REGION 4
Superfund

ANNUAL REPORT

2018

EPA

Contents

Welcome

I would like to thank everyone who contributed to the success of the EPA Region 4 Superfund program in fiscal year (FY) 2018. Your partnership is crucial to the continued successful implementation of this vital program. We have enjoyed this great relationship for many years and hope it will continue in the spirit of cooperative federalism, which we view as critical to the future success of the program.

In FY 2018, the program maintained its commitment to partnering with stakeholders to develop and implement innovative cleanup strategies as well as returning sites to productive and beneficial use. Region 4 achieved several nationally targeted major milestones, emphasizing the vitality and strength of the Superfund program and its mission. In this year's report, you will learn more about our work:

- Integrating EPA's FY 2018-2022 Strategic Plan.
- Furthering partnerships with our state counterparts and local governments in identifying sites for expedited cleanup activities.
- Stepping up efforts to return sites to productive use and deleting sites from the National Priorities List (NPL).
- Enhancing emergency response and preparedness efforts using innovative tools, comprehensive training sessions and rigorous exercises.
- Using best-available science practices and cutting-edge techniques in remedy decisions and cleanup efforts.
- Continuing implementation of Superfund Task Force priorities within the program.
- Protecting children's health and executing educational programs.
- Applying the "enforcement first" approach, holding responsible parties accountable.

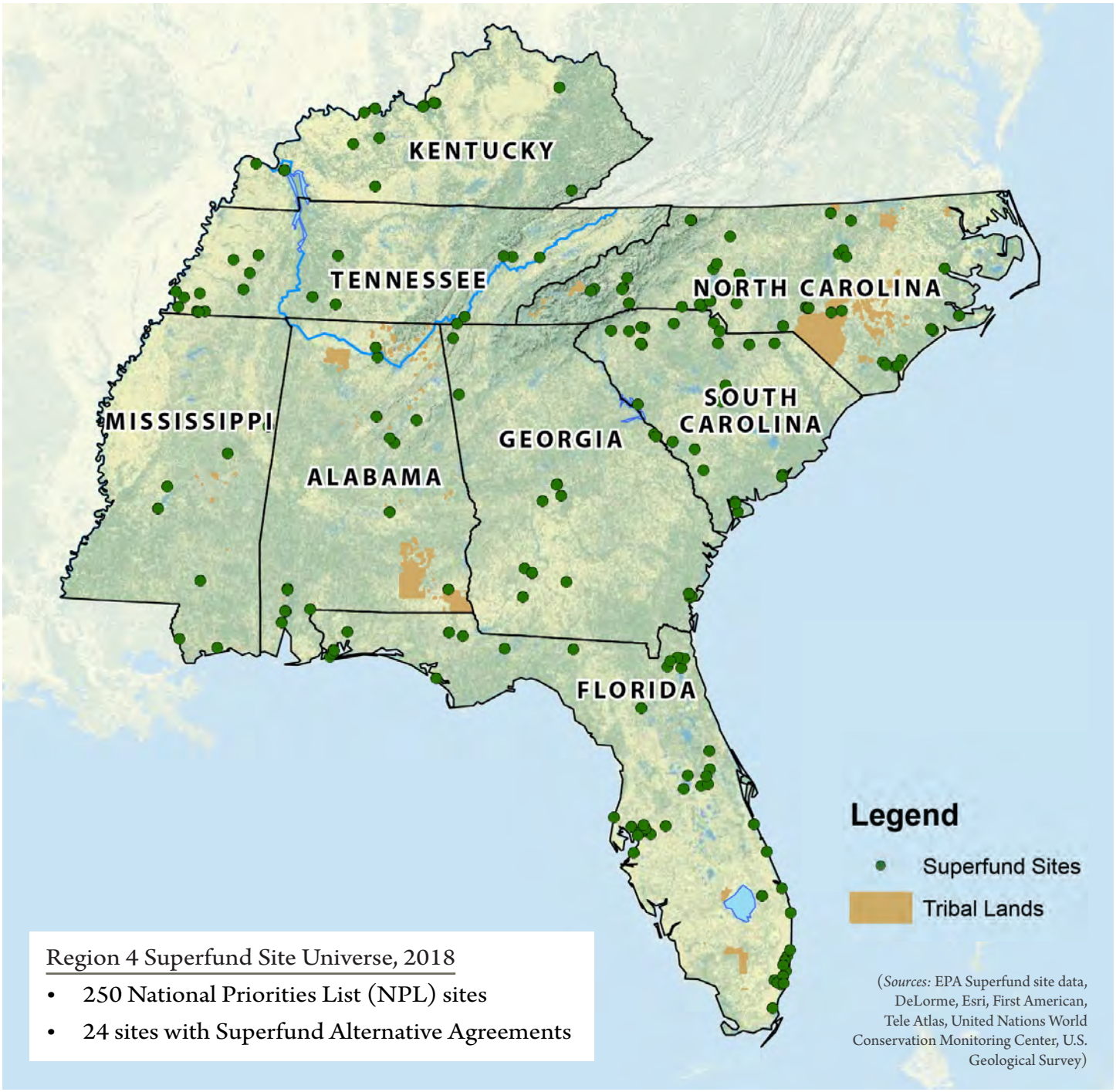
This year, we have been able to work through complex projects while simultaneously tackling reductions in resources. Each facet of the Superfund organization is focused and fixed on the successful accomplishment of our mission. Our staff continues to work diligently in support of our mission and goals, resulting in the fulfillment of our objectives. We do not just work at EPA; we are members of the communities we serve. As such, we view our mission as our duty and obligation to protect human health and the environment.

I am pleased and proud of what we have accomplished in FY 2018. I welcome FY 2019 and look forward to new concepts and ideas from each of you, as well as additional opportunities to partner with our stakeholders. I sincerely thank all of you for your support and dedication to protecting human health and the environment as we walk this journey together.

Franklin E. Hill
Director
Superfund Division

REGION 4 SUPERFUND: AN OVERVIEW

The Region 4 Superfund cleanup program plays a vital role in protecting human health and the environment in communities across the southeastern United States. As this map illustrates, Region 4 serves Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and six tribes – more than 61 million citizens in one of the most populous and fastest-growing EPA regions in the country. The Region 4 Superfund program is recognized regionally and nationally for sustained excellence and innovation in protecting human health and the environment. The program responds rapidly and comprehensively to address environmental emergencies and clean up some of the nation's worst hazardous waste sites.



Region 4 Superfund Site Universe, 2018

- 250 National Priorities List (NPL) sites
- 24 sites with Superfund Alternative Agreements

(*Sources:* EPA Superfund site data, DeLorme, Esri, First American, Tele Atlas, United Nations World Conservation Monitoring Center, U.S. Geological Survey)

"The Agency's mission of protecting human health and the environment resonates with all Americans; we can all agree that we want our future generations to inherit a cleaner, healthier environment that supports a thriving economy."

-- EPA FY 2018-2022 Strategic Plan

Cleanup and mixed-use revitalization have transformed the Calhoun Park Area Superfund site in Charleston, South Carolina. Today, an electrical substation remains in place and provides electricity to most of downtown Charleston. New uses after cleanup include a shopping center, the South Carolina Aquarium, green space, a ferry terminal, parking and restored shorelines.

FISCAL YEAR 2018: THE YEAR IN REVIEW

Region 4 is continuously seeking to improve the performance, protectiveness and cost efficiency of Superfund program activities in the southeastern United States. Continuous improvement efforts are accomplished by expediting cleanups, engaging partners and stakeholders, safeguarding public health, and supporting redevelopment and community revitalization.

Government Performance and Results Act (GPRA) Performance Measure Accomplishments – FY 2018

100% Percent of Superfund Sites with Settlement or Enforcement Action Prior to Remedial Action Start

19 Statute-of-Limitation Cases > $500,000 Addressed

44 Superfund-Lead and Responsible Party-Lead Removal Completions with or without an Enforcement Action

90 Remedial Site Assessment Completions

15 Remedial Action Project Completions

8 Superfund Sites with Human Health Protection Achieved

9 Superfund Sites with Groundwater Migration under Control

9 Superfund Sites Ready for Anticipated Use

4 Construction Completions

Superfund Program Measures Accomplished (Private and Federal Facility Sites) – FY 2018

18 Remedial Investigation/Feasibility Study (RI/FS) Starts

27 Decision Documents

9 Remedial Design/Remedial Action (RD/RA) Negotiation Starts/ Completions

14 Remedial Design Starts

13 Remedial Design Completions

13 Remedial Action Starts

15 Remedial Action Completions

42 Five-Year Reviews Completed

3 Sites Proposed to the National Priorities List (NPL)

4 Final NPL Sites

3 NPL Site Deletions

77 FRP and SPCC Inspections

25 Community Involvement Plans Completed

1 Technical Assistance Grant Awarded

EPA AND PARTNERS RESPOND TO HURRICANES FLORENCE AND MICHAEL

In September 2018, Hurricane Florence caused significant damage and widespread flooding in the Carolinas. Directly following, in October 2018, Hurricane Michael struck the Gulf Coast; it was the most powerful hurricane to ever hit northwest Florida. Prior to the storms landing, EPA activated emergency response centers and worked with federal, state, tribal and local partners in North Carolina, South Carolina and Florida to ensure that Superfund sites were secured, developed plans to assist in rapidly assessing public water systems, and processed emergency fuel waivers. Region 4 Superfund personnel prepared and were ready to deploy if requested by impacted states.

Following landfall, EPA coordinated closely with local, state and federal partners in responding to the hurricanes' impact. Region 4 had more than 40 personnel involved in emergency response efforts. Region 4 Superfund's On-Scene Coordinators (OSCs) deployed to State Emergency Operation Centers and to the Federal Emergency Management Agency (FEMA) Regional Response Coordination Center in Atlanta to assist with emergency support functions for oil and hazardous substance response efforts.

Region 4 Superfund 's deployment included EPA's Mobile Command Post, emergency response trailers, utility terrain vehicles, all-terrain vehicles, a breathing air trailer, communications equipment, air monitoring instruments and other assorted field equipment. During the recovery phase of the responses to the hurricanes, Region 4 Superfund coordinated post-landfall assessments of NPL and NPL-caliber Superfund sites impacted by the storm. Region 4 Superfund's assessment teams conducted inspections at 127 NPL sites. Tyndall Air Force Base in Florida sustained a direct hit from Hurricane Michael. EPA is working with the Air Force to evaluate environmental impacts at the site. EPA also found off-site impacts from flooding at the Burlington Industries Cheraw site in Cheraw, South Carolina, and quickly conducted a removal action to address the impacts.

Region 4 Superfund and state agency staff conducting an aerial assessment of flood-impacted areas in North Carolina in a U.S. Coast Guard helicopter after Hurricane Florence.

Region 4 Superfund's Response to Hurricane Florence: *Taking a Closer Look*

CSX TRAIN DERAILMENT

On September 16, 2018, EPA Region 4 Superfund received notification of a train derailment near Lilesville, North Carolina. An unknown volume of diesel was released from the fuel tanks of the locomotives. The derailment reportedly occurred because of a washout of the railway caused by Hurricane Florence. Region 4 Superfund staff deployed to assess the scene, ensure adequate response, and provide air monitoring and other operational support, as needed. The diesel fuel accumulated in a low-lying area and did not reach the nearby Great Pee Dee River. CSX contractors were also on scene and mitigated the spill.

A meeting with EPA, North Carolina Department of Environmental Quality (NC DEQ), CSX and facility staff took place on September 19, 2018. Excavation of impacted soil finished on September 20, 2018. Other cleanup components included an impermeable barrier and series of collection sumps to capture any additional product weeping from the wreck site. The pond shoreline cleanup was completed and inspected, and EPA, NC DEQ and CSX agreed to a shoreline monitoring plan directed by NC DEQ. Region 4 Superfund staff demobilized on September 20, 2018.

Facility Response Plan Assessments

As part of EPA's response to Hurricane Florence, Region 4 Superfund also worked with the U.S. Coast Guard (USCG) to assess storm-related damage at facilities with Facility Response Plans (FRPs) in place because they store large amounts of oil. Region 4 Superfund contacted 68 FRP facilities in North Carolina. A total of 57 of these facilities are in the EPA inland zone and 11 are in the USCG coastal zone. During and following the hurricane, there were no reported spills or substantial damage.

Facility Response Plans (FRPs)

Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. An FRP demonstrates a facility's preparedness to respond to a worst-case oil discharge.

2018 PROJECT HEADLINES

The Superfund Task Force Announces One-Year Anniversary Accomplishments…

The Superfund Task Force was established to provide recommendations for improving and expediting site cleanups and promoting redevelopment. In July 2018, the one-year anniversary of EPA's Superfund Task Force Report, EPA announced significant progress in carrying out the report's national recommendations, designed to prioritize and reinvigorate the Superfund program. Region 4 Superfund's efforts to protect public health and safeguard the environment directly support EPA's priorities for the Agency's future.

Region 4 Superfund Division Director Franklin E. Hill, community members and EPA staff at the Superfund Task Force celebration at the Kerr-McGee Chemical Corp. site.

…and Recognizes Cleanup Efforts in Region 4

As part of the Superfund Task Force's one-year anniversary, EPA highlighted expedited cleanup efforts at the Kerr-McGee Chemical Corp. Superfund site in Columbus, Mississippi. The July 2018 event acknowledged successful collaborative efforts by the Greenfield Environmental Multistate Trust and federal, state and local stakeholders in achieving goals highlighted by the Superfund Task Force Initiative.

The Multistate Trust, encouraged and supported by EPA and MDEQ, is successfully partnering with local businesses and stakeholders to implement a fundamentally different model for realizing our shared environmental and economic goals for this underserved community. A Together Everyone Accomplishes More (TEAM) concept with a "locals first" cleanup approach was adopted for the investigation and cleanup activities at the site. This cost-effective approach achieves EPA's cleanup goals while using local contractors and resources to the maximum extent practicable.

To date, about 90 percent of the construction work has been conducted on schedule and under budget by local contractors. Cleanup efforts at the site have removed contaminated soil, treated groundwater, and cleaned up the 14th Avenue Ditch and 7th Avenue from Waterworks to Probst Park. Region 4 Superfund has also hosted public meetings in Columbus to gather community input on local priorities for the site's future use following cleanup. More than 500 residents attended these meetings.

Expedited cleanup of the Pine Yard tract at the site started in July 2018. Completion of the cleanup will help to facilitate reuse opportunities at the site. Looking forward, Region 4 Superfund continues to partner with all stakeholders and strives to make a visible difference in the Columbus community. The work being conducted at the site reflects EPA's commitment to protect public health and the environment while promoting the revitalization of properties across the country.

Cleanup of the Pine Yard portion of the site in 2018.

Superfund Task Force Priorities

- **Expediting cleanup and remediation.**
- **Reinvigorating cleanup and reuse efforts by potentially responsible parties.**
- **Maximizing the recovery of Superfund dollars.**
- **Encouraging private investment to facilitate cleanup and reuse.**
- **Promoting redevelopment and community revitalization.**
- **Engaging partners and stakeholders.**

ReVenture Park, a 667-acre high-tech park at the Martin-Marietta, Sodyeco, Inc. site in Charlotte, North Carolina, is bringing together innovative businesses that will create hundreds of jobs. Forsite Development has spearheaded the project, working closely with Region 4 Superfund as it updates former industrial buildings as part of a business park focused on energy production and environmental technology. New investments on site exceed $17 million.

"The partnership between government and the private sector, and a vision to bring about positive change for communities, has resulted in the accomplishment of great milestones for sites across the Southeast. The path to redevelopment has been established and will lead to productive community assets. EPA will continue to work with enterprising individuals and organizations to bring new opportunities to communities impacted by contaminated sites."

-- Franklin E. Hill, Superfund Division Director, EPA Region 4

Region 4 Superfund Leadership Highlighted at National EPA Conference

In July 2018, Region 4 Superfund staff helped kick off the EPA national Community Involvement Training Program. The program brings together people from EPA and Agency partners and stakeholders who plan and implement community involvement, partnership, stewardship, outreach and education programs. It provides an important, comprehensive, in-person forum for interactions among and between EPA and state, local, federal, and tribal community representatives as well as academia and private industry. The panel presentation included senior EPA officials and community representatives focused on the theme of the training program – Engaging and Revitalizing Communities Through Cleanup and Reuse. The 2018 program was held in Kansas City, Missouri.

Superfund Sites in Region 4 Leaving the NPL After Successful Cleanups

REASOR CHEMICAL COMPANY
(Castle Hayne, North Carolina)

Operations at this 25.6-acre former stump-rendering facility resulted in soil, sediment, groundwater and surface water contamination. Contaminated soil, sediment and surface water were cleaned up to residential and ecological cleanup goals in 2008. Groundwater cleanup goals were met in 2017. The property is currently vacant. Future site uses could include wildlife habitat, trail recreation areas or residential use. Region 4 Superfund deleted the site from the NPL in September 2018.

DAVIS TIMBER COMPANY
(Hattiesburg, Mississippi)

Cleanup work finished under budget and ahead of schedule at this former wood treatment site. Cleanup included recycling of 325,000 pounds of steel and concrete, followed by land restoration using native plants and soil amendments. Today, the 30-acre area hosts a community center and an animal welfare facility. The Longleaf Trace recreation trail runs alongside the site, connecting the area with downtown Hattiesburg. Following the cleanup, Region 4 Superfund took the site off the NPL in September 2018.

WHITEHOUSE OIL PITS
(Jacksonville, Florida)

This 9-acre area is a vacant former industrial property where Allied Petroleum disposed of acidic waste oil sludge from 1958 to 1968. EPA placed the site on the NPL because of contaminated debris, groundwater, sludge, soil, surface water and sediment resulting from past waste oil disposal practices.

EPA, the Florida Department of Environmental Protection and the site's potentially responsible parties (PRPs) have cleaned up the site to protect people and the environment from contamination. The site is now used as a natural ecological buffer for the floodplain of an adjacent creek. There is potential for recreational uses on site in the future. Following the cleanup, EPA took the site off the NPL in July 2018.

Did You Know?

In FY 2018, EPA deleted all or part of 22 sites from the NPL. It is the largest number of deletions in one year since FY 2005 and a significant increase over the past few years.

Waste barrels on site during cleanup.

Major Cleanup Milestone Achieved, Florida Site Now Ready for Reuse

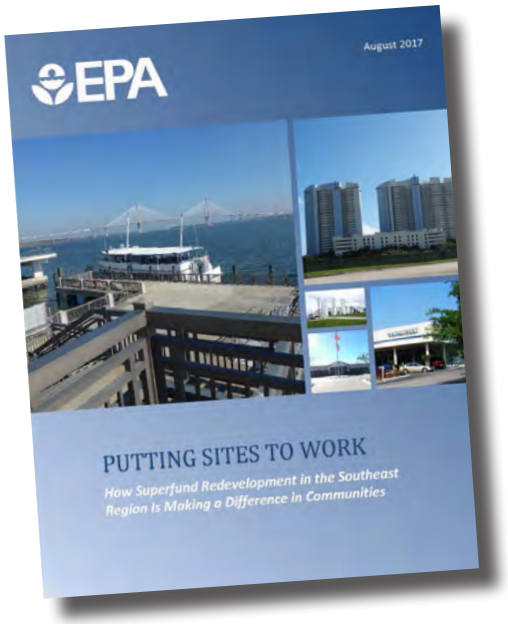
In March 2018, the Sanford Gasification Plant (SGP) Superfund site in Sanford, Florida, achieved the Site-wide Ready for Anticipated Use (SWRAU) milestone. The SWRAU designation is significant because it formally announces that EPA has completed land-based cleanup at the site and that it is now available for reuse. Cleanup included removing contaminated surface soils, stabilizing and capping additional contaminated soils, collecting and treating water, and restoring 2,300 feet of creek bed. The site, located 25 miles northeast of Orlando, includes the former SGP facility, an unnamed tributary and part of Cloud Branch Creek. Homes and businesses border the site. Potential future uses at the site include commercial and mixed commercial-residential redevelopment.

Economic Impacts of Cleanup and Reuse

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. In 2018, EPA took a closer look at these benefits.

Superfund sites across Region 4 are home to commercial facilities, shopping centers, offices and residential areas. Many sites continue to host industrial and manufacturing operations. Other sites host parks, recreation areas and wildlife refuges.

More than 540 on-site businesses and organizations on current and former Superfund sites in Region 4 provide 14,566 jobs, contribute an estimated $853 million in annual employment income for residents across the Southeast, and generate an estimated $5.7 billion in annual sales. Restored site properties in Region 4 generate $9.9 million in annual property tax revenues for local governments.



Taking a Closer Look

Putting Sites to Work, a region-wide report looking at the beneficial effects of Superfund site reuse across the Southeast, is available online:

https://www.epa.gov/superfund-redevelopment-initiative/redevelopment-economics-superfund-sites#regional

New Proposed and Listed NPL Sites in Region 4, FY 2018

ROCKWELL INTERNATIONAL WHEEL & TRIM

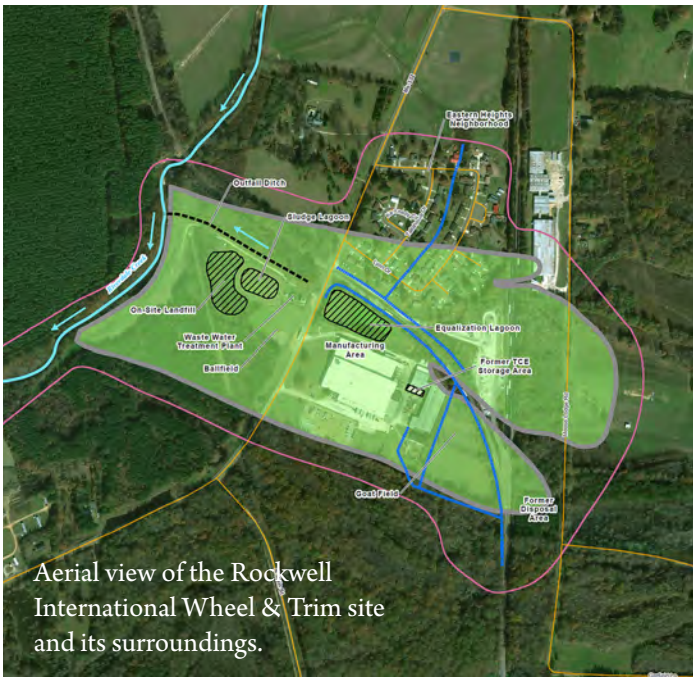
(Grenada, Mississippi)

A wheel cover manufacturing and chrome plating facility operated on site from 1966 to the early 2000s. A metal stamping plant continues to operate on site today. Past operations, spills and waste handling practices resulted in air, groundwater, surface water and soil contamination. Interim actions – including groundwater treatment – have addressed the immediate threats to public health and the environment. Sampling activities as part of the site's remedial investigation started in August 2018 and are ongoing.

SOUTHSIDE CHATTANOOGA LEAD

(Chattanooga, Tennessee)

This site consists of residential neighborhoods and community areas (parks, schools, playgrounds) in downtown Chattanooga, where lead-bearing foundry material has impacted soils. Past foundry operations generated large quantities of waste byproducts. Residents also used excess spent foundry sand and other byproducts for fill material and top soil. Interim actions – the removal of lead-contaminated soil from 84 properties – have addressed immediate threats to public health and the environment. Remedial investigation activities are ongoing.



Aerial view of the Rockwell International Wheel & Trim site and its surroundings.


Soil sampling underway at the Southside Chattanooga Lead site in 2018.

BURLINGTON INDUSTRIES

(Cheraw, South Carolina)

A manufacturing facility at this site produced woven fiberglass fabrics for commercial and industrial operations. In addition to the facility, the site includes 3.2 miles of surface water drainage from the facility to the Great Pee Dee River and several adjacent parcels along the surface water pathway where contamination is located. These properties include 37 homes and public lands. Site soils are contaminated with polychlorinated biphenyls (PCBs). Interim actions – the removal of PCB-contaminated soil from 14 properties, restoration of excavated areas, and removal of park playground equipment – addressed immediate threats to public health and the environment. Follow-up cleanup activities began in June 2018. They include cleanup of the Highland Industries property and 1,900 feet of drainage ditch near the Highland property, removal of soil piles near the bank of the ditch, and remediation of Huckleberry Park.

Further investigations are ongoing at each of these sites. Through these efforts, Region 4 Superfund and state agencies – the Mississippi Department of Environmental Quality (MDEQ), the Tennessee Department of Environment and Conservation (TDEC), and the South Carolina Department of Health and Environmental Control (SC DHEC), respectively – will continue to protect people and the environment from site contamination.

MEANINGFUL COMMUNITY INVOLVEMENT

ENGAGING COMMUNITIES, PROTECTING PUBLIC HEALTH

Region 4 Superfund works every day with other federal agencies, states, tribes and communities to improve the health of American families and protect the environment. The more communities are informed and involved in environmental decision making, the better. Not only does community involvement give the public the ability to influence how a site is cleaned up and how people are affected by Superfund process, the collaboration produces a better result for everyone, including the environment.

Region 4 Superfund's community engagement goals include ensuring transparency and accessibility in the Superfund decision-making process, providing information and technical assistance that makes a difference for communities, and producing site outcomes that are responsive to stakeholder concerns and aligned with community needs.

Introduction to Superfund Workshops at Newly Listed NPL Sites in Mississippi

Through the EPA Technical Assistance Services for Communities (TASC) program, Region 4 Superfund hosted workshops for communities near the Mississippi Phosphates Corporation site in Pascagoula, Mississippi, and the Rockwell International Wheel & Trim site in Grenada, Mississippi. Region 4 Superfund brought in a TASC technical advisor to explain the Superfund process and highlight opportunities for community involvement and technical assistance. At both workshops, community members had an opportunity to meet with EPA staff early in the process to learn more about the Superfund program and ways to get involved.

Safeguarding Our Future

Protecting children's health is central to EPA's mission, and the Agency has taken great strides to improve the environment for children where they live, learn and play. Environmental education is also a key part of ensuring children's health.

Region 4 Superfund staff lead efforts that support Children's Environmental Health (CEH) across the Southeast, visiting schools, making presentations at community centers, and sharing information to support healthy communities and advance environmental protection. For example, during National Lead Poisoning Prevention Week, staff worked with students at the Coretta Scott King Young Women's Leadership Academy in Atlanta. Students learned about how the Superfund program tackles lead and asbestos contamination and discussed how they can be lead-free advocates in their communities.

Cross-Agency Partnership Protecting Children's Health in Florida

In July 2018, Region 4 Superfund and the Florida Department of Environmental Protection (FDEP) expedited schoolyard cleanup efforts at Susie B. Tolbert Elementary School in Jacksonville, Florida. The agencies worked together closely during the summer vacation to manage over 30,000 gallons of stormwater and remove 3,000 tons of contaminated soil from the school's playground, which is located near the fence line of the Fairfax Street Wood Treaters Superfund site. A wood-treating facility operated at the site from 1980 to 2010. Its operations resulted in soil and sediment contamination.

Region 4 Superfund has been working with local, state and federal stakeholders for several years to improve public health and environmental outcomes at the site. The site's long-term $7.9 million remedy includes removal and off-site treatment and disposal of contaminated soils, sediment, demolition debris and waste material. The cleanups protect public health in several nearby neighborhoods.

View of the soil remediation work with stormwater controls to protect the pond and playground.

Protecting Children's Environmental Health

Children are highly sensitive to pollution. At EPA, protecting children from environmental health risks is fundamental to our vision of making the world a better place for future generations.

New Children's Environmental Health Outreach Effort in Region 4

In 2018, Region 4 developed a new way to raise awareness of the importance of EPA's work on children's environmental health for EPA staff. A series of monthly graphics highlights EPA staff as children and adults. This awareness campaign recalls that, as children, we hoped there were adults who were thoughtful enough to consider our environment and its potential impacts on us. Now, as environmental professionals, the graphics emphasize how EPA staff have stepped up to address the environmental challenges of today to protect the health of generations to come.

SUPERFUND REDEVELOPMENT

Region 4 Superfund is committed to helping communities restore Superfund sites as valued assets and views the revitalization of communities affected by contaminated properties as a key component of our mission to protect human health and the environment. As part of our work, we help people participate in the Superfund cleanup process and support community efforts to safely redevelop sites.

Considering reuse engages communities, helps protect remedies, fosters long-term stewardship, identifies faster and lower-cost cleanups, informs land use controls, provides environmental benefits, and enables economic opportunities. Through Superfund Redevelopment, challenges turn into opportunities.

Local Government and PRP Leadership Enable Additional Site Reuse Possibilities

In Gainesville, Florida, local governments and Beazer East, the site's owner and PRP, are working together to explore opportunities to locate the county's new fairgrounds and an event center on the Cabot Koppers site's 86-acre parcel north of Northwest 23rd Avenue. The fairgrounds could include bike trails, athletic fields, an indoor track, an agriculture facility and space for parking.

These opportunities have been made possible by a reuse assessment and cleanup planning with Region 4 Superfund that resulted in a flexible remedy that can support a range of future uses. With construction of the remedy ongoing through 2020, the parties are also exploring ways to phase cleanup and redevelopment, so that areas of the parcel could be returned to use in the shorter term.

The remainder of the site – the 54-acre Cabot Carbon property – is already in reuse. Uses include retail areas (a shopping mall, automobile dealerships and a boat dealership), office buildings, and parking and storage areas.

Updated redevelopment plans for the Picayune Wood Treating site in Mississippi helped the community address site ownership obstacles, consider how remedy updates and nearby land use changes might inform redevelopment priorities, and work on environmental education opportunities.

View of the Escambia Wood (Pensacola) site following soil cleanup and restoration.

EPA Redevelopment Resources Supporting Protective Reuses in Florida

The Escambia Wood (Pensacola) site is located in Pensacola, Florida. The site includes a former wood-treatment manufacturing facility as well as several former neighborhoods nearby. In early 2018, the Escambia County Commission accepted 70 acres from EPA for the development of Mid-Town Commerce Park on site. The project, planned by Escambia County, the City of Pensacola and the local business community, will support industrial and commercial uses. The development is consistent with the soil remedy and compatible with the upcoming groundwater cleanup. The localities estimate that, at full buildout, the facility will support more than 1,700 jobs, generate $132 million in annual employee income and yield $4.4 million in local tax revenue.

To support the protective and beneficial future use of the Escambia Wood Treating site, Region 4 Superfund is developing a Ready for Reuse (RfR) Determination to clearly define appropriate site uses and attract potential developers.

Local Government Planning Underway for Recreational Reuse in Tennessee

The 30.5-acre Clinch River Corporation Superfund site in Harriman, Tennessee, includes an area where the company operated a semi-chemical corrugated liner production facility from 1919 to the late 1980s. Cleanup activities finished in September 2015. The City of Harriman plans to return the site to use as part of riverfront park with boat-launching facilities and walking trails.

Reuse Planning Yields Dynamic Park Designs in Western Florida

This 18-acre area includes the former American Creosote Works wood-treating facility that operated from 1902 to 1981. In 2018, Region 4 Superfund coordinated with the City of Pensacola and STOA Architects on park design plans for the site requested by the citizens of Pensacola. The park will be built on the former facility grounds once the remedial action is complete. Anticipated park facilities include maritime education facilities, an amphitheater, a memorial, open space, a splash park and parking areas. Region 4 Superfund continues to host regular public meetings to keep the public informed of the status of the cleanup.

Did You Know?

Region 4 has seven sites on the EPA Superfund Task Force's Redevelopment Focus List. The List is a list of Superfund NPL sites with the greatest expected redevelopment and commercial potential.

To learn more about how EPA is helping communities reclaim and reuse thousands of acres of formerly contaminated land, visit https://www.epa.gov/superfund-redevelopment-initiative/superfund-redevelopment-focus-list.

National EPA Case Study Highlights Florida Reuse Success Story

At the Pepper Steel & Alloys, Inc. site in Medley, Florida, EPA, FDEP, the Miami-Dade County Department of Environmental Resources Management (DERM), and other project partners worked together to clean up the industrial area and return it to productive use. Site reuses have included truck storage and staging as well as concrete manufacturing. Today, a recreational boat company is planning construction of a boat manufacturing facility on the site's northern parcel. Another parcel has been subdivided and sold; planning for additional site development on these areas is underway. The local government is also exploring ways to improve access and infrastructure at the site.

In September 2018, EPA's Superfund Redevelopment Initiative (SRI) recognized the site's successful cleanup and reuse in an in-depth reuse case study. To learn more, visit: https://semspub.epa.gov/src/document/11/197406.

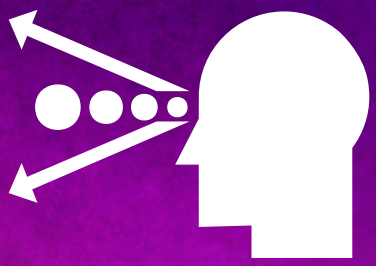
ENVIRONMENTAL PROTECTION AND STEWARDSHIP

EXPEDITING CLEANUP AND REMEDIATION

Innovative and Cost-Saving Cleanup Underway in Southeast Mississippi

After adding the Mississippi Phosphates Corporation (MPC) site in Pascagoula, Mississippi, to the NPL in January 2018, Region 4 Superfund announced a $71.6 million cleanup that will take place from 2018 through 2020, plus $36 million for ongoing wastewater treatment during cleanup. Cleanup construction began in October 2018 and focuses on the closure of the East Gypsum Stack and the North Ponds at the West Gypsum Stack over three phases. The cleanup will eliminate storage of more than 500 million gallons of contaminated wastewater and reduce the volume of wastewater requiring treatment by an estimated 98 percent.

In response to comments received during the public comment period, Region 4 Superfund evaluated and selected engineered geosynthetic turf as an alternative to a traditional soil and grass cap/cover system. This will save an estimated $6 million, including $4.6 million on construction costs and $1.4 million in operations and maintenance costs (no need for mowing and related activities). A final site-wide cleanup will follow these first phases of cleanup. Region 4 Superfund will present its recommended site-wide cleanup remedy to the public for input before a final decision is made.



Long-Term Cleanups: Stewarding Public Health and the Environment

Some cleanups take place at complex, highly contaminated sites such as NPL sites and sites with Superfund Alternative Agreements.

These federal and private-party sites often require several years to fully study the problems, develop a permanent remedy and clean up hazardous substances.

Region 4 Superfund works closely with communities and state, tribal and federal partners to ensure the protection of human health and the environment at these sites.

Site Background

The site is a former diammonium phosphate fertilizer plant. The facility ceased operations in December 2014 following bankruptcy, leaving more than 700 million gallons of acidic, nutrient-rich wastewater behind. In February 2017, EPA assumed control of wastewater treatment operations once the MPC Environmental Trust, which owns the property, ran out of funds.

The wastewater can be toxic to fish and other forms of marine life and can cause algal blooms. Previous releases of untreated wastewater from the site (before EPA took over wastewater treatment operations) resulted in fish kills. EPA oversees wastewater treatment at a rate of about 2 to 4 million gallons per day, at a cost of $1 million per month, due to the high volume of wastewater requiring treatment. EPA has expended about $23.4 million to treat wastewater.

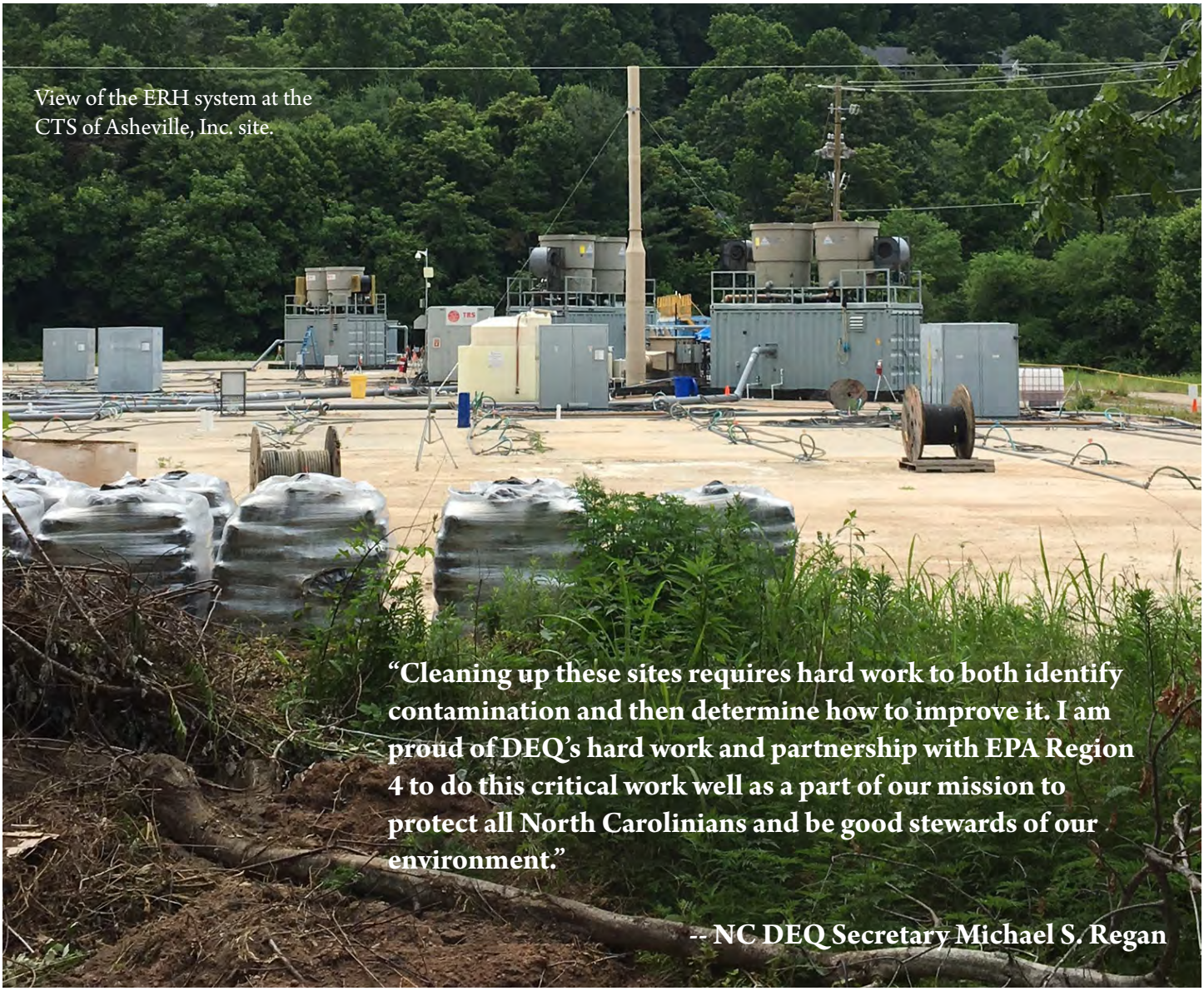
Treatment in Progress at CTS of Asheville, Inc. Superfund Site

Superfund cleanup efforts used electrical resistance heating (ERH) to treat a 1.2-acre area beneath this former electronic-components-manufacturing facility in Asheville, North Carolina. The system extracted 97 percent of the trichloroethene (TCE) in the treatment area, removing an estimated 17,600 pounds of pollutants in 2018. Historical use of solvents during manufacturing activities contaminated the site with TCE.

The system operated from June to November 2018. The ERH treatment at the site was required under a 2017 settlement between EPA and the U.S. Department of Justice with CTS Corporation, Mills Gap Road Associates and Northrop Grumman Systems Corporation for an interim cleanup. The settlement also requires in-situ chemical oxidation (ISCO) to treat TCE in a 1.9-acre area north of the area being treated by ERH. The companies will spend an estimated $9 million on the interim cleanup. A final site-wide cleanup will be selected in the future to address any contamination remaining after the ERH and ISCO technologies have had a chance to work over several years.

ERH 101

A technology that heats the ground to extract and treat types of hazardous substances such as TCE. Electricity runs through electrodes, heating the soil and groundwater to vaporize contaminants. The vapors are removed through extraction wells and treated before being discharged to the ambient air, which is monitored.



View of the ERH system at the CTS of Asheville, Inc. site.

"Cleaning up these sites requires hard work to both identify contamination and then determine how to improve it. I am proud of DEQ's hard work and partnership with EPA Region 4 to do this critical work well as a part of our mission to protect all North Carolinians and be good stewards of our environment."

-- NC DEQ Secretary Michael S. Regan

No Further Action Needed at Superfund Alternative Site in Reuse in North-Central Florida

In July 2018, Region 4 Superfund proposed a No-Action Record of Decision (ROD) for groundwater cleanup at the Cascade Park Gasification Plant and Landfill site in Tallahassee. EPA found that existing and potential unacceptable risks to human health and the environment have been adequately addressed by earlier cleanup actions.

Cleanup plans integrated remedy and reuse considerations, making it possible to excavate contaminated soils and improve infrastructure at the same time. Today, the project's three goals – the protection of human health and the environment, the park's development, and the improvement of the city's stormwater management system – have been achieved. Looking forward, Cascade Park will become part of a larger public park system. A group of stakeholders working with Blueprint 2000 have finished the Capital Cascade Trail Master Plan, which outlines a city-wide system of trails and parks.

The result is a remarkable facility that brings together arts, entertainment, education, history and wellness. Located in the heart of downtown Tallahassee, Cascade Park includes an amphitheater, play areas, water fountains, plazas, open space, commemoration areas and miles of multi-use trails. The innovative park opened at the former industrial area and landfill in March 2014. Constructed by Blueprint 2000 in partnership with the City of Tallahassee and Leon County, Cascade Park is a stormwater facility that doubles as an urban community park. The citizens of Tallahassee and Leon County built the park using a one-cent local option sales tax.

The Superfund Alternative Approach (SAA)

An alternative to listing a site on the NPL when a site scores high enough to be listed on the NPL. The same processes and standards for investigation, cleanup and community involvement are used as a site on the NPL under the SAA.

The Capital City Amphitheater seats 3,500 people and is open year round.

Final Remedy Selected for Chemical Manufacturing Facility in Kentucky

After a multi-year journey, Region 4 Superfund, with support from the EPA Administrator's Office, the Region 4 Regional Administrator, EPA's Office of Site Remediation and Technology Innovation, EPA's Office of Research and Development, and the Kentucky Department of Environmental Protection, achieved a major milestone in advancing the cleanup of the B.F. Goodrich Superfund site. In September 2018, EPA Acting Administrator Andrew Wheeler signed a second ROD selecting the final remedy for the site, which is in Calvert City, Kentucky. The site benefited from inclusion on the EPA Administrator's Emphasis List of Superfund Sites Targeted for Immediate, Intense Attention. After significant action to expedite cleanup and redevelopment opportunities, the site was taken off the list in August 2018.

The $107 million remedy includes a three-mile sub-surface barrier wall around onshore contamination, groundwater collection and treatment, recovery of non-aqueous phase liquid (NAPL) from accessible onshore areas, dredging of contaminated sediments from the barge slip, closure of two ponds, recovery of NAPL from beneath the Tennessee River, and treatment of the groundwater plume beneath the river. The remedy is widely supported by all stakeholders. It replaces an initial cleanup plan that was more than twice as expensive, disruptive to ongoing chemical plant operations and posed health risks during construction.

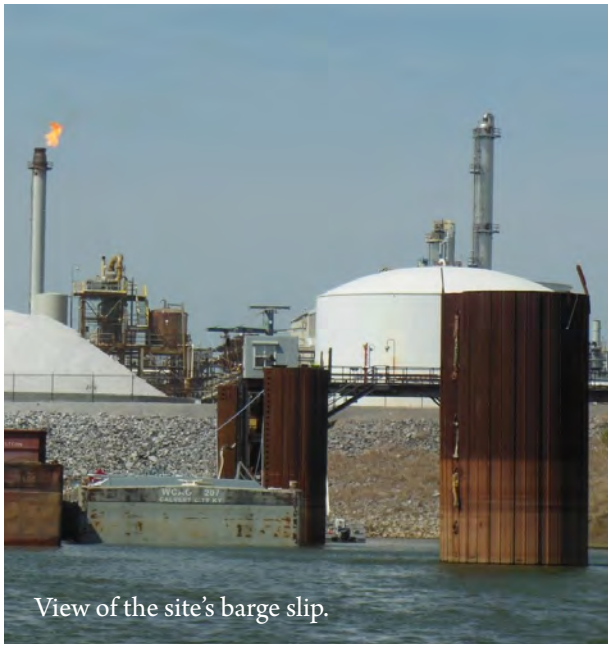
Region 4 Superfund also pursued an innovative approach to the site's remedial design and remedial action process, separating the two activities. Region 4 staff had enforcement documents ready for issuance to site PRPs to negotiate an agreement to conduct the remedial design shortly after the ROD was signed. Remedial design negotiations are expected to be completed and the remedial design started by mid-February 2019.

Aerial view of the site from the Tennessee River.

Site investigations include river sediment sampling.

To Learn More

The Innovations section of the report (page 33) discusses another major site outcome in 2018 – Region 4 Superfund's successful preparation and issuance of an upfront Technical Impracticability waiver.



View of the site's barge slip.

Region 4 Superfund Director Franklin E. Hill and community leaders speaking at the August 2018 community event for the 35th Avenue Superfund site.

Ongoing Cleanup Protecting Public Health in Central Alabama

The 35th Avenue Superfund site in Birmingham, Alabama, includes parts of three North Birmingham communities – Collegeville, Fairmont and Harriman Park – affected by nearby industrial activities. After sampling found about 400 properties with soil contamination above acceptable levels, a multi-phase removal action to protect public health and the environment began in 2014. The site is currently in Phase 4, which began in July 2015. It focuses on addressing all remaining residential properties identified for cleanup.

In August 2018, Region 4 Superfund Director Franklin E. Hill met with Congresswoman Terri Sewell, Mayor Randall Woodfin and community leaders from the three neighborhoods to provide an update on the ongoing cleanup at the site. Region 4 Superfund staff led a tour for Congresswoman Sewell and community leaders to share cleanup progress at the site. The meeting concluded with all representatives agreeing to ensure a comprehensive cleanup for the three communities.

Next Generation Response Tools Enhancing Environmental Decision Making

EPA Region 4 Superfund has raised the bar for the Agency for emergency and disaster-response data collection, management and display. The Response Dashboard provides real-time reporting of assessment and response information and progress from the field. In addition to remote sensing imagery and traditional maps, the Dashboard also has data layers for chemical and oil storage facilities, RCRA corrective action facilities, water/wastewater infrastructure, and Superfund NPL sites. Field data is captured from laptops, tablets and smartphones via a Survey 1-2-3 app and uploaded with geocoordinates and images. The app includes checklists and drop-down menus that ensure thorough and consistent data collection. The Response Dashboard allows for management, visualization, decision making and reporting from an Incident Command Post or the Regional Emergency Operations Center. It can also be linked to EPA's VIPER system, which allows for real-time collection and visualization of air monitoring information.

During the response to hurricanes Irma, Florence and Michael, field responders used these tools to quickly and efficiently assess orphaned containers, chemical storage facilities, NPL sites and debris management sites. Region 4 Superfund staff also used the Response Dashboard to prioritize and track progress in our combined mission with the U.S. Coast

To date, Region 4 Superfund has sampled nearly all 2,000 residential properties in the three neighborhoods and has cleaned up more than 400 properties, including three schools and two low-income apartment complexes. More than 50,000 tons of contaminated soil have been removed and landfilled off site.

Emergency Response and Removals: Building Next Generation Response and Preparedness Capability

EPA's Superfund Emergency Response and Removal program acts quickly to remove imminent threats to public health and the environment.

Whether there is a chemical leak at a manufacturing facility, a landfill fire, an uncontrolled oil release or a natural disaster, Region 4 Superfund will be there, coordinating closely with local responders and other emergency officials.

Guard after Hurricane Irma to recover several hundred sunken or grounded vessels off the coast of eastern Florida and the Florida Keys.

Region 4 Leadership Enables Effective and Efficient Incident Management

The Incident Command System (ICS) is used by all levels of government – federal, tribal, state and local – as well as by many private-sector and nongovernmental organizations. It allows for coordination and collaboration between multiple responding agencies and organizations. It facilitates activities across five functional areas: command, operations, planning, logistics and finance. The system was developed in the 1970s and is designed to enable effective and efficient incident management by establishing a common operational picture and organizational structure.

From executive leadership to field-support personnel, Region 4 has embraced and invested significantly in the training and resources needed to implement ICS. This has served the Region well, enhancing our ability to safely, efficiently and effectively address the challenges faced in responding to catastrophic incidents. Region 4 staffs the Regional Emergency Operation Center with highly trained personnel from the various Region 4 programs, freeing on-scene coordinators and subject matter experts to focus on the specialized concerns of an incident. This capability has further allowed Region 4 to sustain a high level of effectiveness in coordinating EPA response activities with our FEMA and state counterparts.

Vessel recovery efforts off the coast of eastern Florida in 2018. (Source: FEMA news photo)

Region 4 Superfund equipment deployed in the field in 2018.

The Region 4 Regional Emergency Operation Center in action in 2018.

Crude oil on the land surface during cleanup.

The Oil Program *in Action*: The Hensley Well Response

On April 5, 2018, the Kentucky Department of Environmental Protection (DEP) requested EPA assistance regarding a leaking and abandoned oil well in Argillite, Kentucky. The well initially discharged about 200 gallons of crude oil onto the land surface and into Chadwick Creek, a tributary of the Little Sandy River. In turn, the Little Sandy River is a tributary of the Ohio River, one of the nation's largest waterways. The crude oil also posed a threat to the area's drinking water supply.

Region 4 Superfund mobilized the same day, leading response actions that included installing a culvert to divert rainwater from impacting the spill area and a recovery trench to capture oil seeping from the well, connecting the recovery trench to an oil/water separator system, and removing oily sludges and stained soil for off-site disposal. Kentucky DEP provided temporary drinking water supplies to area residents. From May 28 to June 6, Region 4 Superfund led well plugging operations to stop oil release from the abandoned well. The effort was successful. Recovery and restoration operations in the creek and along the banks of the creek also continued.

On July 30, Region 4 Superfund remobilized to the site to address a renewed oil seep downhill from the plugged oil well. The team built an earthen berm around the area of the seep and placed sorbant material to prevent oil from reaching a nearby creek. A french drain was installed to divert rainwater and protect the berm. Further assessment found that a small amount of oil was emerging from the hillside and pooling near the edge of a utility access road. The absence of any petroleum odor indicated that the oil was weathered, suggesting the flow was the result of oil released by saturated soils upslope rather than discharge from the plugged well.

The Oil Program

EPA's Oil Pollution Prevention regulation provides requirements for prevention of, preparedness for and response to oil discharges at non-transportation-related facilities. To prevent oil from reaching navigable waters and shorelines, and to contain discharges of oil, facilities must put Spill Prevention, Control, and Countermeasure (SPCC) Plans and Facility Response Plans (FRPs) in place.

Region 4 Superfund conducts inspections each year to make sure regulated facilities comply with the SPCC and FRP regulation. These efforts focus on facilities that store a million gallons of oil or more; worst-case discharges from these facilities could result in substantial harm to human health and the environment.

Region 4 Superfund also conducts government-initiated unannounced exercises (GIUEs) at FRP facilities. GIUEs evaluate an FRP facility's ability to implement its FRP plan. Similar to fire drills at offices and schools, these unannounced exercises are an excellent test of a facility's preparedness in the event of an oil release.

In 2018, we conducted 42 SPCC and 29 FRP inspections and six GIUEs across the Southeast. These efforts help prevent the release of oil into the environment and improve environmental response preparedness. The goal is to work cooperatively with the oil industry and other governmental agencies to reduce the number, size and impact of oil spills in waterways and other environmentally sensitive areas. Our program is one of the most comprehensive and effective in the nation.

Federal Facilities

From nuclear weapons plants and military bases to landfills and fuel distribution stations, the U.S. government operates thousands of facilities across the country. Many federal facilities are contaminated because of past waste disposal practices and unintentional releases. Contaminated federal facilities such as Department of Defense (DOD) military bases and Department of Energy (DOE) nuclear reactor, processing and research centers are complex sites that require coordination with EPA's partners.

Region 4 Superfund collaborates with many groups, including governmental and non-governmental organizations and local stakeholders, to coordinate cleanup and technical assistance efforts at 20 federal facilities on the NPL. Innovative cleanups are enabling the restoration of these facilities, so they can continue to serve an important role, while making a visible and lasting difference.

Region 4's responsibilities include oversight of complex cleanups at 17 DOD bases and three major DOE complexes on the NPL: The Savannah River Site in South Carolina, the Oak Ridge Reservation in Tennessee and the Paducah Gaseous Diffusion Plant in Kentucky. Region 4 also implements the Base Realignment and Closure (BRAC) program in the Southeast, working closely with our federal partners to facilitate the reuse and redevelopment of federal facilities at NPL sites.

Greener Cleanup Self-Declaration at Marine Corps Base (MCB) Camp Lejeune

Innovative cleanup at the Camp Lejeune Military Res. (US Navy) site in Jacksonville, North Carolina, has followed *ASTM E2893-16 – Standard Guide for Greener Cleanups*. Recognizing that cleanups create their own environmental impacts, this process focuses on incorporating best management practices (BMPs) during cleanup.

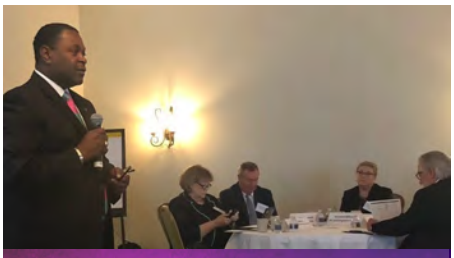
At this federal facility, the second-largest Marine Corps base in the country, BMPs have included:

- A solar-powered subgrade biogeochemical reactor that reduced landfill waste and greenhouse gas emissions, maximized use of renewable energy, reduced contaminant concentrations and accelerated cleanup.
- Air sparging equipment that has saved 800,000 kilowatt-hours of electricity per system per year.
- An optimized long-term monitoring program that minimized waste management, avoiding 1,500 gallons of waste per year, reduced greenhouse gases related to transportation, and resulted in time and cost savings of 600 hours and $32,000 a year.
- Remedy optimization at several areas that enhanced degradation and accelerated site closure. Meeting remedial action objectives earlier reduces soil and wastewater generated.

In total, the site's BMP evaluation identified 29 potentially applicable BMPs and implemented 18 of them. With multiple site areas in conformance with the *Standard Guide for Cleanups*, MCB Camp Lejeune self-declared that site programs implement greener cleanup practices. Cleanup at the site will continue to rely on the BMPs moving forward, helping to further establish a culture of green and sustainable remediation that can serve as a model for other cleanups nationwide.

2018 AFCEC Summit Focuses on Environmental Priorities and Partnering Opportunities

Strong partnerships with DOD and state environmental regulators are critical to EPA's ability to implement innovative environmental restoration solutions. Region 4 Superfund was part of the 2018 Air Force Civil Engineer Center (AFCEC) Eastern Regional Environmental Restoration Summit, held in July 2018 in Charleston, South Carolina. The goal of the summit is to enhance collaborative efforts and improve communication among senior leadership at AFCEC, EPA and state agencies. The summit provides regional regulators and AFCEC leadership an opportunity to discuss environmental issues and restoration procedures, highlight restoration success stories and identify additional partnering opportunities. Region 4 Superfund staff provided an overview of EPA's national and regional cleanup policy and goals.



Region 4 Superfund Director Franklin E. Hill spoke at the AFCEC Summit. He received recognition for his leadership building collaborative relationships and fostering partnerships on environmental projects.

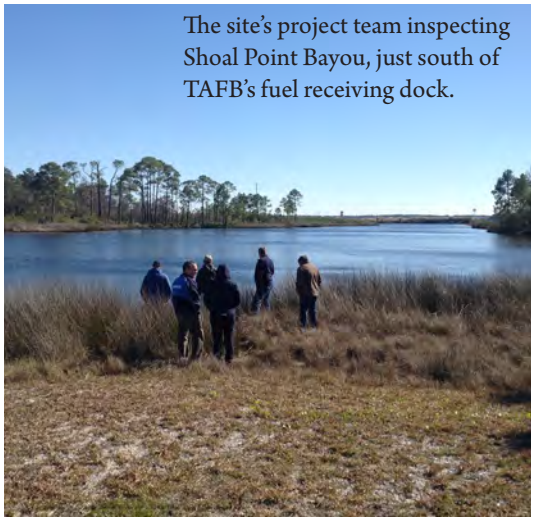
Federal Facility in West Tennessee Achieves SWRAU Milestone

In 2018, the 22,351-acre Milan Army Ammunition Plant site achieved the status of sitewide ready for anticipated reuse (SWRAU). The facility opened in 1942 for wartime munitions production; disposal and discharge practices for ammunition and explosive materials resulted in soil, sediment and groundwater contamination. Cleanup efforts began in the 1980s to address the soil contamination. Excavation and capping activities finished in the early 2000s. Groundwater cleanup is ongoing. The site's SWRAU status will soon be followed by additional milestones, with NPL deletion for parts of the site anticipated in 2019. In the near future, 20 vendors will be reusing the site's infrastructure.

Views of the capped pond area and groundwater treatment facilities at the Milan Army Ammunition Plant site.

Significant Cleanup Progress at Air Force Base in Central Florida

EPA and FDEP oversee investigation and cleanup efforts at Tyndall Air Force Base (TAFB). The site's project team continues to find ways to synergistically combine the Air Force goal of moving forward with cleanup actions with EPA and FDEP's mission to protect human health and the environment. Over the past few years, Region 4 Superfund has prioritized the workload and worked collaboratively with FDEP and the Air Force to excavate and dispose of landfill waste and clean up contaminated soil at former Landfills 1 and 3. This has led to an unlimited use/unrestricted exposure determination for these areas and allowed the Air Force to consider a range of redevelopment opportunities, including residential use, for these former landfills. In 2018, a record number of Proposed Plans (eight) were issued and four Records of Decision were signed. Continuing the momentum, two remedial actions are scheduled for completion in 2019.



The site's project team inspecting Shoal Point Bayou, just south of TAFB's fuel receiving dock.

POLLUTERS PAY, ENFORCEMENT FIRST

Every year, EPA takes hundreds of enforcement actions against violators of federal environmental laws. Superfund enforcement and cost recovery protects human health and the environment by compelling the parties responsible for contamination to clean it up or pay for the cleanup. In turn, resources returned to the Trust Fund help make cleanup activities possible in communities across the Southeast. While compliance with the nation's environmental laws is the ultimate objective, enforcement is a vital part of encouraging governments, businesses and other parties to meet their environmental obligations.

Enforcing federal environmental laws is a central mission of EPA's regional offices. Region 4 Superfund's experienced and trained staff vigorously pursues enforcement and cost recovery activities. In line with EPA enforcement goals, we returned $11.6 million in taxpayer funds to the Agency and reached agreements with PRPs to conduct $10.5 million in cleanup work in 2018. Our enforcement program continues to identify and implement best practices to expedite site cleanups and optimize PRP-lead removals and remedial investigations by referring $15.9 million to the U.S. Department of Justice (DOJ) for litigation.

"Enforcement First" at EPA

Region 4 Superfund's approach to "enforcement first" means that we conduct thorough, timely investigations to identify PRPs, take all appropriate remedial and removal enforcement actions, address recovery of EPA's costs and make sure PRPs conduct investigations and cleanup under enforceable orders.

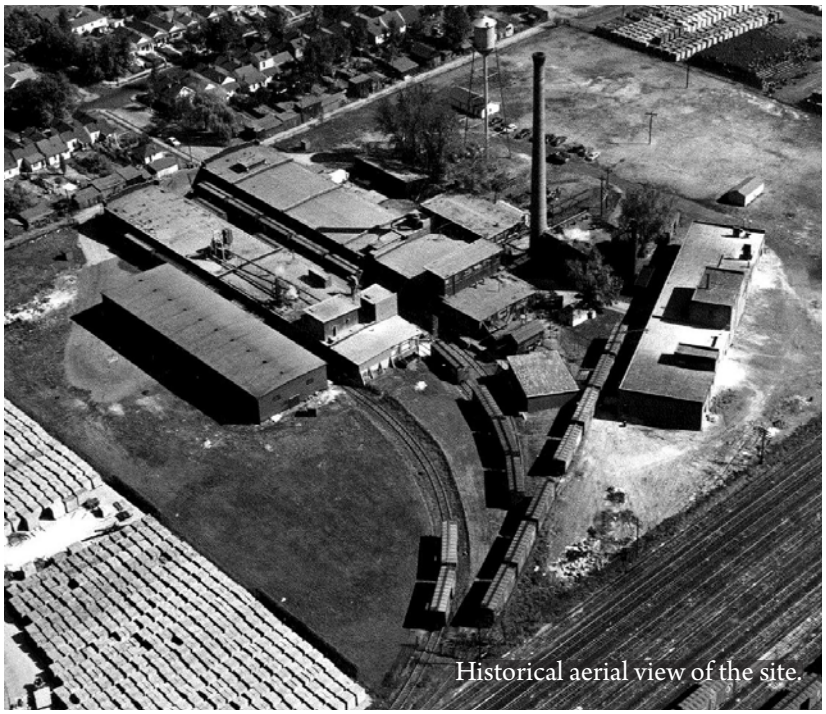
The enforcement program also supports community revitalization by providing guidance materials and site-specific tools that help stakeholders address liability concerns and plan for the future.

Enforcement Facts

Nationwide, since the start of EPA's enforcement program, EPA has secured over $35.1 billion in private-party commitments and over $6.9 billion to recover past cleanup costs.

2018 Agreement Recovers Over $1 Million in Past Response Costs at Kentucky Site

In May 2018, EPA executed a Settlement Agreement with Exxon Mobil Corp., Greif, Inc. and Glenn Springs Holdings, Inc., a subsidiary of Occidental Chemical Company, for payment of past response costs in the amount of $1.25 million for costs incurred by EPA at the Black Leaf Chemical site in Louisville, Kentucky. The site is the former location of a pesticide-formulating facility, a whiskey distillery, and several wood-drying and lumber distribution companies. The site also includes a group of nearby residential properties. EPA's removal activities at the site addressed several contaminants, including arsenic, lead, organochlorine pesticides and polycyclic aromatic hydrocarbons.



Historical aerial view of the site.

Agreements for South Carolina Site Enable Cleanup, Support Reuse

Enforcement actions at the Columbia Nitrogen site in Charleston, South Carolina, have led to several major outcomes. A Unilateral Administrative Order resulted in cleanup actions by the site's PRPs at this former fertilizer manufacturing facility. The removal action includes treatment of contaminated soils and sediments, wetlands restoration and groundwater monitoring. EPA also accepted an offer from Highland Resources, a real estate investment and development company, to purchase the site property for $8.6 million. A Voluntary Cleanup Agreement between the company and the State will ultimately achieve residential cleanup levels. The company plans to redevelop the former industrial area as a mixed-use project that will provide community-wide benefits. Region 4 Superfund is currently negotiating an Administrative Order on Consent with the site's PRP group to complete the cleanup and recover remaining EPA response costs.

2018 Agreement Provides Funding for Georgia Site Cleanup

The Terry Creek Dredge Spoil Areas/Hercules Outfall site in Brunswick, Georgia, is a saltwater tidal creek and marsh system contaminated with toxaphene caused by discharges from a former pesticide plant. In a May 2018 Consent Decree, site PRP Hercules LLC agreed to perform and fund the interim remedial design and remedial action (RD/RA) for the site's outfall ditch (estimated at $4.5 million), pay future response costs (estimated at $449,000), and pay all past site costs ($153,000).

View of the site's tidal creek and marsh system.

CUTTING-EDGE SCIENCE AND INNOVATION

INNOVATIONS

High-quality research, sound science and technological innovation are essential to the protection of human health and the environment and are hallmarks of the Region 4 Superfund program. The program also benefits from specialized expertise in areas including hydrogeology, human health and ecological risk assessments, and environmental radiological evaluation.

Region 4 Superfund scientists integrate knowledge from a wide variety of sources and disciplines to provide responsive solutions to public health and environmental challenges. Our Scientific Support Section makes sure that the science used to support remedial decisions is sound and has integrity, that proper quality control and quality assurance measures are in place, and that sampling approaches and data evaluation are free from bias.

X-Ray Fluorescence Field Operations Guide (XRF FOG) Update

Region 4 Superfund scientists worked with remedial project managers (RPMs), OSCs and our state counterparts to use the XRF FOG to collect defensible XRF data at several Superfund sites across the Southeast. The procedures provide the methods to measure concentrations of contaminants in soil in a practical, cost-effective and timely manner. By following the steps outlined, XRF data collected can be defined as definitive data and have been used for making risk management decisions for cleanups.


Soils prepared for XRF analysis.

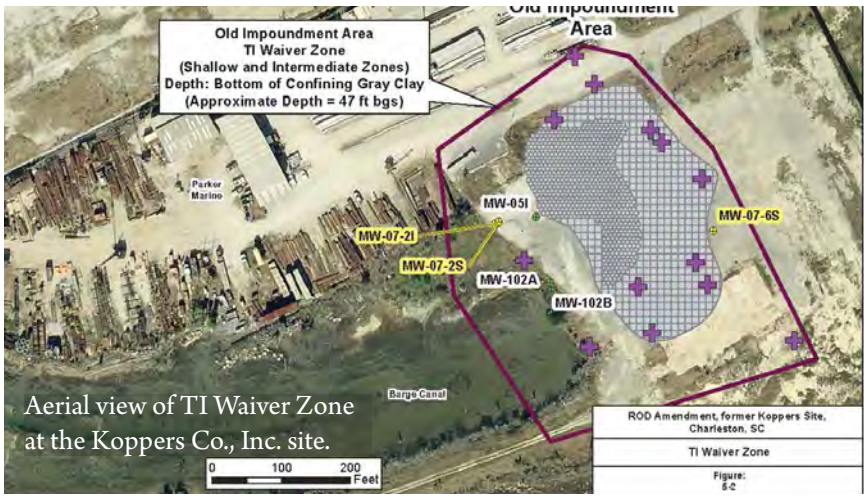
Urban Background Study Update

Region 4 Superfund scientists are finishing up an Urban Background Study (UBS) with EPA's Office of Research & Development and our state counterparts. Urban background data has been collected in eight different cities across the Southeast over the last two years. The final report, currently under development, will be made available on an EPA website. Region 4 states and cities have received trip reports from the sampling events.


UBS field sampling in 2018.

Technical Impracticability Waivers

Region 4 Superfund had its first two successful Technical Impracticability (TI) waivers granted this year, for the Koppers Co., Inc. (Charleston Plant) site in Charleston, South Carolina, and the B.F. Goodrich site in Calvert City, Kentucky. Scientific Support Section staff played key roles in an extensive documentation and consultation process to justify the waivers for the requirement to restore groundwater. The waivers were granted due to complex hydrogeologic settings, decades of active groundwater treatment with diminishing effectiveness and access limitations. Region 4 Superfund will continue to evaluate sites for TI waivers in the future, applying the same rigorous standards that make these first waivers notable.



Aerial view of TI Waiver Zone at the Koppers Co., Inc. site.

Region 4 staff working with community members at a SoilSHOP event in 2018.

SoilSHOPs

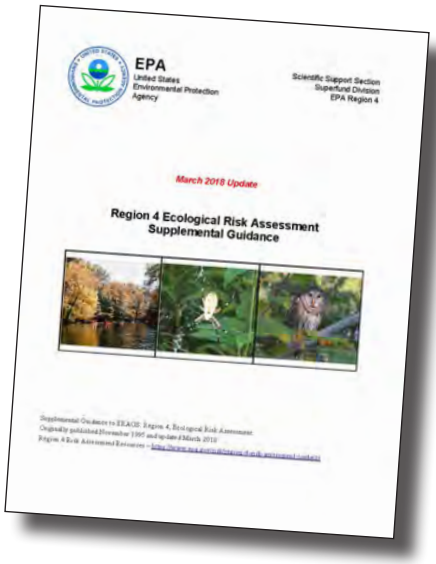
Several Scientific Support Section staff have volunteered in communities concerned about the potential for contaminants in urban gardens. Our staff have volunteered at SoilSHOP (Soil Screening, Health, Outreach and Partnership) events sponsored by the Agency of Toxic Substances and Disease Registry and in partnership with local and state departments of health. These events assist urban gardeners by screening soils for metals with a field-portable XRF device and consulting on risk reduction and safe gardening practices. Our staff are also working with students and faculty from Emory University on community-based assessments of soil contamination and childhood exposure to heavy metals in Atlanta urban agriculture. They helped train investigators in proper soil sampling techniques and the details of the Region 4 XRF Field Operations Guide. The Guide is used to collect high-quality data. To foster relationships and encourage interests in Science, Technology, Engineering and Mathematics (STEM), Region 4 Superfund staff also participated in community events with the Emory team.

Asbestos Research and Cleanup

Addressing asbestos contamination at Superfund sites can be a complicated issue. Region 4 scientists participate in the Asbestos Technical Review Workgroup (TRW), which addresses scientific issues at Superfund sites across the nation. The Asbestos TRW is currently working to revise the Framework for Investigating Asbestos-Contaminated Superfund Sites. Region 4 scientists have also partnered with Region 10 and EPA's Office of Research and Development on improving collection and analysis of soil samples at asbestos-contaminated sites. Region 4 scientists also lead a subgroup on the comparison of air analysis methods. Finally, Region 4 scientists have developed and maintain analytical services statement of work templates. Project managers use these templates to ensure laboratory reports provide data of known and documented quality.

Region 4 Supplemental Risk Assessment Guidance

The Scientific Support Section has finalized the update to Region 4's supplemental guidance to EPA's Risk Assessment Guidance for Superfund (RAGS), which is used to conduct risk assessments in the Region. The documents were peer reviewed and made available online in March 2018. The Region 4 Ecological Risk Assessment Supplemental Guidance and the Region 4 Human Health Risk Assessment Supplemental Guidance are available at https://www.epa.gov/risk/region-4-risk-assessment-contacts.



RESTORING OUR ENVIRONMENT

Ecological revitalization returns land from a contaminated state to one that supports functioning and sustainable habitat. Ecological revitalization improves soil health, supports diverse vegetation, sequesters carbon, protects surface water and groundwater, and provides wildlife habitat and passive recreation opportunities. Through FY 2018, 23 sites in Region 4 are in planned or actual ecological reuse.

In FY 2018, Region 4 Superfund participated in a range of activities and developed a variety of materials in support of ecological revitalization outcomes across the Southeast.

Cleanup Enables Habitat Restoration, Supports Pollinator Health and Ecosystem Services

Facilities at the 310-square-mile Savannah River Site near Aiken, South Carolina, and Augusta, Georgia, made materials used in nuclear weapons for several decades. Part of the site, the H-Area Hazardous Waste Management Facility (HWMF), was once a waste storage area. A 22-acre cover of soil and clay placed on top of the waste and a drainage system now protects people and the environment.

The remedy also enabled the planting of much-needed habitat for native pollinator species, including honey bees, bumblebees, goldfinches and house sparrows. The habitat area is part of a diverse mix of habitats on site that range from mixed-pine hardwoods and sandhills pine savanna to swamp floodplain forests. These habitats support 1,500 species of plants and over 100 species of reptiles and amphibians, 50 species of mammals, and nearly 100 species of fishes and over 250 species of birds. They also provide broader benefits, improving soil health, reducing maintenance needs and costs, and preventing soil erosion.

The site's project team, including staff from Region 4 Superfund, DOE, the South Carolina Department of Health and Environmental Control, and the U.S. Forest Service, have worked collaboratively on the site's ecological revitalization. The project team continues to work together on opportunities for additional pollinator habitat across the 310-square-mile site.

H-Area HWMF during a clover bloom. Crimson clover requires pollinators such as bumblebees to reproduce.

ENGAGEMENT WITH OUR TRIBAL, STATE AND LOCAL PARTNERS

PARTNERING, CONSULTING AND COLLABORATION

Region 4 Superfund works collaboratively with a diverse network of partners – affected communities, states, tribal and local governments, nonprofits, private sector organizations and other federal agencies – to ensure the protection of public health and the environment.

We also rely on our government, nonprofit and private-sector partners to help fulfill EPA's mission of responding to emergencies and cleaning up hazardous sites. Through several types of partnering agreements – including contracts, nonprofit grants, state cooperative agreements and federal interagency agreements – Region 4 Superfund ensures that all required site cleanup work is performed with broad-based support using the most cost-effective approach possible.

PFAS Community Engagement Events in North Carolina and Florida

In August 2018, EPA hosted listening and working sessions in Fayetteville, North Carolina, to hear from the public, provide tools to assist states, tribes and communities in addressing per- and polyfluoroalkyl substance (PFAS)-related challenges in the environment, and understand ways EPA can best support the work being done at the state, local and tribal level. The event included presentations from federal, state and local organizations. With more than 250 attendees, the event was the largest EPA has hosted to help address this important issue. Over 40 people spoke and shared their experiences, concerns and suggestions on PFAS.

PFAS are a group of manmade chemicals widely used in everyday products since the 1940s. They include PFOA, PFOS, GenX and many other chemicals. PFAS compounds can also enter the environment, raising concerns about potential environmental and health risks. PFAS have been detected in the Cape Fear River and several public water supplies, as well as groundwater and private wells in some North Carolina communities. Addressing PFAS contamination is a national priority.

Also in August 2018, the Naval Air Station (NAS) Jacksonville hosted a Drinking Water Investigation Public Open House. Partners including Region 4 Superfund, the Florida Department of Health, the City of Jacksonville, the Jacksonville Electric Authority, and the Florida Department of Environmental Health participated in the Open House and Poster Session. Navy installations across the nation are testing drinking water wells for PFAS. These chemicals are found in fire-fighting foam, which can seep into the ground and get into drinking water.

Views of the listening and working sessions in Fayetteville, North Carolina. Region 4 Superfund Division Director Franklin E. Hill (far right) participated in one of the panels at the PFAS community stakeholder meeting.

The open house provided property owners with information on the sampling process and gave them the opportunity to request sampling appointments as well as information on PFAS health effects. The sampling and testing were provided at no cost to the well owners. Fifty-three people attended the open house. In September 2018, results for the 19 wells sampled indicated that all are below EPA's lifetime health advisory for PFAS. EPA notified all property owners of the results.

At a National Leadership Summit in Washington, D.C. in May 2018, EPA announced several actions:

- EPA is evaluating the need for a maximum contaminant level (MCL) for PFOA and PFOS. The Agency will convene our federal partners and examine everything EPA knows about PFOA and PFOS in drinking water.
- EPA is beginning the necessary steps to propose designating PFOA and PFOS as "hazardous substances" through one of the available statutory mechanisms, including potentially CERCLA Section 102.
- EPA is developing groundwater cleanup recommendations for PFOA and PFOS at contaminated sites.

A groundwater monitoring well at the Escambia (Pensacola) Wood Superfund site on Florida's Gulf Coast.

EMBRACING HIGH PERFORMANCE: CONTRACTS AND TRAINING

RAF Contracts and Training

The Region 4 Superfund program continues to lead in EPA's ongoing transformation in procurement and acquisition of contracted services. Whether in deployment of the national Superfund Remedial Acquisition Framework (RAF) or in multi-regional collaboration for the next generation of Superfund Technical Assessment and Response Team (START) contracts, Region 4 is helping shape the future of Superfund contracting.

Superfund RAF Transition and Deployment Contracts

The Superfund RAF transition and deployment process made significant advances in Region 4 in FY 2018. To meet ongoing project requirements and to allow for a sequential transition to the RAF contracts, both regional Remedial Action Contracts were extended for up to two years through Justification for Other than Full and Open Competition (JOFOC) notices. The JOFOC notices required intensive project planning and Headquarters coordination prior to the expiration of the existing contracts. An updated RAF transition plan was developed from project planning data in the Superfund Enterprise Management System (SEMS). The Remedial Program Management Coordinator led a program-wide effort to evaluate and update SEMS project planning data in conjunction with the Information Management Coordinator as part of FY 2019 remedial work planning.

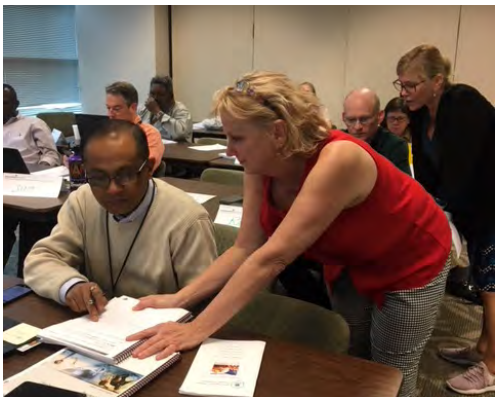
RAF Environmental Services and Operations Contracts

The RAF Environmental Services and Operations (ESO) suite of multiple-award small business contracts were awarded.Region 4 was selected as the "early adopter" to develop and implement the new task ordering process. Three ESO task order projects were identified and prepared for competitive bidding and award in FY 2019: Sanford Dry Cleaners site (Florida) – long-term response action, Flash Cleaners site (Florida) – long-term response action, and Velsicol Chemical Corp. Hardeman County site (Tennessee) – remedial action.

Start 5 Contract

The START 5 contract is the first multi-regional joint solicitation for acquisition of START services in EPA history. START contracts date back to the beginning of the Superfund program and provide full-service technical assistance capability to EPA emergency response, removal and site assessment. The joint Region 4/5 acquisition involves coordination and synchronization of contract requirements that have evolved on a regional basis over prior awards. It is expected that future EPA START contracts will be joint awards using the Region 4/5 acquisition as a model to improve efficiency. A comprehensive contracts training program for Superfund and contracts staff was implemented this year. The training includes four programmatic multi-day training modules for the new RAF contract suites, as well as intensive multi-week training on federal contract fundamentals in statements of work/performance work statements, source selection and advanced source selection. In total, Superfund staff will have access to more than 300 continuous learning points of contracts training in 2018 and 2019.

Innovative Federal Facility Training Led by Region 4 Superfund RPMs



Region 4 Superfund staff developed a comprehensive federal facility cleanup training manual and course that includes statutory and regulatory frameworks as well as technical issues specific to federal facility cleanups. The course empowers Superfund RPMs with a comprehensive information resource tailored to the federal facility response program. In 2018, the course was offered in Philadelphia, San Francisco and Atlanta. Region 4 Superfund RPMs taught the course in all three locations. In 2019, the course will be offered in Chicago, Seattle and Richland, Washington. It is now an integral part of the EPA CERCLA Education Center's Superfund Program Curriculum.

CONNECTING COMMUNITIES, SHARING INFORMATION

Communities and EPA's local, state, tribal and federal partners rely on accurate Superfund program information. Region 4 Superfund staff also rely on access to comprehensive information generated during the program's environmental restoration efforts. We work hard to make sure this information is up-to-date, transparent and easily accessible, serving as a vital and valued shared resource.

Region 4 Superfund has invested substantial resources over the long term to effectively manage and provide program information to EPA staff and share this information with states, communities and other interested parties. To accomplish this goal, we focused on providing Superfund communities with timely, comprehensive information resources and enhancing the program's website.

New and Updated Materials Highlight Reuse Opportunities and Success Stories across Region 4

Ready for Reuse Fact Sheets

Region 4 Superfund updated 75 Ready for Reuse fact sheets and drafted two new fact sheets for FY 2018. These fact sheets provide clear, easy-to-read overviews of a site's reuse status, cleanup status and redevelopment opportunity/potential. The new fact sheets highlight the opportunities for reuse at the American Brass Inc. and the Redwing Carriers, Inc. (Saraland) Superfund sites in Alabama.

- American Brass Inc. is a 148-acre property partially in agricultural use for peanut production. Groundwater monitoring is ongoing and restrictions on shallow groundwater use are in place. The northern part of the site is vacant, located near highway and rail access, and ready to support additional site uses.
- Redwing Carriers, Inc. is a 5-acre area where cleanup has been completed. The site was cleaned up to residential standards, allowing for unlimited use and unrestricted exposure. It is ready for reuse. All utilities are available on site.

Region 4 Ready for Reuse fact sheets are available online at https://www.epa.gov/superfund-redevelopment-initiative/sites-ready-reuse-fact-sheets.

Site Redevelopment Profiles

Site redevelopment profile fact sheets provide an overview of contaminated or formerly contaminated sites and their paths toward supporting beneficial reuse. In FY 2018, Region 4 Superfund shared four site examples across the Southeast. The fact sheets highlight reuse successes and opportunities at the Pioneer Sand site in Pensacola, Florida, the Florida Steel site in Indiantown, Florida, the Woolfolk Chemical Works, Inc. site in Fort Valley, Georgia, and the Pepper Steel & Alloys site in Medley, Florida.

Site redevelopment profiles for all Regions, including Region 4, are available online at https://www.epa.gov/superfund-redevelopment-initiative/superfund-redevelopment-initiative-success-stories.

Region 4 Superfund's fact sheets include the Kerr-McGee Chemical Corp. site in Columbus, Mississippi. EPA recently highlighted community outreach efforts such as this public meeting as well as expedited cleanup at the site. See page 9 to learn more about the site and recent milestones.

EXCELLENCE, INTEGRITY AND EXPERIENCE: Region 4 Superfund Staff Awards

Every day, EPA employees work in offices, laboratories and communities across the Southeast to protect public health and the environment. Whether they are investigating pollution issues at the community level, conducting cutting-edge research on environmental health impacts, working behind the scenes on the legal aspects of rulemakings, supporting community-led reuse planning projects, or carrying out activities that support all of these efforts – Region 4 Superfund staff are on the front lines of environmental protection.

In 2018, the remarkable efforts and dedication of Region 4 Superfund staff were recognized with a range of national and regional awards.

National Honor Award

❖ Silver Medal – Fort Gillem Shines as a National Example of BRAC Reuse and Redevelopment	Excellence in leadership and commitment in ensuring the expedited cleanup of the Fort Gillem BRAC installation in Georgia, using an innovative approach based on unprecedented use of a RCRA § 7003 Unilateral Administrative Order. This approach expedited the cleanup and eliminated the need for NPL listing, accelerating reuse and redevelopment activity.

National Notable Achievement Awards

❖ Federal Facilities Response – RPM of the Year	Exceptional leadership and management of complex projects while exhibiting outstanding technical and planning skills in proposing protective remedies for expedited cleanup at Tyndall Air Force Base in Florida.
❖ Federal Facility Remedial Project Management CERCLA Course Development and Training Team	Outstanding leadership in developing and implementing the national Federal Facilities RPM Training Curriculum.
❖ Regional Science – Superfund Field Demonstration Team Award	Provided outstanding innovation and creativity in researching and developing state-of-the-art methods for soil sampling on Superfund properties.
❖ Superfund Site Remediation Enforcement Team Award – Hurricane Irma Finance Support Team	Exemplary and exceptional customer service for EPA and FEMA in the response to Hurricane Irma.

Regional Honor Awards

❖ Virginia Carolina Chemical Company (VCC) Sites Team	Hard work overseeing ExxonMobil's removal action activities at 27 hazardous waste sites across Region 4, and ensuring the sites are suitable for potential reuse and development.
❖ American Creosote Works, Inc. (Pensacola Plant) Superfund Site Team	Outstanding work at the American Creosote Works, Inc. (Pensacola Plant) Superfund site, where sound scientific principles in risk assessment and analysis of dioxin contaminants will result in a successful residential soil cleanup in Pensacola, Florida.
❖ NPL Hazardous and Radioactive Waste Sites	Exemplary leadership and superior management skills for high-profile and complex NPL hazardous and radioactive waste sites across multiple EPA Regions.
❖ Eastern Heights / Grenada Stamping Air Study Team	Provision of critical geophysical evaluation and technical support to address potential contamination affecting communities in the Eastern Heights residential community of Grenada, Mississippi.
❖ Lean Workshop Team	Role informing the national award nomination process, which resulted in efficiencies and reduced cycle time for overall processing time of award nominations.
❖ Office Safety Committee	Accomplishments in Region 4's Safety and Occupation Health Program, including development and implementation of new tools at the divisional level to expedite safety-related information and resources to employees.
❖ Donald J. Guinyard Pioneer Career Achievement Award	Demonstration of long-term commitment to protection of human health and the environment, earning the respect of his/her peers, and demonstrating a dedication to assisting others within EPA or through community service.

FY 2019 PRIORITIES

To protect public health and the environment, the Superfund program focuses on making a visible and lasting difference in communities, ensuring that people can live and work in healthy, vibrant places. The Superfund program continues to prove vital to the sustainability of communities across the country, as well as serve as the foundation for ensuring the effective and efficient remediation of sites.

In the year ahead, Region 4 Superfund's efforts will continue to directly support EPA's overarching program priorities.

Revitalize Land and Prevent Contamination.

Increase Transparency and Public Participation.

Prioritize Robust Science.

Improve Efficiency and Effectiveness.

Enhance Shared Accountability.

Streamline and Modernize Processes.

Create Consistency and Certainty.

To address these priorities in FY 2019, Region 4 Superfund will continue to:

Hold PRPs accountable for cleaning up sites and supporting their return to productive and beneficial use.

Focus on stakeholder and partner engagement during all phases of the Superfund cleanup process.

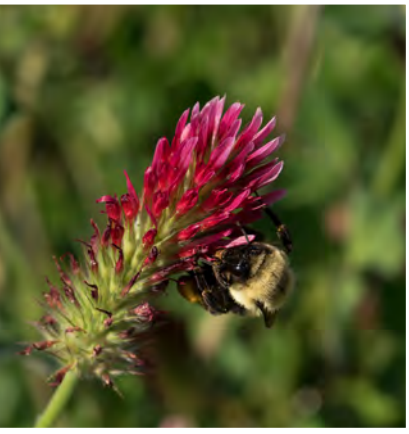
Foster innovation in remedial planning and approaches to promote effective and efficient cleanups.

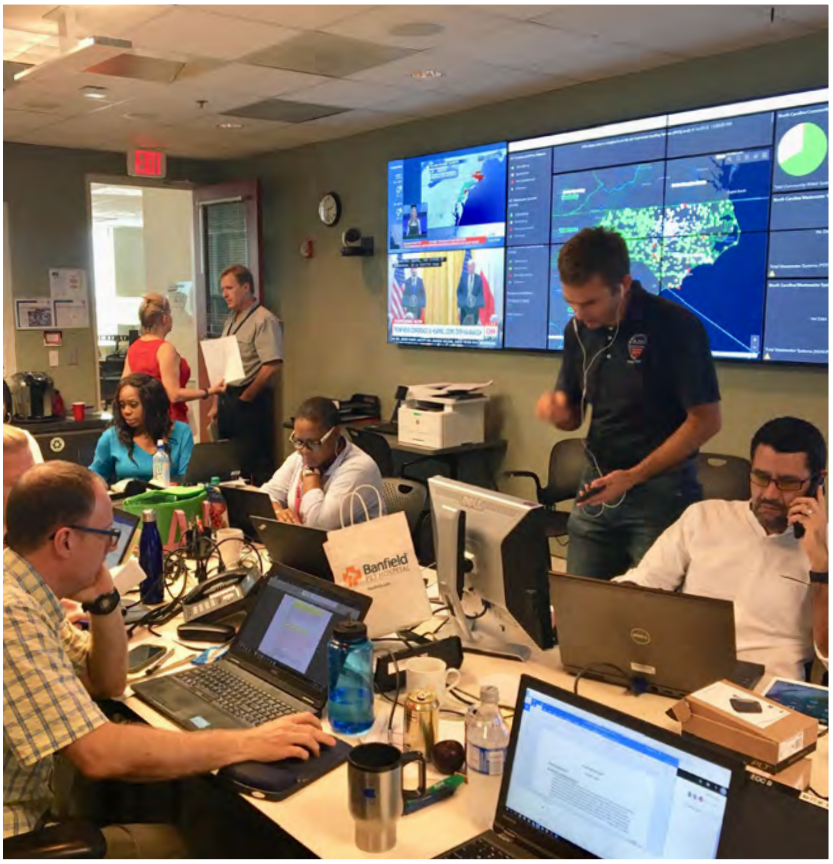
Further promote cooperative federalism by cultivating partnerships with Region 4 states and communities to advance environmental protection and strengthen healthy communities.

Looking ahead, we recognize that this year's activities serve as a strong foundation for FY 2019. We look forward to strengthening our approaches, engaging partners and stakeholders, and pursuing innovation to make sure Region 4 Superfund remains a national leader in public health and environmental protection.

REGION 4
Superfund

ANNUAL REPORT





EPA
United States
Environmental Protection
Agency

EPA 560/R-18/004 | December 2018

www.epa.gov/aboutepa/about-epa-region-4-southeast