

Region 4 Superfund and Emergency Management



Annual
Report

2019



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Front cover: Cleanup and mixed-use revitalization have transformed the Calhoun Park Area Superfund site in Charleston, South Carolina. New uses after cleanup include a shopping center, the South Carolina Aquarium, green space, walking and biking areas, a ferry terminal, parking and restored shorelines.

Welcome and Overview



In fiscal year (FY) 2019, the Region 4 Superfund and Emergency Management Division continued its trend of improving the lives of the citizens across the Southeast, as well as incorporating innovative approaches in the remediation of contaminated properties. Our accomplishments would not have been possible without the dedication of programmatic staff, federal, state and local stakeholders, and community members, all whom are critical partners in these efforts.

We continue to excel nationally targeted milestones and explore opportunities to further advance the program's effort in returning sites to productive use. Whether the focus is expediting cleanup and remediation or holding responsible parties accountable, our commitment to collaboration and effectively utilizing our partnerships directly contributed to the successes realized by the program.

In this year's report, you will read further about:

- Efforts and successes related to the Superfund Task Force.
- Incorporation of the U.S. Environmental Protection Agency's (EPA's) FY 2018-2022 Strategic Plan.
- National realignment efforts implemented.
- Application of EPA's "enforcement first" approach in holding responsible parties accountable.
- Increase in targeting sites to return to communities for reuse efforts and deleting sites from the National Priorities List.
- Enhancement of emergency response and preparedness efforts through the use of innovative tools, comprehensive training and rigorous exercises.
- Continuation of partnerships with state counterparts and local governments in identifying sites for expediting cleanup activities.
- Implementation of Lean management tools to optimize and effectively streamline our operations and program.
- Use of best science practices and innovative techniques in making remedy decisions and effecting cleanup efforts.
- Protection of children's health and the execution of educational programs.

During FY 2019, we emphasized accelerating cleanup and streamlining operations. As a result, we have been able to further enhance several processes, while capitalizing on incorporating innovative concepts yielding an improved utilization of resources. Though our inventory of complex projects remains, our staff and management team continue to exceed expectations and showcase the Region as a national leader in many areas of focus for EPA. I am proud and appreciative of all of the work accomplished in FY 2019. I look forward to sharing the advancements and experiences of FY 2020. Thank you for your support, innovation and investment in our commitment to protecting human health and the environment.

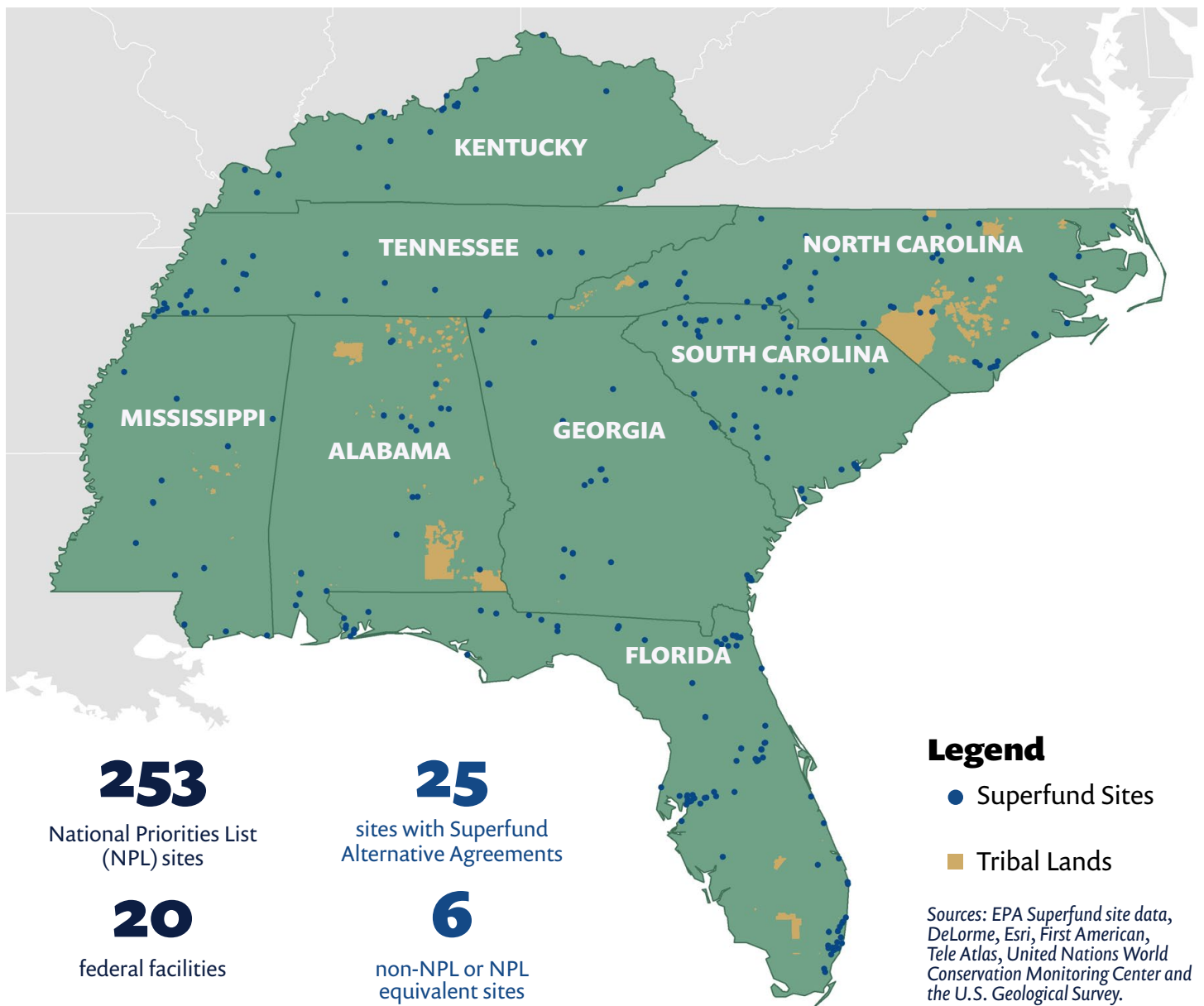
A handwritten signature in cursive script that reads "Franklin E. Hill".

Franklin E. Hill
Director
Region 4 Superfund Division and Emergency Management

Region 4 Superfund and Emergency Management Division (SEMD): An Overview

SEMD responds rapidly and comprehensively to address environmental emergencies and clean up some of the nation's worst hazardous waste sites. Headquartered in Atlanta, EPA Region 4 serves the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and six federally recognized tribes.

Each day, we focus on making sure people can live and work in clean and healthy places. On the ground, this means listening to communities, working with our partners, and innovating to restore and protect the environment.

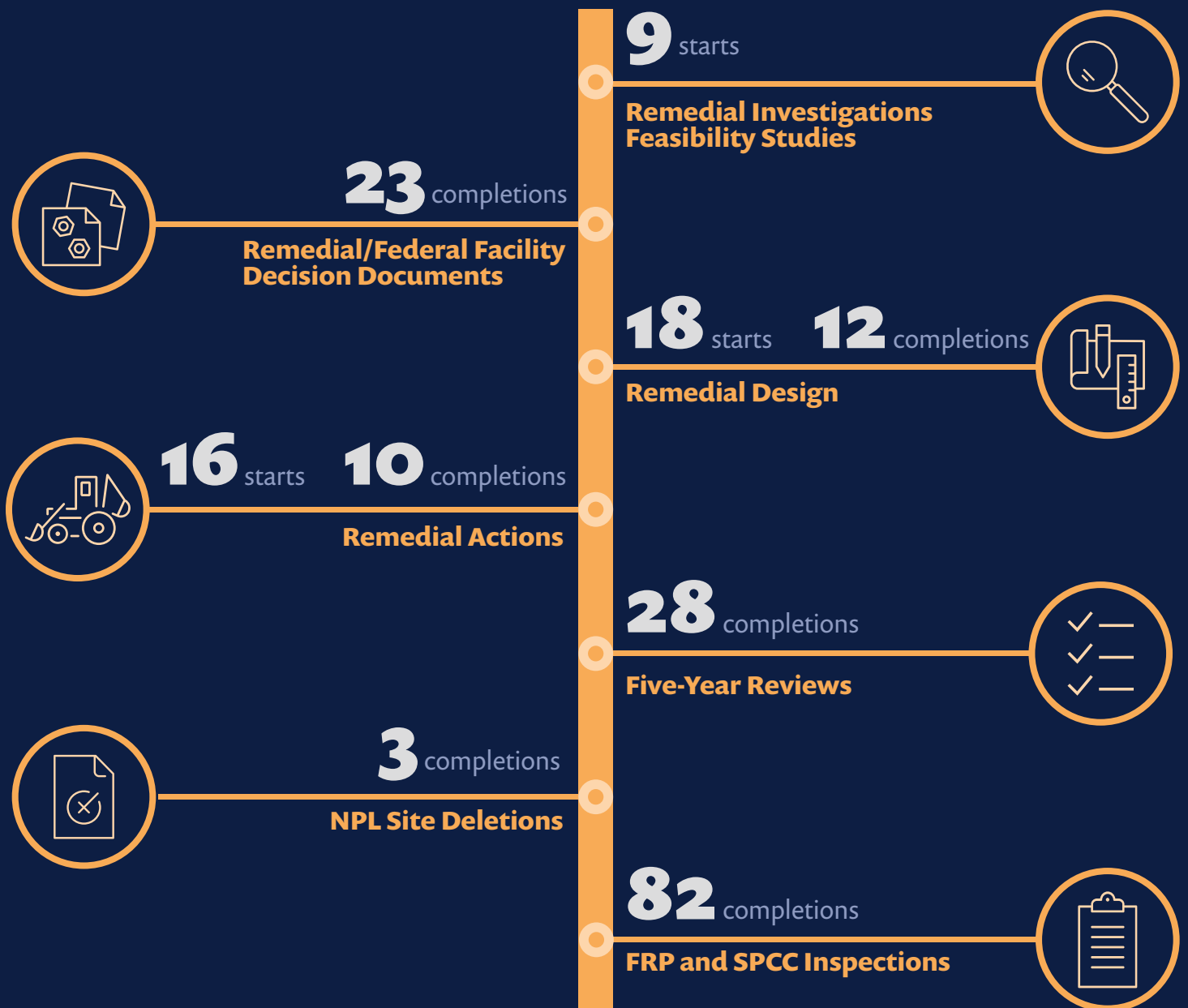


The mission of the Region 4 Superfund and Emergency Management Division is to protect public health and the environment. Headquartered in Atlanta, Georgia, EPA Region 4 serves the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and six federally recognized tribes. Region 4 is one of the largest and fastest-growing EPA Regions in the country.

Fiscal Year 2019: The Year in Review

EPA's Superfund program makes a visible and lasting difference in communities by cleaning up the nation's worst hazardous waste sites, tackling threats to public health and our natural environment, supporting local economies, enhancing quality of life, and preventing future hazardous substance releases. During FY 2019, SEMD met or exceeded the total targeted measures accomplished in the categories tracked below.

Superfund Program Targeted Measures Accomplished



Superfund Program - Other Performance Measures Accomplished



100%

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



14

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



7

Enforcement Negotiation Starts and Completions



25

Community Involvement Plans Completed



Sites Proposed to the NPL



Final NPL Sites



Technical Assistance Grants Awarded

Government Performance and Results Act Measures Accomplished



10

Remedial Action Project Completions



45

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



1

Construction Completion



70

Remedial Site Assessment Completions



5 Superfund Sites with Human Health Protection Achieved



5 Superfund Sites with Groundwater Migration under Control



10 Superfund Sites Ready for Anticipated Use

2019 Project Headlines

2019 Project Headlines

National EPA Effort Aligns Superfund Program Functions, Enhancing Effectiveness and Transparency



In 2019, EPA underwent a national realignment. The goal was to better align programmatic functions and resources with EPA Headquarters and improve interactions with external stakeholders.

The realignment enhanced EPA's operational effectiveness and provided greater transparency for its customers and partners. The alignment brought several changes to the Region 4 Superfund program. The Division is now referred to as the Superfund and Emergency Management Division (SEMD). SEMD's functions were also modified. Functions associated with the Risk Management Program and the Emergency Planning and Community Right-to-Know Act (EPCRA) were incorporated as part of the Superfund Emergency Response and Removal Branch's responsibilities.

To better align external engagement and outreach nationally, EPA's community involvement coordinators were realigned from Superfund to the External Engagement and Outreach Office, which reports directly to the Regional Administrator's Office. The work performed by the coordinators has not changed and remains focused on assisting communities located near Superfund sites across the Southeast.

Rapid Community Outreach, Temporary Relocation Assistance Accompany Firefighting Efforts in South Carolina



At the Able Contracting Fire in Jasper County, South Carolina, SEMD provided emergency response assistance to address the needs of the primarily low-income, Spanish-speaking community living next to a mountain of trash that had been smoldering for months.

EPA provided temporary relocation assistance to the 11 families affected by the fire, ensured their living needs were met, held a public meeting for the community, and issued fact sheets and daily air-quality reports.

In addition to aggressive firefighting efforts, cleanup efforts led by SEMD and the South Carolina Department of Health and Environmental Control (SCDHEC) include the relocation and cooling and disposal of debris from the 2-acre recycled materials processing facility, minimizing impacts on public health, and evaluating potential environmental impacts.



Long-Term Cleanup Protecting Environmental Justice Community in Florida

THE CLEANUP HAS REMOVED:



OVER 50,000
tons of impacted
soil and



300,000
gallons of water
from



OVER 50
off-site residential
properties and the

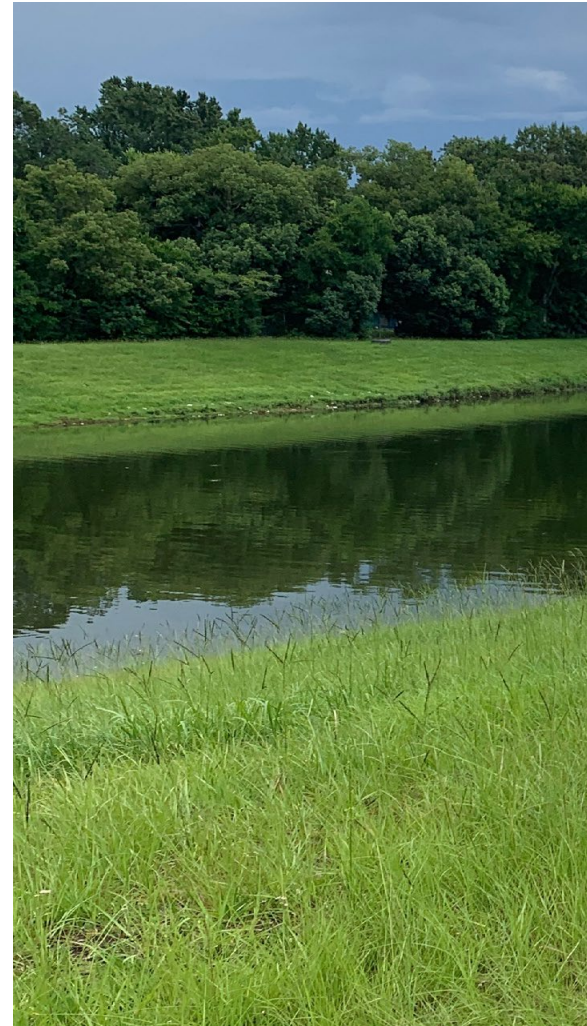


12.5-acre
wood treatment
plant

SEMD has been working with local, state and federal stakeholders for several years to improve public health and environmental outcomes at the Fairfax Street Wood Treaters Superfund site in Jacksonville.

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 cleanup protects public health in several nearby neighborhoods. SEMD's activities at the site illustrate how EPA is accelerating cleanup, empowering communities and facilitating reuse.

Site activities rely on a collaborative approach to expedite cleanup and maximize environmental and public health benefits. This was done by building and strengthening partnerships in the community to promote redevelopment and community revitalization. Cleanup was divided into parallel cleanup tracks to expedite efforts for 51 off-site residential properties and the 12.5-acre wood treatment plant simultaneously. Cleanup goals were achieved six months ahead of schedule, protecting vulnerable populations, including youth and the elderly in this environmental justice community.



Region 4's partnership with the Florida Department of Environmental Protection (FDEP) was key to these efforts. FDEP took the lead on the cleanup of contaminated soils at Susie Tolbert Elementary School during the summer break and is also remediating residential properties north of the site. FDEP is staging equipment on the 12.5-acre plant property EPA is



remediating to ensure it is secure while not in use. Sustained community outreach and engagement has been an integral part of SEMD's approach at the site. Activities have included public meetings and availability sessions to provide regular site updates as well as community-

wide distribution of fact sheets and other information materials. EPA also issued a status comfort letter to support the site's redevelopment and offered job training opportunities to local residents through EPA's Superfund Job Training Initiative. To learn more about these activities, please see page 52.



Region 4 Leads EPA Lean Management System (ELMS) Implementation

In late 2018, Region 4 began implementing the EPA Lean Management System (ELMS). This continuous improvement system helps the Region identify gaps and inefficiencies

in operations, procedures and processes, and ensures that Region 4 responds to and resolves challenges quickly and thoroughly using Lean principles and tools.



Within SEMD, ELMS identified 15 processes requiring further ELMS integration; Division Director Franklin E. Hill identified two of them as high-priority processes. These processes involve the Division's efforts to assess NPL sites after natural disasters (see page 22) and streamlining site assessments (see page 26). All 15 processes affect internal and external stakeholders, and all enable opportunities to streamline resource utilization.

SEMD maintains a strong commitment to work ethically and innovatively by embracing ELMS, further strengthening its reputation as a high-performing organization in the Southeast and nationally. In 2019 and looking ahead to 2020, SEMD will continue to identify opportunities to streamline operations and upgrade management systems. These upgrades will include involving external stakeholders so that further process improvements can be made, highlighting SEMD's commitment and dedication to protecting public health and advancing environmental protection.

For More Information

To learn more about ELMS, please visit www.epa.gov/aboutepa/about-office-continuous-improvement-oci.

The Superfund Task Force Announces Final Report and Accomplishments

In September 2019, EPA Administrator Andrew Wheeler announced the release of the Superfund Task Force final report at the Southside Chattanooga

Lead Superfund site in Tennessee. The Task Force was established to provide recommendations for improving and expediting site cleanups and promoting redevelopment.



Through the work of the Task Force, sites across the country have seen notable progress in accelerated cleanups, site redevelopment, community revitalization, and expedited reduction of risks to human health and the environment. The Southside Chattanooga Lead event also marked the seamless transition from time-critical removal action to remedial action, illustrating several Task Force Recommendations in action.

Superfund Task Force Goals

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

SEMD's efforts to protect public health and safeguard the environment directly support EPA's priorities for the future. In 2019, these efforts included several immediate actions under Task Force Goal #1 (expediting cleanup and remediation) and Goal #2 (reinvigorating cleanup and reuse efforts by potentially responsible parties).



Clinch River Corporation (Harriman, Tennessee)

Non-time-critical removal action removed asbestos and demolished a former industrial facility, protecting public health and supporting the site's return to beneficial use.

LCP-Holtrachem (Riegelwood, North Carolina)

As part of Consent Decree negotiations for the site's cleanup, EPA adjusted financial assurance requirements, which reduced the PRP's immediate outlay of cash and allowed for continued good faith negotiations. The adjustment reduced the PRP's immediate financial burden while ensuring the availability of enough resources to complete the cleanup if necessary.



Kerr-McGee Chemical Corp. (Columbus, Mississippi)

Voluntary early action addressed immediate risks from surface soils in the Pine Yard tract. Today, the majority of cleanup construction work has been completed by local contractors and stakeholders.

Velsicol/Hardeman County Landfill (Toone, Tennessee)

Implementation of optimization plan developed by third-party contractor for part of the cleanup (soil vapor extraction) will significantly reduce site cleanup costs. An early-adopter pilot project at the site also awarded a contract under EPA's new Remedial Action Framework. The contractor will operate and maintain the operable unit 2 (OU2) source treatment soil vapor extraction system at the site.



Superfund Sites in Region 4 Leaving the NPL After Successful Cleanups



Tennessee Products (Chattanooga, Tennessee)

Operations of a coal carbonization facility at this site resulted in soil, sediment, groundwater and surface water contamination. EPA, the Tennessee Department of Environment and Conservation, and the site's PRPs have investigated site conditions and taken steps to protect people and the environment from contamination. Potential future uses at the site include recreation areas and commercial facilities. EPA deleted the site from the NPL in August 2019.



Escambia Wood – Pensacola (Pensacola, Florida)

The site includes the 31-acre former facility where the Escambia Wood Treating Company manufactured treated wood products from 1942 to 1982, as well as 70 acres of nearby former neighborhoods. Following cleanup, EPA deleted 40 acres of the former residential properties from the NPL in September 2019. Community partners are working to redevelop the site as the Mid-Town Commerce Park.



Townsend Saw Chain Co. (Pontiac, South Carolina)

Companies manufactured metal products at this 50-acre site, which is now home to commercial and industrial uses. After cleanup, EPA deleted the soil, sediment, surface water and surficial aquifer portions of the site as well as most of the intermediate aquifer from the NPL in September 2019.

Region 4 Responds to Natural Disasters across the Southeast and the Nation in 2019

Responding to natural disasters is a critical component of the SEMD response program, and FY 2019 was a very busy year for the Division in that respect. Region 4 EPA on-scene coordinators (OSCs) and Response Support Corps members responded to hurricanes Florence, Michael and Dorian in Region 4 and provided response support to Region 9 for wildfires in California and Typhoon Yutu in the Western Marianas Islands.

For example, Hurricane Florence made landfall in North Carolina on September 14, 2018. For three days, the storm slowly made its way through the Carolinas, bringing heavy rainfall and catastrophic flooding. Before Hurricane Florence made landfall, SEMD deployed oil and hazardous materials technical experts to liaise with state agencies and the Federal Emergency Management Agency (FEMA) at the State Emergency Operations Centers in North Carolina and South Carolina. SEMD deployed emergency responders to affected areas of North Carolina under a FEMA mission assignment and performed oil and chemical facility and spill assessment, identified and recovered orphaned oil and chemical containers, and coordinated closely with the U.S. Coast Guard for response work across jurisdictional boundaries. Using EPA funding, the SEMD prioritized NPL sites in the affected states for post-landfall field assessment. All assessment and response data were captured in the field via electronic forms using mobile devices and uploaded to the Region 4 Regional Emergency Operations Center in near real time.

“ For nearly 40 years, the Superfund program has cleaned up the nation’s most contaminated sites, directly improving public health and breathing new life into struggling areas of the country. **Superfund allows communities and businesses to rediscover and repurpose land that was once abandoned or written off.** ”

**- EPA ADMINISTRATOR
ANDREW WHEELER**

Enforcement First, Polluters Pay

SEMD'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 to the maximum extent possible. 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 First, Polluters Pay

National EPA Effort Aligns Superfund Program Functions, Enhancing Effectiveness and Transparency

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. SEMD's experienced and trained staff vigorously pursues enforcement and cost recovery activities. In line with EPA enforcement goals, we returned \$7.0 million in taxpayer funds to the Agency and reached agreements with PRPs to conduct \$59.4 million in cleanup work in 2019. Our enforcement program continues to identify and implement best practices to expedite site cleanups and optimize PRP-lead removals and remedial investigations by referring \$20.9 million to the U.S. Department of Justice (DOJ) for litigation.

Civil Investigators Highlights

- Initiated the Technical Evaluation Panel for the next Enforcement Support Services (ESS) contract.
- Developed a new Performance Work Statement and Interagency Government Cost Estimate document for the upcoming ESS contract.
- Monitored contractor performance and procedures by providing oversight and technical directions and maintaining credentials as determine by EPA Order 3510 and CERCLA Section 104.
- Accomplished 5 Starts, 6 Completions and 16 ongoing PRP Searches during FY 2019.
- Supported and provided many technical assistance services with administrative records and access agreements.

Enforcement Facts



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

ENFORCEMENT ACCOMPLISHMENTS IN REGION 4, 2019

Cost Recovery

8 agreements and
1 Consent Decree entered,
addressing
\$1.8 million
in past costs.

Referrals

5 referrals,
\$20.9 million
in value.

GPRA Target Completions

8 work orders totaling
\$59.4 million
in injunctive relief.

Status/Comfort Letters

15 letters issued.



Did You Know?

Beginning in 1953, a chemical company began producing chemicals at the B.F. Goodrich site. Improper waste disposal practices contaminated the site's groundwater and soils as well as the Tennessee River.

Today, chemical manufacturing continues at the site, but the facility is owned and operated by a different company. The facility and related on-site businesses provide **over \$31 million** in estimated annual income and generate **over \$210 million** in estimated annual sales.

Innovative Approaches Secure and Accelerate Lower-Cost Cleanup in Kentucky

The B.F. Goodrich site is an active chemical manufacturing facility in Calvert City, Kentucky. The site's \$107 million remedy, selected in 2018, includes a 3-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 a 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 safety hazards during construction.

SEMD 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 Record of Decision (ROD) was signed.

SEMD and the PRPs successfully executed the Administrative Order on Consent for the site's remedial design in 60 days and remedial design work is currently underway.



Did You Know?

A former landfill at the Armstrong World Industries site has been cleaned up and is now a thriving pollinator meadow.

The Armstrong Macon Meadow is planted with over 50 locally native plants representing the natural history of central Georgia; the 4.5-acre area provides habitat for bees, butterflies, birds and other species. Collaboration among SEMD, Armstrong World Industries and the nonprofit Pollinator Partnership made the meadow possible.

Agreements Secure Investigations and Recover Past Costs at Two Georgia Sites



Macon Naval Ordnance Plant (Macon, Georgia)

EPA has finalized an Administrative Order on Consent with several PRPs for the remedial investigation and feasibility study at this former ordnance production facility, where trichloroethylene has impacted the groundwater beneath the site. The Order includes payment of EPA’s past costs incurred at the site in the amount of \$1.07 million and the PRPs’ responsibility for future response and oversight costs at the site. The site remains in continued use—Allied Industrial Park is located on site. As of 2019, 17 on-site businesses employed 646 people and generated an estimated \$73 million in annual sales revenue.

Armstrong World Industries – OU2 (Macon, Georgia)

EPA executed an Administrative Order on Consent with several PRPs for the cleanup of this former acoustic ceiling tile manufacturing facility. The Order includes payment of EPA’s past costs incurred at the site in the amount of \$1.14 million and the PRPs’ responsibility for future response costs at the site.



Site Agreement in South Carolina Enables Voluntary Cleanup, Supports Mixed-Use Redevelopment

In October 2018, EPA finalized an Administrative Settlement Agreement with prospective purchaser HR Charleston VII, LLC (Highland Resources) for response actions at the Koppers Co., Inc. site in Charleston, South Carolina. A wood-treating facility operated on site from about 1945 to 1978. The facility’s wood-treatment compounds, primarily creosote, were identified as constituents of concern. Under the terms of the agreement, Highland Resources plans to redevelop this large blighted former industrial area as a mixed-use

project next to the Ashley River and the King Street area, Charleston’s main business/retail thoroughfare. The project will include residential uses; the city has rezoned the area for mixed-use and residential uses. The work Highland Resources performs to support residential land use is a voluntary modification of the remedy required in the site’s 1995 Interim ROD and 1998 ROD. The agreement also includes payment of EPA’s oversight costs.

Emergency Management and Response

Preparedness and Prevention

Revitalization of Key Emergency Response Corps and Leadership Positions in 2019

The Response Support Corps (RSC) is EPA's standing resource of volunteers who provide critical support to the Agency during times of need. These cross-agency volunteers go above and beyond their regular job responsibilities to help with response efforts during national emergencies.

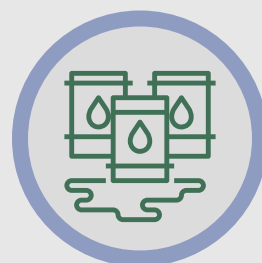
RSC members take basic training and stand ready to be activated to work in EPA's emergency operations centers or the field so that EPA can fulfill its role during a disaster response.

During FY 2019, Region 4 experienced an unprecedented demand for resources to respond to hurricanes Florence, Michael and Dorian, and support EPA Region 9's California wildfire response. Nearly 50 RSC volunteers deployed during these events to manage and coordinate the resources and personnel needed to address these major responses. Fifteen members of the Region 4 RSC also traveled to Philadelphia to receive advanced training in Key Leadership Positions (KLPs). The Region 4 RSC continued recruitment efforts during 2019 and provided new member orientation training for 25 volunteers. EPA also provided training for nine Gulf of Mexico Program RSC volunteers in Biloxi, Mississippi.

Earthquake Preparedness Exercise Provides Opportunity for Region 4 Leadership Training

In June 2019, 47 RSC volunteers received KLP training as part of the three-day Shaken Fury Exercise conducted by the Federal Emergency Management Agency. The training exercise enabled RSC personnel to practice their skills throughout an unfolding scenario.

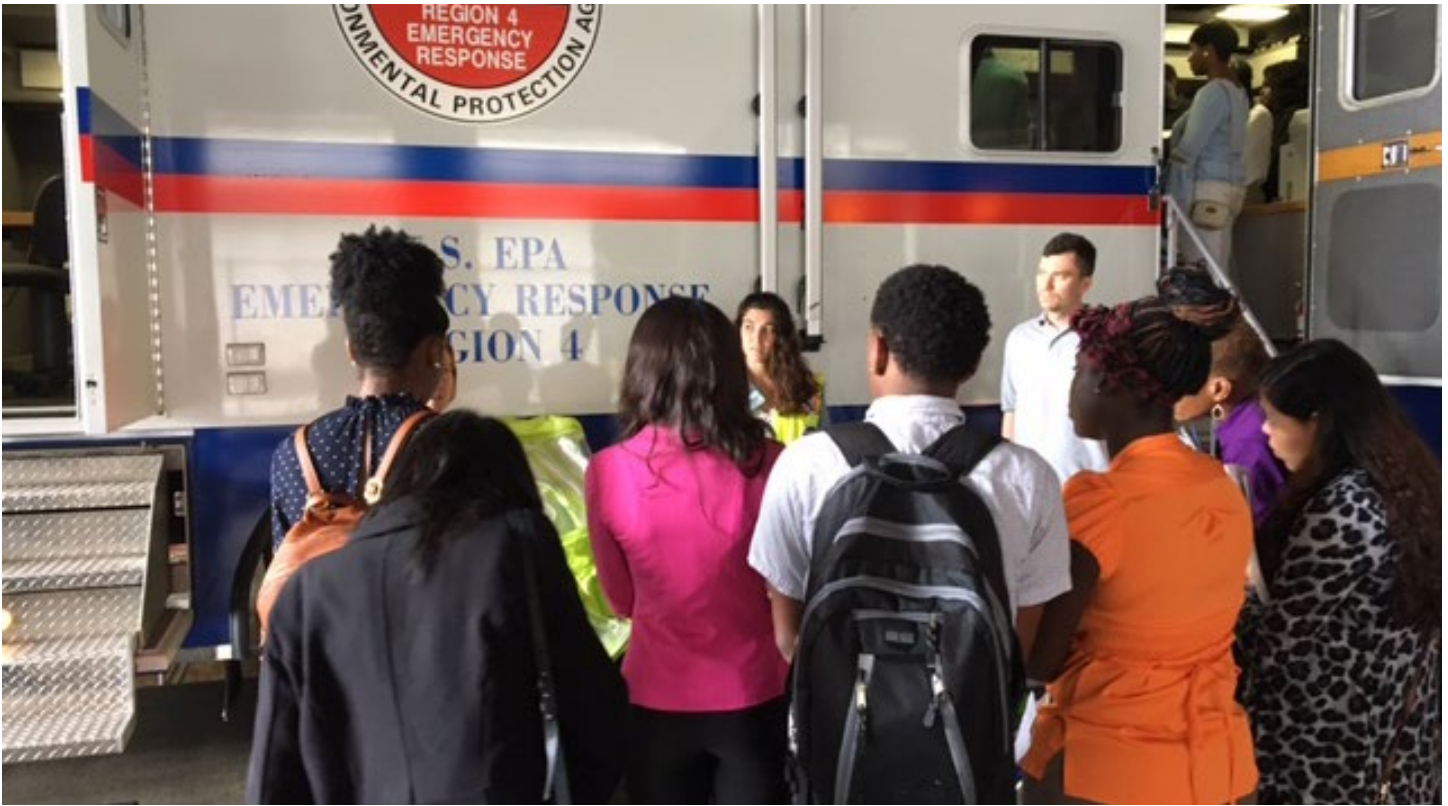
Shadowing/observer experiences were also offered to allow new RSC staff the opportunity to learn more about EPA's role while responding to large-scale oil and hazardous material spills after a major earthquake. Instructors and coaches for this event included EPA-certified instructors, members of EPA's National Incident Management Assistance Team and technical support contractors.



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

SEMD 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, SEMD will be there, coordinating closely with local responders and other emergency officials.



Technology Upgrades Optimize Region 4's Emergency Response Capabilities

SEMD responds rapidly to oil discharges, chemical releases and other natural disaster events in remote locations throughout the Region and nation with state-of-the-art technologies in its mobile operation center.

SEMD procured its Mobile Command Post (MCP) in 2007. The vehicle is designed to rapidly respond to any scene, quickly establish and maintain communications, and efficiently support the management of the site operations during an ongoing emergency. From 2007 to 2018, there had been no major technology upgrades to the MCP.

In 2019, SEMD made a series of updates and upgrades to the MCP and it is now once again a state-of-the-art mobile workspace. Improvements included new field communication and digital networking systems, updated satellite receivers, enhanced driver-assist cameras and safety displays, Wi-Fi networking, high-quality audio/video displays and presentation systems, and new multimedia monitoring displays.



EPCRA Returns to Superfund

EPCRA helps states and communities develop a comprehensive understanding of the chemical threats and hazards in their environment.

EPCRA has four major provisions:

- 1 emergency planning.
- 2 emergency release notification.
- 3 hazardous chemical storage reporting requirements.
- 4 toxic chemical release inventory.

EPCRA increases the public's access to information and knowledge on chemicals at local facilities, how those chemicals are used, and their releases into the environment. States and communities, working with local facilities, can use this information to improve chemical safety and the protection of public health and the environment.

In FY 2019, SEMD provided support for a variety of state and community EPCRA activities, including:

- Outreach at State Emergency Response Commission (SERC) meetings in Tennessee, Alabama and Florida and Local Emergency Planning Committee (LEPC) meetings in Florida and Georgia.
- Coordination with the National Oceanic and Atmospheric Administration and SERCs to revise state-specific information fields for annual chemical inventory submissions.
- Consulting with the Kentucky SERC on EPCRA applicability for a farm supply establishment.
- Coordination with Florida and Georgia SERCs and LEPCs during Hurricane Michael and Hurricane Florence to assess the post-landfall status of facilities regulated under a Risk Management Program (RMP).
- Hosting a regional meeting and roundtable to discuss SERC/ Tribal Emergency Response Commission (TERC) notification requirements under America's Water Infrastructure Act, review planning for natural disaster debris guidance, and share training and exercise resources for chemical facility security and safety.

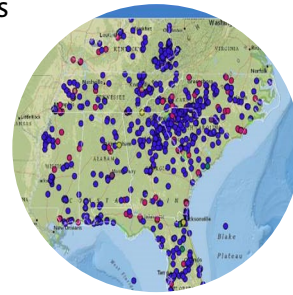


Vital Disaster Response Data Management Strengthens Hurricane Responses, Supports State Capacities

SEMD conducted responses to Hurricanes Florence and Michael in 2018 and Hurricane Dorian in 2019.

Data management during these responses helped prioritize facilities and other locations for post-storm assessment and documenting assessment and removal activities using mobile devices, cloud storage and real-time mapping. Data were maintained at their source and shared simultaneously with state and federal response partners. Assessment data was captured for oil-related facilities, water and wastewater plants, NPL sites, and disaster debris management facilities. Reconnaissance and removal data were also captured for orphaned containers for

oil and hazardous materials. Models generated by government and non-government organizations as well as real-time flood monitors were used to establish field assessment locations; a live digital search grid was shared with all response partners to illustrate field team progress.



In turn, state agencies have started using and relying on these best data management practices. FDEP implemented them during Hurricane Michael and the North Carolina Department of Environmental Protection (NCDEQ) implemented them during Hurricane Florence. During future disaster responses in Florida and North Carolina, EPA personnel supporting the state agencies will be able to help populate the state data systems and access the information generated.



Region 4 Efforts Protect Public Health, Ensure Fan Safety at Super Bowl LIII

In preparation for Super Bowl LIII, the City of Atlanta and Fulton County requested SEMD's assistance with air monitoring and BioWatch sampling support.

During the year leading up to the Super Bowl, Region 4 staff participated in outreach meetings with local, state and federal agencies, two interagency consequence management tabletop exercises, a pre-deployment data collection exercise, and a BioWatch Phase One exercise, and established a Memorandum of Understanding between EPA, the U.S. Department of Homeland Security (DHS) and the Metropolitan Atlanta Rapid Transit Authority (MARTA).

Super Bowl LIII took place on February 3, 2019, at Mercedes-Benz Stadium in Atlanta. In the days leading up to the Super Bowl, SEMD co-deployed EPA air monitoring equipment with local government agencies and DHS at Mercedes Benz

Stadium, Vine City MARTA Station, Dome/CNN Center MARTA Station, Georgia World Congress Center and other areas inside the secure event perimeter. SEMD staff began operating out of EPA's Regional Emergency Operations Center in the Sam Nunn Atlanta Federal Center and began to service and troubleshoot EPA air monitoring equipment in preparation for the event. SEMD staff integrated into the All Hazards Incident Command (AHIC) at the State Emergency Operations Center in Atlanta where EPA air monitoring data was reviewed remotely and displayed for federal, state and local agencies in the AHIC.



Through the conclusion of Super Bowl activities, SEMD staff remained an integrated part of the AHIC and EPA teams continued to maintain air monitoring equipment at Super Bowl venues in downtown Atlanta. After the event, SEMD staff removed the equipment and stood down and demobilized from the AHIC. SEMD's efforts helped ensure the safety of fans attending this year's Super Bowl and illustrated EPA's core mission in action, delivering real results to provide Americans with clean air, land and water, and ensure chemical safety.

Disaster Response Data Management: A Closer Look

SEMD has revolutionized the way technology is used to support EPA's responses to significant incidents such as hurricanes Florence, Michael and Dorian. In the face of a natural disaster, we are able to collect, track, analyze and communicate the status of hazardous waste sites. Given EPA's need to integrate information from multiple sources and synthesize a shared, dynamically updated view for all stakeholders, we have been able to develop robust solutions by learning from site-specific activities and scaling them up during significant response events.

EPA is using mobile technologies to capture data in response locations without Internet connection, which is essential in the aftermath of a disaster, and transmit time-critical data to the Region 4 Regional Emergency Operations Center when a connection is available. The GIS technology-based solution includes a common operating picture for tracking, managing and monitoring sites and assets in real-time. This brings data to life and provides context, so emergency managers can share, understand and act on the information collected.

Next-Generation Response Tools: GeoPlatform and EPA VIPER

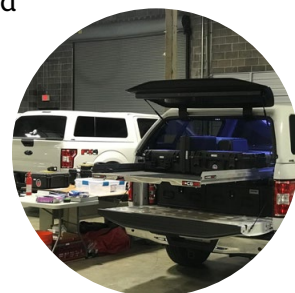
SEMD has made extensive use of EPA's GeoPlatform and VIPER, two dynamic next-generation response tools. GeoPlatform is the hub of EPA geospatial data, services and applications. Sampling data results are displayed in interactive maps on the GeoPlatform from a SCRIBE database on a cloud server. Analysis tools assist in generating excavation areas and surface water flow paths. Progress on time-critical removal actions and emergency responses along with data are released to the public via applications and story maps.



EPA's VIPER is a wireless communications system that transmits data from field sensors for data analysis and visualization. In 2019, SEMD upgraded its VIPER tools to add remote computers. Additional upgrades include expanded mounting hardware for multiple instruments and a radio signal booster for expanded field sensor range. Notable VIPER deployments during 2019 include the Bishops Road landfill fire, the Bartow train derailment, Super Bowl LIII in Georgia and the Able Contracting Fire response in South Carolina.

Next-Generation Response Tools: The Regional Readiness Center (RRC)

SEMD's 13,000-square-foot multi-use facility provides space for the storage, maintenance and deployment of emergency and disaster response equipment, a field-monitoring-instrument shop, and training and meeting space for up to 35 people and can serve as an alternate Continuity of Operations (COOP) location. Response equipment is kept in a continuous state of readiness for routine and emergency use on site, demonstration of the use of the equipment during drills and exercises, and transportation or shipment of the equipment and necessary supplies to active response locations throughout the Region. In 2019, the RRC hosted 10 training courses and four exercises, including an innovative Level A personal protective equipment practical exercise that will be offered quarterly beginning in 2020.



Removal Responses

In addition to prevention and preparedness, SEMD tackles thousands of emergencies involving oil spills or the release (or threatened release) of hazardous substances that are reported in the United States. Emergencies range from small-scale spills to large incidents requiring prompt action and evacuation of nearby populations. Removal responses are common at Superfund sites when the contamination poses an immediate threat to human health and the environment.

Southside Chattanooga Lead (Chattanooga, Tennessee)

The City of Chattanooga has a rich industrial history that includes several metal foundries. This legacy resulted in the use of foundry waste as fill material on residential properties in older areas of the city. As part of EPA's effort to expediate response actions in residential areas, EPA conducted sampling at 355 properties in the Highland Park subdivision in Chattanooga in 2018 and 2019. Of these 355 properties, 130 properties were found to exceed the site-specific remedial goal of 360 parts per million (ppm) lead and 43 properties exceeded 1,200 ppm lead. The 1,200-ppm lead level meets tier 1 removal action criteria for conducting residential soil lead removal as early response actions by EPA. Sampling activities continue in the neighborhood to identify any additional properties which may fall within the Tier 1 category.

The tiered approach being used to address lead contaminated soil in this neighborhood allows for EPA to protect residents from exposure to lead in an expedited manner. This removal action provides rapid response measures to be implemented with a focus on those properties which have the greatest concentration of lead in the soil. The remaining impacted properties will be addressed through a longer-term response action by SEMD's remedial program beginning in late 2019.







35th Avenue (Birmingham, Alabama)

The 35th Avenue Superfund site includes about 2,000 residential properties encompassing parts of three North Birmingham communities—Collegeville, Fairmont and Harriman Park—affected by nearby industrial activities. SEMD has been able to obtain access to and sample 98% of the residential properties. Sampling discovered that 650 properties had soil contamination above acceptable EPA levels. By the end of FY 2019, 475 properties will have been cleaned up. Since the start of site operations, Superfund will have cleaned up 75% of the contaminated residential properties.

A multi-phase removal action to protect public health and the environment began in February 2014. Phase 1 addressed about 50 residential properties that were the most contaminated. Phase 2 began in September 2014 and addressed residential properties where children live, as well as three schools. Phase 3 began in March 2015 and addressed residential properties with the highest remaining carcinogen concentrations (arsenic and benzo(a)pyrene). The site is currently in Phase 4, which began in July 2015 and addresses all remaining residential properties identified for cleanup. This phased approach ensured that the contaminated properties that posed the greatest risk to human health were cleaned up first.



PHASE ONE	PHASE TWO	PHASE THREE	PHASE FOUR
Most contaminated, occupied residential properties.	Properties where children and pregnant women live.	Properties with elevated arsenic and PAHs found in the soil.	All remaining properties needing cleanup.
<i>54 properties cleaned up.</i>	<i>30 properties cleaned up.</i>	<i>35 properties cleaned up.</i>	<i>329 properties cleaned up so far, 192 to go.</i>
			
COMPLETE <i>March - August 2014</i>	COMPLETE <i>September 2014 - March 2015</i>	COMPLETE <i>March - July 2015</i>	IN PROGRESS <i>Since July 2015</i>

Site Assessment Leaning the Site Assessment Process

In 2019, SEMD's Site Assessment Program had the opportunity to streamline and modernize the site assessment process by applying Lean approaches, including identifying and implementing ways to increase efficiency and use best management practices, with the ultimate goal of identifying high-risk/priority sites and moving them through the site assessment process as quickly as possible.

The Lean initiative is a collaborative process with our Region 4 state agency stakeholders. It is being conducted in multiple phases, with goals and milestones to measure progress and success of the program. The overarching goal of the Lean initiative is to achieve a minimum of 25 percent in cost and time savings from initiation to completion of a site assessment project.

During the planning stage, EPA solicited input from our state stakeholders using a survey questionnaire and third-party listening sessions. Information gathered during the planning stage was used to plan and execute a tabletop exercise that brought together state stakeholders, site assessment managers and contractors. The collaborative hands-on event evaluated sites using scenarios that fostered discussion about innovative technologies,



best management practices, and sharing and distillation of ideas. During the exercise, EPA identified issues that were common and most pressing for our stakeholders and discovered ways in which improvements can be made.

Immediately following the exercise, EPA began negotiations for the new cooperative agreements (CAs) grant cycle for the FY 2020/2021 process with state stakeholders. The CAs are an instrumental mechanism used to implement the takeaways from the exercise and the Lean initiative. EPA also initiated pilot studies and



Superfund Site Assessments

These assessments evaluate potential or confirmed releases of hazardous substances that may pose a threat to human health or the environment. Hazard Ranking System (HRS) criteria guide the process, which is carried out by EPA, state, tribal or other federal agency environmental programs. After identification of a site, a series of assessments evaluate the potential need for remedial cleanup.

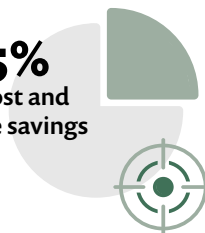
evaluated completed or ongoing projects as case studies to measure our progress in meeting EPA goals and milestones.

With an aggressive schedule for completing the first stage of the Lean initiative, flexibility proved to be vital to our program. EPA quickly made modifications to the tabletop exercise and addressed one of the key issues facing the stakeholders by conducting a vapor intrusion training that was beneficial to all participants. The pilot studies also show the investments the program has made to save time and money.

Overarching Goal of the Lean Initiative

ACHIEVE A MINIMUM OF

25%
in cost and
time savings



Integrated Site Assessments

These collaborative investigations meet data needs for SEMD's removal and remedial programs, resulting in quicker decisions and greater responsiveness to threats to human health and the environment. In 2019, SEMD conducted Integrated Site Assessments at sites in Tennessee and Kentucky.

North American Rayon Corporation (Elizabethton, Tennessee)

The goal of the assessment at this former rayon manufacturing facility is to determine if site conditions warrant a removal action or further investigations for long-term cleanup. The facility includes abandoned and demolished industrial buildings, a chemical laboratory, aboveground storage tanks, neutralization pits, buried vaults and basements, landfills, a water treatment plant, and an extensive system of subsurface pipes and drains with outfalls along the Watauga River. In 2019, staff from SEMD's removal and remedial programs came together with staff from the Tennessee Department of Environment and Conservation to conduct a joint site reconnaissance and generate a living Quality Assurance Project Plan (QAPP) to support adaptive sampling. The same Superfund Technical Assessment and Response Team (START) contractor was used during site mobilizations to collect data for both EPA programs. Use of the Integrated Site Assessment approach at the site will reduce costs and save time.





Butler Furniture (Carrollton, Kentucky)

The assessment at this former manufacturing facility focused on identifying current contamination levels at the site. An earlier site investigation found polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and metals in surface soils at the site. In May 2019, staff from SEMD's removal and remedial programs came together with staff from the Kentucky Department for Environmental Protection (KDEP) to conduct the assessment. The results enabled EPA to designate the site as not qualifying for a time-critical removal action. KDEP staff used the same data to complete a new site investigation report.



Collaboration with State Partners to Build Capacities and Expedite Site Evaluations

In 2019, SEMD prioritized training work with our state partners on innovative field techniques and methods to build the capacities of state staff and streamline site evaluations. Our START field team conducted joint site evaluations with states, demonstrating field methods while accomplishing site inspections.

Methods included:



the use of x-ray fluorescence (XRF) analysis



vapor intrusion sampling (including installation of subslab ports and collection of air samples)



sample collection protocols for per- and polyfluoroalkyl substances (PFAS)



deployment of passive soil gas screening devices



Galey & Lord Sludge Fields **(Society Hill, South Carolina)**

SEMD staff assisted staff from SCDHEC in collecting environmental samples for PFAS analysis, including training state personnel in sampling protocols. The state is continuing to monitor private drinking water wells in the area for PFAS associated with sludge from the former Galey & Lord textile plant.

Rich Ladder **(Carrollton, Kentucky)**

Volatile organic compound (VOC) contamination in municipal wells caused the shutdown of wells and has required treatment of the VOCs at the well heads. The origin of the contamination is unknown. EPA's START field team deployed passive soil gas samplers to find the source of the contamination. The sampling identified the likely source of the contamination; additional samples and monitoring wells can be strategically placed to monitor contamination. During the investigation, EPA trained KDEP staff on the use of passive soil gas samplers and interpreting data results. As a result of this collaboration, KDEP successfully used passive soil gas samples at another site to determine whether vapor intrusion sampling was warranted.

B&L Auto **(Decatur, Georgia)**

SEMD and Georgia Environmental Protection Division (Georgia EPD) staff investigated site conditions to determine whether VOC contamination was present in soil gas beneath two properties at concentrations that might pose a threat to human health via intrusion of vapor from the subsurface into buildings at the properties. Passive soil gas probes were installed around the perimeter of the two buildings. EPA provided hands-on training to Georgia EPD staff for the installation of the passive gas probes. Soil gas screening using passive gas probes is an effective, low-cost way to determine whether VOCs are elevated in soil gas. The results are used to determine whether subslab and indoor air sampling is warranted.

Stewardship Dry Cleaners **(Tallahassee, Florida)**

A defunct dry cleaners with a history of leaks and improper chemical storage is now used for retail, with eight people working in the former dry cleaners building. Passive soil gas screening was used as the first step of investigation to locate any subsurface contamination. Results indicated the potential for vapor intrusion in the occupied building. Subsequent subslab soil gas sampling found high levels of chlorinated VOCs beneath the building foundation. Increased ventilation is used to protect current workers. EPA's START field team demonstrated the use of passive soil gas samplers as well as installation of subslab soil gas ports to FDEP staff during the investigation. EPA also trained FDEP staff on how to evaluate data results. FDEP staff now have the capacity to conduct similar sampling.

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. SEMD 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.

SEMD 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.

During FY19, we conducted 40 SPCC and 30 FRP inspections and exercises. As part of a pilot program in Region 4, an exercise team has been formed to plan and initiate facility drills. The GIUE team's output will be focused on ensuring that all FRP facilities in Region 4 stand ready to effectively respond to accidental releases of oil into the environment should they occur.

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.



Rapid Oil Spill Response and Remediation in North Carolina Protects Neighborhood and Area Waterways

In September 2019, SEMD, NCDEQ, the City of Shelby and Cleveland County officials responded to an emergency request reporting an approximately 3,000-gallon discharge of oil.

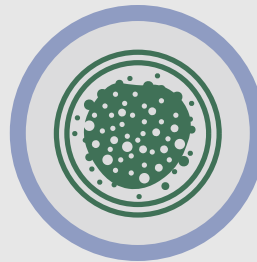
The facility used a 6,500-gallon tanker to store used oil and discharged its contents into the building via a hose placed through a window. The used oil filled the entire footprint of the building and ran out into the property and onto Ruth Street. Due to rain from Hurricane Florence's outer rain-bands, the discharge affected a nearby storm sewer and several sections of the sanitary sewer system. The storm drains led to Hickory Creek, which is a tributary of the Broad River.

SEMD mobilized contractors to remediate the spill. A total of 2,250 gallons of used oil, 300 tons of oil contaminated soil and 3,575 gallons of oil contaminated water was collected and sent off site from the original emergency response. During the initial emergency response, additional hazardous substances were identified as a threat to the surrounding community. Eight hundred pounds of PCB waste, 7,425 gallons of PCB oil, and 51,000 gallons of hazardous waste were sent off site for disposal. Due to the proximity to the neighborhood, a more detailed study called a Removal Site Evaluation (RSE) was conducted for 10 residential properties. The RSE found no additional off-site impacts from the original spill or from past site activities.

COLLECTED AND SENT OFF SITE FROM THE ORIGINAL EMERGENCY RESPONSE



2,250 gallons of used oil

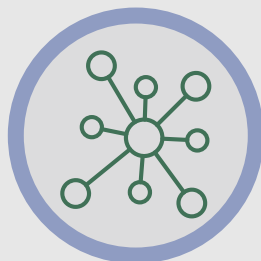


300 tons of oil-contaminated soil



3,575 gallons of oil-contaminated water

ADDITIONAL HAZARDOUS SUBSTANCES IDENTIFIED AND SENT OFF SITE FOR DISPOSAL



800 pounds of PCB waste



7,425 gallons of PCB oil



51,000 gallons of hazardous waste

Long-Term Environmental Protection and Sustainability

Superfund remedial cleanups address the most complex and highly contaminated sites in the country. These cleanups include NPL sites, sites with Superfund Alternative Agreements and federal facilities.

These federal and private-party sites often require years to fully study the problems, develop a permanent remedy and clean up hazardous substances affecting soil, groundwater, surface water, sediment and vapor intrusion. SEMD works closely with communities and our state, tribal and federal partners to ensure the protection of human health and the environment throughout the cleanup of these sites.

Long-Term Environmental Protection and Sustainability

Cleanup of Former Mill in Tennessee Protects Public Health, Lays Groundwork for Reuse



In 2019, a non-time-critical removal action at the Clinch River Corporation site in Harriman, Tennessee, removed asbestos and demolished the remains of a former

linerboard facility.

The action, led by WestRock, the site's responsible party, also installed a boat slip. The City of Harriman plans to include the remediated site as part of a riverfront park, complete with boat slips and walking trails.

Cleanup and Reuse Planning Milestones for Former Manufacturing Facility in Mississippi



SEMD, the Greenfield Multi-State Trust and the Mississippi Department of Environmental Quality (MDEQ) continue to work closely with the City of Columbus and community members on cleanup and reuse plans for the Kerr-McGee Chemical Corp. (Columbus) Superfund site, a 31-acre former manufacturing facility.

ditches. Expedited cleanup of shallow soils at the Pine Yard tract has almost finished. Surface soil was sampled for dioxins and furans at 40 private properties in 2019, with completion of cleanup anticipated in 2020.

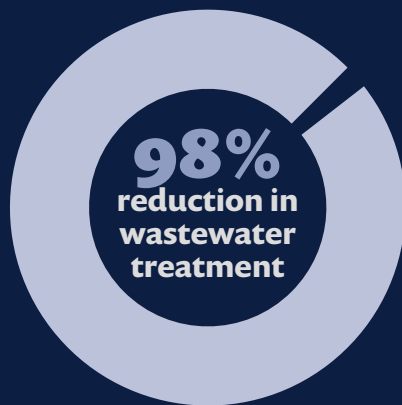
At the same time, the site's Redevelopment Planning Initiative continues to explore options for the site's future that are community supported, safe, beneficial and economically sustainable. In 2019, TEAM initiative activities included community outreach listening sessions and surveys to encourage residents to share their views on how the site should be redeveloped. Preferred future uses identified by the community to date include a health clinic and an adult education center. Other preferred uses include a community center, a bank or credit union, and single-family houses. A manufacturing center, retail shopping, a grocery or market, and a park or playground are among other preferences.

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.

Cleanup efforts at the site have removed contaminated soil, treated groundwater and addressed stormwater



**500
MILLION**
gallons of
contaminated
wastewater
eliminated
from storage



**2 TO 4
MILLION**
gallons of water
treated per day

Multi-Year Cleanup in Mississippi Solving Wastewater Challenges, Protecting the Environment

Cleanup of this former diammonium phosphate fertilizer plant started in 2018, after SEMD announced a \$71.6 million cleanup that will run 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%.

Closure of the west slope of the East Gypsum Stack started in 2019. Work involved subgrade preparation, drainage improvements, and installation of an engineered geosynthetic turf cover system to shed rainwater off 55 acres of acid-generating and nutrient-laden material. Water treatment operations also continued at a rate of 2-to-4 million gallons per day to prevent an uncontrolled release of untreated water to the adjacent bayou and estuary.



Mixed Commercial and Industrial Reuse Underway in Florida

The Escambia Wood – Pensacola site in western Florida includes a former wood-treatment facility and several former neighborhoods.

To support its protective and beneficial future use, SEMD developed a Ready for Reuse (RfR) Determination (see page 56) to clearly define appropriate site uses and attract potential developers. Following cleanup, EPA also partially deleted 50 acres of the site.

Today, the Escambia County Commission owns most of the site and is working with local governments and the business community to develop the Mid-Town Commerce Park on the site. The development is consistent with the soil remedy and compatible with the future 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.

AFTER



**MORE THAN
1,700 JOBS**

**\$132 MILLION
ANNUAL
EMPLOYEE
INCOME**



**\$4.4 MILLION
LOCAL TAXES**

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 DOE nuclear reactor, processing and research centers are complex sites that require coordination with EPA's partners.

SEMD 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 in Region 4. 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.

Continued Reuse, Cleanup Milestones at Former Nuclear Facility in Tennessee



Facilities at the Oak Ridge Gaseous Diffusion Plant made history as part of the Manhattan Project during World War II and strengthened the U.S. nuclear defense program during the Cold War.

Extensive collaboration among federal, state, local and community partners has transformed this national landmark into an innovative technology park—the East Tennessee Technology Park—that includes manufacturing and business centers, conference facilities, several solar arrays, a national historic park, greenway trails and wildlife habitat. Cleanup of parts of the site is ongoing. In



FY 2019, remedial activities included the completion of cleanup for Zone 2 Exposure Unit (EU) Z2-28, a 20.5-acre area used for above-ground dumping of soil, building rubble and debris. This \$1.6 million remedial action removed 4,048 cubic yards of contaminated materials and the area is now ready for use; an industrial park is planned for the area.

The East Tennessee Technology Park (ETTP) Zone 1 Powerhouse Duct Bank was the electrical transmission system that provided power to the gaseous diffusion process buildings that enriched uranium for use in nuclear weapons. The Duct Bank was about 8,700 feet long and contained lead-sheathed copper feeder cables in 262 vaults, which presented a risk to groundwater. Interim cleanup actions included dewatering and filling the vaults with flowable fill. The vaults crossing Poplar Creek were filled with concrete to make sure cables did not present a risk to the creek. This \$2.3 million remedial action finished in September 2019, further supporting the development of technology park facilities at ETTP.

Innovative Cleanup at Marine Corps Base in North Carolina Restoring Groundwater to Beneficial Use



Camp Lejeune is a 156,000-acre facility in Onslow County, North Carolina. The mission of the Base is to maintain combat-ready units for expeditionary deployment. In 2019, the Base is implementing a comprehensive treatment system for groundwater contamination associated with the former Base dry-cleaning facility.

The partnering team worked diligently to determine the most effective treatment system that will address dense non-aqueous phase liquid (DNAPL) and contamination in multiple aquifers with complex geochemistry. The remedy includes three different groundwater treatment areas with three separate treatment technologies, including injection of in-situ chemical oxidation in a closed-loop system via 10 horizontal wells. The remedy also includes mitigation of the vapor intrusion pathway while restoring groundwater to beneficial use. The remedial action cost is \$17 million.

Expediting Cleanup, Making Critical Progress at DOE Facility in South Carolina

The Savannah River Site (SRS) NPL site is an active U.S. Department of Energy (DOE) facility that stretches across 310 square miles in Aiken, Allendale and Barnwell counties in South Carolina. Cleanup at the site is addressing contamination left behind from the Cold War.

A major priority is to address large areas of coal ash left from decades of power and steam generation, used to power daily site operations. In 2019, field work on a multi-unit effort consolidated existing ash landfills and ash basins in Operable Unit 63, known as D Area.

To accomplish this work as quickly as possible in

preventing anticipated berm failure, SEMD and SCDHEC worked with the DOE-SRS to implement removal actions to consolidate the ash. Four separate removal actions consolidated 1.3 million cubic yards covering over 100 acres into two large areas with robust geosynthetic cover systems. The actions prevented berm failure and exposure concerns. SEMD conducted field oversight, and reviewed, commented on and approved removal work plans, risk assessments and removal reports to complete the field work project in 2019. In 2020, EPA will work with DOE and SCDHEC to finalize the CERCLA remedial documents needed to close out the ash subunits and move forward to address additional source areas and groundwater for the D Area Operable Unit.



Former Air Force Base in South Carolina Now Home to Successful Mixed-Use Hub

In July 2019, EPA presented its second annual National Federal Facility Excellence in Site Reuse award to the former Myrtle Beach Air Force Base in recognition of exemplary work transforming the Superfund site into a successful commercial and industrial space.

The base's closure in 1993 resulted in the loss of nearly 5,100 jobs and an economic loss of \$91 million from payroll, taxes and other revenues. Today, the transformation of the former 3,936-acre Myrtle Beach AFB into a thriving new community sets a new standard for successful remediation and redevelopment. The former Air Force base is now home to Myrtle Beach International Airport, over 1,200 new homes, a dozen parks, walking paths and sporting facilities, a golf course, a college, a new technology and aerospace business park, and a centerpiece commercial district called The Market Common that features shops and restaurants. The redevelopment project has had a large economic impact, employing 25,781 people and providing \$2.97 billion in annual economic activity and almost \$120 million in annual tax revenue. Today, The Market Common has become the fastest-growing area in the community—new projects underway include the \$44 million Tidelands Health Medical Park.

The award, which EPA gave to four federal sites nationwide this year, recognizes the innovative thinking and cooperation among federal agencies, states, tribes, local partners and developers that have led to noteworthy restoration and reuse of federal facility sites under the Superfund program.



5,100
jobs lost

Rapid Hurricane Recovery, Cleanup Milestone at Military Base in Florida

Tyndall Air Force Base (TAFB) is an active U.S. Air Force Base in Bay County, Florida, about a mile southeast of Panama City.

The base covers about 29,000 acres on a narrow, 18-mile-long peninsula. In October 2018, TAFB suffered a direct hit from Hurricane Michael's Category 5, 155-mile-per-hour winds, which caused over \$5 billion in damage to aircraft and every building on the base. The base worked diligently to recover from this catastrophic event and submitted the Remedial Action Completion Report (RACR) for LF-003 (Operable Unit 11) in February 2019. A final inspection took place in March 2019. The Air Force addressed EPA and FDEP's comments and submitted RACR Version 2 in May 2019.

After a follow-up site inspection, EPA approved RACR Version 2 in June 2019, achieving the first remedial action completion under the site's Federal Facility Agreement. Achievement of the remedial action objectives allows for unlimited use and unrestricted exposure for LF-003 and is protective of human health and the environment. The estimated cost of remedial activities at Operable Unit 11 is \$4.2 million.





AFTER

25,781
jobs created

THE FORMER MYRTLE BEACH AIR FORCE BASE TODAY

\$2.97 BILLION
in annual economic activity

“ This project is a successful demonstration of how public-private partnerships can convert contaminated sites into community assets that will attract jobs, encourage partnerships and achieve broader economic development outcomes. ”

**- EPA REGION 4 ADMINISTRATOR
MARY S. WALKER**

Scientific Innovation and Next Generation Contracting

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

SEMD 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 (SSS) 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. SSS also provides resource/remedy optimization expertise, reviews remedial technologies, and coordinates with the Office of Research and Development (ORD) and the Agency of Toxic Substances and Disease Registry (ATSDR).

Scientific Excellence and Innovation in Action Across Region 4



Region 4 Human Health and Ecological Supplemental Guidance

This regional guidance updates and replaces all previous Region 4 human health and ecological risk assessment supplemental guidance and supplements the national EPA guidance documents on site-specific human health risk assessments (HHRAs) and the ecological risk assessment (ERA) guidance for Superfund. This supplemental guidance provides direction and does not constitute rulemaking by the Agency. Its intent is to aid in the development of high-quality risk assessments by EPA, EPA contractors, PRPs and state partners.

To learn more, visit www.epa.gov/risk/region-4-risk-assessment-contacts.



Technical Impracticability Waivers

With groundwater contamination where attainment of applicable and/or relevant and appropriate requirements (ARARs) is not practicable from an engineering perspective, a technical impracticability (TI) waiver is an option available to EPA remedial project managers to advance cleanup at a site. TI waivers are an option for Superfund sites where a detailed site analysis leads EPA to conclude that it is not technically practicable, in a reasonable time, for groundwater cleanup to meet regulatory standards. Typical conditions leading to a TI determination are the presence of complex hydrogeologic conditions and contaminants that are difficult to remove or treat due to their subsurface distribution or inherent properties.

Remediation system complexity or cost are not a basis for a TI waiver and remedial options must always be evaluated in a TI determination. TI waiver evaluations require a comprehensive assessment of the potential for groundwater remediation to attain ARARs within a reasonable timeframe. SEMD has recently approved its first two TI waivers. Each TI waiver determination required months of detailed data analysis by SSS hydrogeologists, multiple revisions of the TI waiver demonstration documents and Region 4 consultations with EPA Headquarters. Both approved TI waivers included remedial strategies designed to protect human health and the environment.



Bioavailability

In vitro bioaccessibility assay (IVBA) is a form of bioavailability testing using Method 1340 for arsenic and lead that is being used to understand the bioaccessibility of soil contaminants at Superfund sites. Determining the bioavailability of lead and arsenic is guided by EPA's 2017 Standard Operating Procedure for In Vitro Bioaccessibility (semspub.epa.gov/work/HQ/100000153.pdf). Site-specific bioavailability testing allows for adjustments to decision-making goals to ensure the protection of human health and the environment.

There is an inverse relationship between bioaccessibility and cleanup goals. For example, if site-specific lead bioavailability testing for lead resulted in a lower-than-default (30%) bioaccessibility, the cleanup goal could be adjusted higher than calculated using default parameters. Site-specific bioavailability testing could be performed on as little as 10% of initial samples (minimum of 10) to derive a statistically valid result. All EPA regional labs now have the ability to run Method 1340.



Fairfax RARE Grant Study

Assessment of human health and environmental risk from heavy-metal contamination at Superfund sites depends on proper characterizations of the bioaccessibility and bioavailability of the metals in soils and sediments. EPA Method 1340 defines the proper analytical procedure for the validated IVBA for arsenic in soil. However, the method has not yet been approved for wide use with sediments. Further, results from chemical and toxicological testing may take weeks to obtain and can be expensive.

SEMD is working with ORD through a Regional Applied Research Grant (RARE) at the Fairfax Street Wood Treaters Superfund site in Jacksonville, Florida. The project is an attempt to determine whether EPA Method 1340 may also be used to analyze sediments for arsenic bioavailability and to research and develop rapid, cost-effective microbial-based assays of arsenic bioavailability in sediments. The ability to use the established test method for sediment analysis would allow for an ecological application of IVBA. Field sampling took place in July 2019. Results will be evaluated in early 2020.

Urban Background Study Update

SEMD's Urban Background Study Team has begun to conclude its work on the Region-wide, multi-partner study of metals and PAH contaminant levels in urban areas. The Team is compiling and reviewing the data to make it publicly available. The project covered eight different cities in five different Region 4 states. The Team is also preparing to present the findings at an international conference and to publish the findings in a scientific journal.



DID YOU KNOW? Pipeline Allocation Model (PAM)

PAM is the primary way the Superfund remedial program allocates resources to EPA Regions. The data source for PAM is the Superfund Enterprise Management System (SEMS), which records and tracks planned and ongoing project activities to the task level. PAM uses weighting factors to produce a score for each Region based on current fiscal year start targets, ongoing actions and prior-year completions. "Mega-sites" (sites with expected cleanup costs of \$50+ million) continue to receive a double weighting.

Embracing the Next Generation of Contracts and Training

SEMD 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 or in multi-regional collaboration for the next generation of START contracts, Region 4 is helping shape the future of Superfund contracting.

The Remedial Acquisition Framework (RAF)

The Remedial Acquisition Framework (RAF) is EPA's new approach for acquiring national response services to support the Superfund remedial program. RAF is designed to improve the agency's acquisition efficiency and to ensure the agency is compliant with all current Office of Management and Budget initiatives and Federal Acquisition Regulation provisions.

RAF includes three suites of nationally placed indefinite delivery indefinite quantity (IDIQ) multiple award contracts. These IDIQ contracts use performance-based contracting principles and competitively placed task orders to improve efficiency. The three RAF contract suites are: the Design and Engineering Services (DES) contract, which provides architecture and engineering (A&E) services from the Superfund site investigation phase through the remedial design phase; the Remediation Environmental Services (RES) contract, which provides remedial action services and construction; and the Environmental Services and Operations (ESO) contract, which provides oversight and cleanup operations.

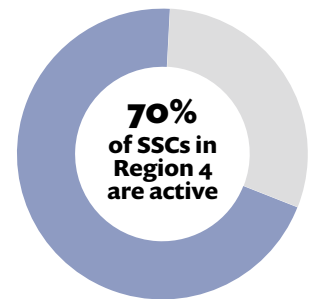
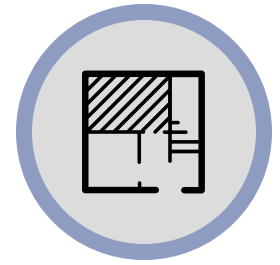
Region 4 embraced the new procurement approach and was the first regional office to award a task order under the ESO contract suite for long-term remedial action. By the end of 2019, Region 4 awarded a total of six new task orders under RAF, the most in the nation.

START 5

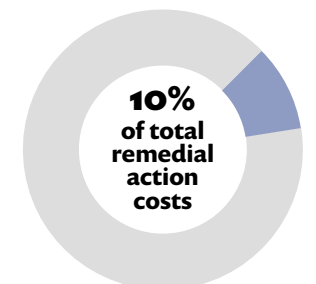
The purpose of the START contract is to provide nationally consistent technical assistance services to EPA's OSCs and other federal officials implementing EPA's mission and responsibilities under the national response system. Additionally, the contractor provides technical assistance services to other programs, including site assessment, the Brownfields program and remedial support activities. START 5 is the sixth generation of this contract. The first joint START solicitation (Regions 4 and 5) was successfully negotiated, and these negotiations resulted in the award of two independent contracts for both regions in July 2019.

Superfund State Contracts

Superfund State Contracts (SSCs) are required prior to beginning Fund-lead remedial actions at Superfund sites. Region 4 has executed 73 SSCs since 1983; 51 are currently active. Collectively, these contracts address \$689 million of remedial actions performed across the Southeast and have provided \$68.9 million, or 10%, of total remedial action costs from state cost-share funding in support of these cleanups. The SSCs provide a legally binding framework for site cleanup activities, including the five required CERCLA assurances from states along with administrative requirements for remedy execution. In 2018, EPA in collaboration with states nationwide, developed an updated model SSC that is being used for all new SSCs. Region 4 has also developed a comprehensive standard operating procedure for SSC Management and Administration for Region 4 staff.



These SSCs provide



from state cost-sharing funding

SEMD Training Program Updates



Workforce Development for Next Generation of Superfund

The Superfund program has well-established training curricula for the technical and professional development of the knowledge, skills and abilities necessary to effectively contribute to mission execution. During 2019, SEMD onboarded six new remedial project managers (RPMs) and two new OSCs, among other staff additions. RPMs and OSCs are Superfund field personnel with multi-year journeyman periods to complete a broad range of training requirements. Training includes classes, on-the-job training, technical conferences/seminars and online learning. Region 4 hosted 14 separate training courses in FY 2019, including two at the EPA lab in Athens, Georgia, and one at SCDHEC offices in Columbia, South Carolina.



 **6** new RPMs

 **2** new OSCs

 **14** training courses

 **31** workshop participants

Environmental Sampling and Analysis Workshop for RAF Contractors

In 2019, SEMD provided an Environmental Sampling and Analysis Workshop for the 31 RAF contractors supporting Region 4. The workshop engaged 30 participants, including three RPMs, and covered planning, quality assurance, data management, logistics, multi-media sampling techniques, decontamination, sample custody and preparation, organic and inorganic analysis, and data review, validation and reporting. The training was well received and was the first training of its kind for many of the participants.

Engagement with Communities and Our Tribal, State and Local Partners

EPA has long recognized the importance of early and meaningful stakeholder participation and will continue to enhance community and stakeholder engagement to promote transparency, community support and more timely cleanup decisions.

Community Outreach

SEMD 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.

SEMD'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.

DID YOU KNOW?

To keep the public informed, SEMD creates Administrative Records and makes site documents available online.

Administrative Records document the basis for a response and selection of the cleanup remedy and acts as a vehicle for public participation in the development of a response selection.

DURING 2019, SEMD PRODUCED THE FOLLOWING ADMINISTRATIVE RECORDS:

18 Remedial Documents

5 Removal Documents

4 Deletion Dockets



SEMD ALSO MADE THE FOLLOWING DOCUMENTS AVAILABLE ONLINE IN 2019:



20 Fact Sheets

7 Community Involvement Plans

5 RODs, ROD Amendments and Explanations of Significant Differences

9 Five-Year Reviews

618 Other Documents

Community-Wide Engagement in Georgia Addresses Several Superfund Sites

There are four Superfund sites in Brunswick, Georgia – Brunswick Wood Preserving, Hercules 009 Landfill, LCP Chemicals Georgia and Terry Creek Dredge Spoil Areas/Hercules Outfall. In 2019, SEMD supported a variety of community engagement opportunities in Brunswick to share site updates and address communitywide concerns.

A series of small-group meetings brought together community members, elected officials and community organizations such as First Mile, the Environmental Justice Advisory Board, One Hundred Miles, and the Glynn Environmental Coalition (GEC). Public availability sessions facilitated discussions covering all four sites. During the comment period for the outfall ditch portion of the Terry Creek Dredge Spoil Areas/Hercules Outfall site, SEMD gave a presentation to a joint meeting of the City of Brunswick and Glynn County governments. SEMD also shared progress updates with the community regarding site investigations at the LCP Chemicals Georgia site. Field work for the remedial

investigation for the cell building area and groundwater at the site is now underway.

GEC receives and maintains Technical Assistance Grants (TAGs) for three of the Superfund sites in Brunswick. In 2019, SEMD approved time extensions and funding increases for all three TAGs. SEMD continues to support GEC's efforts to inform the community and work with EPA to engage with stakeholders. GEC hired a new technical advisor in 2019 and EPA staff participated in a site flyover for the technical advisor to help all parties gain a better understanding of the layout of the sites. In June 2019, GEC and SEMD hosted a joint workshop to assist the community in gaining a better understanding of the Superfund process and how EPA uses risk assessments in the Superfund program. SEMD plans to continue engaging the community with future workshops, availability sessions and other public meetings. The GEC project manager was nationally recognized in 2019 with the Citizen Excellence in Community Involvement Award Recognizing Citizen Participation.



Protecting Children's Health Remains a Vital Part of EPA's Mission

SEMD is dedicated to protecting the health of all of our citizens, from young children to older adults. Protecting children's health from environmental pollutants has always been a major concern for EPA.

SEMD continues to be committed to protecting all children from environmental health threats, spills, releases and Superfund sites by using strict public health standards and evaluating and addressing risks. We increase public awareness through reports, public meetings and one-on-one discussions with stakeholders in impacted communities.

- During FY 2019, SEMD responded to nine residences and a school where mercury spills occurred, with the cleanups protecting the health of more than 600 children. Children are especially sensitive to health

- impacts from exposure to mercury vapors that emanate from mercury spills inside structures.
- Childhood lead poisoning remains a major environmental health problem in the United States. At Superfund sites with lead contamination, Region 4 continues to use a comprehensive, model-based approach to assess lead exposure risks and determine effective cleanup strategies to protect children's health. SEMD led cleanups at more than 150 residential properties during FY 2019, protecting the health of an estimated 275 children who would be potentially exposed to lead in soils.
- SEMD uses EPA's Children-Specific Exposure Factors Handbook to ensure that the latest and most-accurate information is used to guide the assessments and cleanup activities that protect children's health.

To learn more about EPA's continued commitment to safeguarding children's health and improving their environmental health outcomes, please visit www.epa.gov/children/protecting-childrens-health-october-2019-booklet.

Extensive Community Outreach and Technical Assistance Addressing Environmental Justice Priorities in North-Central Mississippi

SEMD has provided additional resources to the environmental justice community near the Rockwell International Wheel & Trim site in Grenada, Mississippi. EPA hosted several public meetings to update residents on the remedial investigation of groundwater contamination in their neighborhood.

SEMD adjusted the format of the meetings in response to the community's preferred method of communication. Site staff also met individually with residents and focused educational presentations on the overburdened community's priorities related to the site. In 2019, SEMD worked with EPA Headquarters and the community to organize a Community Advisory Group (CAG) and provide the community with a technical advisor through the Technical Assistance for Communities (TASC) program. The advisor will provide in-depth information in a community-friendly format and help site staff communicate with area residents.



Community-Wide Collaboration Accompanying Sampling and Cleanup Planning in Atlanta

In 2018, an Emory University doctoral student shared data with EPA. The data revealed elevated lead levels collected in soil samples from Atlanta's Westside.

Additional research led to the discovery of industrial smelting waste (slag) on at least two lots near Elm Street. To get the word out and engage the public, SEMD has collaborated with city, county, state and elected officials. EPA site staff members have given presentations at several community group meetings, held an availability session, and gone door-to-door for permission to sample over 300 yards in the neighborhood. SEMD is performing sampling events in the neighborhood to determine the extent of the lead contamination and will begin cleanup in FY 2020.



Region 4 Food Drive Campaign Leads the Nation in 2019

SEMD led the Region 4 2019 Feds Feed Families Campaign and it was a tremendous success.

Feds Feed Families was created to help food banks and pantries stay stocked during summer months when they

traditionally see a decrease in donations and an increase in need. EPA Region 4 exceeded the goal of 10,000 pounds by 40 percent and led the Agency nationwide. SEMD contributed 2,449 pounds of fresh and nonperishable food and several SEMD staff were recognized for their contributions.



2,449 POUNDS
OF FOOD CONTRIBUTED BY SEMD

40%
OVER THE GOAL
OF 10,000 POUNDS



Partnering, Consulting and Collaboration

SEMD 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.

Partnerships Supporting Job Training and Cleanup at Former Wood-Treating Site in Florida



SuperJTI Provides Job Training Opportunities

In March 2019, 13 community members completed EPA's Superfund Job Training Initiative (SuperJTI) training at the Fairfax Street Wood Treating site in Jacksonville, Florida.

Through a partnership with Northwest Jacksonville Community Development Corp., SuperJTI provided local job seekers with new skills. After a rigorous screening and recruitment process, trainees earned three certifications in hazardous waste and emergency response, CPR/first aid, and OSHA construction safety courses. The trainees also received professional development training. Site contractors hired eight graduates to work on site.



State Partnership and Remedial Action Work

SEMD and FDEP worked together to quickly start the remedial action through an agreement included in the SSC providing state cost-share credit for site cleanup work performed by the state.

EPA completed remaining cleanup activities—removal and disposal of remaining impacted soil, removal of concrete and pavement, and site grading and restoration—in the fall of 2019. FDEP is now leading cleanup activities for Fairfax North properties.

“*SuperJTI's goal is to help communities create job opportunities and partnerships that remain long after site cleanups are completed.*”



✓ **60,000**
tons of contaminated soil taken away



✓ **51**
residences remediated



✓ **60,000**
tons of clean backfill and top soil put in place



Outposted OSCs Enabling Rapid Responses and Increased Stakeholder Coordination

SEMD implemented its outpost program in July 2000. The benefits of outposting OSCs include decreased response time within the outpost’s areas of responsibility, generally within a 150-mile radius of their duty stations, and increased outreach and planning opportunities with state, tribal and local stakeholders. SEMD has OSCs stationed in Mobile, Alabama, Tallahassee, Florida, Charlotte, North Carolina, and Jackson, Tennessee. The Louisville, Kentucky outpost station is currently vacant.



USCG Gulf Strike Team Serving as a Vital Regional Resource

The National Strike Force (NSF) is a Special Team established by the U.S. Coast Guard and available to assist OSCs and RPMs in carrying out their preparedness and response duties. The NSF includes three Strike Teams. Region 4 is fortunate in that the Gulf Strike Team (GST) is based in Mobile, Alabama, and frequently supports our OSCs at emergency response and removal sites across the Region. The GST most often fulfills the role of safety officer at a site, but also offers a variety of additional expertise, including oil and hazardous substance response and Incident Command System implementation.



SEMD Taking on Role of Lead Region in Upcoming FYs

SEMD will fulfill the role of Lead Region for Superfund and Homeland Security in FYs 2020 and 2021. In this role, SEMD is responsible for working with National Program Managers, in this case EPA’s Office of Land and Emergency Management and the Office of Homeland Security, to identify and synthesize the views, concerns and priorities of all 10 EPA regions into a coherent “regional view” to assist the Agency in setting policy, guidance and overall decision-making.



Partnering Team at Marine Corps Installation in North Carolina Accelerates Cleanup

At the Cherry Point Marine Corps Air Station (MCAS), an active Marine Corps installation in Havelock, North Carolina, EPA, NCDEQ and the U.S. Navy work together under a federal facility agreement to ensure human health and the environment are protected. The installation began operations in 1942; EPA placed the site on the NPL in 1994 due to contaminated groundwater, surface water, soil and sediment from installation operations.

The MCAS site partnering team meets three-to-four times a year as needed to identify innovative approaches, successful technologies and management techniques that enable an accelerated site cleanup schedule. The most recent success includes the initiation of a sitewide preliminary assessment and site investigation of over 100 potential PFAS locations on the 13,164-acre base. The preliminary assessment identified several potential sites. Detailed site investigations are underway to determine a path forward for cleanup, if required, to ensure the MCAS site remains protective of human health and the environment. The team also meets regularly with other site stakeholders, ensuring the continued development and achievement of shared goals for the site.

Partnering, Collaborating and Putting Sites into Reuse

SEMD 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. SEMD helps communities and cleanup managers consider redevelopment during cleanup planning and evaluate remedies already in place to ensure appropriate redevelopment at sites. In addition, EPA participates in partnerships with communities and encourages opportunities to support Superfund Redevelopment projects that emphasize environmental and economic sustainability.

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.

Transforming Sites into Community Assets

Record Year for SWRAU Designations in Region 4

In FY 2019, SEMD went above and beyond its target of five sitewide ready for reuse (SWRAU) designations, attaining a record-breaking 10 such designations. Three of the Region 4 sites that achieved SWRAU status in FY 2019 are highlighted below.



American Brass (Headland, Alabama)

This 148-acre property is partially in agricultural use for peanut production. The Academy of Model Aeronautics is interested in reusing part of the site as a flying field for model aircraft.



Airco Plating (Miami, Florida)

The metal-plating operation at the site is expanding its facilities and a second business has begun metal fabrication activities there as well.



Pepper Steel & Alloys (Medley, Florida)

EPA, FDEP and the Miami-Dade County Department of Environmental Resources Management (DERM) worked diligently with the bona fide prospective purchaser of the site's northern parcel to support a large-scale redevelopment that is compatible with the remedy. A recreational boat company completed construction of a boat manufacturing and sales facility on the site's northern parcel in fall 2019. A developer has also acquired the site's western parcel. Its reuse will complement ongoing uses at the site, which include a heavy equipment parts supplier on the eastern parcel and truck and trailer parking on the southern parcel.

What Is SWRAU?

This EPA performance measure reflects the importance of considering future land use as part of the cleanup process by tracking the number of sites meeting the following criteria:

- ✓ All aspects of the cleanup are in place and have been achieved for any media that may affect current and reasonably anticipated future land uses, so that there are no unacceptable risks.
- ✓ All land use restrictions or other controls required as part of the cleanup are in place.
- ✓ Sites are final or deleted NPL sites, or Superfund Alternative Approach (SAA) sites, that have reached the construction completion milestone.

RfR Determination Signed for Former Wood-Treating Site in Florida

In December 2018, EPA and FDEP co-signed a Ready for Reuse Determination for the Escambia Wood – Pensacola Superfund site in Pensacola, Florida. The environmental status report summarizes site history, cleanup actions and the remedy’s compatibility with commercial and industrial uses. The local government is using the RfR Determination to educate prospective developers about the site. To date, Superfund Redevelopment has supported 23 RfR Determinations nationwide.



DID YOU KNOW?

EPA has placed a high priority on expediting site cleanups and moving sites toward deletion from the NPL, enabling communities to return them to safe and productive use.

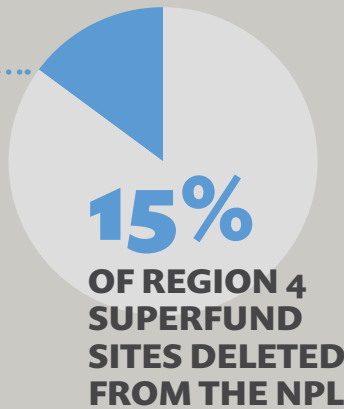
As of 2019, there are 1,757 sites on the NPL nationwide. Of these sites, 424 have been deleted and 81 sites have been partially deleted from the NPL.

In Region 4,

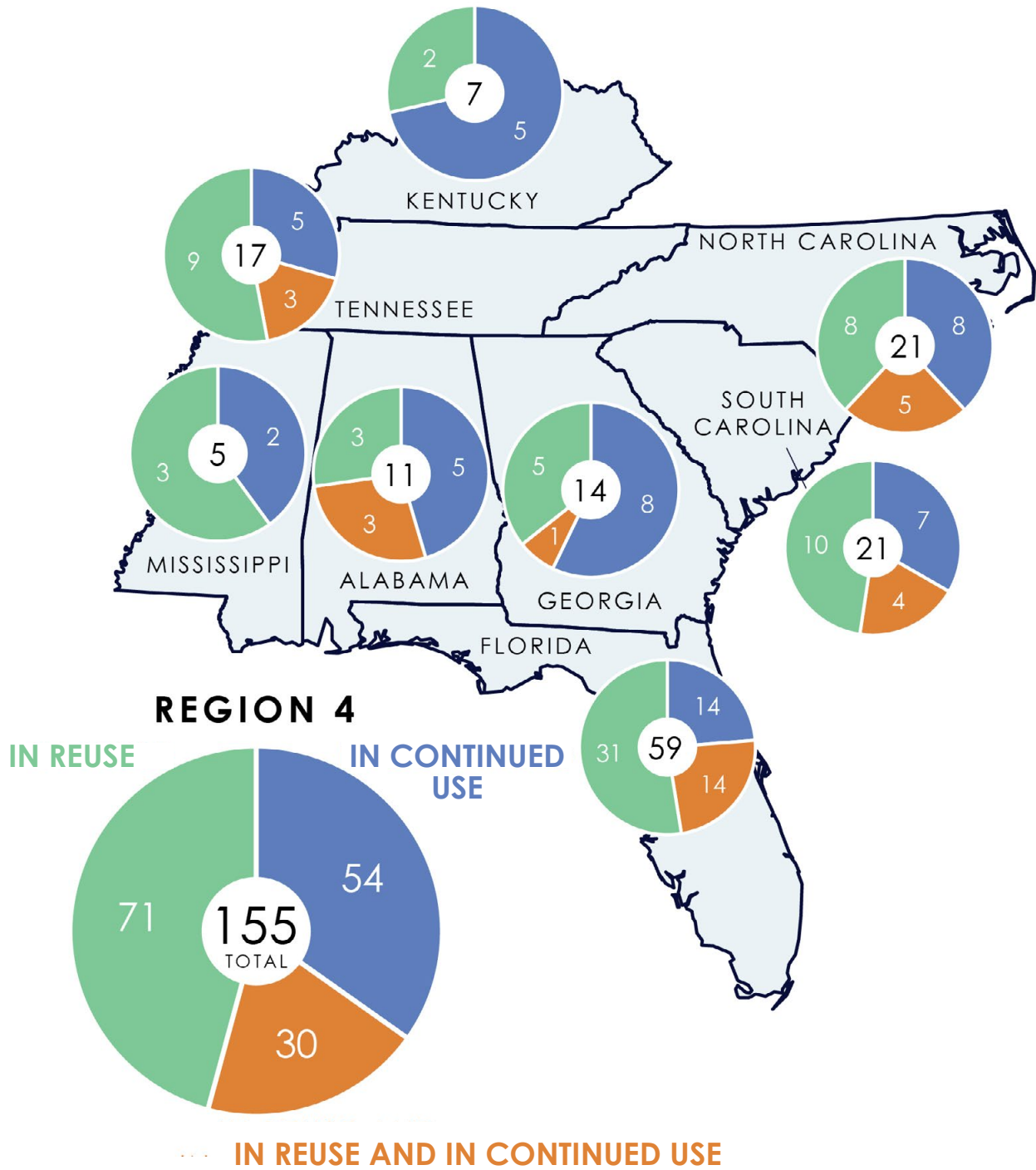
- **63** sites have been deleted from the NPL
- **11** sites have been partially deleted from the NPL

In Region 4 in 2019,

- **1** site was deleted from the NPL
- **2** sites were partially deleted from the NPL



Sites in Use and Reuse in Region 4



The Economics of Superfund Redevelopment in Region 4

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, SEMD helps communities reclaim cleaned-up Superfund sites. Factoring future use of Superfund sites into the cleanup process promotes their safe redevelopment. In addition, SEMD works closely with state and local officials to remove barriers that have kept many Superfund sites underused. SEMD 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.

Superfund sites across Region 4 are home to **industrial and commercial parks, retail centers, car dealerships, government offices, and neighborhoods**. Many sites continue to host industrial operations such as **large-scale manufacturing facilities**. Other sites support **natural areas, parks and recreational facilities**.



On-site businesses and organizations at current and former Region 4 Superfund sites provide an estimated

19,334
jobs

and contribute an estimated

\$1.2 BILLION
in annual employment
income.

Sites in reuse and continued use in Region 4 generate

\$10.2 MILLION
in annual property
tax revenues for local
governments.



Site Reuse in Action in Region 4

Davis Timber Company (Hattiesburg, Mississippi)

Following cleanup of this former wood-treating facility, an animal shelter and dog park are located on site. Other site uses include parking, connections to an adjacent recreation trail and restored habitat for pollinators.

The animal shelter provides over

\$80,000
in estimated annual
income and

generates

OVER
\$300,000
in estimated
annual sales.



Connecting Communities, Sharing Information



Communities and EPA's local, state, tribal and federal partners rely on accurate Superfund program information. SEMD 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.

SEMD 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 focus 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 and Continued Use Fact Sheets
SEMD updated 22 Reuse, Continued Use, and Ready for Reuse fact sheets and drafted seven new fact sheets during FY 2019. 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 Superfund sites in South Carolina, Georgia, Tennessee, Alabama and Florida.

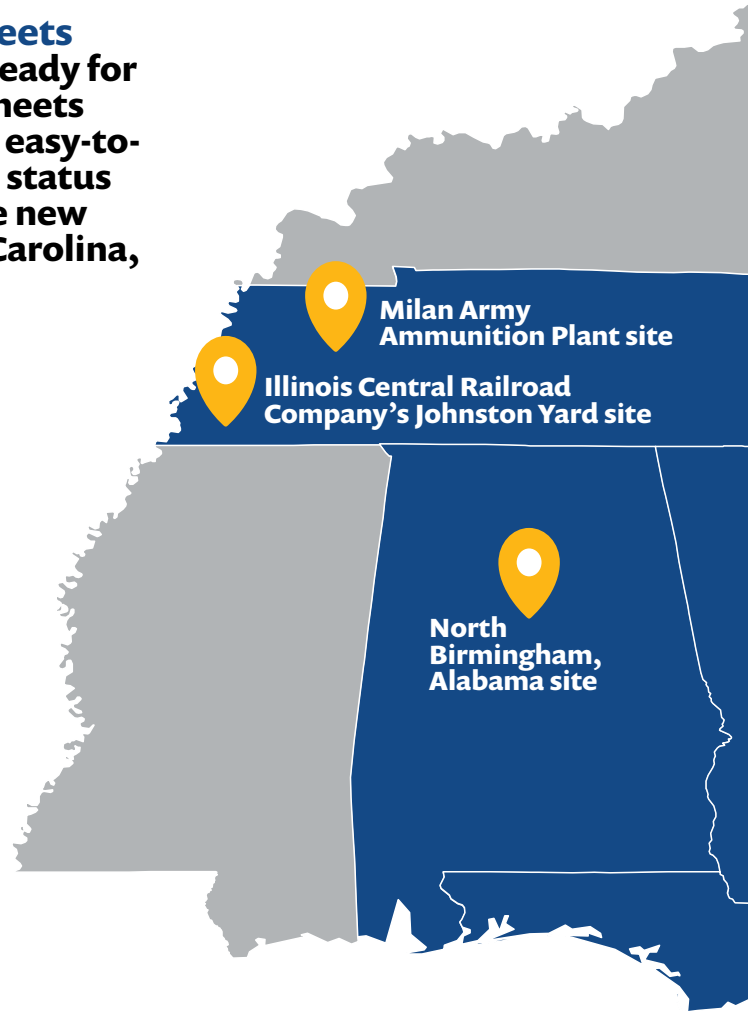
The 288-acre **Illinois Central Railroad Company's Johnston Yard site** in Memphis, Tennessee, is an active railyard. It includes a locomotive fueling and servicing center and a freight car repair facility. Cleanup is ongoing.



EPA is currently addressing residential soil contamination in three **North Birmingham, Alabama neighborhoods**. By the end of FY 2019, 475 properties will have been cleaned up at the 35th Avenue site. More than 50,000 tons of contaminated soil have been excavated and sent for disposal at an approved off-site landfill. Under current conditions, EPA anticipates that cleanup activities will finish by 2023. The fact sheet includes innovative infographics that help tell the site's story.



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



Thanks to an innovative cleanup agreement, the **Former Spellman Engineering site** in Orlando is now home to a school's athletic fields, commercial and industrial areas, parking lots and a park. Potential future redevelopment opportunities at the site include additional commercial development as well as recreation areas and public transit-oriented projects.





The 22,357-acre **Milan Army Ammunition Plant site** in Milan, Tennessee, is an active military installation used to store munitions and provide support services for U.S. Army National Guard and Reserve units. Long term groundwater cleanup is ongoing.



Cleanup and mixed-use revitalization have transformed the **Calhoun Park Area site** in Charleston, South Carolina. An electrical substation continues to provide 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.



The 400-acre **Townsend Saw Chain Co. site** in Pontiac, South Carolina, is home to commercial and industrial uses. They include a manufacturer and supplier of fuel injection equipment, a veterinary hospital, a kennel, a hotel, an auto-body shop, an industrial park, two retail stores, a gas station and restaurants. Groundwater cleanup is ongoing.



Following cleanup, the 16-acre **GAO 144-Zonolite Road site** in Atlanta is now home to Zonolite Park. The Creekside greenway and community park includes walking trails, a pollinator garden, bird-watching resources, picnic tables, restored old-growth forest, wetland garden and native meadow habitat.

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 2019, SEMD shared the recreational reuse success at the Arlington Blending & Packaging site in Arlington, Tennessee. Following cleanup, the site is now home to Mary Alice Neighborhood Park. The park includes sports fields, playgrounds, exercise stations, off-leash dog areas, walking and biking trails, a basketball court, nature area/interpretive walking areas, a picnic area and an area to host special events. The site's redevelopment enhanced EPA's selected remedy and revitalized the property and the surrounding neighborhood.

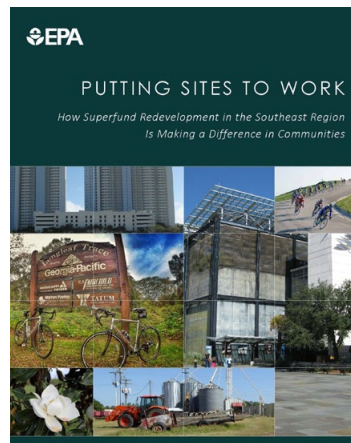
Site redevelopment profiles for all Regions, including Region 4, are available online at www.epa.gov/superfund-redevelopment-initiative/superfund-redevelopment-initiative-success-stories.



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:

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



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 550 on-site businesses and organizations on current and former Superfund sites in Region 4 provide 19,622 jobs, contribute an estimated \$1.3 billion in annual employment income for residents across the Southeast, and generate an estimated \$7.4 billion in annual sales. Restored site properties in Region 4 generate \$10 million in annual property tax revenues for local governments.



**OVER 500
businesses**



**19,662
jobs**



**\$7.4 BILLION
in annual sales**

June 2019 Webinar Highlights Mixed-Use Redevelopment Success in Georgia

SEMD staff participated in this national EPA webinar, which introduced Superfund Redevelopment for EPA's community involvement coordinators.

SEMD staff highlighted cleanup and redevelopment outcomes at the Woolfolk Chemical Works, Inc. site in Fort Valley, Georgia. For more than 60 years, agricultural pesticides were produced on site; these operations resulted in contamination of soil and groundwater as well as homes. EPA cleaned up site soil and residential properties and eliminated the source of groundwater contamination. Today, the homes once affected by the site's contamination remain in use. Fort Valley's library, office space and welcome center stand as a testament to the successful collaboration between EPA and the community.

EPA continues to work with the community to integrate local reuse priorities as part of the cleanup for remaining parts of the site. A bus company reuses a paved portion of the site to park buses. The City of Fort Valley also hosts several local festivals on site, including the ComSouth Hambone Jam and an annual fall festival. As of December 2018, EPA had data on seven on-site businesses. These businesses employed 53 people and generated an estimated \$11.6 million in annual sales revenue.



Georgia Environmental Conference Discussion Highlights South Carolina Redevelopment Project

At this August 2019 conference, SEMD staff hosted a display booth highlighting Superfund Redevelopment and participated in a case study discussion looking at the mixed-use Magnolia redevelopment project proposed for the Koppers Co., Inc. Superfund site and surrounding areas along the Ashley River in Charleston, South Carolina.



The purchaser and EPA have developed a remedial approach that will allow the deletion of much of the site from the NPL (thus allowing it to proceed through South Carolina's Voluntary Cleanup Program) based on technical impracticability. The agreed-upon remedy, which must be implemented prior to the site's removal from the NPL, also involves about \$30 million of cleanup work. The work will be implemented through an Administrative Order on Consent with the purchaser. This strategy will leverage \$30 million in private funds to upgrade the industrial remedy completed in 2003 to support and facilitate the Magnolia redevelopment project.

In Closing



FY 2019 Awards

Every year, SEMD seeks opportunities to recognize the remarkable efforts that sustain continued uses at Superfund sites and return Superfund sites to use. Through our Excellence in Site Reuse award, we honor the hard work and partnerships that make site reuse possible.

From Leaking Storage Tanks to Responsible Environmental Management and Green Practices in Florida

In June 2019, EPA Region 4 presented its Excellence in Site Reuse award to Piper Aircraft (above) to recognize the general aviation company’s efforts to efficiently clean up the Piper Aircraft Corp./Vero Beach Water & Sewer Department Superfund site in Vero Beach, Florida, while also cultivating a “green” culture at the site.

In 1975, the facility began manufacturing airplanes and using an on-site underground storage tank for chemicals used in the assembly process. Soil and groundwater contamination resulted from a leak in an underground storage tank containing trichloroethylene (TCE). In 1978, investigations found TCE and related breakdown products in on-site groundwater, as well as in a city well downgradient and across the street from the property. EPA placed the 80-acre site on the NPL in 1990. With EPA and FDEP oversight, Piper Aircraft, the site’s potentially responsible party, leads site cleanup activities. The remedy includes removal and treatment of contaminated source soil, groundwater treatment and institutional controls, which limit groundwater use and restrict site land uses to industrial uses.

Throughout remedial efforts, Piper Aircraft has worked diligently with EPA and FDEP site oversight teams not only on the required cleanup but also on broader efforts to cultivate a “green” culture at the facility. The company actively improves environmental management through product stewardship, energy and water conservation, pollution prevention, waste reduction and recycling efforts. The company reduced EPA’s long-term stewardship responsibilities through these efforts and coordinated cleanup design to ensure its compatibility with the site’s continued use. Piper Aircraft continues to be a good neighbor in the community, protecting human health and the environment while also supporting the local economy.

Today, the site remains home to Piper Aircraft’s manufacturing facility for small commuter and business aircraft as well as several airport support businesses.

SEMD Staff Excellence

In 2019, the remarkable efforts and dedication of SEMD staff were recognized with a range of national and regional awards.

Regional Honor Awards



Milan Army Ammunition Plant (MLAAP) Site Team

Exceptional leadership and performance in achieving sitewide ready for anticipated use (SWRAU) status for 21,434 acres at the MLAAP installation.

6

SEMD Recipients



National Priority List Hazardous & Radioactive Waste Site

Exemplary leadership, dedication to EPA's mission, and outstanding assistance to colleagues in completing site five-year reviews.

1

SEMD Recipient



TI Waiver Team

Recognition for the scientific complexities successfully addressed with outstanding teamwork and collaboration in achieving these results in a way that establishes a robust science process for future TI waiver proposals.

8

SEMD Recipients



RAF ESO Early Adopter Pilot Team

Recognition for work leading the nation in planning, developing, executing and awarding the first task order in the nation under the national Superfund Remedial Acquisition Framework.

7

SEMD Recipients



Region 4 Realignment/ Reorganization Team

Recognition for the administration of Region 4's realignment/reorganization resulting in a successful Region-wide implementation.

3

SEMD Recipients

National Honor Award



Disaster Response Dashboard Development and Implementation Team

For leading a paradigm shift in Region 4's process for disaster response data management during hurricanes Florence and Michael.

13

SEMD Recipients

National Notable Achievement Award



1
SEMD
Recipient

Community Involvement Coordinator of the Year

For always going above and beyond to ensure meaningful community involvement within the diverse communities in Region 4.



3
SEMD
Recipients

Superfund Remediation Enforcement, Financial Management Team – Hurricane Irma Finance Support Team

Exemplary and exceptional customer service for the EPA and FEMA response to Hurricane Irma.



1
SEMD
Recipient

Superfund Individual of the Year

Outstanding technical support in the areas of risk assessment, field investigations and teamwork in Region 4 and other EPA Regions.



7
SEMD
Recipients

Outstanding Environmental Justice Achievement Award – Southside Chattanooga Lead Superfund Site Team

For their work to gain widespread support for implementation of a Superfund remedy in historically underserved communities in Chattanooga, Tennessee.



2
SEMD
Recipients

Regional Science – Region 4 Ecological Risk Assessment Team

Exemplary scientific knowledge and collaboration in the development of supplemental guidance for ecological risk assessments.



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SEMD
Recipient

National Federal Facility Excellence in Site Reuse Award and Region 4 SRI 20th Anniversary Award – Cecil Field BRAC Team

Exemplary team success, working together to restore the installation in a manner that protects public health and the environment, serves as a catalyst for economic growth and community revitalization, while setting the standard for successful remediation and redevelopment.



Redevelopment Successes at Florida Federal Facility Recognized with National EPA Awards

In 2019, EPA also recognized the Former Naval Air Station Cecil Field Superfund site in Jacksonville, Florida, as the recipient of Superfund Redevelopment Initiative (SRI) 20th Anniversary Award as well as the national Federal Facility Excellence in Site Reuse Award.

The 17,225-acre former Naval Air Station now hosts Cecil Airport, which serves corporate aircraft, general aviation, air cargo, and National Guard and Reserve aviation operations, as well as the City of Jacksonville's Cecil Commerce Center, which is home to more than 31 million square feet of commercial and industrial space. Cecil Airport and Cecil Commerce Center have had significant impacts on job creation and economic development in the Jacksonville area. Today, more than 6,225 people are employed at Cecil Airport and facilities in Cecil Commerce Center. Cecil Airport ranks first among general aviation airports in Florida for total employment and payroll and second in total economic impact.

REDEVELOPMENT FEATURES



Utility upgrades



New fire station



Building demolition and renovation



Lake Fretwell expansion



Improvement of existing hangars and development of new hangars



Florida Community College of Jacksonville campus



Roadway construction/realignment



Equestrian center and recreation complex



Gopher tortoise mitigation



Cecil Field Spaceport

“ EPA continues to be a collaborative partner in remediating our region’s most contaminated sites. The redevelopment of the Former Naval Air Station Cecil Field serves as a catalyst for economic growth and revitalization in the Jacksonville area.

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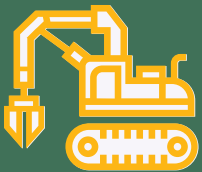
**- EPA REGION 4 ADMINISTRATOR
MARY S. WALKER**

Looking Ahead: FY 2020

As SEMD leans forward, we remain focused on addressing some of the most contaminated sites across the Southeast. Many of our sites are large and complex and require a significant amount of resources to ensure the protectiveness of human health and the environment. SEMD will continue to work to implement and integrate the Superfund Task Force recommendations within our cadre of tools in remediating sites and advancing cleanup, as well as strike a balance of resource shifts and workload adjustments.

In FY 2020, Region 4 begins its tour serving as Lead Region with two coordinators, one focused on remedial efforts and the other on homeland security and emergency response efforts. Having served as a national leader across many of the Agency's priority areas of focus, SEMD will share our expertise at the national level, ensuring consistency across the Regions in addressing and preventing contamination. In FY 2020, SEMD will also continue to embrace our efforts to streamline operations and improve efficiencies, as well as capitalize on opportunities to incorporate innovative practices.

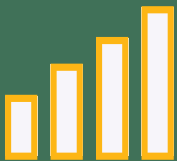
Areas of focus for SEMD in FY 2020 include:



Advancing cleanup and remediation.



Increasing the number of sites returned to beneficial use.



Increasing Sitewide Ready for Anticipated Use completions.



Accelerating Superfund site deletions.



Implementing Superfund Task Force recommendations.



Continuing deployment of the EPA Lean management system in Superfund.



Strengthening partnerships with prospective purchasers in support of redevelopment opportunities.



Increasing capabilities in emergency response and preparedness.



Continuing to hold responsible properties accountable.



Using sound science in remedy selection.



Maximizing resource utilization and implementing a new contracting paradigm.



Maintaining meaningful engagement with communities and stakeholders.

In FY 2020, SEMD looks forward to strengthening our partnerships, increasing communities' trust in our commitment to the Agency's mission, and pursuing opportunities where innovation can play a vital role in expediting cleanup and remediation.

