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Returning Some of the Nation's Worst Hazardous Waste Sites to Safe and Productive Uses





Superfund Redevelopment Initiative

Office of Superfund Remediation
and Technology Innovation



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www.epa.gov/superfund/programs/recycle

The Superfund Redevelopment Initiative

The Superfund Redevelopment Initiative (SRI) helps communities reclaim cleaned Superfund sites and remove barriers that have kept many of them vacant and underutilized for decades.

SRI supports the reuse of sites without compromising cleanup standards.



The consideration of future land use is an integral part of the Superfund process – from remedy selection to the long-term monitoring and stewardship of sites after cleanup. The Superfund Redevelopment Initiative upholds this critical activity.

The reuse potential of Superfund sites after cleanup is far-reaching. Today, sites are being reused for virtually every type of land use, from residential, commercial and industrial land uses to parks, farm land, and public facilities.

Recycled sites provide economic, environmental, and social benefits. Each one of these sites can become the catalyst that revitalizes an economically depressed area and helps to strengthen a community.

SRI believes that almost all sites can be reused and become valuable assets for their communities.



Reclaiming Opportunity

The Superfund Program

Superfund is the federal program to clean up the nation's abandoned hazardous waste sites. The program was created by law in 1980 in the wake of the discovery of toxic waste dumps such as Love Canal and Times Beach. It allows EPA to clean up sites and to compel those responsible for contamination to perform cleanups or reimburse the government for cleanups. Since Superfund's creation, remedies have been completed at 1,060 sites, and work is underway at an additional 423 sites. EPA has also identified and assessed thousands of sites.

The Superfund Redevelopment Initiative (Sri)

In the 1990s, EPA began to notice that, although a few cleaned-up Superfund sites were being put back to use, many sites were left idle and abandoned. SRI was created in 1999 to support reuse without compromising cleanup standards. EPA's mission remains the protection of human health and the environment, and Superfund site redevelopment complements that commitment.

What is reuse?

Reuse refers to the productive use of a site after cleanup. Over the past ten years, EPA has identified several types of reuse options. Communities have reused sites for industrial and commercial uses, such as factories and shopping malls. Sites have been used for housing and public works facilities, such as transit stations. Many communities have created new recreational amenities, like ball fields, parks and golf courses. Sites have also been reused to support ecological resources, including wildlife preserves and wetlands, as well as agricultural land. Superfund reuse exemplifies smart growth principles by protecting natural resources and preserving greenfields. SRI has tracked over 500 sites that are in actual, continued, or planned reuse.

Advancing Solutions

From the beginning, SRI has focused on two approaches that EPA can use to support Superfund site reuse. The first approach is to work with site stakeholders to explore future uses before cleanups are underway. This approach gives EPA the best chance to design cleanup remedies that are compatible with an intended use. The second approach is to work with communities to remove unnecessary barriers to reuse at sites where remedies are already in place.

Since SRI's inception, the Initiative has developed an array of tools and services to help communities reuse their sites.

- **Reuse Pilots:** In 1999, SRI provided ten pilot grants to local governments to support reuse planning efforts. The grant program eventually included 70 communities that received pilot funding or technical assistance.

- **The Return to Use (RTU) Initiative:** SRI developed this effort in late 2004 to remove barriers to reuse. As part of this effort, SRI established site-specific partnerships, called demonstration projects. These partnerships involve community groups, government officials, site owners, and the parties responsible for cleaning up the sites.

- **Regional Seeds:** SRI provides funds to assess sites' redevelopment potential, which can include providing facilitation services as needed and assessing a site's capability to support alternative energy reuses. This initial funding can lead to reuse plans that guide a site's redevelopment. SRI also looks for partnership opportunities with groups, organizations and businesses that could help communities secure redevelopment funding.

- **Ready for Reuse (RfR) Determinations and Comfort Letters:** An RfR is an environmental status report that provides essential information about how a site can be used without compromising the protectiveness of its remedy for people and the environment. Comfort letters provide information about sites and help clarify liability issues for prospective purchasers and site owners.

- **SRI Coordinators:** Each EPA Region has a representative who works with EPA staff and site stakeholders on redevelopment issues.

- **The Reuse Help Desk:** The Reuse Help Desk is a reuse resource for regional staff and communities impacted by Superfund sites.

- **The SRI Web Site**: SRI's Website provides one-stop access to a lot of information, references, and resources, including case studies, videos, and lessons learned, to help communities pursue Superfund reuse opportunities.

Each site is unique and there is no one-size-fits-all approach to make reuse happen. Since 1999, SRI has spent a great deal of time helping communities overcome unnecessary reuse barriers one-by-one. The following pages celebrate SRI's partnership with communities around the country to help make Superfund site reuse a reality.

From the 1960s until 1980, a 12-acre area of the Auburn Road Landfill site, located in Londonderry, New Hampshire, was used for the disposal of chemical wastes, tires, demolition debris and solid waste. Remedy construction, including capping of wastes, ground water treatment and connecting area to municipal water supply, was completed in 1998 and monitored natural attenuation of ground water is ongoing. The New Hampshire Flying Tigers, an Academy of Model Aeronautics (AMA) club, opened the Auburn Road Flying Field at the site in August 2008. This was the first flying field at a Superfund site in New England and was established through the AMA/EPA partnership.

Before



After



Region 1

Auburn Road, Londonderry, New Hampshire

Region 2

Welsbach & General Gas Mantle, Camden and Gloucester City, New Jersey

Before



After



The Welsbach & General Gas Mantle Contamination site is a multi-property site located in an industrial and residential area of Camden and Gloucester City, New Jersey. Between the 1890s and 1940s, two companies produced gas mantles in the area resulting in radiological contamination at the two facilities and approximately 100 area properties. Cleanup efforts began in 2000. In April 2008, two local not- for-profit organizations purchased a cleaned up portion of the site and constructed the 96-seat Waterfront South Theatre. The South Camden Theatre Company opened their first season in the theatre in September 2010. The facility is also used for area school, theater, music and arts programs. Cleanup efforts on remaining portions of the site continue and have been accelerated with the help of $28 million in 2009 American Reinvestment and Recovery Act funds.

The Lower Darby Creek Area Superfund site, located in Philadelphia and Delaware Counties, includes two landfills, one located in the John Heinz National Wildlife Refuge and the other located adjacent to an environmental justice neighborhood. Stakeholders include multiple local government agencies, community members and the site owners; each offering a range of reuse goals and considerations. SRI funded a reuse assessment to clarify stakeholder goals, document potential site constraints, and inform the remedial process. A stakeholder working session in November 2010 clarified that there is significant interest in reuse at both landfills and several potential reuse options. During the working session, participants agreed that the formation of an advisory group would provide a forum to coordinate the remedial process and potential reuse of the site, including the possibility of a regional greenway corridor.

Before



After



Region 3

Lower Darby Creek Area,
Lower Darby Township, Pennsylvania

Region 3

Abex Corporation, Portsmouth, Virginia

Before



After



A foundry operated on the two-acre Abex Corporation Superfund site in Portsmouth, Virginia for 50 years, leaving behind lead-contaminated soil, sediment and surface water. An agreement was reached among EPA, Abex Corporation, the Commonwealth of Virginia, the City of Portsmouth and the Portsmouth Redevelopment and Housing Authority to design and conduct the cleanup of the site and to identify beneficial reuse activities. As part of the cleanup, 20 homeowners sold their properties to the City of Portsmouth, which has been redeveloping the site to bring additional services to the Southside Portsmouth area in support of revitalization activities. The site currently hosts a park, a beverage distribution center and a shopping center in addition to three public service facilities: Fire Station 1, the Charles A. Fisher Memorial Police Training Academy and the not-for-profit Portsmouth Community Health Center.

The 26-acre Former Spellman Engineering Site is located in Lake Highland, an area that is considered the northern gateway to downtown Orlando. The Site is one of the most important pieces of undeveloped land in the vicinity of the Central Business District. Prior to the discovery of contamination, some of the impacted land was acquired by the Orlando Utilities Commission and a portion was leased by Lake Highland Preparatory School (LHPS) for athletic field space. The City did not want the Site to be added to the National Priorities List. EPA issued its first ever Contiguous Property Owner Agreement, in which the City of Orlando agreed to implement the estimated $12.9 million remedy, which it is currently implementing. As part of the arrangement, LHPS simultaneously purchased some of the Site and signed a Bona Fide Prospective Purchaser Agreement with EPA. In exchange for a covenant not to sue from EPA, LHPS provided funds which helped the City finance the cleanup. LHPS has redeveloped the area it purchased to expand its sports and other school facilities.

Before



After



Region 4

Former Spellman Engineering, Orlando, Florida

Region 5

Quincy Smelter, Franklin, Michigan

Before



After



The century-old Quincy Smelter is a National Historic Landmark and the only copper smelter still standing in the Great Lakes region. Local stakeholders agreed that the Smelter should be preserved and were interested in exploring commercial reuse possibilities for other portions of the site. While awaiting a cleanup remedy decision from EPA and Michigan Department of Environmental Quality, Region 5 SRI conducted a two-phase reuse planning process, developing a working group of the partner agencies and conducting a two-day community workshop that resulted in a reuse framework and the formation of an executive steering committee to guide cleanup and redevelopment of the site. The National Park Service has agreed to relocate the Isle Royale Visitor Center and Ranger III dock to the site pending a viable financing strategy. The Steering Committee is now in the process of drafting a request for qualifications for a development financing feasibility study for the site.

The Many Diversified Interests, Inc. Superfund site occupies approximately 36 acres in Houston, Texas. The site is located in the City's Fifth Ward, a historically African-American neighborhood that is undergoing rapid transformation due to Houston's economic growth. Despite the site's excellent redevelopment potential, developers had concerns regarding how a non-liable party could acquire, clean up and redevelop the site. With innovative tools such as an "Agreed Order on Consent and Covenant Not to Sue" and the first ever Bona Fide Prospective Purchaser agreement in the country, the property was acquired by developer Clinton Gregg Investments, L.P. Construction of the site's remedy is now complete and a partial deletion of a remediated portion of the site was finalized in August 2010. In late 2010, EPA presented the developer with a Certificate of Completion for the soil remedy at Operable Unit 1. EPA and the developer hope to host a ground breaking for the new mixed use development in the near future.

Before



After



Region 6

Many Diversified Interests, Inc., Houston, Texas

Region 7

Cherokee County, Galena, Kansas

Before



After



Over one hundred years of mining left much of the approximately 115 square-mile Cherokee County Superfund site covered with barren rock and gravel and a legacy of contamination. With more that 50% of the site remediated, stakeholders began to explore sustainable reuse options for the site through a reuse assessment and an alternative energy suitability study. The results of these studies indicated that activities such as haying, grazing and wildlife habitat are compatible with the site's remedy and have the potential to bring financial returns from otherwise unused lands. The alternative energy suitability study found that the site was best suited for utility scale biomass production and also noted that, in the long-term, restored site lands could play a role in carbon sequestration and conservation programs.

For decades, the Clark Fork River was a dumping ground for mining wastes, which traveled downstream nearly 130 miles until their progress was blocked at the Milltown Dam. Barred from moving downstream, the tailings piled up until nearly six million cubic yards of waste collected at the base of the dam. As part of site cleanup activities, contaminated sediments and wastes were removed, the dam was removed and river flow has been restored. Starting with a Superfund Redevelopment Pilot in 2002, EPA and state and local stakeholders began the planning process to develop a vision for the future of the site. The project aims to restore the high quality of water from the Milltown Aquifer, allow unrestricted fish passage, improve native and recreational fisheries, provide high quality habitat for fish and wildlife and allow for expansion of functional wetland and riparian communities. The restored ecosystem will also provide safe recreational opportunities including river boating, fishing and trail access for hiking and bicycling. Milltown was included in SRI's 2010 Return to Use Initiative.

Before



After



Region 8

Milltown Reservoir Sediments, Milltown, Montana

Region 9

Aerojet General Corporation, Rancho Cordova, California

Before



After



The Aerojet General Corporation Superfund site covers 5,900 acres near Rancho Cordova, California. Since 1953, Aerojet and its subsidiaries have manufactured rocket engines and formulated a number of chemicals. Cleanup of soil and ground water contamination from former disposal practices is currently underway. In 2008, Aerojet began planning to convert a portion of its facility into a solar farm to help power the site's extensive ground water remediation program. Completed in 2010, the 40-acre solar farm generates six megawatts of power, providing more than 20 percent of the energy needed to power the site's ground water remediation program. Aerojet collaborated with Solar Power Inc. on the installation, which is the largest single-site industrial project of its kind in California.

The Reynolds Metals site in Troutdale, Oregon is the former location of the Reynolds/ Alcoa aluminum smelter and subsequent Superfund site cleanup. The Port of Portland bought the 700-acre property after cleanup was complete and plans to redevelop the site into an industrial park. The Port sold the first 78-acre parcel to FedEx Ground, which has built a 425,000 square-foot regional distribution center on the land. The new center began small-scale operations in August 2010 and phased up activities until the grand opening on October 28, 2010. The nearly $130 million dollar facility is anticipated to employ between 700 and 1000 employees when at full operating capacity, bringing new jobs and potenitally new residents with approximately 450 current FedEx Corporation employees being transferred to the area. The Port plans to develop about another 280 acres for industrial use and the rest of the land will be set aside for infrastructure, open space, wetlands and a recreational trail.

Before



After



Region 10

Reynolds Metals, Troutdale, Oregon

The Future of Reuse

Superfund site reuse has delivered benefits at these sites and other sites across the country. Depending on the specific circumstances, site reuse can provide economic, environmental and/or social benefits. Considering the benefits provided at the more than 300 sites that have been returned to productive use, SRI estimates that these reuses have contributed more than 30,000 jobs and generated more than $1.3 billion in annual income in their communities.

SRI also found that reuse leads to better protection of human health. The presence of people and activities makes a site less likely to be a target for vandalism or illegal dumping. In addition, government officials immediately know if an unexpected remedy repair may be needed.

Looking at the big picture of overall land development in a region, site reuse promotes infill development and minimizes sprawl.

For sites that support a commercial enterprise or a public facility, there are associated jobs and income, greater spending at area businesses, increased public revenue, and increased property values at and around the sites. In addition, sites may provide greater recreational opportunities or restore valuable wetlands or refuges for wildlife.



In addition to the tools already provided by SRI, the Initiative will also be engaging in new activities to extend its reach and effectiveness.

Dream Teams

SRI creates teams who bring expertise in Superfund, land use, real estate and community involvement to support community-based reuse planning efforts. The RTU Initiative will also continue to help communities reuse hundreds of sites that have been cleaned up.

Clean to Green

SRI promotes the use of alternative energy – solar, wind and geothermal – at cleaned up sites, and discussions for these uses are already under way for several sites. Case studies, fact sheets and training on alternative energy reuse are available on SRI's website: www.epa.gov/superfund/programs/recycle.

Outreach

SRI provides outreach material to interested parties, helping to create an informed community of stakeholders who understand the opportunities and benefits provided by Superfund site reuse, and who will work with SRI to continue to return sites to productive use.

Measuring Performance

Each year, SRI measures performance by tracking the number of acres of land at Superfund sites that are ready for reuse as well as measuring the number of Superfund sites with land that is ready for reuse.



Superfund site reuse takes time, and SRI intends to support communities who want to reclaim these critical assets. SRI would like to acknowledge the support of those people and organizations whose dedicated efforts make this work possible. They include: SRI's Superfund Redevelopment Initiative Coordinators in each of the EPA 10 Regions, and EPA Remedial Project Managers, Regional and headquarters Council, state and local government officials, State environmental cleanup teams, groups and organizations who have partnered with EPA, developers, and community members whose willingness to go above and beyond has resulted in the innovation and action that make Superfund redevelopment possible.

For more information, please contact:

Melissa Friedland
Superfund Program Manager for Redevelopment
703.603.8864
USEPA Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail code: 5204G
Washington, DC 20460

Frank Avvisato
Superfund Redevelopment Project Officer
703.603.8949
USEPA Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail code: 5204G
Washington, DC 20460

Superfund Redevelopment Reuse Help Desk
434.817.0470



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