

The Clean Water State Revolving Fund: A Powerful Financial Tool to Support Brownfield and Superfund Assessment and Cleanup



Land revitalization is the sustainable redevelopment of abandoned properties and contaminated sites into public parks, restored wetlands, and new businesses. Cleaning up and reinvesting in these properties increases local tax bases; facilitates job growth; use existing infrastructure; takes development pressures off undeveloped, open land; and both improves and protects the environment.

EPA's Land Revitalization Program, including the brownfield, Superfund, and Resource Conservation and Recovery Act programs, fosters strong partnerships with communities to promote sustainable redevelopment of abandoned properties. The program provides technical assistance, outreach, and funding to assist communities in transforming their previously contaminated sites into sustainable redevelopment projects. EPA's Clean Water State Revolving Fund (CWSRF) can further support these efforts as a powerful financial instrument to address the water quality aspects of brownfield and Superfund site assessment and cleanup.

Funding for Contaminated Sites

A brownfield is a property whose expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. It is estimated that there are more than 450,000 brownfields in the United States. EPA's Brownfields Program provides grants and technical assistance to communities, states, tribes, and others to assess and safely clean up brownfield properties with real or perceived contamination. State and Tribal Response Programs also provide assistance to ensure protective and sustainable site cleanups.

EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills, and natural disasters. To protect public health and the environment, the Superfund program focuses on making a visible and lasting difference in communities, ensuring that people can live and work in healthy, vibrant places. Under the Superfund program, the parties responsible for the contamination are required to either perform cleanups or reimburse the government for EPA-led cleanup work. When there is no viable responsible party, Superfund gives EPA the funds and authority to clean up contaminated sites.

The CWSRF can augment resources currently available to assess and clean up brownfield and Superfund sites. The assessment and cleanup of a brownfield site to correct or prevent water quality problems may be eligible for CWSRF assistance. CWSRF-eligible brownfields and Superfund activities include, but are not limited to:

- excavation and disposal of underground storage tanks;
- constructed wetlands;
- excavation, removal, and disposal of contaminated soil or sediments;
- well abandonment;
- site assessments;
- cleanup of contaminated groundwater or surface water;
- environmental insurance premiums; and
- collection/remediation of stormwater generated at the site.

Co-funding Success Stories

Several states use the CWSRF to finance the water quality aspects of brownfield and Superfund remediation projects. The following case studies provide examples of how communities have leveraged brownfields grant and loan funding and CWSRF financing to clean up contaminated sites.

Le Mars Coal Gas Superfund Site, Iowa (Superfund)

Located at the site of a former manufactured gas plant and distribution system constructed by the Le Mars Gas Light Company, the 1.6 acre Le Mars Coal Gas Superfund site was contaminated by elevated VOCs, SVOCs, and cyanide, among other soil and groundwater contaminants. EPA identified remediation activities necessary to remove the human health and groundwater threat posed by the site. The activities included underground storage tank removal, excavation to remove on-site soil contaminants, off-site thermal treatment of highly contaminated soil, off-site disposal of nonhazardous soil and debris, air monitoring during the removal, and backfill with clean soil and site restoration.

The most recent property owners, MidAmerican Energy (formerly Iowa Public Service Company) and the City of Le Mars, paid a total of \$4.6 million to EPA for response costs, which included all costs EPA incurred to clean up the site including the legal fees of the consent decree. The CWSRF provided a \$1.5 million loan at 3% interest to the City of Le Mars for their portion of the remediation.

Fairview Environmental Park, Alabama (Brownfield Project)

Once a former brownfield site, Genetta Park in Montgomery, Alabama is now Fairview Environmental Park, a four-acre constructed wetland that serves as a neighborhood amenity with greenspace, trails, lighting, and green infrastructure features that address stormwater management issues. Genetta Park also serves as an attractive gateway to the 54-mile Selma to Montgomery National Historic Voting Rights Trail, which commemorates the events, people, and the march route of the Historic Civil Rights March.

Flowing through the park is Genetta Stream, an urban waterway and major tributary of Catoma Creek that was channelized underground in the 1960s to facilitate urban development. This channelization led to an increase in impermeable surfaces, eliminated the stream and riparian habitat in the watershed, and increased pollutant loading.

Phase I of the project was funded with an Alabama Department of Environmental Management (ADEM) Section 319 grant, a loan from Alabama's EPA-funded Brownfields Revolving Loan Fund (RLF), and a HUD Community Development Block Grant (CDBG). During this phase, the concrete pipelines were removed, a new channel alignment



Before image of the Genetta Park area. Source: 2D Studio LLC



Genetta Stream prior to the final phase. Source: 2D Studio LLC

and floodplain were created, and the site was remediated due to petroleum hydrocarbon contamination. A \$1.9 million loan from the Alabama CWSRF, as well as HUD CDBG funds, provided the funding for Phase II of the project, which included the installation of green infrastructure features. The construction of the park, daylighting of the stream, and green infrastructure features help to filter stormwater runoff before it discharges to the Catoma Creek.

The EcoCenter at Heron's Head Park, California (Brownfield Project)

The EcoCenter at Heron's Head Park, located on a former abandoned brownfield site, is now a center for community youth to learn about energy efficiency, waste management, water conservation, green infrastructure, and green building. Every feature of the 1,500 square foot EcoCenter serves as a teaching tool for sustainability and green building design, emphasizing the interconnection of social, economic, and environmental issues as they relate to the history of the Bayview Hunters Point community. The EcoCenter treats its own wastewater using constructed wetlands, biological treatment, and ultraviolet sterilization lamps. In addition, it features a green roof and native landscaping, which conserve water and prevent stormwater runoff.



EcoCenter and Heron's Head Park

Redevelopment of the site into the EcoCenter was funded in part by approximately \$350,000 in CWSRF funds from the California State Water Resource Control Board. In recent years, EPA's Brownfields Program has invested over \$1.7 million to continue the revitalization of the neighborhood through site assessment, cleanup, and other EPA grants. In total, EPA's investment leverages over \$6.5 million in property cleanup, design and planning work which is helping to guide the multi-million dollar redevelopment of India Basin Waterfront Park located within the Bayview Hunters Point community.

Former Columbus Wood Treating Plant, Indiana (Brownfield Project)

A combination of CWSRF and Brownfields RLF funding has benefitted the City of Columbus, Indiana. In 2011, the Indiana Finance Authority issued a loan to the City for petroleum remediation activities at the 1.24-acre, vacant, former site of the Columbus Wood Treating Plant, which facilitated construction of a pedestrian/cycling trail. The trail serves as interim greenspace redevelopment for the Columbus community until commercial or other redevelopment occurs in the future.



Former site of the Columbus Wood Treating Plant

The funding mix included \$1.2 million in petroleum brownfields loan funds coupled with \$600,000 in CWSRF loan funds, totaling \$1.8 million in loan funding to mitigate groundwater and soil impacts associated with a long history of the plant's operations, including coal and coke processing and wood treating/preservation. The remediation activities helped to eliminate the discharge of contaminants and protect the Flat Rock River. The combined CWSRF and Brownfields RLF financial assistance for the site has leveraged additional funding to facilitate reuse including a federal Housing and Urban Development Economic Development Initiative Grant for over \$300,000.

Former Marshall Brothers Paper Mill, Delaware (Brownfield Project)

From the late 1800s until 2008, paper products were manufactured at a mill in Yorklyn, Delaware. First named the Marshall Brothers Paper Mill, it became the National Vulcanized Fibre company in 1904. After the plant closed, site contamination and flooding potential were major obstacles to redevelopment. The project is using a “strategic retreat” approach to the 100-year floodplain. All non-essential, non-historic buildings in the floodplain have been removed and essential components are being relocated out of the floodplain where possible.

To date, approximately \$4 million to \$4.5 million has been spent at the site from Hazardous Substance Cleanup Act program funds, plus an additional \$3.3 million loan from the Delaware Department of Natural Resources and Environmental Control’s Clean Water State Revolving Fund for the zinc source removal/flood mitigation wetland project. Clean-up activities have been completed for the western part of the property and remediation of the eastern parcel is ongoing.

The remediation is paving the way for redevelopment on and around the site. After the remediation and subsequent redevelopment are completed, the State’s investment in the National Vulcanized Fibre project is estimated to result in approximately 323 total full- and part-time jobs and \$33.1 million in total economic output. The completed project is also estimated to result in approximately \$1.5 million in state and local taxes each year.



Construction at the former Marshall Brothers Paper Mill.

Gainesville Stormwater Management, Florida (Brownfield Project)

A combination of \$4.5 million in CWSRF and Brownfields RLF funding was used to remediate, restore, and convert the site of the former Gainesville Gas Coal Gasification Plant (GCGP) and CSX Train Depot into a regional stormwater park (Depot Park). EPA awarded a pilot brownfields grant in the amount of \$200,000 to conduct an environmental site assessment. A remedial action plan was developed for the site, which included removing over 147,000 tons of contaminated soil and treating and discharging approximately 40 million gallons of contaminated water. CWSRF funds in the amount of \$4.3 million were loaned to the City of Gainesville for soil remediation and the stormwater treatment system. After further work by the Florida Department of Environmental Protection and the Gainesville Community Redevelopment Agency, the project was completed in 2016. These remediation activities helped the City of Gainesville transform an abandoned industrial hub into a thriving park and stormwater treatment facility. Depot Park now has the capacity to treat runoff from approximately 89 acres and features a children’s play area, water soakers, ground jets, and a promenade for special events including art festivals and musical performances.

For more information on the CWSRF, contact:
The Clean Water State Revolving Fund Branch
United States Environmental Protection Agency
Office of Water, Office of Wastewater Management
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Washington, DC 20460
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For more information on Brownfields, contact:
Office of Land and Emergency Management
U. S. Environmental Protection Agency
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Washington, DC 20460
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