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# Brownfield Remediation Through The Clean Water State Revolving Fund



## Brownfields – The Water Pollution Control Challenge

The USEPA finances brownfield remediation through many programs and funding sources. One of these sources is the Clean Water State Revolving Fund (CWSRF) loan program. Brownfields are abandoned, idle, or under-used industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination. The General Accounting Office estimates that there are nearly 500,000 brownfield sites in the United States. This includes small sites such as abandoned gas stations and dry cleaning facilities as well as larger sites like idle industrial/manufacturing complexes. Brownfield sites can be in urban, suburban, or rural areas.

Brownfield sites are often polluted by a variety of contaminants such as fuels, metals, solvents, and volatile organic compounds. These contaminants, typically found in storage tanks or in a property's soils, can impair a community's water quality if they seep into groundwater or run off into surface water.

Remediation of brownfield sites can address these water quality concerns and also prepare the sites for other uses. States are creatively addressing the challenges of brownfield remediation, including the challenge of financing these efforts. As one piece of a funding solution, many states are considering the use of the USEPA's CWSRF—a funding tool that addresses threats to and impairments of water quality.



## The Clean Water State Revolving Fund

The CWSRF program is a state-operated program that provides low-interest loans to communities, municipalities, individuals, businesses, citizen groups, and nonprofit organiza-

tions to finance projects that address water quality problems. The CWSRF program funds a wide range of projects, including wastewater treatment plants, septic systems, agricultural best management practices, and brownfield remediation.

Today, all 50 states and Puerto Rico have more than 10 years of experience operating CWSRF programs. Each state CWSRF program receives annual capitalization funding from both the federal government and state government. States use this funding to make low- or no-interest loans for water quality projects. As the loans are repaid, states make new loans to other water quality projects.

Annually, CWSRF programs provide between \$3-4 billion in assistance to water quality projects. Total assets in the CWSRF program exceed \$34 billion.

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## What Projects are Eligible for CWSRF Assistance?

States are given great flexibility in the management of CWSRF programs, so CWSRF project eligibility may vary according to the priorities of each state. Examples of brownfield projects that may be eligible for CWSRF funding include:

- Phase I, II and III site assessments (for brownfields with water quality impacts)
- Excavation and disposal of underground storage tanks
- Excavation, removal, and disposal of contaminated soil or sediments
- Capping of wells or soil
- Remediation of stormwater runoff (including the use of constructed wetlands)
- Monitoring of groundwater or surface water for brownfield contaminants

## Advantages of CWSRF Loans

The CWSRF has been a highly popular program for financing water quality projects since 1987. Advantages of the CWSRF include:

- \$3-4 billion of funding available annually
- Low interest rates (zero to market rate)
- Repayment terms up to 20 years
- Repayments begin up to 1 year after project start-up date
- Loans cover 100 percent of eligible costs - no local, up-front match

## CWSRF Brownfield Case Studies

Many states are considering using the CWSRF to finance brownfield remediation projects related to water quality. Ohio and Wisconsin have already made loans to brownfield projects. CWSRF programs in Maryland, New Mexico, and New York are planning to fund brownfield projects, as well. The following case studies show how several states are funding brownfield projects.

### Ohio

Ohio was the first state to use its CWSRF program to finance brownfield remediation that impacts surface water and groundwater quality. Since 1996, Ohio's Voluntary Action Program (VAP) has helped 11 brownfield projects receive CWSRF loans for more than \$10 million.

**Loan Recipient:** Grant Realty Company - Private Company  
**Project:** Remediation of Contaminated Groundwater and Soils  
**Loan:** \$1.6 million  
**Interest Rate:** 4.12%

**Project Description:** The Grant Realty Company of Ohio received a CWSRF loan for the cleanup of a 20-acre industrial site in Cleveland to prepare the area for commercial reuse. The project used vapor extraction and dual-phase vacuum extraction technologies to remediate contaminated soil and groundwater.

**Project Financing:** The cleanup was financed with \$1.6 million from Ohio EPA's Water Pollution Control Loan Fund (Ohio's CWSRF) and \$1.0 million from another state loan program. The 20-year CWSRF loan has an interest rate of 4.12 percent. Grant Realty used its income stream from a tank cleaning operation to repay the loan. Personal guarantees and a second position mortgage on the property provided additional collateral.

**Loan Recipient:** Barberton Laundry and Cleaning - Private company  
**Project:** Phase II Site Assessment  
**Loan:** \$64,000  
**Interest Rate:** 3.2%

**Project Description:** Barberton Laundry and Cleaning, a small company located in Barberton, Ohio, used CWSRF financing to undertake Phase II site assessment work. The project-sampled soil and groundwater to determine the extent of contamination and the scope of any remedial activities needed to prepare the site for reuse. This assessment was a critical first step in planning redevelopment for the site.

**Project Financing:** This project received a \$64,000 loan from

Ohio EPA's Water Pollution Control Loan Fund. This five-year loan bears an interest rate of 3.2 percent. Barberton Laundry and Cleaning used the revenue stream from its laundry and cleaning business to repay the loan. Inventory and cash provided additional collateral.

### New Mexico

New Mexico's Voluntary Remediation Program was introduced in July 1999. This program is planning to use CWSRF funding to encourage the voluntary cleanup of brownfield sites. Two projects are currently planned.

**Potential Recipient:** City of Santa Fé - Municipality  
**Project:** Site Assessment, Remediation, and Water Quality Monitoring  
**Loan:** \$4.0 million  
**Interest Rate:** 3%

**Project Description:** In 1995, the City of Santa Fé purchased a 50-acre former railyard/industrial site that was initially developed in the 1880s. The city plans to improve the water quality of the Acequia Madre (an irrigation canal that runs through the site) and redevelop the property with a mixture of uses. The city is completing a comprehensive environmental assessment for the property with the support of an EPA Brownfields Pilot Grant. CWSRF funding will support water quality monitoring, environmental studies, risk assessment, and remediation activities that address water quality.

**Proposed Financing:** This project is expected to cost \$21 million. The city plans to finance approximately \$4 million (20 percent of the project cost) through the CWSRF. A 3-percent CWSRF loan will allow the project to remain financially viable and will help keep future lease rates attractive to developers. The city will use residential and retail lease payments to repay the loan.

**Potential Recipient:** City of Deming - Municipality  
**Project:** Site Assessment and Soil Remediation  
**Loan:** \$300,000  
**Interest Rate:** 1%

**Project Description:** The Peru Hill Mill site consists of 1,320 acres of abandoned zinc mining lands in Deming, New Mexico. Uncontained tailings (refuse remaining after ore has been processed) in a 104-acre impoundment and windblown tailings on 161 adjacent acres have caused elevated levels of lead, arsenic, cadmium, cobalt, copper, iron, manganese and zinc in soils on the site. These contaminants threaten the City of Deming's drinking water - groundwater that runs underneath the property. The project will include site investigation and remediation activities.

**Proposed Financing:** The City of Deming has applied for a \$300,000 CWSRF loan to assist with cleanup of the site. The loan will have a 20-year term and an interest rate of 1 percent.

**Wisconsin**

Wisconsin has passed legislation that allocates \$20 million of its CWSRF funding to municipal projects that address brownfield site impacts on water quality. The program offers interest rates that are 55 percent of the municipal bond market rate. To date, Wisconsin has funded two brownfield cleanup projects for \$1.9 million.

**Loan Recipient:** City of Plymouth - Municipality  
**Project:** Site Investigation and Landfill Cleanup  
**Loan:** \$1.3 million  
**Interest Rate:** 0%

**Project Description:** The City of Plymouth landfill site was used for the disposal of construction debris, commercial waste, and industrial waste from 1955 through 1990. This project required a site investigation and remediation of the landfill. The city capped and covered the landfill and installed groundwater monitoring equipment.

States use the CWSRF to finance a range of environmental projects including projects to address brownfield-related water quality problems.

**Project Financing:** The City of Plymouth received a \$1.3 million CWSRF loan for this project. The 20-year loan has a 0 percent interest rate.

**Maryland**

Maryland’s Voluntary Cleanup Program, administered by the Maryland Department of the

Environment, streamlines the environmental cleanup process for brownfield sites. The Brownfields Revitalization Incentive Program, managed by the Maryland Department of Business and Economic Development, provides economic incentives such as loans, grants, and property tax credits that support the cleanup and development of brownfield properties. Maryland is planning to coordinate these efforts with CWSRF funding to encourage more brownfield projects.

**Potential Recipient:** Developer/Land Owner - Private Entity  
**Project:** Site Assessment and Abandoned Oil Storage Facility Cleanup  
**Loan:** \$1.0 million  
**Interest Rate:** Below Market

**Project Description:** An abandoned oil storage facility covers 78 acres in downtown Baltimore. There are no buildings on the site, but vacant oil tanks may threaten groundwater and Baltimore Harbor, and the tanks must be removed before any redevelopment can occur. A CWSRF loan will support a site assessment and remediation of potential petrochemical contamination.

**Project Financing:** Maryland plans to offer the private developer a \$1.0 million loan for this brownfield remediation project. The CWSRF may offer the funding through its linked deposit loan program - a partnership between the CWSRF and a commercial bank. In this program, the borrower applies to a commercial bank for a loan. If the borrower is creditworthy and has a CWSRF-eligible project, the commercial bank offers the borrower a loan at a below-market interest rate. The loan subsidy is provided by the CWSRF program.

**New York**

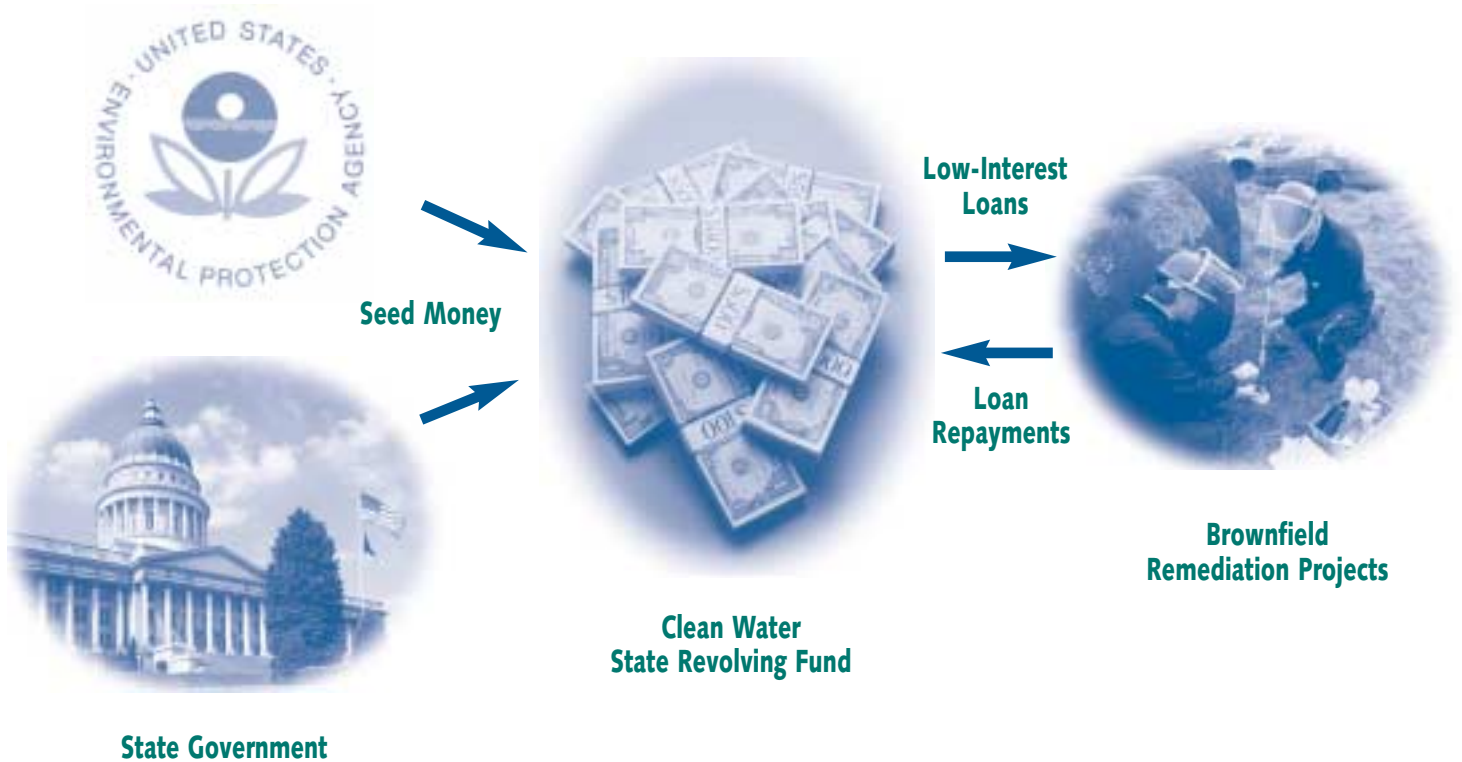
The New York State Environmental Facilities Corporation uses the its CWSRF to help municipalities finance projects that reduce or prevent water pollution from brownfields. The CWSRF offers short-term interest-free loans and 20-year loans at one-half of market interest rates.

**Loan Recipient:** Village of Greenport - Municipality  
**Project:** Leaking Petroleum Tank Removal  
**Loan:** \$300,000  
**Interest Rate:** 0%

**Project Description:** A three-acre site in the Village of Greenport, recently a marina with an engine repair facility and a petroleum product storage area, contains underground storage tanks and soils contaminated with petroleum and arsenic. The village is removing the underground tanks and excavating and disposing of the contaminated soils. After this cleanup, the village will redevelop the site as a waterfront park.

**Project Financing:** New York’s CWSRF has offered the Village of Greenport a 3-year loan for \$300,000. The loan will have an interest rate of 0 percent.

## How Does the CWSRF Program Work?



### CWSRF Program Benefits

- **The CWSRF has money to lend.** CWSRF programs provide between \$3-4 billion annually in assistance to water quality projects. Total CWSRF assets exceed \$34 billion.
- **CWSRF loans are available to public and private borrowers.** Communities, municipalities, individuals, businesses, citizen groups, and nonprofit organizations can all be eligible for CWSRF loans.
- **CWSRF loans mean real cost savings.** If a brownfield developer borrows \$100,000 from the CWSRF, a 20-year, zero-interest loan would give annual debt service payments of \$5,000. A loan from a bank at a commercial rate of 9 percent would have annual debt service payments of \$10,250. Over twenty years, a zero percent loan saves the developer more than \$100,000!
- **CWSRF programs have experience lending to brownfields.** Ohio's CWSRF program has already made loans of more than \$10 million to 11 brownfield projects. Other states are following the lead.

## For More Information

For more information about funding water quality projects related to brownfield remediation, contact your state Clean Water State Revolving Fund program. CWSRF program websites are listed below by state and website.

Alabama	<a href="http://www.adem.state.al.us/WaterDiv/SRF/SRFMainInfo.htm">http://www.adem.state.al.us/WaterDiv/SRF/SRFMainInfo.htm</a>
Alaska	<a href="http://www.state.ak.us/local/akpages/ENV.CONSERV/waterhome.htm">http://www.state.ak.us/local/akpages/ENV.CONSERV/waterhome.htm</a>
Arizona	<a href="http://www.adeq.state.az.us/environ/water/index.html">http://www.adeq.state.az.us/environ/water/index.html</a>
Arkansas	<a href="http://www.state.ar.us/adfa/programs/wwrl.html">http://www.state.ar.us/adfa/programs/wwrl.html</a>
California	<a href="http://www.swrcb.ca.gov/funding/index.html">http://www.swrcb.ca.gov/funding/index.html</a>
Colorado	<a href="http://www.cwrpda.com/funding_programs.htm">http://www.cwrpda.com/funding_programs.htm</a>
Connecticut	<a href="http://dep.state.ct.us/wtr/cwa/cwfund.htm">http://dep.state.ct.us/wtr/cwa/cwfund.htm</a>
Delaware	<a href="http://www.dnrec.state.de.us/DNREC2000/Divisions/Water/Water.htm">http://www.dnrec.state.de.us/DNREC2000/Divisions/Water/Water.htm</a>
Florida	<a href="http://www.dep.state.fl.us/water/wff/cwsrf/">http://www.dep.state.fl.us/water/wff/cwsrf/</a>
Georgia	<a href="http://www.ganet.org/gefa/state_revolving.html">http://www.ganet.org/gefa/state_revolving.html</a>
Hawaii	<a href="http://www.state.hi.us/doh/eh/eiemww00.htm">http://www.state.hi.us/doh/eh/eiemww00.htm</a>
Idaho	<a href="http://www2.state.id.us/deq/water/water1.htm">http://www2.state.id.us/deq/water/water1.htm</a>
Illinois	<a href="http://www.epa.state.il.us/water/financial-assistance/waste-water">http://www.epa.state.il.us/water/financial-assistance/waste-water</a>
Indiana	<a href="http://www.state.in.us/idem/owm/fasb/srfinfo.html">http://www.state.in.us/idem/owm/fasb/srfinfo.html</a>
Iowa	<a href="http://www.state.ia.us/government/dnr/organiza/epd/wastewtr/srloan.htm">http://www.state.ia.us/government/dnr/organiza/epd/wastewtr/srloan.htm</a>
Kansas	<a href="http://www.kdhe.state.ks.us/water/">http://www.kdhe.state.ks.us/water/</a>
Kentucky	<a href="http://water.nr.state.ky.us/dow/dwprog.htm">http://water.nr.state.ky.us/dow/dwprog.htm</a>
Louisiana	<a href="http://www.deq.state.la.us/financial">http://www.deq.state.la.us/financial</a>
Maine	<a href="http://www.state.me.us/dep/blwq/docgrant/srfparag.htm">http://www.state.me.us/dep/blwq/docgrant/srfparag.htm</a>
Maryland	<a href="http://www.mde.state.md.us/wqfa/index.html">http://www.mde.state.md.us/wqfa/index.html</a>
Massachusetts	<a href="http://www.state.ma.us/dep/brp/mf/srf.htm">http://www.state.ma.us/dep/brp/mf/srf.htm</a>
Michigan	<a href="http://www.michigan.gov/deq/1,1607,7-135-3307_3515---,00.html">http://www.michigan.gov/deq/1,1607,7-135-3307_3515---,00.html</a>
Minnesota	<a href="http://www.pca.state.mn.us/water/revolvingfund.html">http://www.pca.state.mn.us/water/revolvingfund.html</a>
Mississippi	<a href="http://www.deq.state.ms.us/newweb/opchome.nsf/pages/surfacewater">http://www.deq.state.ms.us/newweb/opchome.nsf/pages/surfacewater</a>
Missouri	<a href="http://www.dnr.state.mo.us/eiera/revolving_fund.htm">http://www.dnr.state.mo.us/eiera/revolving_fund.htm</a>
Montana	<a href="http://www.deq.state.mt.us/ppa/srf/index.asp">http://www.deq.state.mt.us/ppa/srf/index.asp</a>
Nebraska	<a href="http://www.deq.state.ne.us/">http://www.deq.state.ne.us/</a>
Nevada	<a href="http://ndep.state.nv.us/bwpc/srflf01.htm">http://ndep.state.nv.us/bwpc/srflf01.htm</a>
New Hampshire	<a href="http://www.des.state.nh.us/wwe/srf.htm">http://www.des.state.nh.us/wwe/srf.htm</a>
New Jersey	<a href="http://www.state.nj.us/dep/grantandloanprograms/ereifp.htm">http://www.state.nj.us/dep/grantandloanprograms/ereifp.htm</a>
New Mexico	<a href="http://www.nmenv.state.nm.us/cpb/cwsrf.html">http://www.nmenv.state.nm.us/cpb/cwsrf.html</a>
New York	<a href="http://www.nysefc.org/srf/CWSRF/CWSRFhome.htm">http://www.nysefc.org/srf/CWSRF/CWSRFhome.htm</a>
North Carolina	<a href="http://www.nccgl.net/fap/cwsrf/index.html">http://www.nccgl.net/fap/cwsrf/index.html</a>
North Dakota	<a href="http://www.health.state.nd.us/ndhd/environ/mf/index.htm">http://www.health.state.nd.us/ndhd/environ/mf/index.htm</a>
Ohio	<a href="http://www.epa.state.oh.us/defa/wpclf2.html">http://www.epa.state.oh.us/defa/wpclf2.html</a>
Oklahoma	<a href="http://www.state.ok.us/~owrb/fa/fa1.html">http://www.state.ok.us/~owrb/fa/fa1.html</a>
Oregon	<a href="http://www.deq.state.or.us/wq/wqgrant/wqgrant.htm">http://www.deq.state.or.us/wq/wqgrant/wqgrant.htm</a>
Pennsylvania	<a href="http://www.pennvest.state.pa.us/pennvest/cwp/browse.asp?A=4">http://www.pennvest.state.pa.us/pennvest/cwp/browse.asp?A=4</a>
Puerto Rico	<a href="http://www.epa.gov/region02/cepd/compnum.htm#JCA">http://www.epa.gov/region02/cepd/compnum.htm#JCA</a> (Contact Phone Numbers)
Rhode Island	<a href="http://www.state.ri.us/ricwfa/">http://www.state.ri.us/ricwfa/</a>
South Carolina	<a href="http://www.scdhec.net/eqc/water/html/srf-cw.html">http://www.scdhec.net/eqc/water/html/srf-cw.html</a>
South Dakota	<a href="http://www.state.sd.us/denr/DFTA/WWFunding/cleanwatersrfprogram2.htm">http://www.state.sd.us/denr/DFTA/WWFunding/cleanwatersrfprogram2.htm</a>
Tennessee	<a href="http://www.state.tn.us/environment/dca/swagrnt.htm">http://www.state.tn.us/environment/dca/swagrnt.htm</a>
Texas	<a href="http://www.twdb.state.tx.us/assistance/financial/fin_infrastructure/cwsrffund.htm">http://www.twdb.state.tx.us/assistance/financial/fin_infrastructure/cwsrffund.htm</a>
Utah	<a href="http://www.deq.state.ut.us/EQWQ/CON_ASST/Con_asst.htm">http://www.deq.state.ut.us/EQWQ/CON_ASST/Con_asst.htm</a>
Vermont	<a href="http://www.anr.state.vt.us/dec/fed/FMS.htm">http://www.anr.state.vt.us/dec/fed/FMS.htm</a>
Virginia	<a href="http://www.vra.state.va.us/project/wastewater.html">http://www.vra.state.va.us/project/wastewater.html</a>
Washington	<a href="http://www.ecy.wa.gov/programs/wq/funding/index.html">http://www.ecy.wa.gov/programs/wq/funding/index.html</a>
West Virginia	<a href="http://www.dep.state.wv.us/item.dep?ssid=11&amp;ssid=220">http://www.dep.state.wv.us/item.dep?ssid=11&amp;ssid=220</a>
Wisconsin	<a href="http://www.dnr.state.wi.us/org/caer/cfa/EL/Section/clean.html">http://www.dnr.state.wi.us/org/caer/cfa/EL/Section/clean.html</a>
Wyoming	<a href="http://deq.state.wy.us/wqd/w&amp;ww/SRF/srflans.htm">http://deq.state.wy.us/wqd/w&amp;ww/SRF/srflans.htm</a>