using the

CLEAN WATER STATE REVOLVING FUND

for Brownfields and USTfields

by

TRACY NORFLEET

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NORTHEAST-MIDWEST

INSTITUTE

THE NORTHEAST-MIDWEST INSTITUTE

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The Institute organized the first national conference on brownfield cleanup and reuse in Chicago in June 1991. It also published *New Life for Old Buildings: Confronting Environmental and Economic Issues to Industrial Reuse; Industrial Site Reuse, Contamination, and Urban Redevelopment; Brownfields: Cleaning and Reusing Contaminated Properties; Coming Clean for Economic Development;* and *Lessons from the Field: Unlocking Economic Potential with an Environmental Key*, and has co-authored *The Effects of Environmental Hazards and Regulation on Urban Redevelopment* and *Brownfields Redevelopment: A Guidebook for Local Governments and Communities*. Institute staff have participated in community brownfield coalitions in Chicago and Baltimore and testified in congressional hearings. The Institute also organized a series of community forums on local brownfield needs in Cleveland, Kalamazoo, Pittsburgh, Detroit, East Chicago, Burlington, and Lowell.

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EXECUTIVE SUMMARY

The Clean Water State Revolving Fund (CWSRF) can be an important source of funding for projects at contaminated sites that threaten water quality. States have begun using the CWSRF for these projects in recognition that assessing and cleaning up potentially contaminated sites not only fosters community redevelopment, but also can provide significant water quality benefits.

In 1987, amendments to the Clean Water Act created the CWSRF to fund projects that protect and restore water quality, including publicly owned treatment works (POTWs), nonpoint source pollution control, and estuary management. Under the program, the U.S. Environmental Protection Agency (EPA) provides capitalization grants to states, which are required to match them at a minimum of 20 percent. States use these funds to assist public and private entities in carrying out state-determined priority water quality projects. The most common form of financial assistance has been loans with an interest rate from zero to the market rate and a repayment period of up to 20 years.

To obtain a CWSRF loan, an applicant typically must get the project on the state's project priority list and submit a loan application and any other paperwork that may be required by the state. Once a project has been selected, loan terms and the method of loan repayment can be negotiated, construction can begin, and the loan can be disbursed. As outstanding loans are repaid, states 'revolve' the CWSRF by using this money to issue new loans for other priority water quality projects. Thus, the combination of annual capitalization grants to states from EPA, required state matches, and CWSRF loan repayments has ensured a perpetual and growing source of CWSRF funds for priority water quality projects.

USING THE CWSRF FOR BROWNFIELDS AND USTFIELDS

In states that allow loans for projects other than POTWs, the CWSRF can be a critical financial resource for assessing and remediating brownfields and USTfields where water resources are threatened. Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. USTfields are sites containing one or more abandoned underground storage tanks (USTs), which typically store petroleum products such as fuel, oil, and solvents, but also may store hazardous substances. The effect of these sites on water quality can depend on the following variables:

- type, concentration, and distribution of contaminants on the site;
- whether and how contaminants are contained;
- proximity of contaminants to groundwater or surface water;
- potential for transporting contaminants through soils to groundwater or to surface waters by stormwater runoff and wind; and
- percentage of impervious surface on and adjacent to the site and the presence of vegetation or other stormwater management measures on the site that could retain or slow the rate of stormwater runoff.

Conventional funding sources alone cannot meet the demand for assessing and remediating USTfield sites. Although in fiscal 2003, EPA will be able to devote 25 percent (up to $50 million) of its brownfield grants to petroleum-contaminated sites, as many as 200,000 of these sites may contain abandoned USTs or be contaminated by UST leaks. EPA estimates there are approximately two million USTs nationwide. Given the scope of the problem, the CWSRF could be invaluable for financing the assessment and cleanup of USTfields that threaten water quality.

Depending on the state's approach, brownfield and USTfield remediation projects could be eligible for CWSRF loans under Title VI as nonpoint source pollution control projects. Potentially eligible activities may include:

- assessment and remediation of petroleum contamination, including excavation and disposal (but not replacement) of USTs;
- Phase I, II, and III assessments for brownfield showcase communities, pilots, and in other locations at a state's discretion;
- excavation, removal, and disposal of contaminated soil or sediments;

- capping of wells or soil;
- tunnel demolition;
- monitoring of groundwater or surface water for contaminants; and
- stormwater management and abatement of polluted runoff from a brownfield site.

Several states have expanded their CWSRF programs to fund the water quality portions of brownfield remediation projects, typically under the nonpoint source pollution category. Since brownfields are more prevalent in older, industrialized cities, states in the Northeast and Midwest are most likely to have expanded or to consider expanding their programs. However, few have actually issued loans for brownfields. Ohio and New York have been the leaders to date, with other states beginning to follow their lead.

- Ohio issues loans for brownfield assessment and cleanup through its Water Pollution Control Loan Fund, administered by the Ohio Environmental Protection Agency. The loans are available to both municipalities and private entities, particularly those participating in the state's Voluntary Action Program.
- New York's Clean Water/Clean Air Bond Act of 1996 made the connection between brownfields and water quality, establishing a $200-million fund to provide grants to municipalities to cover up to 75 percent of costs for brownfield and USTfield site investigation and remediation activities, including cleanup of contaminated soils and water. The CWSRF is recognized as an important source of additional funds for these projects.
- New Mexico's CWSRF program recently updated its integrated priority rating system to include brownfield redevelopment among three components, along with point source pollution and nonpoint source pollution. This reflects the program's expansion to offer loans to eligible cities, counties, water and sanitation districts, and Indian tribes to investigate and remediate brownfields.
- Maryland's CWSRF program considers USTfield remediation to be an eligible project under the general goal of encouraging individuals to implement capital improvements that reduce nutrient loading in the Chesapeake Bay watershed and ensure safe drinking water.
- Wyoming's State Lands and Investments Board (SLIB) and Department of Environmental Quality (DEQ) have worked together to provide approximately $45 million in CWSRF loans for site investigations and corrective action contamination cleanup work at over 400 publicly-owned USTfields. The SLIB receives the annual capitalization grant, which DEQ matches at 20 percent using funds from the state's UST Corrective Action Account—derived from a tax of one cent per gallon on oil, gas, and special fuels sold or distributed in Wyoming.

Processes and requirements can vary among state CWSRF programs that fund brownfield and USTfield projects. For example, a state may require that at the time of application the brownfield or USTfield property be owned by a municipality that is not responsible for any contamination on the site. However, a state may allow privately-owned property to qualify for a CWSRF loan if the property owner participates in the state's brownfield voluntary cleanup program. Also, the maximum loan amount or repayment period may differ from those of other types of projects. In addition, a CWSRF loan must have a dedicated source of repayment at the time the loan is made, and it should not be based on the speculative success of placing the redeveloped brownfield or USTfield on the real estate market.

Because states have great flexibility in administering their CWSRF programs, they may be able to modify program requirements in certain cases or in response to sufficient public demand. For example, if the CWSRF does not currently fund brownfield and USTfield projects, brownfield and USTfield advocates may ask CWSRF program administrators to suggest other programs that may provide funding and inquire if they would consider funding this type of project in the future. If a state does fund brownfield and USTfield projects but cannot make loans to private entities, brownfield and USTfield advocates may ask CWSRF program administrators to identify other ways for private entities to acquire funding or to consider expanding their program to fund private entities.

USING THE CLEAN WATER STATE REVOLVING FUND FOR BROWNFIELDS AND USTFIELDS

The Clean Water State Revolving Fund (CWSRF) can be an important source of funding for brownfield and USTfield projects that will protect or restore water quality. States have begun using the CWSRF for these projects in recognition that assessing and cleaning up potentially contaminated sites not only fosters community redevelopment but also can provide significant water quality benefits. (Appendix 1 describes the CWSRF program in detail)

Title VI of the Clean Water Act (CWA), as amended in 1987, created the CWSRF. Administered by states and overseen by the U.S. Environmental Protection Agency (EPA), the CWSRF provides financial assistance other than grants to public and private entities for projects that protect and restore water quality, including publicly owned treatment works (POTWs), nonpoint source pollution control, and estuary management. Under the CWSRF, EPA provides annual grants solely to states. States match these capitalization grants at a minimum of 20 percent and use the funds to provide financial assistance other than grants to public and private entities for state-determined priority water quality projects. The most common form of financial assistance has been loans with interest rates that vary from zero interest to market rate, with repayment periods of up to 20 years.

To obtain a CWSRF loan, an applicant typically must get the project on the state's project priority list and submit a loan application and any other paperwork that may be required by the state. Once a project has been selected, loan terms and the method of loan repayment can be negotiated, construction can begin, and the loan can be disbursed. As outstanding loans are repaid, states 'revolve' the CWSRF by using this money to issue new loans for other priority water quality projects. The combination of annual capitalization grants to states from EPA, required state fund matches, and CWSRF loan repayments has ensured a perpetual and growing source of CWSRF funds for priority water quality projects.

LINKING BROWNFIELDS/USTFIELDS AND WATER QUALITY

In states that allow loans for projects other than POTWs, the CWSRF can be an important source of funding for assessing and remediating brownfields and USTfields that threaten water quality. Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. USTfields are sites containing one or more abandoned underground storage tanks (USTs), which typically store petroleum products such as fuel, oil, and solvents, but some store hazardous substances.[1] Until the mid-1980s, many USTs were made of steel, which if not properly maintained can corrode, leak, and contaminate soils and surface water or groundwater.[2] Contaminated brownfields and USTfields can threaten water quality, depending on the following variables:

- type, concentration, and distribution of contaminants on the site;
- whether and how contaminants are contained;
- proximity of contaminants to groundwater or surface water;
- potential for transporting contaminants through soils to groundwater or to surface waters by stormwater runoff and wind; and
- percentage of impervious surface on and adjacent to the site and the presence of vegetation or other stormwater management measures on the site that could retain or slow the rate of stormwater runoff.

In many states, the most significant USTfield problems stem from abandoned sites (many leaking USTs are located on brownfields) or facilities with owners that are not able to pay for cleanup. UST leaks can threaten groundwater and nearby surface waters with contamination from petroleum products, including methyl tertiary butyl ether (MTBE), a gasoline additive. MTBE's high solubility in water and small molecular size enables it to move rapidly

through groundwater as a result of leaks or spills, and therefore it has been detected in groundwater and surface water with increasing frequency throughout the United States.[3]

The CWSRF could be a critical financial resource for assessing and cleaning up USTfields where water resources are threatened because conventional brownfield funding alone cannot meet the demand at these sites. In fact, until the passage of the Brownfields Revitalization Act in 2002, EPA's brownfield program could not address USTs at all because the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund) does not cover the cleanup of contamination from petroleum-based products. Starting in fiscal 2003, EPA will be able to devote 25 percent (up to $50 million) of its grants to petroleum-contaminated sites. However, of the approximately 450,000 brownfields nationwide, EPA estimates that between 100,000 to 200,000 of these sites may contain abandoned USTs or be contaminated by UST leaks.[4] Given the scope of the problem, the CWSRF could be invaluable for financing assessment and cleanup of brownfields and USTfields that threaten water quality.

Depending on the state's approach, brownfield and USTfield remediation projects could be eligible for CWSRF loans under Title VI as nonpoint source pollution control projects. Potentially eligible activities may include:

- assessment and remediation of petroleum contamination, including excavation and disposal (but not replacement) of USTs;
- Phase I, II, and III assessments for brownfield showcase communities, pilots, and in other locations at a state's discretion;
- excavation, removal, and disposal of contaminated soil or sediments;
- capping of wells or soil;
- tunnel demolition;
- monitoring of groundwater or surface water for contaminants; and
- stormwater management and abatement of polluted runoff from a brownfield site.[5]

Processes and requirements can vary among state CWSRF programs that fund brownfield and USTfield projects. For example, a state may require that at the time of application the brownfield or USTfield property be owned by a municipality that is not responsible for any contamination on the site. However, a state may allow privately-owned property to qualify for a CWSRF loan if the property owner participates in the state's brownfield voluntary cleanup program. Also, the maximum loan amount or repayment period may differ from those of other types of projects. In addition, a CWSRF loan must have a dedicated source of repayment at the time the loan is made, and it should not be based on the speculative success of placing the redeveloped brownfield or USTfield on the real estate market.

USING CWSRF LOANS FOR BROWNFIELDS

Several states have expanded their CWSRF programs to fund the water quality portions of brownfield remediation projects, typically under the non-

Brownfield and USTfield Site Assessments

Phase I, II, and III assessments are the primary vehicles for gathering information needed to begin remediation. A Phase I assessment is a process in which existing data is reviewed to identify potential sources and distribution of contamination on a site (if any), including reviewing business practices and documents, reviewing agency files, conducting employee interviews, researching prior uses and activities at the site, and conducting site inspections to identify areas of obvious or potential contamination.

If contamination is suspected, investigators conduct a Phase II assessment in which samples are collected from soil, groundwater, and sediments and analyzed based on Phase I information. While Phase II assessments can confirm contamination at a site, they cannot necessarily determine the extent of contamination, something that is needed to determine costs of cleanup. Consequently, a Phase III assessment is performed in which samples are taken to identify contamination boundaries, which may be an iterative process. Once contamination has been delineated, a plan with several alternatives and cost options for remediation is drafted as part of the Phase III assessment (also referred to as an action plan or response plan).

Source: Environmental Law Institute, *A Guidebook for Brownfield Property Owners*, 1999, http://www.eli.org/pdf/rrguidebook99.pdf

point source pollution category. Since brownfields are more prevalent in older, industrialized cities, states in the Northeast and Midwest are most likely to have expanded or considered expanding their programs. However, few have actually issued loans for brownfields, partly due to the newness of the concept and partly due to institutional barriers that states are just beginning to identify and address. Ohio and New York have been the leaders in issuing CWSRF loans for brownfields, with other states such as New Mexico and Wisconsin beginning to follow their lead.

Ohio's Brownfields Finance Partnership Identifies the CWSRF as a Funding Source

Ohio issues loans for brownfield assessments and cleanups through its CWSRF program, known as the Water Pollution Control Loan Fund (WPCLF). The WPCLF is administered by the Ohio Environmental Protection Agency (Ohio EPA). The loans are available to both municipalities and private entities, particularly those participating in the state's Voluntary Action Program (VAP). Initiated in 1994, VAP encourages individuals, businesses, and political subdivisions to voluntarily investigate potentially contaminated properties. Where cleanup is needed, they may use engineering, financial, and other tools to remediate the site in a way that is tailored to the future use of the property.[6] Once the site has been investigated and remediated and the VAP participant has received a no-further action letter from a certified professional, Ohio EPA may audit a portion of the property and issue a legal release from further cleanup (i.e., a covenant-not-to-sue[7]).

To promote and encourage participation in the VAP, representatives from state agencies and professionals in finance, law, and environmental science established the Brownfields Finance Partnership to identify and coordinate sources of public and private funding for brownfield activities and provide guidance for those seeking funding.[8] They identified the WPCLF as a potential funding source for brownfields where surface water and groundwater are threatened. The prospective WPCLF loan recipient does not necessarily have to be a participant in the VAP as long as the work performed directly benefits surface/groundwater.[9] WPCLF loans for brownfields cannot exceed $3 million per project, and the loan period cannot exceed ten years. Eligible projects include Phase I and II assessment activities (e.g. literature searches, site evaluation studies, sampling, monitoring, and laboratory tests) and remediation.[10]

Like CWSRF programs in other states, Ohio's WPCLF offers loans at varying interest rates and durations, with lower interest rates for small and disadvantaged communities, short- term loans, and special projects dealing with municipal compliance maintenance, water conservation, and construction of nonconventional technologies. Wastewater and nonpoint source pollution projects, including brownfields and USTfields, are both eligible for funding as long as they benefit water quality and are listed in the state's Nonpoint Source Management Plan.[11]

Ohio EPA also offers linked-deposit loans to private organizations and individuals for nonpoint source projects (especially agricultural best management practices), upgrading failed on-lot wastewater treatment systems, urban stormwater runoff control, stream corridor restoration, and forestry and land development best management practices. To assist prospective WPCLF loan recipients with the listing and application process, Ohio EPA has compiled *The WPCLF Community Guide: a User's Guide to the Ohio Water Pollution Control Loan Fund for Publicly-Owned Treatment Works and Nonpoint Source Improvements.*[12] (More information on linked-deposit loans can be found on page 25 in Appendix 1.)

WPCLF loans can enable businesses to expand on formerly contaminated property. For example, when Liniform Services could not obtain private financing for a Phase II site assessment on property adjacent to its dry cleaning facility, Ohio EPA provided a five-year WPCLF loan of over $60,000. The loan, with an interest rate of approximately 3 percent, financed Phase II investigation activities, including soil and groundwater sampling. Once the assessment and subsequent cleanup were complete, Liniform Services received a covenant-not- to-sue from Ohio EPA through the VAP, enabling facility expansion to proceed. The loan will be repaid using a revenue stream from accounts receivable, with inventory and cash as extra collateral.[13]

In Cleveland, the WPCLF funded a brownfield cleanup prior to site redevelopment. Grant Realty purchased the 20-acre former Sunar-Hauserman Company site to build a centrally- located corporate headquarters, despite environmental assessments showing that soil and groundwater had been contaminated with solvents. A $1.6-million WPCLF loan, at an interest rate of approximately 4 percent,

New York State CWSRF Program

The New York State Environmental Facilities Corporation (NYSEFC) is the lead agency for New York's CWSRF program. Since the program's inception in 1990, NYSEFC has issued more than $5.7 billion in CWSRF loans to approximately 370 communities for the planning, design, and construction of projects that reduce or prevent water pollution. Only municipalities—including cities, towns, villages, and counties, as well as local authorities, public benefit corporations, and improvement districts—are eligible for CWSRF funding. A municipality must own the property prior to investigation or remediation, and a project's primary purpose must be water quality protection or restoration. Ineligible costs include building demolition, recreational activities, and replacement of aboveground and underground storage tanks.

Like other state programs, NYSEFC offers short- and long-term loans with varying interest rates for eligible projects. Short-term loans have a maximum duration of three years and are interest-free. Their primary purpose is to enable municipalities whose projects are listed in the Multi-Year Project Priority List of the CWSRF Intended Use Plan (IUP) to begin the design and construction of water quality projects or to prefinance costs that will be reimbursed from grants from other funding sources or other loans. The project also may be required to be determined to be environmentally significant by the Commissioner of the NYSDEC, have completed the state's environmental review process for CWSRF projects, have an approved engineering or technical report once project planning is complete, and if applicable, have formed a special improvement district.

Short-term loans cannot be used for projects where construction is complete, for advanced refundings, or for the acquisition of wastewater treatment and/or conveyance facilities. More information on short-term loans can be found online at http://www.nysefc.org/srf/CWSRF/ Docs00/ShortTermLoanPolicy.PDF.

There are two types of low-interest long-term loans: leveraged loans (from CWSRF bond proceeds) and direct loans (from CWSRF resources). The maximum duration for either type of loan is 30 years. The interest rate for most communities can be one-half to two-thirds of the market interest rate at which NYSEFC bonds are sold. Municipalities must secure the loan with general obligation bonds.

To obtain a long-term CWSRF loan, municipalities must have a project listed in the annual IUP Project Priority List. However, listing in the IUP and submission of an application do not guarantee funding. To list a project, a municipality must submit a complete Project Listing Form which includes a project description, estimated project cost, and estimated construction start date. Once a project is listed in the state's IUP, the complete loan application can be submitted, which may include:

- a completed application checklist;
- a technical/engineering report;
- a loan application form with municipal resolution authorizing the application;
- evidence of environmental review pursuant to the State Environmental Quality Review Act (SEQR);
- if special district formation is needed, then approval from the State Comptroller;
- municipal bond resolution;
- certification as to title to project site;
- Minority/Women Business Enterprise and Equal Employment Opportunity documents;
- agreements for professional services;
- a notice to proceed; and
- financial information and reports to the borrower.

Sources: New York State Department of Environmental Conservation, Environmental Restoration/Brownfields Program web site, http://www.dec.state.ny.us/website/der/bfieldfs.html; NYSEFC, CWSRF Program Fact Sheet, May 21, 2001; NYSEFC, CWSRF Guidance for Eligible/Allowable Costs Fact Sheet, http://www.nysefc.org/srf/CWSRF/eligible.htm; NYSEFC, CWSRF Eligibility of Nonpoint Source Projects Fact Sheet

covered the cost of treating contaminated subsurface soil and groundwater. The repayment source came from a tank-cleaning operation, with personal loan guarantees and a second position mortgage as additional collateral. With assistance from the Cuyahoga Brownfields Pilot Program, Grant Realty applied to Ohio's VAP for a covenant-not- to-sue and was issued a 'no further action' letter.[14]

New York Bond Act Links Brownfields and Water Quality

New York's Clean Water/Clean Air Bond Act of 1996 made the connection between brownfields and water quality, establishing a $200-million fund to provide grants to municipalities to cover up to 75 percent of costs for brownfield and USTfield site investigation and remediation activities, including cleanup of contaminated soils and water.[15] In many cases, Bond Act funds can be combined with the Environmental Protection Fund (EPF) and other state resources, such as the CWSRF.[16]

Although New York's CWSRF is not part of the Bond Act or EPF, it is recognized as an additional source of funding for municipal water quality projects, including brownfield and USTfield remediation. For example, the CWSRF can be used to prefinance design and construction costs prior to reimbursement of the state share from the Bond Act. It also can fund the local share (non-grant portion) of site investigation and remediation, and it may cover certain costs that are not eligible for funding under the environmental restoration/brownfields fund created by the Bond Act.[17]

Brownfield and USTfield projects potentially are eligible for CWSRF funding as long as the purpose is to investigate or remediate hazardous substances or petroleum on a site where water quality may be threatened. Municipalities cannot be responsible for any contamination on the site, and the site cannot be listed as a Class 1 or 2 site on the New York State Registry of Inactive Hazardous Waste Disposal Sites. For projects involving groundwater remediation, treated water must be returned to the environment and cannot be used for potable water.

For USTfields, the closure of aboveground or underground storage tanks containing petroleum or other materials is fully eligible for CWSRF funding, although tank replacement is not. Related eligible activities include soils and sludge testing and disposal; pumping and disposal of tank contents; removal and disposal of tanks and pipelines; in-place closure by filling with sand, concrete, or other approved materials; excavation and filling with clean soils; groundwater treatment; and site restoration. Upgrading and rehabilitating existing tanks also are eligible, including measures to prevent corrosion, groundwater monitoring systems, replacement of deteriorated pipes and associated equipment, leak monitoring systems, secondary containment systems, tank cleaning prior to repair or reconditioning, reconditioning by installing a new liner, and welding, lining, coating, and other sealing measures to reduce leaks.

Over the years, several municipalities have received Bond Act and CWSRF funds for Phase I site investigations for brownfields and USTfields but have not proceeded with Phase II site assessments or cleanup. Other municipalities have expressed interest in seeking Bond Act and CWSRF funding for investigating or redeveloping brownfields/USTfields, but have chosen not to pursue a CWSRF loan. The state recently has begun to identify and address potential barriers in both programs that may have limited their use for brownfields/USTfields projects.[18] It is important to note that these potential barriers may exist in other states as well, but New York has been among the first to identify and address them.

First, since only municipalities are eligible for Bond Act and CWSRF funds, the programs are not accessible to private entities seeking to remediate brownfields and USTfields, including some participants in the state's Voluntary Cleanup Program, nonprofits, and community brownfield/USTfield advocates. The New York State Legislature would have to amend the Bond Act to expand its eligibility. To expand access to the CWSRF, New York could pass legislation to implement linked-deposit loan programs through local banks or authorize local governments as conduits for loans to private entities. The state legislature has considered allowing such loans for brownfields, as well as failing septic systems and land acquisition, but such proposals have not yet passed. (More information using local governments as conduits can be found on page 25 in Appendix 1.)

A second barrier is the requirement under both the Bond Act and the CWSRF that municipalities must own the brownfield or USTfield site prior to site assessment/investigation. If a site is not already municipally-owned, the costs of acquiring it can increase project costs. In addition, many municipalities may be

unwilling to acquire a brownfield or USTfield site before an investigation is performed because of the risk of having to pay for a potentially expensive cleanup. Furthermore, property ownership can incur other liability and safety concerns that are not related to contamination, including security, insurance, and other measures to protect the public from injury on the site (especially if it is relatively accessible) and protect the municipality from liability. The New York State Legislature is considering a proposal to remove the property ownership requirement from the Bond Act, based on the premise that it would encourage municipalities to investigate sites (and provide useful information to the state) and give them the flexibility to purchase only the sites that they are sure they can afford to remediate. Municipalities can begin the application process for a CWSRF loan while they are acquiring a site, but they are required to have the title prior to loan disbursement.

Finally, municipalities may be discouraged by the requirement to repay Bond Act grants if the property is sold, and to repay CWSRF loans even when a property is kept for municipal uses, such as open space or parkland. For brownfield and USTfield projects, the potential costs of acquiring sites, performing investigations, and remediating any contamination can be prohibitive, especially when coupled with the possibility of failing to recover costs by selling the remediated and/or redeveloped property. These issues can be particularly challenging for small and disadvantaged communities, those undertaking projects with uncertain costs at the time of application, and those that do not wish to secure CWSRF loans with municipal bonds. A proposed amendment to the Bond Act that would allow a municipality that sells a remediated site to recoup its costs for the remediation, with the remainder of the proceeds (if any) going to the state. For CWSRF loans, New York has eased the difficulty of repayment by providing a repayment period for long-term loans of 30 years, whereas most other states allow only 20 years.

New Mexico's Integrated Priority Rating System Includes Brownfields

New Mexico's CWSRF program administrators recently updated its integrated priority rating system to include brownfield redevelopment, along with point source pollution and nonpoint source pollution.[19] The integrated priority rating system reflects the program's expansion to offer loans to eligible cities, counties, water and sanitation districts, and Indian tribes to investigate and remediate brownfields. (More information on integrated priority ranking systems can be found on page 18 in Appendix 1.)

The program calculates the brownfield redevelopment component based on a redevelopment potential factor and a water quality preservation factor. The redevelopment potential factor is based on the following criteria:

- whether the level of contamination at the site poses a potentially unacceptable risk to human health or the environment;
- whether a redevelopment/revitalization plan has been developed with the support of the municipality;
- whether the redevelopment project has attracted investors;
- whether the site is located in a federal Enterprise Community, a state Enterprise Zone, a state historic district, or an environmental justice community;
- whether the site is located within a mile of a major transportation artery and/or industrial/commercial complex;
- whether the site has been abandoned for three or more years.

If a project is not a brownfield, then the value of this component is zero.

The point source pollution component pertains to POTW-related projects. It is calculated from equations that estimate the severity of pollution or public health threat from discharges to surface water or groundwater, the number of people that could be affected by the project, and the level of water quality preservation conveyed by the project. If a project is not a POTW, then the value of this component is zero.

The nonpoint source pollution component is calculated from equations that estimate a project's need based on water quality data and the severity of pollutants to be addressed in the project; project merit (e.g. whether the project will solve a water quality problem and whether there is a measure of success upon completion of the project); and whether the project provides opportunities for outreach to the public, partnerships between public and private entities or agencies and private landowners, and public education and volunteering. If the project is a POTW, then the value of this component is zero.

The values of the three components—brownfields redevelopment, point source pollution, and nonpoint source pollution—are added together to produce the priority ranking number for the project. Projects are then ordered by their priority ranking numbers. However, priority ranking does not guarantee CWSRF funding.

By May 2002, two municipalities had expressed interest in acquiring CWSRF funding for brownfield projects and were included on the state's project priority list. One project is a 50-acre former railyard where groundwater contamination is an issue, and redeveloping the site is a priority under the city's master plan. The second project is a former mining area of approximately 1,320 acres where uncontained tailings threaten groundwater.

New Mexico's integrated priority setting system includes a brownfields redevelopment component which is based on a redevelopment potential factor and a water quality preservation factor.

Wisconsin Links Its CWSRF and Land Recycling Loan Programs

In 2001, Wisconsin's state legislature authorized a one-time diversion of $20 million from the state's 2001 CWSRF capitalization grant to the Department of Natural Resources' Land Recycling Loan Fund for low-interest loans to municipalities that wish to investigate and remediate brownfields where water quality has been affected. By May 2002, two landfill-related loans had been issued, and several municipalities had expressed interest in acquiring CWSRF loans for brownfield and USTfield projects that threaten water quality.

USING CWSRF LOANS FOR USTFIELDS

Delaware, Maryland, Nebraska, New York, Ohio, and Wyoming have used the CWSRF to fund the remediation of leaking aboveground and underground storage tanks. These states have incorporated USTfields into their CWSRF programs in several ways.

For example, Maryland's CWSRF program considers USTfield remediation to be an eligible project under the general goal of encouraging individuals to implement capital improvements that reduce nutrient loading in the Chesapeake Bay watershed and ensure safe drinking water.[20] In seeking sources of low-interest financing for capital improvements, a 1994 "Governor's Blue Ribbon Panel Report on Funding the Chesapeake Bay 40 Percent Nutrient Reduction Goal" specifically recommended expanding the use of the state's CWSRF program. In 1997, the Maryland General Assembly amended the law governing this program to allow the Maryland Department of the Environment (MDE) to provide low-interest loans to private entities for eligible, nonpoint source pollution control projects, and a second amendment in 1998 allows loans through the linked-deposit program. Although MDE has funded no UST remediation projects to date, a private developer in Baltimore has applied for a low-interest linked-deposit loan of $1 million through a commercial bank. This loan would help cover the costs of redeveloping a 78-acre abandoned oil storage facility in downtown Baltimore where vacant oil tanks may threaten groundwater and the Baltimore Harbor.

In Wyoming, the State Lands and Investments Board (SLIB) and the Wyoming Department of Environmental Quality (DEQ) have worked together to provide approximately $45 million in CWSRF loans for site investigations and corrective action contamination cleanup work at over 400 publicly-owned USTfields. The SLIB receives the annual capitalization grant, which DEQ matches at 20 percent using funds from the state's UST Corrective Action Account (CAA). CAA funds are derived from a tax of one cent per gallon on oil, gas, and special fuels sold or distributed in Wyoming.[21] The SLIB then loans this money to DEQ to pay contractors for USTfield

site investigations and cleanups. DEQ provides project oversight and reports to the EPA regional office and headquarters. Loans are repaid through CAA funds, which are then typically revolved as loans for wastewater projects.[22]

The Delaware Department of Natural Resources and Environmental Control's Division of Water Resources (Financial Assistance Branch) has worked with the Division of Air and Waste Management's Underground Storage Tank Branch to fund two UST remediation projects at a gas station ($5000) and a convenience store ($250,000). Each year, the state budgets $250,000 for USTfield projects, but because no applications were received for USTfields in 2001, the money was applied to other projects.

CASE STUDIES OF CWSRF LOANS FOR BROWNFIELDS AND USTFIELDS

Mahoningside Power Plant, Warren, Ohio

In Warren, Ohio, a partnership among the town and Ohio EPA, several other state agencies, EPA Region V, and private contractors is cleaning up and redeveloping a prime downtown site known as the former Mahoningside Power Plant. The site is one of more than 20 brownfields at the intersection of two industrial/commercial corridors targeted by Warren for redevelopment. One of the corridors—the River Edges-New Environment for Warren (RENEW)—is an EPA Brownfields Assessment Demonstration Pilot.[23] Part of the project financing includes a ten-year WPCLF loan of approximately $1.3 million at 3.75 percent interest to clean up a waterfront brownfield that threatened the nearby Mahoning River.

The approximately seven-acre Mahoningside site was first developed in the 1880s as a water and light company. There were several different owners until the site was abandoned over 25 years ago, passing ownership to Warren. The building on the site has a deep open basement through which the Mahoning River was diverted to generate power for former operations. This presents a public safety hazard since the building is not secure and the site is relatively accessible. In addition, most of the contamination on the site is in or near the basement, adversely affecting water quality in the Mahoning River. Environmental assessments carried out by private contractors and Warren showed contamination from mercury, asbestos, and polychlorinated biphenyls (PCBs), which are suspected carcinogens.

The $1.3 million WPCLF loan, awarded in 1999, is funding water-quality related aspects of the site cleanup. Additional state and local funds covered other cleanup costs, such as the demolition of the former power plant. However, during demolition in the spring of 2000, more high-level PCBs were detected in soils and groundwater, requiring city contractors to remove over 400 tons of PCBs and establish a water treatment system to contain PCBs at the site by filtering stormwater, groundwater, and water from cleanup processes. In the fall of 2000, EPA Region V became involved in the project.

During the course of cleanup, EPA Region V took sediment samples from a mile-long segment of the Mahoning River to determine the extent to which stormwater runoff from the site and lateral movement of contaminated groundwater had led to sediment contamination. High levels of PCBs were detected in sediment samples taken near the base of the discharge pipe from the plant and low-level PCBs in other sediment samples. An EPA Region V grant of $860,000 financed the removal of this contamination as part of the greater site cleanup.[24] As of May 2002, EPA Region V had removed an additional 1,700 tons of PCB-contaminated material from the site and nearly 25 pounds of mercury-contaminated debris, which was shipped for treatment and disposal.

As a result of this public/private partnership, a public health hazard and eyesore is being cleaned up, with redevelopment scheduled to begin in late 2002. The city hopes that the property's downtown location and the construction of a new riverwalk that will pass through a portion of the site will make it attractive for commercial and industrial redevelopment, provide needed jobs, and contribute to the overall revitalization of the downtown area.

Hemisphere Corporation and the Stickney West Industrial Park, Toledo, Ohio

The Hemisphere Corporation, a brownfield redevelopment company, has obtained WPCLF loans totaling approximately $3 million to assess and clean up a 27.5-acre brownfield site in the heart of an area undergoing extensive redevelopment in Toledo. The site remediation not only will prime the parcel for redevelopment, but also will remove imminent threats to groundwater and water quality in Sibley Creek and the Ottawa River. To help reduce costs,

finance the cleanup, and repay the WPCLF loan, Hemisphere has devised innovative strategies for deriving income from the property as cleanup proceeds.

Although Toledo boasts the fourth largest port on the Great Lakes and one of the largest railway centers, redevelopment of nearly two-thirds of the city's commercial and industrial real estate has been hindered by environmental concerns, leading to the cancellation of approximately 25 percent of such transactions.[25] To address this and to encourage development within Toledo, the city is participating in EPA's Brownfields Assessment Demonstration Pilot program. In 1997, Toledo received a $200,000 targeted brownfields assessment grant from EPA. The city used part of the EPA grant for a Phase I assessment on a 68-acre commercial/industrial site surrounded by three landfills that are currently being closed to reduce impacts to the nearby Ottawa River. The Phase I assessment determined the former uses of the site, existing site conditions, and potential threats to water quality. The site contained over 250,000 tires and 50,000 railroad ties that posed a fire hazard, over 200 unmarked 55-gallon drums containing unknown materials, bags of fertilizer and pesticides, large piles of automobile parts and fuel tanks, and a number of USTs.[26] The site also had an illegally filled wetland and a large rundown building with asbestos contamination. The Phase I assessment concluded that contaminated soils existed at varying degrees across the property, the site's close proximity to Sibley Creek and the Ottawa River posed concerns for water quality, and further investigation in the form of a Phase II assessment was needed.

Although Toledo boasts the fourth largest port on the Great Lakes and one of the largest railway centers, redevelopment of nearly two-thirds of the city's commercial and industrial real estate has been hindered by environmental concerns.

In 1999, the Hemisphere Corporation purchased a 27.5-acre portion of the property, now known as the Stickney West Industrial Park (SWIP). As part of the sale, Hemisphere agreed to conduct a Phase II assessment, remediate the parcel in accordance with the Ohio VAP, and redevelop it. Because of SWIP's imminent threats to groundwater and water quality in Sibley Creek and the Ottawa River, in the spring of 2000 Hemisphere received a WPCLF loan of $500,000 to fund a Phase II assessment. The assessment confirmed suspected surface soil contamination by pesticides, heavy metals, and a variety of organic contaminants.[27] As required under VAP rules, it also determined the cleanup standards at a level that would enable industrial activities to resume on the site.

To fund cleanup, Hemisphere has received a second WPCLF loan of approximately $2.5 million at approximately 4 percent interest for five years (extending to ten years if the loan is not in default), bringing the total WPCLF funds to approximately $3.0 million. To cover additional costs and provide security for the WPCLF loans, Hemisphere has worked with Toledo, Ohio EPA, and the Ohio Water Development Authority (OWDA), the secondary agency for the WPCLF that generally acts as a financial adviser to Ohio EPA for CWSRF loans.

Hemisphere has several innovative strategies to cut costs and generate funds. The company agreed to excavate and sell subsurface soils from an uncontaminated portion of the site to the city. This material will be used as part of an engineered cap on a city-owned landfill located across the street, which the city wants to close and redevelop as part of its brownfield initiative. This transaction will provide a revenue source for Hemisphere and benefits the city by cost-effectively providing needed capping material for the landfill since the source is local.

The resulting excavated area on the site will be used to operate a licensed construction and demolition debris (C&DD) landfill. Demolition contractors

will be charged to dispose brick and other building materials in the C&DD landfill, providing Hemisphere with an additional source of revenue. Scrap tires from the site will be shredded and used as part of the leachate collection system for the C&DD landfill, reducing costs for tire removal. The C&DD landfill is anticipated to close in three to five years, after which the site will be redeveloped as light industry.

Although the project deviated little from regular WPCLF procedures, Ohio EPA and OWDA needed additional time to secure the loan because it was issued to a private entity. In addition, Ohio EPA added an application fee of 0.5 percent of the total WPCLF loan amount to offset the costs of investigating security and repayment sources. Repayment sources for the loan include payment from the city for the soil needed to cap its landfill, tipping fees from the C&DD landfill, rental fees from the completed SWIP project, and settlements between the city and EPA for environmental liability related to the site.

As a result of its partnership with Ohio EPA, OWDA, and Toledo, and its innovative cost-cutting strategies, Hemisphere has been able to secure funds for site remediation and redevelopment. The project also gives demolition contractors a local option for debris disposal, and Toledo receives inexpensive cover for its landfill at minimal transportation costs, and ultimately the benefits from redeveloping a badly needed commercial/industrial site.

FOR MORE INFORMATION

Because the CWSRF is administered by states and overseen by EPA, brownfield and USTfield advocates are advised to contact state CWSRF program administrators to find out whether their state funds these projects. If so, state program administrators can explain eligibility requirements and identify the steps needed to acquire CWSRF funding, such as getting the project on the state's project priority list and submitting a CWSRF loan application, and whether restrictions apply. (Appendix II lists CWSRF contacts for states and EPA's regional offices and headquarters)

Because states have great flexibility in administering their CWSRF programs, they may be able to modify program requirements in certain cases or in response to sufficient public demand. For example, if the CWSRF does not currently fund brownfield and USTfield projects, brownfield and USTfield advocates may ask CWSRF program administrators to suggest other programs that may provide funding and inquire if they would consider funding this type of project in the future. If a state does fund brownfield and USTfield projects but cannot make loans to private entities, brownfield and USTfield advocates may ask CWSRF program administrators to identify other ways for private entities to acquire funding or to consider expanding their program to fund private entities. This report provides enough policy references, from EPA and other sources, to help build either case.

Appendix I

THE CLEAN WATER STATE REVOLVING FUND: A PRIMER

WHAT IS THE CLEAN WATER STATE REVOLVING FUND?

Congress created the Clean Water State Revolving Fund (CWSRF) in the 1987 amendments to the Clean Water Act (CWA).[28] Title VI of the CWA sets the guidelines for the CWSRF, which it calls the State Water Pollution Control Revolving Fund. The CWSRF is a state-administered and EPA-overseen program for providing financial assistance other than grants to public and private entities for projects that protect and restore water quality, including publicly owned treatment works (POTWs), nonpoint source pollution control, and estuary management.[29]

Under the CWSRF, EPA provides annual grants solely to states. States match these capitalization grants at a minimum of 20 percent and use the funds to provide financial assistance other than grants to public and private entities for state-determined priority water quality projects. The most common form of financial assistance has been loans with interest rates that vary from zero interest to market rate, with repayment periods of up to 20 years.

To obtain a CWSRF loan, a prospective loan recipient must complete the loan application and any other paperwork that may be required by the state (e.g. the application to be listed on a state's project

FIGURE 1.

Key Features of the CWSRF

- There are 51 CWSRF programs (50 states and Puerto Rico) which are administered by states and overseen by EPA.
- CWSRF loans are issued from a fund comprised of annual capitalization grants, state matches, loan repayments, and bond proceeds.
- Depending on the state, eligible entities may include towns, counties, conservation districts, and other public agencies, as well as private parties for certain types of projects.
- Depending on the state, eligible projects may include POTWs, nonpoint source pollution control (e.g. brownfield and USTfield remediation, control of agricultural and urban runoff, stormwater, sewer overflow controls), and estuary management projects.
- Although CWSRF programs can vary from state to state, the basic steps to acquire funding in most states are getting the project listed on a state priority list and submitting a complete CWSRF loan application.
- Repayment periods can last up to 20 years beginning one year after project completion, with state-determined interest rates that vary from zero percent to market rate and negotiable repayment terms and sources.
- The combination of annual capitalization grants to states from EPA, state matches, and loan repayments ensures a growing and perpetual source of funds for water quality projects.

Sources: Adapted from EPA's *The Clean Water State Revolving Fund: Financing America's Environmental Infrastructure–A Report of Progress*, EPA 832-R-95-001, May 2001, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf; and *The Clean Water State Revolving Fund: How to Fund Nonpoint Source and Estuary Enhancement Projects*, EPA 909-K-97-001, July 1997, http://www.epa.gov/owm/cwfinance/cwsrf/final.pdf

priority list). Once a project has been selected by state CWSRF program administrators, loan terms and the method of loan repayment can be negotiated, construction can begin, and the loan can be disbursed. As outstanding loans are repaid, states 'revolve' the CWSRF by using this money to issue new loans for other priority water quality projects.

The combination of annual capitalization grants to states from EPA, required state fund matches, and CWSRF loan repayments has ensured a perpetual and growing source of CWSRF funds for priority water quality projects. Under Title VI of the CWA, the CWSRF also gives states flexibility in administering their programs (e.g. determining funding priorities, project eligibility, and loan terms). Therefore, state programs can vary widely, although they are accountable to EPA regarding their use of CWSRF money, the health of the fund, and general compliance with Title VI. Figure 1 (see previous page) summarizes the key features of the CWSRF.

HOW IS THE CWSRF CAPITALIZED?

Starting in 1989, EPA began providing states with annual grants to capitalize their CWSRF programs under Title VI. The dollar amount of annual capitalization grants varies from state to state per the funding allocation formula in Title II of the CWA and can fluctuate from year to year depending on the amount of money annually appropriated to the CWSRF by Congress.[30]

States acquire annual capitalization grants through annual capitalization agreements they negotiate with EPA. These agreements are the principal instrument by which states clarify the roles and responsibilities of administering agencies and commit to administering their CWSRF programs in accordance with Title VI. This includes agreeing to accept capitalization grants, provide a funds match of at least 20 percent, distribute this money among eligible projects in a timely manner, and comply with environmental review procedures and other legal aspects that may apply (e.g. minority and women-owned business enterprise requirements, equal employment opportunity documentation), as well as accounting, auditing, reporting, and fiscal procedures (e.g. payments received and disbursed, as well as balances at the beginning/end of the fiscal period).[31] State CWSRF programs can opt to incorporate organizational and administrative frameworks and procedures that are expected to remain constant into an operating agreement, which can then be referred to in the capitalization grant agreement.[32]

Upon receiving capitalization grants each year, states can meet their 20 percent match requirement through direct appropriation, general obligation bonds, or revenue bonds.[33] States can manage their CWSRF money in a separate account or as part of a multi-purpose financial-assistance program that combines funds from several sources, such as Connecticut's Clean Water Fund, New Jersey's Environmental Infrastructure Financing Program, or Wisconsin's Environmental Improvement Fund.[34] If the account is part of a multi-purpose financial-assistance program, CWSRF money is kept separate from money for other programs because of the CWSRF's reporting and environmental review requirements and other guidelines pursuant to Title VI. Once states have received their annual capitalization grants and provided the required 20 percent match, they must set aside one percent of the total funds or $100,000 (whichever is greater) for planning purposes.[35] Then, they can begin the process of allocating funds among eligible entities and water quality projects.

WHAT TYPES OF FINANCIAL ASSISTANCE ARE AVAILABLE THROUGH THE CWSRF?

Under Title VI, states can:

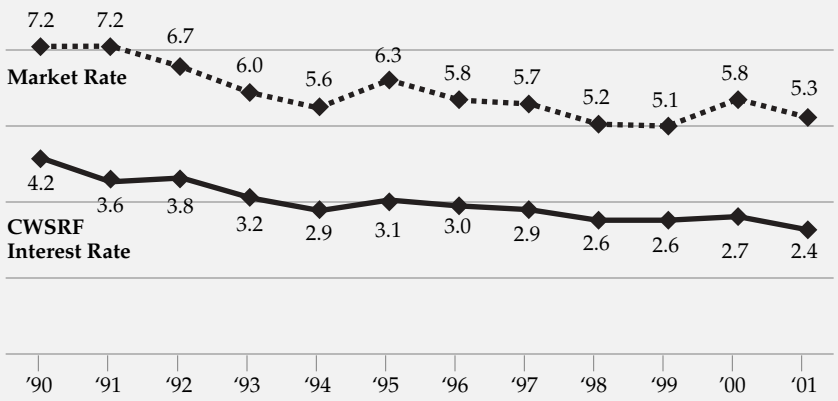
- Issue low- or no-interest revolving loans (as noted in Figure 1).
- Buy or refinance the debt obligation of municipalities and intermunicipal and interstate agencies within the state between zero and market rates.
- Guarantee, or purchase insurance for, local obligations where such action would improve credit market access or reduce interest rates.
- Serve as a source of revenue or security for the payment of principal and interest on revenue or general obligation bonds issued by the state if the proceeds of the sale of such bonds will be deposited in the fund.
- Provide loan guarantees for similar revolving funds established by municipalities or intermunicipal agencies.
- Earn interest on fund accounts.

- Cover the reasonable costs of administering the fund and conducting eligible activities, up to four percent of the total amount of grant awards.[36]

Since the CWSRF is customer-driven and most demand for CWSRF money has come from communities, the majority of financial assistance offered has been in the form of low- or no- interest revolving loans. Figure 2 shows how the interest rates on CWSRF loans have compared to the market rate since 1990.

FIGURE 2.

Market Rates vs. CWSRF Interest Rates



Source: EPA, with permission.

WHAT TYPES OF WATER QUALITY PROJECTS ARE ELIGIBLE FOR CWSRF LOANS?

Projects must have a direct link to water quality to be competitive for CWSRF money. Title VI authorizes the use of CWSRF funding for the following types of water quality projects:

- the construction of publicly owned treatment works (POTWs), as defined in Section 212 of the CWA;
- the implementation of nonpoint source pollution control management programs[37] (NSMPs) under Section 319 of the CWA (includes remediating brownfields[38] and leaking underground storage tanks[39] (USTfields));
- the development and implementation of estuary comprehensive conservation and management plans under Section 320 of the CWA.[40]

The CWSRF can fund only the 'capital' component of eligible projects (e.g. wastewater-related construction equipment and activities, planting vegetation to restore riparian areas, environmental cleanups), and funds cannot be used for operation and maintenance or for salaries and equipment outside the scope of a project.[41]

HOW CAN STATE CWSRF PROGRAMS VARY?

Agency Lead

Because states have great flexibility in administering their CWSRF programs, certain aspects can vary widely from state to state. Generally, a state's environmental and natural resources management agency is the lead agency (e.g. Department of Environmental Conservation, Department of Natural Resources, Department of Ecology). In some states, however, the CWSRF lead is a water resources board (e.g. California, Colorado), a finance authority (e.g. Arizona, Georgia), the Department of Health (e.g. Hawaii, North Dakota), or some other state agency (e.g. Massachusetts Department of the State Treasurer, Minnesota Department of Trade and Economic Development). Regardless of which state entity takes the lead, it works with related state entities to administer the CWSRF program.

Eligible Entities

Only public entities are eligible for CWSRF loans for POTWs, but depending on the state, public and private entities can be eligible for CWSRF loans for nonpoint source pollution control and estuary management projects. Eligible entities may include municipalities; quasi-municipal entities (e.g. local public authorities and improvement districts);

intermunicipal, interstate, or intergovernmental organizations; citizens' groups; non-profit organizations; and individuals (e.g. farmers, gas station owners, and brownfield and USTfield advocates). However, some states are barred from funding private entities by state law. For example, Arizona, Maine, New York, and Tennessee only consider CWSRF applications from municipalities (e.g. counties, cities, towns, villages, and Tribes) and quasi-public entities (e.g. local public authorities and improvement districts).

Loan Terms

CWSRF loan terms may vary widely from state to state. For example, in Ohio, CWSRF loans for most projects cannot exceed 20 years, except in the case of loans for brownfields which cannot exceed 10 years. Interest rates can vary as well. They can be the same for every type of project, they can be a percentage of the state-determined market rate, or they can vary based on the entity's ability to repay the loan—or in the case of municipal loan recipients, the ability of the community to repay the loan. States also determine whether special loan terms will be offered to small and disadvantaged communities and if so, what those terms would be.

For example, New York restricts no-interest loans to short-term loans, and New Mexico restricts no-interest loans to communities with demonstrated financial hardship. Some states also restrict how much money can be loaned for one project in a year. For example, New Mexico and Oregon set the maximum loan amount as a percentage of the total CWSRF funds available for each year, meaning that the actual dollar amount can potentially fluctuate from year to year. Other states such as North Carolina set the maximum dollar amount that one project can receive in a fiscal year, and that amount generally remains the same year after year regardless of whether the capitalization grant allotment fluctuates. Finally, some states such as Delaware set a minimum loan amount (e.g. $10,000) and a minimum interest amount (e.g. 3 percent).

Project Eligibility

Although authorized projects include POTWs, nonpoint source pollution control, and estuary management, states do not have to fund all three or allocate a certain percentage of CWSRF funds to any type of project. Some states fund only POTWs, and others fund all three types of authorized projects. To date, 30 states have funded nonpoint pollution control and estuary management projects through the CWSRF at a level of $1.4 billion, approximately 80 percent of which has been provided over the past five years. This indicates that in many states, funding priorities are shifting in favor of water quality projects other than POTWs.[42]

Some states have funded both traditional projects and the water quality portion of non-traditional projects, or those projects in which the primary purpose is something other than water quality, but aspects of the projects protect or restore water quality. For example, the primary purpose of a new landfill is solid waste disposal. However, because installing leachate collection systems, liners, and groundwater monitoring stations can prevent landfills from adversely affecting water quality, the CWSRF may be used to fund this portion of the project. Table 1 provides examples of traditional and non-traditional projects that can potentially be funded through the CWSRF.

HOW DO STATES ALLOCATE CWSRF MONEY AMONG ELIGIBLE WATER QUALITY PROJECTS?

Under Title VI, states must rank POTWs for funding, but they are not required to prioritize nonpoint source pollution control or estuary management projects.[43] States that fund nonpoint source pollution and estuary management projects, particularly those in which the cost of eligible projects exceeds CWSRF funds, have identified a need to evaluate and compare the water quality benefits of all eligible projects so they can be funded accordingly. To address this, states have worked with EPA to create a framework for evaluating the water quality benefits of eligible projects and prioritize them for funding in a project priority list (PPL) for a given year.

EPA encourages states that fund nonpoint source pollution and estuary management projects through the CWSRF to use integrated planning and priority setting systems to target water quality problems. These systems are frameworks for identifying water quality priorities, assessing the role of the CWSRF in addressing those priorities compared to other funding sources that may be available, conducting outreach to potential loan recipients, and comparing the water quality benefits of different types of projects

TABLE 1.

Projects That Can Potentially be Funded Through the CWSRF

TRADITIONAL PROJECTS

Activity	*Benefit to Water Quality*
Alleviate the water quality impacts of brownfields	Eliminates potential threats to groundwater and surface water from contamination on the site (if any) and erosion
Alleviate the water quality impacts of leaking USTs	Eliminates threats to groundwater from petroleum, MTBE, and other products
Remediate the water quality impacts of existing landfills	Eliminates threats to water quality from landfill leachate
Create and enhance existing vegetative buffers (grass, shrubs, and trees) on stream banks and shorelines and restore riparian areas	Buffers upland runoff from high flows and pollutant loading and prevents streambank erosion during wet weather
Restore riffle-pool sequences and instream flow in streams, lakes, and estuaries	Improves water quality, enhances habitat for aquatic life, and increases the viability of species that depend on aquatic life
Build manure storage facilities for a non-confined animal feeding operation	Prevents manure from contaminating groundwater and surface water by containing it
Purchase no-till equipment	Reduces crop land erosion and topsoil runoff into waterways
Replace failing septic systems	Reduces threats to groundwater, surface water, and drinking water
Build stormwater management facilities including sediment basins and constructed wetlands	Reduces impacts to receiving waters during wet weather events by reducing erosion of streambanks and streambeds by high flows and reduce impacts to water quality by reducing pollutant loading

WATER QUALITY PORTION OF NON-TRADITIONAL PROJECTS

Activity	*Benefit to Water Quality*
Implement new technologies such as leachate collection systems, liners, and groundwater monitoring when building new landfills	Protects water resources, especially groundwater, from leachate
Install smokestack scrubbers	Reduces air pollution and the deposition of airborne pollutants into waterways and on land where they can be washed into waterways during wet weather
Implement street-sweeping and leaf-removal programs	Protects water resources by collecting waste that could be washed into waterways through storm drains during wet weather
Build salt storage sheds to contain it	Prevents salt from contaminating groundwater and surface water
Create bird sanctuaries and other wildlife enhancements	Provides additional high-quality habitat for terrestrial and aquatic wildlife

Sources: EPA, *The Clean Water State Revolving Fund Funding Framework*, EPA 832-B-96-005, October 1996, http://www.epa.gov/owm/cwfinance/cwsrf/framewrk.pdf; EPA, *The Clean Water State Revolving Fund: How to Fund Nonpoint Source and Estuary Enhancement Projects*, EPA 909-K-97-001, July 1997, http://www.epa.gov/owm/cwfinance/cwsrf/final.pdf

so they can be ranked.[44] In 2001, 16 states used integrated planning and priority setting systems: California, Delaware, Idaho, Maryland, Minnesota, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, Ohio, Rhode Island, Utah, Washington, and Wyoming.

The first step in a state's integrated planning and priority setting system is to identify priority water quality issues and locations. Typically, the lead agency works with other agencies to review available water quality information, including national water quality inventories (CWA Section 305(b) reports), lists of impaired waters (CWA Section 303(d) lists), nonpoint source management plans (CWA Section 319), comprehensive conservation management plans (CWA Section 320), national water information surveys, unified watershed assessments, watershed plans, groundwater protection plans, natural resources inventories, and any other available resources.[45] Projects addressing water quality issues in areas of greatest need may receive higher rankings than other projects, although this is not always the case.

Once water quality priorities have been identified, states assess the role of the CWSRF in addressing these priorities in light of other funding sources for wastewater and water quality projects. For example, if a state has a large grant program for dairy best management practices, then this type of project may not be a CWSRF priority for outreach and funding because another source of financial assistance is available. This ensures that the CWSRF complements other programs and that the common goal of improving water quality can be advanced to the greatest extent possible.

Finally, states evaluate the water quality benefits of all projects that have applied for CWSRF funding. The 16 states currently using integrated planning and priority setting systems vary in their approaches, but they all have methods for scoring eligible projects either within one category or across categories, using best professional judgement for completing the annual priority ranking, and determining whether to reserve funding for highest priority needs. Some states have attempted to evaluate projects based on the value of the water body in question, the threat or impairment to that water body, and the effectiveness of the project in addressing water quality problems facing the water body.[46]

WHAT ARE THE RESPONSIBILITIES OF CWSRF LOAN RECIPIENTS?

In many states, there are two basic steps to acquiring CWSRF loans: a project must be included on the state's project priority list (PPL) and a complete loan application must be submitted on time. Specific responsibilities for loan applicants and recipients include gathering preliminary information, applying for the loan, negotiating a loan contract agreement, initiating the project, and repaying the loan according to the schedule in the loan contract agreement.[47]

Loan applicants are advised to establish early contact with state CWSRF program administrators to discuss their project and the state's CWSRF loan application process, including required paperwork and deadlines. Prospective loan recipients also should begin gathering the information needed to apply for a CWSRF loan, which may include the following:

- required form(s) for getting a project listed on the state's project priority list and nonpoint source management plan or estuary management plan;
- CWSRF loan application form(s);
- documentation of water quality benefits of the project;
- project-specific documents such as engineering designs and plans, permits, state agency approvals, record of public involvement, and contract documentation;
- estimated costs and financial information for the project such as project capital and operating and maintenance costs; and
- possible dedicated revenue source(s) to repay the loan.

Maintaining frequent contact after this initial discussion can ensure that the CWSRF loan application and any other required paperwork is obtained, completed accurately, and submitted on time.

Depending on the state, completed loan applications and associated paperwork are reviewed either on a rolling basis or after a state-determined deadline. States notify loan recipients as their projects are selected to receive CWSRF funding. Loan recipients and state CWSRF programs then negotiate loan terms and repayment options.

Title VI of the CWA requires every CWSRF loan recipient to establish one or more dedicated sources of

FIGURE 3.

Selected Guides and Flowcharts on the CWSRF Funding Process

- Florida Department of Environmental Protection, *Water Facilities Funding: Water Pollution Control Manual* http://www.dep.state.fl.us/water/wff/wwmanual.htm.
- Michigan Department of Environmental Quality, *Securing Financial Assistance through the SRF: A Guidance Document for Municipalities and Consultants* http://www.deq.state.mi.us/documents/deq-ead-mfs-formsguidance-SRFBook.pdf
- New York State Environmental Facilities Corporation web site: http://www.nysefc.org/srf/CWSRF/CWSRFhome.htm; and http://www.nycofunding.org/newcofund/waterandsewer.htm
- Ohio EPA, Division of Environmental and Financial Assistance, *The WPCLF Community Guide: A User's Guide to the Ohio Water Pollution Control Loan Fund for Publicly-Owned Treatment Works and Nonpoint Source Improvements* http://www.epa.state.oh.us/defa/comguide.html
- Utah Department of Environmental Quality, *A Community's Guide to the Utah Water Quality Project Assistance Program* http://www.deq.state.ut.us/eqwq/Con_Asst/comgd1.htm
- Wyoming Department of Environmental Quality, funding process flowchart, http://deq.state.wy.us/wqd/w&ww/SRF/flow.pdf

repayment but does not mandate that the source of repayment come from the project itself.[48] In the case of loans to municipalities, dedicated repayment sources may include special assessments, general taxes, general obligation bonds, revenue bonds, user charges, or other sources, such as:

- developer fees on other properties;
- recreational fees (e.g. park entrance fees, hunting/fishing licenses);
- dedicated portions of local, county, or state taxes/fees;
- property owner payments (with ability to repay determined during the application process);
- contributions or dues made to nonprofit organizations; and
- stormwater management fees and wastewater user charges.[49]

The lead agency works with the loan recipients and in some cases, other state agencies, to identify options for securing and repaying the loan.

Once loan terms have been agreed upon and a repayment source has been identified, a loan contract agreement is drafted. This legal document commits CWSRF money for the project and commits the loan recipient to agreed upon terms and conditions for carrying out the project and repaying the loan. It generally consists of the following:

- a loan amortization schedule specifying the anticipated loan principal and interest payments over time;
- a pledge by the loan recipient to dedicate the revenue source identified in the loan application; and
- a certification that the loan recipient will comply with all CWSRF program requirements.

Loan recipients are advised to review loan contract agreements with an attorney. When all parties are satisfied with the loan terms, the loan can be closed, disbursements can begin, and projects can be initiated.

Throughout the project, loan recipients must be able to document project costs (e.g. contractor invoices) and provide documentation that funds have been properly spent. Loan repayments begin based on the final loan amortization schedule, and at least within one year from project completion. Some states have compiled funding guides that further explain the CWSRF funding process, and several are listed in Figure 3.

WHAT ARE THE RESPONSIBILITIES OF STATE CWSRF PROGRAMS?

States are responsible for administering their CWSRF programs, including but not limited to:

- negotiating annual capitalization grant agreements with EPA and making sure that the required state funds match is provided;
- tailoring programs to priorities for water quality and public health;
- assisting loan recipients throughout the funding process by answering questions and providing fact sheets and funding guides;
- ensuring that projects comply with environmental regulations;
- managing CWSRF program information;
- expanding the customer base by identifying new uses for CWSRF money, improving marketing tools for the CWSRF, and conducting outreach to prospective loan recipients;
- ensuring the long-term health and stability of the CWSRF; and
- working with EPA's regional offices to ensure that the CWSRF program runs efficiently and in accordance with Title VI.

States also have several reporting requirements under Title VI: preparing annual Intended Use Plans (IUPs) for CWSRF money, submitting annual reports to EPA, and conducting annual audits of their CWSRF programs.

Intended Use Plans

IUPs are part of the capitalization grant agreement and are based on the results of states' priority setting processes. The primary purpose of an IUP is exactly as it sounds: to identify the intended uses of CWSRF money for a given year. IUPs also aid in negotiating future capitalization grant agreements and schedules of grant payments. To meet these objectives, Title VI specifies that IUPs must include the following:

- a list of wastewater, nonpoint source pollution control, estuary management (if applicable), and other types of projects that are eligible for CWSRF assistance (the composite list or PPL that results from the state's annual project prioritization process can suffice);
- a description of the short- and long-term goals and objectives of the state CWSRF program;
- information on the activities to be supported, including a description of project categories, terms of financial assistance, and communities served; and
- criteria and methods for selecting projects and distributing funds.[50]

IUPs also can include a schedule of estimated disbursements of funds with enough detail to estimate repayment schedules, a preliminary identification of projects that may undergo an Environmental Impact Statement (EIS), and any additional provisions the state deems necessary. IUPs are subject to public review prior to being submitted to EPA and generally can be found on the lead agency's web site or obtained by calling the agency. Appendix I lists state contacts and web sites.

Annual Reports

States must submit annual reports to EPA in accordance with Title VI reporting requirements and the schedule determined by the capitalization agreement, usually within 90 days of the end of the fiscal year. The reports generally describe how the state has met the goals and objectives of the previous fiscal year that were stated in the IUP and the capitalization agreement. The report also confirms that the necessary environmental reviews for funded projects (where applicable) have been conducted, the 20 percent funds match was provided on time, and all funds have been committed in a timely and expeditious manner.[51] The reports may provide information on loan recipients, loan amounts, loan terms, and the long-term health of the fund.

Annual Audits

States must conduct annual financial and compliance audits of their programs for the previous fiscal year. The results of annual audits are summarized in a report, including whether the CWSRF financial statements are accurate and follow the appropriate accounting procedures, its internal controls are sufficient, and the state has complied with all applicable laws and regulations, including the provisions of the annual capitalization grants.[52]

WHAT ARE EPA'S RESPONSIBILITIES UNDER THE CWSRF?

Although states handle all of the administrative details of their CWSRF programs, EPA plays a key oversight role. Duties differ somewhat between EPA's regional offices and headquarters. EPA's regional offices oversee the CWSRF programs in the states in their region and determine whether these programs operate efficiently and in accordance with Title VI. This entails providing guidance and answering questions, awarding annual capitalization grants to states, and reviewing states' IUPs, annual reports, and annual audits. For those states that cannot conduct independent audits, EPA's regional offices coordinate with the Office of the Inspector General to perform audits for those states. Finally, EPA's regional offices conduct annual reviews of the state CWSRF programs in their jurisdiction. These reviews assess the progress of states in carrying out the activities listed in the IUP and annual reports, as well as in complying with the terms set in their annual capitalization grant agreements. Appendix II lists the CWSRF contacts at regional EPA offices.

FIGURE 4.

Brief Overview of the Drinking Water State Revolving Fund

The Drinking Water State Revolving Fund (DWSRF) was created by the Safe Drinking Water Act Amendments of 1996 and is also administered by EPA. The DWSRF is similar to the CWSRF, but DWSRF loans primarily are issued to public water systems for infrastructure improvements and pollution prevention measures that would enable them to comply with national primary drinking water standards and protect public health. Public and private community water systems and non-profit non-community water systems are eligible for DWSRF money, including small and disadvantaged communities. Funded projects may include but are not limited to eligible storage facilities and transmission and distribution systems, the installation and replacement of failing water treatment facilities, water supply consolidation, programs that encourage better system operations through enhanced water systems management, and programs that emphasize prevention as a tool for ensuring safe drinking water.

While most of the DWSRF goes to improving water infrastructure, states have the flexibility to set aside a portion of their capitalization grants for projects related to protecting drinking water sources, since taking steps to prevent contamination can be more efficient and cost-effective than treating drinking water. States can set aside up to 10 percent of their capitalization grants to administer or provide technical assistance through source water protection programs and up to 15 percent of their capitalization grants for source water protection. Such projects may include but are not limited to providing loans to acquire land or conservation easements, voluntary incentive-based source water quality and wellhead protection measures. Although a maximum of 15 percent of the capitalization grant can be set aside for source water protection activities, not more than 10 percent can be used for a single type of source water protection activity.

Though brownfields can adversely affect drinking water supplies, the DWSRF has not yet been applied to brownfield remediation activities. Since several states require remediated groundwater to be returned to the environment and not used as potable drinking water, it is not likely that the DWSRF could be applied to groundwater remediation projects.

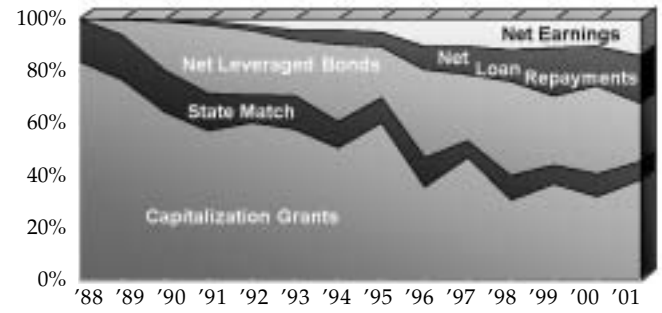
Additional information on the DWSRF can be found online at EPA's Office of Groundwater and Drinking Water web site (http://www.epa.gov/safewater/dwsrf.html) or by contacting the Safe Drinking Water Hotline at 1-800-426-4791 or SDWA@epa.gov.

EPA's headquarters provides national program oversight and sets national policy objectives that ensure the integrity of the CWSRF and improve its pace by reducing the time it takes to complete a funding cycle (e.g. issue loans to eligible entities, begin receiving loan payments, and use this money to issue loans for other eligible projects). EPA may base specific policies to accomplish these goals on information gathered from the reporting requirements under Title VI and suggestions from state CWSRF program administrators.

EPA's headquarters also can provide regional EPA offices and states with information and guidance they need to administer their CWSRF programs and implement any policy changes. For example, if a state wishes to fund projects other than POTWs, the transition can be onerous if bureaucratic barriers exist and state laws or regulations need to be revised. EPA's headquarters can work with its regional offices to provide the state with assistance throughout the transition, including training, technical assistance, guidance, and information on what other states have done, what has worked well, and lessons learned.

FIGURE 5.

Composition of CWSRF Funds



Source: EPA, with permission.

HOW IS THE CWSRF FISCALLY INNOVATIVE?

States have devised several innovative financing techniques that have stretched annual capitalization grant dollars while expanding their CWSRF to fund a greater number and variety of water quality projects. These techniques have increased available CWSRF funds, enhanced the financial security of the CWSRF, reduced the administrative burden to states, lowered the cost of borrowing to the CWSRF program, and ensured a perpetual and growing source of CWSRF funds for priority water quality projects.[53] Such techniques include leveraging, implementing several layers of repayment security, transferring funds to/from the Drinking Water State Revolving Fund (DWSRF), offering linked-deposit loans through banks, and using local governments as conduits. Figure 4 (see previous page) provides an overview of the DWSRF.

Leveraging

The CWSRF is well-suited to leverage other resources, both in the traditional sense as well as in ways suited to the design of the program and current state laws. States can issue bonds using the CWSRF as security, use bond proceeds to issue new loans for eligible projects, and repay bond holders from loan repayments. To date, 23 states have issued bonds secured by CWSRF funds, adding $10 billion to the program. Figure 5 shows how the composition of the CWSRF has changed from 1988 to 2001 as a result of leveraging and the increased volume of net loan repayments and net interest earnings.

Layers of Security

To ensure adequate funds for issuing loans and repaying bonds secured by CWSRF funds, many state CWSRF programs have implemented several layers of security, with the first being CWSRF loan repayments. The second level of security can be a debt service reserve in which states hold a portion of CWSRF funds to cover any CWSRF loan defaults. The third level of security can be cross-program credit enhancements in the form of cross- collateralization or cross-investment. Cross-collateralization combines CWSRF and DWSRF assets to enhance bondholder security, with certain restrictions, to allow the resources of one program to secure the other against default. Arizona, Maine, Minnesota, Missouri, and New Jersey have cross-collateralized their CWSRF programs. New York and Michigan

have used a similar approach called cross-investment in which the CWSRF makes short-term interest-bearing investments in the DWSRF or vice-versa to cover any shortfalls that could threaten the repayment of CWSRF-issued bonds.[54]

Transfers Between the CWSRF and DWSRF

The 1996 Safe Drinking Water Act Amendments included a provision in Section 302 that allowed states to reserve an amount equal to 33 percent of their DWSRF capitalization grant and transfer these funds to the CWSRF (or vice versa). States still had to provide a 20 percent match for the entire capitalization grant prior to the transfer, and they could not use transferred funds to provide state matches. The goal of transfers was to give states greater flexibility in addressing priority needs, especially in states in which the same entity manages both programs, and to encourage those states whose CWSRF and DWSRF programs are managed by separate entities to work together to address state priorities.[55]

As of June, 2001, eight states (Alabama, Colorado, Illinois, Maryland, Montana, New Jersey, New York, and Wisconsin) had transferred funds from the CWSRF to the DWSRF at a total of approximately 4 percent of their capitalization grants, well below the limit of 33 percent. No state had transferred funds from the DWSRF to the CWSRF. However, the provision that authorized transfers included a sunset date of September 30, 2001. This date was extended through September of 2002 by the 2002 Appropriations Act, but the transfer provision has not been made permanent.

Linked-Deposit Loans

Some states have partnered with financial institutions to offer special CWSRF loans, called linked-deposit loans, to private entities, particularly farmers wishing to implement best management practices and homeowners with failing septic tanks. In this approach, states use CWSRF funds to purchase certificates of deposit from local banks at a lower than market rate of return. In return, banks agree to pass on their reduced interest payment obligations as a subsidy to eligible entities in the form of low-interest loans for eligible CWSRF projects. They also typically administer the loans and assume any risk of default of these types of loans.[56] This technique has reduced the volume of CWSRF loan applications for states to process and enabled many private entities to acquire CWSRF funding in a timely manner. Arkansas, California, Maryland, Minnesota, Missouri, Ohio, and West Virginia have offered linked-deposit loans.

Using Local Governments as Conduits

State agencies that administer the CWSRF can partner with other state agencies or local governments to issue CWSRF loans to private entities if they agree to administer the loan and assume any risk of default from the entities to which they loan the money. Like linked-deposit loans, this approach has been popular for reaching small borrowers such as farmers, small businesses, and home owners who wish to implement agriculture best management practices, remediate underground storage tanks, and fix failing septic systems. States that have used this approach include: California, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New Jersey, North Dakota, Ohio, Virginia, Washington, West Virginia, and Wyoming.

WHAT HAVE BEEN THE BENEFITS OF THE CWSRF?

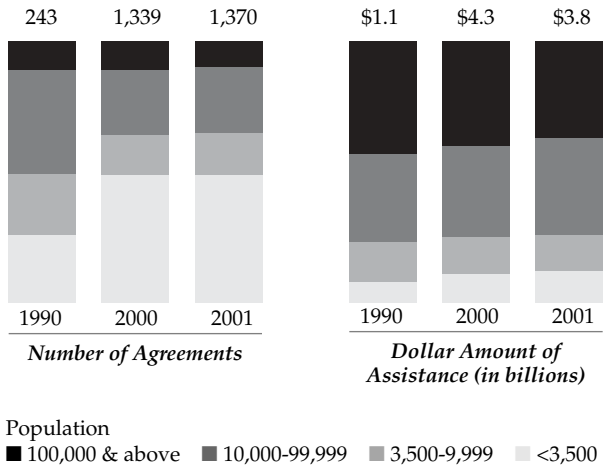
The CWSRF has funded approximately four times more projects in a 20-year period than one-time grants could for the same time period.[57] In addition, the CWSRF provisions in the CWA give no preference to one type of loan recipient or one type of project, enabling a wider range of entities to apply for CWSRF loans for wastewater, nonpoint source pollution control (including brownfields), and estuary management projects.

The CWSRF also has conveyed benefits to states, EPA, local economies, and loan recipients. The CWSRF gives states great flexibility in administering their programs and enables them to tailor programs to priorities for water quality and public health, fund projects accordingly, and offer financial assistance for a variety of water quality projects. EPA benefits from the fact that states administer their respective CWSRF programs. Many local economies have indirectly benefitted from the CWSRF as well; reports have shown that each $1 billion of CWSRF investment creates between 16,000 to 22,000 jobs in construction and associated industries.[58]

CWSRF short- and long-term loans with low- or no-interest rates have dramatically reduced project

FIGURE 6

CWSRF Assistance Agreements by Community Size & Dollars



Source: EPA, with permission.

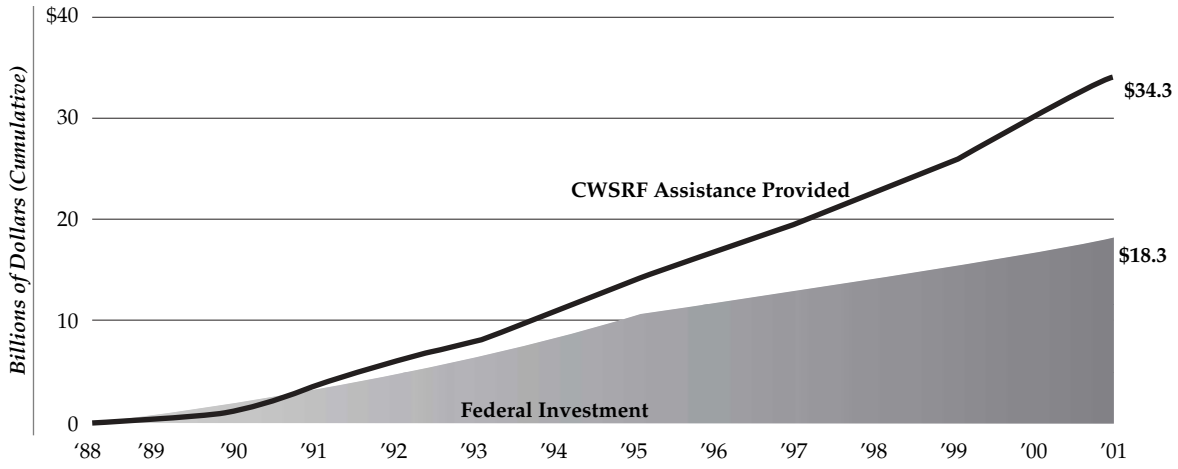
costs for loan recipients. For example, the total cost of a no-interest CWSRF loan is approximately 50 percent less than a commercial loan at 7.5 percent.[59] In addition, unlike many federal grant programs, the CWSRF does not require a cost share on the part of the loan recipient; loan recipients do not need to provide cash up-front. Furthermore, the CWSRF has fewer requirements than federal grants programs, and loan recipients can combine CWSRF funds with other forms of technical assistance.

Thus, the CWSRF has provided an incentive for many communities, particularly small and disadvantaged communities, to undertake water quality projects that otherwise might not have been possible. Figure 6 shows breakdowns by number of agreements and dollar amount of assistance by community size in 1990, 2000, and 2001.

Finally, the revolving nature of the CWSRF and its financial innovations have stretched annual capitalization grant dollars, leveraged the federal investment 1.9 times (as shown in Figure 7), and ensured a perpetual and growing source of financial assistance for future water quality projects. Today, total assets exceed $37 billion, and over the life of the program, more than $34 billion in CWSRF loans have been issued, with average annual funding of between $3 billion and $4 billion.[60]

FIGURE 7.

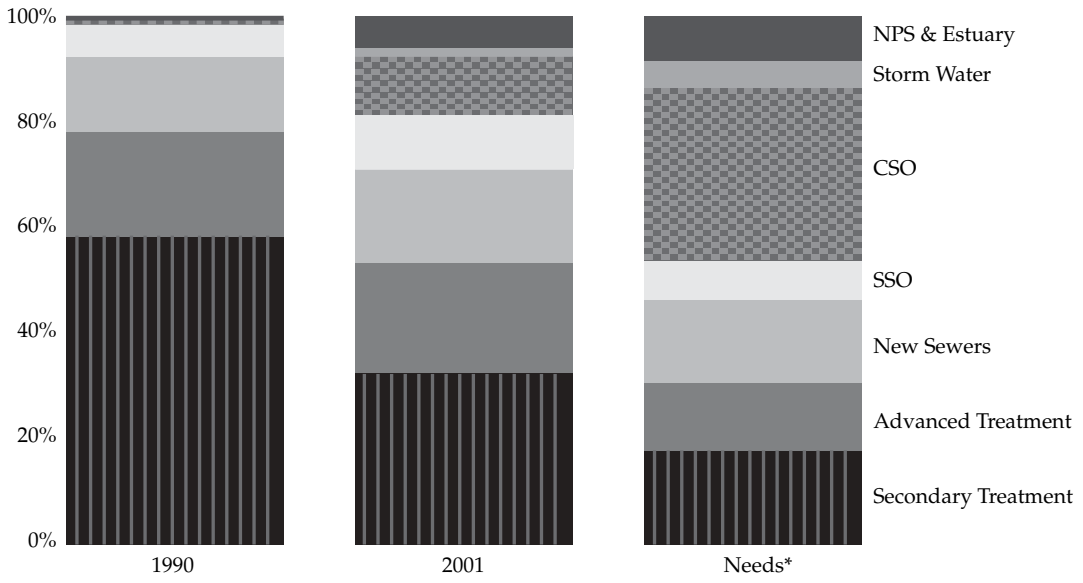
CWSRF Programs Leverage the Federal Investment 1.9 Times



Source: EPA, with permission.

FIGURE 8.

CWSRF Assistance vs. Projected Clean Water Needs



*Needs from EPA's 1996 Needs Survey
Source: EPA, with permission.

WHAT CAN BE DONE TO IMPROVE THE CWSRF?

The revolving nature of the CWSRF and its fiscal innovations have stretched annual capitalization grant dollars to ensure a perpetual and growing source of financial assistance for future water quality projects. The CWSRF likely will continue to be in high demand as a funding source for wastewater and water quality projects, which begs the question of how to make this good program even better and improve progress toward achieving Clean Water Act goals. To that end, several recommendations can be offered:

- Encourage all states to fund nonpoint source pollution control and estuary management projects or offer incentives for voluntary program expansion.
- Include brownfields and USTfields in future Clean Water Needs Surveys.
- Encourage all states to use integrated planning and priority setting systems.
- Extend the maximum duration of CWSRF loans to 30 years or the life of the project.
- Make permanent states' ability to transfer funds between the CWSRF and DWSRF.
- Increase federal appropriations.

Encourage All States to Fund Nonpoint Source Pollution Control and Estuary Management Projects or Offer Incentives for Voluntary Program Expansion

Expanding all state CWSRF programs to fund nonpoint source pollution control and estuary management projects would benefit water quality and advance Clean Water Act goals. According to the 1996 Clean Water Needs Survey (CWNS) (the most recent CWNS for which data is available), state 303(d) lists and other water quality data show a growing need for nonpoint source pollution control and estuary management.[61] As Figure 8 shows, the portion of total CWSRF funding that was used for nonpoint source pollution control increased from 1990 to 2001, but it has not met or exceeded the portion of total nonpoint needs. Because some states have institutional barriers to expanding their CWSRF programs, incentives for expansion may be more effective than a federal mandate.

Include Brownfields and USTfields in Future Clean Water Needs Surveys

Since the demand for CWSRF funding for nonpoint source pollution control and estuary management projects is growing, it could be useful to provide more detailed breakdowns of funding assistance vs. needs for popular projects in these categories, such as brownfields/USTfields, when conducting future Clean Water Needs Surveys. Other categories may include agriculture best management practices, septic system maintenance, and wetlands restoration. This could encourage states to address funding needs by linking related programs through sharing information, coordinating policy and outreach efforts, and co-financing environmental cleanups (e.g. some state programs have linked the CWSRF with state brownfield/USTfield programs).

Encourage All States to Use Integrated Planning and Priority Setting Systems

For states that do fund nonpoint source pollution control and estuary management projects, integrated planning and priority setting systems have proven to be a valuable tool for evaluating and comparing the water quality benefits of different types of eligible water quality projects so they can be prioritized and funded accordingly. It also has been important for coordinating point and nonpoint source pollution control efforts in priority areas. Encouraging all states to expand their programs to include nonpoint source pollution control and estuary management projects and coupling this with incentives, technical assistance, or requirements for using integrated priority setting systems would help ensure that CWSRF money goes to the highest priority projects.

Extend the Maximum Duration of CWSRF Loans to 30 Years or the Life of the Project

The maximum duration of CWSRF loans should be extended from 20 years to 30 years or for the life of the project if it exceeds 30 years. Extending the loan term would lower loan payments and provide an incentive for eligible entities, particularly small and disadvantaged communities, to undertake eligible water quality projects that otherwise would not be affordable.

Make Permanent States' Ability to Transfer Funds Between the CWSRF and DWSRF

The provision of the 1996 Safe Drinking Water Act Amendments that allowed states to reserve up to 33 percent of their capitalization grants in one state revolving fund and transfer it to the other has been extended but not made permanent, despite the fact that states have indicated a preference for keeping the flexibility to transfer funds between SRFs. By extending the provision or making it permanent, Congress would increase states' ability to address water quality priorities.

Increase Federal Appropriations

The CWSRF has efficiently worked to reach Clean Water Act goals in a fiscally responsible manner, but more can be done. The Water Infrastructure Network estimates a funding gap of $23 billion per year between current federal funds and funds needed to replace aging water and wastewater infrastructure and meet CWA goals.[62] According to EPA, states in which proportional needs exceed proportional allotments include Arizona, California, Florida, Illinois, Indiana, Kansas, Kentucky, New Jersey, North Carolina, Oregon, Pennsylvania, South Carolina, and Virginia.

FOR MORE INFORMATION ON THE CWSRF

Appendix II lists state, Regional EPA, and EPA Headquarters CWSRF program contacts and web sites.

Appendix II

CWSRF CONTACTS AND WEB SITES

STATE CWSRF CONTACTS[63]

Alabama

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Water Division
Municipal Branch
Facilities Construction Section
Clean Water State Revolving Fund Loan Program
P.O. Box 301463, Montgomery, AL 36130-1463
Phone: (334) 271-7810 Fax: (334) 279-3051
Email: H2omail@adem.state.al.us

Program Contact: Aubrey H. White III
Phone: (334) 271-7805 Fax: (334) 279-3051
Email: ahw@adem.state.al.us

www.adem.state.al.us/WaterDiv/SRF/SRFMainInfo.htm

Alaska

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Facility Construction and Operation
Municipal Grants and Loans Unit
Clean Water Revolving Loan Fund
555 Cordova St., Anchorage, AK 99501-2617
Phone: (907) 269-7500 Fax: (907) 269-7600

Program Contact: David "Mike" Burns, Program Manager
Phone: (907) 269-7516 Fax: (907) 269-7509
Email: MBurns@envircon.state.ak.us

www.state.ak.us/local/akpages/ENV.CONSERV/dfco/dec_mln s.htm

Arizona

ARIZONA WATER INFRASTRUCTURE FINANCE AUTHORITY
202 E. Earll Drive, Suite 480, Phoenix, AZ 85012
Phone: (602) 230-9770 Fax: (602) 230-0425

Program Contact: Mark D. Lammle
Phone: (602) 230-9770 ext. 205 Fax: (602) 230-1480
Email: Lammle_Mark@pop.state.az.us

www.wifa.state.az.us/cwrf.html

Arkansas

ARKANSAS SOIL AND WATER CONSERVATION COMMISSION
Water Development Division
Water Resources Cost Share Revolving Fund Program
101 East Capitol Ave, Ste 350, Little Rock, AR 72201
Phone: (501) 682-3920 Fax: (501) 682-3991

Program Contact: Ron Hill
Phone: (501) 682-3920 Fax: (501) 682-3991
Email: ron.hill@mail.state.ar.us

www.state.ar.us/aswcc/

ARKANSAS DEVELOPMENT FINANCE AUTHORITY
Municipal Development Programs
Wastewater Loan Revolving Fund
100 Main St., Suite 200, Little Rock, AR 72201
Phone: (501) 682-5900 Fax: (501) 682-5483

Program Contact: Kristi March
Phone: (501) 682-5925 Fax: (501) 682-5483
Email: kmarch@adfa.state.ar.us

www.state.ar.us/adfa/programs/wwrl.html

California

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
Division of Water Quality
Division of Clean Water Programs
Management Support Section
Loans and Grants Branch
State Revolving Loan Fund
1001 I Street, Sacramento, CA 95814
Phone: (916) 341-5874 Fax: (916) 341-5707

Program Contact: James D. Kuykendall
Phone: (916) 227-4355 Fax: (916) 227-4349
Email: kuykendj@cwp.swrcb.ca.gov

www.swrcb.ca.gov/funding/index.html
www.swrcb.ca.gov/funding/docs/fldplsrf.doc
www.swrcb.ca.gov/cwphome/mss/srf.htm

Colorado

COLORADO WATER RESOURCES AND POWER DEVELOPMENT AUTHORITY
Water Pollution Control Revolving Fund
1580 Logan Street, Suite 620, Denver, CO 80203
Phone: (303) 830-1550 Fax: (303) 832-8205

Program Contact: Daniel L. Law
Phone: (303) 830-1550 ext. 14 Fax: (303) 832-8205
Email: dlaw@cwrpda.com

www.cwrpda.com/water_pollution_revolving_fund.htm

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
Water Quality Control Division
Water Pollution Control Revolving Fund
4300 Cherry Creek Drive South, Denver, CO 80246-1530
Phone: (303) 692-2035 Fax: (303) 782-0390

Program Contact: Debbie Stenson
Phone: (303) 692-3554 Fax: (303) 782-0390
Email: debbie.stenson@state.co.us

www.cdphe.state.co.us/wq/wqhom.asp

COLORADO DEPARTMENT OF LOCAL AFFAIRS
Division of Local Government
Water Pollution Control Revolving Fund
1313 Sherman Street, Room 521, Denver, CO 80203
Phone: (303) 866-2771 Fax: (303) 866-4819

Program Contact: Barry Cress
Phone: (303) 866-2352 Fax: (303) 866-4819
Email: barry.cress@state.co.us

www.dola.state.co.us/LGS/TA/Utility/WPCRF.htm

Connecticut

Connecticut Department of Environmental Protection

Bureau of Water Management
Planning and Standards Division
Municipal Facilities and Grants Section
Clean Water Fund
79 Elm Street, Hartford, CT 06106-5127
Phone: (860) 424-3704 Fax: (860) 424-4067

Program Contact: Robert Norwood
Phone: (860) 424-3746 Fax: (860) 424-4067
Email: robert.norwood@po.state.ct.us

www.dep.state.ct.us/wtr/cwa/cwfund.htm

Connecticut Office of the Treasurer

Debt Management Division
Clean Water Loan Program
55 Elm Street, Hartford, CT 06106-1773
Phone: 1800-618-3404 Fax: (860) 702-3000

Program Contact: Sharon D. Peay
Phone: (860) 702-3134 Fax: (860) 702-3034
Email: sharon.peay@po.state.ct.us

www.state.ct.us/ott/

Delaware

Delaware Department of Natural Resources and Environmental Control

Division of Water Resources
Financial Assistance Branch
Water Pollution Control Revolving Fund
5 East Reed Street, Suite 200, Dover, DE 19901
Phone: (302) 739-4403 Fax: (302) 739-2137

Program Contact: Jennifer Klecan
Phone: (302) 739-5081 Fax: (302) 739-2137
Email: jklecan@dnrec.state.de.us

www.dnrec.state.de.us/dnrec2000/Divisions/Water/Water.htm

Florida

Florida Department of Environmental Protection

Division of Water Resource Management
Bureau of Water Facilities Funding
Wastewater and Stormwater State Revolving Fund
2600 Blair Stone Road, Mail Station 3505
Tallahassee, FL 32399-2400
Phone: (850) 488-8163 Fax: (850) 921-2769

Program Contact: Mike Murphree
Phone: (850) 488-8163 Fax: (850) 921-2769
Email: michael.murphree@dep.state.fl.us

www.dep.state.fl.us/water/wff/cwsrf/index.htm
www.dep.state.fl.us/water/wff/wwmanual.htm

Georgia

Georgia Environmental Facilities Authority

State Revolving Loan Fund
100 Peachtree Street NW, Suite 2090, Atlanta, GA 30303-1911
Phone: (404) 656-0938 Fax: (404) 656-6416

Program Contact: Greg Mason
Phone: (404) 656-3824 Fax: (404) 656-6416
Email: gmason@gefa.org

www.ganet.org/gefa/state_revolving.html

Georgia Environmental Protection Division

Water Protection Branch
Engineering and Technical Support Program
State Revolving Loan Program
4220 International Parkway, Suite 101, Atlanta, GA 30354
Phone: (404) 675-6232 Fax: (404) 675- 6246

Program Contact: Bob Scott
Phone: (404) 675-1753 Fax: (404) 675-6246
Email: bob_scott@mail.dnr.state.ga.us

www.dnr.state.ga.us/dnr/environ/

Hawaii

Hawaii Department of Health

Environmental Health Administration
Environmental Management Division
Wastewater Branch
Planning and Design Section
State Revolving Fund Program
919 Ala Moana Blvd, Suite 309, Honolulu, HI 96814
Phone: (808)586-4294 Fax: (808) 586-4370

Program Contact: George Woolworth / Dennis Tulang
Phone: (808) 586-4294 Fax: (808) 586-4300
Email: gwoolworth@eha.health.state.hi.us
dtulang@eha.health.state.hi.us

www.state.hi.us/health/eh/eiemww00.htm

Idaho

Idaho Department of Environmental Quality

State Water Quality Division
Wastewater State Revolving Loan Fund
1410 North Hilton, Boise, ID 83706-1253
Phone: (208) 373-0502 Fax: (208) 373-0417

Program Contact: Bill Jerrel
Phone: (208) 373-0400 Fax: (208) 373-0576
Email: wjerrel@deq.state.id.us

www2.state.id.us/deq/water/water1.htm

Illinois

Illinois Environmental Protection Agency

Bureau of Water
Infrastructure Financial Assistance Section
Water Pollution Control Loan Program
1021 North Grand Avenue East, Springfield, IL 62794-9276
Phone: (217) 782-2027 Fax: (217) 785-1225

Program Contact: Ronald P. Drainer
Phone: (217) 782-2027 Fax: (217) 785-1225
Email: ron.drainer@epa.state.il.us

www.epa.state.il.us/water/financial-assistance/waste-water/index.html

Indiana

Indiana Department of Environmental Management

Office of Water Quality
Financial Administrative Branch
Wastewater State Revolving Fund
100 North Senate Avenue, Indianapolis, IN 46206-6015
Phone: (317) 232-8476 or 1800-451-6027 Fax: (317) 232-8406

Program Contact: Arthur Carter
Phone: (317) 233-2474 Fax: (317) 232-8406
Email: acarter@dem.state.in.us

www.state.in.us/idem/owm/fasb/srfinfo.html

Indiana State Budget Agency

State Revolving Fund
1 N. Capital Avenue #320, Indianapolis, IN 46204
Phone: (317) 232-5610 Fax: (317) 233-3323
Email: budgetagency@sba.state.in.us

Program Contact: Rich Emery
Phone: (317) 232-0759 Fax: (317) 233-3323
Email: remery@sba.state.in.us

www.state.in.us/sba
www.in.gov/sba/stateinformation/srf_bif.html

Iowa

Iowa Department of Natural Resources

Environmental Protection Division
Water Quality Bureau
Wastewater Section
Clean Water State Revolving Fund
Henry A. Wallace Building
502 East Ninth Street, Des Moines, IA 50319-0034
Phone: (515) 281-5918 Fax: (515) 281-6794

Program Contact: Shirley Christoffersen
Phone: (515) 281-8156 Fax: (515) 281-6794
Email: shirley.christoffersen@dnr.state.ia.us

www.state.ia.us/dnr/organiza/epd/wastewtr/srloan.htm

Iowa Finance Authority

Sewage Treatment Works Financing Program
100 East Grand, Suite 250, Des Moines, IA 50309
Phone: (515) 242-7230 Fax: (515) 242-4957

Program Contact: Barbara Gordon
Phone: (515) 242-4972 Fax: (515) 242-4957
Email: barb.gordon@ifa.state.ia.us

www.ifahome.com/partner_environment.htm

Kansas

Kansas Department of Health and Environment

Division of Environment
Bureau of Water
Water Pollution Control Revolving Loan Fund
Forbes Field, Building 283, Topeka, KS 66620
Phone: (785) 296-0461 Fax: (785) 296-5509

Program Contact: Rodney. R. Geisler
Phone: (785) 296-5527 Fax: (785) 296-5509
Email: rgeisler@kdhe.state.ks.us

www.kdhe.state.ks.us/environment/evrythng.html#Wastewater

Kansas Department of Administration

Division of Accounts and Reports
Central Accounting Services Section
Appropriations/Master Lease Purchase Team
900 SW Jackson, Room 351S, Topeka, KS 66612-1248
Phone: (785) 296-2311 Fax: (785) 291-3399

Program Contact: Annette Witt
Phone: (785) 296-8083 Fax: (785) 296-6841
Email: annette.witt@state.ks.us

da.state.ks.us/ar/genacct/acctserv.htm

Kansas Development Finance Authority

Kansas Water Pollution Control Revolving Fund
700 SW Jackson, Suite 1000, Topeka, KS 66603-3758
Phone: (785) 296-6747 Fax: (785) 296-6810

Program Contact: Todd Fraizer
Phone: (785) 296-6747 Fax: (785) 296-6810
Email: tfraizer@kdfa.org

www.kdfa.org/

Kentucky

Kentucky Infrastructure Authority

Federally Assisted Wastewater Revolving Fund
375 Versailles Road
Frankfort, KY 40601
Phone: (502) 573-0260 Fax: (502) 573-0157

Program Contact: Debby L. Milton
Phone: (502) 573-0260 Fax: (502) 573-0157
Email: debby.milton@mail.state.ky.us

wris.state.ky.us/kia/overview.htm
wris.state.ky.us/kia/loana.htm
wris.state.ky.us/kia/loanb.htm

Kentucky Department for Environmental Protection

Division of Water
Facilities Construction Branch
Project Administration Section
Wastewater Revolving Fund
Frankfort Office Park
14 Reilly Road, Frankfort, KY 40601
Phone: (502) 564-3410 Fax: (502) 564-2741

Program Contact: Kelli Rice
Phone: (502) 564-2225 ext. 540 Fax: (502) 564-2741
Email: rice@nrdep.nr.state.ky.us

water.nr.state.ky.us/dow/dwhome.htm

Louisiana

Louisiana Department of Environmental Quality

Municipal Facilities Division
Municipal Facilities Revolving Loan Fund
7290 Bluebonnet Boulevard, Baton Rouge, LA 70810
Phone: (225) 765-0700 Fax: (225) 765-0742
Email: financial@deq.state.la.us

Program Contact: Yvette Beamon
Phone: (225) 765-0810 Fax: (225) 765-0745
Email: yvette_b@deq.state.la.us

www.deq.state.la.us/financial/srf/index.htm

Maine

Maine Municipal Bond Bank

Wastewater State Revolving Loan Fund
3 University Drive, Augusta, ME 04338-2268
Phone: 1800-821-1113 or (207) 622-9386 Fax: (207) 623-5359
Email: info@mainebondbank.com

Program Contact: Karen L. Asselin
Phone: (207) 622-9386 Fax: (207) 623-5359
Email: kla@mainebondbank.com

www.mainebondbank.com/wwsrf.html
www.mainebondbank.com/WastewaterApp.pdf

Maine Department of Environmental Protection

Bureau of Land and Water Quality
Division of Engineering and Technical Assistance
Grants and Loans Section
State Revolving Loan Fund
17 State House Station #17, Augusta, ME 04333-0017
Phone: 1800-452-1942 or (207) 287-2111 Fax: (207) 287-7191

Program Contact: William Brown
Phone: (207) 287-7804 Fax: (207) 287-7191
Email: bill.p.brown@state.me.us

www.state.me.us/dep/blwq/docgrant/srfparag.htm

Maryland

Maryland Department of the Environment

Water Quality Financing Administration
Water Quality Revolving Loan Fund
2500 Broening Highway, Baltimore, MD 21224
Phone: 1800-633-6101 or (410) 631-3000 Fax: (410) 631-3888

Program Contact: Jag Khuman / George Keller
Phone: (410) 631-3981 / (410) 631-3746
Fax: (410) 631-3968 / (410) 631-3517
Email: jkhuman@mde.state.md.us
gkeller@mde.state.md.us

www.mde.state.md.us/wqfa/index.html

Massachusetts

Department of the State Treasurer

Massachusetts Water Pollution Abatement Trust
1 Ashburton Place, 12th Floor, Boston, MA 02108
Phone: (617) 367-3900 Fax: (617) 227-1622

Program Contact: Nancy Parrillo
Phone: (617) 367-3900 ext. 508 Fax: (617) 227-1773
Email: nparrillo@tre.state.ma.us

www.state.ma.us/treasury/wpat.htm

Massachusetts Department of Environmental Protection

Bureau of Resource Protection
Division of Municipal Services
Watershed Project Development Section
Clean Water and Drinking Water State Revolving Fund Loan Programs
One Winter Street, Boston, MA 02108
Phone: (617) 292-5500 Fax: (617) 292-5850
Email: dep.infoline@state.ma.us

Program Contact: Joseph McNealy
Phone: (617) 292-5800 Fax: (617) 292-5850
Email: joseph.mcnealy@state.ma.us

www.state.ma.us/dep/brp/mf/srf.htm

Executive Office of Administration and Finance

State House, Room 373, Boston, MA 02133
Phone: (617) 727-2040 Fax: (617) 727-2779

Program Contact: Scott Jordan
Phone: (607) 727-2040 Fax: (617) 727-2779
Email: scott.jordan@state.ma.us

www.state.ma.us/eoaf/

Michigan

Michigan Department of Environmental Quality

Environmental Assistance Division
Municipal Facilities Section
Water Pollution Control Revolving Fund
Town Center Building, Second Floor
333 South Capitol Avenue, Lansing, MI 48933
Phone: (517) 335-2161 Fax: (517) 335-0743

Program Contact: Chip Heckathorn
Phone: (517) 373-4725 Fax: (517) 335-0743
Email: heckathc@state.mi.us

www.michigan.gov/deq/

www.deq.state.mi.us/documents/deq-ead-mfs-formsguidance-SRFBook.pdf

www.deq.state.mi.us/documents/deq-ead-mfs-formsguidance-SRFBrochure.pdf

Michigan Department of Treasury

Michigan Municipal Bond Authority
Local Audit and Finance Division
State Revolving Fund
Treasury Building
430 W. Allegan, Lansing, MI 48922
Phone: (517) 373-1728 Fax: (517) 335-2160
Email: treasmmba@state.mi.us

Program Contact: Janet Hunter-Moore
Phone: (517) 373-1728 Fax: (517) 335-2160
Email: moorejh@state.mi.us

www.michigan.gov/treasury

Minnesota

Minnesota Department of Trade and Economic Development

Business and Community Development Division
Public Facilities Authority
Water Pollution Control Revolving Fund
500 Metro Square
121 7th Place East, St. Paul, MN 55101-2146
Phone: 1800-657-3858 or (651) 297-1291 Fax: (651) 296-1290
Email: dted@state.mn.us

Program Contact: Jeff Freeman
Phone: (651) 296-2838 Fax: (651) 296-5287
Email: jeff.freeman@state.mn.us

www.dted.state.mn.us/02x00f.asp

Minnesota Pollution Control Agency

Water Quality Division
Water Pollution Control Revolving Fund
520 Lafayette Road, St. Paul, MN 55155
Phone: 1800-657-3864 or (651) 296-6300 Fax: (651) 297-8676

Program Contact: Vickie Krech
Phone: (651) 296-3630 Fax: (651) 297-1456
Email: vickie.krech@pca.state.mn.us

www.pca.state.mn.us/water/revolvingfund.html

Minnesota Department of Agriculture

Agricultural Best Management Practices Loan Program
90 West Plato Boulevard, St. Paul, MN 55107
Phone: (651) 297-2200 Fax: (651) 296-9388

Program Contact: Dwight Wilcox
Phone: (651) 215-1018 Fax: (651) 297-7678
Email: dwight.wilcox@state.mn.us

www.mda.state.mn.us/agbmp/default.htm

Mississippi

Mississippi Department of Environmental Quality

Office of Pollution Control
Surface Water Division
Municipal Construction Branch
State Revolving Loan Program
2380 Highway 80 West, Jackson, MS 39289-0385
Phone: (601) 961-5171 Fax: (601) 961-5187
Email: srfcontact@deq.state.ms.us

Program Contact: Mark Smith
Phone: (601) 961-5130 Fax: (601) 961-5187
Email: mark_smith@deq.state.ms.us

www.deq.state.ms.us/newweb/homepages.nsf

Mississippi State Tax Commission

1577 Springridge Road, Raymond, MS 39154
Phone: (601) 923-7000 Fax: (601) 856-1390

Program Contact: Alice Gorman
Phone: (601) 923-7670 Fax: (601) 923-7658
Email: agorman@mstc.state.ms.us

www.mstc.state.ms.us/

Mississippi Department of Finance and Administration

550 High Street, 901 Sillers Building, Jackson, MS 39201
Phone: (601) 359-3009 Fax: (601) 359-2405

Program Contact: Edward Ranck
Phone: (601) 359-3402 Fax: (601) 359-2405
Email: rancke@dfa.state.ms.us

www.dfa.state.ms.us/

Missouri

Missouri Department of Natural Resources

Environmental Improvement and Energy Resources Authority
Missouri State Revolving Fund
205 Jefferson Street, Jefferson City, MO 65102-0176
Phone: 1800- 334-6946 or (573) 751-1192 Fax: (573) 751-9396
Email: eiera@mail.dnr.state.mo.us

Program Contact: Karen Massey / Steve Townley
Phone: (573) 751-4919 / (573) 751-1192 Fax: (573) 635-3486 / (573) 751-9396
Email: nrmassk@mail.dnr.state.mo.us
nrtowns@mail.dnr.state.mo.us

www.dnr.state.mo.us/eiera/revolving_fund.htm

Montana

Montana Department of Environmental Quality

Planning, Prevention, and Assistance Division
Technical and Financial Assistance Bureau
Water Pollution Control State Revolving Fund
1520 East Sixth Avenue, P.O. Box 200901
Helena, MT 59620-0901
Phone: (406) 444-6697 Fax: (406) 444-6836

Program Contact: Todd Teegarden
Phone: (406) 444-5324 Fax: (406) 444-6836
Email: tteegarden@state.mt.us

www.deq.state.mt.us/wqinfo/WPCSRF/Index.asp

Montana Department of Natural Resources and Conservation

Conservation and Resource Development Division
Water Pollution Control State Revolving Fund Loans
1625 Eleventh Avenue, Helena, MT 59620-1601
Phone: (406) 444-2074 Fax: (406) 444-2684

Program Contact: Anna M. Miller
Phone: (406) 444-6689 Fax: (406) 444-6721
Email: annam@state.mt.us

www.dnrc.state.mt.us/cardd/cardd.html

Nebraska

Nebraska Department of Environmental Quality

Water Quality Division
Wastewater Facilities Section
Clean Water State Revolving Loan Fund
1200 N Street, Suite 400, Lincoln, NE 68509-8922
Phone: (402) 471-2186 Fax: (402) 471-2909
Email: MoreInfo@NEDQ.state.NE.US

Program Contact: Rick Bay
Phone: (402) 471-4200 Fax: (402) 471-2909
Email: rick.bay@ndeq.state.ne.us

www.deq.state.ne.us/

Nevada

Nevada Department of Conservation and Natural Resources

Division of Environmental Protection
Bureau of Water Pollution Control
State Revolving Loan Fund
333 W. Nye Lane, Room 129, Carson City, NV 89706-0851
Phone: (775) 687-4670 Fax: (775) 687-5856

Program Contact: Morris Kanowitz
Phone: (775) 687-4670, extension 3144 Fax: (775) 687-5856
Email: mkanowit@ndep.carson-city.nv.us

ndep.state.nv.us/bwpc/srlf01.htm
ndep.state.nv.us/bwpc/srlf02.htm

Office of the State Treasurer

Debt Management, Carson City Office
101 N. Carson Street, Suite 4, Carson City, NV 89701
Phone: (775) 684-5600 Fax: (775) 684-5623
Email: treasury@treasurer.state.nv.us

Program Contact: Robin Reedy
Phone: (775) 684-5757 Fax: (775) 684-5623
Email: reedy@govmail.state.nv.us

treasurer.state.nv.us/new/

New Hampshire

New Hampshire Department of Environmental Services

Water Division, Wastewater Engineering Bureau
State Revolving Fund Loan Program
6 Hazen Drive, Concord, NH 03302-0095
Phone: (603) 271-3503 Fax: (603) 271-2867

Program Contact: George B. McMennamin
Phone: (603) 271-3448 Fax: (603) 271-4128
Email: g_mcmennamin@des.state.nh.us

www.des.state.nh.us/wwe/srf.htm
www.des.state.nh.us/grants_loans.htm

New Jersey

New Jersey Environmental Infrastructure Trust

3131 Princeton Pike, Building #6, Suite 201
Lawrenceville, NJ 08648
Phone: (609) 219-8600 Fax: (609) 219-8620
Email: Information@njeit.org

Program Contact: Maryclaire D'Andrea
Phone: (609) 219-8600 Fax: (609) 219-8620
Email: mdandrea@njeit.org

www.njeit.org/finance.htm
www.njeit.org/examples.htm

New Jersey Department of Environmental Protection

Division of Water Quality
Municipal Finance and Construction Element
Environmental Infrastructure Financing Program
401 E. State Street, Floor Three, West Wing, Trenton, NJ 08625
Phone: (609) 777-3393 Fax: (609) 633-8165

Program Contact: Gene Chebra
Phone: (609) 633-1208 Fax: (609) 633-8165
Email: gchebra@dep.state.nj.us

www.state.nj.us/dep/grantandloanprograms/ereifp.htm
www.state.nj.us/dep/dwq/mface.htm#finance

New Mexico

New Mexico Environment Department

Administrative Services Division
Construction Programs Bureau
Water, Wastewater, and Solid Waste Construction Funding
Clean Water State Revolving Fund
Harold S. Runnels Building
1190 St. Francis Drive, Santa Fe, NM 87502
Phone: (505) 827-2806 Fax: (505) 827-2836

Program Contact: Ramona Rael
Phone: (505) 827-2808 Fax: (505) 827-2837
Email: ramona_rael@nmenv.state.nm.us

www.nmenv.state.nm.us/cpb/cwsrf.html

New York

New York State Environmental Facilities Corporation

Clean Water State Revolving Fund
625 Broadway, Albany, NY 12207-2997
Phone: (518) 402-7433 or (800) 882-9721 Fax: (518) 457-3908
Email: srf@nysefc.org

Program Contact: David Morseman
Phone: (518) 402-7433 or (800) 882-9721 Fax: (518) 402-7456
Email: morseman@nysefc.org

www.nysefc.org/srf/SRFhome.htm

www.nysefc.org/srf/CWSRF/CWSRFhome.htm

www.nycofunding.org/newcofund/waterandsewer.htm

North Carolina

North Carolina Department of Environment and Natural Resources

Construction Grants and Loans Section
Clean Water State Revolving Fund
2728 Capital Boulevard, Raleigh, NC 27604
Phone: (919) 733-6900 Fax: (919) 715-6229

Program Contact: John R. Blowe
Phone: (919) 715-6212 Fax: (919) 715-6229
Email: bobby.blowe@ncmail.net

www.nccgl.net/fap/cwsrf/index.html
www.nccgl.net/fap/cwsrf/rules1.pdf

North Dakota

North Dakota Department of Health

Environmental Health Section
Division of Municipal Facilities
State Revolving Fund
1200 Missouri Avenue, Bismarck, ND 58506-5520
Phone: (701) 328-5211 Fax: (701) 328-5200

Program Contact: Jeff C. Hauge
Phone: (701) 328-5211 Fax: (701) 328-5200
Email: jhauge@state.nd.us

www.health.state.nd.us/ndhd/environ/mf/cwsrf/~srf.htm

North Dakota Municipal Bond Bank

700 East Main Avenue, Bismarck, ND 58501
Phone: (701) 328-3924 or 1800-526-3509 Fax: (701) 328-3979
Email: ndmbb@state.nd.us

Program Contact: DeAnn Ament
Phone: (701) 328-7110 Fax: (701) 328-7130
Email: dament@state.nd.us

www.state.nd.us/bondbank/srf.htm

Ohio

Ohio Environmental Protection Agency

Division of Environmental and Financial Assistance
Administrative Support Section
Water Pollution Control Loan Fund
122 Couth Front Street, Columbus, OH 43216-1049
Phone: (614) 644-2832 Fax: (614) 644-3687

Program Contact: Greg Smith
Phone: (614) 644-2798 Fax: (614) 644-3687
Email: greg.smith@epa.state.oh.us

www.epa.state.oh.us/defa/wpclf2.html
www.epa.state.oh.us/defa/comguide.html

Ohio Water Development Authority

Water Pollution Control Loan Fund
88 E. Broad Street, Suite 1300, Columbus, OH 43215
Phone: (614) 466-5822 Fax: (614) 644-9964

Program Contact: Steve Grossman
Phone: (614) 466-5822 Fax: (614) 644-9964
Email: steve@owda.org

www.owda.org/html/loans.asp

Oklahoma

Oklahoma Water Resources Board

Financial Assistance Division
Clean Water State Revolving Fund
3800 North Classen Boulevard, Oklahoma City, OK 73118
Phone: (405) 530-8800 Fax: (405) 530-8900

Program Contact: Joe Freeman
Phone: (405) 530-8800 Fax: (405) 530-8900
Email: jsfreeman@owrb.state.ok.us

www.state.ok.us/~owrb/fa/fa2.html#_1_33
www.state.ok.us/~owrb/forms/fa/CWFACTS.PDF

Oregon

Oregon Department of Environmental Quality

Water Quality Division
State Revolving Fund
811 SW Sixth Avenue, Portland, OR 97204-1390
Phone: (503) 229-6814 or (503) 229-6412 Fax: (503) 229-6124

Program Contact: Rick Watters
Phone: (503) 229-6814 Fax: (503) 229-6037
Email: watters.rick@deq.state.or.us

www.deq.state.or.us/wq/wqgrant/wqgrant.htm
www.deq.state.or.us/wq/wqgrant/srf_fs.htm

Pennsylvania

Pennsylvania Infrastructure Investment Authority

Keystone Building
22 South Third Street, Harrisburg, PA 17101
Phone: (717) 787-8137 Fax: (717)705-1656
Email: gov@state.pa.us

Program Contact: Beverly Reinhold
Phone: (717)783-6589 Fax: (717)705-1656
Email: breinhold@state.pa.us

www.pennvest.state.pa.us/

Pennsylvania Department of Environmental Protection

Bureau of Water Supply and Wastewater Management
Division of Municipal Financial Assistance
Administrative Services Section
Clean Water State Revolving Fund
400 Market Street, Harrisburg, PA 17105
Phone: (717) 787-5017 Fax: (717) 772-3249

Program Contact: Peter Slack
Phone: (717) 772-4054 Fax: (717) 772-3249
Email: slack.peter@dep.state.pa.us

www.dep.state.pa.us/dep/deputate/watermgt/WSM/WSM_TA O/Finan_Tech_Asst.htm

Puerto Rico

Puerto Rico Environmental Quality Board

P.O. Box 11488, San Juan, PR 910

Program Contact: Ivonne Santiago
Phone: (787) 767-8073 Fax: (787) 767-1962
Email: jcaagua@prtc.net

www.epa.gov/region02/cepd/compnum.htm#JCA

Puerto Rico Infrastructure Financing Authority

P.O. Box 42001, San Juan, PR 940-2001

Program Contact: Gabriel Rivera
Phone: (787) 722-4170 Fax: (787) 728-6835
Email: grs1223@gdb.prstar.net

Rhode Island

Rhode Island Clean Water Finance Agency

235 Promenade Street, Suite 119, Providence, RI 02908-5767
Phone: (401) 453-4430 Fax: (401) 453-4094
Email: ricwfa@doa.state.ri.us

Program Contact: Robin K. Hedges
Phone: (401) 453-4430 Ext. 10 Fax: (401) 453-4094
Email: rhedges@doa.state.ri.us

www.state.ri.us/ricwfa/programs.htm
www.state.ri.us/ricwfa/works.htm

Rhode Island Department of Environmental Management

Bureau of Environmental Protection
Office of Water Resources
State Revolving Fund
235 Promenade Street, Suite 119, Providence, RI 02908-5767
Phone: (401) 222-3961 Fax: (401) 521-4230

Program Contact: John J. Manning
Phone: (401) 222-3961 ext. 7254 Fax: (401) 521-4230
Email: jmanning@dem.state.ri.us

www.state.ri.us/dem/programs/benviron/water/finance/srf/index.htm

South Carolina

South Carolina Department of Health and Environmental Control

Bureau of Water
Water and Wastewater Facility Loans
2600 Bull Street, Columbia, SC 29201
Phone: (803) 898-4300 Fax: (803) 898-4215

Program Contact: David Price
Phone: (803) 898-3993 Fax: (803) 898-4215
Email: pricedc@columb32.dhec.state.sc.us

www.scdhec.net/water/html/grants.html
www.scdhec.net/water/html/srf.html

South Carolina Budget and Control Board

Division of Regional Development
Office of Local Government
State Water Pollution Control Revolving Fund
1201 Main Street, Suite 910, Columbia, SC 29201
Phone: (803) 253-4160 Fax: (803) 737-3807

Program Contact: Patricia A. Comp
Phone: (803) 737-3808 Fax: (803) 737-3807
Email: compp@drd.state.sc.us

www.state.sc.us/board/
www.state.sc.us/lgovern/swpcr.htm

South Dakota

South Dakota Department of Environment and Natural Resources

Division of Financial and Technical Assistance
Water Resources Assistance
Water and Waste Funding
523 East Capitol Avenue, Pierre, SD 57501-3181
Phone: (605) 773-4216 Fax: (605) 773-4068
Email: DENRINTERNET@state.sd.us

Program Contact: David Templeton
Phone: (605) 773-4216 Fax: (605) 773-4068
Email: dave.templeton@state.sd.us

www.state.sd.us/denr/denr.html

Tennessee

Tennessee Department of Environment and Conservation

Division of Community Assistance
State Revolving Fund Loan Program
L&C Tower, Eighth Floor
401 Church Street, Nashville, TN 37243
Phone: (615) 532-0445 Fax: (615) 532-0199

Program Contact: Jim Poff / Shirley Thornton
Phone: (615) 532-0451 / (615) 532-0315 Fax: (615) 532-0199
Email: jpoff@mail.state.tn.us
sthornton@mail.state.tn.us

www.state.tn.us/environment/dca/swagrnt.htm
www.state.tn.us/environment/dca/cwsrf.htm
www.state.tn.us/environment/dca/cwsrflp.htm

Tennessee Comptroller of the Treasury

James K. Polk State Office Building, Suite 1600
Nashville, TN 37243-0273
Phone: (615) 741-2501 Fax: (615) 741-7328

Program Contact: Janet Manookian
Phone: (615) 741-4272, extension 150 Fax: (615) 741-5986
Email: jmanooki@mail.state.tn.us

www.comptroller.state.tn.us/

Texas

Texas Water Development Board

Office of Project Finance and Construction Assistance
Northern Project Management Division
Clean Water State Revolving Fund Program
1700 North Congress Avenue, Austin, TX 78711-3231
Phone: (512) 463-7853 Fax: (512) 475-2053
Email: info@twdb.state.tx.us

Program Contact: George E. Green
Phone: (512) 463-7853 Fax: (512) 305-9243
Email: ggreen@twdb.state.tx.us

www.twdb.state.tx.us/assistance/financial/fin_infrastructure/cw srffund.htm

www.veterans.house.gov/hinojosa/owoftexas.html

Utah

Utah Department of Environmental Quality

Division of Water Quality
Utah Water Quality Project Assistance Program
288 North 1460 West, Salt Lake City, UT 84114-4870
Phone: (801) 538-6146 Fax: (801) 538-6016

Program Contact: Walter L. Baker
Phone: (801) 538-6146 Fax: (801) 538-6016
Email: wbaker@deq.state.ut.us

www.deq.state.ut.us/eqwq/Con_Asst/Con_asst.htm
www.deq.state.ut.us/eqwq/con_asst/comgd1.htm

Vermont

Vermont Agency of Natural Resources

Department of Environmental Conservation
Financial Management Section
Cannery Building
103 South Main Street, Waterbury, VT 05671-0406
Phone: (802) 241-3737 Fax: (802) 244-4516

Program Contact: Larry Fitch
Phone: (802) 241-3742 Fax: (802) 244-4516
Email: larry.fitch@anrmail.anr.state.vt.us

www.anr.state.vt.us/dec/fed/FMS.htm

Vermont Municipal Bond Bank

133 State Street, Montpelier, VT 05602-2702

Program Contact: Malcolm Rode
Phone: (802) 223-2717 Fax: (802) 229-4709
Email: msrode@attglobal.net

Virginia

Virginia Department of Environmental Quality

Water Division
Wastewater Revolving Loan Fund
629 East Main Street, Richmond, VA 23240
Phone: (804) 698-4000 Fax: (804) 698-4136

Program Contact: Donald Wampler
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Email: dwwampler@deq.state.va.us

www.deq.state.va.us/pdf/forms/water/vrlfapp.pdf

Virginia Resources Authority

Virginia Water Facilities Revolving Fund
707 East Main Street. Suite 1350, Richmond, VA 23219
Phone: (804) 644-3100 Fax: (804) 644-3109

Program Contact: Robert Lauterberg
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www.vra.state.va.us/project/wastewater.html
www.vra.state.va.us/finance/vwfrf.html
www.vra.state.va.us/project/brownfields.htm

Washington

Washington State Department of Ecology
Water Quality Program
Water Quality Financial Assistance
State Revolving Fund
300 Desmond Drive, Lacey, WA 98503
Phone: (360) 407-6000

Program Contact: Brian Howard
Phone: (360) 407-6510 Fax: (360) 407-6426
Email: brho461@ecy.wa.gov

www.ecy.wa.gov/programs/wq/funding/

West Virginia

West Virginia Department of Environmental Protection

Office of Water Resources
Construction Assistance Program
Water Pollution Control Revolving Fund
617 fi Leon Sullivan Way, Charleston, WV 25301
Phone: (304)558-0641 Fax: (304) 558-3778

Program Contact: Michael Johnson
Phone: (304) 558-0641 Fax: (304) 558-3778
Email: mjohnson@mail.dep.state.wv.us

www.dep.state.wv.us/wr/OWR_Website/ConstAsist/SRF.htm

West Virginia Water Development Authority

Clean Water State Revolving Fund
180 Association Drive
Charleston, WV 25311-1571
Phone: (304) 558-3612 Fax: (304) 558-0299

Program Contact: Daniel (Bernie) Yonkosky
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www.wvwda.org/programs.htm

Wisconsin

Wisconsin Department of Natural Resources

Division of Customer Assistance and External Relations
Bureau of Community Financial Assistance
Environmental Loans Section
Clean Water Fund Program and Land Recycling Loan Program
101 South Webster Street - CF/8, Madison, WI 53703
Phone: (608) 266-7555 Fax: (608) 267-0496

Program Contact: Becky Scott
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www.dnr.state.wi.us/org/caer/cfa/EL/Section/clean.html

Wisconsin Department of Administration

101 East Wilson Street, Madison, WI 53701
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Email: doaweb@doa.state.wi.us

Program Contact: Ed Brinson
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www.doa.state.wi.us/index.asp

Wyoming

Wyoming Department of Environmental Quality

Water Quality Division
Water and Wastewater Section
Wyoming State Water Pollution Control Revolving Loan Account
Herschler Building
122 West 25th Street, Fourth Floor West
Cheyenne, WY 82002-0600
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Email: bmark@state.wy.us

deq.state.wy.us/wqd/w&ww/SRF/srfloans.htm
deq.state.wy.us/wqd/w&ww/SRF/CWSRF.htm
deq.state.wy.us/wqd/w&ww/SRF/fctsheet2.htm

Office of State Lands and Investments
Administrative Services Division
Grants and Loans Section
Clean Water State Revolving Fund
122 West 25th Street, Third Floor West
Cheyenne, WY 82002-0600
Phone: (307) 777-7331 Fax: (307) 777-5400

Program Contact: Rebecca Webb / Jeanne Stephen
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Email: rwebb@state.wy.us
jsteph@state.wy.us

lands.state.wy.us/Forms.htm
lands.state.wy.us/CWSRFP.pdf

REGIONAL EPA CWSRF CONTACTS[64]

Region I: CT, ME, MA, NH, RI, VT

U.S. EPA
One Congress Street
JFK Federal Building, Boston, MA 02114-2023

Program Contact: Ralph Caruso
Phone: (617) 918-1612 Fax: (617) 918-2064
Email: caruso.ralph@epa.gov

www.epa.gov/region01/topics/water/cleanwater.html

Region II: NJ, NY, PR, U.S. Virgin Islands

U.S. EPA
290 Broadway, New York, NY 10007-1866

Program Contact: Robert Gill
Phone: (212) 637-3884 Fax: (212) 637-3891
Email: gill.robert@epa.gov

www.epa.gov/region02/water/wpb/staterev.htm

Region III: DE, MD, PA, VA, WV, DC

U.S. EPA
1650 Arch Street, Philadelphia, PA 19103

Program Contact: Magdalene Cunningham
Phone: (215) 814-2338 Fax: (215) 814-2318
Email: cunningham.magdalene@epa.gov

www.epa.gov/region03/

Region IV: AL, FL, GA, KY, MS, NC, SC, TN

U.S. EPA
61 Forsyth Street, Atlanta, GA 30303

Program Contact: Conny Chandler
Phone: (404) 562-9336 Fax: (404) 562-8692
Email: chandler.conny@epa.gov

www.epa.gov/region4/

Region V: IL, IN, MI, MN, OH, WI

U.S. EPA
77 West Jackson Blvd., Chicago, IL 60604-3507

Program Contact: Gene Wojcik
Phone: (312) 886-0174 Fax: (312) 886-0168
Email: wojcik.gene@epa.gov

www.epa.gov/region5/water/

Region VI: AR, LA, NM, OK, TX

U.S. EPA
1445 Ross Avenue, Dallas, TX 75202-2733

Program Contact: Velma Smith
Phone: (214) 665-7153 Fax: (214) 665-7373
Email: smith.velma@epa.gov

www.epa.gov/earth1r6/news/grants.htm

Region VII: IA, KS, MO, NE

U.S. EPA
901 North Fifth Street, Kansas City, KS 66101

Program Contact: Ann Keener
Phone: (913) 551-7388 Fax: (913) 551-7765
Email: keener.ann@epa.gov

www.epa.gov/region07/programs/wwpd/srfhome/cws rf.html

Region VIII: CO, MT, ND, SD, UT, WY

U.S. EPA
999 18th Street, Suite 500, Denver, CO 80202-2466

Program Contact: Brian Friel
Phone: (303) 312-6277 Fax: (303) 312-6131
Email: friel.brian@epa.gov

www.epa.gov/region8/

Region IX: AZ, CA, HI, NV, Guam, American Samoa

U.S. EPA
75 Hawthorne Street, San Francisco, CA 94105

Program Contact: Juanita Licata
Phone: (415) 972-3450 Fax: (415) 947-3537
Email: licata.juanita@epa.gov

www.epa.gov/region09/

Region X: AK, ID, OR, WA

U.S. EPA
1200 Sixth Avenue, Seattle, WA 98101

Program Contact: Michelle Tucker
Phone: (206) 553-1414 Fax: (206) 553-6984
Email: tucker.michelle@epa.gov

www.epa.gov/r10earth/index.htm

EPA HEADQUARTERS CWSRF CONTACT

U.S. Environmental Protection Agency

Office of Wastewater Management
Municipal Support Division
Clean Water State Revolving Fund Branch
1201 Constitution Avenue, NW
EPA East, Mail Code 4204M
Washington, DC 20004
Phone: (202) 564-0567

www.epa.gov/owm/cwfinance/cwsrf/index.htm

ENDNOTES

[1] USTs are regulated under the Resource Conservation and Recovery Act (RCRA) through state- administered programs overseen by EPA. These programs set and enforce minimum standards for design, installation, operation, upgrading, leak detection, and closure of USTs. They also establish the requirements for reporting and cleaning up leaks from USTs and assuring that costs of cleanup and liability to third parties will be covered. (EPA, *Overview of the Federal UST Program*, http://www.epa.gov/swerust1/overview.htm)

[2] EPA, *Overview of the Federal UST Program*, http://www.epa.gov/swerust1/overview.htm

[3] MTBE is added to automobile fuel as an octane enhancer. Introduced in the late 1970's during lead phase- out, it was used in increasing quantities during the 1990's to help gasoline meet the requirements of the Federal Reformulated Gasoline and Oxyfuels programs under the Congress in the Clean Air Act Amendments of 1990. (EPA, *Funding MTBE Prevention and Remediation Projects with the CWSRF*, http://www.epa.gov/owm/cwfinance/cwsrf/srf_mtbe.pdf; EPA, MTBE and USTs web page, http://www.epa.gov/swerust1/mtbe/index.htm)

[4] EPA, 2000, *Underground Storage Tanks and Brownfields Sites: USTfields Initiative*, http://www.epa.gov/swerust1/ustfield/overview.pdf

[5] EPA, *Funding Brownfield Remediation with the Clean Water State Revolving Fund Factsheet*, EPA 832- F-98-006, October 1998, http://www.epa.gov/owm/cwfinance/cwsrf/brown.pdf; EPA, *Brownfield Remediation Through the Clean Water State Revolving Fund*, EPA 832-F-01-007, http://www.epa.gov/owm/cwfinance/cwsrf/brownfield_studies.pdf.

[6] Ohio EPA, *Financial Assistance for Voluntary Action Program Remediations*, October 1997, http://www.epa.state.oh.us/derr/vap/financial/finance.html; Ohio EPA, *Financial Assistance for Voluntary Action Program Remediations*, April 1998, http://www.epa.state.oh.us/derr/vap/factsheets/fact5.html; Ohio EPA, *About Ohio's Voluntary Action Program*, http://www.epa.state.oh.us/derr/vap/aboutvap/aboutvap.html; Ohio EPA, *Summary Outline of the VAP,* http://www.epa.state.oh.us/derr/vap/rulesumm.html; and Ohio EPA, *Ohio's Voluntary Action Program Factsheet*, http://www.epa.state.oh.us/derr/vap/factsheets/fact1.pdf

[7] The director of Ohio EPA issues a covenant-not-to-sue upon satisfactory completion of cleanup activities at properties participating in the VAP as a promise that the State of Ohio will not require further investigation or cleanup of the volunteer's property. (Ohio EPA, *Ohio's Voluntary Cleanup and Redevelopment Program: A Report from Governor George V. Voinovich*; April 1998, http://www.epa.state.oh.us/derr/vap/gov_rept/vapgov.pdf)

[8] Ohio EPA, *Financial Assistance for Voluntary Action Program Remediations*, October 1997, http://www.epa.state.oh.us/derr/vap/financial/finance.html

[9] Ohio EPA, *Financial Assistance—Ohio Volunteers are Taking Advantage of VAP/DOD Low-Interest Loan and Grant Programs*, http://www.epa.state.oh.us/derr/vap/newsletter/97summer/fin_assi.html

[10] Ohio EPA, *Financial Assistance for Voluntary Action Program Remediations*, April 1998, http://www.epa.state.oh.us/derr/vap/factsheets/fact5.html

[11] Ohio EPA, *WPCLF Program Information*, http://www.epa.state.oh.us/defa/wpclf2.html; Ohio EPA, *The WPCLF Community Guide: a User's Guide to the Ohio Water Pollution Control Loan Fund for Publicly-Owned Treatment Works and Nonpoint Source Improvements*, http://www.epa.state.oh.us/defa/comguide.html

[12] This guide can be found online at http://www.epa.state.oh.us/defa/comguide.html

[13] Ohio EPA, *Ohio's Voluntary Cleanup and Redevelopment Program: A Report from Governor George V. Voinovich*; April 1998, http://www.epa.state.oh.us/derr/vap/gov_rept/vapgov.pdf; EPA, *Ohio CWSRF Provides Loans to Brownfields Remediation Projects*, http://www.epa.gov/owm/cwfinance/cwsrf/bfield.pdf; Ohio EPA, *Financial Assistance–Ohio Volunteers are Taking Advantage of VAP/DOD Low-Interest Loan and Grant Programs* http://www.epa.state.oh.us/derr/vap/newsletter/97summer/fin_assi.html; Ohio EPA, VAP Financial Incentives, http://www.epa.state.oh.us/derr/vap/leg_report/loans.html

[14] Ohio EPA, *Ohio's Voluntary Cleanup and Redevelopment Program: A Report from Governor George V. Voinovich*; April 1998, http://www.epa.state.oh.us/derr/vap/gov_rept/vapgov.pdf; EPA, *Ohio CWSRF Provides Loans to Brownfields Remediation Projects*, http://www.epa.gov/owm/cwfinance/cwsrf/bfield.pdf; Ohio EPA, *Financial Assistance—Ohio Volunteers are Taking Advantage of VAP/DOD Low-Interest Loan and Grant Programs,* http://www.epa. state.oh.us/derr/vap/newsletter/97summer/fin_assi.html; Ohio EPA, *VAP Financial Incentives,* http://www.epa.state.oh.us/derr/vap/leg_report/loans.html; EPA, *Brownfields Success Stories: Cuyahoga Pilot is "Dedicated" to Brownfields Redevelopment*, http://www.epa.gov/swerosps/ bf/html-doc/ss_cuya.htm

[15] NYSDEC, Division of Environmental Remediation Fact Sheet, *Brownfields Program*, http://www.dec.state.ny.us/website/der/bfieldfs.html; NYSEFC, *New York State Brownfields Self-Help/Financial Resources Manual*, 2001, http://www.dec.state.ny.us/website/der/bfield/brownmanual.pdf

[16] NYSDEC's *New York State Brownfields Self-Help/Financial Resources Manual* lists a variety of financing sources and can be found online at http://www.dec.state.ny.us/website/der/bfield/brownmanual.pdf

[17] NYSDEC, Division of Environmental Remediation Fact Sheet, *Brownfields Program*, http://www.dec.state.ny.us/website/der/bfieldfs.html

[18] Only barriers to both the Bond Act and CWSRF will be discussed in detail here. Other barriers to Bond Act financing (not CWSRF funding) include the required 25 percent funds match that municipalities must provide to acquire Bond Act financing and the limited ability of municipalities to apply state and federal funds toward this match requirement. Proposed amendments include requiring only a 10 percent match for municipalities with populations of less than 75,000 and allowing municipalities to apply other state and federal funds to the required funds match.

[19] Basic information on New Mexico's CWSRF program can be found online at http://www.nmenv.state.nm.us/cpb/cwsrf.html. Additional information about New Mexico's priority system can be found online at http://www.nmenv.state.nm.us/cpb/cwsrf.doc (New Mexico Environment Department, *New Mexico Clean Water State Revolving Fund (CWSRF) Priority System Policies and Procedures*, Fiscal Year 2000 through 2005) and http://www.nmenv.state.nm.us/cpb/PriorRtng Syst.doc (New Mexico Environment Department, *Priority Rating System for Point Source, Non-Point Source, and Brownfields Redevelopment Projects*)

[20] Maryland Department of the Environment's Water Quality Financing Administration, Linked-Deposit web page, http://www.mde.state.md.us/wqfa/linked%20deposit3.html

[21] EPA, *Funding MTBE Prevention and Remediation Projects with the CWSRF*, EPA 832-F-00-004, August 2000, http://www.epa.gov/owm/cwfinance/cwsrf/srf_mtbe.pdf

[22] EPA, *Funding MTBE Prevention and Remediation Projects with the CWSRF*, EPA 832-F-00-004, August 2000, http://www.epa.gov/owm/cwfinance/cwsrf/srf_mtbe.pdf; Wyoming Department of Environmental Quality, *Wyoming State Water Pollution Control Revolving Loan Account 2001 Intended Use Plan, October 2000*, http://deq.state.wy.us/wqd/w&ww/02014-doc.pdf

[23] As a participant in EPA's Brownfields Assessment Demonstration Pilots program, a community receives up to $200,000 over two years for brownfields site assessment and to test cleanup methods and redevelopment models. The RENEW Plan became a pilot in the summer of 1999. (Source: EPA, *EPA Brownfields Assessment Demonstration Pilot: Warren, OH*, http://www.epa.gov/swerosps/bf/html-doc/warren.htm)

[24] EPA, Environmental News Release, *PCB Cleanup Completed at Mahoningside Power Plant Site*, http://www.epa.gov/region5/news/news01/01opa028.htm; EPA, Environmental News Release; Business Journal Online, *Mahoningside Power Plant Site Gets Clean Bill of Health*, March 2001, http://www.business- journal.com/LateMarch01/Mahoningsideready.html

[25] EPA, *Brownfields Assessment Demonstration Pilot: Toledo, OH*, http://www.epa.gov/swerosps/bf/html-doc/toledo.htm

[26] Davis, Todd S. *Stickney West Industrial Park*, a paper presented at the "Profiling the Ottawa River Conference," September 27, 2000

[27] Contaminants of concern (COCs) in all media included metals, ammonia, cyanide, and several volatile organic compounds. Semivolatile organic compounds and pesticides were COCs in soils, sediments, and groundwater, and PCBs were COCs in soils and sediments. (Source: Environmental Assessment for SWIP Parcel 1)

[28] An early Clean Water Act financing program was the Title II Construction Grants Program, an EPA-administered program which provided more than $60 billion in grants for publicly owned treatment works (POTWs) and wastewater-related projects through the 1970s and 1980s. Funded projects included the rehabilitation of existing sewer systems, the control of combined sewer overflows, and the construction of sewage treatment plants, pumping stations, and collection lines and interceptors. However, as the costs of these types of projects increased throughout the 1980s, so did the popularity of this program, causing it to become a victim of its own success. In Title VI of the Clean Water Act amendments of 1987 (33 USC 1381-1387), Congress ended appropriations for this federally-run grants program and replaced it with a more flexible and cost-effective revolving loan fund, hence, the genesis of the Clean Water State Revolving Fund (CWSRF). (EPA, *How the Clean Water State Revolving Fund Program Works*, http://www.epa.gov/ owm/cwfinance/cwsrf/basics.htm)

[29] POTWs are defined in Section 212 of the CWA as "any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature." (33 USC 1292) Point source pollution can be traced to a single source or pipe, such as a factory or wastewater treatment plant, whereas "nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground and carrying natural and human-made pollutants into lakes, rivers, streams, wetlands, estuaries, other coastal waters, and ground water. Atmospheric deposition and hydrologic modification are also sources of nonpoint pollution." (EPA, *What is Nonpoint Source Pollution? Questions and Answers*, http://www.epa.gov/owow/nps/qa.html)

[30] EPA, State Allotments web page, http://www.epa.gov/owm/cwfinance/cwsrf/cwsrfallots.pdf

[31] CWA Title VI, 33 USC 1382; *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3135

[32] EPA, *Environmental Protection Agency Clean Water State Revolving Fund Audit Guide*, June 1998, http://www.epa.gov/owm/cwfinance/cwsrf/cwsrfallots.pdf

[33] EPA, *Environmental Protection Agency Clean Water State Revolving Fund Audit Guide*, June 1998, http://www.epa.gov/owm/cwfinance/cwsrf/cwsrfallots.pdf; CWA Title VI, 33 USC 1382(b); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3135(b)

[34] Connecticut's Clean Water Fund is the state's environmental infrastructure assistance program and is comprised of the state Water Pollution Control account, the federal Clean Water State Revolving Fund account, the Long Island Sound cleanup account, the River Restoration account, and the Drinking Water State Revolving Fund account (Source: http://www.dep.state.ct.us/wtr/cwa/cwfund.htm). New Jersey's Environmental Infrastructure Financing Program is comprised of the Clean Water State Revolving Fund and Drinking Water State Revolving Fund (Source: http://www.state.nj.us/dep/dwq/mface.htm#finance). Wisconsin's Environmental Improvement Fund (EIF) is comprised of the Clean Water Fund Program, the Safe Drinking Water Loan Program, and the Land Recycling Loan Program; the EIF is jointly managed and administered by the Department of Natural Resources and Department of Administration. Funds for the brownfield program come from repayments of loans issued through the Clean Water Fund (Source: http://www.dnr.state.wi.us/org/caer/cfa/EL/right.html).

[35] CWA Title VI, 33 USC 1384(b); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3110(g)(4)

[36] Adapted from the CWA Title VI, 33 USC 1383(d); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3120

[37] As specified in Section 319 of the CWA, a Nonpoint Source Management Program (NSMP) is a state's framework for controlling NPS pollution, given the existing and potential water quality problems described in the NPS pollution assessment report, the precursor to the NSMP. (EPA, *Nonpoint Source Management Program*, Pointer No. 4, EPA 841-F-96-004D, http://www.epa.gov/OWOW/NPS/facts/point4.htm)

[38] The Brownfields Revitalization Act, signed into law on January 11, 2002, defines brownfields as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

[39] USTs typically store hazardous substances and petroleum or petroleum-based substances, such as motor and jet fuels, fuel oils, lubricants, petroleum solvents, and used oil. Although they are federally regulated, they can pose threats to surface water and groundwater if they leak due to abandonment and neglect. Costs of cleanup are not typically covered under Superfund, but acquiring funding through the CWSRF can be possible in some states. (EPA, *Overview of the Federal UST Program*, http://www.epa.gov/swerust1/overview.htm)

[40] CWA Title VI, 33 USC 1383(c); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3115

[41] EPA, *The Clean Water State Revolving Fund Funding Framework*, EPA 832-B-96-005, October 1996, http://www.epa.gov/owm/cwfinance/cwsrf/framewrk.pdf

[42] EPA, *Financing America's Clean Water Since 1987: A Report of Progress and Innovation*, EPA 832-R-00-011, May 2001, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[43] EPA, *Integrated Planning and Priority Setting in the Clean Water State Revolving Fund Program*, EPA 832-R-01-002, March 2001,http://www.epa.gov/owm/cwfinance/cwsrf/ipps_web.pdf; EPA, *Regional Role in Integrated Planning & Priority Setting System Development*, http://www.epa.gov/owm/cwfinance/cwsrf/ispseval.pdf

[44] EPA, *Integrated Planning and Priority Setting in the Clean Water State Revolving Fund Program*, EPA 832-R-01-002, March 2001, http://www.epa.gov/owm/cwfinance/cwsrf/ipps_web.pdf; EPA, *Regional Role in Integrated Planning & Priority Setting System Development*, http://www.epa.gov/owm/cwfinance/cwsrf/ispseval.pdf

[45] EPA, *The Clean Water State Revolving Fund Funding Framework,* EPA 832-B-96-005, October 1996, http://www.epa.gov/owm/cwfinance/cwsrf/framewrk.pdf

[46] EPA, *Integrated Planning and Priority Setting in the Clean Water State Revolving Fund Program*, EPA 832-R-01-002, March 2001, http://www.epa.gov/owm/cwfinance/cwsrf/ipps_web.pdf; EPA, *Regional Role in Integrated Planning & Priority Setting System Development*, http://www.epa.gov/owm/cwfinance/cwsrf/ispseval.pdf

[47] Adapted from EPA, *The Clean Water State Revolving Fund: How to Fund Nonpoint Source and Estuary Enhancement Projects*, EPA 909-K-97-001, July 1997, http://www.epa.gov/owm/cwfinance/cwsrf/final.pdf

[48] CWA Title VI, 33 USC 1383(d); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3120

[49] EPA, *Funding Brownfield Remediation with the Clean Water State Revolving Fund Factsheet*, EPA 832-F-98-006, October 1998 http://www.epa.gov/owm/cwfinance/cwsrf/brown.pdf; EPA, *Brownfields Remediation Through the Clean Water State Revolving Fund*, EPA 832-F-01-007, October 2001, http://www.epa.gov/owm/cwfinance/cwsrf/brownfield_studies.pdf.

[50] CWA Title VI, 33 USC 1386(c); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3150.

[51] CWA Title VI, 33 USC 1386(d); *State Revolving Fund Program Implementation Regulations*, 40 CFR 35.3165

[52] EPA, *Environmental Protection Agency Clean Water State Revolving Fund Audit Guide*, June 1998, http://www.epa.gov/owm/cwfinance/cwsrf/srfguide.pdf

[53] EPA, *Financing America's Clean Water Since 1987: A Report of Progress and Innovation*, May 2001, EPA 832-R-00-011, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[54] EPA, *Financing America's Clean Water Since 1987: A Report of Progress and Innovation*, May 2001, EPA 832-R-00-011, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[55] EPA, *Implementation of Transfers in the Clean Water and Drinking Water State Revolving Fund Programs: Report to Congress*, October 2000, EPA 816-R-00-021, http://www.epa.gov/safewater/dwsrf/rtc-transfer.pdf

[56] EPA, *Financing America's Clean Water Since 1987: A Report of Progress and Innovation*, May 2001, EPA 832-R-00-011, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[57] EPA, *Clean Water State Revolving Fund Factsheet*, EPA 832-F-99-051, May 1999, http://www.epa.gov/owm/cwfinance/cwsrf/cwsrf.pdf ; EPA, *The Clean Water State Revolving Fund: Financing America's Environmental Infrastructure–A Report of Progress*, EPA 832-R-95-001, May 2001, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[58] EPA, *The Clean Water State Revolving Fund: Financing America's Environmental Infrastructure–A Report of Progress*, EPA 832-R-95-001, May 2001, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[59] EPA, *Cleaning Up Polluted Runoff with the Clean Water State Revolving Fund*, EPA 832-F-98-001, March 1998, http://www.epa.gov/owm/cwfinance/cwsrf/npsfact.pdf

[60] EPA, *Clean Water State Revolving Fund Program*, http://www.epa.gov/owm/cwfinance/cwsrf/index.htm; EPA, *Funding Brownfield Remediation with the Clean Water State Revolving Fund Factsheet*, EPA 832-F-98-006, October 1998, http://www.epa.gov/owm/cwfinance/cwsrf/brown.pdf; EPA, *Financing America's Clean Water Since 1987: A Report of Progress and Innovation*, EPA 832-R-00-011, May 2001, http://www.epa.gov/owm/cwfinance/cwsrf/progress.pdf

[61] EPA's Office of Wastewater Management partners with states to periodically conduct a Clean Water Needs Survey (CWNS), per Sections 205(a) and 516(b)(1) of the CWA. Its purpose is three-fold: to prioritize needs, encourage holistic watershed planning, and to identify best management practices. EPA defines a 'need' as a cost estimate for a project that could be eligible for CWSRF funding, and needs are reported by states based on existing data (e.g. 303(d) lists). Data are summarized in a report to Congress which estimates the clean water needs for the nation. (Source: EPA, *1996 CWNS Report to Congress*, http://www.epa.gov/owm/mtb/cwns/1996rtc/toc.htm and EPA, *Clean Water Needs Survey*, http://www.epa.gov/owm/mtb/cwns/index.htm)

[62] Water Infrastructure Network, *Clean & Safe Water for the 21st Century*, 2000, http://www.amsa-cleanwater.org/advocacy/winreport/winreport2000.pdf

[63] EPA, *List of State SRF Contacts, Directors, and Addresses*, October 2001, http://www.epa.gov/owm/cwfinance/cwsrf/agency.pdf

[64] EPA, CWSRF Regional Office Information, October 2001, http://www.epa.gov/owm/cwfinance/cwsrf/regcon.pdf

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Lessons from the Field: Unlocking Economic Potential with an Environmental Key

20 Case Studies of Successful Brownfield Reuse

by Edith Pepper (1997); $40.

The 1990s have witnessed a deluge of new, innovative brownfield policies at the local, state, and federal level. But which policies are truly working "on the ground" to move projects forward? Lessons from the Field explores this question by analyzing 20 brownfield projects from around the country, researching site histories, and interviewing more than 60 project participants. The result is a series of "lessons learned" — including innovative financing strategies, creative public-private partnerships, and state voluntary cleanup programs. This book, according to EPA Administrator Carol Browner, "is a valuable guide to how communities are joining together to protect the environment while creating new economic opportunities, new jobs, new tax revenues — and new hope."

Brownfields "State of the States" Report: A Mid-Year Review of Initiatives in the 50 States

by Charles Bartsch and Bridget Dorfman; (Revised October 2000); $20.

This report focuses on state activities associated with brownfield cleanup and redevelopment. It reveals how states are adopting innovative financing and regulatory incentives in order to meet brownfield challenges. It also highlights the economic benefits created by programs in the 50 states, providing a common ground for analysis and comparison, while demonstrating the remarkable success many states already have achieved.

Marketing Brownfield Cleanup Technologies

by Julie Gorte (February 1999); $15.

Since traditional methods for treating brownfield sites often are expensive, time consuming, and sometimes ineffective, interest in advanced technologies is growing. This report explains that with the surge of interest in brownfield redevelopment, a few new technologies — notably, soil vapor extraction — have been widely adopted, and a few others show promise. But the path from "aha!" to market is long and difficult for any new technology, and environmental technologies are often faced with the additional hurdle of being driven by regulation rather than market signals, which often attenuates the demand for innovation. While acknowledging the progress made in encouraging innovations in cleanup, this report advises that federal programs designed to develop, test, and provide standardized information on brownfield cleanup technologies be maintained and strengthened.

Financing Brownfield Reuse

edited by Charles Bartsch (May 1999); $35.

Capital is key to brownfield reuse, and federal and state policymakers can do much to invite private investment in brownfield projects. This anthology explores the key issues and opportunities associated with financing the cleanup and reuse of contaminated industrial sites. The eleven articles provide a detailed survey of state and federal initiatives; perspectives from lenders, insurers, and real estate appraisers; as well as profiles of local financing initiatives.

Working on Brownfields: The Employment and Training Connection

by Paula Duggan (November 1998); $15.

This report explores the workforce dimension of brownfield renewal and offers local practitioners examples of how job training and employment can be melded with environmental restoration. Pointing to the confluence of brownfields and employment problems, the monograph encourages the reader to think of the jobs involved and the skills required at each stage of a brownfield project — assessment and remediation, new construction, and reuse — and suggests how particular federal employment and training resources can be brought into play at each stage.

Transportation Investments and Brownfields

by Ann Eberhart Goode, Elizabeth Collaton, and David Smallen (August 1999); $15

Easy access to major transportation facilities is a very important factor in business location decisions, yet little research has focused on the relationship of transportation infrastructure investments and the cleanup and redevelopment of brownfields. This paper describes federal transportation spending and policies, and outlines the manner in which transportation projects relate to brownfield reuse.

Guide to Federal Brownfield Programs

by Charles Bartsch and Bridget Dorfman (Revised October 2000); $35.

The U.S. government has established a multi-agency partnership to support cleanup and redevelopment of underutilized properties. The programs are diverse and sometimes difficult to access. This inventory, targeted to local government officials and private-sector practitioners, provides a summary of each federal agency's brownfield programs, as well as contact and grant information.

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