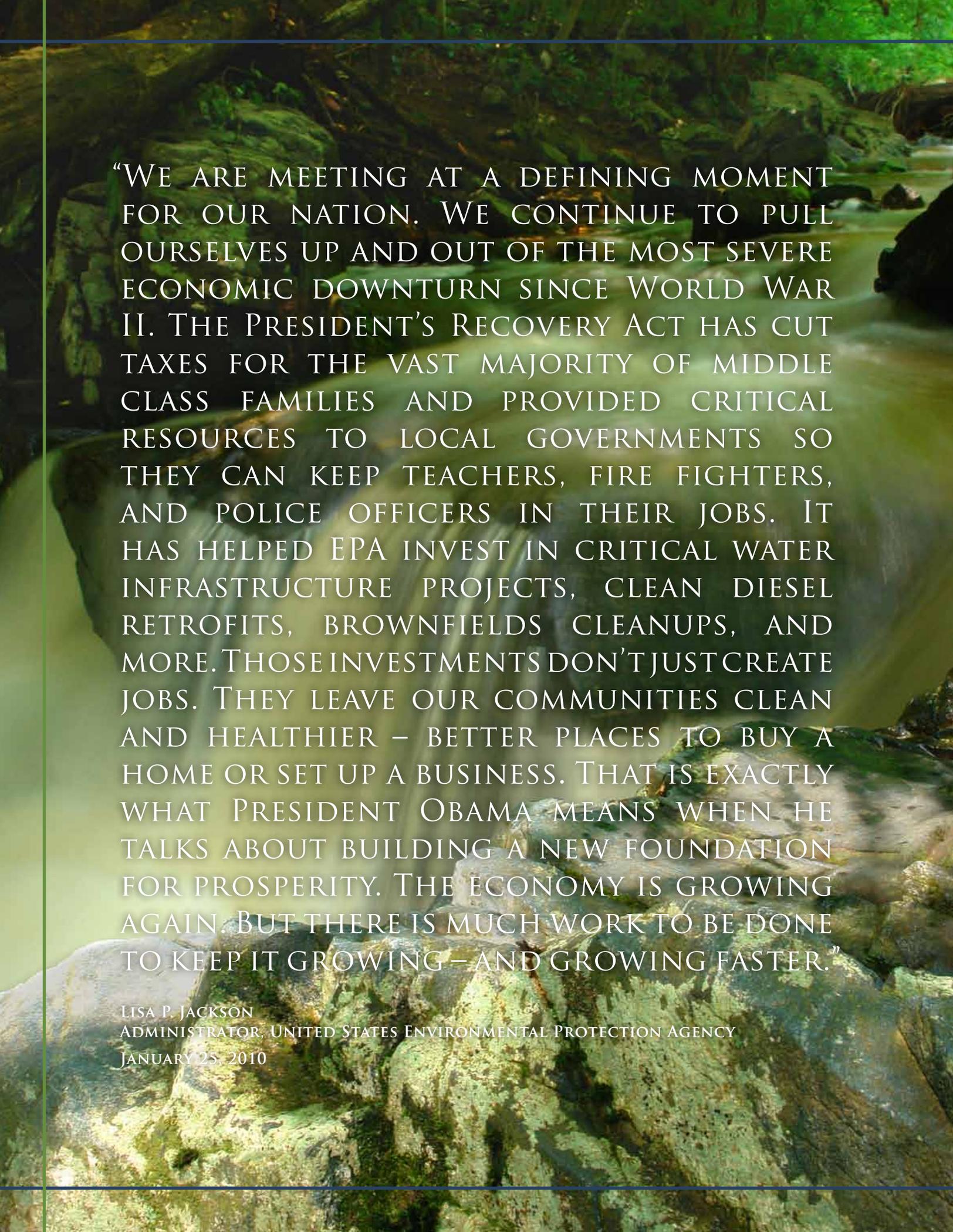


# IMPLEMENTATION OF THE AMERICAN RECOVERY & REINVESTMENT ACT OF 2009

CLEAN WATER & DRINKING WATER STATE REVOLVING FUND PROGRAMS



PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT  
WHILE CREATING JOBS AND REVITALIZING THE ECONOMY



“WE ARE MEETING AT A DEFINING MOMENT FOR OUR NATION. WE CONTINUE TO PULL OURSELVES UP AND OUT OF THE MOST SEVERE ECONOMIC DOWNTURN SINCE WORLD WAR II. THE PRESIDENT’S RECOVERY ACT HAS CUT TAXES FOR THE VAST MAJORITY OF MIDDLE CLASS FAMILIES AND PROVIDED CRITICAL RESOURCES TO LOCAL GOVERNMENTS SO THEY CAN KEEP TEACHERS, FIRE FIGHTERS, AND POLICE OFFICERS IN THEIR JOBS. IT HAS HELPED EPA INVEST IN CRITICAL WATER INFRASTRUCTURE PROJECTS, CLEAN DIESEL RETROFITS, BROWNFIELDS CLEANUPS, AND MORE. THOSE INVESTMENTS DON’T JUST CREATE JOBS. THEY LEAVE OUR COMMUNITIES CLEAN AND HEALTHIER – BETTER PLACES TO BUY A HOME OR SET UP A BUSINESS. THAT IS EXACTLY WHAT PRESIDENT OBAMA MEANS WHEN HE TALKS ABOUT BUILDING A NEW FOUNDATION FOR PROSPERITY. THE ECONOMY IS GROWING AGAIN. BUT THERE IS MUCH WORK TO BE DONE TO KEEP IT GROWING – AND GROWING FASTER.”

LISA P. JACKSON

ADMINISTRATOR, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JANUARY 25, 2010

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NOTE: Data used throughout this report are from:

- A. The Clean Water and Drinking Water SRF National Information Management Systems, reported through June 30, 2010.
- B. The Clean Water Benefits Reporting System and the Drinking Water SRF Project & Benefits Reporting System. Data were downloaded on January 24, 2011.

# THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009



## CREATING JOBS, REVITALIZING THE ECONOMY, AND INVESTING IN A SUSTAINABLE FUTURE

In response to the recent economic recession, Congress passed the American Recovery and Reinvestment Act (Recovery Act or ARRA) of 2009, and President Obama signed it into law on February 17, 2009. ARRA was intended to preserve and create jobs, promote economic growth, and invest in environmental protection and infrastructure for long-term economic productivity. To help achieve these goals, the legislation appropriated \$7.2 billion to programs administered by EPA to protect and promote green jobs and a healthier environment, \$6 billion of which was funding for states to finance high-priority infrastructure projects needed to improve the provision of safe drinking water and protect and restore our surface waters for public health, recreation, and wildlife.

As provided in the Recovery Act, the Clean Water State Revolving Fund (Clean Water SRF) programs received \$4 billion, and the Drinking Water State Revolving Fund (Drinking Wa-

ter SRF) programs received \$2 billion. These significant appropriations were a response to the large water and wastewater infrastructure needs in this country and served as recognition of the effectiveness of the SRF programs in delivering water and wastewater infrastructure. Indeed, clean water is a basic necessity for economic growth and human health.

Since the enactment of ARRA, the SRF programs have worked hard to fund important water and wastewater infrastructure projects and shepherd those projects to completion. EPA provided critical support and guidance to states, and states adapted their programs and streamlined the SRF implementation process to get the ARRA money to communities as soon as possible. Many state programs increased the amount of money they normally award to projects through the SRFs by more than two-fold, and they did so in about half the time it normally takes.

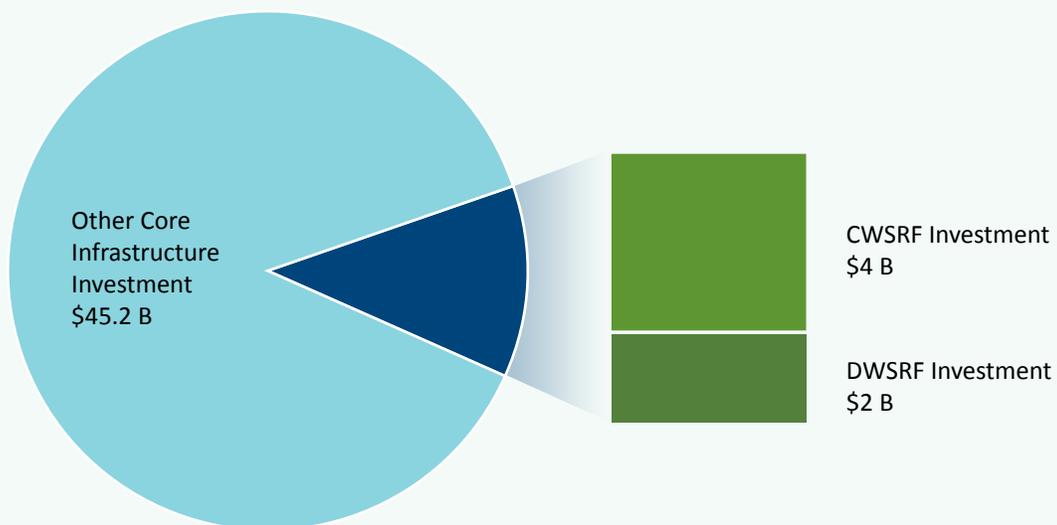
The results of the Recovery Act are truly impressive, as demonstrated by the rise in real gross domestic product (GDP) and the creation or preservation of millions of jobs after only one year. The White House Council of Economic Advisors estimates that ARRA raised the national GDP by 2.7 percent and increased employment by 2.7 to 3.7 million compared to what these figures otherwise would have been through the third quarter of 2010.<sup>1</sup> The SRFs have played a vital role by executing more than 3,200 assistance agreements worth over \$5.6 billion for clean water and drinking water projects that will continue to confer economic, environmental, and public health benefits for years to come.

This report highlights the performance of the SRFs in their implementation of ARRA.



It also features case studies that emphasize the role of ARRA in funding wastewater and drinking water infrastructure projects that will contribute to long-term economic productivity, environmental sustainability, and public health protection, many of which would not have otherwise been funded.

**FIGURE 1: ARRA APPROPRIATION OF MONEY TO THE CLEAN WATER AND DRINKING WATER STATE REVOLVING FUNDS**



<sup>1</sup> The Executive Office of the President of the United States, Council of Economic Advisors. November 2010. The Economic Impact of the American Recovery and Reinvestment Act of 2009. Fifth Quarterly Report. Available at: [http://www.whitehouse.gov/sites/default/files/cea\\_5th\\_arra\\_report.pdf](http://www.whitehouse.gov/sites/default/files/cea_5th_arra_report.pdf).

## THE SRF PROGRAMS DELIVER RESULTS



EPA and the states worked closely together to ensure that ARRA funds were awarded to high-priority eligible water and wastewater projects as soon as possible after the enactment of the Recovery Act. For example, California's Clean Water SRF funded its first ARRA project the same day it received stimulus money from EPA.

By June 17, 2009, SRF programs had executed 150 assistance agreements, obligating more than \$316 million for clean water and drinking water infrastructure projects. Maine distinguished itself by awarding nearly 50 percent of its SRF funds to assistance recipients by June 17, 2009. By October 17, national numbers had increased dramatically, with 1,342 assistance agreements obligating nearly \$2.4 billion to projects and 1,169 projects under construction. Twenty-three state SRF programs (including Puerto Rico) had obligated more than 50 percent of their ARRA funds, and 15 states had over 50 percent of their ARRA funds under construction.

In March 2010, all states submitted certification that their ARRA funds were under con-

### FIGURE 2: ARRA REQUIREMENTS AT A GLANCE

- **February 17, 2010:** All ARRA funds must be under contract or construction.
- **State Match:** No state matching funds are required.
- **Additional Subsidization:** At least 50 percent of ARRA funds must be used to provide additional subsidization, such as grants, principal forgiveness, or negative interest rate loans.
- **Green Project Reserve:** Where applications are made, at least 20 percent of ARRA funds must be used for four types of projects –
  - (1) Water efficiency improvements,
  - (2) Energy efficiency improvements,
  - (3) Green infrastructure, and
  - (4) Environmentally innovative projects.
- **Buy American:** All iron, steel, and manufactured goods incorporated into projects that receive any ARRA funds must be made in the United States unless a waiver is received from EPA.
- **Davis-Bacon Wage Rates:** All laborers and mechanics working on projects funded in whole or in part by ARRA must be paid prevailing wages as determined by the U.S. Department of Labor.

tract or construction by February 17, 2010. In total, more than three thousand (3,272) assistance agreements were signed, totaling \$5.6 billion – \$3.8 billion for wastewater projects and \$1.8 billion for drinking water projects – in one year. In addition, 2,832 ARRA drinking water and wastewater projects had begun construction by February 17, 2010, generating thousands of jobs in construction and other industries.

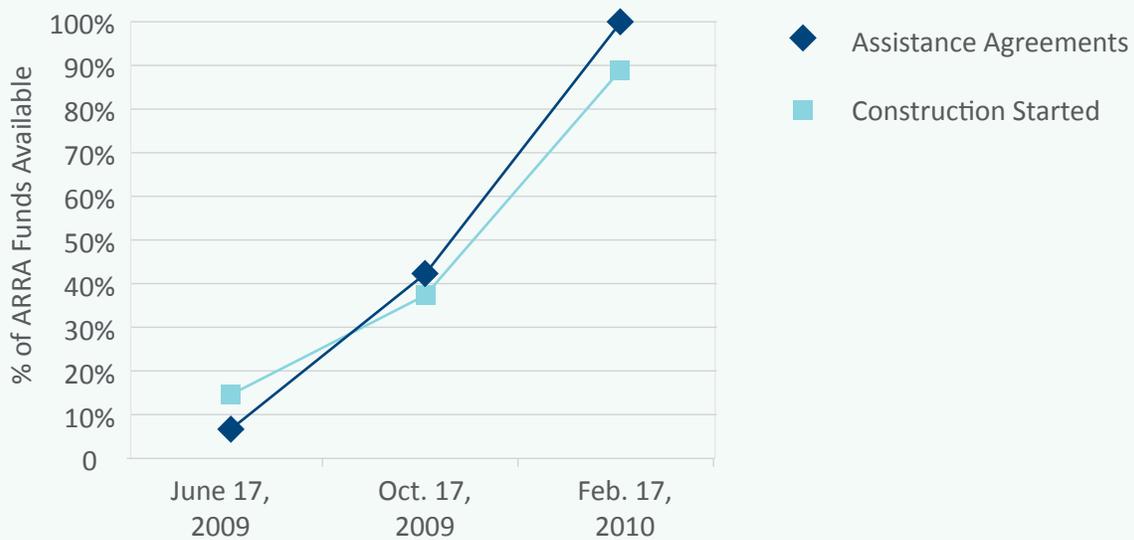
The economic stimulus effects from these investments in water and wastewater infrastructure will continue to be felt in communities as SRF projects progress to completion.

## ARRA FUNDING OF SRF PROJECTS HELPS TO ENSURE CLEAN WATER AND SAFE DRINKING WATER FOR THE NATION

State SRF programs used ARRA dollars to fund a wide range of project types with significant water quality and public health benefits. Our water and wastewater infrastructure is often taken for granted, even though many indicators such as rapidly aging infrastructure, population growth, and geographic shifts suggest that community spending on this life-sustaining infrastructure is inadequate to meet the needs of the future. ARRA funding of the SRF programs helped to mitigate these concerns.

For the Clean Water SRF programs, ARRA-funded projects include upgrades at publicly owned treatment works, such as rehabilitation of failing systems and upgrades of treatment

**FIGURE 3: ARRA FUNDING PROGRESS BY THE SRF PROGRAMS**



processes and correction of sewer overflows, as well as nonpoint source (NPS) and estuary projects. Among others, NPS and estuary projects include green stormwater management projects to reduce erosion and the flow of nutrients and harmful chemicals into our nation's waterways. These projects will help protect and improve our nation's waterways for aquatic life and wildlife, recreation, agriculture, and industrial use.



Drinking Water SRF ARRA funds are funding treatment facility construction and upgrade as well as storage, transmission, and distribution projects. Many of these improvements were needed to ensure compliance with the health-based standards of the Safe Drinking Water Act and improve water systems

funds awarded by the SRFs were in the form of additional subsidization – well above the 50 percent requirement. For the Clean Water SRF programs, grants and principal forgiveness accounted for \$2.9 billion, or 76 percent, of ARRA funds awarded. Negative interest, grants, and principal forgiveness amounted

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*“Clean, safe water is one of the bedrock foundations of communities and an economy that can grow and thrive. This money is an important start to upgrade our aging infrastructure, while creating well-paid, ‘green’ jobs.”*

*Ira Leighton*

*United States Environmental Protection Agency, Region 1,  
Deputy Regional Administrator*

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threatened by contamination due to aging infrastructure. Additionally, funds directed to small and disadvantaged communities will extend access to safe drinking water where current systems are inadequate or failing.

### ARRA SUBSIDIES ALLOW COMMUNITIES TO BUILD CRITICAL WATER INFRASTRUCTURE

The Recovery Act allowed states to provide additional subsidization for SRF projects in the form of principal forgiveness, grants, negative interest, or a combination. Nearly three-quarters (74 percent) of total ARRA

to \$1.3 billion, or 71 percent, of ARRA funds awarded by the Drinking Water SRF programs. Principal forgiveness was most commonly offered as subsidy by states because most states found it easier to administer than grants or negative interest.

Many states provided additional subsidization for projects in economically disadvantaged communities or for projects eligible for the Green Project Reserve (GPR). The provision of additional subsidy for ARRA projects offered a rare opportunity for disadvantaged communities – those that cannot afford to build new systems or charge the higher rates necessary to repay loans – to address long-standing

## NATIONAL GPR FUNDING PER CATEGORY

**Energy Efficiency – \$744 M**  
**Water Efficiency – \$491 M**  
**Green Infrastructure – \$200 M**  
**Environmental Innovations – \$232 M**

deficiencies in their water and wastewater infrastructure. Additionally, Rod Geisler, Chief of the Municipal Programs Section of the Bureau of Water at the Kansas Department of Health and Environment, expressed the view that offering additional subsidization for GPR projects attracted borrowers who would not normally apply for Clean Water SRF funding. Indeed, many states received applications from nonprofit organizations for projects that were eligible for the Green Project Reserve.

ARRA subsidies were crucial in advancing long-sought water and wastewater system improvements in many communities. For example, Colorado water utilities face significant hurdles upgrading systems that are, in some cases, decades old. “The staff at the Colorado Department of Public Health and Environment [CDPHE] was extremely diligent about identifying priority water projects, reviewing engineering designs, and working closely with the Colorado Water Resources and Power Development Authority and the Department of Local Affairs to get these dollars out the door and into the economy,” said Martha Rudolph, the executive director at CDPHE. “Many of these projects have been on our list of identified projects for years and have significant infrastructure needs for the protection of public health and the environment. Without Recovery Act funding and loan forgiveness, the projects would not have been possible.”

## PROMOTING LONG-TERM SUSTAINABILITY WITH THE GREEN PROJECT RESERVE

ARRA required states to allocate at least 20 percent of their ARRA capitalization grant awards to the Green Project Reserve, which included four types of projects: green infrastructure, water efficiency improvements, energy efficiency improvements, and environmentally innovative activities. Although these types of projects have always been eligible for Clean Water SRF financing, funding of them has varied among the state SRF programs, and the 20 percent ARRA requirement was intended to accelerate the incorporation of “green” and sustainable concepts into wastewater and drinking water projects. EPA Administrator Lisa Jackson called the GPR “one of the most exciting aspects of the Recovery Act.”

In one year, the SRF programs allocated \$1.7 billion to the Green Project Reserve, well above the 20 percent requirement.<sup>2</sup> As Figure 5 shows, 45 percent of the funding went towards improving energy efficiency

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*“These types of loans have offered communities throughout our state opportunities to move forward with projects when finding other sources of financing might be difficult. This is a good partnership between local, state, and federal governments.”*

*Justin P. Wilson*  
*Comptroller, Tennessee Local Development Authority*

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<sup>2</sup> Though states did report for GPR up to the 20 percent requirement, many did not account for additional projects or portions thereof that qualified as green projects.

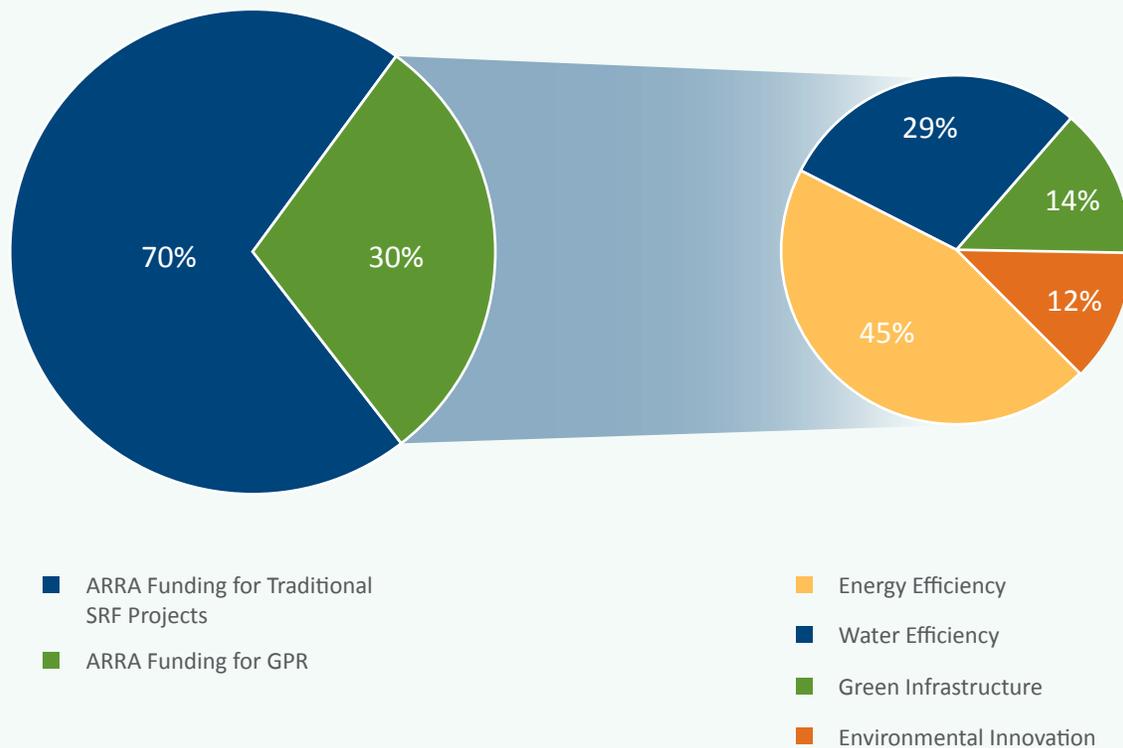
at wastewater and drinking water treatment plants, including installation of premium efficiency pumps and blowers, electricity system upgrades, and installation of wind turbines and solar panels at clean water and drinking water facilities. Another 29 percent went towards water efficiency projects, which include installation of water meters, water reclamation activities, and replacement of water-using fixtures. Green stormwater infrastructure projects accounted for 14 percent of GPR funding and include rain gardens, green roofs, street tree boxes, and pervious pavement. Fi-

nally, 12 percent of GPR funds went towards environmentally innovative projects, which include wetland restoration, decentralized wastewater treatment systems, adaptive measures to cope with climate change impacts, and use of other innovative technologies. These projects will save communities money in energy costs and contribute to long-term sustainability by reducing pressure on limited drinking water resources, protecting surface waters from contaminated stormwater runoff, and reducing the carbon footprint of the nation's water infrastructure.

*“These funds will contribute significantly towards improving the sustainability of our wastewater operations and prepare us for Austin’s growing population.”*

*Greg Meszaros  
Director, Austin Water Utility*

**FIGURE 4: ARRA FUNDING FOR GPR PROJECTS AND PROJECT COMPONENTS**



# CLEAN WATER STATE REVOLVING FUND CASE STUDIES



## WEST MONROE, LOUISIANA: PRESERVING JOBS WHILE SAVING WATER

West Monroe is a small town in Louisiana with a population of 13,500. In recent years, several large employers have closed businesses in West Monroe and taken good jobs with them when they left. Graphic Packaging International, Inc. (GPI), a manufacturer of paper food and beverage packaging that employs 1,200 people in the town and 637 other workers that harvest timber and transport it to the plant might have been the latest employer to leave West Monroe but for ARRA.

GPI's manufacturing processes currently rely on water from the Sparta Aquifer, which also serves as a source of ground water for 16 parishes in northern Louisiana. The aquifer is currently overdrawn by 17 to 18 million gallons per day (MGD). As a result, GPI's wells in the aquifer are increasingly salty and corrosive.

Several years ago, the town of West Monroe and GPI began working together to develop

an innovative solution to the water shortage in the Sparta Aquifer. They implemented a pilot project to test an innovative combination of drinking water treatment technology – dissolved air flotation followed by pressurized granular activated carbon and chlorination – to treat wastewater for reuse in GPI's industrial processes. For GPI to use the recycled water to manufacture food and beverage packaging, treated wastewater effluent must meet EPA Primary Drinking Water Standards and stringent FDA contamination levels. The treated water passed both tests.

Thanks in part to a \$4,750,000 ARRA loan with 100 percent principal forgiveness, West Monroe and GPI are now seeing their partnership come to fruition with the full-scale installation of their tested treatment process into an existing 7.5 MGD wastewater treatment plant. This ARRA-funded water efficiency project is part of the Green

Project Reserve, and the new treatment plant will virtually eliminate the current pollution discharged into the Ouachita River by the existing treatment facility. Water reuse will significantly reduce GPI's current 10 MGD demand for process water from the Sparta Aquifer, providing relief from severely declining water levels in the aquifer. In addition to the direct and indirect jobs supported by project construction, many in West Monroe credit this project with helping to preserve the 1,200 local jobs that are the lifeblood of this small community.



## LINCOLN COUNTY, WEST VIRGINIA: DECENTRALIZED SYSTEMS FOR THE ECONOMICALLY DISADVANTAGED

Communities in southern West Virginia, including Lincoln County, are some of the poorest and most rural in the state. These communities have very little capacity to assume debt for infrastructure improvements, but studies in some communities show that approximately 67 percent of households have inadequate wastewater treatment.<sup>3</sup> Many homes discharge raw sewage into rivers and streams via straight pipes, and the vast majority of streams in the region are severely impaired by fecal coliform and related pollutants. Despite significant wastewater needs, there are few financial resources available to these small, rural communities.

To address some of these problems, the Lincoln County Commission and West Virginia Department of Environmental Protection

(DEP) began a project funded by the U.S. EPA in 2005 to demonstrate the water quality benefits of installing innovative decentralized wastewater systems for homes where current septic systems were failing or nonexistent.<sup>4</sup> As of October 2009, 40 homes either had new systems installed or had bids awarded for installation. As part of these efforts, a variety of electronic and paper reports will be shared with project stakeholders, state agencies, legislators, and the community; workshops will highlight findings from the project, lessons learned, and areas needed for improvement; and educational flyers will provide information to homeowners to help them understand and maintain their wastewater systems.

The Recovery Act helped extend these efforts by allowing DEP and the Lincoln County

<sup>3</sup> Canaan Valley Institute. February 2008. Developing Effective Wastewater Management in Rural, Low Income West Virginia Communities. Available at: [http://www.canaanvi.org/canaanvi\\_web/uploadedFiles/Wastewater/Lincoln\\_Co\\_FlexE\\_Conference\\_Report.pdf](http://www.canaanvi.org/canaanvi_web/uploadedFiles/Wastewater/Lincoln_Co_FlexE_Conference_Report.pdf).

<sup>4</sup> U.S. EPA (2005). Lincoln County – US EPA Cooperative Project: Final Report—Key Lessons Learned. Available at [http://www.epa.gov/owm/septic/pubs/mudriverwv\\_finalreport.pdf](http://www.epa.gov/owm/septic/pubs/mudriverwv_finalreport.pdf).

Commission to address additional wastewater needs of residents in Lincoln County. The Commission is using a \$718,626 ARRA loan, all of which is being provided in the form of principal forgiveness, to fund the construction of on-site wastewater systems for 19 residences in the community of Alkol, in the Left Fork watershed of the Mud River. The systems use innovative peat filters that pretreat septic system effluent, removing high concentrations of

nutrients and producing a high-quality effluent with less biological oxygen demand, fewer total suspended solids, and reduced fecal coliform bacteria. Construction is expected to be completed by November 2011. The on-site systems will replace direct discharges from homes or failing septic systems and reduce pollutants that are negatively impacting surface and ground water in the watershed, helping to protect the environment and public health.

### GEORGETOWN, COLORADO: PROTECTING A THREATENED WATERSHED WITH POTW UPGRADES AND INNOVATIONS

The historic silver mining town of Georgetown is nestled among some of Colorado's most majestic mountain peaks near the headwaters of the Clear Creek Watershed. The 575-square-mile Clear Creek Watershed stretches from the Continental Divide down to the urbanized plains at its confluence with the South Platte River just north of Denver. Clear Creek serves as the principal drinking water source for more than one-quarter million people living in the Denver metropolitan area, as well as the upper Clear Creek Watershed communities that include Georgetown, Silver Plume, Empire, Idaho Springs, Black Hawk, and Central City. It is also prime riparian and wildlife habitat and a favorite among locals and tourists for recreational activities like kayaking, rafting, and fishing. However, Clear Creek is struggling with excessive nutrient loading, impairments associated with E. coli, sedimentation, and the residual effects of Colorado's storied mining past.

Georgetown received a \$5.8 million ARRA loan with \$2 million in principal forgiveness from the Colorado Department of Public Health and Environment to upgrade the

town's existing wastewater treatment facility. The facility's conventional activated sludge treatment process will be replaced with advanced biological nutrient removal and up-flow reactive sand filters for enhanced reduction in phosphorus and zinc levels in treated effluent. Upgrades also include the addition of biological de-nitrification unit processes using anoxic reactors for nutrient removal, which will reduce the need for chemical treatment at the facility.

This project will improve the quality of Clear Creek and aid in protecting a valuable drinking water source while also undertaking sustainable design planning considerations and construction methods. Xeriscaping and stabilization controls put in place during construction are designed to minimize surface run-off and erosion. The facility will also implement a facility-wide non-potable water system designed to utilize treated effluent for operational processes such as wash-down water, toilet flushing, landscape irrigation, and on-site chemical generation.

## SELECTED PROGRAM AND PROJECT HIGHLIGHTS

### REGION 1

Rhode Island advanced water conservation by allocating 43 percent of its ARRA Drinking Water SRF capitalization grant to water efficiency projects.

### REGION 2

New York's new "Green Innovation Grant Program" funded nearly 50 sustainable clean water and drinking water projects worth over \$44 million by leveraging partnerships with other state agencies and reaching out to municipalities, nonprofits, and businesses.

### REGION 3

Maryland funded numerous stormwater management projects under its "Living Shorelines Stewardship Initiative," which aims to improve water quality and enhance habitat in the Chesapeake Bay. Together, Pennsylvania and Maryland account for 35 percent of all stormwater projects.

### REGION 4

Florida directed 50 percent of its ARRA capitalization grants to economically disadvantaged communities with important water and wastewater needs.

### REGION 5

Ohio ensured that a wide variety of communities benefitted from stimulus funding by providing assistance to 335 projects – more than two times that of any other state.

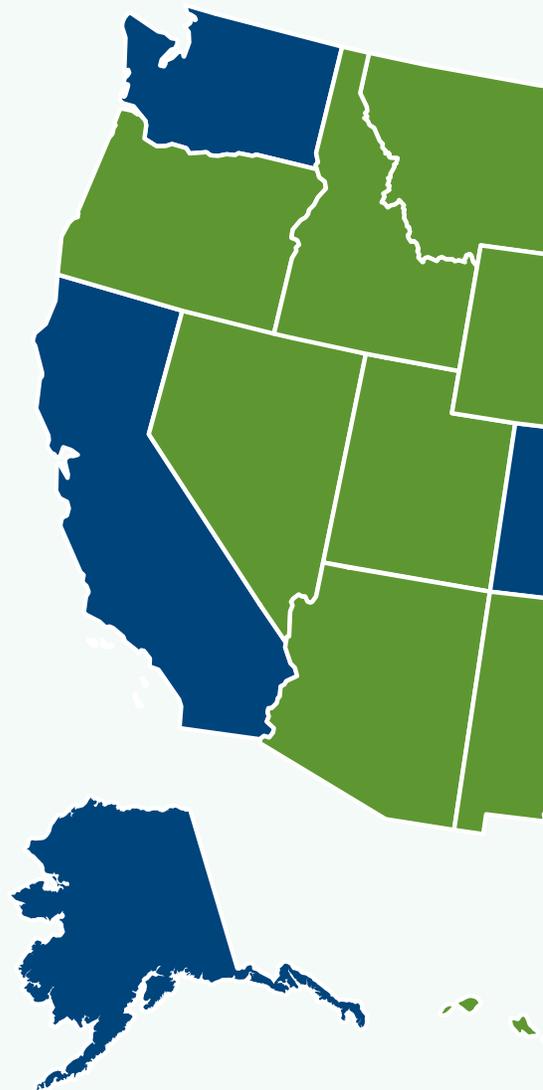
Wisconsin leads the nation in disbursing ARRA funds, with 96.5% of its ARRA capitalization grants outlayed through December 31, 2010.

### REGION 6

Texas is funding an environmentally innovative project to enhance treatment and handling of biosolids, which will save thousands of dollars in energy costs per year, reduce the carbon footprint of the treatment facility, and create 560 local jobs in the city of Austin.

### REGION 7

Kansas prioritized sustainable water and wastewater management and treatment by allocating almost 85 percent of its ARRA capitalization grant to the Green Project Reserve.



### REGION 8

ARRA-funded drinking water projects in Colorado will deliver \$7.3 million in savings over the next 20 years through increased energy efficiency, reduced operating costs, restored billing revenue, and avoided maintenance costs.

The Recovery Act is helping to fund construction of a water treatment plant in South Dakota that is expected to create or save approximately 600 construction jobs over the nearly three-year life of the project.



# DRINKING WATER STATE REVOLVING FUND CASE STUDIES



## WORCESTER, MASSACHUSETTS: HARNESSING SOLAR ENERGY FOR CLEAN WATER

In 2007, The Executive Office of Energy and Environmental Affairs and the Massachusetts Department of Environmental Protection launched the first phase of the Massachusetts Energy Management Pilot for Drinking Water and Wastewater Treatment Facilities. A total of 14 facilities are currently part of this project, including 7 wastewater facilities and 7 drinking water treatment facilities, with the purpose of reducing the amount of energy used in municipal treatment facilities and greenhouse gas emissions by 20% while also saving local communities money through the establishment of public-private partnerships. In addition to working with the Department of Energy Resources, EPA Region 1, The Massachusetts Renewable Energy Trust, the Consortium for Energy Efficiency, University of Massachusetts

at Amherst, and major gas and electric utilities, each of these projects has also received funding through the SRF program and ARRA. Through these sources, all 14 pilot projects, which total \$45.8 million, as well as an additional 7 “green sites,” were fully funded. In total, these 21 sites are estimated to realize over \$5 million in potential energy savings, and over 29 million kWh are expected to be saved annually – enough to power 3,450 average-sized homes for a year.<sup>5,6</sup>

Senator John Kerry said, “This investment will help sustain our high clean drinking water standards without using so much energy. Facilities throughout our state can continue to ensure our water is clean and safe, reduce harmful greenhouse gas emissions, and help put people back to work.”

<sup>5</sup> Massachusetts DEP (2010). The Massachusetts Energy Management Pilot. Available at <http://www.mass.gov/dep/water/wastewater/empilot.htm>.

<sup>6</sup> U.S. Energy Information Administration, March 2010. Independent Statistics and Analysis available at [http://www.eia.doe.gov/ask/electricity\\_faqs.asp#electricity\\_use\\_home](http://www.eia.doe.gov/ask/electricity_faqs.asp#electricity_use_home).

As part of the Massachusetts Energy Management Pilot, the city of Worcester is undertaking a \$1.2 million project funded by ARRA to increase energy efficiency and the use of renewable energy at its water treatment plant (WTP). The WTP processes over 11 billion gallons of drinking water for 200,000 customers annually.

To enhance energy efficiency and reduce the WTP's carbon footprint, Worcester will install an energy management system, upgrade its heating system, and install a 150 kW solar photovoltaic system at the WTP. The city will install an additional solar system at one or more



qualified water treatment facilities or administration buildings. In total, these green investments will account for over \$45,000 in annual energy savings and approximately 293 tons of annual carbon dioxide emissions reductions.

## GALVESTON, TEXAS: IMPROVING WATER SERVICE AFTER HURRICANE IKE

In 2008, Hurricane Ike devastated infrastructure in the city of Galveston, including its water system. In the aftermath, Galveston's city manager, Steve LeBlanc, said, "Our water system is bleeding, literally bleeding... [A]t this point we have so many leaks in the system, we're basically bleeding out more (water) than we're pushing into the system." Since then, repairs have improved the water system, but the city's water distribution system still has insufficient capacity to serve the west end of Galveston Island. The Texas Commission on Environmental Quality (TCEQ) cited the city for both insufficient storage and pressure, and the city entered into an agreed order with TCEQ that requires the city to meet a minimum total capacity of 0.6 gallons per minute per connection requirement and a minimum elevated storage capacity of 100 gallons per connection, among other conditions.

To comply with the order, the city proposed five water capacity projects and received a

\$17.2 million ARRA grant from the Texas Water Development Board. The water distribution system improvements include:

- installation of pressure-sustaining valves that will maintain water volume and pressure for the west end of Galveston;
- installation of 8,393 linear feet of water line to serve the west end of Galveston;
- construction of a new 2.0 MGD elevated storage tank (EST) and disinfection system at Isla del Sol;
- rehabilitation of the White Sands EST, which was damaged by Hurricane Ike, with a new PVC coated fence, inside and outside tank coating, and drainage pipe supports; and
- construction of a new 2.0 MGD elevated storage tank, disinfection system, and pumping station.

The combined improvements in this disadvantaged community will help ensure continuous water service for over 100,000 people that are

served by the system. The ARRA subsidy was critical for the water system improvements, as the city qualifies as a disadvantaged community, with an adjusted median household income (MHI) for

the service area that is less than 75 percent of the state MHI and a household cost factor that is greater than 2 percent for water services.

## MONTEREY COUNTY, CALIFORNIA: PROVIDING SAFE WATER TO THE SEVERELY DISADVANTAGED

The small, rural community of San Jerardo in Monterey County is the first housing cooperative in California for low-income farm worker families. It was once a dilapidated farm labor camp, but it is now a community of about 300 residents where all families are able to participate in decision making that affects the residents.

Although San Jerardo is only located about five miles south of water and wastewater infrastructure serving the city of Salinas, water quality service in San Jerardo is quite different. The San Jerardo community has been under a bottled water order for drinking water since 2001. Well water from the area exceeds the maximum contaminant levels for nitrate – an acute contaminant – and trichloropropane (TCP), which is recognized by California as a cancer-causing agent. An EPA lawsuit resulted in the San Jerardo water system being placed under federal court receivership for violations of the federal Safe Drinking Water Act.<sup>7</sup> Due to high levels of water contamination, the process of finding a new water operator stalled for years, and pursuit of state and federal funds was delayed.

Under the federal receivership, the Monterey County Board of Supervisors spearheaded efforts to provide San Jerardo with an onsite emergency treatment system using absorp-

tion and ion exchange technology to remove nitrate and TCP. The system was implemented in 2007, but the community has struggled to pay the costs associated with operating and maintaining the interim system, further punctuating the need for a permanent solution to the public health and water quality problems. In response to an ARRA project application by Monterey County, the California Department of Public Health issued a \$2.7 million loan with 100 percent principal forgiveness to upgrade the San Jerardo drinking water system and bring it into compliance with regulations. It will include a new drinking water supply production well, a new storage reservoir, a new transmission pipeline and booster station, and emergency intertie for secondary supply.

ARRA subsidization of this project, in the form of principal forgiveness, was critical. The California Department of Public Health lists San Jerardo as a severely disadvantaged community with a median household income (MHI) that is less than 60 percent of the statewide annual MHI. The community has struggled with paying the onsite emergency treatment costs while waiting for a new well, and it could not afford the additional expense associated with a new system. ARRA subsidies will relieve some of the community's financial stress while helping to protect public health.

<sup>7</sup> California State Water Resources Control Board (2010). Board Meeting Session – Division of Financial Assistance. March 16, 2010.

## APPENDIX: COORDINATED IMPLEMENTATION OF ARRA



The American Recovery and Reinvestment Act of 2009 presented new challenges and opportunities for the SRF programs, with new requirements and new authorities.

In order to get the funds to communities as quickly as possible, Congress required that EPA's Administrator reallocate funds where projects were not under contract or construction within one year of enactment. In addition, Congress stated a goal of having at least half of the funds under contract within 120 days. Congress eliminated state match requirements and required states to provide at least 50 percent of Federal ARRA funds in the form of additional subsidization. Congress also required that, where sufficient applications were submitted, 20 percent of the funds go towards four categories of green projects – green infrastructure, water efficiency improvements, energy efficiency improvements, and environmentally innovative activities. Additional new provisions passed on to local recipients of ARRA loans and grants included requirements to buy American iron,

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*“The Recovery Act has pulled our nation back from the worst economic crisis in generations and provided real relief for families and small businesses. EPA’s investments in green jobs and clean communities are growing our economy and building a new foundation for prosperity. We’re putting people to work and creating cleaner, healthier environments that are better places to buy a home or set up a business.”*

*Lisa P. Jackson  
United States Environmental Protection  
Agency Administrator*

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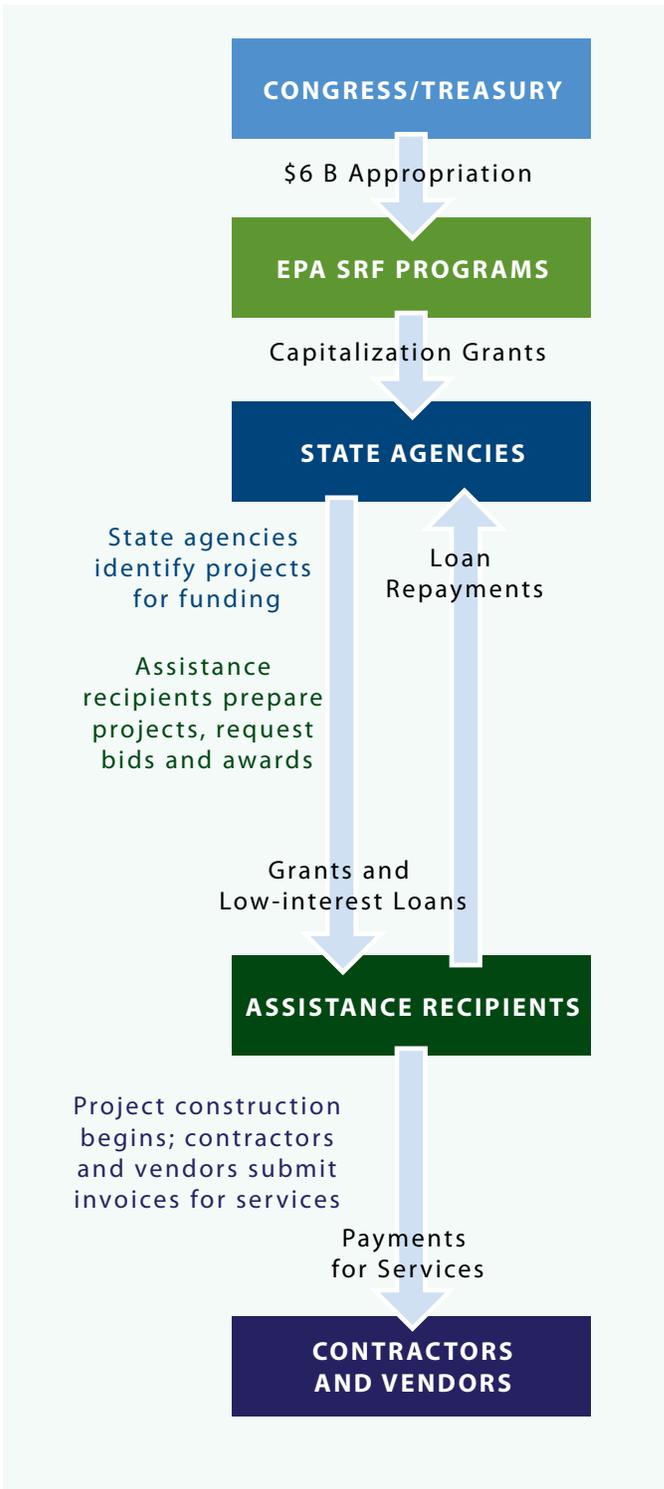
steel, and manufactured goods and to pay laborers and mechanics at prevailing wage rates.

EPA focused its efforts on moving money quickly and providing support for state SRF program implementation of ARRA requirements. While Congress was passing legislation, EPA held online webcasts, meetings, and conference calls with state and Regional EPA SRF staff to discuss how potential provisions might be implemented. EPA worked quickly to release guidance when the final version of the Recovery Act legislation was passed and signed by the President on February 17th, 2009. EPA published the final ARRA guidance less than two weeks later, on March 2nd.

The quick reaction by EPA allowed states to begin implementing the provisions of ARRA with minimal delay. After years of successfully managing large water quality programs such as the SRFs, states hit the ground running. In fact, a number of states began reaching out to communities to identify “shovel-ready” projects several months before the stimulus package passed.

Due to the significant amount of publicity in advance of the passage of the Recovery Act, states received many more – sometimes more than ten times more – inquiries for funding than they typically received in a year. In addition, state SRF staff proactively reached out to communities to identify potential ARRA projects. State employees reviewed thousands of initial applications to prioritize the projects based on economic impact, financial need, environmental benefit, public health, and adherence to ARRA goals and requirements. State SRF programs accomplished all of this work despite facing furloughs and hiring freezes in many cases.

**FIGURE 5: HOW THE ARRA MONEY MOVES THROUGH THE SRF PROGRAMS**



## ARRA TIMELINE – REQUIREMENTS AND ACHIEVEMENTS



**FEBRUARY 17, 2009:** President Obama signs American Recovery and Reinvestment Act of 2009, appropriating \$4 billion to the Clean Water SRF programs and \$2 billion to the Drinking Water SRF programs to aid in the economic recovery.

**FEBRUARY – JULY:** EPA conducts more than 10 online webcasts for states and municipalities about ARRA implementation topics.

**MARCH 2, 2009:** EPA publishes final guidance on ARRA implementation.

**MARCH 12, 2009:** EPA awards the first SRF ARRA funds to several states.

**APRIL 28, 2009:** EPA issues Buy American implementation procedures and establishes a waiver process.

**MAY – NOVEMBER:** State SRF programs, often with assistance from EPA, conduct dozens of workshops for ARRA assistance recipients about program requirements.

**JUNE 22, 2009:** EPA publishes *Questions and Answers on the Green Project Reserve*, responding to common inquiries.

**JULY 1, 2009:** EPA publishes project tracking and reporting guidance. At the same time, the ARRA project data entry system goes live in the Clean Water SRF Benefits Reporting System and the Drinking Water SRF Project & Benefits Reporting System. States can now enter all of the program progress and jobs data required by the Administration, Congress, and EPA into a simple form for easy download.

**AUGUST 17, 2009:** Six months after ARRA is authorized, 29 Clean Water SRF state programs have awarded \$663 million in ARRA assistance to 318 projects, and 31 Drinking Water SRF state programs have provided \$339 million in ARRA assistance to 234 projects.

**OCTOBER 1-10, 2009:** All states are required to report on ARRA progress and jobs created and maintained to the Office of Management and Budget for the first time.

**OCTOBER 13, 2009:** ARRA funds have been awarded to all 50 states and Puerto Rico.

**NOVEMBER 17, 2009:** Nine months after ARRA is authorized, 48 state Clean Water SRF programs have made \$2 billion in loans

and grants to 965 projects, and 45 Drinking Water SRF programs have made \$905 million in loans and grants to 737 projects. Of these, 1,697 projects have begun construction in both SRF programs, and \$752 million in financing for 622 GPR projects has been awarded.

**JANUARY 15-22, 2010:** States are required to submit a second round of quarterly reports on ARRA progress and jobs created and maintained to the Office of Management and Budget.

**FEBRUARY 17, 2010:** States certified that all ARRA funds are under contract or construction in the Clean Water SRF and Drinking Water SRF programs, with \$3.8 billion in ARRA Clean Water SRF assistance provided and \$1.8 billion in ARRA Drinking Water SRF assistance.<sup>8</sup> All state SRF programs have met the Green Project Reserve requirement, with a total of \$1.7 billion awarded to green projects nationwide.

**DECEMBER 31, 2010:** States have disbursed more than 70% of available ARRA capitalization grant funds.

<sup>8</sup> States are authorized to use up to 4% of their capitalization grants for administration of the program. In addition, 1% of the Clean Water SRF allotment is diverted to the 604(b) Water Quality Management Planning Grant program, and Drinking Water SRF programs may divert as much as 17% of their grants for set-asides that benefit drinking water quality.

# ARRA STATISTICS AT A GLANCE



## CLEAN WATER STATE REVOLVING FUND

Total ARRA Assistance Provided <sup>1</sup>	\$3.81 billion
Total ARRA Assistance Disbursed <sup>3</sup>	\$2.8 billion
Total ARRA Funding Agreements <sup>1</sup>	1,913

ARRA Funding Agreements by Population Size <sup>1</sup>	No.	\$ billions
< 3,500	791	\$0.90 billion
3,500-9,999	327	\$0.63 billion
10,000-99,999	575	\$1.19 billion
100,000 and Above	220	\$1.09 billion

Total ARRA Principal Forgiven or Grants <sup>4</sup>	\$2.90 billion
Total ARRA Green Project Reserve <sup>4</sup>	\$1.1 billion
Total FY2010 Assistance Provided (ARRA and Base) <sup>1</sup>	\$10.0 billion

## DRINKING WATER STATE REVOLVING FUND

Total ARRA Assistance Provided <sup>2</sup>	\$1.80 billion
Total ARRA Assistance Disbursed <sup>3</sup>	\$1.4 billion
Total ARRA Funding Agreements <sup>2</sup>	1,359

ARRA Funding Agreements by Population Size <sup>2</sup>	No.	\$ billions
< 501	233	\$0.13 billion
501-3,300	410	\$0.34 billion
3,301-10,000	275	\$0.36 billion
10,001-100,000	354	\$0.64 billion
100,001 and Above	87	\$0.34 billion

Total ARRA Principal Forgiven, Negative Interest, or Grants <sup>5</sup>	\$1.3 billion
Total ARRA Green Project Reserve <sup>5</sup>	\$538 million
Total FY2010 Assistance Provided (ARRA and Base) <sup>2</sup>	\$3.83 billion

<sup>1</sup> EPA Clean Water SRF National Information Management System. Data through 6/30/10.

<sup>2</sup> EPA Drinking Water SRF National Information Management System. Data through 6/30/10.

<sup>3</sup> EPA Integrated Financial Management System. Data through 12/31/10.

<sup>4</sup> Clean Water SRF Benefits Reporting Systems. Data through 1/24/11.

<sup>5</sup> Drinking Water SRF Project and Benefits Reporting Systems. Data through 1/24/11.



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