



# Green Requirements Grow Economy, Benefit Environment

By **Caigan McKenzie**  
NESC Staff Writer



In recent years, the word “green” has become synonymous with the environment. Cars, cleaning products, and even certain laptops can be considered green if they are environmentally friendly. But the green movement hasn’t stopped there; it has also become an integral part of numerous communities across the U.S.

Seattle, Washington, for instance, installed 16 stepped, vegetated cells to collect stormwater runoff from approximately 72 acres. Monitoring results showed a 75 to 80 percent reduction in total runoff and a 60 percent reduction in peak flows. Other communities that have successfully developed green infrastructure include Chicago, Illinois; Portland, Oregon; Philadelphia, Pennsylvania; Pittsburgh, Pennsylvania; and Milwaukee, Wisconsin. With the passage of the American Recovery and Reinvestment Act (ARRA), even more communities will be going green.

## **American Recovery and Reinvestment Act**

On February 17, 2009, President Obama signed ARRA into law. Its objectives, relative to state revolving funds, are, “to preserve and create jobs and promote economic recovery, ... to invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefit...,” according to a March 2, 2009, memorandum from James A. Hanlon, director of the U.S. Environmental Protection Agency’s (EPA) Office of Wastewater Management and Cynthia Dougherty, director of EPA’s Office of Ground Water and Drinking Water.

ARRA funds will increase the amount of money that is available through state revolving funds. Congress appropriated \$4 billion for the Clean Water State Revolving Fund (CWSRF) and \$2 billion for the Drinking Water State Revolving Fund (DWSRF) in addition to its annual appropriation. EPA began issuing grants at the end of March 2009, and these funds are available through September 30, 2010.

### **ARRA Special Conditions**

Under ARRA, 20 percent of the Clean Water State Revolving Funds (CWSRF) and of the Drinking Water State Revolving Funds (DWSRF) must be used for the Green Project Reserve (see below), and these projects must be under contract or construction by February 17, 2010. “The idea is that Congress believes that economic circumstances are so dire that there is a need to move this money into the economy to get these projects going and create jobs,” says Peter Shanaghan, team leader with EPA’s State Drinking Water Revolving Fund.

“In addition, projects must use American-made iron, steel, and manufactured goods for construction (there are waivers if a product is not available in America) and pay prevailing wage rates as federally required under the Davis-Bacon Act. Finally, because of the economic hardships facing many states and communities, states must provide at least 50 percent of their total capitalization grant in the form of additional subsidy, which can be for principle forgiveness, negative interest, or grants.” This is in addition to SRF subsidies already taken. For example, if a state receives \$100 million, at least \$50 million of the funding from the grant would have to be provided as an additional subsidy, and \$20 million would have to be provided for the Green Project Reserve.

### **What is the green project reserve?**

There are four categories of projects that fall under the Green Project Reserve. They are:

1. green (stormwater) infrastructure (technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services such as green roofs and rain gardens),
2. energy efficiency (projects that substantially reduce energy consumption or produce clean energy),
3. water efficiency (reuse or conservation projects that deliver equal or better services using less water), and
4. innovative environmental projects (projects that manage water resources to prevent or remove pollution in an economically sustainable way).

Some examples of CWSRF Green Project Reserve projects are green wet weather infrastructure projects that maintain, restore, or mimic natural systems to infiltrate, evapotranspire, or recycle stormwater; and projects that economically manage water resources to prevent or remove pollution. Some examples of DWSRF Green Project Reserve projects include installing new water meters in previously unmetered systems, purchasing leak detection equipment, and improving onsite facilities, such as installing green roofs for stormwater runoff control and porous pavements.

An entire project or just the “green” components of an SRF eligible project may also count toward the 20 percent Green Project Reserve, and projects can be stand-alone; they do not have to be part of a larger capital improvement project.

Communities or utilities that are interested in receiving assistance for a project must contact their state SRF programs to be placed on the state’s priority list for funding.

### **Making Your Case to Fund Traditional Projects Under Green Project Reserve**

Some traditional projects that are green-related may also qualify toward the 20 percent Green Project Reserve. For example, lower friction provided by a new distribution pipe could reduce the energy needed to pump water through the distribution system. But before the project can be counted toward the Green Project Reserve, communities must develop a business case. A business case is documentation of the reason a project or project component qualifies for the Green Project Reserve. A business case does this by identifying, both technically and financially, substantial green benefits.

Technically, the business case should include engineering studies, project plans, and other supporting information that identify problems in existing facilities and explain the technical benefits that can be gained in water and/or energy efficiency.



### **Stormwater Infiltration Basin in Planter Strip – Portland, Oregon, USA**

Source: State of Washington Transportation Improvement Board

# ARRA Timeline

Date	Stimulus Requirements
February 17, 2009	States have 180 days from this date (August 17, 2009) to find green projects to meet the 20 percent Green Project Reserve and 365 days (February 17, 2010) to spend 100 percent of the ARRA funds.
ASAP	Borrowers apply to their state SRF programs with eligible projects. (The state SRF program can explain the application process.) Priority will be given to shovel-ready projects, which are projects that will be under contract or under construction by February 17, 2010.
ASAP	States submit application for capitalization grant. The application must include an Intended Use Plan that provides a specific list of projects that is at least equal to the capitalization grant amount. If specific projects that fall under the Green Project Reserve (green infrastructure, energy and water efficiency, and innovative environmental projects) are not listed, the Intended Use Plan must describe what the state is doing to solicit applications for these projects.
ASAP	States solicit projects for the 20 percent Green Project Reserve. Projects must be under contract or construction by February 17, 2010. Solicitation can be done by making public requests for green projects, posting requirements of the Green Project Reserve on the state's Web site for public review, asking green agencies about projects, and identifying projects that meet state environmental priorities.
June 17, 2009	States give preference to projects that are ready to proceed within 120 days.
Ongoing	States should complete Intended Use Plans, identifying projects that will be able to start construction or enter into contract by February 17, 2010. The Intended Use Plan should indicate which projects, or portions of projects, will receive part of the 50 percent additional subsidy and which projects are part of the 20 percent Green Project Reserve.  (See <a href="http://www.ncsl.org/print/statefed/FinalARRA-SRF_Guidance.pdf">http://www.ncsl.org/print/statefed/FinalARRA-SRF_Guidance.pdf</a> Attachment 1 provides a sample IUP for CWSRF, and attachment 2 provides a sample IUP for DWSRF.)
August 17, 2009	This is the earliest date for states to certify insufficient projects for the Green Project Reserve. If EPA approves the certification, the state can use the remaining 20 percent of the Green Project reserve for traditional projects or the state can continue to solicit for green projects.
Ongoing	States report project data on a weekly basis.
February 17, 2010	All ARRA funds must be in construction or have signed contracts. States will continue to track and report on ARRA funds on a weekly basis.
March 1, 2010	States must certify in writing to EPA that projects funded under the ARRA grant are either under contract or had begun construction by February 17, 2010. Funds not certified by this date will be reallocated to states that have met the requirement.
June 17, 2010	States that receive reallocated funds must commit these funds by this date to projects that are under contract or under construction.
September 20, 2010	All funds must have been allocated.

The financial component should estimate the cost and water savings of the project and show that the savings substantially justify the costs of the total project. Some examples of projects that require a business case include replacing or rehabilitating distribution lines and energy efficient retrofits and upgrading pumps and treatment processes.

All DWSRF environmentally innovative projects require a business case. Examples of these projects include ones that enable the utility to adapt to the impacts of global climate change and projects, or components of projects, that are consistent with a planning framework in which the project life cycle costs (including infrastructure, energy consumption, and other operational costs) are minimized.

States can help assistance recipients develop business cases for their projects.

### **From Ineligible to Eligible**

Shanaghan provides the following example for turning an ineligible project into an eligible one. “If a community decides to replace a large pump at the end of its useful life in the distribution system with a pump of average efficiency, the new pump will be more efficient than the one it replaced simply because pumps have become more efficient over time. This would not be a project that would qualify for the Green Project Reserve. Now, if they replaced the pump with a premium efficiency pump, a pump that achieved substantial energy savings above and beyond the normal energy savings of an average efficiency pump, then it would qualify under the Green Project Reserve.”

Examples of green infrastructure projects include the incremental cost of porous pavement, bioretention, trees, and green roofs. Examples of energy efficient projects include energy audits, if required as a condition of assistance, and producing clean power for treatment systems onsite. Examples of water efficient projects include automated meter reading systems and retrofit or replacement of water using fixtures, fittings, equipment or appliances. All environmentally innovative projects require a business case.

### **What if my green projects reserve falls below 20 percent?**

There may be cases where there are not enough projects that qualify for the Green Project Reserve. “Starting August 17, 2009, states have the option of coming to EPA and seeking to make a certification that they are unable to achieve the full 20 percent of Green Project Reserve,” Shanaghan says. “If a state has done everything possible to find projects, has gone out to actively solicit their systems but still come up short of legitimate projects

## **Questions for Determining Whether Substantial Transformation Has Occurred in the U.S.**

1. Were all of the components of the manufactured good manufactured in the United States, and were all of the components assembled into the final product in the U.S.? (If the answer is yes, then this is clearly manufactured in the U.S., and the inquiry is complete.)

2. Was there a change in character or use of the good or the components in America? (These questions are asked about the finished good as a whole, not about each individual component)

- a. Was there a change in the physical and/or chemical properties or characteristics designed to alter the functionality of the good?
- b. Did the manufacturing or processing operation result in a change of a product(s) with one use into a product with a different use?
- c. Did the manufacturing or processing operation result in the narrowing of the range of possible uses of a multi-use product?

3. Was(/were) the process(es) performed in the U.S. (including but not limited to assembly) complex and meaningful?

- a. Did the process(es) take a substantial amount of time?
- b. Was(/were) the process(es) costly?
- c. Did the process(es) require particular high level skills?
- d. Did the process(es) require a number of different operations?
- e. Was substantial value added in the process(es)?

If the answer to Question 1 is yes, then this is clearly manufactured in the U.S., and the inquiry is complete. If the answer is yes for any of 2a, 2b, or 2c, then answer to Question 2 is yes. If the answer is yes for at least two of 3a, 3b, 3c, 3d, or 3e, then answer to Question 3 is yes.

However, if a recipient cannot answer any of the following in the affirmative, the recipient should either find an alternative U.S.-made good if possible, or seek a waiver from the Buy American provisions, if applicable.

Source: EPA [http://www.epa.gov/water/eparecovery/docs/2009\\_07\\_02\\_BA\\_Q\\_As\\_Part1.pdf](http://www.epa.gov/water/eparecovery/docs/2009_07_02_BA_Q_As_Part1.pdf)

The Environmental Protection Agency's (EPA) region 8 headquarters in Denver, Colorado has a green roof that is expected to reduce peak flow and runoff volumes from rain and snowmelt to mimic a more natural landscape. Reducing the peak flow will minimize damaging impacts to the South Platte River from concentrated stormwater runoff.

Source: EPA Region 8 Green Roof, <http://www.epa.gov/Region8/greenroof/images.html>



that would qualify as Green Project Reserve, then EPA can allow the state to use the remaining money from the 20 percent Green Project Reserve for other, more traditional projects. But, we are emphasizing to people that we have high expectations of the effort that must be made to solicit for green projects. We believe there are many worthy projects out there that would meet the qualifications of the Green Projects Reserve, and it is our hope and expectation that there will be very few situations in which there will be a need for anyone to seek to certify that they can't do at least 20 percent."

### Buy American Waiver Determination

Agency head may provide a waiver if finds that:

- Applying Buy American is inconsistent with public interest (§1605(b)(1))
- US iron, steel, and manufactured goods are not produced in sufficient and reasonably available quantities or of satisfactory quality (§1605(b)(2))
- Inclusion of US iron, steel, and manufactured goods will increase cost of overall project by > 25% (§1605(b)(3))

Source: EPA, "Buy American Provisions for ARRA," [http://www.epa.gov/water/eparecovery/docs/2009\\_04\\_06\\_Webcast\\_Final\\_webvers.pdf](http://www.epa.gov/water/eparecovery/docs/2009_04_06_Webcast_Final_webvers.pdf)

EPA will use the following as a guide for evaluating state certifications of insufficient Green Project Reserve applications:

1. Were prominent messages posted on the state SRF recovery and green infrastructure Web sites,
2. Did all municipalities in the state receive notification that clearly solicited funding applications for Green Project Reserve projects,
3. Were there targeted meetings with state programs associated with green infrastructure, water and energy efficiency, and other environmentally innovative projects,
4. Was notification soliciting funding applications for eligible projects sent to mailing lists used by state programs,
5. Were targeted meetings held with associations, watershed organizations and environmental groups involved in green infrastructure, water and energy efficiency, and other environmentally innovative projects,
6. Was notification soliciting funding applications for eligible projects sent to mailing lists used by associations, watershed organizations and environmental groups?

EPA will help with outreach efforts to solicit project applications by connecting states with national associations involved in projects targeted by the Green Project Reserve as well as helping with

the development of outreach plans, templates for materials and other project solicitation efforts at the state level.

States cannot use funds from this 20 percent reserve for nonqualifying projects prior to certification and EPA approval.

### **When must money be disbursed?**

“There is no drop dead date to disburse all ARRA funds,” according to EPA. “Funds will be disbursed as construction costs are incurred and should be completed within the term of the grant period, which is generally no later than seven years after the award is granted. However, September 30, 2010 is EPA’s deadline for obligating funds. The final date to take disbursement of awarded funds will be consistent with the end of the grant period associated with the grant award.”

### **Transferring Funds Between SRFs**

A state may transfer up to 33 percent of the state’s DWSRF grant from the DWSRF to the CWSRF, and vice versa. These transferred funds, however, carry the same requirements for 50 percent subsidization and for targeting green projects. Also, the state is still bound by the 12-month deadline in the receiving SRF for entering into contracts or beginning construction. In addition, there are steps that EPA and the state must take to transfer the federal funding in EPA’s budget tracking system.

If a state has already met its 50 percent subsidization and/or its 20 percent minimum for green projects, the receiving SRF does not have to meet these requirements for the transferred funds. If it has not met these requirements, then the receiving SRF would need to meet them.

### **Barrier to Effective Implementation**

A major concern for implementing ARRA is interpretation and implementation of the Buy American provision. “Because the program has not been covered by such provisions under prior statutes, we do not have pre-existing procedures and experience to fall back upon,” according to the EPA recovery Web site. “We have significant concerns that the goals of the ARRA with respect to project speed and job creation may be delayed – assistance recipients (e.g., municipal waterworks) lack experience with incorporating Buy American requirements into project design specifications and contract bidding procedures and we do not yet know the nature and extent of waiver requests that EPA will receive across the many individual projects that will be funded using ARRA monies.”

For more information, e-mail Peter Shanaghan at [shanaghan.peter@epa.gov](mailto:shanaghan.peter@epa.gov).

### **Additional resources include:**

“Award of Capitalization Grants with Funds Appropriated by P.L. 111-5, the ‘American Recovery and Reinvestment Act of 2009,’” James A Hanlon, director, Office of Wastewater Management and Cynthia Dougherty, director, Office of Ground Water and Drinking Water. Retrieved March 2, 2009 at [www.ncsl.org/print/statefed/FinalARRA-SRF\\_Guidance.pdf](http://www.ncsl.org/print/statefed/FinalARRA-SRF_Guidance.pdf)

“SRF Planning for the Green Project Reserve in the American Recovery and Reinvestment Act of 2009 (ARRA). This EPA SRF Webcast Training Series was retrieved March 12, 2009 at [www.epa.gov/water/eparecovery/docs/STI\\_MULUS\\_Green\\_Reserve\\_Webcast\\_Slides%203-12-09.pdf](http://www.epa.gov/water/eparecovery/docs/STI_MULUS_Green_Reserve_Webcast_Slides%203-12-09.pdf)

“Green Project Information.” State of Connecticut – Department of Public Health, Drinking Water State Revolving Fund (DWSRF), American Recovery and Reinvestment Act of 2009 (ARRA). Retrieved from [www.ct.gov/dph/lib/dph/drinking\\_water/docs/ARRA\\_Green\\_Info.doc](http://www.ct.gov/dph/lib/dph/drinking_water/docs/ARRA_Green_Info.doc).

“Managing Wet Weather with Green Infrastructure.” U.S. Environmental Agency. Retrieved from [cfpub.epa.gov/npdes/greeninfrastructure/gicasestudies.cfm](http://cfpub.epa.gov/npdes/greeninfrastructure/gicasestudies.cfm).

“Buy American requirement,” retrieved from [www.epa.gov/water/eparecovery/docs/2009\\_07\\_02\\_BA\\_Q\\_As\\_Part1.pdf](http://www.epa.gov/water/eparecovery/docs/2009_07_02_BA_Q_As_Part1.pdf), and [www.epa.gov/water/eparecovery/docs/04-29-2009\\_BA\\_waiver\\_process\\_final.pdf](http://www.epa.gov/water/eparecovery/docs/04-29-2009_BA_waiver_process_final.pdf).

Green infrastructure case studies,” retrieved from [cfpub.epa.gov/npdes/greeninfrastructure/information.cfm](http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm).

“Green Project Reserve,” section II CWSRF and DWSRF projects retrieved from [www.epa.gov/water/eparecovery/docs/2009\\_6\\_22\\_GPR\\_Q\\_A.pdf](http://www.epa.gov/water/eparecovery/docs/2009_6_22_GPR_Q_A.pdf).



A member of NESCF for more than 10 years, **Caigna McKenzie**, has had her water and wastewater articles reprinted in numerous publications.