



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Catalyst for Improving the Environment

Evaluation Report

EPA Needs Definitive Guidance for Recovery Act and Future Green Reserve Projects

Report No. 10-R-0057

February 1, 2010



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Abbreviations

ARRA	American Recovery and Reinvestment Act
EPA	U.S. Environmental Protection Agency
OIG	Office of Inspector General
SRF	State Revolving Fund

Cover photos:

From left: Vegetated curb extensions used in Portland, Oregon, to decrease stormwater runoff (EPA photo); the American Recovery and Reinvestment Act logo; cisterns at Chesapeake Bay Foundation Headquarters (photo courtesy Chesapeake Bay Foundation).



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

As part of our efforts to review the U.S. Environmental Protection Agency's (EPA's) management of American Recovery and Reinvestment Act (ARRA) funding, we evaluated whether EPA has developed and implemented adequate controls to ensure that States actively solicited for green reserve projects before reprogramming such funds to traditional projects.

Background

The Clean Water and Drinking Water State Revolving Funds provide low-interest loans for protecting water quality and public health. The ARRA provided \$6 billion in capitalization grants to the States for these funds. ARRA required at least 20 percent of this funding to support green projects: water or energy efficiency, green infrastructure, or environmentally innovative activities.

For further information, contact our Office of Congressional, Public Affairs and Management at (202) 566-2391.

To view the full report, click on the following link:
www.epa.gov/oig/reports/2010/20100201-10-R-0057.pdf

EPA Needs Definitive Guidance for Recovery Act and Future Green Reserve Projects

What We Found

EPA has not provided clear and comprehensive guidance to States for how to determine the eligibility of green reserve projects. EPA was promoting a green approach to wastewater and drinking water programs for at least a year prior to the ARRA's enactment. Despite that experience, EPA did not develop and issue clear and comprehensive guidance in time to meet many of the States' needs. For example, EPA did not provide guidance on how to solicit and select green projects until after many States had finished doing so, and some States felt the need to resolicit for green projects while others did not.

EPA's guidance and subsequent updates have not addressed important aspects of project selection. At the time of this review, EPA had not established water and energy efficiency threshold ranges for many types of green projects. Also, the Agency still had not provided sufficient information to States on how to develop business case justifications for non-categorical projects. Moreover, changes over time in EPA's guidance for how to determine project eligibility resulted in EPA regions applying different standards for approving States' green project proposals.

EPA cannot provide a reasonable assurance that its green reserve projects will meet Congress' objectives without issuing guidance that sets definitive expectations. Additionally, future green funding may face similar issues.

What We Recommend

In its formal response to the draft report, the Agency did not agree or disagree with the recommendations. Subsequently, OIG was told the Agency nonconcurred with the draft report's recommendations and alternative recommendations were informally proposed which were acceptable to OIG. We amended the recommendations in this report to incorporate the informal proposal; however the recommendations are undecided pending formal Agency approval or rejection. The revised recommendations are for EPA to develop and revise guidance, information, and, as appropriate, specific criteria that States can employ to assist them in identifying green reserve projects. We also recommend that EPA conduct timely reviews of States' submitted green projects and, where necessary, business cases.



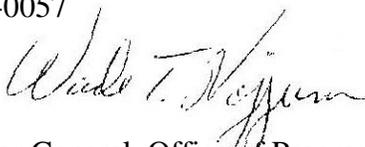
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
INSPECTOR GENERAL

February 1, 2010

MEMORANDUM

SUBJECT: EPA Needs Definitive Guidance for Recovery Act and
Future Green Reserve Projects
Report No. 10-R-0057

FROM: Wade T. Najjum 
Assistant Inspector General, Office of Program Evaluation

TO: Peter S. Silva
Assistant Administrator, Office of Water

This is our report on the subject evaluation conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established resolution procedures.

The estimated cost of this report – calculated by multiplying the project’s staff days by the applicable daily full cost billing rates in effect at the time and adding travel costs – is \$329,423.

Action Required

In accordance with EPA Manual 2750, you are required to provide a written response to this report within 90 calendar days. You should include a corrective actions plan for the undecided recommendations while resolution efforts continue. The corrective actions plan should include agreed-upon actions, including milestone dates. We have no objections to the further release of this report to the public. This report will be available at <http://www.epa.gov/oig>.

If you or your staff have any questions regarding this report, please contact me at 202-566-0827 or najjum.wade@epa.gov; Dan Engelberg, Director, at 202-566-0830 or engelberg.dan@epa.gov; or Julie Hamann, Project Manager, at 913-551-7693 or hamann.julie@epa.gov.

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Purpose

As part of our efforts to review the U.S. Environmental Protection Agency's (EPA's) management of American Recovery and Reinvestment Act (ARRA) funding, we sought to determine whether EPA has developed and implemented adequate controls to ensure that States actively solicit green reserve projects before reprogramming such funds to traditional projects.

Background

The 2009 ARRA provides \$4 billion for EPA's Clean Water State Revolving Fund (SRF) program and \$2 billion for its Drinking Water SRF program. These SRF programs provide low-interest loans and, in some cases, grants for infrastructure projects to protect water quality and public health. Federal Government grants and State matching funds provide funds to establish or capitalize the SRF programs. The States administer the SRF and distribute loans and grants based on public health and environmental priorities.

EPA's \$6 billion of ARRA funding for water SRF programs is approximately four times as large as the Fiscal Year 2008 SRF appropriation. Also, ARRA provides for the first time that States reserve at least 20 percent of the funding for green projects designed to further environmental objectives. This special allocation for green projects (\$1.2 billion) is 80 percent of the Fiscal Year 2008 appropriation from Congress for the SRFs. In addition to the ARRA, the President's proposed Fiscal Year 2010 budget contains language supporting green infrastructure programs.

EPA defines green infrastructure as applications and approaches that reduce, capture, and treat stormwater runoff at its source before it reaches the sewer system. Under the ARRA, green projects include those that promote green infrastructure and energy or water efficiency, as well as projects that demonstrate new or innovative ways to manage water resources in a sustainable way.

States receiving ARRA funds must meet accelerated timeframes. If a State has not identified sufficient green projects, the State can request a waiver to transfer funds to traditional SRF projects. The earliest the States could seek such an application was August 17, 2009. ARRA also requires that by February 17, 2010, all funds must be committed to eligible projects, with States having signed certifications that project applicants have signed contracts or the projects are under construction. If a State fails to meet the February 2010 deadline, EPA is required to deobligate the funds.

States that have sufficient qualified green projects under previous SRF solicitations do not need to solicit additional projects. States that do not have sufficient green projects under the ARRA must continue to actively solicit and accept applications to be eligible to receive the 20-percent reserve. In its May 2009 guidance, EPA defined adequate solicitation to include activities such as placing prominent messages on State SRF and recovery Websites and sending solicitation funding applications to municipalities.

EPA has developed project descriptions and examples to assist States in selecting projects that qualify for the ARRA's green project reserve. The Agency defines project types that clearly meet the ARRA's intent as "categorical." Other projects may have benefits that meet ARRA's

green intent but may not be readily classified as such. These projects require a “business case” or documentation of how the project or portion of the project achieves identifiable and substantial benefits that qualify as green project benefits. EPA has provided contractor assistance and issued four guidance documents to assist States in implementing the green reserve program.

Scope and Methodology

We conducted this review between May and November 2009. We conducted this review in accordance with generally accepted government audit standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Because the ARRA is new, the Office of Inspector General (OIG) has not conducted any prior reviews in this area.

We interviewed officials in EPA’s Office of Water, specifically the Offices of Wastewater Management and Groundwater and Drinking Water, which work with the SRF programs. We also interviewed officials in the Office of Administration and Resources Management’s Office of Grants and Debarment. We interviewed officials in EPA Regions 1, 2, 3, 5, and 6. We sent a survey to EPA regions about how their States were implementing ARRA’s active solicitation requirement.

We obtained information on State solicitation and identification of green reserve projects. We selected States based on EPA’s identification of States that planned to solicit for ARRA SRF projects. States selected for our review were Connecticut, Michigan, New Hampshire, New York, Oklahoma, and West Virginia. We interviewed State officials to learn about their solicitation and project selection activities. We reviewed Websites for solicitations and Intended Use Plans for the selected States.

We reviewed the ARRA to gain an understanding of the legislative requirements. To determine how EPA planned for States to solicit and identify eligible green reserve projects, we reviewed the following EPA guidance:

- *Award of Capitalization Grants with Funds Appropriated by P.L. 111-5, the American Recovery and Reinvestment Act of 2009*, March 2, 2009.
- *Adequate solicitation of Green Project Reserve applications under the American Recovery and Reinvestment Act*, May 13, 2009.
- *Energy Efficiency Business Case for Wastewater Pumping Systems for ARRA Green Project Reserve*, May 14, 2009.
- *The Green Project Reserve: Principles and approach to developing a Business Case for water and energy efficiency projects and Questions and Answers on ARRA GPR*, June 22, 2009.

Results of Review

Although EPA was promoting a green approach to wastewater and drinking water programs for at least a year prior to the ARRA, EPA was not able to develop and issue clear and comprehensive guidance soon enough to meet State needs once the ARRA was enacted. EPA did issue a guidance document generally defining the program on March 2, 2009, about 2 weeks after the passage of ARRA on February 17, 2009. However, that guidance and subsequent updates have not addressed important aspects of project selection. For example:

- EPA did not provide guidance on how to solicit or select green projects until after many States had finished soliciting for projects. Some of those States felt obligated to re-solicit for green projects, while others re-examined their existing lists and developed green projects from those lists.
- At the time of this review, EPA had not established water and energy efficiency threshold ranges for many types of green projects.
- EPA still had not provided enough information to States about how to develop business case justifications for non-categorical projects.
- Changes in how to determine project eligibility resulted in EPA regions applying different standards for approving States' green project proposals, creating confusion for a number of States.

Without adequate guidance, EPA regions and States cannot adequately determine the extent to which these projects reduce energy and water usage compared to projects traditionally funded under the SRF program. EPA also cannot adequately determine whether these projects meet Congress' objectives. Further, this guidance is important if Congress appropriates additional funds for green projects in coming years.

States Actively Soliciting Green Reserve Projects

States have actively conducted solicitation efforts for green reserve projects. In a survey of EPA's 10 regions, respondents from 38 of the 50 States (76 percent) told us that their States solicited for clean water green reserve projects and 35 of the 50 States (70 percent) solicited for drinking water green reserve projects. States conducted a variety of solicitation activities. For example, some States placed prominent messages on State Websites, sent funding applications to municipalities, and conducted targeted meetings with watershed organizations. A number of States in our review solicited beyond the traditional group of applicants. For example, the Oklahoma Clean Water SRF program advertised to environmental groups, including the Nature Conservancy and the Sierra Club, as well as to municipalities and public water systems.

These efforts appear to have been successful, at least in terms of meeting the indistinct guidance supplied by EPA. In September 2009, EPA expected all States to meet the 20-percent green reserve provision for both the Clean Water and Drinking Water SRF programs. Some States received a large surplus of applications. For example, the New York Clean Water SRF program received nearly 300 applications, totaling more than \$450 million, for the \$86.5 million in its green reserve. However, EPA drinking water SRF officials also reported that some States were having difficulty meeting the green project reserve requirements.

EPA Needs to Establish Effective Guidance on Green Project Reserve Eligibility

EPA has not provided the clear and unambiguous direction required to establish ground rules for this new program. The guidance to the regions and States for determining green project reserve eligibility has been incomplete or inconsistent. As early as January 2008, more than a year prior to the ARRA, EPA was promoting the need for establishing a systematic approach to reducing energy consumption and energy costs. However, because EPA considered the SRFs to be largely State-led programs, EPA initially took a hands-off approach on how States should determine project eligibility, providing States with only minimal guidance. Yet, it appears that some States were uneasy with this approach due to concern that they could lose green reserve funding if EPA did not approve submitted projects. This inconsistency has led to differing approaches by EPA regions and confusion in some States. EPA needs to develop unambiguous guidance on green reserve funding eligibility, especially if this program continues in future years.

In its initial March 2, 2009, ARRA guidance, EPA did not require States to solicit for green projects. States could select green reserve projects from applicants already waiting for SRF loans. Solicitation was necessary only when a State could not identify a sufficient number of eligible projects in its SRF pipeline. However, EPA did recommend that States consider soliciting for green projects to establish a buffer in case some projects dropped out of the program.

EPA did not issue guidance in time to assist States soliciting for green reserve projects. On May 13, 2009, about 3 months after ARRA was enacted and after most States had begun their solicitation efforts, EPA expanded its solicitation guidance. This guidance provided States with examples of appropriate types of solicitation actions, such as placing prominent messages on State SRF and recovery Websites and sending solicitation funding applications to municipalities. EPA's intent was to use this guidance to determine the adequacy of the States' solicitation efforts. However, by the time EPA issued this guidance, most States had initiated their solicitation processes without the benefit of the guidance. All six States in our review had started their solicitation process and several of them had already completed those efforts.

The lack of sufficient EPA guidance from the beginning of the program created confusion and disagreements among EPA, the regions, and the States on which projects were eligible for funding. This is particularly evident regarding water meters. EPA's March 2, 2009, guidance defined water meter projects as categorically green, and a number of States submitted projects that replaced water meters. However, in its June 22, 2009, business case guidance, EPA provided clarification, stating that a project that proposes to replace existing water meters with newer water meters is not categorically green. In these situations, a business case is required documenting any water and/or energy efficiency improvements from such replacement. In the Drinking Water SRF program, EPA's guidance did not provide water or energy efficiency thresholds. To its credit, EPA has established a 20-percent increase in its energy efficiency threshold for its Clean Water SRF program. Therefore, some States were not sure which projects were acceptable as "green." Some regions had approved automated meter reading projects as categorically green without consideration of energy efficiencies. Other regions considered energy efficiencies as a factor in approving automated meter reading projects.

Some States have struggled to apply the incomplete and changeable guidance. For example, the Oklahoma Department of Environmental Quality stated, based on EPA's March 2009 guidance, that it had a number of fundable water automated reading system projects for Drinking Water SRF green reserve funds. However, these projects were rejected by EPA Region 6. Region 6 rejected these projects using EPA's June business case guidance and direction from EPA Headquarters, and concluded that the projects did not have sufficient energy efficiencies and the automated meter readers would result in jobs being lost. In July, after receiving additional guidance from EPA Headquarters, Region 6 partially reversed its decision not to fund Oklahoma's automated meter reading projects. EPA approved funding a portion of the project: the instrumentation necessary to gather and transmit the meter readings to a central location rather than the entirety of the projects. Oklahoma officials characterized EPA's decision to change as an instance of "learning as we go."

EPA could better support States in the development of business cases. For example, EPA could develop a standard set of criteria for "business cases" to provide consistency and transparency for documenting why a project is eligible. This standard format will also guide the States in determining sufficient documentation required, which will enable a more efficient EPA review process. West Virginia developed such criteria, and this proved beneficial to that State's public water systems and engineering consultants.

EPA Cannot Effectively Conduct Oversight without Definitive Criteria

EPA regional oversight of State solicitation activities and determination of eligibility has varied. Some regions proactively ensured their States solicited for green projects; others just relied on EPA Headquarters' guidance. Some regions developed checklists to identify green projects but others did not. One region developed internal controls for business cases while others waited for additional EPA Headquarters information. As mentioned previously, regions varied in how they assessed the eligibility of certain types of projects such as automated meter readers.

Due to the non-definitive guidance from EPA, States have proposed several projects for which eligibility is more uncertain than it should have been. The six States subject to our detailed review identified 37 non-categorical Clean Water and Drinking Water projects that were supported with "business cases." However, at the September 2009, only 10 of the 37 projects had been approved by EPA. A representative of the New Hampshire Department of Environmental Services told us that he is unsure whether New Hampshire's documentation of the energy efficiency of one of its business cases is adequate; EPA's uncertain guidance has kept the question open.

Clear and definitive guidance is management's control and would assist in providing accountability and transparency to the green reserve program. Despite the States' efforts, without definitive green reserve guidance or criteria, EPA is not in a position to consistently determine whether these projects meet the objectives for which Congress appropriated these funds. EPA regions and States cannot determine the extent to which these projects reduce energy and water usage compared to projects traditionally funded under the SRF program. In addition, EPA cannot determine whether changes are needed in the program to better achieve

green reserve objectives. Consequently, EPA cannot provide assurance the program is meeting its intended goals.

Recommendations

We recommend that the Assistant Administrator for Water:

1. Develop and revise guidance, information, and, as appropriate, specific criteria that States can employ to assist them in identifying projects qualifying for funding from the State's green project reserve.
2. Conduct a timely review of the States' submitted green projects and, where necessary, accompanying business cases, in accordance with the pertinent statutory provisions and EPA guidance, information, and criteria.

Agency Response and OIG Comments

EPA officials neither agreed nor disagreed with OIG's initial recommendation to "develop threshold ranges for green projects" as they apply to drinking water systems. However, EPA officials said that States need additional flexibility in pursuing water and energy efficiency goals for drinking water systems. Drinking Water SRF officials argued that, "...although many larger systems may be able to achieve 20% efficiency improvements for energy projects, for a smaller system (where DWSRF funds are often targeted), smaller percentage savings could still be considered 'significant' for that system, especially if it is a well targeted and much needed efficiency project." OIG officials met with Agency officials and discussed their concerns. The Agency officials suggested changes to the recommendations that would meet their concerns while addressing the concerns OIG had raised in the draft report. The OIG carefully reviewed these suggestions and amended the recommendations to those contained above.

A complete copy of the Agency response is in Appendix A. All recommendations will remain undecided while the Agency and the OIG continue with resolution efforts.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date	Claimed Amount	Agreed To Amount
1	6	Develop and revise guidance, information, and, as appropriate, specific criteria that States can employ to assist them in identifying projects qualifying for funding from the State's green project reserve.	U	Assistant Administrator for Water			
2	6	Conduct a timely review of the States' submitted green projects and, where necessary, accompanying business cases, in accordance with the pertinent statutory provisions and EPA guidance, information, and criteria.	U	Assistant Administrator for Water			

¹ O = recommendation is open with agreed-to corrective actions pending
C = recommendation is closed with all agreed-to actions completed
U = recommendation is undecided with resolution efforts in progress

Appendix A***Agency Response***

December 28, 2009

MEMORANDUM

SUBJECT: Draft Evaluation Report: EPA Needs Definitive Guidance for Recovery Act and Future Green Reserve Projects - Project No. 2009-901

FROM: Peter S. Silva
Assistant Administrator

TO: Dan Engelberg
Director, Water and Enforcement Issues
Office of Inspector General

Thank you for your letter of November 13, 2009, providing the draft evaluation report “EPA Needs Definitive Guidance for Recovery Act and Future Green Reserve Projects.” In general, the report provides helpful insight into the type and extent of guidance needed for the Green Project Reserve (GPR). As we move forward with the GPR requirement in the 2010 Appropriation, EPA will take the Office of Inspector General’s recommendations into consideration. The attached document includes our responses to specific recommendations. We have already begun the process of developing guidance. The first step was to conduct listening sessions with States and Regions, as well as with non-profit organizations and groups associated with each of the four targeted project types. We will also draw on the draft Clean Water SRF (CWSRF) white paper “Tapping the Untapped Potential of the CWSRF”, which explored existing authority to fund many of the types of projects targeted by the GPR, as well as numerous fact sheets and policy memos that helped the SRF programs get a quick handle on what projects should be included in the GPR for ARRA. We will also be using the lessons learned during ARRA to expand the list of sample green projects and better articulate what makes a good business case for projects that do not appear on the list, so that the guidance is clearer in the 2010 GPR guidance.

These improvements will build upon significant efforts undertaken by the Office of Water to support ARRA implementation and the GPR in particular. For example, EPA issued guidance within two weeks of the American Recovery and Reinvestment Act (ARRA) being signed into law. The portion of the guidance addressing the new GPR requirement not only explicitly defined each of the four types of projects targeted by GPR, it also contained lists of eligible projects to help states easily identify qualified projects. EPA also provided states with

the flexibility to identify other projects by justifying their decision through a business case. The initial guidance was followed by a number of additional efforts focused specifically on GPR issues. First, the State Revolving Fund (SRF) programs hosted several webcasts regarding the GPR on March 12, May 14, and May 21, 2009. Second, Drinking Water Protection Division Director Steve Heare emailed a Drinking Water SRF (DWSRF) memorandum to all the Regional SRF Coordinators on May 20, 2009. This memo explains the components that should be included in a business case and provides details regarding the type of documentation that should be referenced in or submitted with the business case. Third, EPA developed a document providing example business cases for drinking water projects. This document was released in draft form to regions and states on August 12, 2009 and was published and posted on EPA's recovery website in September (http://www.epa.gov/water/eparecovery/docs/2009_09_25_DWSRF_GPR_Business_Case_Examples.pdf).

Again, we appreciate you sharing your draft report for our review and comment, and look forward to our continuing collaboration in the future. If you have any questions, please contact me or Cynthia Dougherty, Director of the Office of Ground Water and Drinking Water, at (202) 564-3750.

Attachment

**Office of Water Responses to Recommendations in
Office of Inspector General Draft Evaluation Report
“EPA Needs Definitive Guidance for Recovery Act and Future Green Reserve Projects.”**

Recommendation #1 – Develop threshold ranges for green projects, such as water and energy efficiency, and develop specific criteria necessary for business cases.

Response: The CWSRF established a numeric threshold for energy efficiency improvements at POTWs to help states easily identify categorically green projects and determine which projects needed a business case to justify them as eligible for GPR. It was determined early on by DWSRF staff that numeric thresholds (i.e. 20% energy savings) were not as appropriate for drinking water systems as for wastewater systems. The DWSRF took the position that, although many larger systems may be able to achieve 20% efficiency improvements for energy projects, for a smaller system (where DWSRF funds are often targeted), smaller percentage savings could still be considered ‘significant’ for that system, especially if it is a well targeted and much needed efficiency project. Similarly, it is also difficult to quantify what water savings should be considered ‘green’. A drinking water system could have a huge volume of water savings (in gallons), but it might only be a small percentage of the total flow. Conversely, a project could result in significant percentage of water savings; however, it may only be a small volume of water. These points were relayed at the meeting with the OIG on August 11, 2009, to discuss the findings of the audit. At that meeting, DWSRF staff suggested that the recommendation be softened to say that EPA could offer acceptable ‘parameters’ for water and energy efficiency projects.

Recommendation #2 – Conduct a timely review of the States’ submitted green projects and, where necessary, accompanying business cases in accordance with the EPA-defined criteria.

Response: In addition to evaluating the green projects proposed by states and any necessary business cases, EPA Regions will be following up with state visits twice a year. During these visits, Regions will review a sample of project files to ensure the projects proceed as proposed and result in the environmental benefits anticipated by Congress when the Green Project Reserve was established. Also, Headquarters DWSRF conducted regional reviews that included state discussions and Headquarters CWSRF visited 49 states. During these reviews, Headquarters provided feedback to the regions and states on the implementation of ARRA, including GPR.

Appendix B

Distribution

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