



U.S. ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF INSPECTOR GENERAL

*Catalyst for Improving the Environment*

## Special Report

# Innovative Techniques for State Monitoring of Revolving Funds Noted

Report No. 08-P-0290

September 29, 2008



## **Abbreviations**

DHEC	Department of Health and Environmental Control (South Carolina)
EPA	U.S. Environmental Protection Agency
IFA	Indiana Finance Authority
OIG	Office of Inspector General
OMB	Office of Management and Budget
SRF	State Revolving Fund

**Cover photo:** Service Reservoir #6 in Anchorage, Alaska, for which work was funded by the State Revolving Fund (photo courtesy Alaska Department of Environmental Conservation)



# At a Glance

*Catalyst for Improving the Environment*

## Why We Did This Review

We conducted this special review to determine whether the States receiving State Revolving Funds comply with the subrecipient monitoring requirements of the Single Audit Act, Clean Water Act, and Safe Drinking Water Act. We also reviewed procedures the States use to prevent and detect fraud in the State Revolving Funds.

## Background

The State Revolving Funds are the U.S. Environmental Protection Agency's (EPA's) largest programs, with approximately \$74 billion in loans and other type of assistance outstanding as of June 30, 2007. About \$1.5 billion was awarded in 2008. The goal of subrecipient monitoring is to ensure projects meet performance goals and borrowers spend federal funds in accordance with the intent of the laws and regulations.

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

To view the full report, click on the following link:  
[www.epa.gov/oig/reports/2008/20080929-08-P-0290.pdf](http://www.epa.gov/oig/reports/2008/20080929-08-P-0290.pdf)

## ***Innovative Techniques for State Monitoring of Revolving Funds Noted***

### **What We Found**

In general, the States we reviewed complied with subrecipient monitoring requirements. Our review identified several innovative techniques and procedures some States use to comply with the subrecipient monitoring requirements of the Single Audit Act, Clean Water Act, and Safe Drinking Water Act. Two States take advantage of current technology, such as e-mail and the Internet, to reduce the number of on-site inspections yet are able to track current construction activity. Two other States analyze subrecipient audit reports not only to track financial condition but also to make trend and ratio analyses to project on a subrecipient's ability to repay a loan in the future.

We did note two minor areas EPA should address. Only 59 percent of the States we reviewed identify the federal award information to the recipient, and EPA's Annual Performance Evaluation should include an evaluation of the States' subrecipient monitoring procedures. We suggest that EPA require all States to notify borrowers of federal award information to assure they can comply with the Single Audit Act. We also suggest that EPA include a review of how States monitor borrowers as part of its annual review procedures.



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

OFFICE OF  
INSPECTOR GENERAL

September 29, 2008

**MEMORANDUM**

**SUBJECT:** Innovative Techniques for State Monitoring of Revolving Funds Noted  
Report No. 08-P-0290

**FROM:** Stephen J. Nesbitt   
Assistant Inspector General for Investigations

**TO:** Benjamin Grumbles  
Assistant Administrator, Office of Water

This is our final report on the subject review conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This special report does not contain any recommendations, but does include matters the OIG has identified that may be of benefit to other States. This special report represents the opinion of the OIG and the matters contained in this report do not necessarily represent the final EPA position.

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 – is \$95,076.

**Action Required**

Because this report contains no recommendations, you are not required to respond to this report. 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 has any questions regarding this report, please contact me at (202) 566-0817 or [nesbitt.stephen@epa.gov](mailto:nesbitt.stephen@epa.gov), or William Dayton at 415-947-4509 or [dayton.william@epa.gov](mailto:dayton.william@epa.gov).

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## Purpose

We conducted this review to determine the extent that States receiving State Revolving Funds (SRFs) are complying with subrecipient monitoring requirements established by the Clean Water Act, the Safe Drinking Water Act, and the Single Audit Act. To accomplish that goal, our review looked at how the States monitor subrecipients of SRF assistance. We also reviewed other procedures the States use, if any, to prevent and detect fraud at the local level

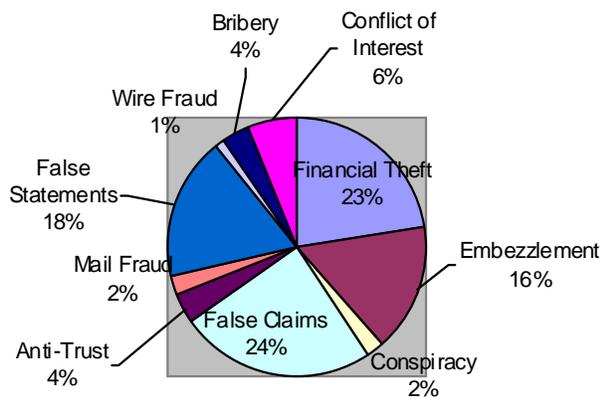
## Background

The Clean Water Act of 1987 created the Clean Water SRF, while the Safe Drinking Water Act Amendments of 1996 created the Drinking Water SRF. The SRFs are permanent funds for the States that provide low-cost financing to local governments. Approximately 95 percent of the financial assistance made by the SRF's is in the form of loans or guarantees for construction of traditional wastewater or drinking water facilities. The U.S. Environmental Protection Agency (EPA) provides the initial funding through capitalization grants. Both programs require the States to provide matching funds of 20 percent of the capitalization grant amount.

The SRFs represent EPA's largest program (about 50 percent of all assistance awards made by EPA), with 2008 funding levels of approximately \$1.5 billion. As of June 2007, the Clean Water SRF had provided approximately \$62.9 billion in financial assistance to local communities and the Drinking Water SRF approximately \$11.0 billion. EPA has the responsibility to oversee the States, and ensure that States operate the SRF programs to meet the intent of the Clean Water Act and Safe Drinking Water Act.

In response to a risk assessment conducted by the EPA Office of Inspector General's (OIG) Office of Investigations,<sup>1</sup> EPA identified several areas of potential risk in the grants area. Major concerns included false claims, false statements, cost mischarging, product substitution, lack of proper oversight, and lack of internal controls. As shown in Figure 1, false statements, false claims, embezzlement, and financial theft accounted for 81 percent of grant fraud allegations. As of Fiscal Year 2006, over 31 percent of all assistance agreement investigations the Office of Investigations conducted involved SRFs. State and EPA personnel involved in the SRF are the front-line defense against fraud to the extent that they can recognize and report potential fraud.

**Figure 1: Grant Fraud Allegations**



Source: OIG analysis.

<sup>1</sup> Financial Fraud Criminal Risk Assessment, July 1, 2007.

The community is responsible for all aspects of the project, from concept, design, construction, and operations. Successful completion of a project requires the community to have procedures to manage and review all aspects of the project. One of the objectives of a system of internal controls is to safeguard the assets of an entity against loss and ensure that transactions are valid.

### ***Single Audit Act Established Subrecipient Monitoring***

Congress passed the Single Audit Act to improve auditing and management of federal funds provided to State and local governments. The Single Audit Act requires an organization-wide financial audit that includes all federal programs and an audit of the entity's compliance with laws and regulations of each major federal program if the entity spends more than \$500,000 in federal funds during the year.

Office of Management and Budget (OMB) Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations," sets audit and reporting standards for single audit reports. OMB's Compliance Supplement, Part 3, identifies State responsibilities, monitoring activities typically performed, audit objectives, and suggested audit procedures.

States are required to:

- Identify the federal award information and applicable compliance requirements to the subrecipient.
- Monitor the subrecipient's use of federal awards through reporting, site visits, regular contact, or other means.
- Ensure that subrecipients expending \$500,000 or more in federal awards during the year have met the audit requirements of OMB Circular A-133.

### ***EPA Annual Reviews***

EPA's responsibility for subrecipient monitoring is to oversee the States. EPA needs to understand how the States monitor the subrecipients, and determine whether the States comply with the subrecipient monitoring requirements of the Single Audit Act. The Clean Water Act and Safe Drinking Water Act require EPA to conduct an annual review to assess how a State meets the program objectives. The primary objectives of EPA's annual review are to determine how the State meets the intent of the Clean Water Act and Safe Drinking Water Act, and evaluate the State's performance.

## **Scope and Methodology**

We conducted this performance audit in accordance with generally accepted government auditing standards. 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.

We conducted our audit field work from December 2007 to September 2008 in EPA Headquarters and Regions 4, 5, and 9. We sent a survey to all EPA regional SRF coordinators. We also prepared a survey that we sent to nine States to determine what specific procedures States used to monitor subrecipients. We received 13 responses to our State questionnaires. We also conducted site visits in four other States to determine how the particular State documented its subrecipient monitoring procedures. We interviewed several SRF coordinators and State personnel.

We reviewed State-wide single audit reports for 26 States for fiscal years ended 2005 and 2006 (the latest available) to determine how many of those States included audit findings on subrecipient monitoring. We also reviewed audits for States that conduct separate audits of the SRF program.

We reviewed 87 investigative files for all investigations completed by the Office of Investigations between October 1, 2003, and September 30, 2007, that dealt with SRFs. These investigations included allegations against the community, a subcontractor, and various other matters.

We issued a prior report that addressed SRF Best Practices, *South Carolina State Revolving Fund Subrecipient Loan Monitoring* (Report No. 2001-S-000745-000001), on October 12, 2000.

## States Comply with Subrecipient Monitoring Requirements

In general, the States we reviewed complied with the subrecipient monitoring requirements of the Single Audit Act. As shown in Table 1, at least 82 percent of the States reviewed met the most critical elements of subrecipient monitoring, with the exception of identifying the federal award information. The States reviewed have systems and procedures in place that provide reasonable assurance to prevent or detect fraud or other irregularities.

EPA's annual review only checks to see if the States require an annual audit as part of the subrecipient monitoring process. All States surveyed and visited require SRF

borrowers to conduct financial statement audits. One of the most important functions of an audit is to review and test the controls in place. The auditor's report on internal controls provides assurance that the controls are adequate, and the State can rely on the financial information presented by the community. While a financial statement audit may not prevent fraud, current auditing standards<sup>2</sup> require that audits consider the possibility of fraud when planning the audit and designing audit tests.

**Table 1: Critical Monitoring Elements**

Element	States	Percentage
<b>Award identification</b>	10	59
<b>During the award monitoring:</b>		
<i>Regular contact and monitoring</i>	16	94
<i>Review reimbursement requests</i>	17	100
<i>Engineer/contractor certifications</i>	16	94
<i>Site visits/project inspections</i>	14	82
<b>Subrecipient audits</b>	17	100
<b>Audit of State SRF</b>	14	82

Source: OIG analysis

<sup>2</sup> Statement on Auditing Standards No. 99, *Consideration of Fraud in a Financial Statement Audit*.

States perform several tasks that EPA’s annual review does not review. Monitoring a project is an on-going process, and there are many different methods of monitoring besides requiring an annual audit (for example, how States reimburse borrowers). States we reviewed require that the borrowers submit invoices, contractor billings, and other documentation to support the request. The project manager then reviews the contractor and engineering billings for the technical aspects of the request, and must approve them before reimbursing the community. These procedures protect SRF assets and make sure the borrower and its contractors are progressing as planned, using specified materials, and billing for work actually completed.

## **Best Practices and Noteworthy Achievements**

Our review disclosed several practices that may be of benefit to other States. These practices address common issues and concerns. Some of these practices deal with the technical or project side of the SRF, such as monitoring construction projects. Others deal with the financial end of the SRF, such as reviewing and analyzing financial reports. These practices help provide the States with the assurances that projects are being constructed according to the intent of the SRF, and that the subrecipients maintain the means to repay the loans according to the terms. The States that developed and implemented these “Best Practices” have offered to provide other interested States with whatever assistance they may need to implement similar procedures.

### ***Technical Best Practices***

A common comment in our surveys and site visits concerned project inspections. Several States cited the lack of personnel and limited travel funds as the main reasons they cannot conduct regular inspections. Rising fuel costs have increased airfares and vehicle costs dramatically, plus have reduced the number of flights or eliminated them altogether, especially to smaller market areas. The only alternative is to travel by car, which can involve hundreds miles and extensive travel hours, especially in the larger States. Adding in costs for lodging and several days to inspect just one project, some States stated it is not cost effective to send an engineer to inspect a project. Thus, the challenge facing States is how to cost effectively ensure that projects are completed according to the plans and specifications, as well as complying with monitoring requirements.

The solution California and Alaska developed is to use technology in innovative ways that allow them to comply with the subrecipient monitoring requirements. California and Alaska use e-mail and the Internet to ensure that communities complete their projects according to the approved plans and specifications while limiting personnel and travel costs.

### **California**

A project engineer in California developed a “Construction Report” several years ago that communities were required to complete on a monthly basis. These reports are generally in electronic form, and the community sends the report to the project manager via e-mail. While the Construction Report does not take the place of an actual on-site project inspection, it does provide detailed information so that the project manager can keep

abreast of construction progress, identify potential problems, and track time schedules. The Construction Report includes:

- A summary of progress to date, including a detailed description of progress since the last report.
- The percentage of construction that is complete, the percentage the contractor has billed, and the percentage of the schedule that has elapsed.
- A listing of change orders, including amount of the change order, description of work performed, change in contract amount, and changes in the time schedule.
- A discussion of problems encountered and proposed resolutions, a schedule for resolution of the problems, and an update on the status of previous problems.

The resident engineer generally completes the Construction Report on behalf of the borrower. Most construction reports include photographs of the construction as completed. For example, photo 1, which was included in a recent Construction Report, shows workers finishing the bottom of a secondary clarifier at the Ellis Creek Water Recycling Facility, City of Petaluma, California. The photograph allows the project manager to see the construction activity in progress and the construction techniques and methods used. The project manager can then make an assessment on the percentage completed, and compare to progress payments made to date.



Photo 1: Construction of secondary clarifier, City of Petaluma, California (photo courtesy City of Petaluma).

Whether the project is across town or across the State, the efficiency of the Construction Report is apparent. This report has allowed project managers to track the progress of a project without incurring any additional costs in personnel or travel. Due to the success of the Construction Report, California includes the requirement to prepare and submit such reports in its loan agreements for all borrowers. The report documents work performed, and can help prevent potential problems in the future. Further, the project manager can request additional information if the manager has questions or concerns noted in the report. Using the Internet, the project manager can get the information within minutes instead of waiting until the next inspection.

Several California communities also include progress and details of current construction projects on the Internet. For example, the City of Lompoc updates the progress of its wastewater plant upgrade monthly, and includes updates from March 2007 to the current

month. The following is a sample of construction projects posted on official community internet Websites:

<http://www.cityoflompoc.com/departments/utilities/wastewater.htm>

<http://www.reedley.com/publicworks/wastewater.htm>

<http://www.cityofpetaluma.net/waterrecycling/construction.html>

## Alaska

While Alaska performs regular inspections, the size of Alaska, plus the fact that many locations are not accessible by road, severely limits how often Alaska conducts project inspections. Alaska project managers communicate with borrowers frequently by telephone, but Alaska officials said the development of e-mail has made the biggest difference in being able to track remote projects. Photo 2 shows construction activity at the Nome Water and Sewer Project, over 1,100 miles from the project manager in Juneau. Alaska can obtain such information almost instantly by e-mail, and can address questions and problems quickly and efficiently. The ability to obtain written status reports quickly with attached documentation and photographs has minimized the need to travel into the field for inspections. Alaska uses these e-mails, documentation, and photographs as part of the official State files.



Photo 2: Nome Water and Sewer Project, Nome, Alaska (photo courtesy Alaska Department of Environmental Conservation).

### ***Financial Best Practices***

All States included in our surveys require borrowers to conduct a single audit and submit the audit reports to the State. While States are expected to review the audit reports, the level of review varies widely among the States. Two States we reviewed (South Carolina and Indiana) perform extensive analyses of subrecipient financial statements and proactively use the financial information to help manage their loan portfolios. While the two States have different approaches to monitoring the financial aspects of the SRFs, they have common elements in that they both:

- Take a pro-active role in reviewing and analyzing audits of subrecipients;
- Use historical information to predict and prevent future problems from occurring;

- Contact the communities when the reviews show that key ratios are in danger of falling below State minimums, and
- Actively work with communities to address potential problems.

## South Carolina

South Carolina's SRF program is jointly administered by the State's Department of Health and Environmental Control (DHEC) and the South Carolina Water Quality Revolving Fund Authority, through the State Budget and Control Board's Office of Local Government. DHEC is responsible for administering the technical and program activities of the SRF program, and the Office of Local Government is responsible for all financial and management functions, including credit approval and loan monitoring. This joint administration of the SRF maximizes the strengths and expertise of both DHEC and the Office of Local Government. We had issued a Best Practices report on South Carolina's subrecipient monitoring practices in October 2000 (Report No. 2001-S-000745-000001).

Revenues generated by the utility systems are the sole security for most SRF loans in South Carolina. Therefore, making good credit decisions and actively monitoring loans is particularly important for South Carolina's SRF program. Credit decisions begin with an analysis for the loan approval process and end with the loan repayment. The process involves the following major stages:

- **Credit analysis:** Determining the current and future financing needs of the borrower, how to meet these needs, how the borrower can repay the loan, and the key factors critical to repayment.
- **Loan Structuring:** Determining how to structure the loan to meet the borrower's needs while meeting SRF legal requirements and minimizing risks to the SRF.
- **Loan Monitoring:** Designing a system to monitor and control the credit risk factors throughout the life of the loan.

The Office of Local Government uses various means to monitor loan recipients. It analyzes the audited financial statements to make sure that the community still meets the established debt coverage, and that nothing has changed that would affect the community's ability to repay the loan. A financial database is prepared that calculates and tracks a variety of key ratios and financial trends for each borrower. They also use a database to make projections for the next 4 years and, when they receive the actual information, compares to the projections.

By continuously monitoring the financial condition of the borrower and making projections, program management can anticipate how potential changes may affect the borrower's ability to repay the loan. Such projections help provide sufficient time to meet with the community and discuss possible courses of actions that will prevent problems in meeting the obligation.

## Indiana

The Indiana Finance Authority (IFA) operates Indiana's SRF program. IFA has established a monitoring program that tracks all financial aspects of loans to ensure that borrowers conduct audits, maintain required debt coverage ratios, and can make scheduled loan payments according to the loan agreement. As IFA awards a new loan, it enters the loan information into a database to track when audits are due and notes the most recent loan closing date, status of the loan, date of most recent financial statements, and the auditor's opinion on the most recent financial statements.

IFA also has a system for ensuring that borrowers conduct audits when required. IFA sends a list to the Indiana State Board of Accounts (the State auditor), who will perform audits of communities at least every 3 years if they do not conduct an annual audit. IFA also tracks the amount of federal funds in each disbursement so the community, as well as IFA, can track when the OMB Circular A-133 threshold of \$500,000 is met. They will also audit private borrowers under the Drinking Water SRF if requested.

As IFA receives the financial statements, key financial information is entered and various ratios calculated. IFA analyzes net operating income, debt service (interest and principal), current ratios, user charges, and cash flow to see if the community is maintaining the required coverage. IFA also encourages new applicants to set up their debt service reserve with IFA's trustee. As a result, IFA is able to monitor communities on a monthly basis. Moreover, IFA contacts all borrowers at least annually to ensure that borrowers maintain their debt service reserve balances. If the debt service ratio drops below IFA requirements, IFA will call the community and discuss options to get the ratio up to the agreed minimum coverage ratio. The options discussed may include reducing expenses, rate increases, or other means. In some cases, IFA may require that the community move its debt service funds to IFA's trustee bank so it can have some control over any disbursements.

### Minor Improvements Needed

Even though the States generally comply with the subrecipient monitoring requirements of the Single Audit Act, Clean Water Act, and Safe Drinking Water Act, certain improvements can be made, as discussed below.

#### ***Award Identification***

The Single Audit Act requires that States inform assistance recipients of the Catalogue of Federal Domestic Assistance title and number, award name and number, award year, and name of federal agency. Only 10 of the 17 States surveyed include this required information in loan documents. While all States reviewed require subrecipients to conduct annual audits, the intent of this requirement is to ensure that SRF recipients are aware of when a single audit is required, and specific requirements imposed on them by federal laws, regulations, and grant provisions.

***EPA Annual Review***

The purpose of EPA's Annual Review is to assess how each State is meeting the intent of the Clean Water Act and Safe Drinking Water Act, and whether the State complies with applicable laws and regulations. EPA's Annual Review guidance includes eight required program elements, nine financial elements, and three required elements for the set-aside funds in Drinking Water SRF. However, none of these required elements addresses the States' subrecipient monitoring process.

# **Status of Recommendations and Potential Monetary Benefits**

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status <sup>1</sup>	Action Official	Planned Completion Date	Claimed Amount	Agreed To Amount
No recommendations							

<sup>1</sup> 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**

***Distribution***

Office of the Administrator  
Assistant Administrator, Office of Water  
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