

Management Implication Report: Poor Data Management Hinders Oversight of State Clean and Drinking Water Revolving Fund Programs

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OFFICE OF INSPECTOR GENERAL
U.S. ENVIRONMENTAL PROTECTION AGENCY

October 28, 2024

MEMORANDUM

SUBJECT: Management Implication Report: Poor Data Management Hinders Oversight of State Clean and Drinking Water Revolving Fund Programs

FROM: Adam Seefeldt, Acting Assistant Inspector General *AS*
Office of Strategic Analysis and Results

TO: Bruno Pigott, Principal Deputy Assistant Administrator
Office of Water

Purpose: The U.S. Environmental Protection Agency Office of Inspector General, or OIG, has identified concerns regarding how some states collect and store subrecipient and contractor data for the Clean Water State Revolving Fund, or CWSRF, and Drinking Water State Revolving Fund, or DWSRF, programs. Some states are collecting and storing their CWSRF and DWSRF subrecipient and contractor data in unstructured or nonmachine-readable formats. Data that are not collected or stored in a structured database or machine-readable format can be difficult to access and can significantly inhibit the ability to use data analytics for proactive oversight of the state revolving funds. We conducted this work in accordance with the *Quality Standards for Federal Offices of Inspector General* published in August 2012 by the Council of the Inspectors General on Integrity and Efficiency, as well as our own internal standards.

Background: Congress annually appropriates funds for the CWSRF and DWSRF programs. The EPA then provides capitalization grants to the 50 states and Puerto Rico, later referred to simply as the states. Through their CWSRFs and DWSRFs, the states are pass-through entities that in turn provide funds to subrecipients. This funding allows subrecipients, usually local government entities such as cities or municipalities, to either complete the project work themselves or to hire contractors to perform the work. The states most commonly provide these funds to subrecipients in the form of loans for eligible projects. The subrecipients repay the loan principal and interest back into the CWSRFs and DWSRFs, replenishing the funds and allowing the states to fund future infrastructure projects.

In addition to the funds received through its annual appropriations, the EPA will receive \$43.4 billion over five years to allocate to states for their CWSRF and DWSRF programs through the Infrastructure Investment and Jobs Act, Pub. L. No. 117-58 (2021). According to the EPA's [website](#), this is "the single largest investment in water that the federal government has made."

U.S. Office of Management and Budget Memorandum No. [M-22-12](#), *Advancing Effective Stewardship of Taxpayer Resources and Outcomes in the Implementation of the Infrastructure Investment and Jobs Act*, dated April 29, 2022, provides implementation and oversight guidance for agencies receiving Infrastructure Investment and Jobs Act funds. In particular, the Office of Management and Budget noted that “agencies should proactively engage with their inspector generals to identify major cross-cutting risks through the use of data analytics and risk assessments.” This risk-based approach “can reduce the need for costly, after-the-fact remediation or enforcement.” The Office of Management and Budget also noted that, consistent with 2 C.F.R. § 200.336, agencies should collect, transmit, and store federal award-related information in “open and machine-readable formats” rather than in closed formats or on paper. As set forth in 2 C.F.R. § 200.336, *machine-readable format* is defined as “a format in a standard computer language (not English text) that can be read automatically” by a computer system. This provision also states that, in addition to federal agencies, pass-through entities, recipients, and subrecipients should, whenever practicable, collect, transmit, and store federal award-related data in such formats.

Shortly after the OMB issued Memorandum No. M-22-12, the EPA finalized a rule that relieved the state revolving funds from engaging in regulatorily required monitoring of their subrecipients.¹ Specifically, the EPA directed that “[r]equirements for subrecipient monitoring and management at 2 CFR 200.331 through 200.333 do not apply to loan, loan guarantees, interest subsidies and principal forgiveness, purchases of insurance or local government debt or similar transactions with borrowers by recipients of Clean Water State Revolving Fund (CWSRF) capitalization grants and Drinking Water State Revolving Fund (DWSRF) capitalization grants.” These requirements, which no longer apply to the states, required, among other things, that a pass-through entity like the state revolving funds “[e]valuate each subrecipient's fraud risk and risk of noncompliance with a subaward to determine the appropriate subrecipient monitoring [under the regulation].”²

In early 2024, our Data Analytics Directorate sent each of the states a survey requesting information on how each CWSRF and DWSRF program collects and stores subrecipient and contractor data.³ We asked the states whether they collected data using structured formats, such as an online portal, or unstructured formats, such as paper documents. We also asked the states whether they stored CWSRF and DWSRF data using machine-readable formats, such as a structured database, or in nonmachine-readable formats, such as unstructured electronic filing systems or paper filing cabinets. Knowing which states have data stored in machine-readable formats would allow us to take steps to automate data analytical processes for proactive oversight.

¹ 2 C.F.R. § 1500.3(b).

² 2 C.F.R. § 332(c).

³ The Inspector General Act of 1978, the Uniform Guidance, and recent updates to the state revolving fund terms and conditions all provide that the OIG is entitled to timely access to recipient and subrecipient information. Only 42 states provided information in response to the survey. Most of the respondents provided information for both their CWSRF and DWSRF programs, but some only provided information on one of those programs. Nine states failed to provide the OIG with the information we requested. U.S. territories and the District of Columbia are not included in this report’s analysis.

Concerns: According to the results of our survey, states are not uniformly collecting and storing CWSRF and DWSRF subrecipient and contractor data in structured machine-readable formats. Data that are collected and stored in paper formats or nonmachine-readable formats significantly limits the ability to conduct data analytics for proactive oversight of the state revolving fund programs. Thousands of subrecipients, such as local governments, have received CWSRF and DWSRF awards in recent years. These subrecipients often hire contractors to perform work, and it is not uncommon that a single infrastructure project would have several contractors working on it. To provide oversight of the awards process, project performance, and contractor payments, it is essential to analyze losing and winning bid data, contract agreements, and billing and invoice information to identify any potential fraud, waste, abuse, or mismanagement within the program. States that collect and store contractor data in unstructured formats, such as scanned PDFs, make it difficult for us to execute automated data analytical reviews and necessitate our use of more resources and manual effort to conduct our oversight responsibilities.

Six States Only Use Paper or Nonreadable Documentation for Subrecipient and Contractor Data

The survey responses indicate that six states, whose combined assets as of 2022 totaled over \$3.4 billion in state revolving funds, are only collecting paper documentation for CWSRF and DWSRF subrecipient and contractor data. Of these six states, four upload scanned hardcopies of the paper documents and store them in an electronic filing system, but the content is not necessarily searchable or structured. Two states store CWSRF and DWSRF paper documentation in file cabinets and binders, making the information the least accessible and searchable. Reviewing and copying data stored in this manner is extremely time consuming and would potentially require staff to travel to the facilities housing this information.

Of the six states that either store hard copies or that store information in a nonreadable format, only one has an online portal for subrecipients to upload their documents. None of those states have portals for contractors of the subrecipients to submit or upload their documentation. Online portals could allow the states to structure and store the information in a database that is searchable. Moreover, structuring the data would allow states to conduct proactive data analytics to detect and prevent potential fraud. In this instance, the state with the online portal is using it to push the documents into an electronic filing system and is not structuring any of the critical data elements, such as subrecipient contact information or project location, or storing those elements in a searchable database.

This raises concerns similar to those we identified in March 2024 in Report No. [24-N-0027](#), *Management Implication Report: The EPA Has Insufficient Internal Controls for Detection and Prevention of Procurement Collusion*, emphasizing the importance of structuring procurement data for the purposes of detecting and preventing fraudulent, collusive contractor behavior. For example, collecting and structuring losing and winning bid proposal data would allow for proactive data analytics that could detect and prevent procurement fraud, such as bid rigging. This same principal applies to the states and their collection and storage of subrecipient and contractor data. Procurement fraud can artificially raise

project costs, thereby reducing the number of infrastructure projects that could have been executed to benefit local communities. Our ability to provide proactive oversight of the subrecipients procurement processes is significantly hindered without structured contractor data that can be examined using automated data analytical processes.

States Use Databases but Are Not Using Data Analytics

Thirty-six of the states that responded to the survey use structured databases to store and collect their subrecipient and contractor data or a combination of a structured database and an electronic filing system. Some of these states have online portals where subrecipient and contractor information can be entered and stored in a database. Nine of those states collect and store contractor data down to the bids for each contract awarded. We met with one state to discuss its CWSRF and DWSRF data and learned that, prior to the Coronavirus Disease-19 pandemic, it had only been collecting and storing information using paper documentation. During the pandemic-related shift to remote work, the state moved away from paper documentation and started using an online portal to collect and store information in databases.

We met with some of the states who use structured databases to understand how they analyze their subrecipient and contractor data. None of those states were using data analytics to detect or prevent procurement fraud or bid rigging. One state mentioned that it often sees the same contractors performing infrastructure work but has not performed any data analytics to detect potential bid rigging in the award process.

OIG Oversight of the CWSRF and DWSRF Programs Moving Forward

Our survey was the first time we have assessed how the 50 states are collecting and storing their subrecipient and contractor data for their CWSRF and DWSRF programs. Based on the results showing most states are using structured databases to store subrecipient and contractor information, we have begun engaging some states to access their structured databases for potential oversight projects. In furtherance of our [Year of Fighting Fraud](#) initiative, we will continue to meet with the states to discuss their CWSRF and DWSRF data collection and storage processes and develop proactive data analytics methodologies to assist in our future oversight activities.

OMB Memorandum M-22-12 expressly directs federal agencies to “[e]xplore alternatives to new data collection, tracking, and reporting, including cross-agency and intergovernmental data sharing, data modeling, or other approaches that may provide sufficient specificity.” As a steward of taxpayer dollars, the EPA should explore what steps it could take so that states and subrecipients are collecting and storing federal award-related information in open and machine-readable formats rather than in closed formats such as paper documents. When the states and subrecipients are collecting and storing data in machine-readable formats, data analytics can be performed to reduce the need for costly, after-the-fact remediation or enforcement associated with program fraud, waste, abuse, or mismanagement.

My office is notifying you of these concerns so that the Agency may take whatever steps it deems appropriate. If you decide it is appropriate for your office to take or plan to take action to address these matters, we would appreciate notification of that action. Should you have any questions regarding this report, please contact me at (202) 819-3586 or seefeldt.adam@epa.gov, or the Office of Strategic Analysis and Results Data Analytics Directorate Acting Director Daniel Porter at [REDACTED] or porter.daniel@epa.gov.

cc: Sean W. O'Donnell, Inspector General
Nicole M. Murley, Deputy Inspector General



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U.S. Environmental Protection Agency

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