



OFFICE OF INSPECTOR GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

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Ensuring clean and safe water

The EPA Needs to Fully Address the OIG's 2018 Flint Water Crisis Report Recommendations by Improving Controls, Training, and Risk Assessments

Report No. 22-P-0046

May 17, 2022



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Abbreviations:	C.F.R.	Code of Federal Regulations
	EPA	U.S. Environmental Protection Agency
	LCR	Lead and Copper Rule
	OECA	Office of Enforcement and Compliance Assurance
	OIG	Office of Inspector General
	OW	Office of Water
	PWSS	Public Water System Supervision
	RAV	Report a Violation
	SDWA	Safe Drinking Water Act
	U.S.C.	United States Code

Cover Image: Water treatment plant, Flint, Michigan. (EPA OIG image)

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Office of Inspector General U.S. Environmental Protection Agency **At a Glance**

22-P-0046
May 17, 2022

Why We Did This Audit

The U.S. Environmental Protection Agency's Office of Inspector General conducted this audit to determine whether the EPA implemented agreed-upon corrective actions in response to [OIG Report No. 18-P-0221, Management Weaknesses Delayed Response to Flint Water Crisis](#), issued July 19, 2018, as well as whether those actions effectively addressed the identified program deficiencies.

After Flint, Michigan, switched its drinking water supply in April 2014, inadequate treatment of the water exposed residents to lead. Due to EPA, state, and city oversight lapses, this contamination was not identified or mitigated in a timely manner. To improve the EPA's oversight of state drinking water programs and response to drinking water emergencies, our 2018 report issued nine recommendations: five jointly to the Offices of Water and Enforcement and Compliance Assurance, one to the Office of Water, and three to EPA Region 5.

This audit supports EPA mission-related efforts:

- *Ensuring clean and safe water.*
- *Compliance with the law.*
- *Operating efficiently and effectively.*

This audit addresses a top EPA management challenge:

- *Integrating and leading environmental justice, including communicating risks.*

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[List of OIG reports.](#)

The EPA Needs to Fully Address the OIG's 2018 Flint Water Crisis Report Recommendations by Improving Controls, Training, and Risk Assessments

What We Found

The EPA certified that it completed corrective actions to address all nine recommendations issued in our 2018 report. However, the EPA's corrective actions for three recommendations—Recommendations 1, 6, and 8—did not fully address the identified deficiencies in oversight. Specifically:

- The Office of Water did not establish controls to require that states are monitoring water system compliance with all Lead and Copper Rule requirements.
- The Office of Enforcement and Compliance Assurance could not confirm who received training on Safe Drinking Water Act tools and authorities.
- The Office of Enforcement and Compliance Assurance did not incorporate functions into its Report a Violation system to assess risks associated with citizen tips and to track resolution of these tips.

Without complete oversight of the drinking water program, the public's health is still at risk from lead in drinking water.

The Safe Drinking Water Act gives the EPA emergency authority to act when a contaminant may present an "imminent and substantial endangerment" to human health and when the appropriate state and local authorities have not acted to protect the public. Because the EPA did not fully implement corrective actions addressing the 2018 OIG report, residents whose homes are served by lead service lines may continue to be exposed to lead in drinking water, EPA personnel may not be familiar with how to employ Safe Drinking Water Act tools and authorities, and citizens' tips may not be effectively monitored and used to alert the EPA of public health concerns.

Recommendations and Planned Agency Corrective Actions

In response to this follow-up audit, the Office of Water began requiring EPA regions to annually review whether states monitor water system compliance with the Lead and Copper Rule. We therefore consider the corrective action for Recommendation 1 of our 2018 report complete. To fully address Recommendations 6 and 8 of our 2018 report, we make two recommendations for the assistant administrator for Enforcement and Compliance Assurance to document Safe Drinking Water Act training attendance and to enhance the Report a Violation system to assess and track citizen tips. The EPA agreed with the training recommendation, which is resolved with corrective actions pending. Based on the Agency's response to our draft report, we revised the recommendation related to the Report a Violation system; that recommendation is unresolved with resolution efforts in progress. Where appropriate, we revised the report based on technical comments provided by the EPA.



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

THE INSPECTOR GENERAL

May 17, 2022

MEMORANDUM

SUBJECT: The EPA Needs to Fully Address the OIG's 2018 Flint Water Crisis Report Recommendations by Improving Controls, Training, and Risk Assessments
Report No. 22-P-0046

FROM: Sean W. O'Donnell

A handwritten signature in blue ink that reads "Sean W O'Donnell".

TO: Lawrence Starfield, Acting Assistant Administrator
Office of Enforcement and Compliance Assurance

Radhika Fox, Assistant Administrator
Office of Water

This is our report on the subject audit conducted by the Office of Inspector General of the U.S. Environmental Protection Agency. The project number for this audit was [OA-FY21-0123](#). This report contains findings that describe the problems the OIG has identified and corrective actions the OIG recommends. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

The EPA's Office of Enforcement and Compliance Assurance and Office of Water are responsible for the issues discussed in the report. However, this report issued recommendations to only the Office of Enforcement and Compliance Assurance. In accordance with EPA Manual 2750, the Office of Enforcement and Compliance Assurance provided acceptable corrective actions and estimated milestone dates for Recommendation 1. This recommendation is resolved.

Action Required

Recommendation 2 is unresolved. The resolution process, as described in the EPA's *Audit Management Procedures*, begins immediately with the issuance of this report. Furthermore, we request a written response to the final report within 60 days of this memorandum. Your response will be posted on the OIG's website, along with our memorandum commenting on your response. Your response should be provided as an Adobe PDF file that complies with the accessibility requirements of Section 508 of the Rehabilitation Act of 1973, as amended. The final response should not contain data that you do not want to be released to the public; if your response contains such data, you should identify the data for redaction or removal along with corresponding justification.

We will post this report to our website at www.epa.gov/oig.

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Chapter 1

Introduction

Purpose

The U.S. Environmental Protection Agency’s Office of Inspector General [initiated](#) this follow-up audit to EPA OIG Report No. [18-P-0221](#), *Management Weaknesses Delayed Response to Flint Water Crisis*, issued on July 19, 2018, to determine whether the:

- EPA implemented corrective actions to close the resolved recommendations.
- Corrective actions taken effectively addressed the identified program deficiencies.

Top Management Challenge Addressed

This audit addresses the following top management challenge for the Agency, as identified in OIG Report No. [22-N-0004](#), *EPA’s Fiscal Year 2022 Top Management Challenges*, issued November 12, 2021:

- Integrating and leading environmental justice, including communicating risks.

Background

In April 2014, the water system for Flint, Michigan, which serves drinking water to a population of nearly 100,000 residents, switched from purchasing treated water from the Detroit Water and Sewerage Department to sourcing its water supply from the Flint River. The City of Flint’s process for treating water from the river did not include a method to prevent corrosion of lead-containing components in the water-distribution system, which allowed lead to begin leaching into drinking water. After the source switch, Flint residents began reporting issues with the quality of their water.



Flint River, Flint, Michigan. (EPA image)

Safe Drinking Water Act

The Safe Drinking Water Act, or SDWA, as amended, 42 U.S.C. § 300f et seq., gives the EPA administrator the authority to protect public health by setting and enforcing drinking water regulations. These regulations are codified at 40 C.F.R. parts 141–143. The EPA, states, territories, tribes,¹ and water systems work together to ensure that water systems comply with these regulations. Under SDWA, the EPA has issued regulations that address more than 90 contaminants, including lead, and set legally enforceable standards and treatment techniques that limit contaminant levels in drinking water. The EPA also provides the public with information about drinking water, collects drinking water data, and oversees state drinking water programs.

¹ Hereafter, we use the term *state* to refer to *state, territory, and tribe* when discussing delegated authority.

SDWA allows the EPA to grant **primacy** to states that meet certain requirements. Primacy states have the primary authority to implement and enforce federal SDWA regulations. To be granted primacy, a state must show it will adopt standards that are at least as stringent as the EPA’s standards and ensure that its water systems meet those standards. The designated agency within each primacy state, also known as the **primacy agency**:

- Ensures water systems test for contaminants.
- Reviews plans for water system improvements.
- Conducts on-site inspections and sanitary surveys.
- Provides training and technical assistance.
- Takes action against water systems that do not meet the standards.

The EPA retains enforcement oversight authority to ensure that primacy agencies and water systems comply with SDWA. Section 1414 of SDWA gives the Agency the authority to issue an administrative order to or commence a civil action against a water system that does not comply with applicable requirements if, after 30 days of notifying the state, the state does not act. Section 1431 of SDWA gives the EPA emergency authority to act when a contaminant may present an “imminent and substantial endangerment” to human health and the appropriate authorities have not acted to protect the public.

In addition to oversight, the EPA assists primacy agencies in implementing SDWA by providing grants that help primacy agencies develop and implement state-level Public Water System Supervision, or PWSS, Programs that adequately enforce the requirements of SDWA and ensure their water systems comply with SDWA regulations.

SDWA Regulations for Lead in Drinking Water

SDWA regulations for lead—which are known as the “Lead and Copper Rule,” or LCR, and are found at 40 C.F.R. part 141, subpart I—set treatment techniques for lead in drinking water. The EPA originally established the LCR in 1991 to protect public health and reduce exposure to lead in drinking water. Lead enters drinking water mainly from the corrosion of lead-containing components in the water-distribution system. The EPA estimates that drinking water can make up 20 percent or more of a person’s total exposure to lead. The EPA established a goal of no lead in drinking water.

Health Effects of Lead

Lead has acute (short-term) and chronic (long-term) impacts on the body. Exposure to lead is known to present serious health risks to the brains and nervous systems of children. Lead exposure also causes damage to the brain and kidneys. In addition, lead exposure can interfere with the production of red blood cells, which carry oxygen to all parts of the body.

Instead of setting an enforceable maximum contaminant level for lead, the LCR established an action level and complex sampling requirements that are intended to protect the public from exposure to lead in drinking water.² The LCR requires all large water systems, as well as small- and medium-size water systems with amounts of lead in their water that exceed the action level, to regularly monitor for changes in lead concentration. This requires the water systems to identify targeted sampling sites, such as single-family homes, that are served by lead service lines. The highest-priority sampling sites are

² The LCR requires water systems to take action when the level of lead in the drinking water exceeds the *action level* of 15 micrograms per liter.

identified as **Tier 1 sampling sites**. Water systems must have the expertise and resources to accurately identify sampling locations and to correctly collect and analyze the water samples.

The LCR also requires water systems to optimize **corrosion control**, which is a treatment method used to minimize the amount of lead leaching from components within the distribution system into the drinking water. If the amount of lead in the water exceeds the action level, the water system is required to optimize and maintain **continuous corrosion-control treatment**. The LCR does not prescribe specific corrosion-control treatments. Instead, the LCR provides a range of methods that water systems can use.

In 2021, the EPA revised the LCR to strengthen the rule and further reduce public exposure to lead in drinking water. According to the revised LCR, implementation of the revisions will better identify when and where lead contamination occurs or has the potential to occur. The LCR revisions require water systems to take actions to address lead contamination more effectively and sooner than under the previous rule, to follow improved sampling procedures, to replace lead service lines, and to identify distribution system materials.

The OIG Identified Deficiencies That Contributed to the Flint Water Crisis and Issued Recommendations for Improvement

In 2018, EPA OIG Report No. [18-P-0221](#), *Management Weaknesses Delayed Response to Flint Water Crisis*, reported that the City of Flint did not adhere to LCR requirements to identify and maintain sampling sites and to install and maintain continuous corrosion-control treatment throughout its water-distribution system. We also identified deficiencies in the EPA's oversight of state drinking water programs, as well as in the EPA's response to drinking water contamination emergencies. In addition, we found that staff and managers in EPA Region 5—which oversees the PWSS Program in Michigan, as well as in Illinois, Indiana, Minnesota, Ohio, and Wisconsin—did not establish clear roles and responsibilities for the oversight and monitoring of Michigan's PWSS Program.

Our 2018 report made nine recommendations: five issued jointly to the EPA's Office of Water, or OW, and the EPA's Office of Enforcement and Compliance Assurance, or OECA; one issued to the OW; and three issued to EPA Region 5.³ Beginning on December 21, 2018, the Agency issued three separate **certification memorandums** to the chief financial officer certifying that it had completed corrective actions to address all nine recommendations.⁴ However, as we discuss in Chapters 2, 3, and 4 of this follow-up report, the Agency's corrective actions did not fully address the following three 2018 recommendations:

- **Recommendation 1:** The EPA should “[e]stablish controls to annually verify that states are monitoring compliance with all Lead and Copper Rule requirements, including accurately identifying tier 1 sampling sites and maintaining continuous corrosion control treatment.”

³ For eight recommendations, the Agency proposed acceptable corrective actions before we issued our final report, and we recorded these recommendations as resolved. Recommendation 1 remained unresolved when the report was issued, but the Agency subsequently proposed an acceptable corrective action in a November 13, 2018 [memorandum](#). We recorded our agreement with this corrective action in a December 7, 2018 [memorandum](#).

⁴ The certification memorandum from the OW, dated July 7, 2021, addressed Recommendations 1, 2, and 6–8; the certification memorandum from OECA, dated December 10, 2020, addressed Recommendations 6 and 9; and the certification memorandum from Region 5, dated December 21, 2018, addressed Recommendations 3–5.

- **Recommendation 6:** The EPA should “[p]rovide regular training for EPA drinking water staff, managers and senior leaders on Safe Drinking Water Act tools and authorities; state and agency roles and responsibilities; and any Safe Drinking Water Act amendments or Lead and Copper Rule revisions.”
- **Recommendation 8:** The EPA should “[c]reate a system that tracks citizen complaints and gathers information on emerging issues. The system should assess the risk associated with the complaints, including efficient and effective resolution.”

We disagree that the Agency completed the corrective actions for these three recommendations, and the Agency should not have closed these recommendations in its audit tracking system.

Appendix A details the recommendations from the 2018 report, summarizes the EPA’s proposed corrective actions, and provides our analysis of the EPA’s actions taken in response to the nine resolved recommendations.

Michigan Residents Continue to Be Exposed to Excessive Levels of Lead in Drinking Water

The residents of the City of Flint are not the only Michigan residents who have been exposed to excessive levels of lead in drinking water. The City of Benton Harbor’s water system, which serves nearly 10,000 residents, has had levels of lead in its drinking water that exceeded the action level. As of 2021, these excessive levels had persisted for three years, since 2018. On September 9, 2021, a petition for emergency action was submitted to the EPA on behalf of Benton Harbor residents. On September 30, 2021, the State of Michigan began providing free bottled water and distributing water filters to Benton Harbor residents. These efforts were followed by other actions to protect residents, including:

- Blood testing for lead.
- Services to find and remove lead hazards from homes.
- Water deliveries to students, teachers, and support staff in schools.
- Water deliveries to residents in multifamily dwellings.

In a joint, multiday inspection in September 2021, the EPA and the State of Michigan identified multiple violations of drinking water regulations. On November 2, 2021, using its authority under section 1414 of SDWA, EPA Region 5 issued an administrative order requiring that the City of Benton Harbor address these violations.

In a separate [audit](#), we are determining the extent to which the EPA followed its 2016 elevation policy memorandum, *Policy on Elevation of Critical Public Health Issues*, when responding to evidence of drinking water lead contamination in the water system for the City of Benton Harbor.

Responsible Offices

OECA works with EPA regional offices and in partnership with state governments and other federal agencies to enforce the nation’s environmental laws.

The OW works with EPA regional offices, other federal agencies, state and local governments, the regulated community, organized professional and interest groups, landowners and managers, and the

public at large to implement federal laws, such as SDWA. The OW also provides guidance, performs oversight, and facilitates communication among those involved in implementing laws and regulations.

Scope and Methodology

We conducted this performance audit from February 2021 to February 2022 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

We assessed the internal controls necessary to satisfy our audit objective.⁵ In particular, we assessed the internal control components—as outlined in the U.S. Government Accountability Office’s Green Book—significant to our audit objective. Any internal control deficiencies we found are discussed in this report.

To verify whether the Agency completed the agreed-to corrective actions in response to OIG Report No. [18-P-0221](#), we obtained an understanding of the deficiencies identified in the 2018 report and reviewed the report’s recommendations; the Agency’s proposed corrective actions; information from the Agency’s Enterprise Audit Management System, which is the EPA’s audit tracking system; and the Agency’s memorandums certifying the corrective actions as completed.

To determine whether the Agency’s corrective actions effectively addressed the deficiencies identified in our 2018 report, we interviewed staff in OECA; the OW; Region 5; the Office of Congressional and Intergovernmental Relations; and the Michigan Department of Environment, Great Lakes, and Energy, formerly known as the Department of Environment Quality. In addition, we reviewed applicable criteria relating to the nine recommendations issued in the 2018 OIG report. We also:

- Analyzed the requirements in SDWA and relevant regulations.
- Determined to what extent the OW revised its annual PWSS Program review protocols for EPA regions to verify that states are monitoring water system implementation of LCR requirements, including identifying Tier 1 sampling sites and maintaining continuous corrosion-control treatment.
- Analyzed the EPA regions’ PWSS Program reviews to determine whether monitoring of LCR requirements was included.
- Assessed whether Michigan’s PWSS Program review reports were publicly available.
- Analyzed the *Michigan Corrective Action Plan* from the 2018 PWSS Program review to determine to what extent Michigan was completing required activities.

⁵ An entity designs, implements, and operates internal controls to achieve its objectives related to operations, reporting, and compliance. The U.S. Government Accountability Office sets internal control standards for federal entities in GAO-14-704G, *Standards for Internal Control in the Federal Government* (also known as the “Green Book”), issued September 10, 2014.

- Reviewed and compared recent Michigan work plans to determine whether roles and responsibilities were clearly defined.
- Analyzed data on the various Region 5 incentive awards by fiscal year, type, and number of awards to determine to what extent awards were presented for human health and environmental issues.
- Reviewed OECA training materials to determine training topics and to verify that the training events were conducted. Assessed training participation to determine whether senior leaders were being trained.
- Assessed the National Compliance Initiative strategy and determined how it addresses the identification of risk for noncompliance.
- Reviewed OECA's standard operating procedure for the Report a Violation, or RAV, system and the OW's *Protocol for Addressing Water Quality Concerns from the Public* for the Safe Drinking Water Hotline system to determine how these tools are used to receive citizen tips, assess risks, and record resolutions.
- Analyzed EPA administrators' electronic messages issued in 2016, 2017, 2018, and 2021 to all EPA staff on the importance of elevating issues to determine whether the process for elevating issues was clearly defined, whether effective communication existed, and the extent to which the responses to elevated issues were timely and effective.

Prior Report

Before we issued Report No. [18-P-0221](#), we issued a management alert about the Flint water crisis, which was Report No. [17-P-0004](#), *Management Alert: Drinking Water Contamination in Flint, Michigan, Demonstrates a Need to Clarify EPA Authority to Issue Emergency Orders to Protect the Public*, issued October 20, 2016. In that report, we recommended that OECA update the EPA's 1991 guidance on section 1431 of SDWA. We also recommended that OECA require all relevant EPA drinking water and water enforcement program management and staff to attend training on the section 1431 authority. The Agency certified in August 2018 that all corrective actions were completed. Our follow-up audit did not assess whether the Agency's completed corrective actions addressed the recommendations of the 2016 report.

Chapter 2

The OW Did Not Establish Controls to Require that States Monitor Compliance with the LCR

The corrective action that the OW implemented in response to Recommendation 1 of our 2018 report, Report No. 18-P-0221, *Management Weaknesses Delayed Response to Flint Water Crisis*, did not fully address the recommendation. Specifically, the OW's 2020 revision to its annual PWSS Program review protocol—which EPA regions use to verify that states are monitoring water systems' compliance with SDWA requirements—made regional oversight of LCR compliance optional. Unless the EPA can ascertain that water systems are complying with all LCR requirements, communities across the United States may continue to be exposed to lead in drinking water.

OIG Report No. 18-P-0221: Recommendation 1

The EPA should “establish controls to annually verify that states are monitoring compliance with all Lead and Copper Rule requirements, including accurately identifying tier 1 sampling sites and maintaining continuous corrosion control treatment.”

In 2021, during the course of our follow-up audit, the OW further revised its annual PWSS Program review protocol to make regional oversight of LCR compliance mandatory and to specifically address Tier 1 sampling sites and continuous corrosion-control treatment. With these revisions, the OW has fully addressed Recommendation 1 of our 2018 report, and we now agree that the corrective action is complete.

LCR Requirements and 2018 Report Recommendation 1

The LCR requires primacy agencies to monitor water systems to ensure that they are adhering to all LCR requirements, including identifying Tier 1 sampling sites and maintaining continuous corrosion-control treatment. As shown in the green box above, Recommendation 1 of our 2018 report said that the EPA should establish controls to annually verify that states are monitoring whether water systems are adhering to these requirements. This recommendation was unresolved when the final report was published on July 19, 2018.

In a November 13, 2018 memorandum responding to the unresolved recommendation, the OW said that it would revise its annual PWSS Program review protocol “as needed to verify that states are implementing [LCR] requirements.” In a December 7, 2018 memorandum to the OW, the OIG accepted the OW's planned corrective action and changed the status of Recommendation 1 to resolved with corrective actions pending. In response to our follow-up audit, the OW issued a July 7, 2021 certification memorandum stating that the OW had completed the corrective action for Recommendation 1 by implementing a revised protocol in 2020. The certification memorandum also said that each region submits its annual PWSS Program review reports to the OW so that the OW can track the reviews.

The OW's Corrective Action Did Not Fully Address the 2018 Report Recommendation 1

While the OW took corrective action to monitor state oversight of water systems' implementation of LCR requirements, the action taken did not fully correct the deficiencies identified in our 2018 report.

Specifically, the 2020 revision to the OW’s PWSS Program review protocol did not make regional oversight of LCR compliance mandatory.

In response to our 2018 report Recommendation 1, the Agency, through its Drinking Water Oversight Workgroup, revised its annual PWSS Program review protocol that EPA regions use to assess the states’ PWSS Programs. The revised protocol, which was implemented in 2020, included a step addressing LCR compliance. However, this step made the oversight optional, and it did not specifically include reviews related to Tier 1 sampling sites or continuous corrosion-control treatment:

This review **could** [emphasis added] include a discussion of [LCR] implementation to ensure that states are monitoring compliance with all LCR requirements, including documenting systems out of compliance with the LCR.

The OW Believed the Corrective Action Addressed the 2018 Report Recommendation 1

With the 2020 revision to its annual PWSS Program review protocol, the OW believed that it had completed the corrective action for Recommendation 1 of our 2018 report. In the OW’s July 7, 2021 certification memorandum to the EPA’s chief financial officer, the OW said that the corrective action for the recommendation was complete. Accordingly, the OW closed the recommendation in the Agency’s audit tracking system. To complete and close Recommendation 1 of our 2018 report, however, the Agency needed to require—not suggest—that the EPA regions oversee whether states are monitoring water system compliance with all LCR requirements. As such, in light of the 2020 revisions to the annual PWSS Program review protocol, we considered the recommendation to be unimplemented, with corrective actions pending.

Some Regions Proactively Conducted LCR Oversight

Even though the 2020 revision to the annual PWSS Program review protocol made oversight optional and did not specifically address the identification of Tier 1 sampling sites and maintenance of continuous corrosion-control treatment, some EPA regions did proactively monitor state oversight of LCR requirements. We found that five (50 percent) of the EPA’s ten regions specifically addressed Tier 1 sampling sites and four (40 percent) of the ten regions specifically addressed corrosion-control treatment in their reviews of LCR implementation (Table 1).

Table 1: OIG analysis of regional PWSS Program reviews

Region	Selection of Tier 1 sampling sites	Monitoring for corrosion-control treatment
1	✓	✓
2	✓	
3	✓	✓
4		
5	✓	✓
6		
7	✓	✓
8		
9		
10		
Percent	50%	40%

Source: OIG analysis of regional PWSS Program review protocols. (EPA OIG table)

Lack of Capacity Hinders the EPA's Oversight

In its response to our 2018 report, the EPA cited workload issues and a lack of state-level staffing as impediments to comprehensive oversight. During our follow-up audit fieldwork, in an interview with Agency water and enforcement managers, we were told that:

- About 70,000 water systems are required to comply with the LCR.
- Workloads were too heavy for the states to verify water systems' selection of Tier 1 sampling sites and continuous corrosion-control treatment.
- The EPA does not have the capacity to identify the Tier 1 sampling sites.
- The EPA clearly communicated the continuous corrosion-control treatment requirements to the states.
- The EPA issued a memorandum to the states regarding how to identify Tier 1 sampling sites.
- The EPA oversees state implementation of requirements through annual PWSS Program reviews.

As discussed in the section above, however, fully implementing Recommendation 1 of our 2018 report requires the Agency to review whether the states are monitoring water system compliance with the LCR requirements, including accurately identifying Tier 1 sampling sites and maintaining corrosion-control treatment. The OW, as part of its oversight role, should work with the EPA regions to ensure adequate oversight.

Continued Health Risks and Exposure to Lead in Drinking Water

Until the EPA improves its oversight and can ascertain that water systems are complying with all LCR requirements, communities across the United States may continue to be exposed to lead in drinking water at levels that require action under the LCR. In our 2018 report, we identified that the circumstances and response to Flint's drinking water contamination involved implementation and oversight lapses at the EPA, state, and local levels. Oversight lapses resulted in infrastructure damage and the prolonged exposure of Flint residents to lead in their drinking water. To prevent similar crises in other communities, the EPA regions should conduct mandatory oversight of LCR requirements, including the Tier 1 sampling and continuous corrosion-control treatment requirements.

2021 OW Action

On October 18, 2021, in response to our sharing our draft follow-up audit findings, the OW further revised its PWSS Program review protocol. This revision clarified that each review must include oversight of LCR requirements, including how the state is working with water systems to accurately identify Tier 1 sampling sites and maintain continuous corrosion-control treatment. The OW's revised protocol states:

This review **must** include a discussion of the state's approach to [LCR] implementation to ensure that states are monitoring compliance with all LCR requirements. ... This review **must** include, but is not limited to, the following, how the state is working with

systems to **accurately identifying Tier 1 sampling sites and maintaining continuous corrosion control**. [emphases added]

This 2021 revision to the PWSS Program review protocol is responsive to Recommendation 1 of our 2018 report. With this revision to the protocol, we consider the corrective action for the recommendation to be completed and the recommendation appropriately listed as closed in the Agency's audit tracking system.

Agency Response and OIG Assessment

The Agency provided a response to our draft report. Where appropriate, we revised the report based on technical comments provided by the EPA. Appendix B contains the Agency's response to the draft report.

Chapter 3

OECA Could Not Confirm Who Received Training on SDWA Tools and Authorities

OECA could not demonstrate that it fully addressed Recommendation 6 of our 2018 report, Report No. 18-P-0221, *Management Weaknesses Delayed Response to Flint Water Crisis*. While OECA provided training on SDWA tools and authorities, it did not track who attended the training. We, therefore, could not determine whether “drinking water staff, managers, and senior leaders” attended the trainings in accordance with the recommendation. Public health is not best protected when the EPA’s drinking water program and enforcement staff, managers, and senior leaders do not appropriately use or are not trained on the EPA’s oversight and enforcement authorities, such as SDWA’s emergency powers under section 1431 and the enforcement of drinking water regulations under section 1414. If EPA employees are not aware of available SDWA tools and authorities, the EPA is at risk of not effectively responding to protect public health when an imminent and substantial endangerment to human health exists. In response to our follow-up audit findings, OECA tracked attendance for SDWA training held in 2021 and found that only one of the four invited senior leaders attended.

OIG Report No. 18-P-0221: Recommendation 6

The EPA should “provide regular training for EPA drinking water staff, managers and senior leaders on Safe Drinking Water Act tools and authorities; state and agency roles and responsibilities; and any Safe Drinking Water Act amendments or Lead and Copper Rule revisions.”

SDWA Training and 2018 Report Recommendation 6

Educating the EPA’s drinking water program and enforcement staff, managers, and senior leaders on SDWA tools and authorities best equips them to:

- Verify that primacy agencies are implementing SDWA requirements.
- Act if the state does not when an imminent threat to public health exists.

In our 2018 report, we determined that Region 5 did not use SDWA tools and authorities at its disposal to require water system compliance during the Flint water crisis. As such, and as shown in the green box above, we issued Recommendation 6 to improve the EPA’s SDWA training. To address this recommendation, the EPA proposed providing regular training nationally about SDWA tools and authorities, such as sections 1414 and 1431, and various drinking water regulations, including the LCR. The EPA also said that it would make these trainings available to staff, managers, and senior leaders. In our 2018 report, we accepted the planned corrective actions and recorded the recommendation as resolved. In a certification memorandum dated December 10, 2020, OECA stated that it had completed its corrective actions for Recommendation 6.

The OIG Could Not Determine Whether OECA’s Corrective Actions Fully Addressed 2018 Report Recommendation 6

Even though OECA provided SDWA training in response to Recommendation 6 of our 2018 report, the office could not provide documentation of which employees attended these trainings. Because of the

lack of attendance documentation, we were unable to determine whether the Agency’s corrective actions fully addressed the recommendation.

OECA Provided SDWA Training

Our analysis of SDWA training documents shows that OECA’s May 7, 2020 training session provided information on sections 1414 and 1431 tools and authorities; the OIG’s 2016 management alert regarding the Flint water crisis, Report No. [17-P-0004](#); and other pertinent topics (Table 2).

Table 2: OECA’s May 7, 2020 SDWA training

Topic areas addressed
Background of EPA OIG Report No. 17-P-0004
OECA’s updated guidance on SDWA section 1431
EPA administrators’ electronic messages issued in 2016 and 2017 to EPA staff on the importance of elevating issues
Emergency administrative powers in the EPA’s <i>Delegations Manual</i> , Chapters 9 through 17
Emergency orders in Indian Country
Penalties for failure to comply
SDWA section 1447, “Federal Agencies”
March 2013 memorandum, <i>Language Regarding Judicial Review of Certain Administrative Enforcement Orders Following the Supreme Court Decision in Sackett v. EPA</i>
Guidance on developing administrative records for unilateral administrative enforcement orders
Emergency orders
OECA’s points of contact for consultation

Source: OIG analysis of OECA’s 2020 training slides. (EPA OIG table)

Because OECA Did Not Track Attendance, It Could Not Support Claims that Corrective Actions Were Completed

Although OECA provided SDWA training that was responsive to Recommendation 6 of our 2018 report, OECA could not provide documentation showing that “drinking water staff, managers and senior leaders” attended the training. As such, we could not ascertain whether the Agency fully addressed the recommendation.

In its December 10, 2020 certification memorandum addressing Recommendation 6, OECA stated that it continues to hold regular SDWA trainings for staff and managers; it did not specifically mention senior leaders. The certification memorandum did state that OECA conducts “consultations” with the regions on specific potential emergency drinking water situations. We were told by an OECA manager that these “consultations” can, but do not always, include senior leaders. In our opinion these “consultations” are less formal than training and do not meet the part of Recommendation 6 that was intended to train senior leaders.

During the course of our follow-up audit, OECA held a SDWA training on September 23, 2021, and provided us with a list of the 139 employees who attended. Four senior leaders were invited, but only one attended. All other attendees were staff or managers. OECA did not identify any invited attendees as regional senior leaders.

Proper Oversight and Monitoring Prevents and Detects Risks to Public Health and the Environment

Public health is at greater risk if the EPA's staff, managers, and senior leaders are not fully aware of the EPA's oversight and enforcement authorities. Awareness of SDWA tools and authorities, including SDWA sections 1414 and 1431, best equips the EPA to readily employ these tools when an imminent and substantial endangerment to human health exists.

Recommendation

We recommend that the assistant administrator for Enforcement and Compliance Assurance:

1. Document and monitor attendance at Safe Drinking Water Act training events to ensure the appropriate staff members, managers, and senior leaders attend the training and are aware of the EPA's oversight and enforcement tools and authorities, including sections 1414 and 1431 of the Safe Drinking Water Act.

Agency Response and OIG Assessment

The Agency provided a response to our draft report. OECA agreed with Recommendation 1 and proposed to document and monitor attendance by staff, managers, and senior leaders at SDWA sections 1414 and 1431 trainings and to present information on the EPA's SDWA sections 1414 and 1431 oversight and enforcement tools and authorities to OECA's directors and regional counsels at their annual meetings. The planned completion date is December 31, 2022. These corrective actions satisfy our recommendation; therefore, Recommendation 1 is resolved with corrective actions pending.

Appendix B contains the Agency's response to the draft report.

Chapter 4

OECA Did Not Develop System to Assess Risk and Track Resolution of Citizen Tips

OECA did not complete actions to address Recommendation 8 of our 2018 report, Report No. 18-P-0221, *Management Weaknesses Delayed Response to Flint Water Crisis*. In response to Recommendation 8, the OW developed a Safe Drinking Water Hotline protocol that includes risk assessment and resolution tracking, but the hotline is not the only mechanism available to report drinking water concerns. OECA's RAV system receives citizen tips on environmental concerns regardless of media and can include drinking water-related tips. However, the RAV system does not assess the risks or track the resolution of the issues reported, and OECA did not take action to incorporate these functions into the system. Unless the EPA comprehensively assesses the risks and tracks resolution of issues reported via citizen tips, the Agency's ability to proactively oversee public health issues in the regions and states is impaired.

OIG Report No. 18-P-0221: Recommendation 8

The OW and OECA should "create a system that tracks citizen complaints and gathers information on emerging issues. The system should assess the risk associated with the complaints, including efficient and effective resolution."

Citizen Tips About Public Health Concerns and 2018 Report Recommendation 8

Citizen tips can serve as critical indicators to alert the Agency of water systems that could potentially be in violation of drinking water regulations. One of the EPA's goals related to drinking water is to better leverage stakeholder information to ensure timely identification and resolution of problems. Recommendation 8 of our 2018 report, as shown in the green box above, aimed to improve how the EPA uses information received through citizen tips. The recommendation was issued jointly to two offices: the OW and OECA.

To address this recommendation, the EPA proposed to "identify potential enhancements to existing systems and/or identify new system requirements that can support tracking of citizen complaints." In our 2018 report, we accepted this planned corrective action and recorded the recommendation as resolved with corrective actions pending. According to its July 7, 2021 certification memorandum, to address this recommendation, the OW developed a protocol to be used for tips received through the Safe Drinking Water Hotline. However, in its December 10, 2020 certification memorandum, OECA only addressed Recommendations 6 and 9; it did not mention any corrective action taken for Recommendation 8.

The EPA Did Not Fully Address 2018 Report Recommendation 8

The functionalities of the two systems that the EPA uses to gather citizen tips—OECA's RAV system and the OW's Safe Drinking Water Hotline—differ in their capacity to manage citizens' concerns, as shown in Table 3. Another difference between the systems is that OECA's RAV system is for reporting citizen complaints regardless of media, whereas the OW's Safe Drinking Water Hotline is specifically for reporting citizen complaints regarding drinking water. In our 2018 report, we recommended that OECA and the OW create a system that tracks citizen complaints; we did not identify a specific media. We

found that the OW’s revised protocol is responsive to Recommendation 8 of our 2018 report. However, OECA did not take corrective actions to address Recommendation 8.

Table 3: Functionalities of the two systems used to gather citizen tips

Function	OECA’s RAV system	The OW’s Safe Drinking Water Hotline
Has standard operation procedure or process steps	✓	✓
Differentiates between civil and criminal violations	✓	
Allows images, media, and audio to be attached to complaint	✓	
Assesses the risks associated with potential violations		✓*
Tracks resolution of tips submitted		✓**
Communicates resolution to those who provided tips		✓
Tracks the locations or areas of potential violations	✓	
Has an information-filtering system	✓	
Tracks and stores tips about specific water issues	✓	✓**
Filters tips arising from same locations or areas	✓	✓**
Produces reports of potential violations	✓	

Source: OIG analysis of the functionality of OECA’s RAV system and the OW’s Safe Drinking Water Hotline. (EPA OIG table)

* EPA employees assess the concern presented.

** Email folders are used to track and manage issues.

The OW’s Hotline Protocol Is Responsive to Recommendation 8

The OW’s Safe Drinking Water Hotline allows the public to submit tips and concerns about drinking water via an online form, which is routed to an electronic mailbox that EPA staff members manage. In 2019, in response to Recommendation 8 of our 2018 report, the OW developed its *Protocol for Addressing Water Quality Concerns from the Public*, which requires the OW to track public concerns raised through the Safe Drinking Water Hotline system tips, to assess risks associated with the tips, and to determine and record each tip’s resolution.

The OW’s protocol states that tips are to be sent to the appropriate EPA staff for follow up within “24 to 48 hours” of submission. A headquarters employee determines whether the tip can be addressed with existing publicly available information or should be delegated to an EPA subject-matter expert, who should then address the concern and communicate with the person who submitted the tip. An OW manager told us that OW staff manage and assess the risk associated with each tip before forwarding it to the appropriate subject-matter expert or region and that the electronic mailbox allows for staff to track and manage information regarding tips received through the hotline. These OW corrective actions were responsive to our 2018 report Recommendation 8.

OECA Did Not Take Corrective Action to Address Recommendation 8

OECA did not take action to address Recommendation 8 of our 2018 report and did not submit a memorandum certifying that any corrective actions were completed for that recommendation. An OECA manager told us that OECA assumed no further action was required since the OW completed corrective actions in response to the recommendation. However, the effectiveness of OECA’s RAV system is limited because it does not assess the risk or track the resolution of tips. We thus consider Recommendation 8 of our 2018 report resolved but still open pending completion of corrective actions by OECA.

OECA implemented the RAV system in January 2006. Upon receipt of a tip through the RAV system, the EPA either refers it to another entity, such as a state, or retains it for action. For retained tips, the EPA assesses whether tips submitted via this system are criminal or civil in nature and then routes them to the appropriate program office or region. The RAV coordinator can track to whom an issue was referred, and RAV system operators can review and refer incoming tips, prepare and print reports, open or close cases, and report tips to Congress. But there is no functionality to assess the risks or track the resolutions of tips.



The EPA's RAV system logo. (EPA image)

In responding to the OIG's draft 2018 report, the assistant administrators for Enforcement and Compliance Assurance and for Water stated that the "EPA could use the RAV as the foundation of an improved system that captures citizen reports and sorts them into ranked categories to facilitate identification of management risks that require EPA response." OECA did make enhancements to the RAV tool, such as increasing the visibility of the tool and adding the ability to submit photographs and video files. However, these enhancements did not add the functionality to assess risks associated with and track resolutions of tips, as recommended in our 2018 report.

Public Concerns Alert the EPA to Risks

Citizens' concerns can serve as critical indicators of emerging problems. Assessing citizen tips allows the Agency to identify patterns, irregularities, and trends more efficiently. Through improved assessment of risks associated with tips and better resolution of tips, the Agency can improve oversight and its efforts to protect public health. Given the large number of water systems in the country that the EPA regions and states must oversee, public health is at risk if the EPA does not adequately consider indicators of dangers, such as citizen tips.

Recommendation

We recommend that the assistant administrator for Enforcement and Compliance Assurance:

2. Incorporate controls into the Report a Violation system to assess the risks associated with tips retained by the EPA and to track when and how the retained tips are resolved.

Agency Response and OIG Assessment

The Agency provided a response to our draft report (Appendix B). In that response, OECA disagreed with Recommendation 2. OECA stated that it "does not have the resources to prepare an assessment of the risk associated with each tip and complaint [OECA receives] through the system and track when resolution is achieved." OECA stated that the RAV system has been used "to gather citizen tips and complaints on possible noncompliance issues – large and small – regardless of the media." In its response, OECA also reported that the RAV system receives 14,000 tips per year, a large number of which are referred to the states. In response to these comments, we revised Recommendation 2 to give the EPA flexibility to assess the risks of only those tips that the EPA retains for action. We maintain that assessing the risks and resolutions of tips reported in the RAV system is critical to the EPA's mission to protect public health and the environment. Recommendation 2 is unresolved with resolution efforts in progress.

Status of Recommendations

RECOMMENDATIONS

Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date
1	13	Document and monitor attendance at Safe Drinking Water Act training events to ensure the appropriate staff members, managers, and senior leaders attend the training and are aware of the EPA's oversight and enforcement tools and authorities, including sections 1414 and 1431 of the Safe Drinking Water Act.	R	Assistant Administrator for Enforcement and Compliance Assurance	12/31/22
2	16	Incorporate controls into the Report a Violation system to assess the risks associated with tips retained by the EPA and to track when and how the retained tips are resolved.	U	Assistant Administrator for Enforcement and Compliance Assurance	

¹ C = Corrective action completed.

R = Recommendation resolved with corrective action pending.

U = Recommendation unresolved with resolution efforts in progress.

OIG Evaluation of the EPA's Actions in Response to OIG Report No. 18-P-0221

Recommendation 1:	
Text of recommendation	Establish controls to annually verify that states are monitoring compliance with all Lead and Copper Rule requirements, including accurately identifying tier 1 sampling sites and maintaining continuous corrosion control treatment.
Issued to	Assistant Administrator for Enforcement and Compliance Assurance and Assistant Administrator for Water
OIG finding leading to recommendation	The City of Flint did not develop or maintain accurate records of lead service line locations to identify Tier 1 sampling sites. Primacy states, such as the State of Michigan, must require water systems to collect and maintain lead service line information in accordance with the LCR. Without this information, the City of Flint could not prioritize its sampling efforts to collect water samples where higher levels of lead contamination were most likely to occur, which is required by the LCR. See Recommendation 2 of our 2018 report for more information on maintaining continuous corrosion-control treatment.
Agency-proposed corrective action	In December 2018, the EPA will hold a meeting with the regional branch chiefs to review and update the protocol used for the fiscal year 2018 annual PWSS Program reviews. As part of this review, the EPA will amend the PWSS Program review protocol as needed to verify that states are implementing LCR requirements. The changes made will be implemented in the fiscal year 2019 and future annual program reviews.
Agency action	According to the OW's certification memorandum dated July 7, 2021, the OW took the lead in addressing the recommendation. The effort to update the <i>State Drinking Water Annual Program Evaluation</i> protocol to explicitly include the LCR was first discussed during the June 12, 2018 Drinking Water Oversight Workgroup call. On December 17, 2018, the Drinking Water Oversight Workgroup finalized the updates to the protocol. Starting in fiscal year 2020, completion of the annual program reviews was added as a Bowling Chart Measure that is tracked nationally.
OIG assessment of Agency action	COMPLETED. The actions taken by the OW prior to its July 7, 2021 certification memorandum did not fully correct the identified deficiencies because the <i>State Drinking Water Annual Program Evaluation</i> protocol did not make regional oversight mandatory, nor did the protocol specifically address the identification of Tier 1 sampling sites and maintenance of continuous corrosion-control treatment. In response to this follow-up audit, on October 18, 2021, the OW revised its protocol to fully address the recommendation. Further details are discussed in Chapter 2 of our follow-up report.
Recommendation 2:	
Text of recommendation	Revise the Lead and Copper Rule to improve the effectiveness of monitoring corrosion control treatment protocols.
Issued to	Assistant Administrator for Water
OIG finding leading to recommendation	According to EPA Region 5, the Michigan Department of Environmental Quality concluded that Flint's change in source water would require Flint to revert to the LCR provision that required the water system to conduct tests to determine whether corrosion-control treatment was necessary. Region 5 disagreed with the department's interpretation. The LCR treats water systems, such as Flint's, that change their source water or treatment as existing systems. Therefore, under the LCR, the city needed to maintain continuous corrosion-control treatment.
Agency-proposed corrective action	The Agency is evaluating input received from state, local, and tribal partners, as well as the best available peer-reviewed science, to ensure the rule reflects the best ways to improve public health protection.
Agency action	According to the OW's certification memorandum dated July 7, 2021, the EPA is evaluating input from state and local, partners, as well as the best available peer-reviewed science, to ensure the LCR reflects the best ways to improve public health protection.
OIG assessment of Agency action	COMPLETED. The OW finalized revisions to the LCR to improve the effectiveness of monitoring and corrosion-control treatment protocol. However, implementation was delayed because of the change in administration. The EPA extended the effective date of the revision to December 16, 2021, with a compliance deadline of September 16, 2024.

Recommendation 3:	
Text of recommendation	Publicly document clear expectations, roles and responsibilities between the EPA and the state of Michigan in an official document, such as a memorandum of understanding or a supplemental primacy document.
Issued to	Region 5 Regional Administrator
OIG finding leading to recommendation	The EPA retains the authority and responsibility to oversee states with primacy over their drinking water programs. The EPA is empowered and required to intervene when states do not fulfill their obligations. However, EPA Region 5 staff and managers did not establish the clear roles and responsibilities needed to foster a constructive relationship with Michigan's drinking water program staff.
Agency-proposed corrective action	Region 5 will document clear expectations, roles, and responsibilities between the region and each of its states in the annual work plan for the PWSS Program grant. Region 5 will post the annual Michigan PWSS Program work plan and end-of-year evaluation on the EPA's website so that the information is publicly available.
Agency action	According to the Region 5 certification memorandum dated December 21, 2018, Region 5 publicly documented on October 1, 2018, clear expectations, roles, and responsibilities for the EPA and the State of Michigan in the PWSS Program annual work plan for Michigan's PWSS grant. On October 26, 2017, Region 5 publicly posted on its website the final report documenting its review of Michigan's drinking water program.
OIG assessment of Agency action	COMPLETED. Region 5 publicly posted on its website the fiscal year 2020 work plan between the EPA and Michigan for the PWSS Program grant, which outlined expectations, roles, and responsibilities. In June 2021, the Michigan drinking water staff stated that the new work plan offers more clarity on what the state should be doing under the grant, what the roles of the EPA are, and communication between the state and Region 5.
Recommendation 4:	
Text of recommendation	Implement a system for regional drinking water staff, managers, and senior leaders that incentivizes staff elevating and managers addressing important and emerging issues in accordance with the EPA's <i>Policy on Elevation of Critical Environmental and Public Health Issues</i> .
Issued to	Region 5 Regional Administrator
OIG finding leading to recommendation	Communication weaknesses contributed to a delayed federal response in Flint. For effective oversight, management needs accurate and complete information and clear communication. However, the interaction between the EPA and the Michigan Department of Environmental Quality did not convey key information about human health risks from lead contamination in Flint. Communication within the EPA was also problematic.
Agency-proposed corrective action	Within Region 5, staff are encouraged to participate and share concerns in a variety of meetings, including team, section, branch, division, and regional meetings. These regular check-in meetings among managers and staff allow information to flow from regional leaders down to staff and vice versa. Region 5 agrees to incentivize staff, managers, and senior leaders to elevate and address issues of concern during these engagement opportunities, including providing feedback during midyear and end-of-year reviews, specifically on the customer service critical element present in all staff performance agreements. Region 5 will incentivize staff, management, and senior leadership to elevate and address important and emerging issues, including the use of awards.
Agency action	According to the Region 5 certification memorandum dated December 21, 2018, Region 5's administrator has been clear in all staff meetings that she actively encourages employees to meet with her on any issue, including public or environmental issues. Region 5's Groundwater and Drinking Water Branch established a public health protection recognition program that consists of a traveling trophy to be presented during a branch meeting to a staff person who raised a public health or environmental concern. In 2018, Region 5 began implementing an internal peer-to-peer recognition program called "Shooting Star."
OIG assessment of Agency action	COMPLETED. Region 5 implemented various systems and award programs to incentivize staff to elevate important and emerging issues in accordance with the EPA's <i>Policy on Elevation of Critical Environmental and Public Health Issues</i> . The Water Division director in Region 5 holds meetings during which employees can raise any issue. Based on the examples provided, we determined that Region 5 has created incentives for staff to elevate public health issues or environmental concerns to management.

Recommendation 5:	
Text of recommendation	Provide the public with all results from EPA reviews of Michigan's Safe Drinking Water Act program and track the progress of identified corrective actions.
Issued to	Region 5 Regional Administrator
OIG finding leading to recommendation	Region 5 did not use oversight and monitoring authorities and tools to influence the Michigan Department of Environmental Quality.
Agency-proposed corrective action	The 2010 and 2016 <i>Michigan Drinking Water Program Review Reports</i> are available on the EPA's website. In addition, Region 5's fiscal years 2010–2016 <i>End-of-Year Evaluation Reports</i> for the State of Michigan's PWSS Program are available to the public through the Freedom of Information Act online website . Region 5 and the state are finalizing a corrective action plan that has been developed from the recommendations in the <i>2016 Program Review Report</i> , which Region 5 released in October 2017. Once final and approved by Region 5, Region 5 will post the corrective action plan to the Agency's website and provide progress updates on a quarterly basis. In addition, the Michigan corrective action plan will be attached to the fiscal year 2018 and subsequent PWSS grant work plans, so that both state and EPA commitments are clear. Frequent check-ins with the state are planned to ensure progress in implementing the EPA's recommendations to strengthen Michigan's drinking water program.
Agency action	According to the Region 5 certification memorandum dated December 21, 2018, Region 5 posted on the EPA's website the 2016 <i>Michigan Drinking Water Program Review Report</i> on October 26, 2017. In addition, Region 5's fiscal years 2011–2016 <i>End-of-Year Evaluation Reports</i> for the State of Michigan's PWSS Program are available through Freedom of Information Act online. Region 5 ensures that issues found in previous data and enforcement program reviews of the state's PWSS implementation are included in the following year's annual PWSS Program work plan and tracked for progress. Region 5 and the Michigan Department of Environmental Quality are implementing a corrective action plan that has been developed from the recommendations in the <i>2016 Program Review Report</i> , which Region 5 released in October 2017.
OIG assessment of Agency action	COMPLETED. Region 5 published results on its website from EPA reviews of Michigan's SDWA program. The corrective action plan for fiscal year 2018 in which the Agency tracked the progress of identified corrective actions was also available online. Our comparison of the corrective action plan updates determined that Region 5 tracked the progress of identified corrective actions, and ongoing activities are carried forward in the next year's corrective action plan. Michigan has completed 78 percent of the recommendations in the initial corrective action plan. Furthermore, Region 5 provided the Freedom of Information Act link where end-of-year evaluations for the State of Michigan from fiscal years 2010 through 2016 are available.
Recommendation 6:	
Text of recommendation	Provide regular training for EPA drinking water staff, managers and senior leaders on Safe Drinking Water Act tools and authorities; state and Agency roles and responsibilities; and any Safe Drinking Water Act amendments or Lead and Copper Rule revisions.
Issued to	Assistant Administrator for Enforcement and Compliance Assurance and Assistant Administrator for Water
OIG finding leading to recommendation	Region 5 used several tools to oversee the Michigan Department of Environmental Quality's handling of contamination in Flint. However, when those approaches did not result in swift action to protect public health, Region 5 did not employ other SDWA authorities at its disposal to require compliance in Flint. Most authorities were not used because regional managers did not recognize them or deem them appropriate. Region 5 did not place additional conditions on the Michigan PWSS grant, even when issues were identified.
Agency-proposed corrective action	The EPA has provided and will continue to provide regular training nationally to staff and managers about SDWA tools and authorities, such as sections 1414 and 1431, and various drinking water regulations, including the LCR. The EPA will also make these trainings available to senior managers. As part of ongoing Agency efforts to enhance national implementation of the LCR, the EPA has been providing training on the rule's optimal corrosion-control treatment and optimal water-quality parameter requirements. The workshops provide a review of LCR requirements and emphasize the tools and authorities drinking water programs can leverage to implement the requirements more effectively. The training has been delivered through in-person workshops at each of the EPA regions, as well as through special conference sessions. Since the inaugural workshop in fiscal year 2016, the training has reached approximately 1,300 drinking water professionals at the staff and managerial level from federal and state drinking water programs, technical assistance providers, and water utilities.

Agency action	According to OECA's certification memorandum dated December 10, 2020, OECA took the lead in addressing the recommendation. OECA continues to hold regular SDWA training on sections 1414 and 1431 for staff and managers and to conduct consultations with the regions regarding specific potential emergency drinking water situations. The presentations from the training events are available electronically to EPA personnel on the internal National Drinking Water Enforcement site.
OIG assessment of Agency action	DID NOT FULLY ADDRESS RECOMMENDATION. OECA's corrective action did not meet the intent of Recommendation 6. The Agency provided training on SDWA sections 1414 and 1431 tools and authorities to staff. However, the Agency was not able to provide documentation of which staff members, managers, and senior leaders attended the training. During the course of our follow-up audit, a SDWA training was held on September 23, 2021. OECA provided the OIG with a list of attendees. Further details are discussed in Chapter 3 of this report.

Recommendation 7:

Text of recommendation	Implement a system to identify management risks in state drinking water programs, including elements such as atypical events, emerging public health concerns, environmental justice concerns and public health analyses.
Issued to	Assistant Administrator for Enforcement and Compliance Assurance and Assistant Administrator for Water
OIG finding leading to recommendation	EPA Region 5 did not have effective risk-assessment processes that would have alerted the region to growing issues in Flint. An effective risk-assessment system provides the basis for responding to threats that impact human health.
Agency-proposed corrective action	The EPA has initiated a workgroup with participation from OECA, the OW, and the regions. The workgroup will explore how best to use drinking water data and measures to identify public water systems that present or are likely to present significant risks to public health. The workgroup will develop procedures and strategies to ensure timely and effective intervention where risks to public health are identified.
Agency action	According to the OW's certification memorandum dated July 7, 2021, the OW took the lead in addressing the recommendation. The corrective action for this recommendation focuses on the EPA's annual reviews of state drinking water programs. Since 2017, the OW has led a national oversight workgroup that has the priority to refine the protocol for the EPA's <i>State Drinking Water Annual Program Evaluation</i> and the contents of the reports. Since fiscal year 2020, one of the OW's measures has been the completion of these reports for each primacy agency. The OW has reviewed all the fiscal year 2019 reports to understand common challenges and to provide key best management practices. The EPA created and maintains a workgroup with participation from OECA, the OW, and the regions. One area of focus for the workgroup is determining how to best use drinking water data to identify public water systems that present significant risk to public health.
OIG assessment of Agency action	COMPLETED. OECA developed a <i>National Compliance Initiative</i> to work with the states to address community water systems with known, ongoing noncompliance issues and to identify and address risks for noncompliance at community water systems that may have gone unnoticed. In addition, the OW reviewed PWSS Program annual reviews to verify that states are implementing the LCR. Based upon our review of the meeting notes, we determined that the Agency identifies and discusses public water systems that present risks to public health.

Recommendation 8:

Text of recommendation	Create a system that tracks citizen complaints and gathers information on emerging issues. The system should assess the risk associated with the complaints, including efficient and effective resolution.
Issued to	Assistant Administrator for Enforcement and Compliance Assurance and Assistant Administrator for Water
OIG finding leading to recommendation	Some citizens interviewed expressed frustration at the lack of resolution of their tips by Region 5. Staff and managers in Region 5 did not have a system for cataloging and responding to citizen tips, nor did they use citizen tips or the volume of calls as indicators of problems with Flint's water system. As a result, Region 5 could not assess the severity of the situation, and staff were not able to alert management of an emerging incident.
Agency-proposed corrective action	Identify potential enhancements to existing systems and/or identify new system requirements that can support tracking of citizen complaints.
Agency action	According to the OW's certification memorandum dated July 7, 2021, the OW took the lead in addressing the recommendation and identifying potential enhancements to existing systems and new system requirements that can support tracking of citizen tips. In 2019, the OW developed a <i>Protocol for Addressing Water Quality Concerns from the Public</i> to address this OIG recommendation. This protocol was shared with the OIG in March 2021.

OIG assessment of Agency action	DID NOT FULLY ADDRESS RECOMMENDATION. The EPA has two key systems that gather citizen tips. The OW implemented the SDWA hotline's <i>Protocol for Addressing Water Quality Concerns from the Public</i> to manage drinking water-related tips, including assessing tip risk and tracking tip resolution. The OW's corrective actions address Recommendation 8. The RAV system is used by OECA to gather citizen tips on environmental issues regardless of media. The system does not assess risk or track information on the resolution of issues raised. Further details are discussed in Chapter 4 of our follow-up report.
Recommendation 9:	
Text of recommendation	Improve oversight by establishing a clear and credible escalation policy for EPA intervention in states. The policy should provide steps the will take when states do not act.
Issued to	Assistant Administrator for Enforcement and Compliance Assurance and Assistant Administrator for Water
OIG finding leading to recommendation	Between May 2014 and the issuance of the EPA's <i>Emergency Administrative Order</i> in January 2016, EPA Region 5 staff received 87 citizen tips about drinking water conditions in Flint. Thirty of the tips included concerns about lead. Region 5 officials responded with form letters that recommended citizens resolve their concerns by contacting the Michigan Department of Environmental Quality or Flint's water system staff. Region 5 did not have a system for cataloging and responding to citizen tips, nor did it use tips or the volume of calls as indicators of problems with Flint's water system. Tips can serve as critical indicators of potential problems. Instead of referring complaints back to state and local officials to resolve, the region could have taken a more proactive stance.
Agency-proposed corrective action	OECA will continue to provide training on SDWA authorities, including the use of section 1431 authority when state and local authorities have not acted to protect public health. The EPA has initiated a workgroup with participation from OECA, the OW, and the regions. The workgroup will develop procedures and strategies to ensure timely and effective EPA intervention if a state's response to a risk is insufficient to protect the public's health.
Agency action	According to OECA's certification memorandum dated December 10, 2020, OECA took the lead in addressing the recommendation. On August 15, 2017, EPA Administrator Scott Pruitt reaffirmed the EPA's <i>Policy on Elevation of Critical Environmental and Public Health Issues</i> . He directed EPA staff to elevate concerns quickly and the regions to inform headquarters of any issues elevated under this policy. On June 7, 2019, OECA identified "Reducing Non-Compliance with Drinking Water Standards at Community Water Systems" as a National Compliance Initiative for fiscal years 2020–2023. These initiatives strategically focus enforcement and compliance assurance resources where they can be most impactful. As part of the drinking water National Compliance Initiative, the EPA will work with partner states, tribes, and territories to address community water systems whose known, ongoing noncompliance with SDWA presents a threat to public health. Additionally, the National Compliance Initiative will seek to identify and address undiscovered risks involving community water systems that may also pose a threat. An increased EPA compliance and enforcement presence and integrated cooperation with primacy agencies will improve compliance with the National Primary Drinking Water Regulations and protect public health.
OIG assessment of Agency action	COMPLETED. On January 21, 2016, EPA Administrator Gina McCarthy issued the <i>Policy on Elevation of Critical Public Health Issues</i> . The policy describes which offices should be contacted if a concern needs to be elevated, as well as the characteristics of issues that should be elevated. The policy was reaffirmed by subsequent Administrators Scott Pruitt, Andrew Wheeler, and Michael Regan. Additionally, then-Administrator Andrew Wheeler introduced the "Report-an-Issue" tool as an additional avenue for employees to elevate concerns. The Report-an-Issue tool allows an EPA employee to provide Agency senior management with notice of a perceived or unaddressed significant risk to public health or the environment. As of April 2021, only two issues had been reported via the Report-an-Issue tool; however, management believes that the number of issues reported is not an indicator of effectiveness, as the policy requires staff to go to management first and report an issue via the Report-an-Issue tool as a last resort.

Source: OIG assessment of the EPA's corrective actions. (EPA OIG table)

Agency Response to Draft Report



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

April 15, 2022

MEMORANDUM

SUBJECT: Response to Office of Inspector General Draft Report OA-FY21-0123, The EPA Needs to Fully Address the OIG's 2018 Flint Water Crisis Report Recommendations by Improving Controls, Training, and Risk Assessments, dated March 18, 2022

FROM: Lawrence E. Starfield, Acting Assistant Administrator

**LAWRENCE
STARFIELD** Digitally signed by
LAWRENCE STARFIELD
Date: 2022.04.15
14:19:51 -04'00'

TO: Michael D. Davis, Director
Environmental Investment and Infrastructure Directorate
Office of Audit

Thank you for the opportunity to respond to the recommendations in the subject audit report. The following is our position on each of the report recommendations. The Agency agrees with Recommendation 1 and has provided a high-level intended corrective action and estimated completion date. The Office of Enforcement and Compliance Assurance (OECA) does not agree with Recommendation 2 and has provided our position for your consideration. Additionally, attached is one technical comment on the draft report.

AGENCY'S POSITION

Recommendation 1 – Agree

Document and monitor attendance at Safe Drinking Water Act training events to ensure the appropriate staff members, managers, and senior leaders attend the training and are aware of the EPA's oversight and enforcement tools and authorities, including sections 1414 and 1431 of the Safe Drinking Water Act.

RESPONSE:

We accept Recommendation 1. OECA has been offering and will continue to offer training to staff, managers, and senior leaders regarding Safe Drinking Water Act sections 1414 and 1431. We will document and monitor attendance by staff, managers, and senior leaders at these trainings. Before the COVID-19 pandemic, EPA did not routinely use the full array of Microsoft

Teams functions, including the attendance report. However, since the pandemic and moving forward, particularly given a possible sustained hybrid work environment, OECA will make sure to generate and download attendance reports. Moreover, to ensure we address the OIG's concerns about training senior leaders in particular, OECA will present information on EPA's Safe Drinking Water Act oversight and enforcement tools and authorities to the Regional Enforcement and Compliance Assurance Directors and Regional Counsels during one of their meetings each year. These are standing meetings that are generally well attended by senior leaders (e.g., SES Director level), which will ensure that we capture as large an audience as possible at this senior level.

Recommendation 2 – Disagree

Incorporate controls into the Report a Violation system to assess the risk associated with each tip and track when resolution of each tip is achieved.

RESPONSE: OECA agrees that an Agency system to track citizen tips, gather information, and assess risk on emerging drinking water issues is important. In fact, the Office of Water (OW) effectively fulfilled this recommendation in response to the 2018 OIG report, "Management Weaknesses Delayed Response to Flint Water Crisis," when it implemented an SDWA hotline "Protocol for Addressing Water Quality Concerns from the Public" (Protocol) to manage drinking water-related tips, including assessment of tip risk and tracking of tip resolution. OECA owns and operates another system, as noted by the OIG, called Report A Violation (RAV). The RAV system is an existing tool used by OECA for many years to gather citizen tips and complaints on possible noncompliance issues – large and small – regardless of media. This system goes well beyond the scope of OW's SDWA hotline Protocol and beyond the OIG's effort to "fully address the OIG's 2018 Flint Water Crisis Report Recommendations by improving controls." Given that there is *already* a system in place to "assess the risk associated with each [drinking water-related] tip" and that tracks "when resolution of each tip is achieved" as it relates to public drinking water, it is not necessary to "incorporate [identical] controls into the Report A Violation (RAV) system." Creating such a redundancy in a second system (i.e., via costly system changes to RAV) is unnecessary, and is not a prudent or efficient use of Agency funds.

Also, given the extremely large number of tips in the RAV system (14,000 tips per year vs. 5,000 per year to the SDWA hotline) and the broad multimedia nature of RAV, OECA does not have the resources to prepare an assessment of the risk associated with each tip and complaint we receive through the system and track when resolution is achieved. In addition, most RAV tips are referred to the appropriate state for review. Requiring the state to report back to EPA on the risk associated with each tip and its resolution would constitute a significant burden on the states. Additionally, it is unclear whether EPA has the authority to require that information from the states for all programs and in any event would trigger the Paperwork Reduction Act.

For all these reasons, OECA does not agree with Recommendation 2 in the 2022 OIG report to "Incorporate controls into the Report a Violation system to assess the risk associated with each tip and track when resolution of each tip achieved."

AGENCY’S RESPONSE TO REPORT RECOMMENDATIONS

	<i>Recommendation</i>	<i>High-Level Intended Corrective Action(s)</i>	<i>Estimated Completion Date</i>
1	Document and monitor attendance at Safe Drinking Water Act training events to ensure the appropriate staff members, managers, and senior leaders attend the training and are aware of the EPA’s oversight and enforcement tools and authorities, including sections 1414 and 1431 of the Safe Drinking Water Act.	<ul style="list-style-type: none"> a. Document and monitor attendance by staff, managers and senior leaders at Safe Drinking Water Act 1414 and 1431 trainings. b. Present information on EPA’s Safe Drinking Water Act 1414 and 1431 oversight and enforcement tools and authorities to the Enforcement and Compliance Assurance Directors and Regional Counsels at one of their meetings each year. 	<p>12/31/22</p> <p>12/31/22</p>

CONTACT INFORMATION

If you have any questions regarding this response, please have your staff contact OECA’s Audit Follow-Up Coordinator, Gwendolyn Spriggs, at spriggs.gwendolyn@epa.gov or 202-564-2439.

Attachment: Technical Comment

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