

PROGRESS REPORT: SAFE DRINKING WATER PROGRAM

LOUISIANA DEPARTMENT OF HEALTH
OFFICE OF PUBLIC HEALTH



PERFORMANCE AUDIT SERVICES
ISSUED NOVEMBER 24, 2021

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LOUISIANA LEGISLATIVE AUDITOR
MICHAEL J. "MIKE" WAGUESPACK, CPA

November 24, 2021

The Honorable Patrick Page Cortez,
President of the Senate
The Honorable Clay Schexnayder,
Speaker of the House of Representatives

Dear Senator Cortez and Representative Schexnayder:

This report provides the results of our performance audit of the Office of Public Health (OPH). The purpose of this audit was to evaluate OPH's progress in addressing issues we identified in two previous reports on the monitoring and enforcement activities of the Safe Drinking Water Program and the Capacity Development Program.

In the first report – released in August 2016 – we made seven recommendations to improve OPH's monitoring and enforcement processes of the Safe Drinking Water Program. In the second – released in March 2017 – we made two recommendations to improve OPH's assistance to water systems in the Capacity Development Program. OPH agreed with all nine recommendations, and in this audit, we evaluated whether the office had implemented them.

Overall, we found that OPH fully or partially implemented six of the seven recommendations in the 2016 report and one of the two recommendations in the 2017 report.

Since January 2017, OPH has created an additional 40 sanitarian positions and resumed collecting most water samples used to test for contamination, instead of relying on water systems to collect these samples. As a result, the number of monitoring violations decreased by 97 percent, from 905 in fiscal year 2016 to 27 in fiscal year 2021.

OPH also has improved in conducting timely sanitary surveys of water systems. During fiscal years 2016 through 2021, the office conducted required sanitary surveys on all 1,406 active water systems, which is an improvement from our 2016 audit that found OPH conducted 1,075 (89 percent) of 1,208 required sanitary surveys during fiscal years 2009 through 2014.

In addition, OPH escalated its enforcement actions when water systems did not correct violations for nine (90 percent) of 10 Administrative Orders (AOs) we reviewed. This is also an improvement from our 2016 audit, where we found that the office did not follow its enforcement process in five (33.3 percent) of the 15 AOs we reviewed.

The Honorable Patrick Page Cortez,
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The Honorable Clay Schexnayder,
Speaker of the House of Representatives
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OPH has improved as well in its issuance of violations to water systems that do not notify their customers of non-compliance with drinking water regulations. During fiscal years 2016 through 2021, the office issued violations to water systems for 2,348 (99.5 percent) of 2,359 unperformed public notifications, as required by the U.S. Environmental Protection Agency. This is an improvement from our 2016 audit that found OPH did not issue violations for 363 (35.4 percent) of 1,025 unperformed public notifications.

Finally, OPH now collects additional financial and managerial information during onsite inspections to identify water systems that may need to participate in the Capacity Development Program. In addition, OPH has started requiring participation in the program as a remedial action in AOs.

The report contains our findings, conclusions, and recommendations. I hope this report will benefit you in your legislative decision-making process.

We would like to express our appreciation to the Office of Public Health for its assistance during this audit.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Mike Waguespack', with a long horizontal flourish extending to the right.

Michael J. "Mike" Waguespack, CPA
Legislative Auditor

MJW/aa

Louisiana Legislative Auditor

Michael J. “Mike” Waguespack, CPA



Progress Report: Safe Drinking Water Program Louisiana Department of Health, Office of Public Health

November 2021

Audit Control # 40200029

Introduction

We evaluated the Louisiana Department of Health (LDH) Office of Public Health’s (OPH) progress towards addressing issues identified in our August 2016 report on its oversight of the Safe Drinking Water Program (SDWP).¹ Specifically, we evaluated whether OPH’s monitoring and enforcement activities ensure that public water systems provide safe drinking water to consumers in accordance with state and federal regulations. In addition, we evaluated OPH’s progress towards addressing issues identified in our March 2017 report on the Capacity Development Program.² In our August 2016 report, we made seven recommendations to improve OPH’s monitoring and enforcement processes, and OPH agreed with all of them. In our March 2017 report, we made two recommendations to improve OPH’s assistance provided to water systems in the Capacity Development Program (see text box on right), and OPH agreed with both. In this audit, we evaluated whether OPH implemented the nine recommendations.

The **Capacity Development Program** is a component of the 1996 Safe Drinking Water Act and requires OPH to assist water systems with achieving and maintaining the technical, managerial, and financial capacity necessary to consistently provide safe drinking water to the public.

Source: [Environmental Protection Agency](#)

In 1977, the United States Environmental Protection Agency (EPA) authorized LDH to set and enforce drinking water regulations in Louisiana.³ Under the SDWP, OPH staff oversee more than 1,200 public water systems⁴ for compliance with state and federal drinking water regulations. The objective of the program is to prevent illness and death that can occur from waterborne disease outbreaks or chemical exposure associated with contaminated drinking water. Exhibit 1 on the next page shows the number of active public water systems in Louisiana by type and LDH region as of June 2021.

¹ The report can be found here: [https://la.la.gov/PublicReports.nsf/0EB37BBC680076098625800A00595AE4/\\$FILE/00010792.pdf](https://la.la.gov/PublicReports.nsf/0EB37BBC680076098625800A00595AE4/$FILE/00010792.pdf)

² The report can be found here: [https://la.la.gov/PublicReports.nsf/E79C2E44A4A9D635862580EB0057B474/\\$FILE/00012F5D.pdf](https://la.la.gov/PublicReports.nsf/E79C2E44A4A9D635862580EB0057B474/$FILE/00012F5D.pdf)

³ 40 CFR §142.11

⁴ The EPA defines a public water system as a system that provides the public with water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves at least 25 individuals.

OPH conducts a variety of regulatory activities to ensure the safety of drinking water. These activities include monitoring water systems by collecting and testing water samples to ensure contaminants are within established limits, conducting sanitary surveys to inspect the physical conditions of systems, and ensuring systems notify the public when contaminants are found in drinking water. OPH also enforces compliance with state and federal regulations when water systems do not address violations in a timely manner.

Exhibit 1			
Active Water Systems in Louisiana by Region/Area			
As of June 2021			
LDH Region/Area	No. Ground Water Systems	No. Surface Water Systems	Total Water Systems
1 – New Orleans	1	20	21
2 – Baton Rouge	107	5	112
3 – Houma/Thibodaux	16	24	40
4 – Lafayette	175	1	176
5 – Lake Charles	111	0	111
6 – Alexandria	117	3	120
7 – Shreveport	181	38	219
8 – Monroe	157	9	166
9 – Northshore	323	0	323
Total	1,188	100	1,288
Source: Prepared by legislative auditor’s staff using information provided by OPH.			

The objective of this audit was:

To evaluate OPH’s progress towards addressing issues identified in our previous reports on the monitoring and enforcement activities of the Safe Drinking Water Program and the Capacity Development Program.

Our results are summarized on the next page and discussed in detail throughout the remainder of the report. Appendix A contains OPH’s response, Appendix B contains our scope and methodology, and Appendix C summarizes the findings and recommendations from our August 2016 and March 2017 performance audits and whether OPH has implemented, partially implemented, or not implemented each recommendation. Appendix D contains an overview of the Safe Drinking Water Rules monitored by OPH, including contamination sources and potential side effects.

Objective: To evaluate OPH's progress towards addressing issues identified in our previous reports on the monitoring and enforcement activities of the Safe Drinking Water Program and the Capacity Development Program.

Overall, we found that OPH fully or partially implemented six of seven recommendations made in our August 2016 audit report on the SDWP and one of two recommendations made in our March 2017 report regarding the Capacity Development Program. Specifically, we found the following:

- **Since January 2017, OPH has created an additional 40 sanitarian positions and resumed collecting most water samples used to test for contamination instead of relying on water systems to collect these samples. As a result, the number of monitoring violations decreased by 97.0%, from 905 in fiscal year 2016 to 27 in fiscal year 2021.** In addition, revenue from Act 605 of the 2016 Regular Legislative Session has allowed OPH to conduct routine monitoring for secondary contaminants, including iron and manganese, and to continue sampling for *Naegleria fowleri* using risk-based selection criteria.
- **OPH has improved in conducting timely sanitary surveys of water systems. During fiscal years 2016 through 2021, OPH conducted required sanitary surveys on all 1,406 active water systems, which is an improvement from our August 2016 audit that found OPH only conducted 1,075 (89.0%) of 1,208 required sanitary surveys during fiscal years 2009 through 2014. However, OPH did not always issue violations when water systems did not resolve significant deficiencies identified on sanitary surveys.** As of June 2021, OPH has not issued violations for 10 (8.5%) of 118 unresolved significant deficiencies identified during fiscal years 2016 through 2021.
- **OPH escalated enforcement actions in accordance with policy when water systems did not correct violations for nine (90.0%) of 10 Administrative Orders (AOs) we reviewed. This is an improvement from our 2016 audit, where we found that OPH did not follow its enforcement process in five (33.3%) of the 15 AOs we reviewed. However, OPH did not issue AOs for 36 (92.3%) of 39 unresolved non-health-based violations cited during fiscal years 2016 through 2021 in accordance with its criteria for issuing AOs.** In addition, OPH has not yet developed and implemented a data system that effectively tracks its issued enforcement actions.
- **OPH has improved in its issuance of violations to water systems that do not notify their customers of noncompliance with drinking water regulations. During fiscal years 2016 through 2021, OPH issued violations to water systems for 2,348 (99.5%) of 2,359 unperformed public notifications, as required by the EPA.** This is an improvement from our August 2016 audit that

found OPH did not issue violations for 363 (35.4%) of 1,025 unperformed public notifications.

- **OPH now collects additional financial and managerial information during onsite inspections to identify water systems that may need to participate in its Capacity Development Program. In addition, OPH has started requiring participation in the Capacity Development Program as a remedial action in AOs.** While OPH does not have the authority to issue penalties to water systems simply for failure to participate in the Program, it can impose penalties when systems do not comply with other aspects of an AO.

Our findings, along with new recommendations to assist OPH in further strengthening its oversight of public water systems, are discussed in more detail throughout the remainder of the report.

Since January 2017, OPH has created an additional 40 sanitarian positions and resumed collecting most water samples used to test for contamination instead of relying on water systems to collect these samples. As a result, the number of monitoring violations decreased by 97.0%, from 905 in fiscal year 2016 to 27 in fiscal year 2021.

OPH monitors public water systems to ensure drinking water meets minimum federal and state requirements for more than 90 physical, chemical, radiological, and biological contaminants such as arsenic, lead, copper, and E. coli. These requirements are outlined in a series of EPA rules,⁵ grouped by contaminant. Each rule establishes acceptable limits, such as Maximum Contaminant Rules (MCLs), for contaminants and required frequencies for taking samples based on several variables, including the population served by the system, the water source, and the water system type.

In our August 2016 report, we found that because of staffing reductions and a new EPA rule that required increased sampling, since 2012 OPH had to rely on water systems to collect the majority of the water samples used to test for bacteriological contamination. As a result, OPH could not fully ensure the integrity of those samples. In addition, we found that when water systems began collecting the majority of water samples in 2012, the number of violations OPH

⁵ States can be granted primacy (enforcement authority) by the EPA over the regulation of individual rules provided that they have met certain requirements, including the implementation of state regulations that are no less stringent than those required by the EPA. Currently in Louisiana, OPH has primacy for all 10 drinking water rules but only had primacy for eight rules in 2016.

cited water systems for not collecting and reporting samples as required had increased by 193%. We recommended that OPH evaluate the risks of allowing water systems to collect their own water samples and determine whether additional funding from Act 605 (see text box on right) could be used to help address these risks, such as using sanitarians to collect water samples as it did prior to 2012.

Act 605 of the 2016 Regular Legislative Session increased the administrative fee for the SDWP beginning January 1, 2017, from \$3.20 to \$12.00 per customer per year to fund up to 40 additional sanitarian positions to help OPH comply with provisions of the federal Safe Drinking Water Act.

Source: Louisiana Revised Statute (R.S.) 40:31.33

During fiscal years 2017 through 2021, SDWP fee increases from Act 605 resulted in OPH revenues increasing by 134.1%, from approximately \$8.3 million to \$19.4 million, and OPH creating an additional 40 sanitarian positions. While overall SDWP staffing increased by 40 positions, the number of sanitarians hired specifically increased from 16 in fiscal year 2016 to 39 in fiscal year 2021, an increase of 23 sanitarians (143.8%). Exhibit 2 shows SDWP fee revenues collected by OPH and the number of sanitarians on staff during fiscal years 2016 through 2021.

While the total number of violations OPH cited water systems for increased 5.6% during fiscal years 2016 through 2021, the number of monitoring violations decreased 97.0% during this time after OPH itself resumed collecting the majority of water samples in January 2017. Additional SDWP fee revenue from Act 605 also allowed OPH to resume the collection of bacteriological

(coliform) and chemical (disinfection by-products or DBPs) samples for water systems statewide starting in January 2017. According to OPH, as of April 2021, it conducts 100% of chemical sampling and approximately 99% of bacteriological sampling. OPH stated that staff collected a total of 33,378 coliform samples and 5,565 DBP samples in fiscal year 2020.

If a water sample exceeds the MCL for a particular contaminant, OPH issues the system an MCL violation. If the system fails to sample the water in accordance with the established frequency requirements and/or report the results of the sample to OPH, it issues a Monitoring and Reporting (M&R) violation. Overall, we found that the total number of violations cited increased 5.6%, or from 2,472 in fiscal year 2016 to 2,611 in fiscal year 2021, as shown in Exhibit 3 on the next page.

Exhibit 2 Safe Drinking Water Fee Revenue Collected by OPH and Number of Sanitarians Fiscal Years 2016 through 2021		
Fiscal Year	Amount	No. of Sanitarians
2016	\$4,944,715	16
2017*	8,277,362	39
2018	18,552,966	42
2019	19,578,045	39
2020	19,258,110	40
2021	19,378,422	39
Total	\$89,989,620	

*The increase in fees authorized by Act 605 was effective January 1, 2017.
Source: Prepared by legislative auditor’s staff using information provided by OPH.

Exhibit 3 Violations by Type and Year Fiscal Years 2016 through 2021



Note: Violations classified as “other” include public notification violations and treatment technique violations issued to water systems for failure to correct deficiencies noted in sanitary surveys.
Source: Prepared by legislative auditor’s staff using data provided by OPH.

However, the number of monitoring violations decreased 97.0% from fiscal year 2016 to fiscal year 2021. The greatest decrease occurred between fiscal years 2016 and 2017, which coincided with OPH resuming its own collection of bacteriological and DBP samples in January 2017, when OPH cited 507 (56.0%) fewer monitoring violations.

Additional revenue from Act 605 has allowed OPH to conduct routine monitoring for secondary contaminants, including iron and manganese, and to continue sampling for *Naegleria fowleri*⁶ each summer⁷ using risk-based selection criteria. As of August 2014, state law⁸ requires OPH to adopt rules to implement a program to control the levels of iron and manganese in drinking water, which affects the water’s color, smell, and taste. However, the EPA does not enforce these contaminant rules because neither iron nor manganese pose a significant health risk and only affect the aesthetic conditions of water. In our 2016 report, we recommended that OPH evaluate the additional requirements necessary for regulating iron and manganese and for monitoring *Naegleria fowleri*, prioritize those duties with staffing availability, and consider using the additional sanitarian positions from Act 605 to assist with these additional monitoring requirements. At that time, OPH stated that it was in the process of developing state regulations to control iron and manganese; however, it has not moved forward with enforcing these contaminants, as it has estimated the fiscal impact on public water systems to remove these contaminants to be approximately \$1.13 billion. According to OPH, it conducts routine monitoring for secondary contaminants, including iron and manganese, and recommends that the system send out a public notice when the manganese level exceeds the EPA’s health

⁶ Commonly referred to as the “brain-eating amoeba”

⁷ With the exception of Summer 2020 due to COVID-19

⁸ R.S. 40:4.16

advisory limit.⁹ In addition, as a result of additional revenue from Act 605, staff continued sampling for *Naegleria fowleri* each summer using risk-based selection criteria. As of October 2021, OPH had collected a total of 989 samples from 145 water systems to test for *Naegleria fowleri* and detected 13 instances in nine water systems.

Recommendation 1: OPH should continue to work with the legislature to amend the iron and manganese monitoring requirements in R.S. 40:4.16 based on the significant fiscal impact on public water systems.

Summary of Management's Response: OPH agrees with this recommendation and stated that it will approach and work with the authors of Act 861 (R.S. 40:4.16). See Appendix A for management's full response.

OPH has improved in conducting timely sanitary surveys of water systems. During fiscal years 2016 through 2021, OPH conducted required sanitary surveys on all 1,406 active water systems, which is an improvement from our August 2016 audit that found OPH only conducted 1,075 (89.0%) of 1,208 required sanitary surveys during fiscal years 2009 through 2014. However, OPH did not always issue violations when water systems did not resolve significant deficiencies identified on sanitary surveys.

Federal law¹⁰ mandates that OPH conduct sanitary surveys, or onsite reviews of public water systems, to evaluate the capability of each system to produce and distribute safe drinking water and to assess compliance with state and federal drinking water regulations. During a sanitary survey, OPH evaluates the adequacy of the water source, facilities, equipment, operation, and maintenance of the water system. OPH is required to conduct these sanitary surveys no less than every three years for community water systems (e.g., water systems that supply subdivisions) and not less than every five years for non-community water systems (e.g., schools, hospitals, campgrounds). During these surveys, OPH may identify significant deficiencies (see text box on right) that water systems must correct within a certain timeframe. If these deficiencies are not addressed, OPH will issue a violation to the system.

A **significant deficiency** includes a defect in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that OPH determines to be causing, or has the potential for causing the introduction of contamination into the water delivered to consumers.

OPH has improved the timeliness of its sanitary surveys. In our August 2016 report, we found that OPH conducted all required sanitary surveys on 1,075 (89.0%) of 1,208 active water systems during fiscal years 2009 through 2014. However, we also found that 48.1% of the

⁹ According to OPH, it notified 11 water systems that exceeded the manganese advisory level in fiscal year 2021.

¹⁰ 40 CFR §142.16

surveys we tested were not conducted within required timeframes. During fiscal years 2016 through 2021, OPH improved its compliance with conducting timely sanitary surveys. Specifically, OPH conducted 1,406 (100.0%) of 1,406 required sanitary surveys and completed 1,385 (98.5%) of these within the established timeframes. According to OPH, since our August 2016 audit it has implemented an internal goal to conduct sanitary surveys every two years, which is more stringent than the EPA requires, so that the infrastructure of water systems is monitored more frequently. We found that there was an average span of 2.0 years between sanitary surveys conducted during fiscal years 2016 through 2021, which exceeds the federal requirement of every three to five years. Conducting these surveys more frequently allows OPH to maximize its opportunities to visit water systems to provide technical assistance and educate the operators about rule compliance and disinfection practices.

Database limitations make it difficult for OPH to ensure that it issues violations to water systems that have not resolved significant deficiencies. In our 2016 audit, we found that database limitations prevented OPH from being able to ensure that appropriate enforcement action was taken when water systems failed to resolve significant deficiencies identified during sanitary surveys. We recommended that OPH develop a process for ensuring that it took enforcement action when water systems do not resolve these significant deficiencies. According to OPH, its new process for ensuring it takes enforcement action involves running reports that identify deficiencies that have not been resolved by the required dates. However, these reports were not accurate or complete when we reviewed them in October 2021, so OPH still must conduct a manual review to determine if unresolved significant deficiencies are being addressed. According to this manual review, OPH did not issue violations to eight water systems as of June 2021 for 10 (8.5%) of 118 unresolved significant deficiencies identified during fiscal years 2016 through 2021.¹¹

Recommendation 2: OPH should resolve the database issues that prevent it from running accurate and complete reports to ensure that it takes enforcement actions when water systems do not resolve significant deficiencies.

Summary of Management's Response: OPH agrees with this recommendation and stated that it implemented measures to identify and resolve database issues that includes performing routine data evaluations. In addition, the SDWP will continue to train staff to ensure proper data entry. See Appendix A for management's full response.

¹¹ During fiscal years 2016 through 2021, OPH identified a total of 3,863 significant deficiencies.

OPH escalated enforcement actions in accordance with policy when water systems did not correct violations for nine (90.0%) of 10 Administrative Orders (AOs) we reviewed. This is an improvement from our 2016 audit, where we found that OPH did not follow its enforcement process in five (33.3%) of the 15 AOs we reviewed. However, OPH did not issue AOs for 36 (92.3%) of 39 unresolved non-health-based violations cited during fiscal years 2016 and 2021 in accordance with its criteria for issuing AOs. In addition, OPH has not yet developed and implemented a data system that effectively tracks its issued enforcement actions.

In our 2016 report, we found that OPH did not always follow its enforcement process. Specifically, OPH did not always follow up to determine if water systems complied with corrective actions and did not always escalate enforcement actions when it identified continued noncompliance. We found that OPH failed to follow its enforcement process in five (33.3%) of the 15 AOs we reviewed. We recommended that OPH follow up to determine if water systems have complied with corrective actions and escalate enforcement actions if it identifies continued noncompliance, such as issuing modified AOs and civil penalties. In addition, we recommended that OPH develop and implement a data system that effectively tracks its enforcement actions so that it can better identify noncompliant water systems and take further enforcement actions when necessary.

OPH escalated enforcement actions in accordance with its policy for nine (90.0%) of the 10 AOs¹² we reviewed. Overall, we found that in instances where an AO was issued, OPH implemented the recommendations of the 2016 audit and has improved in its escalation of enforcement actions, including the issuance of penalties or modified AOs. In total, since fiscal year 2016, OPH has issued 273 AOs to water systems for sustained noncompliance and assessed approximately \$1.6 million in penalties to 23 water systems in 25 AOs for sustained noncompliance.¹³ We found that of the 10 AOs we reviewed, nine (90%) appropriately escalated enforcement activities through continued post-order investigations, the issuance of additional AOs, and issuance of penalties in accordance with OPH's policy. In the remaining one, OPH issued the AO in December 2018 but did not order any post-order investigations between January 2020 and August 2021. Following its post-order investigations in August 2021, OPH issued a warning letter to the noncompliant water system, but acknowledges that the post-order investigations were late and has prioritized addressing post-order investigation timeliness.

¹² We reviewed 10 (3.7%) of 273 total AOs issued during fiscal years 2016 through 2021 to include a selection of AOs based on fiscal year, region, type of system, and levels of escalation of enforcement actions (i.e., penalties or subsequent orders).

¹³ According to OPH, any penalty payments received are sent directly to the State Treasurer for the State General Fund; however, penalties are rarely collected by OPH.

We found that of 127 unresolved non-health-based violations cited during fiscal years 2016 through 2021, 36 (92.3%) of 39 met criteria for but have not been issued an AO by OPH. OPH uses the EPA’s Enforcement Targeting Tool (ETT) to target groundwater systems for enforcement using a point system that focuses on systems with health-based violations and/or those that show a history of violations across multiple rules. Once a water system reaches 11 points, the EPA places the system on the ETT list for escalated enforcement action, and OPH “targets,” or puts the water system in its queue to be issued an AO within 90 days. As of June 2021, OPH had issued AOs to 64 water systems for 215 non-health-based violations. However, it had not yet issued AOs to 115 water systems for 127 non-health-based violations cited during fiscal years 2016 through 2021 that had not been resolved within 90 days. According to OPH, 88 of these violations did not meet criteria for issuance of an AO yet because the ETT point threshold had not been met. However, for the remaining 39 unresolved violations with at least 11 ETT points, OPH had only issued AOs for three (7.7%) as of August 2021. OPH did not issue an AO for 36 (92.3%) of the 39 unresolved violations as of August 2021, although OPH states that these violations have been “targeted” for an AO, and the violations are non-health-based and thus the lowest priority. For surface water systems, the process differs slightly in that OPH issues AOs when the systems fail to resolve significant deficiencies. We found that as of June 2021, OPH failed to issue AOs for 11 (33.3%) of 33 unresolved significant deficiencies cited during fiscal years 2016 through 2021. According to OPH, turnover and staffing limitations have also contributed to the delay in issuing AOs.

OPH has not yet developed and implemented a data system that effectively tracks its issued enforcement actions. As a result, OPH cannot ensure that it follows its enforcement process of identifying noncompliant water systems and taking further enforcement actions when necessary. According to OPH, the database limitations noted during the 2016 audit still exist. In August 2018, OPH implemented a database to track issued enforcement actions; however, this system was abandoned after 18 months because of the amount of work needed to populate the database. OPH stated that until it can develop a new data system, which will take years, it will continue to use its current tracking process for AOs and ordered enforcement actions that involves the Safe Drinking Water Information System (SDWIS) database, Microsoft Outlook, and spreadsheets. In addition, OPH conducts bi-weekly reviews to determine the applicable course of action for open AOs.

Recommendation 3: OPH should ensure that it issues AOs for unresolved violations as required by policy.

Summary of Management’s Response: OPH agrees with this recommendation. The SDWP continues to experience significant staff turnover so it will need to adjust staffing to assist with the increased demand for formal enforcement actions. See Appendix A for management’s full response.

Recommendation 4: OPH should develop and implement a data system that effectively tracks its issued enforcement actions so that it can identify all noncompliant water systems and take further enforcement action when necessary.

Summary of Management's Response: OPH agrees with this recommendation and stated that it is actively evaluating options for data management, which may include using a software development company to design the data system. However, such in-depth complex software programs can take 4-5 years for development and cost upwards of \$200,000. See Appendix A for management's full response.

OPH has improved in its issuance of violations to water systems that do not notify their customers of noncompliance with drinking water regulations. During fiscal years 2016 through 2021, OPH issued violations to water systems for 2,348 (99.5%) of 2,359 unperformed public notifications, as required by the EPA. This is an improvement from our August 2016 audit that found OPH did not issue violations for 363 (35.4%) of 1,025 unperformed public notifications.

When OPH identifies violations through its monitoring process, federal law¹⁴ requires water systems to notify the public of the issue with their drinking water. Public notifications must include a description of the violation, when the event occurred, the potential adverse health risks, the population at risk, and what actions consumers should take before drinking the water (such as boiling, etc.). When a water system does not perform a required public notification, the EPA requires that OPH issue the water system a Public Notification violation.

In our 2016 report, we found that OPH did not always issue violations for water systems that did not perform public notifications. During calendar years 2011 through 2014, OPH did not issue violations for 363 (35.4%) of 1,025 unperformed public notifications. We recommended that OPH develop procedures regarding its public notification activities, including updating SDWIS, so that it can better identify noncompliant water systems and issue violations to water systems that fail to perform required public notifications.

We found that OPH implemented our recommendation and improved its issuance of public notification violations. During fiscal years 2016 through 2021, OPH issued violations for 2,348 (99.5%) of 2,359 unperformed public notifications. According to OPH, it implemented additional cross checks to ensure that staff update SDWIS with all public notification activity, and it trains new staff on timely data entry to ensure that public notification violations are issued.

¹⁴ 40 CFR §142.16

OPH now collects additional financial and managerial information during onsite inspections to identify water systems that may need to participate in its Capacity Development Program. In addition, OPH has started requiring participation in the Capacity Development Program as a remedial action in AOs.

In 1996, the Capacity Development Program was created under the Safe Drinking Water Act and requires OPH to assist water systems with achieving and maintaining the technical, managerial, and financial capacity necessary to comply with drinking water regulations. These Capacity Development reviews assist OPH in identifying systems that may have difficulty complying with drinking water regulations in the future instead of only reviewing currently noncompliant systems. In Louisiana, requirements for participating in the Capacity Development Program vary depending on whether a water system is new or existing. All new water systems must complete a Capacity Development review before OPH issues a permit. OPH also selects 20 existing systems to review each year based on a combination of factors including prior compliance history.¹⁵ While OPH can withhold permits for new systems, there is no penalty for existing water systems that do not comply with Capacity Development requirements; as a result, OPH cannot maximize its assistance to existing water systems in achieving and maintaining the capacity to comply with drinking water regulations.

In our 2017 audit, we recommended that OPH gather additional financial and managerial information during its onsite inspections to help it identify systems that may benefit from participating in the Capacity Development Program. For example, assessing whether a system has increased its rates within the last five years, has a policy to review its rates for sufficiency, and has a cut-off policy for delinquent customers could help OPH identify systems that might have difficulty complying with drinking water regulations in the future instead of only reviewing currently noncompliant systems. We also recommended that OPH should develop, issue, and enforce penalties for existing water systems that do not comply with Capacity Development requirements.

As of April 2017, OPH added nine financial questions to the Sanitary Survey Financial Question Set and requires water systems to provide a copy of their current rate schedules to be filed along with the completed sanitary survey. The questions are related to the systems' budgets, revenues, expenditures, rate structure, and tracking of water produced, sold, and lost, and are designed to assist OPH assess the systems' financial capacity. As of May 2021, OPH has received rate schedules and reviewed completed financial question sets for 313 community water systems. According to OPH, it sent 25 of these water systems through the Capacity Development Program after it reviewed their financial question sets.

¹⁵ Other factors include whether an AO has been issued, the system is on the significant noncompliers list, an MCL violation was cited during the past three years, or significant unresolved observations resulted from a sanitary survey.

After our report was issued in March 2017, OPH started requiring participation in the Capacity Development Program as a remedial action in AOs. However, while failure to resolve an AO can result in the issuance of penalties, OPH does not have the regulatory authority to issue penalties based on noncompliance with the Program alone. During fiscal years 2016 through 2021, OPH selected 523 water systems to participate in the Capacity Development Program. Of these, 426 (81.5%) participated in the Program, 74 (14.1%) declined participation, and 23 (4.4%) had not notified OPH whether they were participating as of June 2021. While participation in the Capacity Development Program is voluntary, OPH has begun to require participation in the Program for some water systems to resolve an AO. According to OPH, during fiscal years 2016 through 2021, it issued 128 AOs that contained language that required participation in the Capacity Development Program. This language mandates that within 90 days of receipt of the order, the respondent shall contact OPH’s Capacity Development Engineer to schedule a meeting, submit documentation, and complete training relative to the technical, managerial, and financial capacity of the water system. According to OPH, while it does not have the authority to issue penalties to water systems simply for failure to participate in the Capacity Development Program, if systems do not comply with other aspects of the AO then OPH can impose penalties.

In addition to assessing the technical, managerial, and financial capacity of water systems, OPH is required¹⁶ to consider and include asset management in its Capacity Development Program by December 31, 2021 (see text box on right). According to the Association of State Drinking Water Administrators, public water systems need asset management to address aging water infrastructure, make sound investment decisions to maximize limited financial resources, and make costs transparent to support financial decisions. Infrastructure concerns and water quality were also addressed by the legislature during the 2021 Regular Session. Act 98¹⁷ created the “Community Drinking Water Infrastructure Sustainability Act,” which provides for the development and implementation of a community water system accountability process which requires and supports drinking water infrastructure sustainability for the citizens of Louisiana. This act requires LDH to establish a letter grade schedule that reflects the quality, performance, and sustainability of the community water system, and water systems will be assigned a letter grade of “A,” “B,” “C,” “D,” or “F.” According to OPH, it is considering incorporating a point system into the grading schedule where water systems that participate in the Capacity Development Program and develop an asset management plan can earn points toward earning a higher letter grade.

Asset management is a process within capacity development that involves maintaining a desired level of customer service for public water systems to provide at the lowest cost. With a proper plan for asset management, a water system can improve service and reliability, reduce risk and unexpected costs, and enhance communication with customers and stakeholders.

Source: [Association of State Drinking Water Administrators](#)

Recommendation 5: OPH should formalize and implement its proposed point system into the grading schedule required by Act 98 of the 2021 Regular Legislative Session so that water systems that participate in the Capacity Development Program and develop an asset management plan can earn points toward earning a higher letter grade.

¹⁶ America’s Water Infrastructure Act of 2018, Section 2012

¹⁷ R.S. 40:5.9.1

Summary of Management's Response: OPH agrees with this recommendation and stated that the Community Water System Accountability Rule will provide water systems an opportunity to receive extra points for submitting an asset management plan and participation in a capacity development program. See Appendix A for management's full response.

APPENDIX A: MANAGEMENT'S RESPONSE



State of Louisiana
Louisiana Department of Health
Office of the Secretary

November 18, 2021

VIA E-MAIL ONLY

Michael J. "Mike" Waguespack, CPA
Legislative Auditor
P.O. Box 94397
Baton Rouge, LA 70804-9397

Re: Progress Report Safe Drinking Water Program

Dear Mr. Waguespack:

The Louisiana Department of Health (LDH) acknowledges receipt of your correspondence dated October 29, 2021, wherein the Louisiana Legislative Auditor (LLA) notified LDH of a progress report related to the Safe Drinking Water Program (SDWP). LDH appreciates the opportunity to provide this response to your findings. Along those lines, please allow this correspondence to serve as the LDH official response thereto.

Finding 1/Recommendation 1 - OPH should continue to work with the legislature to amend the iron and manganese monitoring requirements in R.S. 40:4.16 based on the significant fiscal impact on public water systems.

LDH Response - The SDWP agrees with this recommendation. The Office of Public Health (OPH) will approach and work with the authors of Act 861 (R.S. 40:4.16).

Enforcing the non-health based standards for iron and manganese would require a significant increase in water rates throughout the State based on the estimated cost of the infrastructure upgrades required for removing iron/manganese from the drinking water (~\$1.13 B). Although LDH does not enforce the secondary standards, the SDWP does conduct investigative and routine monitoring for iron and manganese at public water systems to determine the iron/manganese levels in drinking water. For cases of elevated iron /manganese levels found in the drinking water, the SDWP provides technical guidance and requires public water systems to implement corrective actions (such as routine flushing programs) to reduce levels in the drinking water. Additionally, the SDWP requests public water systems to issue a

public notice when the manganese level in the drinking water exceeds the EPA health advisory level (0.3 mg/L).

Finding 2/Recommendation 2 - OPH should resolve the database issues that prevent it from running accurate and complete reports to ensure that it takes enforcement actions when water systems do not resolve significant deficiencies.

LDH Response - The SDWP agrees with this recommendation.

In accordance with the federal Ground Water Rule (GWR), LDH is required to conduct onsite inspections (a.k.a. Sanitary Surveys) at public water systems every 3 to 5 years to identify significant deficiencies. LDH-SDWP did not receive primary enforcement authority of the GWR until September 28, 2017. The SDWP developed an extensive training program for staff that included detailed procedures and step guides on the data entry process. In addition, the SDWP implemented measures to identify and resolve database issues that includes performing routine data evaluations. The SDWP will continue to train staff to ensure proper data entry.

Since FY 2016, the SDWP has issued roughly 949 treatment technique violations to water systems for unresolved significant deficiencies after adopting and receiving enforcement authority from EPA for the federal Ground Water Rule in September 28, 2017.

Finding 3/Recommendation 3 - OPH should ensure that it issues AOs for unresolved violations as required by policy.

LDH Response - The SDWP agrees with this recommendation.

Administrative Orders (AOs) are prioritized and issued based on the number and severity of the violations for the water system. AOs for health-based (MCL) violations take priority over the AOs for non-health based violations. Since FY 2016, the SDWP has issued approximately 270 Orders to water systems, which include 148 AOs for 3,858 MCL violations and 64 AOs for 215 non-health based violations. The remaining Orders were for imposition of penalties and modified orders and/or stipulated and agreed orders.

The SDWP continues to experience significant staff turnover. Furthermore, as indicated in Exhibit 3 of the Audit Report, the number of MCL and Other, i.e. non-health based, violations has continued to increase each year since FY 2016. SDWP will need to adjust our staffing to assist with the increased demand for formal enforcement actions.

Finding 3/Recommendation 4 - OPH should develop and implement a data system that effectively tracks its issued enforcement actions so that it can identify

all noncompliant water systems and take further enforcement action when necessary.

LDH Response - The SDWP agrees with this recommendation.

Since 2016, the SDWP has investigated several data tracking systems but the systems were not viable. The SDWP is actively evaluating options for data management, which may include using a software development company to design the data system. However, it has been our experience such in-depth complex software programs can take 4-5 years for development and cost upwards of \$200,000.

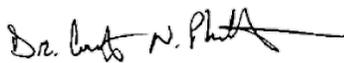
Finding 5/Recommendation 5 - OPH should formalize and implement its proposed point system into the grading schedule required by Act 98 so that water systems that participate in the Capacity Development Program and develop an asset management plan can earn points toward earning a higher letter grade.

LDH Response - The SDWP agrees with this recommendation.

The Community Water System Accountability Rule will provide water systems an opportunity to receive extra points for submitting an asset management plan and participation in a capacity development program.

Should you have any questions, please contact Amanda Ames, PE, Chief Engineer, Louisiana Department of Health, at (225) 342-7499.

Sincerely,



Dr. Courtney N. Phillips

APPENDIX B: SCOPE AND METHODOLOGY

This report provides the results of our performance audit on the Louisiana Department of Health, Office of Public Health's (OPH) progress towards addressing issues identified in two previous reports on the monitoring and oversight of the Safe Drinking Water Program (SDWP) and on the Capacity Development Program. We conducted this performance audit under the provisions of Title 24 of the Louisiana Revised Statutes of 1950, as amended. This audit generally covered June 1, 2015, through July 31, 2021. Our audit objective was:

To evaluate OPH's progress towards addressing issues identified in our previous reports on the monitoring and enforcement activities of the Safe Drinking Water Program and the Capacity Development Program.

We conducted this performance audit in accordance with generally accepted *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide reasonable basis for our findings and conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. To answer our objective, we reviewed internal controls relevant to the audit objective and performed the following audit steps:

- Researched reviewed relevant federal and state statutes related to the SDWP.
- Interviewed relevant staff from OPH to understand agency operations and processes.
- Obtained and reviewed OPH policies and procedures.
- Obtained violation, deficiency, public notification, and administrative order data from OPH staff to determine compliance with OPH policy.
- Imported obtained data into ACL and performed analyses to determine whether OPH had demonstrated improvement in regard to sanitary surveys, public notifications, and escalation of enforcement actions.
- Obtained information regarding OPH's Capacity Development Program, including program participation and requirements.
- Reviewed a selection of 10 administrative orders issued by OPH during fiscal years 2016 through 2021 that included a variety of fiscal years, regions, water system types, and levels of escalation of enforcement actions (i.e., penalties or subsequent orders).

- Reviewed methodologies and preliminary results of our analyses with OPH and adjusted analyses based on feedback and documentation provided.

APPENDIX C: SUMMARY OF PRIOR FINDINGS AND RECOMMENDATIONS AND OPH'S IMPLEMENTATION PROGRESS AS OF JUNE 2021

Safe Drinking Water Program - August 2016*

Finding #1: Because of staffing reductions and a new EPA rule that requires increased sampling, OPH has had to rely on water systems to collect the majority of the water samples used to test for contamination since 2012. As a result, OPH cannot fully ensure the integrity of these samples.

Recommendation	Status
1. OPH management should evaluate the risks of allowing water systems to collect their own water samples and determine if additional funding from Act 605 could be used to help address these risks, such as using sanitarians to collect water samples as it did prior to 2012.	Implemented. Since January 2017, OPH has created an additional 40 sanitarian positions and resumed collecting the majority of water samples used to test for contamination in water systems. While the total number of violations OPH cited water systems for increased 5.6% during fiscal years 2016 through 2021, the number of monitoring violations decreased 97.0% during this time.
2. OPH management should evaluate the additional requirements necessary for regulating iron and manganese levels and for monitoring <i>Naegleria fowleri</i> , prioritize these duties with staffing availability, and consider using the additional sanitarian positions from Act 605 to assist with these additional monitoring requirements.	Partially Implemented. Additional revenue from Act 605 has allowed OPH to conduct routine monitoring for secondary contaminants, including iron and manganese, and to continue sampling for <i>Naegleria fowleri</i> each summer using risk-based selection criteria. However, OPH has not moved forward with enforcing the non-health-based standards of iron and manganese, as it has estimated the fiscal impact on public water systems to remove these contaminants to be approximately \$1.13 billion.

Finding #2: Although OPH conducted all required sanitary surveys on 1,075 (89%) of 1,208 active water systems during calendar years 2009 through 2014, 48.1% of the surveys we tested were not conducted within required timeframes.

Recommendation	Status
3. OPH should conduct sanitary surveys in a timely manner as required by federal law.	Implemented. OPH conducted 1,406 (100.0%) of 1,406 required sanitary surveys, and 1,385 (98.5%) were implemented in accordance with required timeframes. OPH established an internal goal of performing sanitary surveys every two years, and we found that the average time between sanitary surveys was 2.0 years.

Finding #3: Due to data limitations, OPH cannot ensure that it took appropriate enforcement action when water systems failed to resolve significant deficiencies identified during sanitary surveys.	
Recommendation	Status
4. OPH management should develop a process for ensuring that it took enforcement action when water systems do not resolve significant deficiencies identified during sanitary surveys.	Partially implemented. Database limitations continue to exist that prevent OPH from ensuring that appropriate action is taken when water systems fail to resolve significant deficiencies. To address these limitations, OPH developed a policy to review significant deficiencies to ensure regional staff were taking appropriate enforcement action. OPH did not issue violations for 10 (8.5%) of 118 unresolved significant deficiencies issued during fiscal years 2016 through 2021. In addition, of 127 unresolved non-health-based violations cited during this same timeframe, 36 (92.3%) of 39 met criteria for an Administrative Order (AO) that OPH did not issue according to policy.
Finding #4: OPH did not always cite violations for water systems that did not perform public notifications. During calendar years 2011 through 2014, OPH did not issue violations for 363 (35.4%) of 1,025 unperformed public notifications, as required by the EPA.	
Recommendation	Status
5. OPH should develop procedures regarding its public notification activities, including updating SDWIS, so that it can better identify noncompliant water systems and issue violations to water systems that fail to perform required public notifications.	Implemented. During fiscal years 2016 through 2021, OPH issued violations for 2,348 (99.5%) of 2,359 unperformed public notifications. According to OPH, it implemented additional cross checks to ensure that staff update SDWIS with all public notification activity.
Finding #5: OPH did not always follow its enforcement process. Specifically, OPH did not always follow up to determine if water systems complied with corrective actions and did not always escalate enforcement actions when it identified continued noncompliance.	
Recommendation	Status
6. OPH should follow up to determine if water systems have complied with corrective actions and escalate enforcement actions if it identifies continued noncompliance, such as issued modified administrative orders and civil penalties.	Implemented. We reviewed a selection of 10 AOs issued during fiscal years 2016 through 2021 to determine whether OPH properly escalated enforcement activities when water systems remain noncompliant with the terms of an AO. We found that of the 10 administrative orders, nine (90%) appropriately escalated enforcement activities through continued post-order investigations, the issuance of additional AOs, and issuance of penalties, in accordance with OPH’s policy.

<p>7. OPH should develop and implement a data system that effectively tracks its enforcement actions so that it can better follow its enforcement process of identifying noncompliant water systems and taking further enforcement actions when necessary.</p>	<p>Not implemented. According to OPH, until it can develop a new data system, which will take years, it will continue to use its current tracking process for AOs and ordered enforcement actions that involves that Safe Drinking Water Information System (SDWIS) database, Microsoft Outlook, and spreadsheets.</p>
<p>Water Rates in Louisiana – March 2017**</p>	
<p>Finding: Governmental water systems, which are not regulated by the Louisiana Public Service Commission, may not be charging high enough rates to cover the costs of providing safe drinking water. Of the 212 water systems we reviewed, 87 (41.0%) had expenses that exceeded revenues. However, other factors, including aging infrastructure and water loss, may also contribute to systems having expenses that exceeded revenues. In addition, concern over customers’ ability to pay makes it difficult for these systems to raise rates.</p>	
<p>Recommendation</p>	<p>Status</p>
<p>1. LDH should develop, issue, and enforce penalties for existing water systems that do not comply with the Capacity Development Program and required training.</p>	<p>Not Implemented. According to OPH, state law and regulations do not give them the authority to take enforcement action against water systems that do not participate in the Capacity Development Program.</p>
<p>2. LDH should collect additional financial and managerial information during onsite inspections of water systems to identify systems that may need to be selected for participation in its Capacity Development Program.</p>	<p>Implemented. In April 2017, OPH added a set of financial questions to its sanitary survey process. In addition, new water systems are required to participate in the Capacity Development Program in order to obtain a permit to operate.</p>
<p>*The report can be found here: https://lla.la.gov/PublicReports.nsf/0EB37BBC680076098625800A00595AE4/\$FILE/00010792.pdf ** The report can be found here: https://lla.la.gov/PublicReports.nsf/E79C2E44A4A9D635862580EB0057B474/\$FILE/00012F5D.pdf Source: Prepared by legislative auditor’s staff using information provided by OPH.</p>	

APPENDIX D: OVERVIEW OF SAFE DRINKING WATER CONTAMINANT RULES MONITORED BY OPH

Rule	Example Contaminants	Source of Contamination	Potential Side Effects
Arsenic Rule	Arsenic	Rocks and soil, water, air, plants, and animals	Several forms of cancer, as well as adverse cardiovascular, pulmonary, immunological, neurological, and endocrine effects
Chemical Contaminant Rule	Asbestos, Atrazine, Benzene, Cyanide, Mercury, Nitrate, Nitrite	Fertilizers	Cancer, organ damage, circulatory system disorders, nervous system disorders, and reproductive system disorders
Disinfectant and Disinfection Byproducts Rules (Stage 1 and Stage 2)	Total Trihalomethanes (TTHM), 5 Haloacetic Acids (HAA5), Bromate, Chlorite, Chlorine/chloramines, Chlorine Dioxide	Chemicals added to disinfect drinking water	Bladder cancer and adverse reproductive effects
Lead and Copper Rule	Lead, Copper	Corrosion of lead and copper containing plumbing materials	Damage to the brain, red blood cells, and kidneys, stomach and intestinal distress, liver or kidney damage, and complications of Wilson's disease in genetically predisposed people
Radionuclides Rule	Radium, Uranium	Leaching from soil and rocks, and in releases from processing plants	Toxic kidney effects, increased risk of cancer
Ground Water Rule	E. coli, Enterococci, Coliphage	Fecal contamination	Enteroviruses, Hepatitis A and E, Rotavirus, Norovirus
Surface Water Treatment Rules	Legionella, Giardia lamblia, Cryptosporidium	Derived from water sources on surface of the earth such as streams, ponds, lakes, or reservoirs	Gastrointestinal illness and other health risks
Total Coliform/Revised Total Coliform Rules	Fecal coliforms and E. coli	Sewage or animal waste	Gastrointestinal illness, jaundice, headaches, fatigue

Source: Prepared by legislative auditor's staff using information contained in EPA rules.