



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Eric J. Holcomb**  
Governor

**Brian C. Rockensuess**  
Commissioner

September 27, 2023

Candice Bauer, Chief  
Ground Water and Drinking Water Branch  
U.S. Environmental Protection Agency  
77 West Jackson Boulevard, WD-15J  
Chicago, Illinois 60604-3590

Dear Ms. Bauer:

Re: Capacity Development Program  
Report 2020 – 2023 Report to the  
Governor

Enclosed, please find a copy of Indiana's Capacity Development Program Report to the Governor. This report was submitted to Governor Holcomb's Office by September 27, 2023. The purpose of this document is to report to Governor Holcomb the effectiveness of the Indiana Department of Environmental Management's capacity development program for the 2020 – 2023 time period.

If you have any questions or comments concerning this report, please contact me at (317) 234-7437 or Alex Powers at (317) 416-8214.

Sincerely,

Matthew Prater, Branch Chief  
Drinking Water Branch  
Office of Water Quality

## Enclosure

cc: Cynthia Meyer, EPA Region V  
Sahba Rouhani, EPA Region V  
Daniel Diedrich, EPA Region V  
Alex Powers, IDEM



**Program Report to the Governor**

***“The Effectiveness of Indiana’s Capacity  
Development Strategy for New/Existing  
Public Water Systems”***

**September 2023**



**Prepared by:**

**Indiana Department of Environmental Management  
Office of Water Quality  
Drinking Water Branch**

## **Background**

This Capacity Development Annual report was prepared by the Indiana Department of Environmental Management (IDEM), Drinking Water Branch (DWB) in fulfillment of the reporting requirements of the United States Environmental Protection Agency (US EPA) Guidance on Implementing the Capacity Development provisions of the 1996 Amendments to the Safe Drinking Water Act (SDWA). The 1996 amendments emphasized the prevention of contamination of water supplies and encouraged the proper management of public water systems to ensure the delivery of safe drinking water to all citizens. The Amendments required states to develop and implement a strategy that assists public water systems in acquiring and maintaining water system capacity. Water system capacity has three components: technical, managerial, and financial. Proficiency in all three areas is necessary for a system to have adequate “capacity.” The process of assisting systems to acquire and maintain adequate technical, managerial, and financial capacity is called Capacity Development. The goal of Indiana Department of Environmental Management’s (IDEM) Capacity Development efforts is ensuring that public water systems in Indiana will maintain high compliance rates and consistently provide safe and adequate drinking water to their customers. The purpose of this document is to report to Govern Holcomb the effectiveness of the Indiana Department of Environmental Management’s capacity development program for the 2020-2023 time period. The State risks losing 20 percent of the annual Drinking water State Revolving Fund (DWSRF) allotment if it does not submit a report to its Governor by September 30 every third year or does not make the report available to the public under Section 1420(c)(3) of the SDWA.

## **Introduction**

IDEM submitted the initial “Capacity Development Strategy for Existing Public Water Systems” to EPA on July 28, 2000. The goal of the strategy is to help all public water systems achieve and maintain “capacity,” defined as the ability to meet the SDWA’s requirements and consistently provide safe drinking water to the citizens of Indiana. IDEM submitted an updated strategy on December 2022 to the EPA that was approved. IDEM utilized the experience and expertise of stakeholders both within and outside the agency to develop this strategy. The Indiana Department of Environmental Management’s strategy involves a variety of activities and tools designed to enhance the technical, managerial, and financial capacity of our public water systems. The goal of the IDEM’s Capacity Development Program is to assist owners and operators of public drinking water systems by improving their technical abilities, managerial skills, and financial viability to achieve and ensure safe drinking water now and in the future. As a result of IDEM’s capacity development strategy, a majority of Indiana’s water systems meet the health-based standards for drinking water quality.

IDEM, with input from stakeholders, developed rules found at (327 IAC 8-3.6) that govern the development of new Community and Nontransient Noncommunity public water supplies in Indiana. As of September 9, 1999, all new Community or new Nontransient Noncommunity Public Water Systems (PWSs) in Indiana must submit a

water system management plan to IDEM that demonstrates the technical, managerial, and financial capacity of the proposed public water system. IDEM must approve the Water System Management Plan prior to the submission of a construction permit application by the proposed PWS. No construction may begin until the water system management plan is approved. It is the intent that systems passing this hurdle are better equipped to remain viable for the long term.

Existing public water systems are evaluated regularly to ensure that they are maintaining their technical, managerial, and financial capacity. This approach is a multi-faceted effort. The sanitary survey performed by the Drinking Water Branch and Field Inspection Section is a primary tool for evaluating public water system capacity. The sanitary survey is a detailed, on-site inspection of the public water system. The sanitary survey encompasses 8 separate elements found at public water systems. The sanitary surveys are conducted at regular intervals. IDEM uses a variety of programs aimed at capacity development. Our Compliance Section is responsible for ensuring the appropriate sampling is completed and results submitted. They also aid both new and existing systems helping those systems understand monitoring and reporting requirements. Our Operator Certification staff help ensure that systems are operated by certified operators. Our Construction Permits Section reviews construction permit applications to ensure construction meets standards. The Groundwater Section looks at source protection. In short, the job of capacity development is a team effort designed to help ensure safe drinking water for the citizens of Indiana who obtain drinking water from public water systems.

IDEM has submitted reports to the Governor regarding the effectiveness of our Capacity Development Strategy for Existing Public Water Systems every three years starting in 2002, in accordance with federal requirements. Meeting this and related requirements under federal rules avoids a withholding of up to 20% of the Drinking Water State Revolving Fund (DWSRF) Capitalization Grant. The 2023 report is submitted in fulfillment of requirements and to avoid withholding of up to 20% of the Drinking Water State Revolving Fund (DWSRF) allotment for Federal Fiscal Year 2024. This document serves to fulfill the reporting requirement for Indiana's Capacity Development Report to the Governor on the effectiveness of our strategy for new and existing public water systems.

### **Objectives**

Our objective, in implementing the strategy, is to ensure safe drinking water for the citizens of Indiana by improving the overall compliance rates for existing PWSs. Over the last three years, IDEM has successfully implemented many activities and developed several tools to assist public water supplies in attaining technical, managerial, and financial capacity.

## **Current Activities to Enhance Water System Capacity**

### ***Staff***

The Drinking Water Compliance Assistance Program (DWCAP) has three staff members specifically designated as Capacity Development Program Staff. However, the job of ensuring compliance and capacity development extends over every section of the Drinking Water Branch. These DWCAP Staff are directly involved in assisting public water systems (systems) to reach compliance and maintain technical, financial, and managerial capacity. The staff works as a team with all sections of the Branch to determine the best approach on how to assist public water systems to achieve and maintain high rates of compliance.

DWCAP Staff have been instrumental in assisting systems with technical, financial, and managerial matters. The DWCAP staff developed and/or utilizes the following approaches to help systems:

- Fact sheets
- Financial evaluation assistance
- Town board training materials
- On-site evaluations of systems
- Maintain operator training materials as well as provide technical assistance to operators.
- Level 2 Assessment Training and Certification
- Operator Daily Duty Log
- Mentoring programs
- Maintaining a list of operators for systems in need of an operator
- Training assistance for certified operators
- Asset management and budgeting for short-term and long-term infrastructure replacement goals
- Contaminant treatment and removal assistance
- Lead and Copper control program assistance
- Assistance preparing annual Consumer Confidence Report
- Assistance identifying potential funding sources for utility capital improvement projects
- Assisting new systems with understanding and complying with Drinking Water Rules
- Training for Facility Specific Operators
- Maintain a List of Active Backflow Inspectors

## ***Implementation of Strategy***

As part of the implementation of Indiana’s “Capacity Development Strategy for Existing Public Water Systems,” and to focus our efforts on systems with the greatest need, IDEM has improved mechanisms to screen, categorize, and prioritize them. As we continue to aid public water supplies, we are continually exploring new tools to further enhance our abilities in identifying and assisting these systems. The activities and tools listed below were developed or enhanced to improve IDEM’s ability to provide technical, managerial, and financial assistance to systems in Indiana. A more detailed description of these items is included in the following section.

- Screening, Categorizing and Prioritizing Systems
- Compliance Assistance Tools
- On-site Technical, Financial, Managerial Assistance
- Self-Assessment Manual
- Small System Technical Assistance Workshops
- Facility Specific Operator Trainings
- Water & Wastewater Task Force
- Small System Lab Assistance Program
- Operator Certification Rule
- Updated Operator Certification Database
- Updated Capacity Development Database
- Drinking Water Watch Sampling Schedule
- Operator Daily Duty Log

### **Progress - Improving Existing System Capacity**

#### ***Screening, Categorizing, and Prioritizing Systems***

IDEM has fully integrated the US EPA Federal Enforcement Response Policy (ERP) and Enforcement Tracking Tool (ETT) along with several other tools at our disposal. To protect public health and track health violations, IDEM has implemented the use of the ERP/ETT tool to effectively identify and return systems to compliance. We utilize a combination of ERP/ETT, Safe Drinking Water Information System (SDWIS) data (the Federal reporting database), inspections, Capacity Development activities, and Operator Certification data to track the status of all active PWSs.

The DWCAP and Branch staff worked with numerous systems, over the last three years, to reduce the quantity of violations accumulated by effectively using the ERP/ETT tool and the Safe Drinking Water Information System (SDWIS) Data Violations, see Appendix A. Violations are divided into four categories and characterized as Maximum Contaminant Level (MCL), Treatment Technique, Monitoring and Reporting (M&R), and Consumer Confidence Report. The first category deals with all contaminant violations. The second category includes all non-health related violations such as a Treatment Technique Violations or the failure to provide adequate treatment.

The third category deals with the system's failure to collect and/or report sample results for all contaminants. Finally, the fourth category applies to only community public water systems that fail to provide a Consumer Confidence Report to their patrons. Over the past three years, IDEM provided technical, managerial, and financial assistance to numerous systems effectively decreasing the total number of violations for Community Water Systems (CWS) and Nontransient Noncommunity (NTNC) Systems.

### **Revised Total Coliform Rule**

IDEM saw a reduction in systems with noncompliance for MCL violations but an increase of treatment technique and M&R violations for Transient Noncommunity (TNC) systems with the inception of the Revised Total Coliform Rule (RTCR). The RTCR, which went into effect April 1, 2016, has had a large impact on compliance rates for all systems, but more so at Noncommunity Systems. The number of Total Coliform violations, and systems in violation increased with the onset of the new rule. There has been a large increase in outreach and educational efforts to help systems comply with this new rule. Systems frequently trigger increased monitoring under the new rule. This creates a domino effect leading to more violations and confusion for the systems. Systems had to adjust their program to comply with the RTCR adding more responsibilities due to the procedures introduced by the RTCR.

The RTCR has put a strain on the Branch to provide more technical assistance for systems to comply with these new requirements. This rule requires various assessments of the distribution systems when multiple positive bacteria samples or monitoring and reporting violations occur. The type of RTCR assessments triggered are the Level 1 Assessments or Level 2 Assessments. Each of these assessments are reviewed by DWCAP Staff for completeness and compliance understanding. Additionally, the DWCAP Staff follows up on omissions and/or errors in the assessments. Level 2 Assessments are triggered when the system incurs multiple bacteria positive results, including *Escherichia coli* (*E. coli*) results, or multiple Level 1 triggers. Level 1 Assessments may be performed by a representative of the water system. However, Level 2 Assessments must be done by either IDEM staff or a certified operator who has been trained by IDEM to complete these assessments.

During this reporting period, there were a total of six hundred and forty-six (646) Level 1 Assessments and four hundred and five (405) Level 2 Assessments that were triggered and completed. These assessments have proven to be laborious and time consuming, which puts additional strain on an already small staff. IDEM has developed online training modules on how to properly performs RTCR assessments. To date, we have trained and certified three hundred and twenty-five (325) operators to perform Level 2 assessments.

IDEM has online trainings for qualified candidates to become certified Level 2 Assessors. This training emphasizes the basics of what a Level 2 Assessment is and the purpose behind this training. In this training we conveyed data that we had collected since April 1, 2016 and lessons learned. We discussed the problems that were faced

during the Level 2 Assessment and after the assessment was completed. Many of the issues systems faced correlated with performing corrective actions and showing proof the system had completed this. We also emphasized that it is important that the assessor makes sure that everything is completed prior to submission of the Level 2 Assessment form. Once the training is completed, the certified assessor can then renew their assessor's certificate.

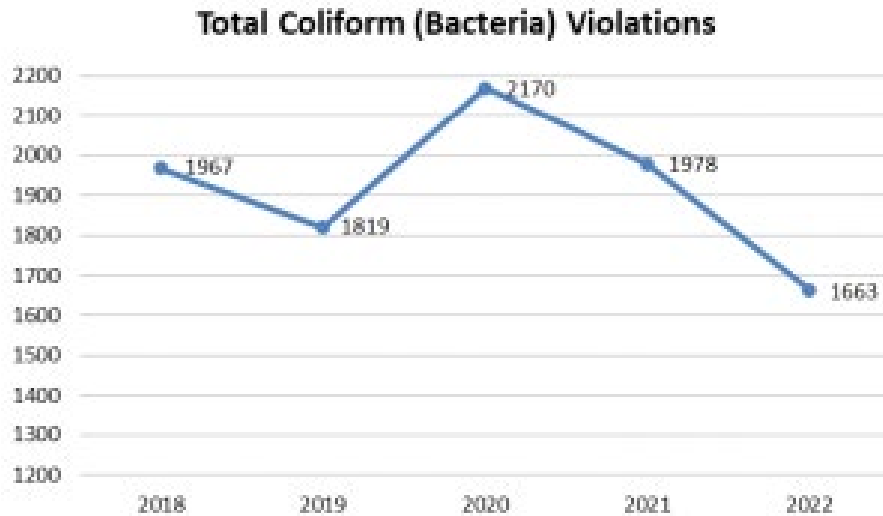
In response to the growing numbers of Level 2 Assessments being triggered throughout the northern part of the state, IDEM has reached out to many of their trained Level 2 Assessors for assistance. IDEM sent out an Email and Interactive Voice Response (phone message) to all certified Level 2 Assessors requesting operator information be provided to public water systems that may need assistance with Level 2 Assessors. Currently, we have seventy-nine (79) assessors signed up to assist various systems throughout the state. This list is maintained by IDEM and provided to all systems that trigger a Level 2 Assessment.

Since 2016 at the onset of the rule, we made concerted efforts to assist and educate seasonal transient systems with learning the RTCR requirements specific to these systems. Since 2020 we have reduced the number of seasonal systems in non-compliance. We provide guidance and technical assistance to these systems to help them stay in compliance. We currently have three hundred and eighty-six (386) seasonal systems that we work with to continue to improve compliance rates. In 2020 there were 204 SSUP violations and in 2023 we have almost cut that number in half with 108 violations. Seasonal compliance rates continue to improve, through the efforts of the dedicated DWCAP staff.

We will continue assist systems as best we can in the ongoing implementation of the RTCR. It will continue to be time and labor intensive for the Branch and burdensome for the systems.

Although RTCR violations still make up the bulk of the PWS violations issued, continuous educational outreach and concentrated compliance assistance efforts by IDEM staff resulted in a decrease in RTCR violations as illustrated here:





### ***Compliance Assistance***

IDEM Drinking Water Branch (DWB) have been effective in promoting compliance at PWSs by using various compliance assistance resources. A sample of these assets includes:

- Courtesy Reminder Letters for key compliance activities (sent prior to the end of a compliance period)
- Reminder Letters for missing information (sent immediately following the end of a compliance period)
- Violation Letters that allow a return to compliance with no penalty
- Courtesy phone calls to systems reminding them of applicable requirements
- On-site assistance by Field Inspection Staff or DWCAP staff
- Monitoring Waiver Program – review of likelihood of contaminant occurrence this program allows a reduction in testing where appropriate, saving the system monitoring costs
- Educational materials and reminders of new rule requirements
- Seminars and workshops done in cooperation with various water associations such as American Water Works Association (AWWA), Alliance of Indiana Rural Water, and Rural Community Assistance Program (RCAP)

### ***Individualized Assistance***

IDEM has coordinated efforts, with various water associations, in providing technical assistance for public water systems. These efforts are critical to reduce current violations and minimize the possibility of systems accumulating new ones. We use various databases to track all public water systems compliance records. These records assist IDEM in determining if a system has returned to compliance, needs additional

assistance, or has various violations that need to be addressed through an Administrative Order. Over the last three years, **DWCAP Staff and Field Staff have provided over four thousand seven hundred and thirty-nine (4,739) accounts of technical assistance and have performed over four thousand and three (4,003) on site visits for various systems.** DWCAP Staff are involved in various types of assistance that can be any or all aspects of financial, managerial, and/or technical capacity.

Systems may require various types of assistance to solve a problem, which prevents the system from attaining capacity. For instance, a system that is without a certified operator is contacted to remind them of the requirement and may be given a list of operators located within the county and in the surrounding counties, making the search for an operator less complicated. In addition, the Operator Certification (OpCert) Staff maintains a list of operators who have made it known to us that they may be interested in full or part-time employment. Any interested operator is placed on the list and the list is then provided to systems upon request. If a system has trouble with required reports, the DWCAP Staff may help them fill out the report, help them understand the report, the requirement and need for the report, and ensure the report contains the required information. Certain problems are more complex and require working and coordinating the efforts of other IDEM program staff, consultants, the system operator, the public water system's management, and the system's owners. The DWCAP Staff may draw upon expertise from other Branch Sections, outside professional associations, or other state agencies. A long-term project plan may be built requiring a coordinated effort from all involved parties to overcome complex obstacles.

## ***Assistance Success Stories***

### ***Lead and Copper Rule Assistance***

Much of our assistance with the Lead and Copper Rules this year has involved providing information and education about the new changes. There have been twenty-five (25) presentations by IDEM staff on this issue during this reporting period. IDEM has been trying to ensure our systems are aware of the changes before they go into effect and patiently listening to the concerns water operators have brought to our attention. This rule has naturally caused much concern among our systems with heated debate during some of the presentations. The hope is that with continued presentation, outreach, and education, systems will be able to smoothly transition into a new regulatory requirement without any compliance issues ([see IDEM's Drinking Water and Lead Website](#)). Simultaneously, IDEM is working to incorporate all federal rules by reference into the Lead and Copper Rules Revisions (LCRR). Once the Lead and Copper Rule Inventory (LCRI) is finalized, it will also be adopted by reference into the Indiana Administrative Code. IDEM utilizes IVRs to inform systems about training opportunities from 120Water for the PWS Portal (for LSLI Submission process).

The Indiana Finance Authority (IFA) has been active in several areas including the lead sampling program for schools and childcare facilities and will continue assisting these facilities under the new funding opportunities. The most current [information for schools participating in the program](#) can be found on IFA's website. The IFA also updated the [Lead Service Line Inventory Funding Program Guidance](#). IFA has also supplied guidance for [funding opportunities for systems requiring assistance](#) with the lead service line replacement. Indiana Finance Authority (IFA) has funded several programs to assist with ensuring that the Lead Service Line Inventories are completed and has developed the [Lead Service Line Replacement Program](#) to further guide systems. There is a contract in place with 120Water to provide uniformity in submitting service line inventories to IDEM and reporting those inventories to a state reporting portal. The state reporting portal will ensure IDEM reports the service line numbers for each system to EPA. There is also a contract in place with Alliance of Indiana Rural Water (with Arcadis as a subcontractor) to assist Community Systems with less than 1,000 service connections and all Nontransient Noncommunity Systems to complete their LSLI. This Alliance/Arcadis program is known as the Lead Inventory Technical Assistance Program (LITAP). IFA has also provided grant opportunities for systems to contract with their choice of contractors to assist with completion of the LSLI. These grants are awarded to the contractor to be used by the system. IDEM staff are also working with IFA and a small committee of PWS personnel to ensure that the school and childcare sampling requirements will be implementable. Barring any changes, these requirements will become effective in 2025. Throughout this process, IDEM continues to maintain the relationship with Indiana's Family and Social Services Administration to help ensure that daycare providers remain informed.

### ***Lead and Copper***

We currently have one thousand three hundred and fifty-eight (1,358) public water systems that are required to comply with the lead and copper rule. Out of the one thousand three hundred and fifty-eight (1,358) systems, we had one hundred and fifty (150) Monitoring & Reporting Violations during this reporting period in addition to thirty-eight (38) lead exceedances and twenty-eight (28) copper exceedances. Our goal is to reduce the number of monitoring violations by sending multiple reminders via email and phone. We have made concerted efforts in providing clear instructions on how to properly collect the lead and copper samples. These violation totals have all decreased from the last reporting period. This is due to the dedication and outreach from IDEM staff that has been done to educate systems not only about the new proposed rule but also the current rule that is in place.

Most lead and copper violations stem from systems failing to submit their lead consumer notice and certification form. We require all systems to submit a copy of the lead consumer notice for all results exceeding the lead or copper Action Level (AL). We also recommend that systems deliver the lead consumer notice to their customer by the close of next business day if results exceed the action level. If a system exceeds the lead AL, the facilities are required to distribute the Public Education (PE) within sixty

(60) days from the end of the monitoring period. We now require systems to distribute the PE to customers within thirty (30) days from the lead exceedance letter date. This shortens the time frame and allows information to get to the consumers quickly. In addition to the public notices, IDEM provides oversight and guidance for corrosion control and proper sampling procedures when sampling.

### ***Amish School Cisterns***

The Drinking Water Branch (DWB) received an inquiry from the Indiana State Department of Health (IDOH) regarding the allowable distance of a cistern to a potable water well. A new Amish Parochial School was being proposed in Adams County, Indiana. As it is with all Amish Schools, IDEM would have been involved in the well location, design, and approval. While we had no knowledge of this new proposed school the inquiry was of interest because of the use of cisterns in the school setting. The community relies on rain catchment systems collected in vaults and tanks of various configurations, locations, and sizes and a dedicated handpump brings water into the schoolhouse for handwashing and other uses while the well with a handpump is located outside as the primary water for drinking. This practice has been in place for over one hundred years. We knew right away that this was going to be a delicate issue to discuss.

IDOH assisted the DWB to contact the county health department and the building department. Our goal was to learn more about this issue and understand the extent of the use and how it is integrated into the community. We decided to meet at the proposed school location, and we found construction was underway and they needed to know where to locate the cistern in relation to the well. We helped locate the well and in turn our conversation turned to the rain catchment system use in a public water supply environment. IDEM's position from the beginning was that it was not an acceptable practice and the use of collected rainwater for handwashing is not allowed by the Safe Drinking Water Act (SDWA). We began a dialogue with leaders of the community and the process of understanding more about it so a fair and consistent decision would be reached that protected human health. We needed to carefully listen.

IDEM was invited to a meeting with most of the Adams and Jay County leaders in attendance. We discussed the situation up to that point and we listened to their concerns and talked about potential solutions. Our research and conversations with other State regulatory agencies in the EPA Region 5 revealed that such practice is not consistent with the Safe Drinking Water Act and poses a potential health concern. There are forty-four (44) Amish schools in Adams and Jay Counties that are potentially affected by this decision and IDEM wanted to make sure to get it right so that not only the health of pupils is protected, but the rule is implemented in a way that is fair and consistent. The meeting was productive and positive, both sides walked away feeling that progress was made. We offered yet another perspective to the conversation to reach out to our partners at the EPA regarding this issue. Region 5 EPA representatives replied to our question after talking to several other Regions

around the country and Headquarters in Washington, DC. Their position was in support of Indiana's decision because to the potential concerns to human health of stored rainwater for uses that the State and EPA deem fall in the definition of "drinking water". We relayed the findings of our inquiry with EPA to the Amish School and community leaders and after further conversations they asked if they could reach out directly to EPA. We agreed and assisted them in making the contact. Eventually the Amish community leaders in Adams and Jay Counties provided a letter of understanding regarding the issue of their cisterns at Amish Schools and were going to start making the necessary changes to stop the practice.

We feel that this multi-year process was positive because of active engagement from both sides. Staff at the DWB had past experiences with cisterns and was able to understand, genuinely connect with the issue, and to sympathize with the Amish representative at a level that is not typical. The conversation was positive, from a place of caring and respect. The collaboration of so many governmental entities at the Federal, State, and County level helped the process in a way that the community was able to fully understand the issue and see that our primary concern was for the health of the students at the schools. Amish schools with cisterns are now beginning the process of removing the handpumps and DWB Field staff is working closely with the schools to provide the technical assistance that they need to complete this task.

### ***Tall Oaks Lake Corporation IN5255018***

Tall Oaks Lake Corporation was a found system that was activated in November 2018. This system was a small community surface water system. The system used a local pond as its source of drinking water for 19 homes. Tall Oaks had a primitive surface water treatment plant that did not meet the current standards. As a result of this, Tall Oaks accrued a number of significant deficiencies, turbidity violations, DBP violations as well as others. IDEM as well as the system recognized that the system in its current state could not continue to serve water to its residents and meet the regulations. DWB staff as well as other agencies and technical assistance providers researched and reviewed options to help Tall Oaks find a solution. In 2020 IDEM applied for an EPA WIIN grant for small, disadvantaged community water systems and were awarded the grant to provide financial assistance to connect Tall Oaks to a nearby community water system, Citizens Water. The project was a major undertaking for this small community. On November 23, 2022 all the homes were connected to Citizens Water. With this project the homeowners in Tall Oaks were able to be provided with water that meets the requirements of the SDWA by a regulated utility.

### ***Poseyville Municipal Water Department IN5265008***

In 2021 Poseyville was reporting consistent Nitrate samples above the MCL of 10 ppm. Because of this issue Poseyville was in the need of a solution and funding to make that solution possible. IDEM staff along with the IFA worked to get Poseyville SRF financing to install new treatment in order to address the Nitrate issues. They were able to secure a \$1,950,000 SRF loan, a \$549,000 WIIN grant, and a \$1,000,000 SRF grant. The new

treatment project is planned to be completed in March of 2024. Along with this funding, Poseyville also worked with the Posey County Soil and Water Conservation Department on an initiative to educate and assist adjacent property owners with nutrient management plans. This education effort was focused on getting the neighbors and community in the room to show how actions and practices can affect source water and how better practices can really make a difference on public health and the environment.

## ***Climate Resiliency***

IDEM has taken a unique response to climate resiliency in monitoring for natural as well as unnatural indicators. Many programs that have been in effect fall under the category of Climate Resiliency. Programs such as the Cybersecurity and the Drought Prevention Programs show that Indiana's response has already been occurring for years, if not decades. In light of the previous comments' request for specific programs, below are the programs that monitor risks to water quality and availability.

### ***Cybersecurity Program***

IDEM participates in bimonthly meetings of the Governor's Indiana Executive Committee on Cybersecurity (Water & Wastewater Sub-Committee). The Committee works on outreach/education information and templates for cybersecurity plans and risk assessments required of utilities by the American Water Infrastructure Act of 2018. IDEM has compiled and maintains a list of cybersecurity contacts for its roughly 835 municipal community PWS systems, and over 500 wastewater facilities, and used this contact list to communicate cybersecurity advisories, warnings, and regulatory information to Indiana's water sector.

On March 3, 2023, the EPA issued a memo detailing a requirement for states to assess the cybersecurity practices of drinking water systems based on the interpretation of existing federal authority. The memo detailed three potential approaches for states to accomplish this task. States may require utilities to use a third party or self-assess, with follow up occurring via the sanitary survey process. States may perform the cybersecurity assessment themselves as part of the sanitary survey process, or states may use an alternative state program that provides oversight and enforcement capabilities equivalent to the sanitary survey process. IDEM does not believe its sanitary survey program is the right avenue for Indiana, and Indiana does not currently have statutory authority to require all utilities to perform mandatory cybersecurity assessments. At this time, IDEM is developing an alternative state program that initially will be voluntary in nature, encouraging all utilities to perform an assessment using a vendor, TA provider, or self-assess, using a robust tool like the assessment tools developed by the EPA and AWWA. Our plan will encourage utilities to take corrective actions for vulnerabilities identified in the assessments, will follow up with utilities during sanitary surveys and will have organized resources, guidance, and personal technical assistance available to utilities requesting it.

On April 17, 2023, Iowa, Arkansas, and Missouri, along with several water sector organizations, challenged EPA's legal authority to issue the mandate through interpretive rule. On July 13, 2023, the courts stayed action by the EPA to advance the memo's mandates pending the outcome of the court proceedings. IDEM currently is cautiously moving forward with developing the voluntary program with the understanding that outcome of the court proceedings may solidify or change the current nature and timeline of the planned alternative program.

### ***Drought Prevention and Water Guidance***

IDEM meets regularly with the National Weather Service, the NOAA, the State Climatologist, Purdue's College of Agriculture, and occasionally the Department of Homeland Security. During months with reduced drought risks, this meeting happens monthly; during months with higher drought risks the meeting occurs at least weekly, if not more frequently, to closely monitor weather patterns and movements. IDEM utilizes IVRs to contact systems once or twice per year regarding drought trends and risks. This correspondence can be sent to local communities that are at risk of experiencing, or are currently experiencing, a drought event. Systems are encouraged to have a water shortage plan, but at this time Indiana does not require one.

### ***Watershed Assessment and Planning Branch (WAPB) Stream Regional Monitoring Project***

The Regional Monitoring Network (RMN) project operates within the Watershed Assessment and Planning Branch (WAPB). Other organizations assisting with data preparation, collection, and analysis include private laboratories under contract with the state of Indiana, U.S. EPA Region 5, and the Indiana Department of Natural Resources. The regional monitoring network project goal is to monitor chemical, physical, and biological parameters through collected samples to assess changes in thermal and hydrological conditions over time, while also detecting trends through long-term baseline conditions. The WAPB is conducting this study as part of a partnership with the U.S. EPA along with states and tribes within EPA's Region 5. The hope is to establish and detect long-term changes in the baseline conditions of streams due to changes in weather patterns.

### ***Water Loss Audits***

In an effort to better understand non-revenue water, in 2019, the Indiana Legislature adopted IC 8-1-30.8, which obligates water utilities to complete an annual water loss audit. Water utilities must submit water loss audits every even-numbered year to the Indiana Finance Authority ("IFA") for compilation into a biennial report to the Indiana General Assembly. In 2022, 418 utilities out of 537 utilities (78% of Indiana's metered drinking water utilities) submitted a validated water audit. The results found that the state-wide total of non-revenue water amounted to over 45.3 billion gallons. As a result of the 45.3 billion gallons of water lost, the total cost statewide of non-revenue water is over \$51.6 million. These statewide statistics are lower than those from 2019, which

found that 46.7 billion gallons of non-revenue water resulted in a loss of over \$58.4 million. Data gathered through performing a water audit can bring to light opportunities for improvement in a utility's water management process. More efficient operations lead to financial savings for the utility, a longer lifespan for infrastructure, and preservation of Indiana's water resources. IDEM utilizes this data to work with systems in need to help with water loss issues as well as overall asset management improvements.

### ***Source Water Threat Minimization and Response Plan***

In 2015, IDEM and IFA started developing Source Water Threat Minimization and Response Plans (SWTMRP) for Public Water Systems (PWSs) that utilize surface water as their source of drinking water. This works on further implementation of America's Water Infrastructure Act, which ideally minimizes the impact of contamination events for Public Water Systems that use surface water as their water source. During the process of developing these plans, IDEM and IFA identified upstream Potential Contaminant Sources (PCSs) and provided guidance regarding steps to contact the PCSs and facilitate communication and collaboration. Additionally, these documents provide resources such as example contact lists, roles, and procedures that should be completed using the included templates as a guide to add to current resources. The Drinking Water Branch started receiving and reviewing SWTMRP five-year update submittals in 2019. Of the thirty-three (33) active Community surface water treatment system, IDEM has received and approved fourteen (14) 5-Year updated submissions during this reporting period. All active surface water systems have submitted an approved SWTMRP five year-update, except for one system. IDEM will continue working with the other surface water treatment systems that were either not required to submit or have not yet submitted their 5-year updated plan.

### ***Harmful Algal Bloom (HAB) Sampling***

In 2016, IDEM created a project to better understand the occurrence and threat of cyanobacteria and cyanotoxins. Roughly thirty-six (36) percent of Indiana's population is serviced by surface water treatment systems; therefore, IDEM felt it best to focus on these systems to record and monitor algae speciation, cyanotoxins, and baseline information for regional biological matrixes and life cycles.

This sampling was finished in February 2023, sampling at all thirty-three (33) surface water treatment systems in Indiana. To complete this sampling, Groundwater Staff visited systems once every two weeks to take baseline data and monitor any changes throughout the year. The staff sampled both at the intake of the source water and after treatment to evaluate the effectiveness of current treatment on cyanobacteria and cyanotoxins. The project lead adjusted the criteria to account for the behavior of cyanobacteria and cyanotoxins, since levels can be at their highest in the winter months. IDEM intends to have the project reports available during the next fiscal year, but this deadline may be delayed due to the magnitude of the data.



## ***Per- and Polyfluoroalkyl substances (PFAS)***

Over the past few years, much ink has been shed on the potential and current regulation of Per- and Polyfluoroalkyl substances (PFAS). IDEM is currently facilitating PFAS monitoring at all Community Water Systems throughout the state of Indiana with samples being collected before and after treatment to evaluate the statewide occurrence of PFAS compounds and the effectiveness of conventional drinking water treatment. IDEM successfully applied for U.S. EPA Emerging Contaminants Grants and a Multipurpose Grant fund. The match for these grants was provided by the Indiana Finance Authority (IFA). The sampling project was broken down into 3 different phases by system's population size. Phase 1 was for medium size systems, Phase 2 - small systems, and Phase 3 - large systems. The following is a summary of the results so far:

- Phase 1 Sampling: 106 systems agreed to participate, but only 78 systems actually returned samples to IDOH lab. 13 systems had detectable levels of PFOS or PFOA above the interim Health Advisory Level (HAL). 6 systems had PFOS or PFOA above the proposed MCL in finished drinking water.
- Phase 2 Sampling: 383 out of 562 systems participated. 10 systems had had PFOS or PFOA above the HAL. Only two of the 324 systems exceeded the proposed MCL for PFOS or PFOA.
- Phase 3 Sampling: Around 85 systems plan to be involved. Based on the results from 45 systems so far, 3 systems had PFAS sample results above the proposed MCL for finished/treated drinking water.
- Sampling results and additional information about PFAS in Indiana can be found at: [www.IDEM.in.gov/pfas](http://www.IDEM.in.gov/pfas).

IDEM has reviewed the PFAS regulations proposed by the EPA and eagerly awaits the final version of the rule.

## ***Source Water Assessments and Wellhead Protection Plans***

The Groundwater Section provides Source Water Assessments to public water systems. These assessments are intended to provide basic information to public water suppliers regarding where their drinking water comes from; and the degree, called susceptibility, to which the drinking water source may be impacted by potential sources of contamination. During this reporting period, IDEM has performed approximately forty-three (43) assessments. IDEM continues its efforts to assist PWSs on completing source water assessments.

IDEM's Groundwater Section also administers the Wellhead Protection Program. Wellhead Protection Plans are a tool for communities to use in protecting their Community Public Water Systems. The Safe Drinking Water Act and the Indiana

Wellhead Protection Rule (327 IAC 8-4.1) mandates a wellhead protection program for each well or wellfield providing groundwater to a Community Public Water System. During this time, IDEM had worked with and approved three hundred and seventy-four (374) Plans, which is over double the plans approved during the previous reporting period. IDEM has shown consistent approval ratings over the past three-year cycle.

### ***Total Coliform - Coliform Remediation Program (CRP)***

IDEM started the Coliform Remediation Program (CRP) in 2018 after noticing an increasing number of systems had recurring routine and repeat samples test positive for total coliform. This resulted in multiple RTCR Level I and Level II Assessments and increased sampling requirements. For many of these systems, it is believed that biofilm established and harbored harmful bacteria in the distribution systems, against which conventional chlorine treatment can be ineffective in eliminating. IDEM approached the Indiana Finance Authority (IFA) and received a grant to cover the costs for enrolled systems. IFA also contracted with Water Solutions Unlimited to provide assistance to enrolled systems.

During this reporting period, IDEM continued to work alongside the contractors who assisted during last year's reporting period and brainstormed trials and projects to evaluate chemical treatment for systems struggling with recurring compliance issues. These evaluations were to determine the effectiveness of treatments such as shock treatment, flushing, and long-term chemical injection on biofilm. For most of the systems enrolled in the CRP, a biofilm retardant was run through the entire system and allowed to sit for twenty-four (24) to forty-eight (48) hours before flushing the system with a sodium hypochlorite solution. For systems with a more expansive distribution system, injection of both chemicals at low concentrations for an extended period of time proved most effective. After successful treatment and absent samples, the system could then choose to either continue the treatment process at their own expense or return the equipment to the vendor.

Since the start of the project in 2018, IDEM has assisted more than forty-three (43) different Public Water Systems with over sixty-two (62) separate treatments. To date, over ninety (90) percent of sites have had success in eliminating biofilm and have been returned to compliance.

The CRP program continues to gain popularity with Public Water Systems as well as treatment providers, IDEM, and IFA officials. The program was extended through this reporting period. If the need continues IDEM will request additional funding from IFA to continue the program.

### ***Backflow Cross Connection Program***

IDEM's Backflow and Cross Connection Program is designed to protect the public and municipalities of possible intrusion of sources of nonpotable water into a potable water system via a cross connection. Municipalities are becoming more attentive to situations

that can impact public health and water quality. These systems are cracking down on backflow inspectors who submit inspection reports and rejecting the reports if the inspections had been done by an inspector that does not hold an active license or if the individual does not show up on the IDEM Active Backflow Tester List IDEM keeps updated. The systems require testers to contact IDEM to get their license renewed before accepting any future documentation from the inspector.

IDEM requires all individuals who initially want to become a backflow inspector and tester to go through a forty (40) hour course to become certified. Additionally, we require all active backflow inspectors and testers to renew their certification every two years and track the testers who have/have not renewed. The inspectors are required to submit a Backflow Renewal Form providing IDEM updated contact information along with any other pertinent information they would like to share on our Active Backflow Tester List. Currently, IDEM has total of one thousand nine hundred and one (1,901) registered active backflow testers throughout the state on the active list.

### ***Self-Assessment Manual***

IDEM had developed a self-assessment manual designed to assist existing public water systems in identifying their technical, managerial, and financial needs. A copy of this manual is provided as Appendix B. These self-assessments are intended to benefit the public water system, DWCAP, the Indiana Finance Authority, and the State Revolving Fund Staff to determine what options can best be utilized to maintain and/or achieve water system capacity. System operators, that have completed the self-assessment, have indicated that this resource is useful. IDEM encourages all municipalities to use this tool to assess their system and develop an Asset Management Plan.

### ***IDEM Small System Technical Assistance/Facility Specific Operator Training***

The DWCAP Staff has developed various technical assistance materials and workshops for small water system. These workshops include topics on the Safe Drinking Water Act, Indiana's Public Water Supply Regulations, sampling methods, monitoring, and reporting requirements, operation and maintenance issues, and various other topics. These workshops are designed for Community and Nontransient Noncommunity PWS's providing continuing education for the operator. We always encourage Noncommunity Transient Systems to attend, but they are the least likely to attend these trainings. We have discovered that these workshops are a good way to educate new Facility Specific Operators (FSO) on what is required of them as a certified operator. When possible, we conduct the training at the new operator's system. This allows us to train the FSO on the specifics of their system and provides a one-on-one and hands-on sampling training environment for the new operator. New FSO's seem to be more comfortable and exert a willingness to ask questions that they normally would not feel comfortable asking in front of a crowd of people they never met before. These one-on-one workshops increase trust between the FSO and IDEM to the point where they are not afraid to reach out to us in time of need. IDEM was able to reach out and educate one hundred

and ninety-one (191) individuals on Facility Specific Operator responsibilities during this reporting period.

### ***Water and Wastewater Task Force***

Representatives from IDEM, the Indiana Utility Regulatory Commission, and the Indiana Office of the Utility Consumer Counselor meet on a quarterly basis to discuss issues with public water systems that may overlap the agencies' jurisdictions. The meetings have been helpful to bring attention to public water systems that may be having problems. The meetings also improve communication between the agencies to focus on solutions to address problems at water systems.

### ***Small System Laboratory Assistance Program***

Historically, IDEM's Compliance and Enforcement resources had been taken up to address various monitoring and reporting deficiencies at small systems. In the past, noncompliance rates for collecting required water samples and reporting the information to IDEM were approximately 40-45% for small systems. IDEM and the Indiana Department of Health (IDOH) Lab partnered together to provide the required resources for bacteriological and nitrate samples free of charge for Governmental and nonprofit public water systems serving a population of 100 or less. This is a voluntary program with approximately eight hundred (800) systems participating in the program. The Small System Laboratory Assistance Program has been very successful. The noncompliance rates for sampling related violations for small systems have dropped significantly since the launch of this program in 2002. More importantly, information about the quality of the drinking water served by these systems is now available. The DWCAP Staff is working closely with remaining noncompliant systems to reduce the noncompliance rates to even lower levels.

### ***Operator Certification Rule***

Indiana's Revised Operator Certification Rule became effective in December 2000. The new rule required all Community and Nontransient Noncommunity Public Water Systems to be under the direct supervision of a Certified Operator in Responsible Charge (CORC). Additionally, the rule required all Nontransient Noncommunity systems and all Community Systems serving less than a hundred (100) people to have a CORC. The rule required all states to develop peer reviewed operator certification exams or purchase these tests from an accredited source. IDEM did not have the resources to develop our own exams and chose to purchase the tests at the time of the effective date of the rule. Having been disappointed in the services of Association of Boards of Certification, IDEM decided to develop our own test.

IDEM concluded that Indiana systems and operators would benefit from examinations more specific to Indiana and the EPA Region 5 states with many more systems per state than most of the nation. We undertook the task of creating our own exams and

formed a stakeholder workgroup. IDEM wanted to ensure that the exams the state offered adequately assessed the skills needed to successfully operate a PWS.

We then entered into a contract with Ivy Tech Community College (Ivy Tech) allowing water operator examinees to test at any of the twenty-five Ivy Tech Testing Centers statewide. Indiana launched their new exams and test procedures in April of 2016. Indiana Administrative Code requires IDEM to offer a written exam at least annually. We offer pen and paper exam in November of each year. Since the Ivy Tech option our annual exam has had fewer than a dozen applicants each year. IDEM received one application, but the applicant did not sit for the test in person; nor did they sit for the test at an Ivy Tech location within the ninety (90) days allowed by IDEM. We originally offered the written exams twice a year, once in the Spring and Fall. Now, examinees can take the exam whenever they meet the hands-on training requirements and are approved by IDEM to test. The operators now have the opportunity to take the exams on demand. The paper exam is still offered in November of every year.

Ivy Tech provides IDEM with a weekly and quarterly statistical report on exam scores as well as a report on questions missed. The quarterly reports are reviewed by IDEM and the Stakeholder Workgroup. Questions that have a high miss rate are reviewed to ensure the question is relevant and accurate. Changes are made if necessary. An advantage to owning our exams is that we now can make changes as needed without additional cost or lag time. The members of the Stakeholder Workgroup have agreed to continue working on the testing program and to provide guidance and review of the Operator Certification Program to ensure that we are covering needs and providing the resources to educate and assist operators.

The Operator Exam Stakeholder Workgroup continues to review the program and make recommendations as needed. During this reporting period, the workgroup has been meeting at least once a month, sometimes more frequently, to address problematic exam questions. These questions are then either removed or revised to bolster successful operators, while maintaining the fairness and comprehensive evaluation of the exam. Furthermore, evaluating the problematic questions allows trainers and IDEM to evaluate topics that need to be better understood by operators and discuss how best to teach these topics. In addition to the Workgroup, Ivy Tech has been tremendously helpful with evaluating the exam by supplying passing rates of each question. These passing rates are then used to evaluate the question's strength and relevance to the exam. During this reporting period, the committee focused on evaluating the Water Treatment 3 (WT3) exam. The WT3 exam was the focus since it was deemed the most difficult based on passing rates and operator shortages. IDEM hopes to complete the evaluation of this exam during the 2024 Fiscal Year.

With the help of our stakeholder workgroup, IDEM is developing a plan for a comprehensive review of the operator certification program. However, IDEM continually evaluates the effectiveness of our operating procedures to make operational improvements as appropriate. IDEM continues the relationship with the stakeholder workgroup to review the program and maintain a close relationship with professional

associations to provide transparency of our program and ensure that the program meets the needs of public water systems and the State.

Examinee feedback is an important part of a good program. It gives us an idea of how the exam is on any subject and it provides us information of what kinds of trainings that are needed. We can then translate those needs to trainings provided either by us or the professional associations. These trainings can take place at various conferences throughout the state and on webinars. Water operators and various water utility companies have been pleased with the revision of the exams to date. IDEM has put on multiple presentations to provide information to the public on the changes that we are currently implementing and the trends we have seen in the past exams.

Staff are involved with the Alliance of Indiana Rural Water (Alliance), a National Rural Water state affiliate. IDEM attended and provided speakers at both the Spring and Fall Summits they hosted. The Alliance also offers an operator training school and allowed two of IDEM's staff to attend. IDEM's attendance of this school allows them to see first-hand what operators are exposed to prior to sitting for the exam. The Alliance member teaching this school is very passionate about the process and has shared with IDEM training materials used, which include a breakdown of exam topics, log of daily duties for operators, and chlorine safety information, to name a few. Furthermore, Alliance has an apprenticeship program that has successfully placed apprentices with both drinking water and wastewater systems. This program will hopefully continue to be successful in reducing the water operator shortage that Indiana – like many other states – is experiencing.

IDEM sends out courtesy reminder letters to operators to renew their license(s) that are coming up on their three-year cycle. Indiana provides a list of continuing education providers and upcoming webinars on the IDEM website. IDEM has worked with various operators to renew approximately three thousand five hundred and twenty-three (3,523) certifications over the last three-year cycle.

The State of Indiana and the Operator Certification Program continue to have concerns regarding the loss of certified operators. Using available information, Indiana has a shortage of certified operators and that will continue as more and more operators retire. When this occurs, small systems are typically hit the hardest. It is important that IDEM continues to address this concern by working with water associations, towns, cities, and water utilities throughout the State to promote the profession. A research group from Indiana University has formed to research possible solutions with reducing the shortage and changing public opinion of water utility systems. This group has meets with Ivy Tech staff as well as various system personnel from the researched area to learn more. Occasionally, IDEM will sit in on these meetings to provide input or gain insight. This group has discussed pathways to encourage younger operators entering the profession and evaluated the success of the apprenticeship program and outreach to veterans.

The Operator Certification Section is combined with IDEM's Capacity Development section, which makes our Operator Certification Program more versatile in taking steps

to improve the implementation of the program and the quality of certified operators. Outreach, assistance, and training are important for ongoing aspects of the program. This is seen with the success of training new FSO operators at their respective systems. Evidence of improvements in the operation of their systems and public health protection, combined with the reduction of violations support this success. IDEM works to prioritize at-risk systems needing additional assistance through the Capacity Development program with the belief that technical assistance for monitoring and reporting violations include operator compliance training. Trainings are updated regularly and are catered to address the challenges faced by public water systems: e.g., corrosion control, lead and copper monitoring, preventative practices, etc.

### ***Water System Management Plans***

Over this reporting period, DWCAP staff reviewed and/or approved eight Water System Management Plans for new drinking water systems. Seven of these plans were approved. The remaining system, CRW Utility, submitted a water system management plan in June 2023 that has been approved but after this reporting period. These water system management plans demonstrate and help ensure that these new systems have adequate technical, manager and financial capacity to meet all the requirements of the Safe Drinking Water Act and serve water that is safe in quality and adequate in quantity.

### **Asset Management Plan**

An Asset Management Plan takes in consideration of a system's technical, financial, and managerial capacities and it helps to assist systems in identifying five key components: assets, service levels, criticality of the assets, life cycles of the asset, and utility funding. IDEM's plan will assist systems in keeping an inventory list on all assets available and in use; what is the service life of the assets in use; identifying which assets need to be tracked and where that particular asset is located; when it should be replaced; the cost of the replacement; and whether or not they have the required equipment and funds available for replacement. Once a system has collected all of this information, it is expected that they classify the importance of a system's assets, low risk to high risk of system failure.

Amendments to Indiana Code 13-18-26, which went into effect on July 1, 2019, require certain Community PWS permit applicants to certify that they have prepared and completed a life cycle cost-benefit analysis, a capital asset management plan, and a cybersecurity plan. The certification must be submitted to IDEM along with the PWS construction permit application under IC 13-18-16.

The requirements of IC 13-18-26 are applicable to the following PWS permitting actions:

1. A permit for a new PWS treatment plant, defined by IC 13-11-2-264, for a community water system.

2. A permit for the modification or expansion of a community PWS treatment plant that increases the system design capacity of the plant.

IDEM will not issue a permit to an applicant that is subject to IC 13-18-26 if the required certification is not included with the application packet, as required by IC 13-18-26-1(b).

IDEM has conducted outreach for these requirements by notifying external organizations that work directly with PWSs, consultants and engineer firms.

### ***Standard Monitoring Framework***

The Drinking Water Watch (DWW) Program was still available online for systems to review their Standard Monitoring Framework (SMF) in real time for most of this reporting period. However, IDEM has upgraded and replaced DWW with the Drinking Water Viewer (DWV) in order to provide greater transparency and access drinking water data. The Drinking Water Viewer has the following unique capabilities:

- Allows internal and external users to search inventory information for public water systems.
- Allows the public to search and view all compliance drinking water sample results. Users can create water system specific sample data set, which will immediately help fulfill public information records request.
- Users can create customize searches for public water systems drinking water sampling schedules.
- Users can create public water system-specific violation and enforcement reports.
- Users can view public water system specific site visits and deficiencies.
- Drinking Water Operators can easily create a customized Consumer Confidence Report (CCR), which is ultimately delivered to the residents that the public water system serves. The CCR displays drinking water results and any past violations that were issued by IDEM.

### ***Challenges to Capacity Development***

There are several challenges in making the Capacity Development Strategy as effective as possible. There are approximately three thousand nine hundred and thirty (3,930) Public Water Systems in the State; over 50% of these systems are serving a population of less than 100 individuals. The Safe Drinking Water Act continues to place additional regulations on public water systems, creating a greater challenge to small systems. Therefore, additional resources are needed to aid these systems. The sheer volume of systems that could benefit from State assistance far exceeds our ability to provide the needed assistance to the systems and is our greatest struggle.



## ***Field Inspection's Sanitary Surveys and Well Site Surveys***

During this reporting period, IDEM Field Inspection Section has helped various systems fulfill the Safe Drinking Water Act (SDWA) requirements. They performed two thousand nine hundred and eighty-nine (2,989) Sanitary Surveys during this reporting period. Sanitary surveys are a comprehensive on-site review of the drinking water facility. The review includes some or all of the following: source, treatment, distribution, storage, management and operation, monitoring and reporting, and operator compliance. The main purpose of the sanitary survey is to identify any possible defects at the water system that can or may have a direct impact on public health. In addition to the Sanitary Surveys performed, IDEM Field Inspectors also performed one hundred and thirty-three (133) Well Site Surveys and performed one thousand five hundred and sixty (560) technical assistance visits to aid systems with various compliance requirements.

IDEM has been actively utilizing a new Sanitary Survey (SS) tool since February 1<sup>st</sup>, 2019. IDEM has contracted with Global Environmental Consultants (GEC) to develop, train, and deploy the Safe Water Information Field Tool (SWIFT). This program can communicate with SDWIS and has enhanced field operations with the Sanitary Survey inspection process. It has also allowed the Field Inspection Section to track and present data more quickly and effectively. Indiana has a goal of a seven-day turn-around on inspection reports, where reports are to be issued to the facility within seven days of the site visit. SWIFT has helped us achieve this goal because it directly populates fields in the SS report that are already in SDWIS and has streamlined the technical review process of the report. As of June 2023, Sanitary Survey inspection reports have been issued at an average of 1.91 days. This is the Running Annual Average of the last twelve months (July 2022-June 2023). The transition to SWIFT has helped streamline our overall process for Sanitary Surveys.

## ***Efficacy of Capacity Development Strategy***

IDEM believes that our Capacity Development efforts have been effective in improving the technical, managerial, and financial capacity of public water systems in Indiana. We have received positive feedback from water suppliers on our outreach, site visits, workshops, self-assessment manual, workbooks, etc. Public water system responses indicate that our agency is making a positive impact on providing technical assistance and improving compliance rates. IDEM continues to improve public water system capacity through our own efforts and the invaluable partnerships we have with our sister agencies including ISDH, IURC, OUCC and FSSA Childcare Division and the professional organizations including AWWA, AIRW and RCAP.

Indiana's Capacity Development Plan, for existing public water supplies, will continue to improve the compliance status for a magnitude of public water supplies with the continued implementation of our plan. Our goal is to ensure that the highest quality of water is delivered to consumers across the State and to foster improved compliance rates.

IDEM's approach will minimize the use of dedicated enforcement staff resources in returning systems to compliance. Indiana is laying a strong foundation in supporting public water supplies by improving their ability to provide safe water with support from the State's program. IDEM will continue efforts to assist systems in preventing future noncompliance issues and aiding systems attempting to return to compliance. The cornerstone of the program is providing public water systems the assistance they need to ensure that they can deliver safe drinking water to their customers.

IDEM will make this report available through its website at <http://www.in.gov/idem>.

# **Appendix A**



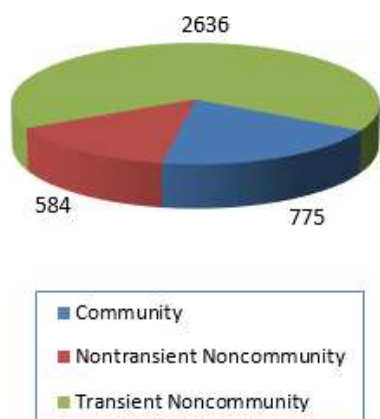
# Indiana Department of Environmental Management 2020 Annual Compliance Report for Indiana Public Water Supply Systems

## Introduction

The 1996 Amendments to the Safe Drinking Water Act require each state to prepare an annual report of violations of the national primary drinking water regulations for public water supplies. The annual reports are intended to provide a summary of violations of maximum contaminant levels (MCL's), treatment techniques, variances and exemptions<sup>1</sup>, and monitoring and reporting violations (M&R). This report includes information for the time period January 1, 2020 through December 31, 2020.

## Public Water Supply Information

**Graph 1. Number and Type of Public Water Systems in Indiana**



There are approximately 3,995 active public water supplies in Indiana. Graph 1 shows the distribution of public water systems by the system type. Drinking water in Indiana comes from ground water sources via wells or surface water sources such as lakes and rivers. Some public water systems purchase water from other public water supplies and distribute the water to their customers. Ninety-seven percent (97%) of all public water systems are served by ground water systems. However, only fifty-four percent (54%) of the total population is served by systems utilizing ground water.

<sup>1</sup> IDEM did not issue any variances or exemptions in 2020; therefore there are no violations for variances and exemptions to address in this summary report.

## Drinking Water Monitoring Requirements

The Safe Drinking Water Act and the Indiana Public Water Supply Supervision Program mandate the monitoring and reporting of various bacteriological and chemical contaminants that may be found in drinking water. The contaminants are categorized as total coliform, nitrate (NO<sub>3</sub>), inorganic chemicals (IOCs), volatile organic compounds (VOCs), synthetic organic compounds (SOCs), radionuclides (Rads), lead and copper (Pb/Cu), and Stage 1 and Stage 2 disinfectants/disinfection byproducts (D/DBPs) Rules. The levels of these contaminants in drinking water are compared to maximum contaminant levels (MCLs) which are set by the Environmental Protection Agency (EPA) and adopted by the State, to ensure that water is safe for human consumption. In addition, compliance results may trigger additional actions, such as source water monitoring under the Ground Water Rule (GWR) or public education for lead. See Table 2 on page 5 for a list of MCLs and action levels for all of the regulated contaminants.

Surface water systems are also required to comply with additional provisions of the Safe Drinking Water Act which deal with surface water treatment. These regulations pertain to treatment techniques that require systems to properly treat their water. When a surface water PWS fails to properly treat its water or cannot control the levels of such contaminants as turbidity, bacteria, viruses, or parasitic microorganisms the system has violated the provisions of the Safe Drinking Water Act and is assigned a treatment technique (TT) violation. Surface water systems are also required to sample for *Cryptosporidium* and/or *E. coli* under the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) to determine if additional treatment is required to remove *Cryptosporidium*.

If a system has an MCL or TT violation, that system becomes a priority for follow-up by the Drinking Water Branch to ensure the violation is corrected.

## Violation Summary

Table 1 provides a summary of the number of MCL, M&R, and TT violations for all of the regulated drinking water contaminants for the 2020 calendar year (January 1, 2020 - December 31, 2020). The table also provides a summary of the number of systems in violation for each contaminant group.

**Table 1. 2020 Violations Summary for Indiana Public Water Supplies**

|                  |             | MCL        |                      | Treatment Technique |                      | Monitoring & Reporting |                      | Consumer Confidence Report  |                      |    |    |
|------------------|-------------|------------|----------------------|---------------------|----------------------|------------------------|----------------------|-----------------------------|----------------------|----|----|
|                  |             | Violations | Systems In Violation | Violations          | Systems in Violation | Violations             | Systems In Violation | Violations                  | Systems in violation |    |    |
| <b>CCR</b>       | <b>CWS</b>  |            |                      |                     |                      |                        |                      | 77                          | 73                   |    |    |
| <b>Pb/Cu</b>     | <b>CWS</b>  |            |                      | 3                   | 3                    | 62                     | 50                   | <b>PN Violations</b>        |                      |    |    |
|                  | <b>NTNC</b> |            |                      | 0                   | 0                    | 29                     | 24                   |                             |                      |    |    |
| <b>SWTR</b>      | <b>CWS</b>  |            |                      | 0                   | 0                    | 0                      | 0                    | 0                           | 0                    |    |    |
|                  | <b>NTNC</b> |            |                      | 0                   | 0                    | 0                      | 0                    | 0                           | 0                    |    |    |
|                  | <b>TNC</b>  |            |                      | 0                   | 0                    | 0                      | 0                    | 0                           | 0                    |    |    |
| <b>VOC</b>       | <b>CWS</b>  | 0          | 0                    |                     |                      | 210                    | 10                   | <b>GWR Other Violations</b> |                      |    |    |
|                  | <b>NTNC</b> | 0          | 0                    |                     |                      | 84                     | 4                    |                             |                      |    |    |
| <b>IOC</b>       | <b>CWS</b>  | 5          | 3                    |                     |                      | 139                    | 23                   |                             |                      |    |    |
|                  | <b>NTNC</b> | 1          | 1                    |                     |                      | 86                     | 24                   |                             |                      |    |    |
|                  | <b>TNC</b>  | 31         | 23                   |                     |                      | 257                    | 244                  |                             |                      |    |    |
| <b>SOC</b>       | <b>CWS</b>  | 0          | 0                    |                     |                      | 1                      | 11                   |                             |                      |    |    |
|                  | <b>NTNC</b> | 0          | 0                    |                     |                      | 118                    | 5                    |                             |                      |    |    |
| <b>GWR</b>       | <b>CWS</b>  |            |                      | 1                   | 1                    | 17                     | 17                   |                             |                      | 3  | 3  |
|                  | <b>NTNC</b> |            |                      | 0                   | 0                    | 11                     | 11                   |                             |                      | 2  | 1  |
|                  | <b>TNC</b>  |            |                      | 26                  | 17                   | 313                    | 208                  |                             |                      | 38 | 36 |
| <b>TCR/ RTCR</b> | <b>CWS</b>  | 3          | 3                    | 12                  | 12                   | 67                     | 30                   | <b>GWR Other Violations</b> |                      |    |    |
|                  | <b>NTNC</b> | 1          | 1                    | 6                   | 6                    | 96                     | 64                   |                             |                      |    |    |
|                  | <b>TNC</b>  | 22         | 18                   | 335                 | 284                  | 1628                   | 739                  |                             |                      |    |    |
| <b>Rads</b>      | <b>CWS</b>  | 0          | 0                    |                     |                      | 15                     | 12                   |                             |                      |    |    |
| <b>DBP</b>       | <b>CWS</b>  | 42         | 12                   | 0                   | 0                    | 28                     | 15                   |                             |                      |    |    |
|                  | <b>NTNC</b> | 3          | 1                    | 0                   | 0                    | 0                      | 0                    |                             |                      |    |    |
|                  | <b>TNC</b>  | 0          | 0                    | 0                   | 0                    | 0                      | 0                    |                             |                      |    |    |
| <b>Totals*</b>   | <b>CWS</b>  | 50         | 17                   | 16                  | 16                   | 539                    | 112                  |                             |                      |    |    |
|                  | <b>NTNC</b> | 5          | 3                    | 7                   | 7                    | 424                    | 103                  |                             |                      |    |    |
|                  | <b>TNC</b>  | 53         | 41                   | 361                 | 295                  | 2198                   | 913                  |                             |                      |    |    |

|                                       |       |      |
|---------------------------------------|-------|------|
| Total Number of Systems in Violation* | CWS   | 210  |
|                                       | NTNC  | 144  |
|                                       | TNC   | 1153 |
|                                       | Total | 1507 |

|                            |       |      |
|----------------------------|-------|------|
| Total Number Of Violations | CWS   | 685  |
|                            | NTNC  | 438  |
|                            | TNC   | 2650 |
|                            | Total | 3773 |

**LEGEND**

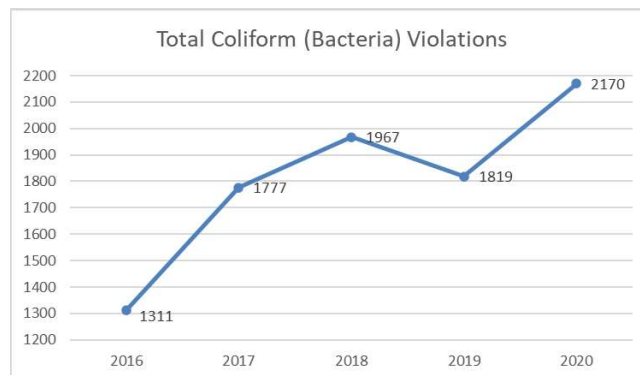
|   |   |   |                    |
|---|---|---|--------------------|
| MCL=Maximum Contaminant Level Violation | IOC=Inorganic Chemicals (10-12 Chemicals)         | VOC=Volatile Organic Compounds (21 Chemicals) | NO3=Nitrate        |
| Pb/Cu=Lead and Copper                   | SOC=Synthetic Organic Compounds (27-30 Chemicals) | TCR=Total Coliform Rule                       | Rads=Radionuclides |
| DBP=Disinfection By-Products            | SWTR=Surface Water Treatment Rule                 | CCR=Consumer Confidence Report                |                    |
| TNC=Transient Noncommunity              | NTNC=Nontransient Noncommunity Water System       | CWS=Community Water System                    |                    |

\* This number represents the total number of systems in violations for 2020. However, this number includes some systems with multiple violations across contaminant groups.

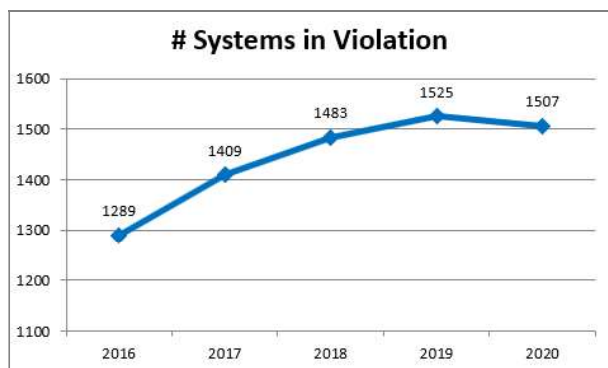
An evaluation of the data in 2020 Annual Compliance Report (ACR) shows the in-compliance rates at about seventy-two percent (72%) for monitoring and reporting (M/R) violations, ninety-eight percent (98%) for MCLs, and ninety-two percent (92%) for TT violations. The majority of violations are related to failing to collect and/or report samples. Approximately twenty-eight percent (28%) of the total number of active water systems have sampling (M/R) violations for at least one contaminant, but the majority of those systems (approximately 81%) are transient public water systems.

The number of systems with violations decreased in 2020 due to IDEM’s recently mandated electronic submission of sample results and continued focus on improving compliance statewide. In contrast, the numbers of total violations, particularly M/R violations and RTCR violations have risen due to many challenges brought on by the COVID-19 pandemic. RTCR violations make up the vast majority of all violations. The following charts illustrate these trends:

Although continuous educational outreach and concentrated compliance assistance efforts made by IDEM staff have been ongoing, RTCR violations were difficult to avoid in 2020. The COVID-19 pandemic caused many sudden system closures mid-monitoring period, prior to routine samples being taken, resulting in the increased amount of RTCR violations as illustrated here:

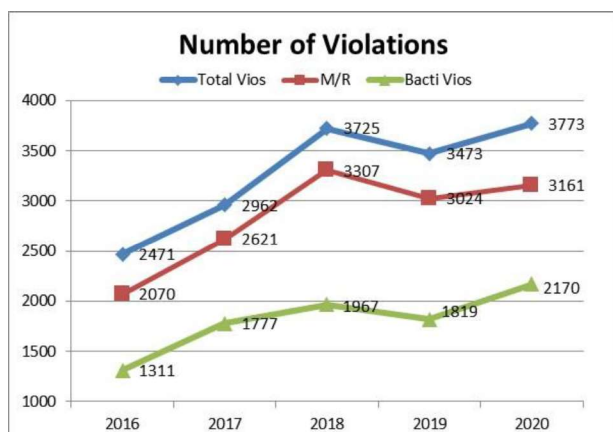


A key indicator of the quality of the drinking water is the Community Water Systems’ (CWSs) populations meeting current health-based standards. IDEM and EPA Region 5 agreed on a strategic plan with shared goals including tracking the percentage of population served by CWSs that meets current health-based standards. During 2020, the percentage was measured quarterly and the average for the four (4) quarterly results was ninety-nine percent (99.2%) of the population served by CWSs in Indiana meets all health standards.



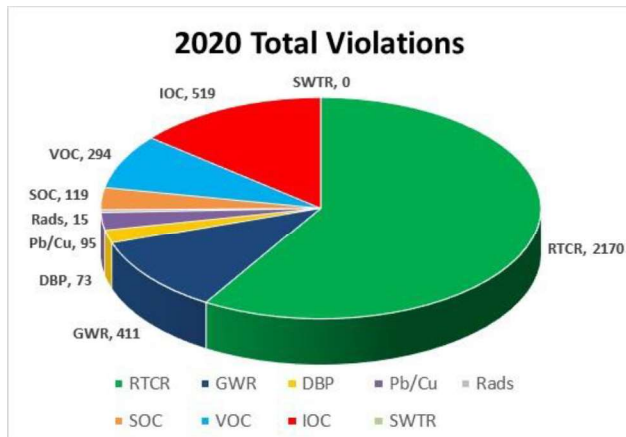
## Consumer Confidence Reports

All community public water systems are required to develop and distribute to their customers a brief annual water quality report called a consumer confidence report (CCR). The community water system is required to deliver a copy of the CCR to its consumers by July 1<sup>st</sup>. The purpose of the report is to inform and educate customers on the status and quality of their public water supply. The report contains information on the sources of drinking water, the levels of any detected contaminants, and educational information regarding drinking water.



## Compliance Assistance Efforts

The Drinking Water Branch currently assists public water supply owners and operators to promote compliance with the drinking water regulations. Assistance is provided through several activities, namely: site visits, correspondence, telephone contact (including the use of interactive voice response (IVR) and regular phone calls), e-mails, educational presentations and materials, and implementation of the small system laboratory assistance program (SSLAP) where IDEM provides free sampling for very small, nonprofit systems serving a population of one hundred (100) or less. Additionally with RTCR, field staff are handling all the Level 2 Assessments and Capacity Development staff are helping systems with the Level 1 Assessments. Another way IDEM reduces sampling violations is by reminding all public water systems of their



required monthly, quarterly, semi-annual, or annual sampling by utilizing the IVR system, which leaves automated messages indicating when their sampling requirements are due. Further, IDEM also uses e-mails (when available) as another way to notify systems of when sampling is due.

The following is a summary of the number of site visits and assistance efforts that were conducted in 2020 by the Drinking Water Branch staff:

|  |               |
|--|---------------|
| <b>Sanitary Surveys</b>                  | <b>925</b>    |
| <b>Well Site Surveys</b>                 | <b>71</b>     |
| <b>Technical Assistance Visits</b>       | <b>63</b>     |
| <b>Cap. Dev. Assistance Interactions</b> | <b>819</b>    |
| <b>IVR Calls &amp; E-mails</b>           | <b>49,162</b> |

The Drinking Water Branch continues to provide assistance to all public water systems as a means to ensure drinking water is protective of human health.

## **For More Information**

If you have any questions concerning this report or would like the lists of public water supplies that had violations in 2020, please contact the Drinking Water Branch at (317) 234-7430. Additional copies of this report are available on the Indiana Department of Environmental Management, Office of Water Quality, Drinking Water Branch web-site at: <http://www.in.gov/idem/cleanwater/2579.htm> or by calling the Drinking Water Branch at (317) 234-7430.

Additional information regarding the quality of your drinking water may be obtained by contacting your local public water supplier. Please contact your local public water supply for a copy of their latest consumer confidence report (CCR).

For more information regarding all aspects of the environment in Indiana, visit IDEM's website at: <http://www.in.gov/idem/>. Also, for general information regarding drinking water, you may contact the EPA Safe Drinking Water Hotline by calling (800) 426-4791.

**TABLE 2  
REGULATED CHEMICAL DRINKING WATER CONTAMINANTS  
MAXIMUM CONTAMINANT LEVELS**

| Contaminant                        | MCL          | Contaminant                       | MCL    | Contaminant                        | MCL    |
|------------------------------------|--------------|-----------------------------------|--------|------------------------------------|--------|
| Inorganic Chemicals (IOCs)         | mg/l         | Volatile Organic Compounds (VOCs) | ug/l   | Synthetic Organic Compounds (SOCs) | ug/l   |
| Antimony                           | 0.006        | 1,1-Dichloroethylene              | 7      | 2,4-D                              | 70     |
| Arsenic                            | 0.01         | 1,1,1-Trichloroethane             | 200    | 2,4,5-TP (Silvex)                  | 50     |
| Barium                             | 2            | 1,1,2-Trichloroethane             | 5      | Alachlor                           | 2      |
| Beryllium                          | 0.004        | 1,2-Dichloroethane                | 5      | Atrazine                           | 3      |
| Cadmium                            | 0.005        | 1,2-Dichloropropane               | 5      | Benzo(a)pyrene                     | 0.2    |
| Chromium                           | 0.1          | 1,2,4-Trichlorobenzene            | 70     | Carbofuran                         | 40     |
| Cyanide (free)                     | 0.2          | Benzene                           | 5      | Chlordane                          | 2      |
| Fluoride (Adjusted) *              | 2            | Carbon Tetrachloride              | 5      | Dalapon                            | 200    |
| Fluoride (Natural) *               | 4            | Cis-1,2-Dichloroethylene          | 70     | Di(2-ethylhexyl)adipate            | 400    |
| Mercury                            | 0.002        | Dichloromethane                   | 5      | Di(2-ethylhexyl)phthalate          | 6      |
| Nickel                             | ---          | Ethylbenzene                      | 700    | Dibromochloropropane (DBCP)        | 0.2    |
| Selenium                           | 0.05         | Monochlorobenzene                 | 100    | Dinoseb                            | 7      |
| Thallium                           | 0.002        | o-Dichlorobenzene                 | 600    | Dioxin (2,3,7,8-TCDD)              | 3X10-5 |
| Nitrate                            | 10           | p-Dichlorobenzene                 | 75     | Diquat                             | 20     |
| Nitrite                            | 1            | Styrene                           | 100    | Endothall                          | 100    |
| Total Nitrate & Nitrite            | 10           | Tetrachloroethylene               | 5      | Endrin                             | 2      |
|                                    |              | Toluene                           | 1000   | Ethylene Dibromide (EDB)           | 0.05   |
| Sodium *                           | No MCL       | Trans-1,2-Dichloroethylene        | 100    | Glyphosate                         | 700    |
|                                    |              | Trichloroethylene                 | 5      | Heptachlor                         | 0.4    |
| <b>Asbestos</b>                    |              | Vinyl Chloride                    | 2      | Heptachlor epoxide                 | 0.2    |
| Asbestos                           | 7 MFL**      | Xylenes (total)                   | 10,000 | Hexachlorobenzene                  | 1      |
|                                    |              |                                   |        | Hexachlorocyclopentadiene          | 50     |
|                                    |              |                                   |        | Lindane                            | 0.2    |
|                                    |              |                                   |        | Methoxychlor                       | 40     |
| <b>Lead &amp; Copper</b>           |              | <b>Disinfection Byproducts</b>    |        | Oxamyl (Vydate)                    | 200    |
| Lead Action Level                  | 0.015        | Total Trihalomethanes ****        | 80     | PCBs                               | 0.5    |
| Copper Action Level                | 1.3          | Haloacetic Acids 5*****           | 60     | Pentachlorophenol                  | 1      |
|                                    |              |                                   |        | Picloram                           | 500    |
| <b>Radionuclides *</b>             | <b>PCi/l</b> |                                   |        | Simazine                           | 4      |
| Gross Alpha                        | 15           |                                   |        | Toxaphene                          | 3      |
| Gross Alpha Action Level           | 5            |                                   |        |                                    |        |
| Radium-226 Action Level            | 3            |                                   |        |                                    |        |
| Radium-226 & Radium-228 (combined) | 5            |                                   |        |                                    |        |
| Manmade                            | ***          |                                   |        |                                    |        |

\* Community Water Systems Only

\*\* MFL=million fibers/liter > 10 micron

\*\*\* The average annual concentration of beta particle and photon radioactivity from manmade radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirem per year.

\*\*\*\* The sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform), and trichloromethane (chloroform).

\*\*\*\*\*The sum of the concentrations of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid.



| <b>Code Type</b> | <b>-</b> | <b>Description</b>                            |
|------------------|----------|---|
| 01               | -        | MCL, Single Sample                            |
| 02               | -        | MCL, Average                                  |
| 03               | -        | Monitoring, Regular                           |
| 1A               | -        | MCL, E.Coli, Pos E Coli (RTCR)                |
| 2A               | -        | Level 1 Assessment Treatment Technique (RTCR) |
| 2B               | -        | Level 2 Assessment Treatment Technique (RTCR) |
| 2D               | -        | Startup Procedures Treatment Technique (RTCR) |
| 21               | -        | MCL, Acute (TCR)                              |
| 22               | -        | MCL, Monthly (TCR)                            |
| 23               | -        | Monitoring, Routine Major (TCR)               |
| 24               | -        | Monitoring, Routine Minor (TCR)               |
| 25               | -        | Monitoring, Repeat Major (TCR)                |
| 26               | -        | Monitoring, Repeat Minor (TCR)                |
| 27               | -        | Monitoring, Major (DBP)                       |
| 3A               | -        | Monitoring, Routine Major (RTCR)              |
| 3B               | -        | Monitoring, Additional Routine Major (RTCR)   |
| 34               | -        | Monitoring, GWR Triggered/Additional Major    |
| 38               | -        | Monitoring, Major (Surface Water)             |
| 41, 44           | -        | Treatment Techniques (Surface Water)          |
| 51               | -        | Initial Tap Sampling (Lead and Copper)        |
| 52               | -        | Follow Up or Routine Tap (Lead and Copper)    |
| 65               | -        | Public Education (LCR)                        |
| 66               | -        | Lead Consumer Notice (LCR)                    |
| 71               | -        | Consumer Confidence Report                    |
| C                | -        | Community Water System                        |
| NTNC             | -        | Non-Transient Non-Community Water System      |
| NC               | -        | Transient Water System                        |
| GW               | -        | Ground Water System                           |
| GWP              | -        | Ground Water Purchased System                 |
| SW               | -        | Surface Water System                          |
| SWP              | -        | Surface Water Purchased System                |



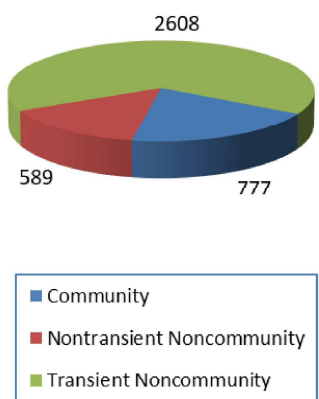
# Indiana Department of Environmental Management 2021 Annual Compliance Report for Indiana Public Water Supply Systems

## Introduction

The 1996 Amendments to the Safe Drinking Water Act require each state to prepare an annual report of violations of the national primary drinking water regulations for public water supplies. The annual reports are intended to provide a summary of violations of maximum contaminant levels (MCL's), treatment techniques, variances and exemptions<sup>1</sup>, and monitoring and reporting violations (M&R). This report includes information for the time period January 1, 2021 through December 31, 2021.

## Public Water Supply Information

**Graph 1. Number and Type of Public Water Systems in Indiana**



Approximately 3,974 active public water systems supply water in Indiana. Graph 1 shows the distribution of public water systems by the system type. Drinking water in Indiana comes from ground water sources via wells or surface water sources such as lakes and rivers. Some public water systems purchase water from other public water supplies and distribute the water to their customers. Ninety-seven percent (97%) of all public water systems are served by ground water systems. However, only fifty-six percent (56%) of the total population is served by systems utilizing ground water.

<sup>1</sup> IDEM did not issue any variances or exemptions in 2020; therefore there are no violations for variances and exemptions to address in this summary report.

## Drinking Water Monitoring Requirements

The Safe Drinking Water Act and the Indiana Public Water Supply Supervision Program mandate the monitoring and reporting of various bacteriological and chemical contaminants that may be found in drinking water. The contaminants are categorized as total coliform, nitrate (NO<sub>3</sub>), inorganic chemicals (IOCs), volatile organic compounds (VOCs), synthetic organic compounds (SOCs), radionuclides (Rads), lead and copper (Pb/Cu), and Stage 1 and Stage 2 disinfectants/disinfection byproducts (D/DBPs) Rules. The levels of these contaminants in drinking water are compared to maximum contaminant levels (MCLs) which are set by the Environmental Protection Agency (EPA) and adopted by the State, to ensure that water is safe for human consumption. In addition, compliance results may trigger additional actions, such as source water monitoring under the Ground Water Rule (GWR) or public education for lead. See Table 2 on page 5 for a list of MCLs and action levels for all of the regulated contaminants.

Surface water systems are also required to comply with additional provisions of the Safe Drinking Water Act which deal with surface water treatment. These regulations pertain to treatment techniques that require systems to properly treat their water. When a surface water PWS fails to properly treat its water or cannot control the levels of such contaminants as turbidity, bacteria, viruses, or parasitic microorganisms the system has violated the provisions of the Safe Drinking Water Act and is assigned a treatment technique (TT) violation. Surface water systems are also required to sample for *Cryptosporidium* and/or *E. coli* under the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) to determine if additional treatment is required to remove *Cryptosporidium*.

If a system has an MCL or TT violation, that system becomes a priority for follow-up by the Drinking Water Branch to ensure the violation is corrected.

## Violation Summary

Table 1 provides a summary of the number of MCL, M&R, and TT violations for all of the regulated drinking water contaminants for the 2021 calendar year (January 1, 2021 - December 31, 2021). The table also provides a summary of the number of systems in violation for each contaminant group.

**Table 1. 2021 Violations Summary for Indiana Public Water Supplies**

|                  |      | MCL        |                      | Treatment Technique |                      | Monitoring & Reporting |                      | Consumer Confidence Report  |                      |
|------------------|------|------------|----------------------|---------------------|----------------------|------------------------|----------------------|-----------------------------|----------------------|
|                  |      | Violations | Systems In Violation | Violations          | Systems in Violation | Violations             | Systems In Violation | Violations                  | Systems in violation |
| <b>CCR</b>       | CWS  |            |                      |                     |                      |                        |                      | 54                          | 48                   |
| <b>Pb/Cu</b>     | CWS  |            |                      | 3                   | 3                    | 97                     | 91                   | <b>PN Violations</b>        |                      |
|                  | NTNC |            |                      | 0                   | 0                    | 79                     | 76                   |                             |                      |
| <b>SWTR</b>      | CWS  |            |                      | 0                   | 0                    | 0                      | 0                    | 1                           | 1                    |
|                  | NTNC |            |                      | 0                   | 0                    | 0                      | 0                    | 0                           | 0                    |
|                  | TNC  |            |                      | 0                   | 0                    | 0                      | 0                    | 0                           | 0                    |
| <b>VOC</b>       | CWS  | 0          | 0                    |                     |                      | 126                    | 6                    |                             |                      |
|                  | NTNC | 0          | 0                    |                     |                      | 231                    | 11                   |                             |                      |
| <b>IOC</b>       | CWS  | 8          | 4                    |                     |                      | 111                    | 17                   |                             |                      |
|                  | NTNC | 10         | 8                    |                     |                      | 79                     | 18                   |                             |                      |
|                  | TNC  | 21         | 17                   |                     |                      | 182                    | 167                  |                             |                      |
| <b>SOC</b>       | CWS  | 0          | 0                    |                     |                      | 146                    | 7                    | <b>GWR Other Violations</b> |                      |
|                  | NTNC | 0          | 0                    |                     |                      | 197                    | 8                    |                             |                      |
| <b>GWR</b>       | CWS  |            |                      | 2                   | 2                    | 9                      | 9                    | 8                           | 8                    |
|                  | NTNC |            |                      | 0                   | 0                    | 22                     | 18                   | 2                           | 2                    |
|                  | TNC  |            |                      | 19                  | 16                   | 315                    | 219                  | 48                          | 47                   |
| <b>TCR/ RTCR</b> | CWS  | 5          | 5                    | 7                   | 7                    | 83                     | 43                   |                             |                      |
|                  | NTNC | 2          | 2                    | 3                   | 3                    | 82                     | 54                   |                             |                      |
|                  | TNC  | 31         | 30                   | 253                 | 198                  | 1512                   | 679                  |                             |                      |
| <b>Rads</b>      | CWS  | 0          | 0                    |                     |                      | 7                      | 7                    |                             |                      |
| <b>DBP</b>       | CWS  | 38         | 12                   | 0                   | 0                    | 69                     | 35                   |                             |                      |
|                  | NTNC | 2          | 1                    | 0                   | 0                    | 18                     | 10                   |                             |                      |
|                  | TNC  | 0          | 0                    | 0                   | 0                    | 2                      | 1                    |                             |                      |
| <b>Totals*</b>   | CWS  | 51         | 21                   | 12                  | 14                   | 648                    | 170                  |                             |                      |
|                  | NTNC | 15         | 11                   | 3                   | 3                    | 708                    | 130                  |                             |                      |
|                  | TNC  | 52         | 47                   | 272                 | 211                  | 2011                   | 837                  |                             |                      |

|                                       |       |      |
|---------------------------------------|-------|------|
| Total Number of Systems in Violation* | CWS   | 270  |
|                                       | NTNC  | 167  |
|                                       | TNC   | 1046 |
|                                       | Total | 1483 |

|                            |       |      |
|----------------------------|-------|------|
| Total Number Of Violations | CWS   | 774  |
|                            | NTNC  | 728  |
|                            | TNC   | 2383 |
|                            | Total | 3885 |

**LEGEND**

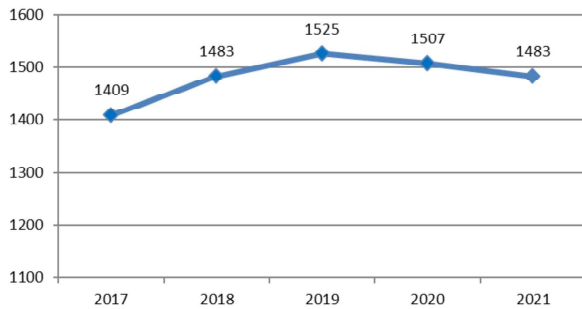
|   |   |   |                            |
|---|---|---|----------------------------|
| <b>MCL</b> =Maximum Contaminant Level Violation | <b>IOC</b> =Inorganic Chemicals (10-12 Chemicals)         | <b>VOC</b> =Volatile Organic Compounds (21 Chemicals) | <b>NO3</b> =Nitrate        |
| <b>Pb/Cu</b> =Lead and Copper                   | <b>SOC</b> =Synthetic Organic Compounds (27-30 Chemicals) | <b>TCR</b> =Total Coliform Rule                       | <b>Rads</b> =Radionuclides |
| <b>DBP</b> =Disinfection By-Products            | <b>SWTR</b> =Surface Water Treatment Rule                 | <b>CCR</b> =Consumer Confidence Report                |                            |
| <b>TNC</b> =Transient Noncommunity              | <b>NTNC</b> =Nontransient Noncommunity Water System       | <b>CWS</b> =Community Water System                    |                            |

\* This number represents the total number of systems in violations for 2020. However, this number includes some systems with multiple violations across contaminant groups.

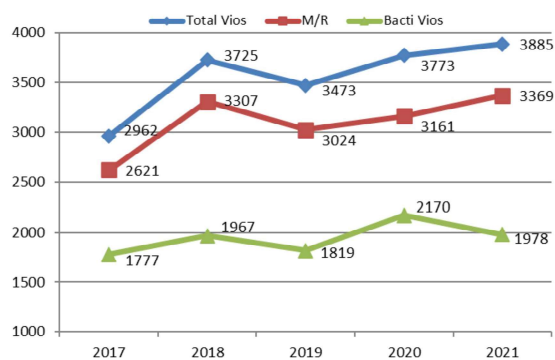
An evaluation of the data in 2021 Annual Compliance Report (ACR) shows the in-compliance rates at about seventy-one percent (71%) for monitoring and reporting (M/R) violations, ninety-eight percent (98%) for MCLs, and ninety-four percent (94%) for TT violations. The majority of violations are related to failing to collect and/or report samples. Approximately twenty-nine percent (29%) of the total number of active water systems have sampling (M/R) violations for at least one contaminant, but the majority of those systems (approximately 60% [less than last year]) are transient public water systems.

The number of systems with violations decreased in 2021 due to IDEM’s recently mandated electronic submission of sample results and continued focus on improving compliance statewide. In contrast, the number of violations of DBP’s, Pb/Cu, SOC, and VOC violations have risen due to a higher volume of systems required to sample in the year of 2021 as part of their triennial sampling requirement. RTCR violations make up the vast majority of all violations. The following charts illustrate these trends:

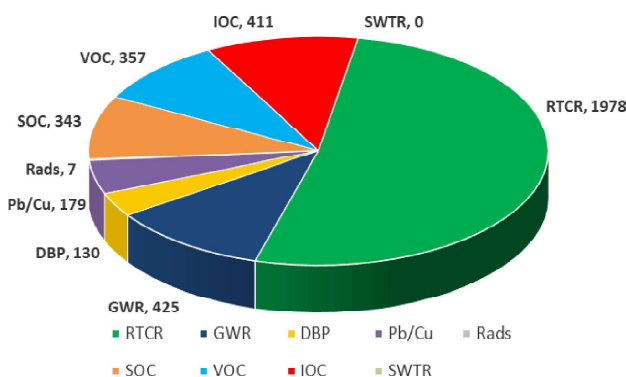
**# Systems in Violation**



**Number of Violations**

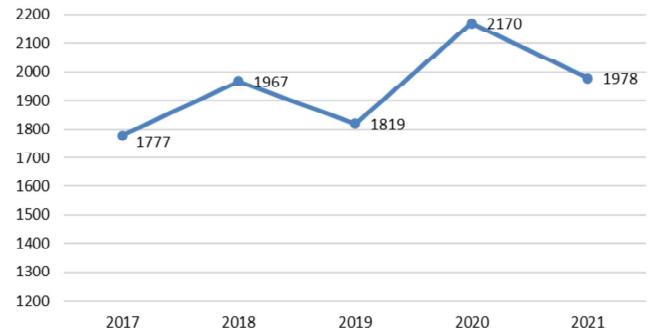


**2021 Total Violations**



Continuous educational outreach and concentrated compliance assistance efforts made by IDEM staff have resulted in the decreased amount of RTCR violations as illustrated here:

**Total Coliform (Bacteria) Violations**



A key indicator of the quality of the drinking water is the Community Water Systems’ (CWSs) populations meeting current health-based standards. IDEM and EPA Region 5 agreed on a strategic plan with shared goals including tracking the percentage of population served by CWSs that meets current health-based standards. During 2021, the percentage was measured quarterly and the average for the four (4) quarterly results was ninety-eight percent (98.68%) of the population served by CWSs in Indiana meets all health standards.

## Consumer Confidence Reports

All community public water systems are required to develop and distribute to their customers a brief annual water quality report called a consumer confidence report (CCR). The community water system is required to deliver a copy of the CCR to its consumers by July 1<sup>st</sup>. The purpose of the report is to inform and educate customers on the status and quality of their public water supply. The report contains information on the sources of drinking water, the levels of any detected contaminants, and educational information regarding drinking water.

## Compliance Assistance Efforts

The Drinking Water Branch currently assists public water supply owners and operators to promote compliance with the drinking water regulations. Assistance is provided through several activities, namely: site visits, correspondence, telephone contact (including the use of interactive voice response (IVR) and regular phone calls), e-mails, educational presentations and materials, and implementation of the small system laboratory assistance program (SSLAP) where IDEM provides free sampling for very small, nonprofit systems serving a population of one hundred (100) or less. Additionally with RTCR, field staff are handling all the Level 2 Assessments and Capacity Development staff are helping systems with the Level 1 Assessments. Another way IDEM reduces sampling violations is by reminding all public water systems of their required monthly, quarterly, semi-annual, or annual sampling by utilizing the IVR system, which leaves automated messages indicating when their sampling requirements are due. Further, IDEM also uses e-mails

(when available) as another way to notify systems of when sampling is due.

The following is a summary of the number of site visits and assistance efforts that were conducted in 2021 by the Drinking Water Branch staff:

|  |               |
|--|---------------|
| <b>Sanitary Surveys</b>                  | <b>871</b>    |
| <b>Well Site Surveys</b>                 | <b>77</b>     |
| <b>Technical Assistance Visits</b>       | <b>96</b>     |
| <b>Cap. Dev. Assistance Interactions</b> | <b>741</b>    |
| <b>IVR Calls &amp; E-mails</b>           | <b>44,079</b> |

The Drinking Water Branch continues to provide assistance to all public water systems as a means to ensure drinking water is protective of human health.

## **For More Information**

If you have any questions concerning this report or would like the lists of public water supplies that had violations in 2021, please contact the Drinking Water Branch at (317) 234-7430. Additional copies of this report are available on the Indiana Department of Environmental Management, Office of Water Quality, Drinking Water Branch web-site at: <http://www.in.gov/idem/cleanwater/2579.htm> or by calling the Drinking Water Branch at (317) 234-7430.

Additional information regarding the quality of your drinking water may be obtained by contacting your local public water supplier. Please contact your local public water supply for a copy of their latest consumer confidence report (CCR).

For more information regarding all aspects of the environment in Indiana, visit IDEM's website at: <http://www.in.gov/idem/>. Also, for general information regarding drinking water, you may contact the EPA Safe Drinking Water Hotline by calling (800) 426-4791.

**TABLE 2  
REGULATED CHEMICAL DRINKING WATER CONTAMINANTS  
MAXIMUM CONTAMINANT LEVELS**

| Contaminant                        | MCL          | Contaminant                       | MCL    | Contaminant                        | MCL    |
|------------------------------------|--------------|-----------------------------------|--------|------------------------------------|--------|
| Inorganic Chemicals (IOCs)         | mg/l         | Volatile Organic Compounds (VOCs) | ug/l   | Synthetic Organic Compounds (SOCs) | ug/l   |
| Antimony                           | 0.006        | 1,1-Dichloroethylene              | 7      | 2,4-D                              | 70     |
| Arsenic                            | 0.01         | 1,1,1-Trichloroethane             | 200    | 2,4,5-TP (Silvex)                  | 50     |
| Barium                             | 2            | 1,1,2-Trichloroethane             | 5      | Alachlor                           | 2      |
| Beryllium                          | 0.004        | 1,2-Dichloroethane                | 5      | Atrazine                           | 3      |
| Cadmium                            | 0.005        | 1,2-Dichloropropane               | 5      | Benzo(a)pyrene                     | 0.2    |
| Chromium                           | 0.1          | 1,2,4-Trichlorobenzene            | 70     | Carbofuran                         | 40     |
| Cyanide (free)                     | 0.2          | Benzene                           | 5      | Chlordane                          | 2      |
| Fluoride (Adjusted) *              | 2            | Carbon Tetrachloride              | 5      | Dalapon                            | 200    |
| Fluoride (Natural) *               | 4            | Cis-1,2-Dichloroethylene          | 70     | Di(2-ethylhexyl)adipate            | 400    |
| Mercury                            | 0.002        | Dichloromethane                   | 5      | Di(2-ethylhexyl)phthalate          | 6      |
| Nickel                             | ---          | Ethylbenzene                      | 700    | Dibromochloropropane (DBCP)        | 0.2    |
| Selenium                           | 0.05         | Monochlorobenzene                 | 100    | Dinoseb                            | 7      |
| Thallium                           | 0.002        | o-Dichlorobenzene                 | 600    | Dioxin (2,3,7,8-TCDD)              | 3X10-5 |
| Nitrate                            | 10           | p-Dichlorobenzene                 | 75     | Diquat                             | 20     |
| Nitrite                            | 1            | Styrene                           | 100    | Endothall                          | 100    |
| Total Nitrate & Nitrite            | 10           | Tetrachloroethylene               | 5      | Endrin                             | 2      |
|                                    |              | Toluene                           | 1000   | Ethylene Dibromide (EDB)           | 0.05   |
| Sodium *                           | No MCL       | Trans-1,2-Dichloroethylene        | 100    | Glyphosate                         | 700    |
|                                    |              | Trichloroethylene                 | 5      | Heptachlor                         | 0.4    |
| <b>Asbestos</b>                    |              | Vinyl Chloride                    | 2      | Heptachlor epoxide                 | 0.2    |
| Asbestos                           | 7 MFL**      | Xylenes (total)                   | 10,000 | Hexachlorobenzene                  | 1      |
|                                    |              |                                   |        | Hexachlorocyclopentadiene          | 50     |
|                                    |              |                                   |        | Lindane                            | 0.2    |
|                                    |              |                                   |        | Methoxychlor                       | 40     |
| <b>Lead &amp; Copper</b>           |              | <b>Disinfection Byproducts</b>    |        | Oxamyl (Vydate)                    | 200    |
| Lead Action Level                  | 0.015        | Total Trihalomethanes ****        | 80     | PCBs                               | 0.5    |
| Copper Action Level                | 1.3          | Haloacetic Acids 5*****           | 60     | Pentachlorophenol                  | 1      |
|                                    |              |                                   |        | Picloram                           | 500    |
| <b>Radionuclides *</b>             | <b>PCi/l</b> |                                   |        | Simazine                           | 4      |
| Gross Alpha                        | 15           |                                   |        | Toxaphene                          | 3      |
| Gross Alpha Action Level           | 5            |                                   |        |                                    |        |
| Radium-226 Action Level            | 3            |                                   |        |                                    |        |
| Radium-226 & Radium-228 (combined) | 5            |                                   |        |                                    |        |
| Manmade                            | ***          |                                   |        |                                    |        |

\* Community Water Systems Only  
 \*\* MFL=million fibers/liter > 10 micron  
 \*\*\* The average annual concentration of beta particle and photon radioactivity from manmade radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirem per year.  
 \*\*\*\* The sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromofom), and trichloromethane (chlorofom).  
 \*\*\*\*\*The sum of the concentrations of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid.

| <b>Code Type</b> | <b>-</b> | <b>Description</b>                            |
|------------------|----------|---|
| 01               | -        | MCL, Single Sample                            |
| 02               | -        | MCL, Average                                  |
| 03               | -        | Monitoring, Regular                           |
| 1A               | -        | MCL, E.Coli, Pos E Coli (RTCR)                |
| 2A               | -        | Level 1 Assessment Treatment Technique (RTCR) |
| 2B               | -        | Level 2 Assessment Treatment Technique (RTCR) |
| 2D               | -        | Startup Procedures Treatment Technique (RTCR) |
| 21               | -        | MCL, Acute (TCR)                              |
| 22               | -        | MCL, Monthly (TCR)                            |
| 23               | -        | Monitoring, Routine Major (TCR)               |
| 24               | -        | Monitoring, Routine Minor (TCR)               |
| 25               | -        | Monitoring, Repeat Major (TCR)                |
| 26               | -        | Monitoring, Repeat Minor (TCR)                |
| 27               | -        | Monitoring, Major (DBP)                       |
| 3A               | -        | Monitoring, Routine Major (RTCR)              |
| 3B               | -        | Monitoring, Additional Routine Major (RTCR)   |
| 34               | -        | Monitoring, GWR Triggered/Additional Major    |
| 38               | -        | Monitoring, Major (Surface Water)             |
| 41, 44           | -        | Treatment Techniques (Surface Water)          |
| 51               | -        | Initial Tap Sampling (Lead and Copper)        |
| 52               | -        | Follow Up or Routine Tap (Lead and Copper)    |
| 65               | -        | Public Education (LCR)                        |
| 66               | -        | Lead Consumer Notice (LCR)                    |
| 71               | -        | Consumer Confidence Report                    |
| C                | -        | Community Water System                        |
| NTNC             | -        | Non-Transient Non-Community Water System      |
| NC               | -        | Transient Water System                        |
| GW               | -        | Ground Water System                           |
| GWP              | -        | Ground Water Purchased System                 |
| SW               | -        | Surface Water System                          |
| SWP              | -        | Surface Water Purchased System                |



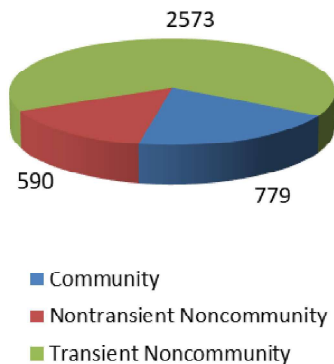
# Indiana Department of Environmental Management 2022 Annual Compliance Report for Indiana Public Water Supply Systems

## Introduction

The 1996 Amendments to the Safe Drinking Water Act require each state to prepare an annual report of violations of the national primary drinking water regulations for public water supplies. The annual reports are intended to provide a summary of violations of maximum contaminant levels (MCL's), treatment techniques, variances and exemptions<sup>1</sup>, and monitoring and reporting violations (M&R). This report includes information for the time period January 1, 2022 through December 31, 2022.

## Public Water Supply Information

**Graph 1. Number and Type of Public Water Systems in Indiana**



Approximately 3,942 active public water systems supply water in Indiana. Graph 1 shows the distribution of public water systems by the system type. Drinking water in Indiana comes from ground water sources via wells or surface water sources such as lakes and rivers. Some public water systems purchase water from other public water supplies and distribute the water to their customers. Ninety-seven percent (97%) of all public water systems are served by ground water systems. However, only fifty-six percent (56%) of the total population is served by systems utilizing ground water.

<sup>1</sup> IDEM did not issue any variances or exemptions in 2022; therefore there are no violations for variances and exemptions to address in this summary report.

## Drinking Water Monitoring Requirements

The Safe Drinking Water Act and the Indiana Public Water Supply Supervision Program mandate the monitoring and reporting of various bacteriological and chemical contaminants that may be found in drinking water. The contaminants are categorized as total coliform, nitrate (NO<sub>3</sub>), inorganic chemicals (IOCs), volatile organic compounds (VOCs), synthetic organic compounds (SOCs), radionuclides (Rads), lead and copper (Pb/Cu), and Stage 1 and Stage 2 disinfectants/disinfection byproducts (D/DBPs) Rules. The levels of these contaminants in drinking water are compared to maximum contaminant levels (MCLs) which are set by the Environmental Protection Agency (EPA) and adopted by the State, to ensure that water is safe for human consumption. In addition, compliance results may trigger additional actions, such as source water monitoring under the Ground Water Rule (GWR) or public education for lead. See Table 2 on page 5 for a list of MCLs and action levels for all of the regulated contaminants.

Surface water systems are also required to comply with additional provisions of the Safe Drinking Water Act which deal with surface water treatment. These regulations pertain to treatment techniques that require systems to properly treat their water. When a surface water PWS fails to properly treat its water or cannot control the levels of such contaminants as turbidity, bacteria, viruses, or parasitic microorganisms the system has violated the provisions of the Safe Drinking Water Act and is assigned a treatment technique (TT) violation. Surface water systems are also required to sample for *Cryptosporidium* and/or *E. coli* under the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) to determine if additional treatment is required to remove *Cryptosporidium*.

If a system has an MCL or TT violation, that system becomes a priority for follow-up by the Drinking Water Branch to ensure the violation is corrected.

## Violation Summary

Table 1 provides a summary of the number of MCL, M&R, and TT violations for all of the regulated drinking water contaminants for the 2022 calendar year (January 1, 2022 - December 31, 2022). The table also provides a summary of the number of systems in violation for each contaminant group.



**Table 1. 2022 Violations Summary for Indiana Public Water Supplies**

|                  |      | MCL        |                      | Treatment Technique |                      | Monitoring & Reporting |                      | Consumer Confidence Report  |                      |
|------------------|------|------------|----------------------|---------------------|----------------------|------------------------|----------------------|-----------------------------|----------------------|
|                  |      | Violations | Systems In Violation | Violations          | Systems in Violation | Violations             | Systems In Violation | Violations                  | Systems in violation |
| <b>CCR</b>       | CWS  |            |                      |                     |                      |                        |                      | 70                          | 64                   |
| <b>Pb/Cu</b>     | CWS  |            |                      | 8                   | 7                    | 84                     | 69                   | <b>PN Violations</b>        |                      |
|                  | NTNC |            |                      | 7                   | 5                    | 97                     | 78                   |                             |                      |
| <b>SWTR</b>      | CWS  |            |                      | 0                   | 0                    | 0                      | 0                    | 2                           | 2                    |
|                  | NTNC |            |                      | 0                   | 0                    | 0                      | 0                    | 0                           | 0                    |
|                  | TNC  |            |                      | 0                   | 0                    | 0                      | 0                    | 5                           | 5                    |
| <b>VOC</b>       | CWS  | 0          | 0                    |                     |                      | 42                     | 2                    | <b>GWR Other Violations</b> |                      |
|                  | NTNC | 0          | 0                    |                     |                      | 126                    | 6                    |                             |                      |
| <b>IOC</b>       | CWS  | 9          | 3                    |                     |                      | 19                     | 19                   |                             |                      |
|                  | NTNC | 7          | 5                    |                     |                      | 45                     | 22                   |                             |                      |
|                  | TNC  | 31         | 25                   |                     |                      | 249                    | 234                  |                             |                      |
| <b>SOC</b>       | CWS  | 0          | 0                    |                     |                      | 287                    | 11                   |                             |                      |
|                  | NTNC | 0          | 0                    |                     |                      | 28                     | 1                    |                             |                      |
| <b>GWR</b>       | CWS  |            |                      | 24                  | 9                    | 9                      | 7                    | 3                           | 3                    |
|                  | NTNC |            |                      | 0                   | 0                    | 10                     | 9                    | 0                           | 0                    |
|                  | TNC  |            |                      | 33                  | 24                   | 248                    | 180                  | 13                          | 13                   |
| <b>TCR/ RTCR</b> | CWS  | 0          | 0                    | 3                   | 3                    | 71                     | 33                   | <b>GWR Other Violations</b> |                      |
|                  | NTNC | 3          | 3                    | 10                  | 6                    | 67                     | 48                   |                             |                      |
|                  | TNC  | 20         | 20                   | 195                 | 165                  | 1294                   | 675                  |                             |                      |
| <b>Rads</b>      | CWS  | 0          | 0                    |                     |                      | 33                     | 11                   |                             |                      |
| <b>DBP</b>       | CWS  | 13         | 5                    | 1                   | 1                    | 56                     | 27                   |                             |                      |
|                  | NTNC | 0          | 0                    | 0                   | 0                    | 2                      | 1                    |                             |                      |
|                  | TNC  | 0          | 0                    | 0                   | 0                    | 0                      | 0                    |                             |                      |
| <b>Totals*</b>   | CWS  | <b>22</b>  | <b>8</b>             | <b>36</b>           | <b>21</b>            | <b>601</b>             | <b>137</b>           |                             |                      |
|                  | NTNC | <b>10</b>  | <b>8</b>             | <b>17</b>           | <b>11</b>            | <b>375</b>             | <b>126</b>           |                             |                      |
|                  | TNC  | <b>51</b>  | <b>45</b>            | <b>228</b>          | <b>185</b>           | <b>1791</b>            | <b>873</b>           |                             |                      |

|                                       |              |             |
|---------------------------------------|--------------|-------------|
| Total Number of Systems in Violation* | CWS          | 243         |
|                                       | NTNC         | 162         |
|                                       | TNC          | 1033        |
|                                       | <b>Total</b> | <b>1438</b> |

|                            |              |             |
|----------------------------|--------------|-------------|
| Total Number Of Violations | CWS          | 734         |
|                            | NTNC         | 402         |
|                            | TNC          | 2088        |
|                            | <b>Total</b> | <b>3224</b> |

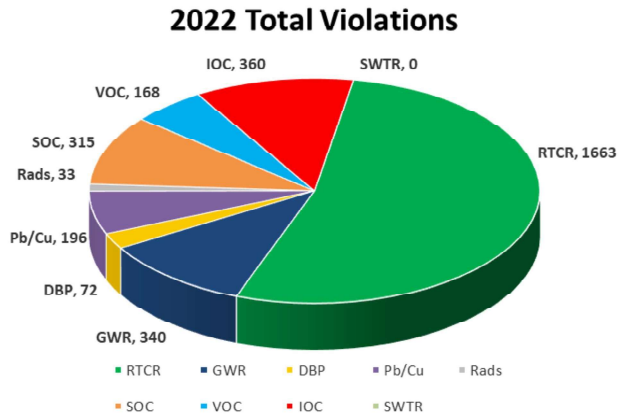
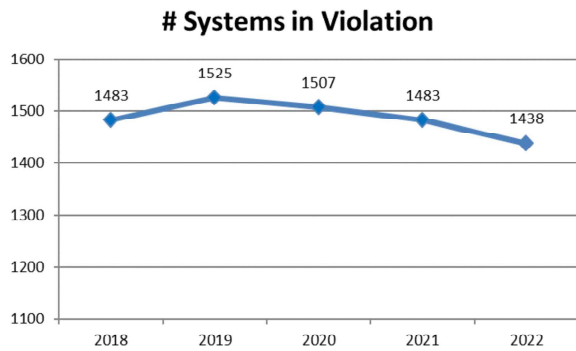
**LEGEND**

|   |   |   |                    |
|---|---|---|--------------------|
| MCL=Maximum Contaminant Level Violation | IOC=Inorganic Chemicals (10-12 Chemicals)         | VOC=Volatile Organic Compounds (21 Chemicals) | NO3=Nitrate        |
| Pb/Cu=Lead and Copper                   | SOC=Synthetic Organic Compounds (27-30 Chemicals) | TCR=Total Coliform Rule                       | Rads=Radionuclides |
| DBP=Disinfection By-Products            | SWTR=Surface Water Treatment Rule                 | CCR=Consumer Confidence Report                |                    |
| TNC=Transient Noncommunity              | NTNC=Nontransient Noncommunity Water System       | CWS=Community Water System                    |                    |

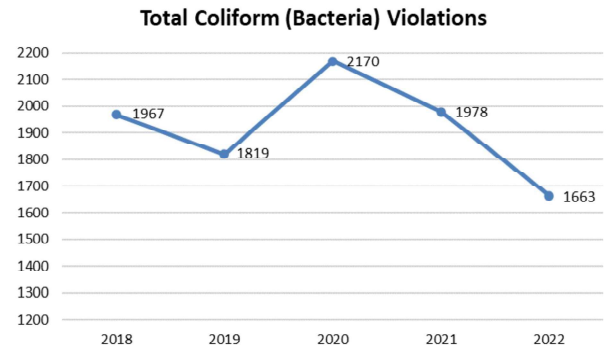
\* This number represents the total number of systems in violations for 2022. However, this number includes some systems with multiple violations across contaminant groups.

An evaluation of the data in 2022 Annual Compliance Report (ACR) shows the in-compliance rates at about seventy-one percent (71%) for monitoring and reporting (M/R) violations, ninety-eight percent (98%) for MCLs, and ninety-four percent (94%) for TT violations. The majority of violations are related to failing to collect and/or report samples. Approximately twenty-nine percent (29%) of the total number of active water systems have sampling (M/R) violations for at least one contaminant, but the majority of those systems (59%) are transient public water systems with M/R violations for TCR/RTCR.

The total number of systems with violations continued to decrease in 2022 due to IDEM's mandated electronic submission of sample results and continued focus on improving compliance statewide. Regarding specific violation types, only slight increases occurred in Pb/Cu by 17 violations and Rads by 26 violations from the previous year. Rads showed the greatest increase due to a change in reporting from group to individual analytes of Gross Alpha, Radium-226, and Radium-228, which multiplied the number of violations by 3 in comparison to previous years<sup>2</sup>. RTCR violations make up the majority of all violations due to having the most frequent monitoring frequency. The following charts illustrate these trends:



Continuous educational outreach and concentrated compliance assistance efforts made by IDEM staff have resulted in the decreased amount of RTCR violations as illustrated here:



A key indicator of the quality of the drinking water is the Community Water Systems' (CWSs) populations meeting current health-based standards. IDEM and EPA Region 5 agreed on a strategic plan with shared goals including tracking the percentage of population served by CWSs that meets current health-based standards. During 2022, the percentage was measured quarterly and the average for the four (4) quarterly results was ninety-eight and fifty-seven hundredths percent (98.57%) of the population served by CWSs in Indiana meets all health standards.

## Consumer Confidence Reports

All community public water systems are required to develop and distribute to their customers a brief annual water quality report called a consumer confidence report (CCR). The community water system is required to deliver a copy of the CCR to its consumers by July 1<sup>st</sup>. The purpose of the report is to inform and educate customers on the status and quality of their public water supply. The report contains information on the sources of drinking water, the levels of any detected contaminants, and educational information regarding drinking water.

## Compliance Assistance Efforts

The Drinking Water Branch currently assists public water supply owners and operators to promote compliance with the drinking water regulations. Assistance is provided

<sup>2</sup> IDEM previously reported Rads violations by group prior to 2022 and is now reporting violations per individual analyte (Gross Alpha, Radium-226, and Radium-228).

through several activities, namely: site visits, correspondence, telephone contact (including the use of interactive voice response (IVR) and regular phone calls), e-mails, educational presentations and materials, and implementation of the small system laboratory assistance program (SSLAP) where IDEM provides free sampling for very small, nonprofit systems serving a population of one hundred (100) or less. Additionally, with RTCR, field staff are handling all the Level 2 Assessments and Capacity Development staff are helping systems with the Level 1 Assessments. Another way IDEM reduces sampling violations is by reminding all public water systems of their required monthly, quarterly, semi-annual, or annual sampling by utilizing the IVR system, which leaves automated messages indicating when their sampling requirements are due. Further, IDEM also uses e-mails (when available) as another way to notify systems of when sampling is due.

The following is a summary of the number of site visits and assistance efforts that were conducted in 2022 by the Drinking Water Branch staff:

|  |               |
|--|---------------|
| <b>Sanitary Surveys</b>                  | <b>1053</b>   |
| <b>Well Site Surveys</b>                 | <b>78</b>     |
| <b>Technical Assistance Visits</b>       | <b>209</b>    |
| <b>Cap. Dev. Assistance Interactions</b> | <b>1649</b>   |
| <b>IVR Calls &amp; E-mails</b>           | <b>28,156</b> |

The Drinking Water Branch continues to provide assistance to all public water systems as a means to ensure drinking water is protective of human health.

## **For More Information**

If you have any questions concerning this report or would like the lists of public water supplies that had violations in 2021, please contact the Drinking Water Branch at (317) 234-7430. Additional copies of this report are available on the Indiana Department of Environmental Management, Office of Water Quality, Drinking Water Branch web-site at: <http://www.in.gov/idem/cleanwater/2579.htm> or by calling the Drinking Water Branch at (317) 234-7430.

Additional information regarding the quality of your drinking water may be obtained by contacting your local public water supplier. Please contact your local public water supply for a copy of their latest consumer confidence report (CCR).

For more information regarding all aspects of the environment in Indiana, visit IDEM's website at: <http://www.in.gov/idem/>. Also, for general information regarding drinking water, you may contact the EPA Safe Drinking Water Hotline by calling (800) 426-4791.

**TABLE 2  
REGULATED CHEMICAL DRINKING WATER CONTAMINANTS  
MAXIMUM CONTAMINANT LEVELS**

| Contaminant                        | MCL          | Contaminant                       | MCL    | Contaminant                        | MCL    |
|------------------------------------|--------------|-----------------------------------|--------|------------------------------------|--------|
| Inorganic Chemicals (IOCs)         | mg/l         | Volatile Organic Compounds (VOCs) | ug/l   | Synthetic Organic Compounds (SOCs) | ug/l   |
| Antimony                           | 0.006        | 1,1-Dichloroethylene              | 7      | 2,4-D                              | 70     |
| Arsenic                            | 0.01         | 1,1,1-Trichloroethane             | 200    | 2,4,5-TP (Silvex)                  | 50     |
| Barium                             | 2            | 1,1,2-Trichloroethane             | 5      | Alachlor                           | 2      |
| Beryllium                          | 0.004        | 1,2-Dichloroethane                | 5      | Atrazine                           | 3      |
| Cadmium                            | 0.005        | 1,2-Dichloropropane               | 5      | Benzo(a)pyrene                     | 0.2    |
| Chromium                           | 0.1          | 1,2,4-Trichlorobenzene            | 70     | Carbofuran                         | 40     |
| Cyanide (free)                     | 0.2          | Benzene                           | 5      | Chlordane                          | 2      |
| Fluoride (Adjusted) *              | 2            | Carbon Tetrachloride              | 5      | Dalapon                            | 200    |
| Fluoride (Natural) *               | 4            | Cis-1,2-Dichloroethylene          | 70     | Di(2-ethylhexyl)adipate            | 400    |
| Mercury                            | 0.002        | Dichloromethane                   | 5      | Di(2-ethylhexyl)phthalate          | 6      |
| Nickel                             | ---          | Ethylbenzene                      | 700    | Dibromochloropropane (DBCP)        | 0.2    |
| Selenium                           | 0.05         | Monochlorobenzene                 | 100    | Dinoseb                            | 7      |
| Thallium                           | 0.002        | o-Dichlorobenzene                 | 600    | Dioxin (2,3,7,8-TCDD)              | 3X10-5 |
| Nitrate                            | 10           | p-Dichlorobenzene                 | 75     | Diquat                             | 20     |
| Nitrite                            | 1            | Styrene                           | 100    | Endothall                          | 100    |
| Total Nitrate & Nitrite            | 10           | Tetrachloroethylene               | 5      | Endrin                             | 2      |
|                                    |              | Toluene                           | 1000   | Ethylene Dibromide (EDB)           | 0.05   |
| Sodium *                           | No MCL       | Trans-1,2-Dichloroethylene        | 100    | Glyphosate                         | 700    |
|                                    |              | Trichloroethylene                 | 5      | Heptachlor                         | 0.4    |
| <b>Asbestos</b>                    |              | Vinyl Chloride                    | 2      | Heptachlor epoxide                 | 0.2    |
| Asbestos                           | 7 MFL**      | Xylenes (total)                   | 10,000 | Hexachlorobenzene                  | 1      |
|                                    |              |                                   |        | Hexachlorocyclopentadiene          | 50     |
|                                    |              |                                   |        | Lindane                            | 0.2    |
|                                    |              |                                   |        | Methoxychlor                       | 40     |
| <b>Lead &amp; Copper</b>           |              | <b>Disinfection Byproducts</b>    |        | Oxamyl (Vydate)                    | 200    |
| Lead Action Level                  | 0.015        | Total Trihalomethanes ****        | 80     | PCBs                               | 0.5    |
| Copper Action Level                | 1.3          | Haloacetic Acids 5*****           | 60     | Pentachlorophenol                  | 1      |
|                                    |              |                                   |        | Picloram                           | 500    |
| <b>Radionuclides *</b>             | <b>PCi/l</b> |                                   |        | Simazine                           | 4      |
| Gross Alpha                        | 15           |                                   |        | Toxaphene                          | 3      |
| Gross Alpha Action Level           | 5            |                                   |        |                                    |        |
| Radium-226 Action Level            | 3            |                                   |        |                                    |        |
| Radium-226 & Radium-228 (combined) | 5            |                                   |        |                                    |        |
| Manmade                            | ***          |                                   |        |                                    |        |

\* Community Water Systems Only  
 \*\* MFL=million fibers/liter > 10 micron  
 \*\*\* The average annual concentration of beta particle and photon radioactivity from manmade radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than four (4) millirem per year.  
 \*\*\*\* The sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform), and trichloromethane (chloroform).  
 \*\*\*\*\*The sum of the concentrations of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid.

| <b>Code Type</b> | <b>-</b> | <b>Description</b>                            |
|------------------|----------|---|
| 01               | -        | MCL, Single Sample                            |
| 02               | -        | MCL, Average                                  |
| 03               | -        | Monitoring, Regular                           |
| 1A               | -        | MCL, E.Coli, Pos E Coli (RTCR)                |
| 2A               | -        | Level 1 Assessment Treatment Technique (RTCR) |
| 2B               | -        | Level 2 Assessment Treatment Technique (RTCR) |
| 2D               | -        | Startup Procedures Treatment Technique (RTCR) |
| 21               | -        | MCL, Acute (TCR)                              |
| 22               | -        | MCL, Monthly (TCR)                            |
| 23               | -        | Monitoring, Routine Major (TCR)               |
| 24               | -        | Monitoring, Routine Minor (TCR)               |
| 25               | -        | Monitoring, Repeat Major (TCR)                |
| 26               | -        | Monitoring, Repeat Minor (TCR)                |
| 27               | -        | Monitoring, Major (DBP)                       |
| 3A               | -        | Monitoring, Routine Major (RTCR)              |
| 3B               | -        | Monitoring, Additional Routine Major (RTCR)   |
| 34               | -        | Monitoring, GWR Triggered/Additional Major    |
| 38               | -        | Monitoring, Major (Surface Water)             |
| 41, 44           | -        | Treatment Techniques (Surface Water)          |
| 51               | -        | Initial Tap Sampling (Lead and Copper)        |
| 52               | -        | Follow Up or Routine Tap (Lead and Copper)    |
| 65               | -        | Public Education (LCR)                        |
| 66               | -        | Lead Consumer Notice (LCR)                    |
| 71               | -        | Consumer Confidence Report                    |
| C                | -        | Community Water System                        |
| NTNC             | -        | Non-Transient Non-Community Water System      |
| NC               | -        | Transient Water System                        |
| GW               | -        | Ground Water System                           |
| GWP              | -        | Ground Water Purchased System                 |
| SW               | -        | Surface Water System                          |
| SWP              | -        | Surface Water Purchased System                |

# Appendix B

Indiana Department of Environmental Management

# CAPACITY DEVELOPMENT

---

*Self-Assessment Form For Indiana's Public Water Systems  
Applying for State Revolving Fund (SRF) Loans*



April 2015

## INTRODUCTION

A water system should be “operated like a business.” This is a frequently repeated phrase. But what is meant by it? Here’s one useful way to think about what it means to operate as a business:

*For a successful business, a manager must be aware of changes taking place in the environment in which the business operates. It is necessary to constantly look to the future to:*

- 1) Cope with any **threats** to the survival of the business; and*
- 2) Take advantage of **opportunities** to improve the performance of the business.*

In the same way, owners and managers of a water system must look to the future. Situations such as the need for financing, the impact of new regulations, or the loss of key customers will present management demands that can only be met through sound business planning.

Many water systems were started at a time when the cost of providing water was low and regulatory demands were few. Without significant costs or other pressures, there was little incentive to focus on the business aspects of the operation. But times have changed! Little remains of the good old days when operating a water utility was a simple job. Today, customer expectations and new regulations have significantly increased the level of responsibility and preparedness required of public water systems. This form provides a process for water systems to assess their capacity to function in an effective, “business-like” manner.

Section 1420(c)(1)(C) of the Safe Drinking Water Act requires States to develop and implement a strategy to assist existing public water systems in acquiring and maintaining technical, managerial, and financial capacity. What exactly does technical, managerial, and financial capacity mean?

- **Technical capacity** - the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible required by law to your customers right now? Will you be able to in the future?
- **Managerial capacity** - the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have capable and trained staff? Does your system have an effective management structure?
- **Financial capacity** - the financial resources of the water system, including but not limited to the revenue sufficiency, credit worthiness, and fiscal controls. Basically, does your system have a budget and enough revenue to cover costs, repairs, and replacements?

This self-assessment form presents a structured series of yes/no questions which follow the three major elements of Capacity Development: Technical Capacity, Managerial Capacity, and Financial Capacity. The questions are intended to help you identify major capital and operating costs that could arise in the future operation of your system.





*Within each section of the form, the questions are grouped according to overall topic areas. Each topic represents an important area where there may be hidden costs in your future. The individual yes/no questions under each topic are intended to stimulate your thinking about the topic in general. In going through them you should keep the general topic in mind and ask yourself: "Is there anything to worry about here?" "Is there anything that could surprise us and cost a lot of money?"*

There are questions covering every major category of capital and operating costs. **The questions are all structured such that a "yes" answer means that cost surprises are unlikely and a "no" answer means some potential for cost surprises exist.**

When answering the questions, be honest with yourself. If you don't know the answer, take the time to do the research. In order to answer some of the questions, you may need to look at some records or find someone to help you understand the topic. When you come upon such questions, leave them blank and get what you need to complete them later.

Some questions may not apply to your system. For example, surface water questions do not apply to ground water systems. When you encounter such questions, simply cross them out and mark "NA" in the margin next to them, so you will remember to ignore those sections.

*How do you use the results of this self-assessment to tell if your water system is going to be a successful business in the future?*

There is no standard scoring system that can be used to interpret your answers to the yes/no questions. If you have relatively few "no" answers, the potential for cost surprises in your future is probably less than if you have several "no" answers. However, it is important for you to think carefully about each "no." Consider what can be done to reduce your liability in each instance and make an estimate about what each "no" might cost you. Ask yourself "What do all the "no" answers add up to?" "What must be done to change a "no" answer to a "yes?" "Can my system afford it?"

|                                  |  |
|----------------------------------|--|
| <b>System Name:</b>              |  |
| <b>Public Water Supply ID #:</b> |  |
| <b>Prepared By:</b>              |  |
|                                  |  |
| <b>Phone #:</b>                  |  |
| <b>Date:</b>                     |  |



## DRINKING WATER DEFINITIONS

**Community water system:** A public water system which serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents.

**Contaminant:** Any microorganisms, chemicals, waste, physical substance, radiological substance, or any wastewater introduced or found in the drinking water.

**Disinfectant:** Any oxidant, including but not limited to, chlorine, chlorine dioxide, chloramine, and ozone, that is added to water in any part of the treatment or distribution process and that is intended to kill or inactivate pathogenic microorganisms.

**Disinfectant contact time:** The time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration is measured.

**Filtration:** A process for removing particulate matter from the water by passing the water through porous media.

**Ground Water:** The supply of fresh water found beneath the surface of the ground, usually in aquifers, which is often used for supplying wells and springs.

**Ground Water Under the Direct Influence (GWUDI) of Surface Water:** Any water beneath the surface of the ground with a significant occurrence of insects, macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*; or any water with significant and relatively rapid shifts in water quality characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

**Maximum Contaminant Level (MCLs):** The maximum permissible level of a contaminant in water delivered to any user of a public water system. MCLs are enforceable standards.

**mg/L:** Milligrams per liter - equivalent to parts per million.

**µg/L:** Micrograms per liter - equivalent to parts per billion.

**Nontransient Noncommunity water system:** A public water system that is not a community system which regularly serves the same twenty-five (25) or more persons at least six (6) months per year

**NTU:** Nephelometric turbidity unit.

**Operator:** The person in direct or responsible charge and supervising the operation of a water treatment plant or a water distribution system.

**pCi/L:** picoCuries per liter – The quantity of radioactive material producing two and twenty-two hundredths (2.22) nuclear transformations per minute.

**psi:** Pounds per square inch.

**Surface Water:** All water occurring on the surface of the ground, including water in a stream, natural and artificial lakes, ponds, swales, marshes, and diffused surface water.

**Turbidity:** A cloudy condition in water due to suspended silt or organic matter.

**Waiver:** A process used by the Department of Environmental Management that allows a public water system to reduce or eliminate monitoring for a particular contaminant.



## TECHNICAL CAPACITY

Please mark  the appropriate box: *Yes, No, or Unknown* for each section. Please try to determine the answer to every question. If a section or question does not apply to your system, please write NA for not applicable.

### *Your Water Supply*

| Water Supply and Existing Demands   | Yes                      | No                       | Unknown                  |
|---|--------------------------|--------------------------|--------------------------|
| Do you know how much water you pump on an average day?<br><i>Amount:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know how much water you pump on a peak day?<br><i>Amount:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know the maximum amount of water you can pump from your source?<br><i>Amount:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is your source capacity higher than your peak day demand?<br><i>Percentage higher or lower:</i> _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Can you meet peak demand without pumping at peak capacity for extended periods? <i>Longest time pumping at peak demand:</i> _____                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you been able to provide adequate volumes of water during drought conditions?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have an Emergency Response Plan that will allow your system to meet system demand during a drought, shortage, or natural disaster?                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Water Demand  | Yes                      | No                       | Unknown                  |
| Do you know whether your system demand will be growing, declining, or remain stable over the next ten years? <i>Please circle one: growing declining stable</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If you have large commercial, industrial, or irrigation users, do you know their long-term plans and understand their needs?                                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other Uses of Water   | Yes                      | No                       | Unknown                  |
| Are you knowledgeable about other demands being placed on the same water source that you are using?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know who the other users are and do you understand their future plans?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you registered as a significant water withdraw facility with the Indiana Department of Natural Resources?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Water Quality   | Yes                      | No                       | Unknown                  |
| In the past year, have you remained in compliance with the maximum contaminant level for the bacteriological contaminants?                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| In the past two years, have you remained in compliance with the Nitrate maximum contaminant level?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| In the past three years, have you remained in compliance with Inorganic Chemical (IOC) maximum contaminant levels?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| In the past three years, have you remained in compliance with Synthetic Organic Compound (SOC) maximum contaminant levels?                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



| <b>Water Quality (continued)</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|--|--------------------------|--------------------------|--------------------------|
| In the past three years, have you remained in compliance with Volatile Organic Compound (VOC) maximum contaminant levels?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the levels of Arsenic in your finished water at or below 0.010 mg/L?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you ever monitored for Radon in your wells?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the level of Radon in your wells below 4,000 pCi/L?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the level of Radon in your wells below 300 pCi/L?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the level of Sulfate in your finished water below 250 mg/L?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you monitored for Methyl Tertiary-Butyl Ether (MtBE)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Treatment – General</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Does your treatment system(s) adequately treat the water to comply with the applicable primary or secondary drinking water standards?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is your treatment system properly operated and maintained?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Purchased Water</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| If you purchase water from another system or a wholesaler, do you know their long-term plans?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a contract to purchase water?<br><i>If yes, with who?</i>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you currently complying with your contract?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know the terms affecting your supply during drought conditions?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Alternative Sources</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Are alternative water sources possibly available to you?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you knowledgeable of the characteristics and costs of using alternative water sources?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Water Source</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you know the depth of your wells? <i>Depths:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know the “type” of aquifer system from which your water is drawn?<br><i>If yes please circle one:      confined                  unconfined</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Source Water Protection</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you meter your water at each well?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know if you qualify for the fixed radius delineation method?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have an approved “phase I” Wellhead Protection Plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you on track with your Wellhead Protection Plan implementation?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know all the types of land uses within your wellhead protection area or your source water area?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know the areas within your wellhead protection area or source water area that are served by septic systems, wastewater treatment facilities or have an agricultural feedlot waste treatment facility? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



**Treatment - Microbiological Contamination**

|   |  |   |
|---|--|---|
| Is your system using surface water or ground water under the direct influence of surface water? | <input type="checkbox"/> yes <input type="checkbox"/> no | <i>(if you checked "no", skip to the next section - Ground Water Systems)</i> |
|---|--|---|

**Surface Water Systems**

| <b>Filtration Plant Condition</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|--|--------------------------|--------------------------|--------------------------|
| Is your filter plant in good physical condition (free from spalling concrete, peeling paint)?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are repair parts available?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have redundancy (back-ups/automatic switchovers) for all major mechanical units? <i>If no, list units you do NOT have redundancy for:</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Can your plant achieve a filtered water turbidity of 0.3 NTU?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have on-line continuous turbidimeters on each filter?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Have you adopted a turbidity goal lower than the standard?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have the capability to add coagulant before the filter?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a procedure in place to determine your filter backwash frequency?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If you recycle your filter backwash water, do you return the recycled water to a location at or before the point of coagulant addition?          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has IDEM performed a "sanitary survey" of your system recently with satisfactory results? <i>Year of last sanitary survey:</i> _____             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Ground Water Systems**

| <b>Ground Water Under the Direct Influence (GWUDI) of Surface Water</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|---|--------------------------|--------------------------|--------------------------|
| Are your wells more than 50 feet deep?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is your water free from variations in turbidity and temperature after storm events?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has a determination been completed by the IDEM to evaluate whether your wells are classified as "ground water under the direct influence" (GWUDI) of surface water? <i>Please circle one: Wells GWUDI?    yes    no</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Well Construction and Protection</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you know when your wells were constructed?<br><i>List year(s):</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did IDEM approve your well sites?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are your wells constructed according to current Indiana regulations?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are your wells protected from flooding?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has IDEM performed a "sanitary survey" of your system recently with satisfactory results? <i>Year of last sanitary survey:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



### Disinfection

|                   |  |   |
|-------------------|--|---|
| Do you disinfect? | <input type="checkbox"/> yes <input type="checkbox"/> no | (if you checked "no", skip to the Infrastructure - Pumping section) |
|-------------------|--|---|

| Disinfection  | Yes                      | No                       | Unknown                  |
|---|--------------------------|--------------------------|--------------------------|
| Do you regularly inspect and maintain your disinfection/chlorination equipment? <i>Type of equipment:</i> _____<br><i>How often?</i> _____<br><i>Disinfectant used:</i> _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have back-up equipment? <i>Type:</i> _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have adequate contact time following disinfection and before the first user in the distribution system?<br><i>Approximate Contact time:</i> _____                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you test for chlorine (free and total) daily in the distribution system and at plant taps? <i>Average free chlorine residual in distribution system:</i> _____             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Treatment for the Control of Disinfection By-Products   | Yes                      | No                       | Unknown                  |
| Is the level of total trihalomethanes (TTHMs) in your distribution system below 80 µg/L.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If you treat surface water, are you already practicing or could you adopt "enhanced coagulation" in your current plant?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If you treat surface water, do you know how much disinfection contact time your plant is achieving?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### Infrastructure - Pumping

| Condition of Pumping Equipment  | Yes                      | No                       | Unknown                  |
|---|--------------------------|--------------------------|--------------------------|
| Do you routinely inspect for signs of pump or pump motor problems?<br><i>How often?</i> _____ <i>How are the pumps monitored?</i> _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Once diagnosed, are problems corrected in a timely enough manner to avoid crisis financing, costly repairs, and unscheduled downtime?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you hire a qualified pump contractor to perform an inspection of all pumping equipment, identify potential problems, and perform maintenance, on an annual basis?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Standby/Emergency Power Equipment   | Yes                      | No                       | Unknown                  |
| Is there sufficient standby/emergency power capacity to supply 100% of the average daily demand (excluding fire demand)? <i>How long?</i> _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are any existing standby/emergency power equipment, controls and switches tested or exercised routinely under load conditions, for at least 30 minutes at a time? <i>How often?</i> _____                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has the local electric utility been made aware of the standby/emergency power provisions made by the water system, so that they can reinforce and safeguard the electrical facilities serving the water operations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



### Infrastructure - Storage

| <b>Storage Capacity</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|---|--------------------------|--------------------------|--------------------------|
| Does the system have sufficient gravity-flow (non-pumped) or emergency generator-supported pumping capability to ensure adequate distribution storage to provide safe and adequate service for up to 24 hours without power?<br><i>If no, how long?</i> _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there reserve capacity in the tank for fire protection support?<br><i>Amount:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Security Measures</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Are any openings such as vent pipes, screened to protect against the entrance of birds, small animals, mosquitoes, flies and other small insects?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there an entry hatch to allow access for cleaning and painting of the interior of the tank?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is your storage tank covered?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the tank and the immediate surrounding area fenced and secured?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Control Systems</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Is there a high and low water level signal system to control the pumps?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there an altitude valve, to preclude the tank from overflowing?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a drain valve or hydrant to allow for draining of the tank?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there an alarm system to notify the operator of problems in the system?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Tank Maintenance</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Is the tank inspected at least every three years by a qualified tank contractor for evidence of corrosion or pitting, leakage, structural weakness, integrity of safety devises, and accuracy of pressure gauges?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the tank contractor capable of analyzing the coating of paint on the interior and exterior surfaces of the tank to determine if it contains lead or other hazardous materials?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### Infrastructure - Distribution

| <b>Svstem Maintenance</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|--|--------------------------|--------------------------|--------------------------|
| Does the operator routinely flush, test, and maintain the hydrants in the system?<br><i>How often:</i> _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the locations of valves in the mains and curb stops on the service lines precisely known?                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the system keep a log of distribution system breaks to identify weak areas in the system?               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are histories, locations, size, and type of mains and service lines detailed on records in a secure area?    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are all valves exercised and lubricated periodically?<br><i>How often:</i> _____                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the system free of severe "water hammer" problems?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|  |                          |                          |                          |



| <b>System Maintenance (continued)</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|--|--------------------------|--------------------------|--------------------------|
| Are meter pits, pressure regulating valves, altitude valves, blow-offs, and other appurtenances maintained on a regular basis?                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Unaccounted-for Water</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Is unaccounted-for water in the water system monitored and analyzed each month?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the unaccounted-for water less than 15 percent of the total water delivered to the mains? <i>List percentage of unaccounted-for water: _____%</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the normal operating pressures in the distribution system between 35 psi and 80 psi? <i>Normal operating pressure: _____psi</i>                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a routine leak detection and repair program?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are all sources of supply and customers metered?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the meters calibrated and tested routinely to ensure their accuracy and reliability? <i>How often:</i>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Water Quality in Distribution System</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Is an annual inspection for cross-connections performed?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a program for installing and testing backflow prevention devices where potential contamination is present?                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a program to eliminate "dead-ends" in the mains, where feasible?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Construction Standards</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Are there a low percentage of mains less than 6 inches in diameter in the water system? <i>List percentage: _____%</i>                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a program to gradually replace sub-standard sized mains?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are their suitable rights-of-way and easements provided to the water system for expansion, maintenance, and replacement of mains and services?       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there sufficient earth cover to protect the mains from frost damage or heavy loads, if driven over? <i>Inches of cover: _____</i>                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are materials of mains designed and selected to resist corrosion, electrolysis, and deterioration?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Distribution System Problems</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you receive <u>few</u> complaints regarding taste, odor, or staining?<br><i>List number of complaints in the past year: _____</i>                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Can you maintain adequate pressure in the distribution system under all conditions of flow?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |





## MANAGERIAL CAPACITY

Please mark  the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. If a section or question does not apply to your system, please write NA for not applicable.

### *Operation & Maintenance*

| <b>Operations Staff</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|---|--------------------------|--------------------------|--------------------------|
| Does the person operating your system hold a current certified drinking water operator's license from IDEM?<br><i>If yes, list classification(s):</i> _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does your operator receive additional training on an ongoing basis to keep current on new developments in the field?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Future Operational Demands</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Does your water system obtain any regular or occasional technical assistance from outside sources such as IDEM, your engineer, other utilities, or organizations specifically dedicated to providing technical assistance?<br><i>If yes, who:</i> _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### *Management & Administration*

| <b>Who's in Charge?</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|--|--------------------------|--------------------------|--------------------------|
| Is there a clear plan of organization and control among the people responsible for management and operation of the system? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are the limits of the operator's authority clearly known?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are all the specific functional areas of operations and management assigned?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does everyone involved in operations know who is responsible for each area?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is someone responsible for scheduling work?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Rules and Standards</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you have explicit rules and standards for system modifications?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have rules governing new hook-ups?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a water main extension policy?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have standard construction specifications to be followed?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have measures to assure cross-connection control and backflow prevention?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have policies or rules describing customer rights and responsibilities?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Regulatory Compliance Program</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you fully understand all of your monitoring requirements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a scheduling mechanism to assure compliance?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a mechanism to obtain the most recent information on regulatory requirements?                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know how to get clarifications or explanations of the requirements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



| <b>Regulatory Compliance Program (continued)</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
|---|--------------------------|--------------------------|--------------------------|
| Do you maintain adequate records to document compliance?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>If yes, for how long?</i>  |                          |                          |                          |
| Do you fill out Monthly Reports of Operations (MROs) completely and submit them to IDEM?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is your track record free of repeated episodes of monitoring violations?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know what to do in the event of a failure to monitor violation?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you know what to do in the event of an MCL violation?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you currently in compliance with all drinking water regulations?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you delivering adequate and timely annual consumer confidence reports (CCRs) to your consumers?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you aware of and do you understand provisions for obtaining waivers from monitoring requirements or the role of vulnerability assessments?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you currently in compliance with all wastewater regulations?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Emergencies</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you have an Emergency Response Plan?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there a contingency for making emergency interconnections to neighboring systems, and do you know they will work if needed?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does everyone involved in operations know what they are to do in the event of contamination from a toxic hazardous waste spill in your source water or a main break or a tank failure?                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a clear chain-of-command protocol for emergency action?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is someone responsible for emergency operations, for communications with state regulators, for customer relations, for media relations?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>If yes, who (title):</i> _____   |                          |                          |                          |
| <b>Safety</b>   | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you have a safety program defining measures to be taken if someone is injured?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does everyone understand the risks and safety measures involved in handling water treatment chemicals?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have written operating procedures for both routine and emergency system operations?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you fully aware of Occupational Safety and Health Administration (OSHA) confined space (such as trenches/manholes) regulations?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Maintenance</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Do you have a planned maintenance management system -- a system for scheduling routine preventive maintenance?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a system for assuring adequate inventory of essential spare parts and back-up equipment?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have relationships with contractors and equipment vendors to assure prompt priority service?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have records and data management systems for system operating and maintenance data, for regulatory compliance data, and for system management and administration?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Management Capability</b>  | <b>Yes</b>               | <b>No</b>                | <b>Unknown</b>           |
| Are you aware of upcoming regulations in the water industry?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are you getting the outside services and technical assistance you need, such as legal counsel, insurance, engineering advice, technical/operations assistance? assistance, rate case preparation, and financial advice? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



## FINANCIAL CAPACITY

Please mark  the appropriate box: *Yes*, *No*, or *Unknown* for each section. Please try to determine the answer to every question. If a section or question does not apply to your system, please write NA for not applicable.

| Financial Planning Mechanisms   | Yes                      | No                       | Unknown                  |
|---|--------------------------|--------------------------|--------------------------|
| Do you know your actual cost of service?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have an annual budget?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have within the annual budget a separate reserve account for equipment replacement and/or capital improvement?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a capital budget or capital improvement plan that projects future capital investment need some distance (at least five years) into the future?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a process for scheduling and committing to capital projects?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a capital improvement plan that covers at least the next ten years?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does your planning process take account of all the potential capital needs suggested by your answers to the technical questions in these worksheets?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does your long-term planning incorporate analysis of alternative strategies that might offer cost savings to customers, such as consolidation with other nearby systems or sharing of operations and management expenses with other nearby systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rates/Billing - Are they Adequate?  | Yes                      | No                       | Unknown                  |
| Do you regularly review your rates? <i>How often?</i> _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a plan in place for periodic increases in rates?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is the rate structure based on metered watered use?<br><i>List water rates per 1000 gallons:</i> _____  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do users pay the same or higher rate per 1000 gallons as they use more water?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the rate structure assure proportionality among users?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have procedures for billing and collection?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is your billing collection rate greater than 95%?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have collection procedures specifically for delinquent accounts?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Financial Planning Mechanisms - Are they Adequate?  | Yes                      | No                       | Unknown                  |
| Do you have audited financial statements?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does your water system presently operate on a break-even basis or better?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the water system keep all the water revenues (i.e., water revenue does not support other municipal departments or unrelated activities)?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you employ standardized accounting and tracking systems?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you track budget performance?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you keep records to substantiate depreciation of fixed assets and accounting for reserve funds?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are financial management recordkeeping systems organized?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are controls exercised over expenditures?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are controls exercised to keep from exceeding your budget?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are there purchasing procedures?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



## PUTTING IT ALL TOGETHER:

### Do you have Technical, Managerial, and Financial Capacity?

After processing through all of the questions in this self-assessment form, you should be in a position to summarize what you have learned about your status.

- First, you should have accumulated a list of items on which you need to do some more research or investigation in order to fully answer the question, or in order to reverse your answer from “no” to “yes.”
- Second, you should be able to make a qualitative summary of what you have learned by taking a clean sheet of paper and filling in the most important things that come to mind – reflecting on the issues raised in this form – under the following headings
  - Strengths
  - Weaknesses
  - Opportunities
  - Threats
- Third, perhaps with some additional research – or with the right assistance – you may be within range of being able to begin a more quantitative form of business planning utilizing budget and revenue planning.

Finally, customer awareness of the issues covered by the preceding questions in this form is the true foundation of viability. Getting customers to fully appreciate what it takes to operate and maintain a water system is important to assure support for new capital investment and higher water rates. The more customers know about the cost to run a proper water system in the future, the more open-minded they are likely to be in considering alternative strategies for providing water service, conceivably at lower cost. Nothing focuses the mind like cost estimates. Once you have performed an analysis of prospective future liabilities and costs following the questions in this form, you will have the information needed to get people to focus on the choices involved in determining your future.

The final question to ask yourself is: *How much of all this is known and understood by the customers, and how would this change their attitudes about the future?*

If you need more information or assistance in completing this form, please contact:

Indiana Department of Environmental Management: Drinking Water Branch  
Attn: Juliana Savia, *Operator Certification and Capacity Development*  
(317) 234-7459; [jsavia@idem.in.gov](mailto:jsavia@idem.in.gov)

Indiana Finance Authority: State Revolving Fund Loan Program  
Attn: Shelley L. Love, *Drinking Water and Wastewater Program Administrator*  
(317) 232-4396; [slove@ifa.in.gov](mailto:slove@ifa.in.gov)