Drinking Water & Wastewater

State of Drinking Water Quality in Saskatchewan

Annual Report for 2024-25

Water Security Agency

wsask.ca

Minister's Message

Honourable Daryl Harrison
Minister Responsible for
Water Security Agency

I am pleased to present the 2024-25 State of Drinking Water Quality in Saskatchewan report.

Access to safe drinking water and effective wastewater management protects public health and supports economic growth in Saskatchewan. Strong leadership in planning, regulation and reporting ensures sustainable and accountable water governance for current and future needs.

Thank you to our communities for their dedication to excellence and participation in drinking water studies that inform technical guidance and drinking water guidelines. This collaboration plays a critical role in informing drinking water management decisions and protecting public health.

Key highlights of ongoing success in safe drinking water management in 2024-25:

- Confidence that our drinking water is safe remains strong at 86 per cent, based on consumer survey results.
- Drinking water quality continues to improve with upgrades to waterworks addressing water quality concerns and the majority of regulatory testing compliance above 90 per cent.
- Comprehensive inspections of waterworks and wastewater systems continue to show overall good results.
- Operators trained and certified to operate water and wastewater systems are critical and compliance remains consistently high at 95 per cent.
- Over $100 million government funding was allocated to water and wastewater infrastructure and programs.

Introduction

This is the 23rd annual report on the status of drinking water in Saskatchewan for the fiscal year ending March 31, 2025. The State of Drinking Water Quality Report is a requirement under *The Environmental Management and Protection Act, 2010*, with the purpose of evaluating public perception and trust; assessing each barrier within the multi-barrier approach to safe drinking water; and summarizing government and consumer investment.

Drinking water management in Saskatchewan is legislated under *The Environmental Management and Protection Act, 2010, The Waterworks and Sewage Works Regulations, The Public Health Act, 1994* and *The Health Hazard Regulations*. The Water Security Agency (WSA) and the Saskatchewan Health Authority (SHA) are the primary government agencies responsible for the programs and activities associated with drinking water regulation in the province.

WSA regulates municipal waterworks, private waterworks with greater than 18 cubic metres (m^3) per day design flow, water pipelines connected to municipal waterworks, and water pipelines with 15 or more service connections. In addition, water sampling requirements for limited-scope water pipelines, as defined in *The Health Hazard Regulations*, are regulated by WSA. SHA regulates non-municipal public water systems and private semi-public water systems. Private non-public water systems used for domestic purposes (e.g., private household systems) are not regulated.

Public Perception and Trust

Information to build a positive perception of Saskatchewan's drinking water must be comprehensible, current and readily available. WSA and waterworks owners work to build trust with the public by providing annual notifications to consumers; online water quality and inspection report results; online advisories currently in place; and annual reporting on the state of drinking water quality in Saskatchewan.

To measure public perception and trust, WSA conducts an annual survey to gauge the public's perception of drinking water quality and safety in Saskatchewan. For 2024-25, the survey collected data from 802 respondents from across the province from May 6 to 7, 2025 (Table 1). The survey found 86 per cent of the citizens surveyed strongly or somewhat agreed that their drinking water is safe, which is a slight increase from last year but remains consistent over time ranging from 84 to 89 per cent in the past ten years. When looking at the entire province, 82 per cent of the residents are confident that everyone in Saskatchewan has safe drinking water showing an increase of five per cent from last year.

Table 1. Summary of drinking water quality survey results.

Strongly disagree / Somewhat disagree	Agreement to Statements	Strongly agree / Somewhat agree	Don't Know
12% (7%)	I am confident that **my drinking water is safe**	45% (40%) 86%	2%
16% (11%)	**Saskatchewan** residents have **safe drinking water**	31% (51%) 82%	3%
33% (21% / 12%)	I am **willing to pay more** to improve the safety or quality of my drinking water	21% (40%) 61%	6%

SOURCE WATER PROTECTION

Source water protection, the first barrier in an effective drinking water management system, prevents contamination and reduces treatment costs. Monitoring the environment and regulating wastewater systems protects current and future drinking water sources, aquatic life and the environment.

Wastewater system inspections ensure compliance and provide timely feedback on wastewater management. In 2024-25, 623 wastewater operations or collection systems associated with lagoon or mechanical wastewater treatment were permitted by WSA. A total of 615 inspections were conducted with 55 per cent of inspections fully compliant. Seventy-three per cent of inspections were compliant with most inspection items. Ninety-three per cent of systems inspected met the requirements for a certified operator. Figure 1 illustrates the categories of non-compliance items found during inspections. Two of the main areas of non-compliance within these categories include record keeping associated with maintenance and discharges and operational issues related to lagoon design requirements (i.e., capacity, poor construction, no secondary treatment).

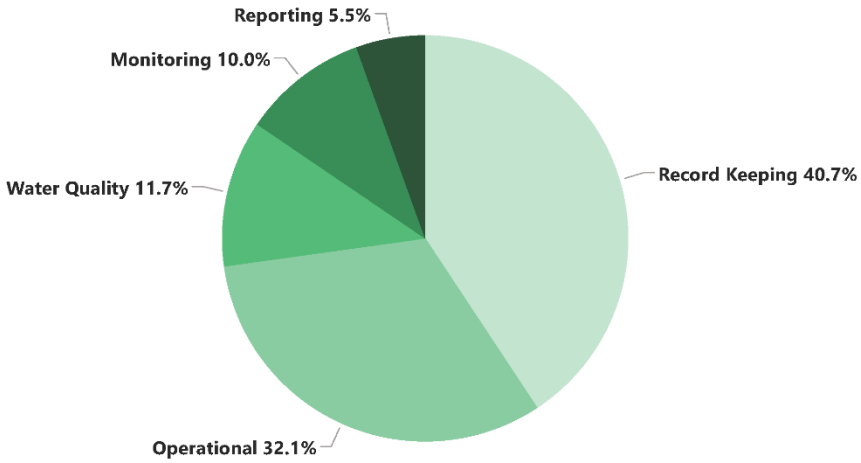

Figure 1. Wastewater regulatory inspection non-compliance by category. Per cent from greatest (light) to least (dark).

The operation, maintenance and repair of wastewater systems must be under the direction of a certified operator. Table 2 provides a breakdown of classifications and operators certified at each level for WSA regulated wastewater systems; please note, the same operator can be certified in multiple disciplines.

	Wastewater Treatment		Wastewater Collection	
	Certified Operators	Systems	Certified Operators	Systems
Small System	56	N/A*	50	N/A*
Class 1	460	494	512	446
Class 2	143	18	263	42
Class 3	29	8	48	5
Class 4	42	4	56	2

Table 2. Breakdown of certified operators and wastewater systems at each level.

*N/A - Small systems are captured with the total number of Class 1 systems; these are Class 1 systems that meet certain criteria based on treatment and population. Small system certification is only sufficient for certain Class 1 systems.

WSA works with communities to ensure wastewater systems achieve a minimum level of treatment. Addressing sewage works capacity and treatment concerns requires planning, financial investment and construction time. This means the reduction in the number of works representing a risk to source waters is expected to decline slowly.

In 2024-25, WSA reviewed eight studies assessing downstream uses and impacts from communities that discharge treated effluent into fish-bearing waters.

There are 104 wastewater systems discharging effluent that enters fish-bearing water regulated under provincial legislation and the federal *Wastewater Systems Effluent Regulations*; 23 are low to medium risk systems still working toward compliance with effluent quality standards.

WSA monitors water resources to protect water quality and ecosystem function. The Primary Water Quality Monitoring Program monitors 10 primary rivers at 24 sites, four times a year, to assess the state of the water quality. Saskatchewan's naturally nutrient rich prairie soils and human activities contribute to nutrient level concentrations in our rivers. High flows and transport of sediment in the spring can raise concentrations of metals and nutrients, while low flow or winter conditions can increase un-ionized ammonia or lower dissolved oxygen concentrations. The average surface water quality in the primary rivers sampled from 2022 to 2024 is classified, overall, as good and continues to support aquatic life (Figure 2).

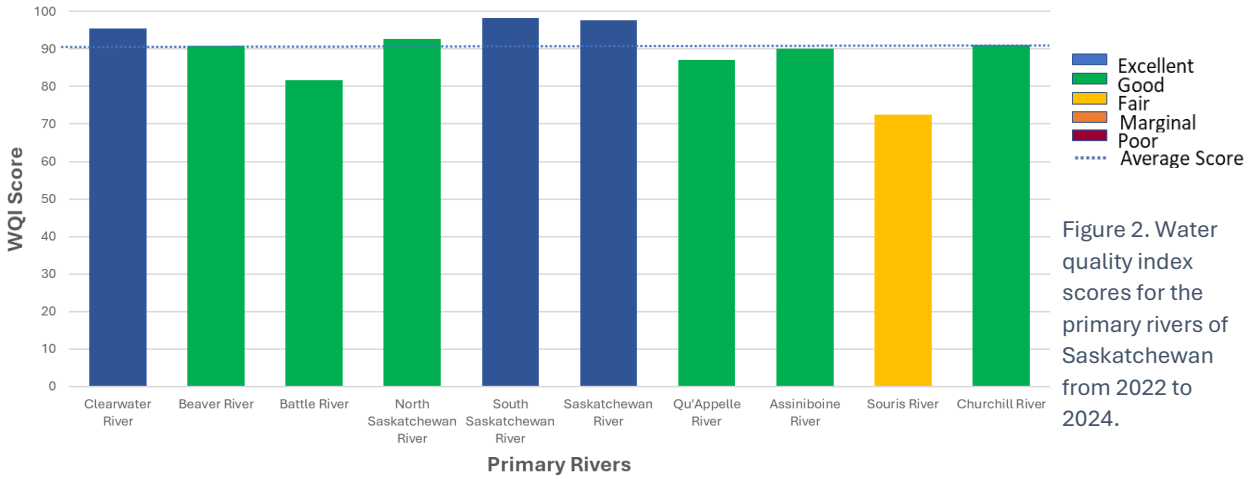

Figure 2. Water quality index scores for the primary rivers of Saskatchewan from 2022 to 2024.

Municipal bylaws protect source water and drinking water supplies. Figure 3 shows an increase in the percentage of municipalities with bylaws in place to protect their drinking water supplies. Approximately 91.7 per cent (↑0.7 per cent) of the population resides in a municipality with source water protection provisions.

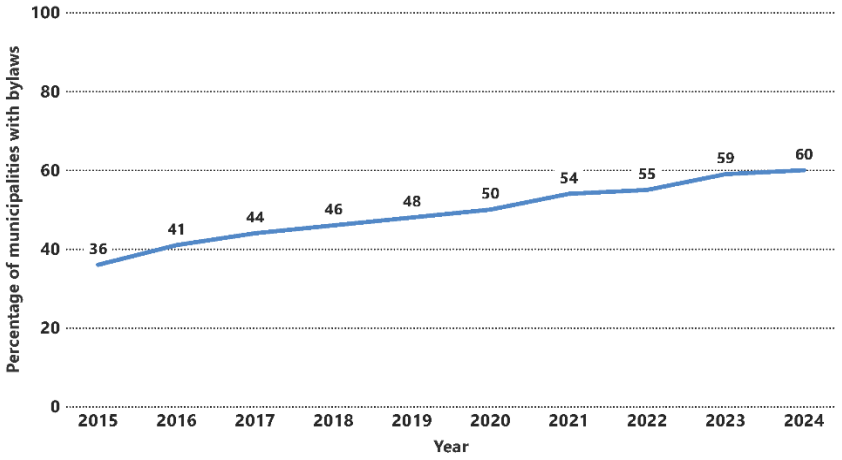

Figure 3. Percentage of municipalities with source water protection bylaws.

DRINKING WATER TREATMENT AND DISTRIBUTION

Providing safe drinking water relies on the knowledge and capabilities of waterworks operators, infrastructure design and maintenance, and ongoing compliance with regulations. WSA regulates 611 human consumptive water treatment and distribution systems, including municipal and private waterworks, and treated water pipelines. WSA also regulates 159 hygienic (non-potable) waterworks and directs water sampling for 45 limited-scope pipelines. Providing regulatory oversight, engineering design review and approval services is important for ensuring owners and operators meet regulatory requirements.

The operation, maintenance and repair of human consumptive waterworks must be under the direction of a certified operator. In 2024-25, 97 per cent of inspections for human consumptive treatment facilities met the requirements for a certified operator. Operators are certified by the Saskatchewan Operator Certification Board (OCB) from small systems up to class four. As of March 31, 2025, the OCB had 1,495 certified operators. Table 3 provides a breakdown of classifications and operators certified at each level for WSA regulated waterworks; please note, the same operator can be certified in multiple disciplines.

Table 3. Breakdown of certified operators and waterworks at each level.

	Water Treatment		Water Distribution	
	Certified Operators	**Systems**	**Certified Operators**	**Systems**
Small System	65	N/A*	58	N/A*
Class 1	358	281	495	537
Class 2	305	128	441	49
Class 3	73	12	88	6
Class 4	76	8	52	2

*N/A - Small systems are captured with the total number of Class 1 systems; these are Class 1 systems that meet certain criteria based on treatment and population. Small system certification is only sufficient for certain Class 1 systems.

To ensure waterworks meet the provincial regulatory requirements and to reduce the need for future modifications, construction permits are required to build water treatment and distribution systems. WSA works with communities and consulting engineers to ensure design standards and regulations are met.

Three new treatment technologies were reviewed, with WSA developing standards and guidelines for their use in the province.

MONITORING AND COMPLIANCE

Consistent and sustained delivery of safe drinking water requires ongoing monitoring and inspection to ensure effective water treatment. A *Permit to Operate a Waterworks* issued by WSA provides the operational requirements including record keeping, reporting, sampling and monitoring, and minimum water quality standards. WSA determines compliance with the operational permit during inspection to ensure the system and operations meet regulatory requirements.

Waterworks inspections provide performance feedback to waterworks owners and operators and are an essential tool in drinking water management to identify and correct issues before they pose a significant risk. In 2024-25, WSA inspected 98 per cent of human consumptive water treatment and distribution systems. A total of 768 inspections were conducted with 29 per cent of inspections fully compliant. Ninety-three per cent of inspections were compliant with most inspection items. Figure 4 illustrates the categories of non-compliance items found during inspections. Three of the main areas of non-compliance within these categories include: failure to maintain and calibrate test equipment; bacteriological water quality standards; and chemical water quality standards.

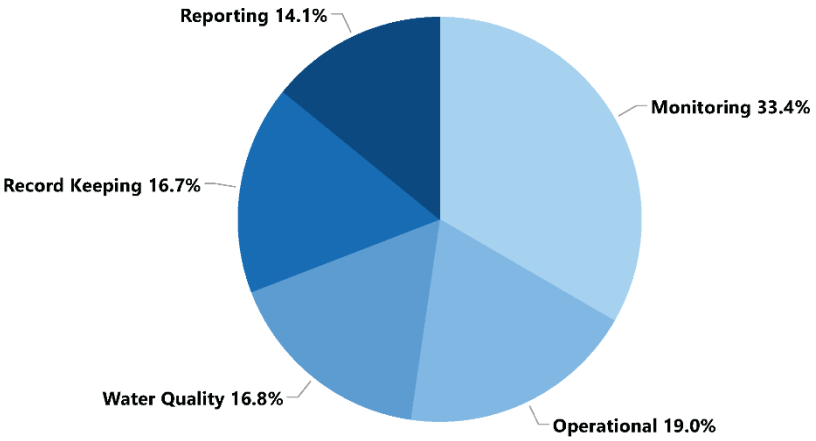

Figure 4. WSA drinking water regulatory inspection non-compliance by category. Per cent from greatest (light) to least (dark).

What about small drinking water systems regulated by the Saskatchewan Health Authority?

SHA regulated 822 drinking water supplies in 2024-25 and conducted a total of 901 inspections of public drinking water systems to monitor compliance with *The Health Hazard Regulations*. Figure 5 shows that non-compliance was primarily related to monitoring (sampling, treatment/testing equipment) and operational (water treatment, storage & handling of chemicals, and cleaning & maintenance) inspection items.

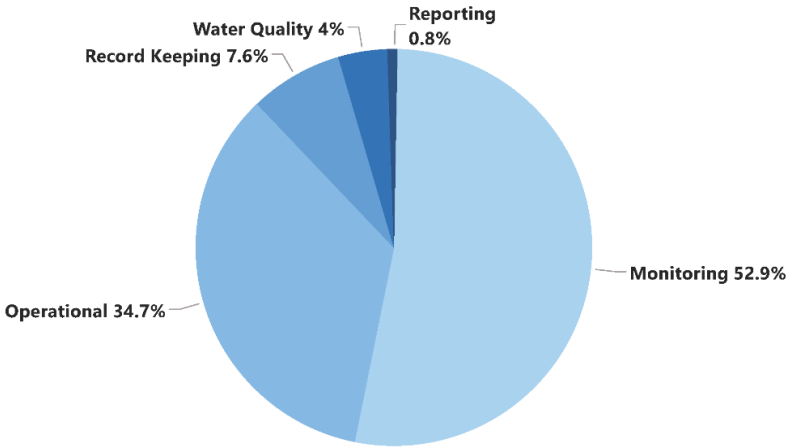

Figure 5. SHA drinking water regulatory inspection non-compliance by category. Per cent from greatest (light) to least (dark).

Operators monitor water quality to ensure treatment is effective and water is safe for human consumption. A *Permit to Operate a Waterworks* outlines the minimum monitoring requirements as determined by the *Municipal Drinking Water Quality Monitoring Guidelines* (EPB 202). The water quality parameters monitored depend on factors associated with source water, treatment method and performance, and the population served. The frequency of sampling for most parameters is primarily based on the type of source water and population served. Figure 6 shows that water quality compliance with drinking water standards is highest for bacteria and health and toxicity. Compliance with disinfection requirements may appear low due to operators failing to report on-site chlorine residuals with bacteria samples. Turbidity compliance is based on the review of turbidity during compliance inspections. Compliance with standards for disinfection by-products, including trihalomethanes and haloacetic acids, is variable and consists of continuous assessment of annually averaged data.

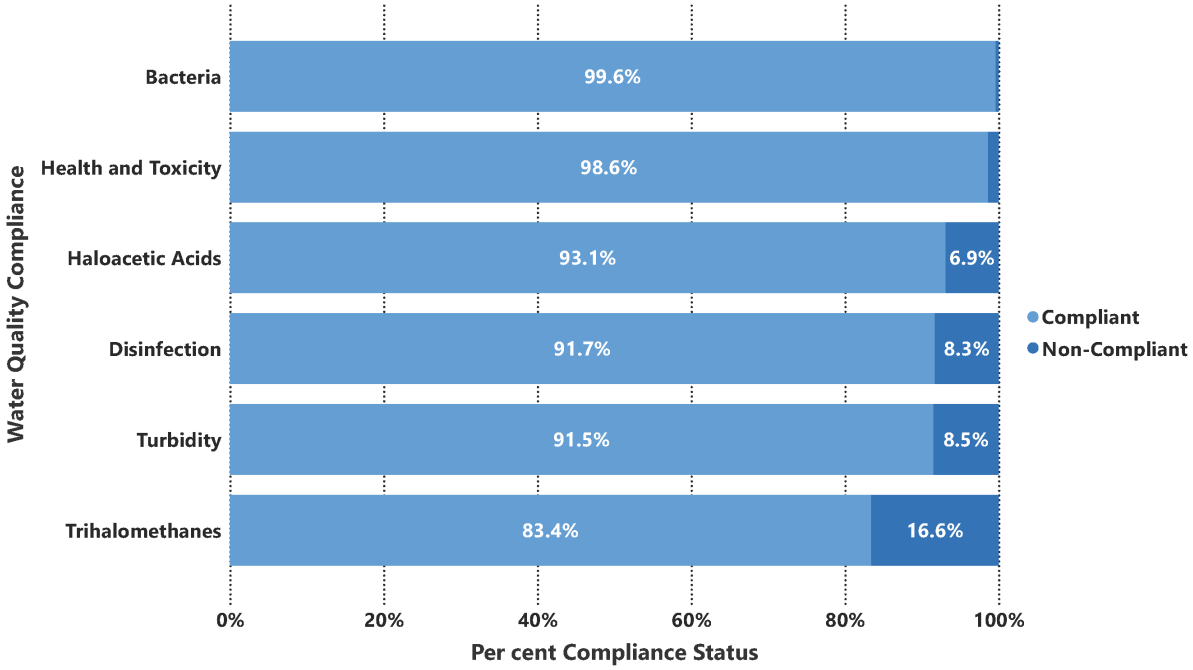

Figure 6. Compliance with required water quality monitoring.

Saskatchewan collaborates with other jurisdictions when establishing monitoring and compliance standards for safe drinking water. In addition, WSA assesses risk and impacts by conducting research and exposure studies, evaluating treatment effectiveness and cost associated with complying with proposed drinking water quality standards, and consults with the public and provincial stakeholders before adopting new standards. WSA is currently working on finalizing a study on the impacts and exposure of manganese and lead in the province. A study on asbestos in drinking water was also undertaken in 2024-25. Next, WSA is planning studies on arsenic and disinfection by-products as well as a study to determine the potential impacts of 'forever chemicals' per- and polyfluoroalkyl substances (PFAS) as emerging chemicals of concern. Results from these studies will also inform the needs for future upgrades and management strategies.

The Ministry of Environment's Compliance Audit Program conducted three audits associated with water and wastewater systems in 2024-25 with compliance averaging 51 per cent overall.

RESPONSE TO ADVERSE CONDITIONS

When water quality is potentially impacted, protecting public health is the priority. A risk-based management approach dictates the response by WSA or SHA that considers the source water, treatment, distribution, cross-connections and the operator's skill level. In most cases, follow-up sampling and monitoring is all that is required to verify the water is safe to consume.

When drinking water quality is impacted and poses potential risk, WSA and SHA issue Precautionary Drinking Water Advisories (PDWA) and Emergency Boil Water Orders (EBWO). In 2024-25, there was a combined total of 865 PDWAs and EBWOs in effect or issued by WSA and SHA. All drinking water advisories and orders are entered into the Canadian Network for Public Health Intelligence (CNPHI) system to ensure real-time notification and information sharing, which enhances communication and response co-ordination.

In 2024-25, there were 842 advisories issued to WSA regulated waterworks (Figure 7). Low risk PDWAs made up 96.4 per cent of all advisories issued. These were issued as precautionary measures mostly associated with brief periods of pressure loss in the distribution system because of watermain breaks or power outages; watermain repairs/replacements; planned maintenance; and seasonal startups. Medium risk PDWAs, comprised three per cent of the advisories, were issued mostly because of equipment failure or damage; elevated turbidity; system maintenance; inadequate disinfection in the treated water supply; suspected contamination; and prolonged pressure loss in the distribution system. Three high risk PDWAs were issued due to inadequate disinfection in the distribution system; treatment equipment failure resulting in elevated turbidity; and concern with cross-connections. Two emergency advisories, known as EBWOs, were issued to WSA regulated systems, due to the presence of *E. coli*. These emergency advisories were resolved within ten days.

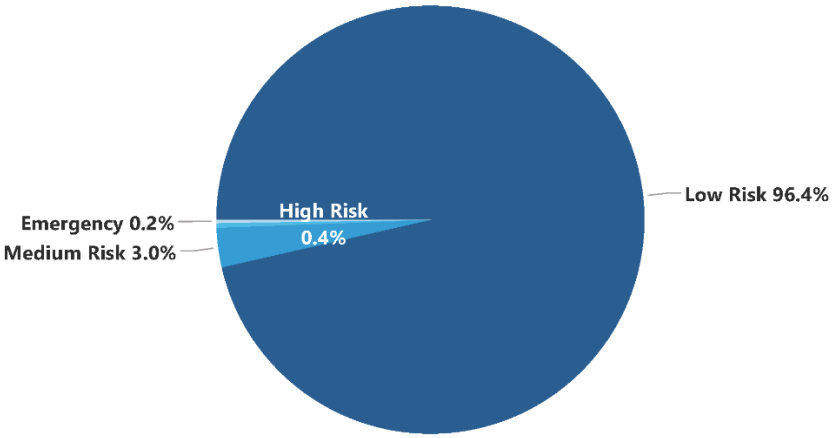

Figure 7. PDWAs and EBWOs issued to WSA regulated waterworks.

In 2024-25, 99.9 per cent of WSA regulated waterworks that posted advisories still met the minimum treatment requirements.

What about small drinking water systems regulated by the Saskatchewan Health Authority?

Of the 23 advisories issued to small drinking water systems regulated by SHA, 17 were PDWAs and six were EBWOs (Figure 8). PDWAs are issued by SHA for a variety of reasons including as a precautionary measure during startup of a seasonal water system; insufficient treatment or maintenance; and in response to equipment or facility failures. SHA adheres to standard operating procedures when issuing PDWAs and, in more serious situations, EBWOs. SHA's medical health officers are responsible for issuing EBWOs in accordance with *The Public Health Act, 1994* to WSA or SHA regulated water systems. The predominant reason for issuing an EBWO is the presence of *E. coli* bacteria in a water sample.

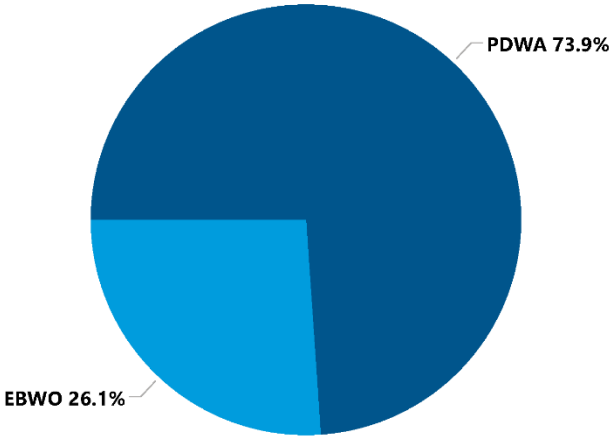

Figure 8. PDWAs and EBWOs issued to small drinking water systems regulated by SHA.

WSA prioritizes education and guidance as a primary response to issues of non-compliance. Verbal warnings are issued for minor offences encountered during inspections and are documented on inspection forms to ensure proper follow-up. Written warnings consist of letters of non-compliance and warnings of non-compliance. These are issued for non-compliance detected during inspections, or when follow-up requirements previously identified were not complied with. Waterworks and sewage works protection orders are issued to ensure immediate protection of human health and the environment. In 2024-25, six written warnings were issued to waterworks or sewage works. The last protection order was issued in 2020.

For water and wastewater management information on advisories and warnings, drinking water quality, operator information, and wastewater and surface water quality, visit: *Water and Wastewater Management*.

INVESTMENT

The condition, capability and capacity of water treatment and distribution infrastructure is critical to providing drinking water that meets provincial standards and national guidelines. Funding and grants are important to help upgrade and expand infrastructure to meet guidelines, standards and the pressure created by growth.

Municipal drinking water and wastewater programming and infrastructure investments in 2024-25 from WSA and Ministry of Government Relations (GR) totaled $102.9 million. WSA's operational costs totaled $7.9 million for drinking water and wastewater programs and activities. GR federal-provincial infrastructure funding programs including the Investing in Canada Infrastructure Program (ICIP), Small Communities Fund (SCF), and National Regional Projects (NRPs) totaled $95 million in 2024-25. Municipalities received $66.6 million towards 49 drinking water projects and $28.4 million towards 40 wastewater projects. Federal-provincial funding for these three infrastructure programs began ten years ago with all funding being allocated as of March 31, 2023. In 2024-25 investment spending decreased as approved projects were being completed (Figure 9). In addition to federal-provincial programs, GR provides municipalities with Municipal Revenue Sharing (MRS) funding each fiscal year that is long term funding and can be used at the discretion of the municipality. MRS has increased by 14.22 per cent from 2023-24 to 2024-25.

The Canada Community-Building Fund (CCBF) provides flexible funding to community projects including drinking water and wastewater infrastructure. In 2024-25, the CCBF approved a total of $7.1 million in funding to 81 drinking water ($5.5 million) and 39 wastewater ($1.6 million) projects.

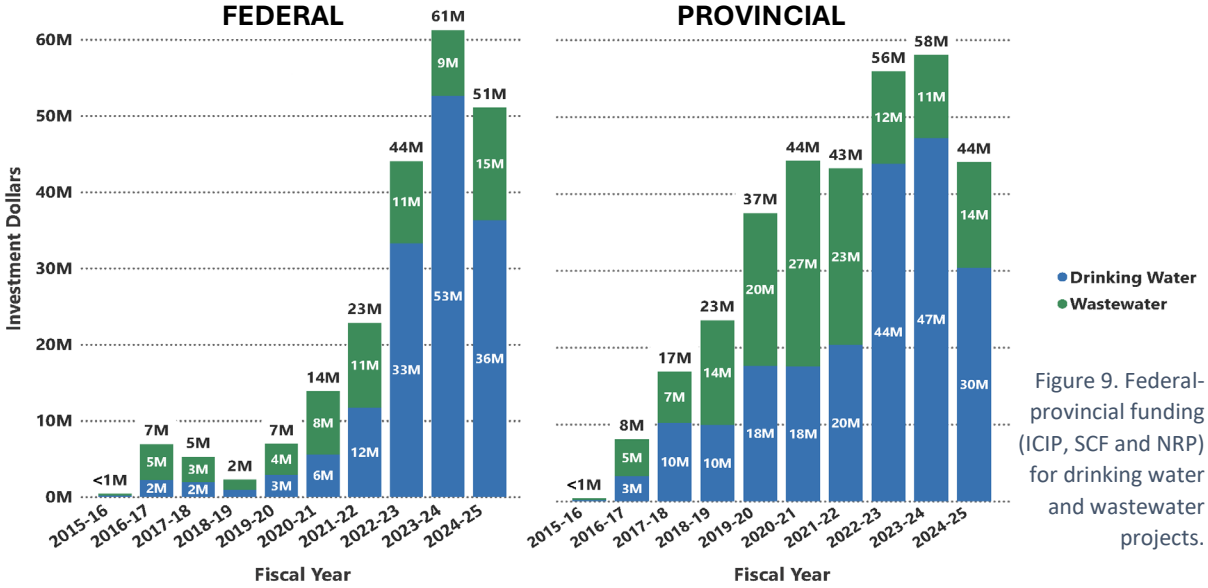

Figure 9. Federal-provincial funding (ICIP, SCF and NRP) for drinking water and wastewater projects.

The Ministry of Environment and SHA conduct water and wastewater-related activities but do not have a dedicated budget for water-specific expenditures.
SaskWater's financial budget approval process is separate from that of the ministries and WSA as their activities are related to water services to their customers.

Municipal infrastructure, such as treatment and distribution facilities, deteriorates over time and may need to be expanded or replaced to meet requirements, such as drinking water quality or design standards. Therefore, municipalities need to know the condition of their systems and create pricing and capital investment policies to maintain and improve these systems. Waterworks rates that cover current and future expenses are used as an indicator of waterworks financial sustainability. Based on an analysis of waterworks financial overviews (unaudited) submitted for 451 municipal waterworks systems, there was a five per cent increase in municipalities operating at a sustainable level in 2023 (Figure 10). From 2022 to 2023, 45 per cent of municipal waterworks showed a decrease in their sustainability ratio.

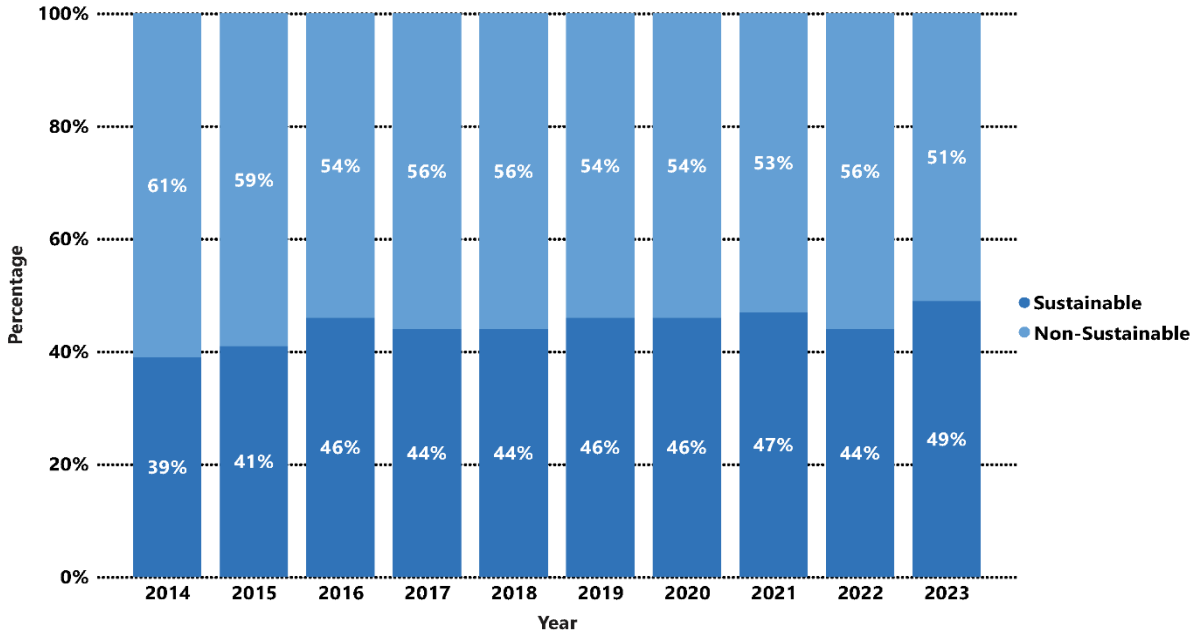

Figure 10. Percentage of municipalities that were operating waterworks at a sustainable level.

The annual drinking water survey evaluates consumer investment towards improving drinking water quality. In 2025, the survey found the proportion of people willing to pay more to improve drinking water continues to drop slightly again this year from 62 to 61 per cent in Saskatchewan. Consumer willingness to pay for drinking water is an important measure of the value placed on safe drinking water (Figure 11). Communicating accurate information on investment requirements needed to maintain services can build trust and support changes to drinking water fees or services in the future. Saskatchewan residents reluctant to pay additional fees for water quality improvements often believe the current quality is adequate and/or have concerns with cost.

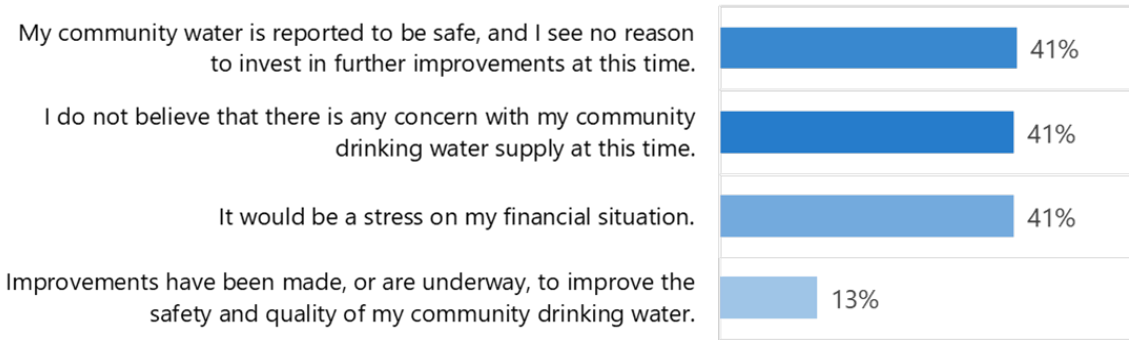

Figure 11. Reasons for unwillingness to pay to improve community water quality/safety.

State of the Drinking Water Quality in Saskatchewan - Summary

Indicator	State	Trend	Information
Source Water Protection	Fair to Good	Improving	Wastewater inspection compliance remains fair with no change from the previous year. Sewage effluent discharges continue to improve as communities establish funds to upgrade or construct facilities to meet standards. Operator certification for wastewater systems remains consistent and high. No major variations were noted with surface water quality in the primary rivers. Source water protection bylaws continue to improve as municipalities establish bylaws.
Drinking Water Treatment and Distribution	Good	No Change	The number of certified operators working in waterworks remains stable. Review and approval of construction projects continue at a steady pace.
Monitoring and Compliance	Good	Improving	Overall compliance with the main water quality indicators is high and waterworks inspection compliance continues to improve. WSA's participation in drinking water quality guidelines review and development remains consistent.
Response to Adverse Conditions	Good	Not Applicable	Precautionary Drinking Water Advisories and Emergency Boil Water Orders continue to be issued to ensure public safety. Priority remains to work with communities and their operators to correct non-compliance through education and inspections.
Investment	Good	Not Applicable	Government infrastructure funding fluctuates with the availability of federal-provincial programs, decreasing as approved projects are being completed and increasing as new programs come online. Despite improvements in the sustainability of municipalities' waterworks, the costs to municipalities continue to rise while consumer willingness to pay more to improve drinking water declines. Future sustainability and resilience of drinking water and wastewater systems will be dependent on effective planning, water pricing and funding.

For an electronic copy of this report or more information on the status of drinking water in Saskatchewan visit: wsask.ca or saskatchewan.ca.

To provide feedback or comment, please contact the Water Security Agency.

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