

Chapter 24

Government Relations—Safe Drinking Water in Northern Settlements

1.0 MAIN POINTS

The Ministry of Government Relations (Ministry) is responsible for providing safe drinking water to Saskatchewan's northern settlements. Northern settlements are unincorporated communities in northern Saskatchewan that the Ministry administers.¹ The northern settlements are located in the Northern Saskatchewan Administration District.² The Minister of Government Relations functions as the municipal council for each of the northern settlements.³

By December 31, 2015, the Ministry had implemented one half of the recommendations we first made in 2012. The Ministry clarified responsibility for safe drinking water for northern settlements and communicated how it is addressing the results of the 2010 Waterworks System Assessments to residents. It defined a long-term approach for providing safe drinking water. It consistently received water quality test results from First Nations communities that provide drinking water to northern settlements, and reported results of drinking water testing and related issues to senior management.

While the Ministry made progress on the other half of the recommendations, further work remains in the following areas:

- › Testing of drinking water samples as required by its water system permits
- › Completing water system maintenance as expected for all drinking water systems
- › Consistently documenting its supervision of the completion of maintenance activities
- › Communicating the safety of drinking water to the residents of the northern settlement of Stanley Mission
- › Resolving long-standing issues with the safety of drinking water for the northern settlement of Uranium City

Access to clean and safe drinking water is essential for public health and well-being.

2.0 INTRODUCTION

This chapter describes our first follow-up of management's actions on the ten recommendations we made in our *2012 Report – Volume 1*, Chapter 12 resulting from our audit of the Ministry's processes to provide safe drinking water to northern settlements. We concluded the Ministry did not have effective processes in this area.

¹ The Ministry administers the northern settlements through the Northern Municipal Services branch of the Ministry.

² The Northern Saskatchewan Administration District is a geographical area defined under *The Northern Municipalities Regulations*.

³ The Minister's responsibilities are set out in *The Northern Municipalities Act, 2010*.



To conduct this review engagement, we followed the standards for assurance engagements published in the *CPA Canada Handbook – Assurance*. To evaluate the Ministry's progress towards meeting our recommendations, we used the relevant criteria from the 2012 audit. The Ministry agreed with the criteria in the 2012 audit.

To complete our follow-up, we interviewed staff and management responsible for the provision of drinking water to northern settlements. We reviewed management records relating to maintenance of water systems used to provide drinking water, water quality test results, and other supporting documentation.

2.1 Providing Drinking Water to Northern Settlements

The Ministry uses various water systems to provide drinking water to northern settlements. As shown in **Figure 1**, it owns and operates water systems for five settlements, and it obtains drinking water for two settlements through contracts with First Nations communities.

Figure 1 – Drinking Water Systems for Northern Settlements at December 2015

| Northern Settlement | Estimated Population ^A | Type of Water Delivery System of Drinking Water to Residents |
|---|-----------------------------------|--|
| Ministry-owned Water Systems | | |
| Bear Creek | 45 | The Ministry transports drinking water from its water treatment plant at Bear Creek to residents' homes. |
| Brabant Lake | 45 | Residents contract with a private company to transport drinking water from the Ministry's water treatment plant at Brabant Lake to residents' homes. |
| Missinipe | 15 | Ministry pipeline distribution from the Ministry's water treatment plant at Missinipe to residents' homes. |
| Sled Lake | 60 | Ministry pipeline distribution from the Ministry's water treatment plant at Sled Lake to residents' homes. |
| Uranium City | 75 | Ministry pipeline distribution from the Ministry's water treatment plant at Uranium City to residents' homes. |
| Ministry Contracts with First Nations communities that Own Water Systems | | |
| Stanley Mission | 100 | Ministry pipeline distribution from nearby First Nations community's water treatment plant to off-reserve northern settlement residents' homes. |
| Wollaston Lake | 85 | Ministry pipeline distribution from nearby First Nations community's water treatment plant to off-reserve northern settlement residents' homes. |

Source: Ministry of Government Relations' records.

^A Estimated permanent population information provided by the Ministry of Government Relations at July 2015. Note that there are additional northern settlements. Because these do not have water systems, they were outside the scope of our audit and follow-up.

As the municipal council for each of the northern settlements, the Ministry must work within the legislative framework established for drinking water. **Figure 2** describes provincial government agencies with varied responsibilities for drinking water in Saskatchewan. For example, the Water Security Agency (WSA) sets provincial water quality and water system standards in *The Environmental Management and Protection Act, 2010*. WSA issues permits to the Ministry where the Ministry operates water systems to provide drinking water to northern settlements (see **Figure 1**).

Figure 2—Other Provincial Government Agencies Involved with Drinking Water

| Name of Agency | Responsibilities for Drinking Water |
|---|--|
| Water Security Agency (WSA) | WSA is the regulator of municipal waterworks, privately owned (publicly accessible) waterworks that have a flow rate of 18,000 litres or more per day, certain pipeline systems, and municipal sewage works. WSA also focuses on watershed management and source protection, and works to balance competing water and land uses that impact water quality. WSA administers provincial water quality standards in <i>The Environmental Management and Protection Act, 2010</i> , and <i>The Waterworks and Sewage Works Regulations</i> . WSA issues permits to municipalities, including the Northern Saskatchewan Administration District, to operate water systems. This includes reservoirs, tanks, buildings, pumps, and pipes. WSA is responsible for periodically inspecting and enforcing compliance with permits it issues. WSA does not regulate non-public water systems, nor is WSA responsible for drinking water on First Nations reserves. |
| Saskatchewan Water Corporation (SaskWater) | SaskWater owns and operates certain regional water systems throughout the province. It also provides system assessments and project management of water infrastructure projects. |
| Ministry of Health | The Ministry of Health and regional health authorities regulate certain non-municipal water systems with limited capacity that service locations such as tourist accommodations and campgrounds. |
| Ministry of Agriculture | The Ministry of Agriculture is responsible for the protection of surface and groundwater with respect to intensive livestock operations. The Ministry is also responsible for irrigation-related services. |
| Ministry of Environment | The Ministry of Environment is the regulator of industrial waterworks and sewage works. |

Source: www.saskh2o.ca/RolesAndResponsibilities.asp and selected references (08 January 2016).

3.0 STATUS OF RECOMMENDATIONS

This section sets out each recommendation including the date on which the Standing Committee on Public Accounts agreed to the recommendation, the status of the recommendation at December 31, 2015, and the Ministry's actions up to that date. We found that the Ministry implemented 5 out of 10 recommendations.

3.1 Ministry Accepts Responsibility for Providing Safe Drinking Water to Northern Settlements

We recommended that in consultation with the Government, consider if or when the provision in *The Public Health Act, 1994* should come into force that requires the Minister of Government Relations to ensure that there is a supply of safe drinking water for the use of residents of northern settlements. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Implemented



As the Ministry communicated to the Standing Committee on Public Accounts on January 13, 2014,⁴ it had discussed the related provision of *The Public Health Act, 1994*⁵ with the Ministry of Health and SaskWater. These parties concluded that the existing legislative framework was appropriate to ensure the safety of drinking water in northern settlements, and putting the provision into effect was unnecessary. As a result, at December 31, 2015, the provision was not in force.

We found the Ministry took responsibility for ensuring a safe supply of drinking water for residents of northern settlements, and operated in a manner that confirmed the provincial regulatory framework applied to all northern settlements receiving water from a water system. For example, it obtained permits from WSA for ministry-owned water systems, and for distribution systems used to distribute water to northern settlements that receive water from nearby First Nations. As explained below, it took steps to monitor the quality of drinking water provided to residents of northern settlements.

3.2 2010 Waterworks System Assessments Analyzed

We recommended that the Ministry of Government Relations complete its analysis of the 2010 Waterworks System Assessment reports for northern settlements and communicate how it intends to address recommendations made in these reports. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Implemented

The Ministry's latest Waterworks System Assessment reports (assessment reports) were the 2010 assessment reports, other than for the northern settlement of Stanley Mission. The Ministry obtained an assessment report for Stanley Mission in November 2015.

The Ministry engaged SaskWater to perform professional engineering services including project management services for its water and sewer projects in the north. We found SaskWater completed the analysis of the 2010 assessment reports on the Ministry's behalf. We observed evidence that by January 2014, SaskWater had evaluated and summarized a list of all suggested actions (e.g., add a new water filter to a water treatment plant, make significant water treatment plant upgrades) recommended in the 2010 assessment reports.

SaskWater used its professional judgment to prioritize the list of water and sewer projects. It gave highest priority to projects required to address health or regulatory compliance issues (e.g., issues that increased the risk of water not being safe). SaskWater discussed its prioritized project listing with the Ministry. This prioritized project list forms the Ministry's 2014-2018 capital plan for its water systems.

⁴ <http://docs.legassembly.sk.ca/legdocs/Legislative%20Committees/PAC/Debates/140113Debates-PAC.pdf> (14 February 2016).

⁵ *The Public Health Act, 1994*, section 14(2), "On and from a day or days to be prescribed, the council of a northern village or northern hamlet and the minister responsible for the administration of *The Northern Municipalities Act, 2010* on behalf of a northern settlement shall ensure that there is a supply of potable water and system for disposal of sewage for use by the inhabitants of the northern village, northern hamlet or northern settlement, as the case may be."

The Minister of Government Relations is responsible to approve water infrastructure projects for northern settlements. We reviewed examples of projects being communicated to northern settlements once they were approved. For example, in April 2014, the Minister communicated, by letter, information about approved projects relating to Stanley Mission's sewage lagoon and water systems.

The law requires the Ministry to annually make certain information available to the public about its water systems. This includes the most recent independent engineering assessments (i.e., the assessment reports) and capital plans.⁶ We found, each year, the Ministry prepared and distributed to residents a waterworks information bulletin for each northern settlement.

For the bulletins we sampled, we found they communicated the Ministry's waterworks capital investment strategy. Its strategy was to take actions to ensure waterworks infrastructure is capable of providing safe drinking water. We also found the Ministry advised residents that assessment reports were available for viewing at the Ministry's office in La Ronge.

3.3 Long-term Approach Defined

We recommended that the Ministry of Government Relations define its approach for the long term to provide safe drinking water. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Implemented

On January 13, 2014, the Ministry indicated to the Standing Committee on Public Accounts that its long-term objective for the provision of drinking water to northern settlements was to ensure it complied with all WSA permit requirements.⁷ The Ministry communicated this objective in its waterworks capital investment strategy referred to in **Section 3.2**.

In addition, its long-term approach to achieving its objective is to use the results of the assessment reports to develop multi-year capital plans. SaskWater indicated that when it evaluated the most recent water assessment reports, its objective was to ensure the Ministry's water systems would meet provincial regulations and water quality standards. We found use of this objective was evident in how SaskWater prioritized water system projects.

Management indicated that it plans to complete its next cycle of assessment reports for all northern settlements in 2020. It expects to use the assessment reports to develop its next multi-year capital plan.

Also, the Ministry continued to contract with an infrastructure management consulting company to assess the condition of each of its water systems, and provide training to

⁶ *The Northern Municipalities Regulations*, section 44.

⁷ <http://docs.legassembly.sk.ca/legdocs/Legislative%20Committees/PAC/Debates/140113Debates-PAC.pdf> (14 February 2016).



water system operators. It uses these steps to help ensure the Ministry complies with WSA permit requirements. In 2015, it extended this consulting agreement until 2017.

3.4 Ministry Not Completing All Required Drinking Water Tests

We recommended that the Ministry of Government Relations test drinking water samples and document the results as required by its water system permits issued by the Water Security Agency. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Partially Implemented

Starting in 2014, the Ministry requires staff to carry out monthly reviews of the daily water quality test results. Water system operators of Ministry-owned water systems complete daily water tests and record test results in a log. They provide these logs to Ministry staff every month. Ministry staff review logs for completeness, and to determine whether test results meet permit requirements (e.g., daily chlorine levels met standards).

Also, as discussed in **Section 3.5**, the Ministry received drinking water test results for the northern settlements of Wollaston Lake and Stanley Mission.

For the water quality tests we sampled, we compared results to permit requirements for all northern settlements in **Figure 1**. We found water quality tests generally met water quality standards, except for in Uranium City as later described in **Section 3.7**.

We found the Ministry had improved, on an overall basis since our 2012 audit, its process to make sure drinking water was tested consistent with permit requirements. However, as shown in **Figure 3**, further improvement is needed in that we found some required water quality tests were not always completed (e.g., when water system operators went on vacation).

Figure 3—Provincial Auditor Review of Drinking Water Test Results December 1, 2014 to November 30, 2015

| Water Quality Tests Required | Frequency of Tests Required by Permit | Provincial Auditor Results (for sample selected) |
|------------------------------|--|--|
| Turbidity and Chlorine | Daily | Daily tests were completed as required |
| Bacteria | Various (monthly, every two weeks, weekly) | All bacteria tests were completed as required except: - 2 of 52 not completed at Missinipe - 5 of 52 not completed at Stanley Mission - 8 of 24 not completed at Wollaston Lake (note: for 3 of the 8 not completed, samples arrived at the lab too late for reliable analysis) |
| Chemical (general) | Various (e.g., every two years) | All but one test was completed as required |
| Chemical (health) | Once every two years | All tests were completed as required |

Completing all tests that permits require is essential for adequate monitoring of the safety of drinking water.

3.5 Ministry Receiving Water Quality Test Results from First Nations Communities that Provide Drinking Water to Northern Settlements

We recommended that the Ministry of Government Relations, where it has contracted for the supply of drinking water from a First Nations community, specify in its contract that the First Nation community provide water quality test results to the Ministry on a timely basis. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Intent of Recommendation Implemented

We found the Ministry's contracts with First Nations communities had not changed since our 2012 audit. These contracts require First Nations communities to perform water quality tests in accordance with the Ministry's permits, but do not require the communities to communicate the results to the Ministry (i.e., contracts only require communication of the results to the WSA).

At the time of our 2012 audit, the Ministry received water quality test results only for the northern settlement of Stanley Mission, and not for the northern settlement of Wollaston Lake. Since then, the Ministry has continued to receive water quality test results for the northern settlement of Stanley Mission.

Also, SaskWater, on the Ministry's behalf, attended a meeting in February 2013 with the First Nations community and other officials that provide water to the northern settlement of Wollaston Lake. Since that meeting, the First Nations community takes water quality tests from the northern settlement, and sends the samples to a laboratory as required by the Ministry's permit. The laboratory sends the results to the Ministry, and to WSA. We found the Ministry received water quality test results for Wollaston Lake.

3.6 Maintenance and Maintenance Records Not Always Complete

We recommended that the Ministry of Government Relations consistently carry out all required maintenance for its water systems. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Partially implemented



We recommended that the Ministry of Government Relations document its monthly supervision of maintenance carried out on its water systems to evidence that all required maintenance is occurring. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Partially implemented

The Ministry's processes to supervise maintenance of water systems differ between ministry-owned and operated water systems, and water systems operated by First Nations communities. Since our 2012 audit, the Ministry better documents its supervision of maintenance of these water systems.

Ministry-Owned Water Systems

In 2014, the Ministry created a new process to supervise the maintenance of its water systems. The Ministry expects its staff to review water system maintenance logs at least monthly. To facilitate this, the water system operators in the northern settlements are to send the monthly maintenance logs to the Ministry's La Ronge office.

We found, for four of the five northern settlements, the Ministry did not consistently obtain maintenance records from water operators, or do so in a timely fashion. For records it did obtain, Ministry management often documented its review.

Also, we found that the WSA's regulatory inspections of the Ministry's water systems noted issues with completion of maintenance at Uranium City.⁸ For example, the 2015 WSA inspection report for Uranium City indicated that the majority of the floor drains within the water system building did not work properly.

The Ministry hired an infrastructure management consulting company (consultant) to assess and report, twice per year, the condition of each of its water systems. The consultant's 2015 reports also indicate significant outstanding maintenance at Uranium City (e.g., water pipes leaking, water pipes require cleaning). We did not find evidence of what the Ministry planned to do in response to these findings and when.

Ministry Contracts with First Nations Communities that Own Water Systems

The Ministry contracted the maintenance of its water distribution systems used to distribute water to northern settlements that receive water from nearby First Nations communities to the First Nations communities. Its contracts indicated that the First Nations communities were responsible for all normal maintenance for these systems. In these contracts, the Ministry did not require the First Nations communities to give it any maintenance records, or give the Ministry access to the First Nations records about their supervision of maintenance of water systems.

Instead of reviewing periodic maintenance records (e.g., daily or monthly maintenance logs) for these distribution systems, the Ministry's consultant assessed and reported, twice per year, the condition of each of its distribution systems. In our review of each of the consultant's reports for 2015, we found the reports highlighted outstanding

⁸ Summary reports are available at www.saskinfo.ca (08 January 2016).

maintenance issues for Wollaston Lake. For example, at Wollaston Lake, numerous water system components were required to be cleaned (e.g., distribution lines) to ensure drinking water would meet standards.

Timely maintenance is required to keep water systems working effectively and to reduce the risk of providing unsafe drinking water to residents of northern settlements.

3.7 Ministry Continues to Research Drinking Water Options for Uranium City Residents

We recommended that the Ministry of Government Relations take prompt action to address problems in providing safe drinking water to northern settlements.

(2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Partially Implemented

Our 2012 audit noted that water quality in certain northern settlements had been a long-term problem. As described in earlier sections, while the Ministry has made progress on many issues, others continued to pose difficulties such as supplying quality drinking water to residents of the northern settlement of Uranium City.

The Ministry inherited a very outdated water system in Uranium City that it continues to operate. The system was built for a much larger population. This means it is expensive to maintain and operate. A precautionary drinking water advisory has been in place for Uranium City since 2001 due to the design of the water system. An emergency boil water order was issued in February 2015 due to the presence of *E. coli*.⁹ This order remained in effect for the remainder of the year. **Figure 4** explains drinking water advisories and orders.

Figure 4—Description of Water Advisories and Orders

Water Security Agency issues precautionary drinking water advisories where drinking water quality problems may exist but an immediate public health threat has not been identified. Under a precautionary drinking water advisory, water must be boiled before it is used for drinking purposes, or used for other activities where it could be consumed, such as brushing teeth, dishwashing, or washing fruits and vegetables.

Regional health authorities issue emergency boil water orders when a confirmed threat to public health exists (i.e., microbial contamination).

A listing of these orders and advisories are publicly available on the SaskH2O website at www.saskh2o.ca/advisories.asp.

Source: www.saskh2o.ca/advisories.asp (08 January 2016).

We found that the Ministry continued to work on potential solutions to the water quality issues in Uranium City. For example, it completed a water system assessment in May 2015 to determine potential solutions. The Ministry indicated that, at December 2015, it was deliberating to determine an appropriate solution to address water system concerns in a cost-effective manner.

⁹ *E. coli* is a bacteria that can make people sick.



Unless the Ministry takes prompt corrective action to resolve drinking water issues, the health of residents in affected northern settlements remain at risk.

3.8 Information on Water Quality not Always Provided

We recommended that the Ministry of Government Relations implement a formal process for communicating in writing about the safety of drinking water to residents of the northern settlements of Stanley Mission and Wollaston Lake, as required by its water system permits issued by the Water Security Agency. (2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Partially Implemented

The Waterworks and Sewage Works Regulations,¹⁰ and its predecessor *The Water Regulations, 2002*¹¹ require permit holders to annually provide water consumers with the following information:

- › The quality of the water provided in comparison to the water quality standards in the regulations
- › The permittee's compliance with the permit for completing water quality testing

For the northern settlement of Wollaston Lake, we found the Ministry developed a process for annually communicating these requirements. This process was consistent with its processes to annually communicate with northern settlements where it owns and operates the water systems. In February 2015, the Ministry communicated the required information to the northern settlement of Wollaston Lake for 2014. For example, it communicated:

- › 26 bacteria tests were completed (24 required) and all tests met water quality standards
- › All bi-monthly chlorine tests (evaluated by the laboratory as part of the bacteria tests) were completed and chlorine levels were adequate in 75% of the samples
- › 99% of daily chlorine tests were completed and chlorine levels were adequate in 99% of the samples

For Stanley Mission, we found the Ministry expected the First Nations community to prepare the required information, but did not follow up to determine if they did. Consistent with the WSA 2015 inspection report for Stanley Mission, we did not find evidence that the 2014 report was completed, and communicated to residents as required.

Communicating the results of water quality testing to residents promotes transparency and confidence in the management of drinking water.

¹⁰ *The Waterworks and Sewage Works Regulations*, section 42. These regulations came into effect June 1, 2015.

¹¹ *The Water Regulations, 2002*, section 44. These regulations were repealed effective June 1, 2015.

3.9 Formally Reporting on Drinking Water to Senior Management

We recommended that the Ministry of Government Relations formally report to its senior management the results of water tests and issues with water systems.
(2012 Report – Volume 1; Public Accounts Committee agreement January 13, 2014)

Status – Implemented

In 2014, the Ministry created a new reporting process for drinking water. Ministry staff, responsible for reviewing maintenance logs and water test results, must give monthly written reports to senior management. For a sample of these monthly reports, we found they contained sufficient detail to keep senior management informed of important issues impacting drinking water provided to northern settlements.

