

# St Malo Provincial Park

## Public Water System Annual Report

2021

Prepared by: William Prevost - Operator-in- Charge

# **St Malo Provincial Park**

## **Annual Water System Operation Report-2021**

The St Malo Provincial Park strives to provide high quality drinking water to meet the needs of all the campers in the park and all of the amenities that come with camping. It is our goal to do so in a safe, cost effective manner while remaining in compliance with the regulatory governing the provisions of drinking water.

It is our belief that the public has a right to access information related to the drinking water they consume. This report is also a requirement of our public water systems operation licence. This report has been prepared for the St Malo Provincial Park water system.

### **Where do we get our water from?**

The water source at the park consists of two wells located immediately west of the water treatment facility. Both wells are five inches in diameter and were installed in 2017. The first well has a casing advanced to 390 feet with an open hole extending through strata composed primarily of limestone, shale, and sandstone, to a final depth of approximately 476 feet below grade. The second well has a casing advanced to 393 feet, with an open hole extending through strata consisting primarily of limestone, shale and sandstone, to the final depth of approximately 497 feet below grade.

### **Why do we treat our water?**

We treat our water to ensure that safe and pleasing drinking water is supplied to the St Malo Provincial Park. In addition, provincial regulations have set health based drinking water standards for all public water systems. St Malo Provincial Park is committed to meeting or exceeding the water quality standards set by the province, while providing palatable tap water.

### **What type of water treatment do we use?**

Treatment consists of cartridge filtration, followed by disinfection via three banks of ultraviolet (UV) disinfection units arranged in parallel. Secondary disinfection is provided through chloramination, which is achieved through the addition of sodium hypochlorite, which reacts with the naturally occurring ammonia in the groundwater. The Drinking Water Safety Act and supporting regulations require that water is disinfected before it leaves the water treatment facility and that an adequate amount of disinfectant is in the distribution system (water piping network) to ensure the water in our distribution is safe for the park patrons.

### **How much water storage do we have?**

Treated water is stored in three above ground storage tanks (8,000L + 8,000L + 4,000L) before being pumped to distribution. The water supply, classified as a Class 1 Water Treatment system that falls under the Manitoba Conservation's Water and Waste Water Facility Operators Regulation under the Environment Act. The reservoir is designed for ultimate contact time and to ensure the water never gets stale.

### **Is our water tested? What for When?**

Water tests are taken on a routine basis to ensure that the water is safe and to monitor how well the treatment facility is performing. We test the water at the water treatment facility and in the distribution system at various locations and times. It is a regulatory requirement that all water test results associated with water safety be submitted to the provincial Office of Drinking Water for review.

**Bacterial testing:** We test the raw water (untreated well water), the treated water (leaving the water treatment facility) and the water in the distribution system (within the St Malo Park) every two weeks (bi-weekly) for the presence of Total Coliform and E. coli bacteria. If these bacteria are present in the water it is an indication that disease causing organisms may also be present.

**Disinfectant testing:** We test the level of chloramine in the treated water every day to ensure that the water leaving the water treatment facility has enough

chlorine to ensure proper disinfection. We also test chloramine levels in the distribution system every time we take water samples for bacterial testing. In addition, we test our water for Free Ammonia weekly. We monitor the UV lights alarms daily and do regular maintenance of the UV light disinfection system two times per year as prescribed by the manufacturer.

### What are our test results? Can we get copies?

Test results can be requested from the Operator in Charge by calling

**204-346-2737**

Parameter	Quality Standard	St Malo Treated Aug 31,2020	St Malo Raw Aug 17,20	St Malo Dist. Aug 17,20
Total coliform	Less than one total coliform bacteria detectable per 100 mL in all treated and distributed water	Standard was met 100%		Standard was met 100%
<i>E. coli</i>	Less than one <i>E. coli</i> bacteria detectable per 100 mL in all treated and distributed water	Standard was met 100%		Standard was met 100%
Monochloramine	A Monochloramine residual of at least 0.3 mg/L at all times at any point in the water distribution system	Standard was met 100%		Standard was met 100%
Ultraviolet Disinfection	95% of water produced per month is disinfected within validated conditions	Standard was met 100%		Standard was met 100%
Arsenic	Less than or equal to 0.01 mg/L	0.00071	0.00078	0.00091
Benzene	Less than or equal to 0.005 mg/L	N/A	<0.00050 From Raw	N/A
Ethylbenzene	Less than or equal to 0.14 mg/L	N/A	<0.00050 From Raw	N/A
Fluoride	Less than or equal to 1.5 mg/L	N/A	N/A	N/A
Lead	Less than or equal to 0.01 mg/L in the water distribution system	<0.000110	<0.000050	0.000230
Nitrate	Less than or equal to 45 mg/L measured as nitrate (10 mg/L measured as nitrogen)	<0.025 DLM	<0.025 DLM	N/A
Nitrite	Less than or equal to 3 mg/L measured as nitrite (1 mg/L measured as nitrogen)	<0.0050 DLM	<0.0050 DLM	NA
Trichloroethylene	Less than or equal to 0.005 mg/L	N/A	<0.00050	N/A
Tetrachloroethylene	Less than or equal to 0.01 mg/L	N/A	<0.00050	N/A
Toluene	Less than or equal to 0.06 mg/L	N/A	<0.00050	N/A
Total Xylenes	Less than or equal to 0.09 mg/L	N/A	<0.00064	N/A
Uranium	Less than or equal to 0.02 mg/L	0.000743	0.000762	0.000767

Table 2: Monitoring Schedule

Parameter	Monitoring Requirement
Bacteriological (total coliform and <i>E. coli</i> )	Biweekly sampling program with each set of samples consisting of one raw, one treated, and a minimum of one distribution sample  Consecutive sample sets to be separated by at least 12 days
Monochloramine (treated water)	One sample per day of water entering the distribution system
Monochloramine (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
Total Chlorine (treated water)	One sample per week of water entering the distribution system
Total Chlorine (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
Free Ammonia (treated water)	One sample per week of water entering the distribution system
Free Ammonia (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
Nitrite and Nitrate (distribution system)	One sample taken during July or August every year at a dead end sampling location in the distribution system
Ultraviolet Disinfection	Continuous monitoring of UV dosage for each operating UV unit
General Chemistry (parameter list provided by Office of Drinking Water)	One raw and one treated water sample once every three years
Total Metals (distribution system)	One sample taken at the same time(s) as General Chemistry sampling at a mid-point in the distribution system
Other Parameters	As per the instructions of the Drinking Water Officer
Lead	As per the instructions of the Drinking Water Officer

### What do we have in place to alert staff and the Public of a water emergency?

Our staff test the water everyday to make sure our chlorine levels are at an acceptable level. Water samples are sent in by-weekly to ALS laboratories in Winnipeg for bacterial testing. If a bad result is detected the lab automatically contacts the Operator in Charge and the Drinking Water Officer on call for the province. It is then determined if two resamples are sufficient or if we should go into a boil Water advisory immediately. Signs would be posted at every water source.

**Were there any emergencies, regulatory compliance issues or other operational issues to report for 2021?**

There was a power outage on 2021-07-04 that was not reported to ODW.

August reports were not submitted in accordance with our operating licence.

Re-assessment of our water supply infrastructure was not completed.

Failure to test for free Ammonia in September.

**Did we have any boil water advisories in 2021?**

We did have one July 4<sup>th</sup>, there was a power outage and we had low pressure in the lines. The lines were flushed and we did do two consecutive (24hrs apart) water test and the results were Normal and met the standards

**Were there any major expenses incurred in 2021?**

No major expenses occurred in 2021.

**Who can we call with questions or concerns regarding our drinking water?**

You can call the operator in charge at 204-346-2737

If no answer call the park supervisor at 204- 408-8682

A paper copy is available at the Steinbach District office.

## Environment, Climate and Parks

February 25, 2022

### 2021 Annual Compliance Audit

<b>Water System:</b> ST. MALO PROVINCIAL PARK - PWS	<b>Code:</b> 217.63
<b>Water System Owner:</b> Manitoba Conservation and Climate	<b>Address:</b> Box 50 - 200 Saulteaux Crescent, Winnipeg, MB R3J 3W3
<b>Operating Licence:</b> PWS-09-400-02	<b>Expiry Date:</b> May 31, 2024
<b>Water System Assessment Due Date:</b> September 1, 2021	
<b>Public Water System Annual Report Due Date:</b> March 31, 2022	<b>Advisory Notification Plan Due Date:</b> May 1, 2022

- 1) This report documents compliance of the St. Malo Provincial Park Public Water System for the period from May 12 to September 12, 2021.
- 2) This report provides specific information on the non-compliance incidents identified in the summary below.
- 3) Other than the information provided in this report, the water supplier has complied with The Drinking Water Safety Act, its supporting regulations, and the terms and conditions of the water system's current operating licence.
- 4) This report is based on information submitted by the water supplier, agents of the water supplier, and / or the Province of Manitoba.
- 5) Where non-compliance items are identified, the issues do not necessarily translate into increased public health risk. The Office of Drinking Water uses processes, including boil water advisories, to notify water users of a public health risk.

### **Non-compliance with Treatment Standards:**

***Water system was compliant in the audited time period.***

### **Non-compliance Incidents:**

Date	Incident	Outcome
2021-07-04	Failure to report an emergency	Warning Issued
August	Failure to submit monthly monitoring reports in accordance with the operating licence	Non-compliant
2021	Failure to submit the re-assessment of the water system infrastructure and water supply sources report	Non-compliant
September	Failure to test for Free Ammonia in accordance with the Operating Licence	Non-compliant