Preparing for a Public Water System Assessment

PURPOSE

To continue to ensure public health protection related to drinking water, Manitoba introduced regulations for the approval, design and operation of drinking water systems. These regulations, created under *The Drinking Water Safety Act*, are the Drinking Water Safety Regulation MR 40/2007 and the Drinking Water Quality Standards Regulation MR 41/2007. They can be viewed at: [www.manitoba.ca/drinkingwater](http://www.manitoba.ca/drinkingwater).

The regulations set out requirements for public water systems including:

- A permit for the construction or alteration of a water system
- An operating licence for operation of a water system
- A periodic third-party assessment of a water system by an engineer

*This information bulletin provides advice to owners and operators of public water systems on how to prepare for a water system assessment.*

**What is a water system assessment?**

The purpose of a water system assessment is to identify issues or deficiencies with a water system so the Owner and Operator can prepare for, and take appropriate actions to ensure safe water is being supplied to customers/clients. The water source, water supply, water treatment and water distribution systems must be thoroughly evaluated by a registered professional engineer. The assessment requires that all available water system records be provided to the Engineer and that an on-site evaluation be completed by the Engineer in the company of key water system personnel.

The assessment is a review and evaluation of the condition and quality of an existing public water supply, and its ability to meet regulatory requirements, industry best practices and guidelines. The assessment requires the Engineer to identify key deficiencies and offer recommendations on addressing those deficiencies. A periodic assessment of a water system is a critical component of the ongoing process of owning, managing and maintaining a public water system in accordance with regulatory and industry standards.

As with any other service contract, the Office of Drinking Water recommends that an Owner obtain several quotes, and ensure the engineer or consulting firm provides evidence of their qualifications to conduct an assessment of your water system. To assist Owners, the Office of Drinking Water website includes a document entitled: Recommendations for the Selection of an Engineer to Provide a Water System Assessment Report.
How should an Owner or Operator prepare for an assessment?

The Owner is ultimately responsible for ensuring the assessment is completed in accordance with required guidelines and that the report is submitted to the Office of Drinking Water.

The first step is to obtain a copy of the ‘Terms of Reference for Assessment of Water System Infrastructure and Water Supply Sources for Public Water Systems’ and familiarize yourself with the requirements of an assessment to ensure the work is completed.

The assessment requires the Engineer to become familiar with the water system, identify deficiencies and offer recommendations. An Owner may want to consider expanding the scope of work beyond the assessment requirements or, at minimum, discuss (with the Engineer) continuation of the work through a separate contract to include other services such as:

- Conducting a detailed study of a water quality issue to identify options (ex: THMs).
- Preliminary design of necessary water supply, treatment or distribution system upgrades and development of a new treatment process schematic (i.e., pre-design report).
- Detailed design and development of necessary approval (permit) documents for water supply, treatment or distribution system upgrades that do not involve extensive or complex study or design work (ex: design of a chlorine contact tank system).
- Identifying basic equipment expansion requirements (ex: up-sizing of pumps).
- Prioritizing identified deficiencies.
- Providing preliminary opinion of the cost for addressing identified deficiencies.
- Assisting with the development of a Compliance Plan which identifies a schedule of actions that will be taken to meet provincial water quality standards.
- Assisting with the development of an Action Plan which identifies a schedule of actions to address other significant water system deficiencies.
- Taking samples for non-routine water quality parameters.
- Providing written procedures for critical operation or maintenance tasks.

Once an engineer or firm has been hired to conduct the assessment, the Owner’s or Operator’s first task is to compile and organize as much information on the water system as possible including:

- A copy of the Operating Licence
- A copy of all chemical water quality analysis reports from testing laboratories
- Bacterial testing records (contact your Drinking Water Officer for assistance)
- Chlorination and turbidity monitoring records
- Operation and maintenance logs or records
- Correspondence from the Office of Drinking Water
- Previous water system design reports and studies
- Equipment manuals, operation and maintenance manuals, emergency response plans
□ Well driller’s report (i.e., well log) for any water supply wells
□ Water distribution system drawings or maps
□ General information on the water system (ex: number of people served, number and types of service connections, pipe materials and ages)
□ A list of deficiencies or concerns that have been identified by water system personnel
□ Information or details for any future expansion plans

The Owner must arrange for an on-site visit and ensure appropriate personnel are available to discuss the water system operation with the Engineer. It is the responsibility of the Owner and their water system operator to bring forward any comments or concerns they have about the design or operation of their water system.

Once the water system assessment report has been drafted, it is the responsibility of the Owner to review the report to ensure it accurately reflects how the water system is designed and operated, and that the terms and conditions of the service agreement or contract have been met.

**How should an Owner submit an assessment to the Office of Drinking Water?**

The Owner is responsible for submitting the assessment report to the Office of Drinking Water once complete. Three paper copies and an electronic (pdf) version of the assessment report must be submitted as per Section 10.0 of the Terms of Reference. The Engineer and Owner must complete submission forms which must accompany the submission. These submission forms are available in the Terms of Reference through the Office of Drinking Water website or from your regional Drinking Water Officer.

**FURTHER INFORMATION**

Information and forms related to public water system assessments are available on the Office of Drinking Water website at:

For general questions on regulatory requirements for a public water system or to request copies of regulatory documents or forms, contact your regional Drinking Water Officer. Contact information is available on the Office of Drinking Water website at:

For specific questions on the public water system assessment process, contact:
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