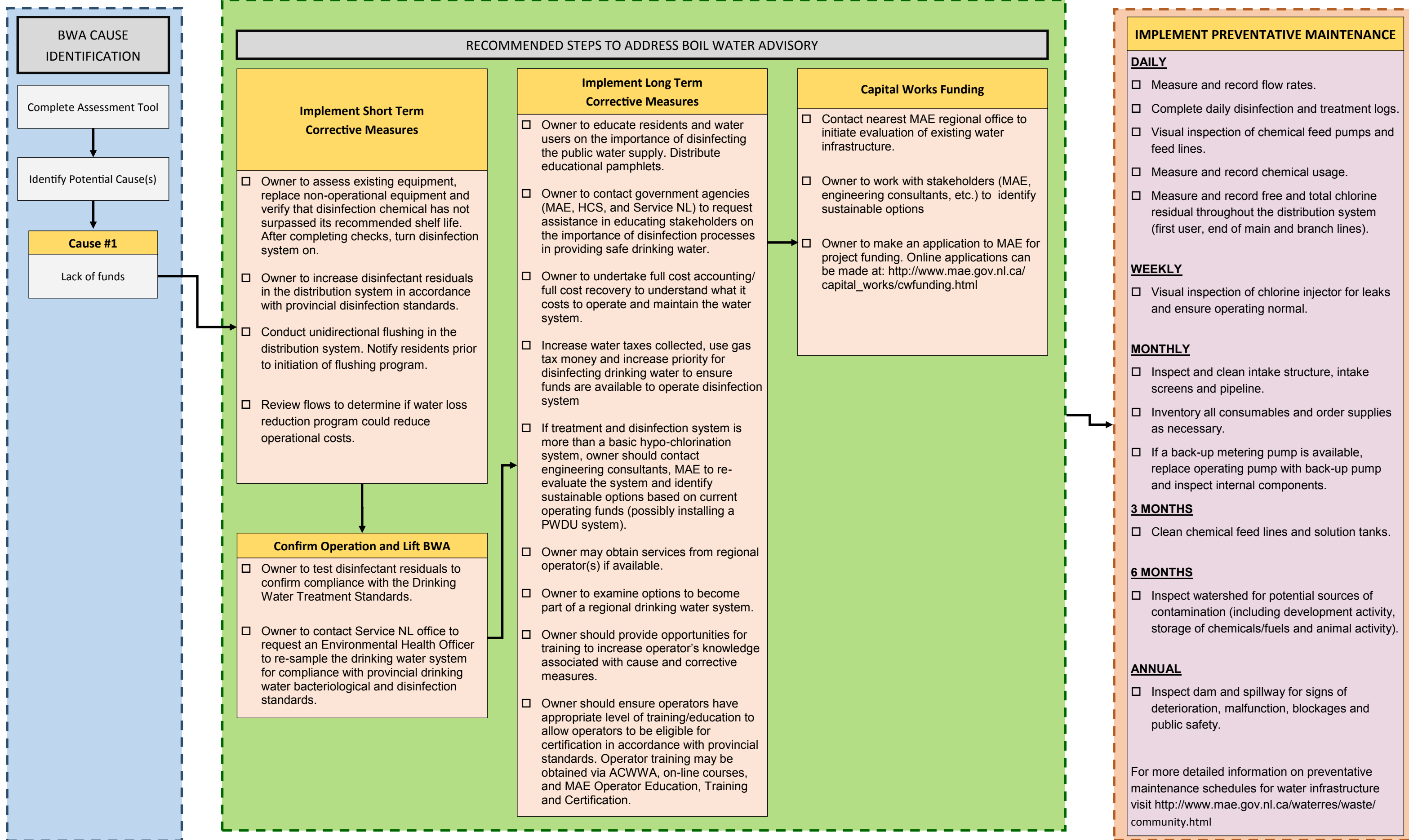


STANDARD OPERATING PROCEDURE

SOP # 4 REASON CODE: B3—Chlorination system is turned off by operator, due to lack of funds to operate. REV: 0 DATE: Dec. 2015



BWA CAUSE IDENTIFICATION

Complete Assessment Tool

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Identify Potential Cause(s)

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Cause #1

Lack of funds

RECOMMENDED STEPS TO ADDRESS BOIL WATER ADVISORY

Implement Short Term Corrective Measures

- Owner to assess existing equipment, replace non-operational equipment and verify that disinfection chemical has not surpassed its recommended shelf life. After completing checks, turn disinfection system on.
- Owner to increase disinfectant residuals in the distribution system in accordance with provincial disinfection standards.
- Conduct unidirectional flushing in the distribution system. Notify residents prior to initiation of flushing program.
- Review flows to determine if water loss reduction program could reduce operational costs.

Confirm Operation and Lift BWA

- Owner to test disinfectant residuals to confirm compliance with the Drinking Water Treatment Standards.
- Owner to contact Service NL office to request an Environmental Health Officer to re-sample the drinking water system for compliance with provincial drinking water bacteriological and disinfection standards.

Implement Long Term Corrective Measures

- Owner to educate residents and water users on the importance of disinfecting the public water supply. Distribute educational pamphlets.
- Owner to contact government agencies (MAE, HCS, and Service NL) to request assistance in educating stakeholders on the importance of disinfection processes in providing safe drinking water.
- Owner to undertake full cost accounting/full cost recovery to understand what it costs to operate and maintain the water system.
- Increase water taxes collected, use gas tax money and increase priority for disinfecting drinking water to ensure funds are available to operate disinfection system
- If treatment and disinfection system is more than a basic hypo-chlorination system, owner should contact engineering consultants, MAE to re-evaluate the system and identify sustainable options based on current operating funds (possibly installing a PWDU system).
- Owner may obtain services from regional operator(s) if available.
- Owner to examine options to become part of a regional drinking water system.
- Owner should provide opportunities for training to increase operator's knowledge associated with cause and corrective measures.
- Owner should ensure operators have appropriate level of training/education to allow operators to be eligible for certification in accordance with provincial standards. Operator training may be obtained via ACWWA, on-line courses, and MAE Operator Education, Training and Certification.

Capital Works Funding

- Contact nearest MAE regional office to initiate evaluation of existing water infrastructure.
- Owner to work with stakeholders (MAE, engineering consultants, etc.) to identify sustainable options
- Owner to make an application to MAE for project funding. Online applications can be made at: http://www.mae.gov.nl.ca/capital_works/cwffunding.html

IMPLEMENT PREVENTATIVE MAINTENANCE

- DAILY**
- Measure and record flow rates.
 - Complete daily disinfection and treatment logs.
 - Visual inspection of chemical feed pumps and feed lines.
 - Measure and record chemical usage.
 - Measure and record free and total chlorine residual throughout the distribution system (first user, end of main and branch lines).
- WEEKLY**
- Visual inspection of chlorine injector for leaks and ensure operating normal.
- MONTHLY**
- Inspect and clean intake structure, intake screens and pipeline.
 - Inventory all consumables and order supplies as necessary.
 - If a back-up metering pump is available, replace operating pump with back-up pump and inspect internal components.
- 3 MONTHS**
- Clean chemical feed lines and solution tanks.
- 6 MONTHS**
- Inspect watershed for potential sources of contamination (including development activity, storage of chemicals/fuels and animal activity).
- ANNUAL**
- Inspect dam and spillway for signs of deterioration, malfunction, blockages and public safety.
- For more detailed information on preventative maintenance schedules for water infrastructure visit <http://www.mae.gov.nl.ca/waterres/waste/community.html>