



Operational Guideline for Manitoba Water Suppliers

Algae Control in Raw Water Storage Ponds

PURPOSE

This guideline has been developed to provide public and semi-public drinking water suppliers throughout the Province of Manitoba with information on algae control in raw water storage ponds that are part of a drinking water system, and in particular the use of pesticides for algae control in these storage ponds.

This operational guideline applies only to raw water storage ponds that are owned by the water supplier and that supply water directly, and only, to a licensed water treatment system.

Algal Blooms

Excess algae growth can cause taste and odour problems in drinking water. Blue green algae, also known as cyanobacteria can produce toxins that can be dangerous to people, livestock and pets. Rapid, excessive algal growth is commonly called a 'bloom'.

The addition of algaecides to control a cyanobacteria bloom may be harmful, as this could release toxins from the cells, making them more difficult to remove.

Health Canada Guidelines for Canadian Drinking Water Quality technical document provides addition information on [cyanobacterial toxins](#).

Pesticides

Any product that is used to directly control, destroy, repel, or attract a pest may be considered a pesticide under Canadian legislation. Pesticides typically include herbicides, fungicides, insecticides, rodenticides, and algaecides.

You can recognize a pest control product authorized by the Health Canada Pest Management Regulatory Agency (PMRA) by the Pest Control Products (PCP) number on the label, for example:

- Reg. No. 00000 P.C.P. Act
- Registration No. 00000 Pest Control Products Act

Registered pesticides are demonstrated to be safe when used in accordance with the label instructions and can be effective for managing the pests included on the label.

Pesticides cannot be advertised, sold or used to control pests not included on the label. For example, a product registered for algae control cannot make claims it is also effective to control zebra mussels unless it is labelled for that pest.

Unregistered pesticide suppliers may make false claims and may offer pest-control products that are not effective or safe.

To be used legally to control algae in a raw water storage pond, the intended use of the product must clearly specify algae as a controlled pest and indicate that the product is safe to be applied to potable water sources.

To use pesticides safely, make sure you use a registered product and read and follow all label directions.

Pesticide Permit/Licence Requirements

Pesticide Use Permit

Pesticide applications may require a Pesticide Use Permit issued by Conservation and Climate under the provincial Environment Act. This would include most applications to raw water impoundments or storage ponds.

Additional information is available at: www.gov.mb.ca/sd/environment_and_biodiversity/pesticides/index.html

Pesticide Applicators Licence

Commercial or restricted class pesticides must be applied by someone with a valid Pesticide Applicator Licence issued by Agriculture and Resource Development. Licenced pesticide applicators have demonstrated knowledge of pesticide application requirements and restrictions, and carry appropriate liability insurance.

Information on how to apply for a pesticide applicator licence is available at:

www.gov.mb.ca/agriculture/permits-and-licences/pesticide-and-manure/index.html

Municipal Permits and Licences

Most municipalities have existing pesticide use permits and licensed pesticide applicators. Amendments to permits are required if the initial permit did not specify use of products for algae control.

NSF and PMRA Requirements

All public and semi-public water system operating licences have a clause indicating that all chemicals used for drinking water treatment must be certified to NSF International (NSF) / American National Standards Institute (ANSI) Standard 60 - Drinking Water Treatment Chemicals – Health Effects. This standard was designated as a National Standard of Canada by the Standards Council of Canada in 2019. For information on NSF/ANSI/CAN Standard 60, see: [Drinking Water Treatment Chemicals Certification | NSF](#)

In addition to NSF/ANSI/CAN Standard 60 requirements, pesticides must meet PMRA requirements as indicated in the Pest Control Products Regulations. Information on registered pesticides is available through the PMRA Public Registry at:

<https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/public/protecting-your-health-environment/public-registry.html>

Pesticides registered with PMRA must be used in accordance with their product label. Product label information is available through the Label Search Tool at: <https://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php>

Pest control products used in raw water storage ponds must comply with NSF and PMRA requirements. Proponents should assess the application of contemplated pest-control products to a drinking water system.

Proponents must follow all federal, NSF and PMRA requirements, including specific maximum use levels (MULs), application limits, dilution rates, monitoring requirements or other restrictions.

Polydex™ is an example of a product that is registered with PMRA for control of algae in storage ponds and certified by NSF as safe for use in potable water supplies. Restrictions and monitoring requirements apply as per the pesticide label and NSF certification information.

Maximum Use Levels / Dilution Rates

Pesticide product label application limits and/or dilution rates may be more or less conservative than NSF/ANSI/CAN maximum use levels for the same product. Where this is the case, the most conservative limits must be used.

Monitoring Requirements

The NSF/ANSI/CAN certification or PMRA registration may also contain specific monitoring requirements. Some algae control products contain copper for example, and the certification or registration documentation may contain a requirement to monitor the raw and/or treated water for compliance with drinking water quality standards or guidelines.

Health Canada introduced a new maximum acceptable concentration (MAC) of 2 mg/L for copper in drinking water in 2019. Information on copper in drinking water is available at: www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/copper.html

Restrictions on Use

In all cases, the water supplier is responsible for any environmental or safety issues arising from the application of a pesticide to their raw water storage pond.

Office of Drinking Water Requirements

Water suppliers should contact their regional Drinking Water Officer if they are planning a pesticide application to their raw water impoundment or storage pond before use as additional approvals or operational monitoring requirements may apply. A project description and proof of NSF certification and PRMA registration of the product may be requested.

Chemical Storage and Handling

Chemical storage, handling and disposal requirements may be specified in the pesticide product registration information or pesticide use permit. Requirements may be regulated under The Environment Act or The Workplace Safety and Health Act. Questions related to chemical storage and handling, or other workplace safety and health issues should be directed to Safe Work Manitoba. Questions related to disposal should be directed to the Environmental Compliance and Enforcement Branch. See contact information at the end of this guideline.

Contact Information

For questions related to pesticide registrations, pesticide use permits, or on-site wastewater management systems contact Environmental Approvals at 204-945-8321 or visit:

www.gov.mb.ca/sd/environment_and_biodiversity/pesticides/index.html

For information related to Manitoba's Commercial Pesticide Applicator Licensing, contact Agriculture and Resource Development at 204-745-5648 or visit:

www.gov.mb.ca/agriculture/permits-and-licences/pesticide-and-manure/index.html

For workplace safety and health questions, contact Safe Work Manitoba at 204-957-7233 in Winnipeg or 1-855-957-7233 outside of Winnipeg; or send an email to information@safeworkmanitoba.ca; or visit their website at: www.safemanitoba.com/

For information on pesticide spills or disposal of leftover or expired containers, contact your local Environment Officer. Contact information is available at: [regional_eo.pdf \(gov.mb.ca\)](#)

Office of Drinking Water

Regional [Drinking Water Officers](#) are available for operational and monitoring advice and to provide technical assistance. After hours, please call the Environmental Emergency Response line at 204-944-4888 and ask for the on-call Drinking Water Officer.

For the Office of Drinking Water Approvals Unit, call 204-945-5762. For more information related to Manitoba's drinking water and how it is regulated, visit:

Manitoba.ca/drinkingwater