

DRINKING WATER SOURCE PROTECTION

ACT FOR CLEAN WATER



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Drinking Water Threats from Aquaculture

Aquaculture is listed as a drinking water threat under Ontario's *Clean Water Act, 2006*. Aquaculture, also known as aquafarming, is the farming of aquatic organisms such as fish. It involves cultivation under controlled conditions in contrast to commercial fishing which is the harvesting of wild fish.

Aquaculture facilities are located either in a water source or on land. These facilities may include tanks, raceways, ponds, pits and lakes and may include equipment to re-circulate the water to add oxygen and/or remove wastes. Pathogens could make their way into surface and groundwater as a result of the management of agricultural source material (ASM) from aquaculture. These contaminants could threaten the safety of drinking water sources in

certain situations. The primary sources of pathogens in ASM from aquaculture are the water in which fish manure and by-products are in suspension or settled, the incoming water to an aquaculture facility contaminated with pathogens from other sources, and dead fish not removed from the water. These sources can increase the pathogens in the water. Aquaculture is considered a form of agriculture, and would therefore likely be permitted by municipalities wherever agricultural is allowed.

In general, the province is responsible for aquaculture planning, site leasing, licenses and approvals for aquaculture sites, aquaculture training and education, the collection of statistics, the promotion of fish and aquaculture products, and the management of the industry's day-to-day operations.

Where are the aquaculture threats and how are they addressed?

No existing aquaculture operations were identified as threats in the Quinte Region. According to the Ministry of the Environment and Climate Change aquaculture cannot be considered a significant threat. Aquaculture is considered a potential future moderate drinking water threat in the drinking water intake protection zone closest to the intakes in Belleville, Picton, Ameliasburgh, Point Anne, Deseronto, and Napanee. Aquaculture is considered a low drinking water threat near the municipal wells of Madoc and Peats Point and in the secondary drinking water intake protection zones of Belleville, Point Anne, Deseronto, Napanee and Ameliasburgh.

The Source Protection Plan specifies that the Ministries of the Environment and Climate Change and Natural Resources must consider the impact on drinking water sources prior to issuing approvals for any aquaculture related activities in zones where these activities would be a moderate or low threat.

Types of threats to our drinking water sources:

Waste Disposal Sites

On-site Sewage Systems (septic systems)

Sewage Works (sewage treatment plants, municipal sewers)

Fuel Oil (residential heating oil)

Liquid Fuel

Nutrients (manure, bio-solids, outdoor livestock areas)

Commercial Fertilizer

Pesticides

Road Salt and Snow Storage

Chemicals (DNAPLs (toxic chemicals) and Organic Solvents)

Aquaculture

Aircraft De-icing Runoff