

10.5 COMMERCIAL FERTILIZER

Definition

Commercial fertilizer is one of the prescribed drinking water threats listed in Regulation 287/07 under the *Clean Water Act, 2006*. Commercial fertilizer is a manufactured compound containing nitrogen, phosphorus, potassium or other minerals intended for use as a plant nutrient. In the drinking water source protection process, commercial fertilizer is distinguished from other nutrient sources – agricultural source material (ASM) and non-agricultural source material (NASM).

Why is Fertilizer a Threat to Drinking Water Sources?

Chemicals from the application, handling and storage of fertilizer could make their way into drinking water sources. The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following sub-threat activities:

- The application of commercial fertilizer to land (see circumstances #19-36)
- The handling and storage of commercial fertilizer (see circumstances #1273-1288)

The nitrogen and phosphorus in commercial fertilizer can enter drinking water sources due to the improper use and storage of the fertilizer. The improper use of fertilizer includes the application of fertilizer without consideration for nutrients already available in the soil and plant requirements, or the inappropriate timing of application for plant growth cycles and weather conditions. Potential impacts of storing fertilizer relate to leaks and spills from aging infrastructure or improper storage techniques. Phosphorus is often associated with runoff and soil erosion from both the storage and application of commercial fertilizer.

The Ministry of the Environment and Climate Change's *Tables of Drinking Water Threats* identifies the following chemicals as potential concerns:

- Nitrogen
- Total phosphorus

Nitrogen is a concern for both surface and groundwater, but phosphorus is primarily a concern for surface water. The assessment of potential threats to drinking water sources from commercial fertilizer application is dependent on the location and the combination of the percentage of managed land, and

livestock density in the vulnerable area and where the fertilizer is applied. The potential threat to drinking water from the storage of fertilizer depends on the location, type of facility where it is stored, and the quantity stored.

See **Table 10-7** for when and where application and storage of commercial fertilizer may be a significant drinking water threat. Note: to determine if a specific activity is a significant drinking water threat consult the *Tables of Drinking Water Threats* for the specific circumstances that must be met for the activity to be a threat. These activities may also be significant drinking water threats anywhere within an Issue Contributing Area (ICA) for Nitrates. If the activity meets the description in Column 2 of the *Tables of Drinking Water Threats* it is a significant drinking water threat irrespective of vulnerability score.

Prescribed Drinking Water Threat	Commercial Fertilizer Threat Sub-Category	Area and Vulnerability Score (VS)
The application, handling and storage of commercial fertilizer	The application of commercial fertilizer to land	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS ≥ 9) • Anywhere in an ICA for Nitrates
	The storage of commercial fertilizer	<ul style="list-style-type: none"> • WHPA-A • WHPA-B (VS = 10) • WHPA-E (VS = 10) • Anywhere in an ICA for Nitrates

Table 10-7: When/where commercial fertilizer may be a significant drinking water threat

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-1	Application of Commercial Fertilizer to Land	OMAFRA	C	<p>Prescribed Instrument</p> <p>1) The application of commercial fertilizer (containing nitrogen) to land shall be prohibited where the activity is, or would be, a significant drinking water threat in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (future). 	See Maps 1.1 - 1.21	<p>Future: Immediately (T-3)</p> <p>Existing: Upon expiry or within 5 years (T-2)</p>	N/A	MON-4
				<p>2) Where the application of commercial fertilizer (containing nitrogen or phosphorus) to land is in an area where the activity is, or would be, a significant drinking water threat, the Nutrient Management Plan or Strategy that governs the activity shall be reviewed or established to ensure appropriate terms and conditions are included so that the activity ceases to be, or does not become, a significant drinking water threat in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) which is not in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (existing); or • the remainder of an Issue Contributing Area for Nitrates (existing, future). 		<p>Future: Immediately (T-3)</p> <p>Existing: 3 years (T-1)</p>	GEN-3	MON-4

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-2	Application of Commercial Fertilizer to Land	RMO	G	<p>Part IV, s.57, s.58</p> <p>For lands that do not require a Nutrient Management Plan or Strategy, where the application of commercial fertilizer to land is, or would be, a significant drinking water threat (excluding incidental quantities for personal use), the following actions shall be taken:</p> <p>1) The application of commercial fertilizer (containing nitrogen) is designated for the purpose of s.57 under the <i>Clean Water Act</i>, and is therefore prohibited where the threat is, or would be significant, in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (future). 	See Maps 1.1 - 1.21	<p>Future: Immediately (T-5)</p> <p>Existing: 180 days (T-4)</p>	GEN-1	MON-2
			H	<p>2) The application of commercial fertilizer (containing nitrogen or phosphorus) to land is designated for the purpose of s.58 under the <i>Clean Water Act</i>, requiring risk management plans, where the threat is, or would be significant, in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9) which is not in an Issue Contributing Area for Nitrates (existing, future); or • WHPA-E in an Issue Contributing Area for Nitrates (existing); or • the remainder of an Issue Contributing Area for Nitrates (existing, future). 		<p>Future: Immediately (T-7)</p> <p>Existing: 1 year/ 5 years (T-6)</p>		

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-3	Handling and Storage of Commercial Fertilizer	RMO	G	<p>Part IV, s.57, s.58</p> <p>For farms and other lands, where the handling and storage of commercial fertilizer to land is, or would be, a significant drinking water threat (excluding incidental quantities for personal use), the following actions shall be taken:</p> <p>1) The handling and storage of commercial fertilizer is designated for the purpose of s.57 under the <i>Clean Water Act</i>, and is therefore prohibited where the threat would be significant in the following area:</p> <ul style="list-style-type: none"> • WHPA-A (future). 	See Maps 1.1 - 1.21	Future: Immediately (T-5)	GEN-1	MON-2
			H	<p>2) The handling and storage of commercial fertilizer to land is designated for the purpose of s.58 under the <i>Clean Water Act</i>, requiring risk management plans, where the threat is, or would be significant, in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS = 10) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates (existing, future). <p>Without limiting other requirements, risk management plans shall include conditions to require storage of quantities over 2,500 kg to be within a covered structure.</p>		Future: Immediately (T-7) Existing: 1 year/ 5 years (T-6)	GEN-1 GEN-2	MON-2

Policy ID	Threat Description	Implementing Body	Legal Effect	Policy	Where Policy Applies	When Policy Applies	Related Policies	Monitoring Policy
FER-4	Application of Commercial Fertilizer to Land	Municipality	E	<p>Education and Outreach</p> <p>The municipality shall deliver education and outreach materials and programs where the application, handling and storage of commercial fertilizer is, or would be, a significant drinking water threat, targeted towards:</p> <p>a) an individual for personal use to promote timely fertilizer application and best management practices in urban settings; and</p> <p>b) owners/tenants of non-agriculturally zoned lands to promote best management practices to safeguard water supplies from drinking water threats; in any of the following areas:</p> <ul style="list-style-type: none"> • WHPA-A (existing, future); or • WHPA-B (VS = 10) (existing, future); or • WHPA-E (VS ≥ 9 for application; VS = 10 for handling and storage) (existing, future); or • the remainder of an Issue Contributing Area for Nitrates (existing, future). <p>Where appropriate education and outreach materials prepared by the Ministry of the Environment and Climate Change are available, the municipality shall deliver those materials.</p>	See Maps 1.1 - 1.21	Existing & Future: Implement within 2 years (T-10)	GEN-8	MON-1
	Handling and Storage of Commercial Fertilizer	MOECC	K					MON-4