

Calgary



Commercial Painting Operations

Wastewater Compliance Information



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1.0 Introduction

Many painting activities produce paint waste that requires proper clean-up in order to prevent adverse effects on the City of Calgary wastewater infrastructure and the environment. Paint waste is commonly produced from left over paint, run-off, cleaning of tools and brushes, as well as residual materials left behind once the activities are complete. The type of paint used during these activities may dictate the disposal and management practices required. Consideration must be given to the use of cleaning solvents for painting tools as many of these solvents are hazardous and will impact waste disposal options. Environmental impacts such as decreased water quality will result if paint is disposed of incorrectly. Furthermore, improper disposal may also lead to adverse health effects to the environmental ecosystems as well as humans as the land may become contaminated.

Wastewater (i.e equipment wash water, run-off, cleaners) from painting activities may have adverse effects on City of Calgary water infrastructure and the environment. **Discharge of this water to the stormwater system is prohibited under the City of Calgary Wastewater Bylaw (14M2012) due to the contaminated nature of the water.** Generated wastewater may contain a variety of pollutants including dirt, debris, cleaning additives such as soap, degreasing agents, as well as oil, grease, acid solution, solvents, paint chips, that can harm aquatic life and contaminate recreational sites and the environment.

Cleaning agents and soaps labelled “*bio-degradable*” and “*non-toxic*” may be a safer alternative to other brands but despite the labelling, they still have harmful effects on aquatic life and the environment. **As a result, wash water from painting washing activities using environmentally safe additives are still prohibited from discharging wash water into the stormwater system.** Such activities performed by individual businesses may at quick glance seem negligible, but when applied across an industry, produce effects that are magnitudes stronger resulting in lethal consequences to aquatic life and our waterways.

The purpose of this Wastewater Information Summary document is to offer guidance for the disposal of paint that does not put the user, community, environment, and City of Calgary infrastructure at risk. By following the recommendations outlined in this document, businesses will be able to lower the risk of fines for non-compliance with The City’s Wastewater Bylaw 14M2012 and reduce monthly surcharge fees (if applicable). **Non-compliance fines for discharging a prohibited substance begin at \$1,000 and can exceed \$3,000.** This document contains some federal, provincial and municipal regulations relevant to carpet cleaning practices as well as strategies to lower the risk to wastewater infrastructure and the environment.

2.0 Regulations

The regulations listed below are a summary of some, but not all, applicable guidelines and requirements that apply to painting operations in the City of Calgary. This regulation list is for informational purposes only. Reference of the actual legislation document is the responsibility of every business owner and individual that engages in painting activities.

2.1 The City of Calgary regulations

Wastewater Bylaw Number 14M2012 (from now on referred to as Wastewater Bylaw) is a City of Calgary bylaw that allows the municipality to regulate wastewater. This bylaw sets concentration limits for contaminants found within commercial wastewater. There are multiple sections addressing contamination limits within this bylaw. These sections include but are not limited to:

- **Schedule A**
 - This section lists substances that should not be released into the wastewater system in any concentration. An example of prohibited substances relevant to power washing operations may include:
 - Wastewater with a pH of less than 5.5 or greater than 10, or with a temperature exceeding 75 degree Celsius.
- **Schedule B**
 - This section states concentration limits for inorganic and organic contaminants.
- **Schedule C**
 - This section outlines concentration limits for substances for which a surcharge fee will be applied if limits are exceeded.

Stormwater Bylaw Number 37M2005 (from now on referred to as Stormwater Bylaw) is a City of Calgary bylaw that allows the municipality to regulate stormwater, including discharges to the storm water collection system. Sections include but are not limited to:

- **Section 2 (t)**
 - “Prohibited Material” means any substance that may, directly or indirectly, obstruct the flow of water within the stormwater system or may have an adverse effect and includes, but is not limited to:
 - Soaps or detergents
 - Soil, sediment, waste or other solid matter
 - Industrial waste (including empty chemical containers and drums, acids, caustics, sludge and industrial sump water)
- **Section 4**
 - No Person shall Release, or allow to be Released, any Prohibited Material into the Stormwater System unless permitted in Subsection (3)

2.2 Provincial regulations

Environmental Protection and Enhancement Act supports and promotes the protection, enhancement and wise use of the environment while recognizing the need for economic growth and sustainable development as well as other factors.

Wastewater and Stormwater Regulation is an Alberta regulation under the *Environmental Protection and Enhancement Act* that addresses wastewater discharge and stormwater.

- **Section 7**
 - Owners of wastewater or stormwater systems are not permitted to use, or dispose of, substances into the wastewater or stormwater system in an amount, concentration, level or rate of release that may hinder the integrity, operation or quality of the treated materials within these systems.

The Alberta Water Act is an Alberta regulation that supports and promotes the conservation and management of water, including the wise allocation and use of water. This act addresses the use of water during processes such as power washing by introducing proper disposal and management actions.

2.3 Federal regulations

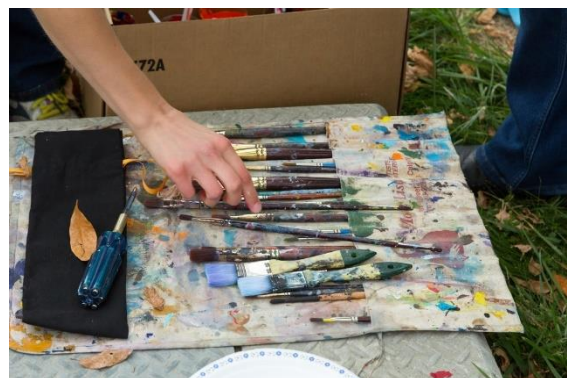
Fisheries Act is a Canadian regulation that focuses on protecting the productivity of commercial, recreational, and Aboriginal fisheries through regulating construction, impact and wastewater discharge.

Canadian Environmental Protection Act is one of the most important environmental laws in Canada as it protects the environment as well as the health and well being of Canadians. A major part of this Act is to sustainably prevent pollution by addressing wastewater discharge and dangerous chemical substance exposure.

3.0 Industry best practices

This section describes some Industry Best Practices that can be implemented to reduce the impact commercial painting operations have on the environment, local community, and wastewater treatment facilities. Following the suggested practices can assist in meeting regulatory requirements, lowering wastewater surcharge fees as well as better protecting your business, community, and environment.

The practices and procedures outlined in this document emphasize eliminating pollutants at the source. Once pollutants are mixed into a single waste stream, reduction and separation of these pollutants becomes increasingly difficult and cost intensive.



3.1 Managing contaminants

Proper management of generated wastewater is an important aspect of painting operations that must be followed diligently. Wastewater may contain a variety of contaminants though the most common substances include non-biodegradable grit, various painting additives and chemicals, solvents, and oils. Furthermore, cleaning agents and other chemicals that may have been used to clean and de-grease tools will inevitably end up in the wastewater. Attention must be paid to the type of cleaning agents and other additives used as these chemicals can change the classification of wastewater from non-hazardous to hazardous, affecting the disposal options. The following are various wastewater management strategies that will assist in the safe disposal of generated wastewater.

The type of paint used during painting activities will dictate the appropriate disposals available. Typically, there are two general types of paints: latex or water-based and oil-based paints. It is recommended that latex paints are used whenever possible as these types of paints are less harmful to the environment and are also easier to safely dispose of. Oil-based paints typically require harsh cleaning chemicals such as paint thinners that should also be properly disposed of.

Latex (water-based) paints: Latex or water-based paints pose less of an environmental concern relative to its oil-based counterparts as these types of paints typically do not require harsh cleaning chemicals and contain generally less harmful substances. The following section addresses proper latex paint management practices that should be followed to protect the business, community, environment as well as the City infrastructure.

- Unused paint left over from painting activities should be poured into the original container and stored for later use. **Unused or unwanted paint cannot be discharged into the wastewater or stormwater system.**
- If in small quantities, left over paint can be painted onto a disposable surface such as cardboard and disposed of in the garbage after the paint has dried. This action can only be used for latex and water-based paints.
- Paint out brushes and other tools as much as possible before washing. This will result in less paint waste ending up in the wash water.
- For latex or water-based paints only, wash water to wash paint brushes and other tools should be collected and disposed of down a drain connected to the wastewater system. It is recommended that a secondary sink is used as this type of wastewater may stain the sink or drain.
- Wash water used to clean paint brushes and tools may also be mixed with an absorbent to reduce the wastewater and be disposed of in the garbage waste stream.
- Recycle, return to the supplier, or donate any unwanted latex and water-based paints. Dried paint and empty paint cans may be disposed of in the garbage.
- Paint chips and dust from latex and water-based paints that are produced from dry stripping and sand blasting may be swept up and collected for disposal in the garbage.

- If sandblasting or dry stripping outdoors, make sure appropriate storm drain protection measures are in place to prevent materials from entering the stormwater system.
- Wastewater from painting activities (water used to clean tools, excess paint etc.) cannot be discharge into the storm drain system or through a manhole as this is illegal and may result in damages to infrastructure and the environment.

Oil-based paints: Oil-based paints pose a significantly higher environmental risk and disposal concern than latex and water-based paints, as oil-based paints contain hazardous materials. Therefore, it is recommended that the use of oil-based paints is limited or avoided if possible. The following section addresses proper oil-based paint management practices that can be followed in order to protect your community and the local environment.

- Unused paint left over from painting activities should be poured into the original container and stored for later use.
- Used brushes and rollers should be scraped or squeezed in order to remove any excess paint prior to cleaning. This will reduce the amount of cleaning agents needed as well as the amount of cleaning waste produced that will require disposal.
- Paint thinners are commonly used to clean oil-based painting tools. Paint thinner is a hazardous waste and cannot be disposed of into the storm or wastewater system.
- Paint thinner can be reused by filtering the used thinner or allowing the paint residue to settle out. This will reduce the amount of paint thinner needed as well as the amount of waste that will require disposal.
- Wastes produced from oil-based paints such as paint thinners and wash water cannot be disposed of into the stormwater or wastewater system. These wastes can be recycled, reused or disposed of at appropriate waste facilities.
- No oil-based paint waste (dried debris etc.) can be disposed of in the garbage. Oil-based paint debris must be disposed of at an appropriate waste facility.
- Paint chips and dust from oil-based paints that are produced from dry stripping and sand blasting must be swept up and collected to be disposed of at a hazardous waste facility.
- If sand blasting or dry stripping outdoors, make sure appropriate storm drain protection measures are installed in order to prevent materials from entering the storm drain.

3.2 Wastewater collection

Wastewater must be collected as it is prohibited to discharge the wastewater into the stormwater system.

3.3 Paint and wastewater disposal

There are several facilities throughout the City of Calgary that accept unused and/or unwanted paint and paint waste. Disposal site options will differ between residential and commercial painting based on the type of paint and quantity looking to be offloaded.

Residential paint disposal sites: Full, empty, and dry paint cans (water-based or oil-based) are accepted in Household Hazardous Waste Programs. A total maximum of 20 litres of household chemicals can be accepted per week, free of charge, at any of the City Landfill Throw 'n' Go areas or designated fire stations.

The Landfill Throw 'n' Go sites are available during regular landfill hours of operation. The Household Hazardous Waste drop-offs are open seven days a week between the hours of 8:00 a.m. and 6:00 p.m.

Household hazardous waste must be properly labelled and adhere to the following packing rules:

- Leave the unwanted hazardous waste in the original container or make sure it is clearly labelled indicating the true contents.
- Leftover and unwanted hazardous waste shall be packaged securely in a sealed, spill-proof container.

For a complete list and addresses of household hazardous waste drop-off locations, please visit calgary.ca/hhw.

Commercial Paint Disposal Sites: The East Calgary Landfill accepts commercial paint at one of two locations within the landfill, depending on the quantity. The change was enacted to provide a location for the appropriate disposal of commercial paint, which is not accepted through the Household Hazardous Waste Drop-Off program. **The Shephard and Spyhill Landfills do not accept commercial paints.**

Smaller quantities are placed at the Throw n' Go drop-off areas. Large quantities are placed at the Paint Transfer Station. Commercial paint businesses are responsible for appropriate packaging and unloading of all materials.

Note* - All materials must qualify under the Alberta Recycling Guidelines. No charges will apply.

For more information, please contact the Alberta Recycling Management Authority at **1.888.999.8762**



3.4 Employee training and education

Spill response

It is important to train all staff in the correct steps and procedures to follow when dealing with a spill. Instructions should be posted in the workplace and appropriate spill response equipment should be made available. A spill kit should consist of:

- Protective clothing and equipment
- Absorbent materials such as sand, sawdust, absorbent pads, kitty litter, mops, brooms, and rags
- Brooms, shovels, and dustpans to clean up the absorbent materials
- Portable barriers or storm drain covers to prevent spills from entering the stormwater system (if working outdoors)

Secondary containment for stored chemicals is recommend as a last line of defense to prevent spills and leaks from reaching the wastewater or storm system.

During a spill it is important to act quickly to prevent wastewater from entering any nearby storm drain. Spills entering the stormwater system could have adverse effects on the local environment. The City of Calgary Wastewater Bylaw section 35 requires the person who released or allowed the release of wastewater to notify:

- The City by calling 311 as well as the Industrial Monitoring Group at img@calgary.ca
- The owner of the premise where the release occurred
- Any other person that may be affected by the release

For any spills that could harm the environment you will also need to report the spill to Alberta Environment.

4.0 Further information

For more information regarding best management practices for power washing operations, please contact The City at 311 or the Industrial Monitoring Group at img@calgary.ca

5.0 Summary of mandatory and recommend actions

Required actions	
Regulation	Action
Wastewater Bylaw 14M2012	<p>22 (1) A person must not allow the release of any wastewater into the wastewater system that:</p> <ul style="list-style-type: none"> (a) contains a substance described in Schedule “A”: Prohibited Substances. (b) contains a substance that is above the approved concentration limits as described in Column 2 of Schedule “B” or Column 2 of Schedule “C”; or, <p>Does not comply with the requirements of this bylaw.</p>
Wastewater Bylaw 14M2012	<p>26 (1) The Director, Water Resources may require an owner to do any one or more of the following: (a) Install, operate, monitor and properly maintain at all times a wastewater pre-treatment system that is located at a directly accessible location on the upstream side of a monitoring access point at the owner’s premises</p> <p>(2) An owner who fails to install, operate, monitor, provide access to and properly maintain at all times a wastewater pre-treatment system as required by the Director pursuant to subsection (1) (a), (b) or (b.1) is guilty of an offence under this bylaw.</p> <p>(4) An owner of premises with a pre-treatment system installed in or on a premise must:</p> <ul style="list-style-type: none"> (b) maintain a maintenance schedule and record of each maintenance for every pre-treatment system installed at the premises for a period of two years, including records for disposal of waste residue
Wastewater Bylaw 14M2012 – Section 35	<p>A person who released or allowed the release of a substance must notify:</p> <ol style="list-style-type: none"> 1. The City by calling 311 2. The owner of the premise where the release occurred 3. Any other person that may be affected by the release

Recommended actions	
Type	Action
Employee education	<ol style="list-style-type: none"> 1. Clean up spills immediately. 2. Use a broom and mop to clean the floor. 3. Do not overfill tanks.
Establishment operations	<ol style="list-style-type: none"> 1. No discharging of prohibited substances (pH less than 5.5 or greater than 10 or a temperature exceeding 75°C). 2. Maintain records of pre-treatment maintenance and cleaning.
Accidental spills and releases	<p>Have a spill plan ready for:</p> <ul style="list-style-type: none"> • Indoor wet spills • Outdoor wet spills • Indoor or outdoor dry spills

Appendix A: Information Handout



Carpet Cleaning Wastewater Information Handout

Carpet cleaning businesses must adhere to The City of Calgary Wastewater Bylaw 14M2012 and The City of Calgary Stormwater Bylaw 37M2005. Use these tips to comply with regulatory requirements, lower fees and protect your business, the community and the environment.

Manage contaminants in your wastewater

- Ensure the purchase of non-toxic detergents and cleaners
- Prior to cleaning, confirm equipment is in proper working order, free of leaks and damage

Use a pre-treatment method

- Filter screens shall be installed at any water release point to capture all solid materials.
- Dry vacuuming should occur prior to cleaning agent application and water cleaning
- Solids must be diverted to a solids waste stream unless the materials are considered hazardous, in which case they shall be sent to an appropriate treatment facility.
- Visit calgary.ca/hhw or contact 311 for the hazardous materials disposal requirements.

How to dispose of your wastewater

- Drains connected to the Wastewater System (i.e. floor drains and sinks) may be used to dispose of wastewater if the following conditions of the Wastewater Bylaw (14M2012) are met:
 - Does not contain any substances listed in Schedule A Prohibited Substances;
 - Does not exceed any concentrations listed in Schedule B Restricted Substances and Schedule C Surcharge Substances
- If the wastewater exceeds City of Calgary Wastewater Bylaw limits, the wastewater can be disposed of at other waste treatment facilities where industrial wastewater is permitted.

Wastewater Bylaw 14M2012 Fines for Non-Compliance

18(1) Failing to dispose of wastewater from a premises into either the wastewater system or a private wastewater system

Specified Penalty \$1000

22(1)(a) Releasing, or allowing the release of wastewater that contains a prohibited substance into the wastewater system

Specified Penalty \$3000

22(1)(b) Releasing, or allowing the release of wastewater into the wastewater system that contains a substance that is over the concentration limit as described in Column 2 of Schedule "B" or Column 2 of Schedule "C"

Specified Penalty \$3000

43(6) Failing to comply with a Remedial Order

Specified Penalty \$1000

What to do if you have an accidental release

In the event of an unintentional release it is important to act quickly to prevent the material from entering the wastewater or stormwater system.

The Wastewater Bylaw section 35 under "Release Reporting" requires the person who released or allowed the release to notify:

- The City of Calgary by contacting 311 as well as the Industrial Monitoring Group at img@calgary.ca
- The owner of the premise where the release occurred.
- Any other person that may be affected by the release.

For any spills that could harm the environment you will also need to report the spill to Alberta Environment.

For more information please contact 311 or the Industrial Monitoring Group at img@calgary.ca