



Recreation Facilities Environmental Waste Compliance Guidelines

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Role of the Ministry of Environment (MOE)

We help protect Ontario's environment by making laws that improve our air quality, protect our drinking water, and give us recycling programs and safe places to put our waste.

Please be advised that it remains the generators responsibility to manage their waste in accordance with all applicable environmental legislation. The following information is shared for guidance purposes only and is not to be considered as the Ministry's endorsement of the guideline.

Introduction

Recreation facilities are being pressured to be "good environmental stewards" by controlling the waste generated through their general operations, programs and services. Items (light bulbs, unused paint, ballasts, and batteries) that were once hauled to landfill may now need to be disposed of in a more appropriate manner. While concession wastes are expected to be sorted and placed in the appropriate recycling bins. However, some wastes may be required to be disposed of under specific Regulation. For example, facilities that utilize onsite septic systems that require pumping may be required to accurately maintain an emptying recording system. Further, specific legislation controls the disposal of asbestos [O. Reg 347 (17)]. Containments such as ice paints, soaps, and pool filter materials/cleaning chemicals - along with high concentrations of chlorine and chloride concentrations that were once merely discharged into municipal sewer systems or local waterways with little thought to environmental impact. Operational activities such as the traditional method of dumping ice shavings outdoors each spring has fallen under scrutiny by officials from the MOE causing facility managers to reassess their responsibilities in these matters. To assist recreation professionals, the ORFA offers the following information to its members in hope of elevating awareness to the known issues and ultimately raising our overall environmental performance.

Legislative Framework – "Cradle to Grave Waste Management"

Ontario has a comprehensive legislative and regulatory framework to ensure that wastes are managed in an environmentally safe manner. Through the Environmental Protection Act

(EPA) and accompanying regulations, the ministry has established a "cradle to grave" management system, which includes the systematic control of collection, storage, transportation, treatment, recovery and disposal of this waste. Ontario Regulation 347 identifies wastes through a series of listings and tests. It also sets standards and requires annual registration of generators of waste (HW) and liquid industrial (LIW) and the payment of a registration fee.

Regulation 347

The Environmental Protection Act (provincial) R.R.O 1990 Regulation 347 and Reg. 326/03 are the primary piece of documentation that guides all workplaces in waste management responsibilities. Both documents are further supported by the Ministry of Environment "Registration Guidance Manual for Generators of Liquid Industrial and Waste" (2009). Beyond domestic wastewater disposal [sinks, toilets, showers] recreation management should be prepared to defend wastewater disposal best practices and policies. In some cases, facilities may require a "waste discharge permit" to dispose of waste into the local sewer system. Wastes containing suspended solids such as ice paints and pool filter materials [diatomaceous earth] have been known to cause blockage in sewer lines or contribute to the grazing of pumps. Liquid effluent may contain high or low pH, chloride, chlorine, oil, grease or other chemicals/substances in high concentrations that can upset the natural balance of the aquatic organisms used to balance the municipal waste disposal system. These operational wastes must be disposed of correctly.

Beyond the obvious oils, greases, chemicals and filter wastes, the addition of construction or demolition materials [brick, corrugated cardboard, concrete, drywall, steel and wood (O. Reg. 347 s.2(2) that leave a "facility construction site" may be designated as wastes; controlled under specific legislation. Section 61 of O. Reg. 347.

Refrigerant Management

Both Regulation 463 and 347 guide refrigerant disposal.

- Regulation 463 governs what you do with the refrigerant product.

- Regulation 347 governs what you do with the refrigerant waste.

Regulation 463 defines a refrigerant as “any liquid or gas that is or that contains a class 1 ozone depleting substance, a class 2 ozone depleting substance or a halocarbon and that is used in refrigeration equipment. Ammonia (R717), glycol or brine are not defined as refrigerants.

- Regulation 347 defines Refrigerant Waste as:
- Stationary Refrigerant Waste

Mobile Refrigerant Waste

Regulation 463/10 came into force in January 2011 and consolidated five former ozone depleting substance regulations into one. Governs the discharge, making, use, sale, transfer, display, transport, storage Reg. 347 (17.2) and disposal of ozone-depleting substances and other halocarbons in Ontario. Discharge – report discharges of refrigerants into environment over 100 kg to the ministry’s Spills action Center at 1-800-268-6060. An ozone depleting prevention (ODP) certificate is required to perform maintenance and/or refill refrigerant

Who is a Waste Generator?

A “waste generation facility” is defined as a facility, equipment and/or operations that are involved in the production, collection, handling or storage of waste at a site. Determining, if in fact, a specific recreation facility is considered a “waste generator” under legislation requires an internal assessment/audit to be conducted.

Waste includes, but are not limited to:

- manufacturing residues (e.g. waste acids, contaminated sludge)
- mercury light bulbs
- biomedical wastes from hospitals
- spent photo finishing chemicals
- waste pesticides
- PCBs
- paints, varsol and refrigerants
- un-used cleaning products and discarded batteries

These wastes require special handling to reduce adverse effects to human health and the environment.

Registering as a Waste Generator

Regulation 347 came into effect on January 1st, 2002 and required that anyone that generates waste is required to register as a waste generator and must pay a registration fee. In addition, any waste that leaves a registered facility must be manifested, and transported under the Transportation of Dangerous Goods Act. There are specific companies that are registered to transport these wastes to registered treatment facilities. Your facilities should be using these companies to manage any waste that is leaving the sites. Generators of waste need to register online at www.hwin.ca

Generators will be given an Ontario generator number, and once registered should use a registered hazardous waste hauler to move waste from their site. Regulation 347 provides a comprehensive system for the management of hazardous and liquid industrial wastes, from their point of origin to their final disposal. In Ontario,

- “All generators of subject waste must register by February 15th of each year”
- “All generators of waste will be required to pay a fee associated with their annual registration”
- As required under Regulation 347, “all generators of wastes must evaluate their wastes to identify in fact they are “hazardous” or “liquid industrial” and if so, register with the Ministry of Environment.

Waste must be in compliance of Regulation 347 whenever it is stored, processed, disposed of or transported. Processing/transporting and disposing of waste may also be required to adhere to other acts/regulations such as the Transportation of Dangerous Goods Act and such wastes in Ontario unless a “generator registration document” has been created and posted on the Hazardous Waste Information Network (HWIN).

Note: The (processing disposing and transporting of wastes requires a Certificate of Approval through the Ministry of Environment; it is recommended that none of these tasks be completed at any recreation facility.

Facility managers must research all applicable compliance requirements based on their specific task.

The registration process includes 3-steps.

Step 1: Will help you determine whether or not registration of your waste(s) is required. The Ministry has created a flowchart to help in this identification process [attached in the appendix]. Once you have reviewed the flowchart and determined if in fact your wastes are subject to registration-you will need to either register or not.

Step 2: Is completing and submitting your annual Generator Registration Report.

Step 3: Once the Ministry accepts and reviews your reports - it outlines your ongoing obligation as a waste generator.

A comprehensive guidance manual is provided at no cost from the Ministry. It may be downloaded at:

http://www.ene.gov.on.ca/envision/env_reg/er/documents/2000/RA00E0002.htm

Note: For registration on the HWIN system there is a 2006 registration renewal guide for renewal registration. There is also a HWIN helpdesk for any issues associated with registering available at 1-866-HWIN-MOE from M-F 8-5 EST.

Manifesting Requirements

A manifest is a document used to track the movement of liquid industrial and waste (subject wastes) as they move from a generator to an off-site receiving facility. Manifests are used to identify the type of waste being shipped, overall volumes and the movements of the waste from generator to receiver to ensure that these wastes are managed appropriately. Generators are required to retain copy 2, however it is recommended that copy 6 is retained and attached to its corresponding copy 2 to verify waste receipt.



Example: The Any-Town Ice Arena orders 4 – 20L pails of compressor oil from their refrigeration contractor on Sept.1 – this is the cradle portion of the purchase. The oil is used during the ice in season and must be disposed of – this the grave portion of the process. The receipt for the purchase and a copy 6 is retained and attached to the corresponding copy 2 to verify the proper waste disposal of the oil.

Creating Acceptable Discharge Practices

Recreation facility management must set controls for the disposal of non-domestic wastes. Paints, oils, greases, solvents, acids and caustics can potentially cause fires, explosions, blocked piping, odours or corrosion/damage of underground sewage piping. Proper disposal of these products is required under Reg. 347. Disposal methods will need to be developed using a Job Hazard Analysis. The creation of this document will help ensure compliance is being met. Refrigerant coolant, used paper [lines], plastic markings, logos/stencils, ice paints, pool filter remnants must also have specific disposal guidance system applied.

Curling and Ice Rink Ice Paint Disposal

Investigations by the MOE has raised issues related to the removal of ice and disposal of ice contaminated with ice paint. Some operations annually leave ice piles outside their facilities to naturally melt. The potential exists for water contaminated with ice paint to enter the environment through storm sewer or natural drainage. This practice may not be viewed as the environmentally friendly image we aspire to project nor, legally acceptable.

Note: The MOE requires that the following be completed (after ice had been melting outside of the facility):

1. Pump out all storm sewer catch basins on the local street and dispose of the wastewater in the sanitary sewer system.
2. Thoroughly clean the street and parking lot.
3. Ensure that the removed ice contaminated with paint was either:
 - a. Trucked to an acceptable disposal area.
 - b. Melted in a contained area.

- c. Disposed of through a sanitary sewer system.
- 4. Remove and dispose of any paint residue attached to ditches in the area.
- 5. Submit a contingency plan to the provincial officer to outline what actions are taken to prevent the discharge of paint residues to ditches.



General Safety

- The ORFA wishes to remind all operators that ice shavings dropped outside at any time of the year may contain traces of “human body fluids” [spit, vomit, blood etc.] and as such managers should consider posting these areas as unsafe and attempt to ensure they do not pose an attraction as “child play areas” or used for “cooling purposes” of sport team beverages or “First Aid”.
- As required under OHS laws - workers should be advised of the possible hidden dangers found in ice shavings
- Personal Protective Equipment of gloves, long sleeved shirts, long pants, eye protection and hearing protection may need to be worn
- A complete written procedure outlining the acceptable methods of ice disposal should be in place and reviewed by all involved with the process

The ORFA recommends that you:

- Have a current MSDS for all ice paints used
- Consult with the appropriate authorities for approval of an acceptable ice-disposal procedure-local sanitary officials, local office of the Ministry of Environment etc.

Note: Sewer use is governed by each municipality, however the Ministry of the Environment regulates everything else (third party disposal, outside discharge etc.)

Sample disposal methods include:

- An ice pad that is 25.9 x 56.4m (85 x 185ft) with an average depth of 3.8cm (1.5in) will be scraped out in 30-35 loads
- If the paint has been installed close to the ice surface, as recommended in the ORFA Ice Making and Painting Technologies training course-only the last 3-5 loads of ice shavings should contain paint-drivers should monitor ice depth and snow shavings to identify when paint is at or near the surface-once identified, a fresh blade should be installed to quickly complete the process
- If acceptable, shavings containing paint may then be dumped into “the snow pit” for drainage into the sanitary sewer system a thorough cleaning and sanitizing of the snow pit should be conducted once all snow has melted
- Snow pits that empty into a septic system should not be used for paint disposal
- A site inspection of the proposed dump area should be conducted by a “competent person” to ensure ground water from melting shavings will not enter natural waterways such as creeks, rivers or well-water supplies
- The area should be protected from possible human contact-posted with warning signs and/or fenced off
- Shavings with no ice paint may then be placed outside
- Shavings being placed outside containing ice paint should be controlled:
 - A barrier such as plastic or tarp should be placed on the ground as a barrier between the contaminated sand and the natural soil
 - The ground barrier should have 15-30cm (6-12in) of sand placed on top to help trap melting paint
 - A containment system of one or any combination of 30cm (12in) of sand, hay, or wood box construction is then placed on the outer edge of

the ground barrier to help prevent leakage.

- The exact size of this containment area will need to be calculated by each facility to best meet their specific needs - the containment area may collect all ice shavings or only ice shavings containing ice paint.
 - Paint waste and sand should then be disposed as per local by-laws.
 - Some operations have been known to use local contractors with portable waste containers in lieu of a ground barrier system to collect ice shavings containing paint.
- A reminder that “sand” tracked onto an ice surface will quickly dull an ice resurfacer blade. Dull blades require significantly more mechanical and human resources (waste) to complete the task at hand-a comprehensive tire washing program should be in place if shavings are to be dumped outside
 - A final inspection of the disposal area should be conducted and logged once melting is complete

Note: The sample method may not be acceptable under every circumstance. It is the facility manager’s responsibility to ensure that any disposal method meets all the conditions of Regulation 347.

Aquatic Facilities

Swimming pools, whirlpools and water parks all require regular maintenance and upkeep. Care should be taken to ensure over-dosage or spillage of chemicals does not occur during use. Leftover or expired chemicals should never be disposed of by dumping into the sewer system. They should be handled as hazardous waste and disposed of accordingly. Backwash waters, cleaning chemicals and diatomaceous earth or sand must be filtered prior to release into a municipal sewer system (contact the municipality for acceptable levels and municipal guidelines).

Note: If unsure of how best to approach this task, consider sourcing an expert in the area and ask for their advice.

Wastewater containing residual chlorine should be regularly tested to ensure chlorine levels are at acceptable levels prior to release.

Consider; minimizing the use of chlorinated water for deck cleaning purposes; reduce the level of chlorine in backwash wastewater by utilizing freshwater for backwashing; perform backwashing at low flow periods of the municipal wastewater collection system; installing automated chlorine/bromine systems that use inorganic salts or ozone systems; reuse or recycle separated diatomaceous earth or pool filter sand; or take them to the landfill site for disposal. Ensure that any waste that is leaving the facility is properly disposed of following municipal, provincial and federal guidelines.

Staff Training

The first line of defense is at the frontline staffing level. Providing and maintaining employee education is an indication of management’s commitment to compliance. Employees should be made aware of inherited risks associated with the handling of contaminated waste as well as the hazards involved with the materials and chemicals they are using. Response plans and emergency evacuation procedures for spills or releases must be in place and practiced to be effective. Housekeeping is a key element to ensure emergency situations are avoided. Storing chemicals, paints, etc. in areas with drain systems can unknowingly create a release into the sewer system. Proper storage, labeling and rotating of chemicals will help avoid such situations.

Note: (See also Regulation 347- Section 17.2 for acceptable storage lengths for waste generators - this is only for waste products not for “new” products.

Should a spill occur, it is important to immediately contact the MOE (as per Section 92 EPA). Facility managers should be prepared to professionally respond to such events as well as conducting staff training on spill response protocols.

Visit: <http://www.ene.gov.on.ca/spills.htm> or 1-800-268-6060 (emergency reporting).

Energy Management is Waste Management

Loss of tap water through poor maintenance and upkeep adds thousands of dollars to every municipality's operational costs. Pool covers can help reduce evaporation, while ice thickness and temperature control can produce a more quality surface-reducing energy costs.

Conclusion

Waste management has become another subject that today's facility practitioner must continually monitor. Contracts must reflect responsibility of generated waste but the true responsibility of the 'owner' cannot be shifted or reduced through such contractual arrangements.



Remaining diligent, in all aspects of operation can only be accomplished through continued information review and professional interaction. Recreation professionals should never be hesitant in contacting the MOE for guidance on any environmental issue.

References

Registration Guidance Manual for Generators of Liquid and Industrial and Hazardous Waste

<http://www.ontario.ca/environment-and-energy/registration-manual-generators-liquid-industrial-and-hazardous-waste>

Appendices

<http://www.ontario.ca/environment-and-energy/registration-manual-generators-liquid-industrial-and-hazardous-waste-append>

Report a Spill

<http://www.ontario.ca/environment-and-energy/report-spill>

HWIN Help Desk

1-866-494-6663 or www.hwin.ca

www.e-laws.gov.on.ca