Swimming Pools, Spas & Water Features Pool & Hot Tub Council of Canada

April 2014

The Pool & Hot Tub Council of Canada (PHTCC) is a voluntary, not-for-profit association representing the interests of the aquatic leisure industry.

PHTCC Member companies design, manufacture, construct, landscape and service pools, hot tubs, spas, splash pads, water features, artificial ponds and rivers. In carrying out these undertakings Members abide by the association's Code of Ethics.

Introduction

Based on an estimated 1.1 million swimming pools operating in Canada*, the aquatic leisure industry is responsible for the ongoing servicing and stewardship of more than 60 billion Litres of water, an increasingly valuable natural resource. The Pool & Hot Tub Council of Canada is committed to minimizing the ecological footprint of the aquatic leisure industry. Efforts extend beyond the environmentally-conscious design, construction and operation of swimming pools, hot tubs, spas, water features and splash pads to the conservation of resources and elimination of wasteful practices, all while providing its workforce with a safe and healthy workplace. Furthermore, the PHTCC promotes responsible environmental management best practices to its members, operators and the public by upholding a series of policy objectives as outlined in this document. The PHTCC is dedicated to environmental affairs leadership in all its proceedings.

^{*} Based on *High Efficiency Residential Swimming Pool Initiative*: Report issued by the Consortium for Energy Efficiency in 2012

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Policies

Building Products/Materials and Construction Methods – Installers and service companies are encouraged to procure construction materials, automation systems, timers, mechanical plumbing systems, LED lighting, and solar systems that have the least impact on the environment. This includes utilizing products that have been certified under the national Environmental Choice (Ecologo®) Program or the Energy Star® Program, and products from companies that have carried out life cycle assessment studies and earned accreditation under the CAN/CSA-ISO 14000 series of standards. Eco-friendly building techniques are promoted, including such methods that take into consideration projected hardscape/softscape coverage.

Chemical Usage – The PHTCC advocates for training on the Workplace Hazardous Materials Information System (WHMIS) and the requirements of regulations related to the transportation and storage of chemicals and dangerous goods. Hazardous materials (e.g., surplus pool chemicals, leftover containers of epoxy paint, etc.) are disposed of in accordance with required protocols, and all sanitizers and algaecides must be used and stored according to the manufacturers' instructions. In addition, the industry educates pool and spa owners and operators on the appropriate use of chemicals and water testing procedures in order to ensure that water chemistry is maintained in proper balance. This enables greater chemical efficiency thereby reducing waste. Finally, owners and operators are advised to recycle plastic containers and paperboard products that are used in packaging.

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Energy Conservation – The PHTCC supports energy saving practices such as:

- the integration of automation systems;
- the use of thermal insulating covers;
- the installation of dehumidification /energy recovery systems;
- the use of high efficiency heaters;
- the right-sizing of equipment (e.g., larger diameter piping may permit the utilization of pumps of lower power);
- the conversion to energy-efficient multi-speed and variable speed pumps;
- the installation of heat pump pool heaters and indoor pool dehumidifiers that have been certified by the Air-conditioning, Heating and Refrigeration Institute (AHRI);
- the changeover to energy-efficient LED lighting;
- the utilization of mini-recirculation pumps;
- the usage of solar pool heaters and solar decking with appropriate automated controls;
- the use of fuel efficient vehicles; and
- the deployment of robotic cleaners.

Information on these initiatives can be found in published Recommended Guidelines, "Energy Conservation Opportunities for Pools, Spas, and Water Features" (G-0310).

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Location of Pools – Designers and installers typically take into consideration the effects of shade and runoff in plans for the positioning and elevation of pools, spas and hot tubs and for the landscaping of the lot. This minimizes energy consumption and maximizes efficiency.

Manufacturing Facilities – As a common business practice, industry suppliers avoid the overpackaging of products released to market. Similarly, manufacturers and distributors strive to improve efficiencies in the transportation of their goods, thereby conserving energy and other resources. Recycling is actively promoted.

Permanent Closures – Companies involved in the removal of permanently closed pools and hot tubs customarily implement measures that are intended to ease the burden on landfill sites. Practices such as recovering soil from excavations to fill in pools and re-using or recycling components are commonly carried out.

Public Health and Safety – The PHTCC promotes a layered approach to water safety in accordance with Recommended Guidelines, "General Safety Provisions for Pools and Hot Tubs" (G-0209). PHTCC Members are encouraged to design and build swimming pools and spas to eliminate suction entrapment as per Recommended Guidelines, "Suction Entrapment Avoidance Procedures" (G-0109). Beyond this, pool, spa, hot tub, water feature, and splash pad owners and operators are provided with fundamental instruction on how to maintain proper water quality using standard disinfection/sanitization techniques.

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Retail Operations – Retail facilities routinely support:

- municipal recycling programs;
- measures to reduce energy consumption in their operations (e.g., the use of energy efficient lighting, timers, and thermostats);
- efforts to eliminate wasteful practices within the distribution chain; and,
- education and awareness sessions made available to customers.

The PHTCC endorses the sale by its Members of solar blankets, dechlorination products, eco-friendly heat trapping additives, water testing software to control chemical treatment levels, and replacement mechanical systems that meet the requirements of the *Energy Star®* Program.

Surrounds – Pool installers and service companies ensure that the grounds are cleaned thoroughly upon completion of work and are safe for use. Also, the overall aesthetics of the site is preserved.

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Water Consumption – The PHTCC actively encourages the conservation of water through:

- the use of covers to minimize evaporation;
- the reduction in demand for fresh water by maintaining swimming pools and spa/hot tubs at optimal circulation settings. This includes the reparation of leaks to reduce water loss, regular cleanings, lower temperature settings when not in use, and the deterrence of excessive backwashing procedures;
- the use of cartridge filtration systems in order to diminish makeup water demand;
- the reduction of water use when drought conditions are in effect;
 and,
- the reclamation of greywater (i.e., sullage) from commercial installations for secondary use (e.g., car wash facilities, irrigation, filter backwashing).

Note: Due to the prevailing climate in Canada, swimming pools are typically filled in the spring, after which the water is subsequently recirculated through the filtration equipment throughout the season. While some water loss occurs by evaporation, greater amounts are lost during backwashing and winterizing procedures. The PHTCC supports the implementation of maintenance procedures that minimize water loss.



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Water Discharge – The PHTCC is committed to the protection of marine and freshwater eco-systems. In support of this objective, the association offers certified training in the field of water discharge management to industry service personnel. This includes instruction in approved methods for the testing, monitoring, control and treatment of chlorine, bromine, copper, sodium chloride, algaecides/fungicides, nonylphenols/nonylphenol ethoxylates, pH levels, etc. Additionally, students are taught how to avoid the clogging of storm drains by debris. The PHTCC encourages Member companies to follow the Recommended Guidelines – "Water Discharge Best Management Practices" (G-0613), upon which the course is based. Chemical contamination of waste water entering the environment through catch basins and other means of entry is effectively eliminated by the implementation of these standardized operating procedures.

Work Environment – The PHTCC requires Member Companies to abide by its published recommendations entitled, "O*ccupational Health & Safety Guidelines*" [G-0511]. Adhering to the guidelines ensures a safe work environment for employees.

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Supplementary Information

For additional tips on environmental stewardship and practices consult your local utility, municipality, provincial department of environment, or Environment Canada.

Recommended guidelines referenced in this document are available free of charge and are posted on the website: www.poolcouncil.ca

Water safety information is available at: www.safepools.ca

Pool & Hot Tub Council of Canada

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• This document will be updated from time to time to reflect current PHTCC policy related to the environment.



