

Ontario Allied Golf Association

Golf Course Water Use – Protection and Conservation of a Vital Resource

Golf Industry Commitment to Source Water Protection

Water is a key resource to a golf course. Carefully managed application of this precious commodity is essential to manage the regulated growth of specialty turfgrasses that make-up our varied playing surfaces. Water features often figure prominently in the design and playability of the golf course and can double as storage reservoirs. Golf courses are often the last large green space in many urban areas, and water features are attractive, sustainable habitats for a host of indigenous wildlife. For these and other important reasons, especially the need for potable water, the golf industry is acutely aware of the need to preserve and protect our water sources.

Best Management Practices

The golf industry is committed to continued improvement of our turf maintenance practices. The Canadian golf industry spends upwards of \$100,000 per year on research that complements our colleagues in the USA who commit approximately \$1.3 million each year improving turf species and maintenance practices. Much work has been done in the areas of run-off and leaching on golf courses and best management practices continue to be developed that will ensure products used on golf courses stay where they are intended.

The science of turfgrass and soil management and soil construction continues to improve the health and vigour of grasses with the goal to reduce water, fertilizer and pesticide requirements needed to maintain playing characteristics.

Examples of Best Management Practices and Existing Regulations Protecting Water Resources on Golf Courses in Ontario

Water Taking

The taking of water for irrigation and potable uses on a golf course are regulated through the issuance of permits to take water under Section 34 of the Ontario Water Resources Act. These permits include terms, conditions, monitoring, recording and reporting requirements for the water taking and provide protection to other existing water uses and users.

Over the past decade, an accelerated implementation of best management practices to conserve water have included retrofitting irrigation equipment with state-of-the-art, computer-controlled systems along with an increased number of spray heads for a more targeted and precise delivery of water where it is needed.

Most golf courses have constructed additional ponds or reservoirs complete with strategic drainage systems to capture valuable runoff following storms, rainfalls and spring freshet events. This supplements and reduces our need for taking water from permitted sources.

Fertilizer Use and Storage

Best Management Practices employed when applying fertilizers can include:

- The use of slow release fertilizers in environmentally sensitive areas;
- Testing soil chemistry to ensure the products we apply are being used efficiently;
- Testing grass clippings for nutrient requirements. A healthy grass plant is less susceptible to disease and pests and the need for pesticides is reduced;
- Naturalizing out-of-play areas of the golf course;
- Increased buffer areas along rivers and ponds to keep nutrients and pesticides away from watercourses;
- Keeping records of all fertilizer applications for future reference; and,
- Storing of granular fertilizers in enclosed structures to keep the product dry, away from the elements and manageable in the event of a spill.



Pesticide Use and Storage

The use and storage of pesticides on golf courses is currently governed through the Pesticides Act and Ontario Regulation 914 and under this legislation:

- Pesticides are to be applied on golf courses only by Licensed Applicators or Technicians;
- Pesticides being used on the golf course must be Scheduled for use under the Pest Control Products Act (PCPA);
- Pesticides are to be applied strictly according to the directions on the label;
- Pesticides are to be stored in a secure, well ventilated, contained, and posted area; and,
- Posting requirements before and after pesticide applications must be followed.



In addition to the above-noted legislative requirements, many golf course superintendents are implementing an Integrated Pest Management (IPM) program, which can reduce pesticide use by 30 to 50 percent. Furthermore, Ontario is very fortunate to have an IPM Accreditation program that is managed by Ridgeway College a division of the University of Guelph. This program involves an examination and auditing process to ensure there is an IPM Agent on site trained in the theories and practices of IPM. Daily pest monitoring is required and both written and on-site audits are conducted by third party environmental auditors to ensure compliance.

Waste Water Treatment

Privately owned waste water treatment systems servicing golf course properties are regulated through approvals granted by the Ministry of the Environment under Section 53 of the Ontario Water Resources Act (systems with flows greater than 10,000 litres per day) or local municipalities under the Building Code (systems under 10,000 litres per day).

Fuel Use and Storage

The use and storage of fuels on golf course properties is regulated under the Liquid Fuels Handling Code. The code regulates the minimum standards for tank construction and establishes requirements for spill containment, tank protection from vehicles, leak detection, and setbacks from buildings and property lines.



Stormwater Management

Storm water best management practices are employed on golf courses through measures including; directing stormwater run-off to off-line ponds for quantity and quality control and/or re-use for irrigation, establishing vegetation in ditches and swales to reduce the potential for erosion and sedimentation and grading to direct overland flow away from sensitive areas and to reduce channelized flow.

The Ontario Allied Golf Associations (OAGA) is a coalition of the Golf Association of Ontario (GAO), Ontario Golf Superintendents Association (OGSA), Ontario Professional Golfers Association (OPGA), Royal Canadian Golf Association (RCGA), Canadian Golf Superintendents Association (CGSA), National Golf Course Owners Association Canada (NGCOA), and other affiliated organizations, associations and member clubs.



