

Water Conservation and Management for Turfgrass Systems

The turfgrass plant is 75-90% water and requires ample amounts to remain productive under intense management. There is increasing concern regarding the quantity and quality of clean, fresh water that is available for both human consumption and recreational needs. The turfgrass industry is working to help conserve our valuable resources. This factsheet will highlight key practices that you should keep in mind.



Fig. 1. Leave buffer zones around waterbodies

Design Considerations

Proper plant selection is very important. Incorporate as much natural vegetation into the design as possible. This will allow wildlife and native plant species a chance to recover and help naturalize the property. Industry participants should work with their irrigation consultants to design an irrigation system to deliver water only to the areas that require regular irrigation. This will help conserve water by not over applying in areas where water is not needed.

Alternative sources of irrigation water should be investigated. These can include the use of effluent water, providing it is suitable for use on turfgrass. Collection ponds can be established to capture and contain rainfall and storm water runoff.

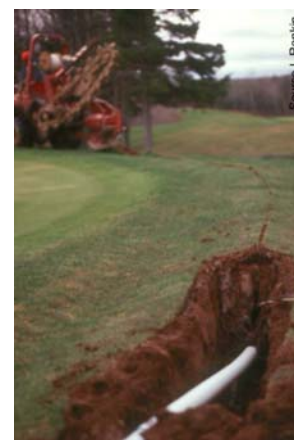


Fig. 2. Installing an irrigation line.

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For more information, please check our website at www.turfgrass.ca

Buffer strips are vegetated areas along waterbodies and streams. They limit runoff, minimize erosion, assist in bank stabilization, filter sediment, fertilizers, and pesticides, create habitat for aquatic and terrestrial organisms, and minimize maintenance of hard to manage areas.

These buffers should be constructed and maintained around all waterbodies and watercourses. They should be a minimum of 10 m wide to allow for the capture of any runoff from the site. The buffer strips also moderate water temperature and filter stormwater before it enters the watercourse.

Design Construction



Fig. 3. Hay bales prevent contamination during construction.

Areas should be irrigated to match daily requirements. Alternative sources of irrigation water should be investigated, such as effluent water and the use of captured stormwater, as long as these sources will not negatively affect the turf.

If construction must be done around watercourses, use all available measures to minimize the effect and prevent potential problems. For example, the use of hay bales and silt fences are two good strategies to prevent contamination.

Design Operations

Use pesticides that are registered in Canada, and specific to turf. Ensure they are applied by licensed applicators.

All appropriate measures should be used to minimize drift when applying pesticides. Use low pressure nozzles. Avoid spraying on windy days. These are good management practices and also limit the amount of product wasted.

Establish proper Integrated Pest Management (IPM) practices such as scouting and monitoring indicator areas where diseases are first noted. Communicate to the public that you are using the product in a safe and appropriate manner in accordance with all applicable laws.

Fertilizers should be applied in the appropriate quantities for plant growth to minimize the potential for nutrient and leachate loss to the environment.

Turfgrass management requires a substantial amount of water. All those working in the industry should strive to maintain a sustainable supply, while at the same time improving the efficiency of their systems to minimize waste and pollution. Through monitoring, research and education, turfgrass managers and producers can utilize and conserve water while enhancing their respective watersheds for future generations.



Fig. 4. Scout for diseases and pests like cutworm.