

Best Management Practices for Turfgrass Irrigation Systems

Turfgrass and landscape irrigation are one of the most visible uses of water in an urban setting, and so stakeholders at every level must demonstrate their understanding of the resource and the technology. Every manager has baseline requirements for assuring optimal irrigation system performance. Attention to design, maintenance, and management will assure the overall quality of the system.

Best Management Practices (BMPs) for turfgrass irrigation systems ensure environmentally responsible practices are used in water management and delivery. Four BMPs have been identified for turfgrass managers. These BMPs are applicable to any location, promote water conservation and sustainability, and are economically feasible.

BMP 1: Design the System for Efficient and Uniform Distribution of Water

Specific criteria to be considered in the design include soil type, slope, root depth, plant materials, microclimates, weather conditions, and water sources (quantity, quality, pressure).

Critical components to a proper irrigation design are:

- Site inspections
- Equipment specification
- Backflow prevention
- Precipitation rates versus infiltration rates
- Monthly water budgets
- Baseline schedules



Fig. 1. Irrigate in response to the turf needs.

BMP 2: Install the Irrigation System to Meet Design Criteria

To conserve and protect water resources, the installed components must meet the irrigation design specifications, manufacturer's specifications, and provincial and local code requirements. This will contribute to an efficient and uniform distribution of water. Installation criteria include:

- Locating all underground utilities on site
- Verifying design inputs of flow and pressure as accurate
- Documenting any design changes
- Testing and auditing the system following installation

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

BMP 3: Maintain the Irrigation System for Optimum Performance

The irrigation system should be regularly serviced to maintain the performance, as it was originally designed. Any serviced components are to match the original design specifications. This will help sustain an efficient and uniform distribution of water.

Optimum maintenance includes: regular inspection and maintenance schedules, compatible or matched replacement parts, plant maintenance and spray interference, and system winterization.

BMP 4: Manage the Irrigation System in Response to Changing Water Requirements

The irrigation schedule should be adjusted as required to provide supplemental water to maintain a functional, healthy turf and landscape with the minimum required amount of water.

Basic irrigation concepts such as effective water management and budgets, responses to drought conditions, irrigation performance audits, and inspections need to be considered.

BMPs encourage the turfgrass manager to set attainable goals. By setting targets and keeping records, the turf manager can check the performance of the irrigation system and make sure their available resources are properly used.

An irrigation system is a tool that needs to be maintained and regularly checked to make certain it is meeting the original installation expectations.



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Fig. 2. Irrigate only the required area.
