

Irrigation Efficiency for Turfgrass Systems

Irrigation methods need to address how best to conserve water. Three principles of efficient irrigation are:

- Amount of water applied is appropriate
- Timing of water application is suitable to turf and weather conditions
- Water is applied uniformly and efficiently

Major sources of inefficiency include:

- Amount of water applied in excess of what is needed
- Non-uniform application of water
- Precipitation or irrigation rate higher than soil infiltration rate
- Faulty or malfunctioning equipment
- Windy conditions

Factors to consider include:

- Soil type, as sandy soils will saturate quicker and dry out faster
- Grass species can also influence the amount of irrigation required, as some require less water
- Slopes and grades can influence water requirements as water will run off and not soak into the soil.



Fig. 1. Irrigation at the NSAC turfgrass research site.

Water conservation reduces:

- Irrigation and labour costs
- Time spent irrigating or repairing system
- Potential of wasting water and leaching nutrients
- Adverse effects to turfgrass systems from over-irrigation. These effects can include lower oxygen levels in the soil and increased susceptibility to disease and pathogens.

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

