



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection – Water Management Act
 Program
Seasonal Demand Management Plan
For Permitted Water Management Golf Courses

 Facility Name

 Permit #

 City or Town

Plan Requirements

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Permitted golf courses with irrigation sources under the Water Management Act (WMA) are required to implement a Seasonal Demand Management Plan (SDMP) at permit renewal that, at a minimum, reduces nonessential outdoor water use¹ based on the criteria below.

The SDMP must be consistent with the following when a “Drought Advisory” or greater level (i.e., Watch, Warning or Emergency) is declared by the Massachusetts Drought Management Task Force² (MDMTF) from May 1st to September 30th.

During a Drought Advisory or greater level, nonessential outdoor water use shall not occur between the hours of 9 am to 5 pm when evapotranspiration rates are highest. Hand-watering of hot spots may occur at anytime as necessary.

During a Drought Advisory or greater level, reductions are required in the irrigation (as applicable) of fairways and roughs consistent with those percentages outlined in Section C of this document.

During a Drought Emergency, should the Governor proclaim a state of Emergency, more stringent water use reductions may be required. At a minimum, all non-essential water use (including fairways and roughs) must cease.

Restrictions shall be based on the drought level for the MDMTF region where the golf course is located. Drought levels may be monitored at:

<http://www.mass.gov/dcr/watersupply/rainfall/drought.htm>.

Golf course facility managers shall be responsible for tracking drought declarations and recording when restrictions are implemented.

Complete and return this document to your MassDEP Regional Office.

Should you have any questions, contact Duane LeVangie at 617-292-5706, or Tom LaMonte at 617-292-5532.

A. Golf Facility Information

 Facility Name

 City/Town

 Course Manager

 Phone Number

 Email

 Date

¹ “Nonessential outside water use” means uses that are not required: (a) for health or safety reasons; (b) by regulation; (c) for the production of food and fiber; (d) for the maintenance of livestock; or (e) to meet the core functions of a business. Examples of nonessential outdoor water use includes: the irrigation of lawns or landscaping, washing vehicles, parking lots, driveways and/or sidewalks, etc.

Examples of essential water use not subject to restrictions are: irrigation to establish a new lawn during the months of May and September; irrigation for the production of food and fiber or the maintenance of livestock; irrigation by plant nurseries as necessary to maintain stock; irrigation by golf courses as necessary to maintain greens and tees, and limited fairway watering; and irrigation of public parks and recreational fields.

² See Massachusetts Drought Management Task Force at <http://www.mass.gov/dcr/watersupply/rainfall/drought.htm>.



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B. Best Management Practices (BMPs)

Check the following BMPs for water conservation and management that you implement.

- Yes No 1. Water use is 100% metered.
- Yes No 2. Source meters are regularly calibrated.
- Yes No 3. New and existing irrigation ponds are lined with impervious material.
- Yes No 4. Implementation of an irrigation system inspection and maintenance program that includes leak detection and repair, sprinkler head maintenance and replacement.
- Yes No 5. Regular inspection of course to determine irrigation needs.
- Yes No 6. Implementation of a Turf Management Plan.
- Yes No 7. Use of soil sensors and/or soil samples to monitor soil moisture.
- Yes No 8. Use of weather stations to generate irrigation cycles.
- Yes No 9. Use of computer control irrigation system.
- Yes No 10. Use of low trajectory sprinkler heads.
- Yes No 11. Use of wetting agents.
- Yes No 12. Use of drought tolerant grasses and shrubs.
- Yes No 13. Regular aerating of turf to increase the percolation of water into the soil.
- Yes No 14. Use of mulch materials in planting beds to improve water-holding capacity.
- Yes No 15. Elimination of irrigation whenever possible, such as in rough areas.
- Yes No 16. Limited ornamental watering.
- Yes No 17. Employee training in water conservation and management.
- Yes No 18. Raising turf height during dry weather and drought conditions.
- Yes No 19. Reuse of wastewater and/or stormwater for irrigation.

Comment:



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C. Seasonal Demand Management Approach for Water Use Reductions

Demand management protocols frequently require more stringent water use reductions as the water supply availability worsens and triggers dictate when different responses are needed.

The two tables below reflect two approaches to indicate water use reductions. You may choose to complete (fill in the appropriate table) the Acres Table or the Time Table to reflect your water use reduction approach, or otherwise describe your specific water use reduction plan (Option 3). The Acres Table reduces water use by limiting the number of irrigated acres for fairways, roughs, and ornamentals. Notice the water use acreage percent reduction per unit area. The Time Table reduces irrigation by limiting the length of irrigation cycles.

Check and complete Option 1, 2 or 3.

Check box if choosing Option 1.

1. ACRES TABLE (Fill in number of acres in all blank cells)

Massachusetts Drought Levels	Watering Less Irrigated Acreage as Drought Severity Increases Watering allowed up to designated percent							
	Irrigated Tees & Greens		Irrigated Fairways		Irrigated Roughs		Irrigated Landscape & Ornamentals	
	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres
Normal	100%		100%		100%		100%	
Advisory †	100%	XXX	80%		50%		*	XXX
Watch †	100%	XXX	60%		*	XXX	*	XXX
Warning †	100%	XXX	40%		*	XXX	*	XXX
Emergency **	TBD	TBD	TBD	TBD	*	XXX	*	XXX

† Nonessential outdoor irrigation use shall not occur between the hours of 9 am and 5 pm, except that hand-watering of hot spots may occur at any time

* No irrigation allowed.

** Mitigation actions to be determined by the Governor’s Emergency Proclamation.



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C. Seasonal Demand Management Approach for Water Use Reductions

Check box if choosing Option 2.

2. TIME TABLE (Fill in time in minutes in all blank cells)

Massachusetts Drought Levels	Irrigating Less Volume as Drought Severity Increases Reduced Minutes in Irrigation Cycles						
	Irrigated Tees & Greens	Irrigated Fairways		Irrigated Roughs		Irrigated Landscape & Ornamentals	
		Percent	Time (min.)	Percent	Time (min.)	Percent	Time (min.)
Normal	Full cycle (100%)	Full cycle		Full Cycle		100%	
Advisory †	Full cycle	80%		50%		*	
Watch †	Full cycle	60%		*	XXX	*	
Warning †	Full cycle	40%		*	XXX	*	
Emergency **	TBD	TBD	TBD	*	XXX	*	

† Nonessential outdoor irrigation use shall not occur between the hours of 9 am and 5 pm, except that hand-watering of hot spots may occur at any time

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Along with completing one of the tables, provide any additional description or narrative explanation as warranted on how your golf course plans to implement required irrigation reductions as drought conditions worsen. This could be through such practices as: limited rotation of sprinkler heads, limits on water pressure, limiting irrigation to hot spots, eliminate non-target watering, etc. (Attach additional pages as necessary.)

Check box if choosing Option 3.

3. Alternative Approach

The Department offers flexibility for equivalent irrigation use reductions. Golf courses that have developed an equivalent plan that quantifies real water use reductions by other means that can relate to the Massachusetts Drought Management Task Force action levels, may submit their plan for the Department’s review and approval.

(Attach additional pages as necessary.)

