WWMDC Water Conservation Regulations
Adopted by WWMDC on 2011 Dec 21
Wayland, MA

WHEREAS, the conservation of fresh water resources is a critical goal throughout the Commonwealth of Massachusetts and in the WWMDC service area in particular;

WHEREAS, recent innovations have produced significant reductions in the amount of potable water required for certain plumbing fixtures and other water using devices without significant cost;

WHEREAS, the purpose of this regulation is to foster water conservation throughout the WWMDC service area;

NOW, THEREFORE, the Wayland Wastewater Management District Commission hereby amends its Rules and Regulations as follows:

1. Label the current paragraph under Article IV, Section 5, Water & Energy Conservation as paragraph (a);

2. Add paragraphs (b) through (g) and Table 1 to Article IV, Section 5, Water & Energy Conservation, as follows:

    (b) All users requiring a connection permit under Article III, Section 1 of these Rules and Regulations that meet the applicability criteria defined in paragraph (c) of this Section shall be subject to the Water Conservation Performance Standards listed in Table 1.

    (c) The requirement to comply with the Water Conservation Performance Standards applies to all New Construction or Significant Renovation over the Threshold Size that has not received a Certificate of Occupancy as of the effective date of this amendment to the WWMDC Rules and Regulations.

        (i) New Construction or Significant Renovation is defined as (1) the construction of a new building for which a Certificate of Occupancy is required or (2) an increase in the square footage of a building or structure of greater than or equal to 25 percent or (3) an increase in design flow of a building or structure, as calculated pursuant to 310 CMR 15.203, of greater than or equal to 25 percent or (4) the addition of one or more bedrooms to an existing building.

        (ii) The Threshold Size is defined as a peak day flow of 100 gallons per day for commercial uses and 440 gallons per day for residential

uses. In calculating the peak day flow, the user must consider the entire building or structure and not just the addition or renovation. For users with evaporative cooling systems, estimated peak day flow must include estimated cooling tower blow down volumes.

(d) The Water Conservation Performance Standards (Table 1) apply only to new plumbing fixtures or water using devices installed in New Construction or Significant Renovation; the Standards do not apply to existing plumbing fixtures or water using devices in the same building or structure. The user shall present plans in compliance with these regulations prior to issuance of a building permit. The user shall demonstrate compliance with the Water Conservation Performance Standards to the satisfaction of the WWMDC prior to the issuance of the Certificate of Occupancy for the New Construction or Significant Renovation.

Table 1: Water Conservation Performance Standards

Water Saving Fixtures

	Residential		Commercial	
Appliance/Fixture	**Baseline Water Usage**	**Water Conservation Performance Standard**	**Baseline Water Usage**	**Water Conservation Performance Standard**
Toilet	1.6 gal/flush	1.3 gal/flush	1.6 gal/flush	1.3 gal/flush
Urinal			1.0 gal/flush	0.5 gal/flush
Shower	2.5 gpm (showerhead)	2.0 gpm (showerhead)		
Residential Clothes Washer	Varies	6.0 Water Factor (See Note 3)		
Lavatory Faucet	2.2 gpm	1.5 gpm	2.2 gpm	1.5 gpm
Commercial prerinse spray valves			1.6 gpm	1.4 gpm
Kitchen Faucet	2.2 gpm	2.2 gpm		
Residential Dish Washer	Varies	5.0 gal/cycle		
Dishwasher Single Tank Rack Conveyor - High Temp			1.13 gal/rack	0.700 gal/rack
Dishwasher Single Tank Rack Conveyor - Low Temp			1.23 gal/rack	0.790 gal/rack
Dishwasher Multi-Tank Rack Conveyor - High Temp			1.1 gal/rack	0.540 gal/rack
Dishwasher Multi-Tank Rack Conveyor - Low Temp			0.99 gal/rack	0.540 gal/rack
Ice Machine			<25 gal/100 lbs ice	25 gal/100 lbs ice
Ice Machine Self Contained Unit			<35 gal/100 lbs ice	35 gal/100 lbs ice

Notes:

1) Baseline values are based on the Massachusetts State Plumbing Code and values published by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Program. These values are presented for reference only.

2) Water Conservation Performance Standard values are based on the U.S. Environmental Protection Agency, Water Sense and Energy Star programs, and LEED documents.

3) The Water Factor is a water performance metric published by the U.S. Environmental Protection Agency Energy Star Program that allows the comparison of clothes washer water consumption. WF=Q/C, where Q is the quotient of the total weighted per-cycle water consumption, and C is the capacity of the clothes washer.

(e) All users requiring a connection permit under Article III, Section 1 of these Rules and Regulations that install a new evaporative cooling system shall be prohibited from using a single pass cooling system. In addition, such users are subject to the following requirements:

(i) At least 10 days prior to the installation of a new cooling system, the user shall submit a written estimate of the daily volume of tower blow down for the new evaporative cooling system to the WWMDC. This estimate of the daily volume of tower blow down shall be based on seasonal periods when the largest monthly blow down volumes are expected and should be calculated and stamped by a Massachusetts Registered Professional Engineer.

(ii) All new evaporative cooling system towers shall have separate blow down metering systems to monitor and record blow down water volumes. Blow down water volumes shall be reported to the WWMDC on a monthly basis.

(iii) At least 10 days prior to the installation of a new [heating or] cooling system, the user shall submit a list of any chemical additives to be used in the system as well as the estimated amount of their use. All chemical additives used in new [heating] or cooling systems shall be approved by the WWMDC prior to use to ensure compatibility with the treatment system and effluent limits.

(f) For the purposes of evaluating the effectiveness of this Article and of the Rules and Regulations generally, the WWMDC may require any user requiring a connection permit under Article III, Section 1 of these Rules and Regulations, whether the connection is existing or new, to meter actual flow to the Wastewater Sewer.

(g) If in the sole discretion of the Commission, full compliance with this Article IV represents an unreasonable hardship to the user, as measured by costs disproportionate to the benefits of full compliance, the Commission may waive any requirement imposed pursuant to paragraphs (b) through (f) of this Article.

3. These amendments shall take effect upon their passage, approval and publication, as provided by law.

PASSED this 21st day of December, 2011.

Fred Knight, chair
David Schofield
Sam Potter