

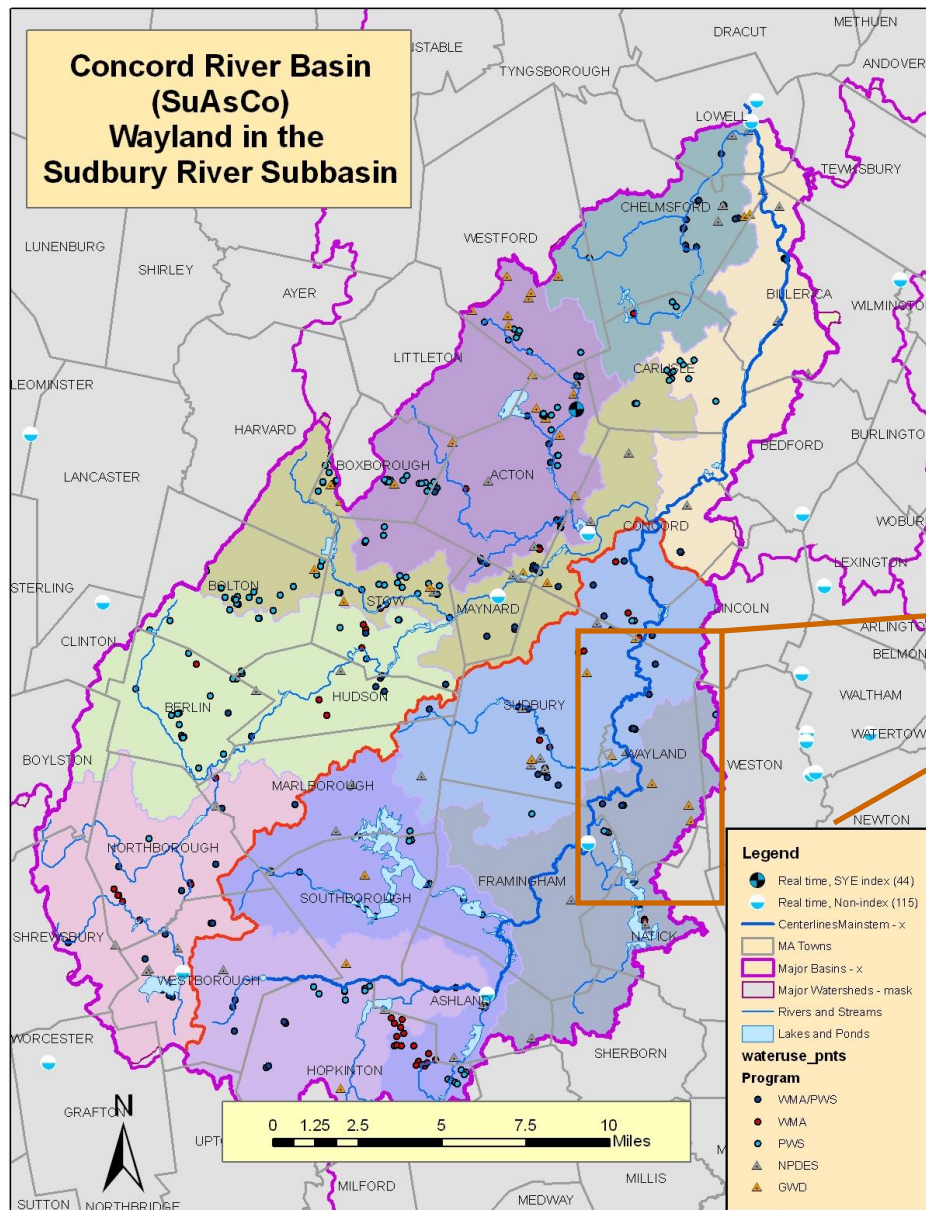
Water Management Act Program

Water Conservation and the Water Management Program Town of Wayland



April 29, 2009

**Concord River Basin
(SuAsCo)
Wayland in the
Sudbury River Subbasin**



**Town of
Wayland**

Town of Wayland

WMA Authorized withdrawals (8 wells)



Wayland and WMA

Registration #31431502 ... 1.66 mgd
Permit #9P431431501 ... 0.11 mgd
Total authorized volume 1.77 mgd

	2006	2007	2008
Water use	1.38 mgd	1.75 mgd	1.50 mgd
RGPCD	87	87	70
UAW	17%	21%	16%

Administrative Consent Order (ACO) 2002 - for exceeding volume at 2.0 mgd

Requirements:

- Leak detection and repair
- Retrofit all public buildings with low flow devices
- Provide low flow devices to consumers at cost
- Enact, implement and enforce a bylaw regulating automatic sprinklers, the clearing of land, and maintenance of lawns

Water Conservation per Water Management Permit

- Performance standards
 - 65 RGPCD
 - 10% UAW
- Seasonal Demand Management Plan
- Water use restrictions
 - Drought
 - Seasonal
 - Streamflow
- Offsets

20-Year Permit Renewal Timeline Concord River Basin 2011

- Winter 2011: Meeting to discuss demand projection forecasts
- May 31, 2011: Filing date / Renewal Form (with completed Conservation Form)
- August 31, 2011: Expiration of current permit and ...

Renewal complete

DEP issues:

- Interim permit
- Draft permit
- 30-day comment

Aug.2011

OR

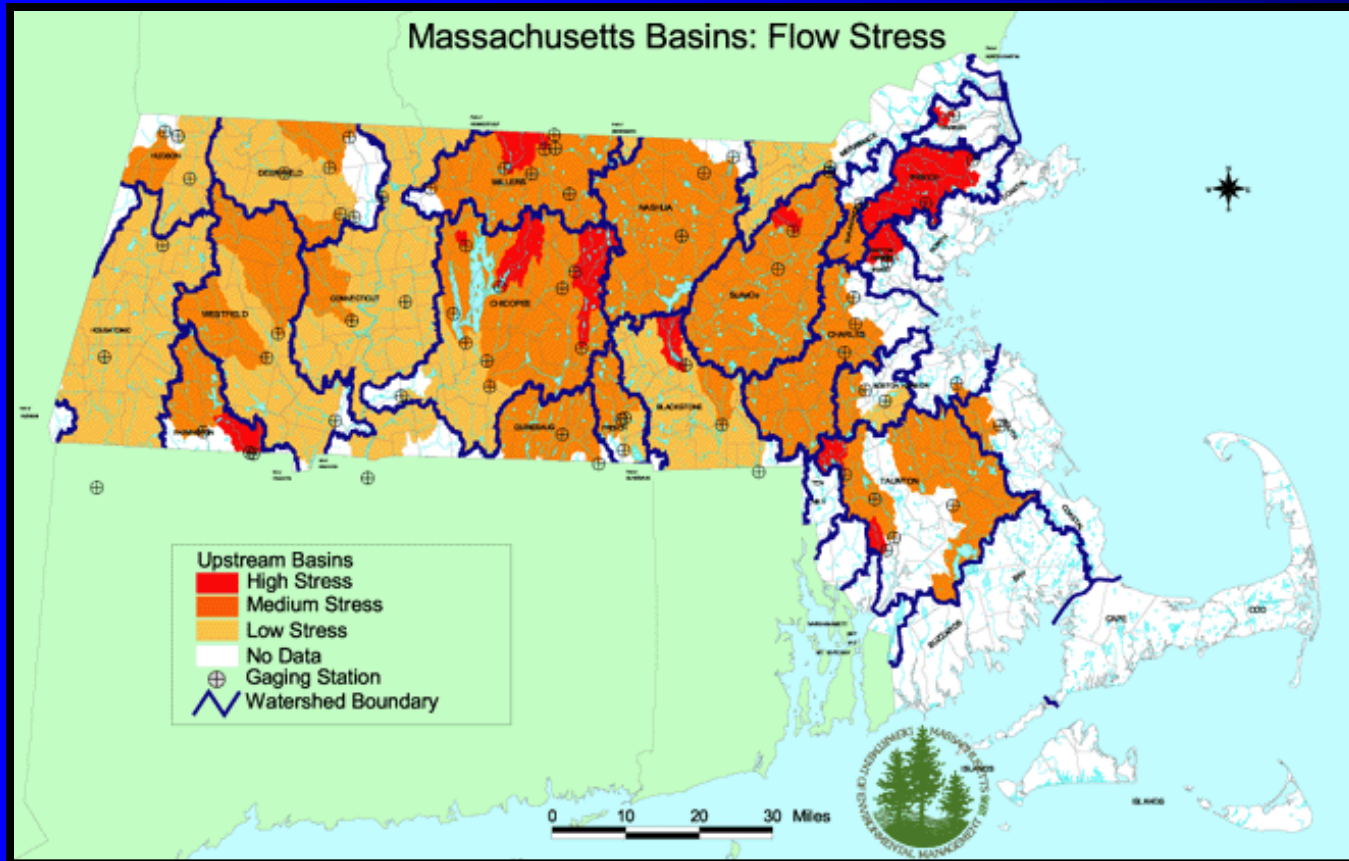
Renewal incomplete

DEP issues:

- Interim permit
- Order-To-Complete (OTC)
 - Applicant responds to OTC (30 days)
- Draft permit
- 30-day comment

Aug.2011

Stressed Basins



- 16 High Stress
- 36 Medium Stress
- 18 Low Stress
- Unassessed: mostly coastal basins

Source: Water Resource Commission stressed basin report (2001)
http://www.mass.gov/dcr/waterSupply/intbasin/stressed_basins.htm
Based on USGS subbasin stream gages

PWS Performance Standards and Conditions for Renewed Permits

- 65 residential gallons per capita day (RGPCD)
- 10% Unaccounted-for-Water (UAW)
- WRC Conservation Standards
- Seasonal Demand Management Plan (SDMP)
includes water use restriction* based on
 - Streamflow level for aquatic habitat protection
 - Drought Advisory or greater (as declared by Massachusetts Drought Management Task Force (MDMTF))

Concord River
Watershed:
Medium Stress
Basin

* Water use restriction on non-essential water uses

WRC Conservation Standards

July 2006

- Comprehensive planning
- Water Audits and Leak Detection
- Metering
- Pricing
- Residential Use
- Public Sector Use
- Industrial, Commercial and Institutional Use
- Agricultural Use
- Lawn and Landscape
- Public Education and Outreach

Water Use Restriction

- Mandatory restrictions limit nonessential outside water use between the hours of 9 am and 5 pm
- Control nonessential outside water uses that are not required for
 - Health or safety reasons
 - By regulation
 - Production of food or fiber
 - Core functions of a business
 - Maintenance of livestock
- Allowable uses before 9 am/ after 5 pm, 1 or 2 days per week
 - All outdoor water use
- Allowable uses before 9 am / after 5 pm, 7 days per week
 - Hand held hoses to water lawns, gardens, etc.
 - Irrigation systems to establish new lawns
- Allowable uses - anytime
 - Use of watering cans
 - Sprinklers and hoses used for children's recreation

Environmental Triggers for Implementing Nonessential Water Use Restriction

By May 1, 2012:

- Restriction at Drought Advisory or greater and
- Seasonal restriction May thru September OR

Restriction at real-time USGS streamflow gage

Wayland streamflow triggers:*

May-June: Bioperiod for fish spawning: 0.86 cfsm 344 cfs

Jul-Aug-Sep: Bioperiod for fish rearing and growth: 0.25 cfsm 100 cfs

at USGS Gage 01099500 Concord R. below R Meadow Brook, at Lowell

* DEP's selected Aquatic Base Flow (ABF) for restrictions based on USGS Index Gage flow data compiled by DCR (www.mass.gov/envir/mwrc/streamflows.htm)

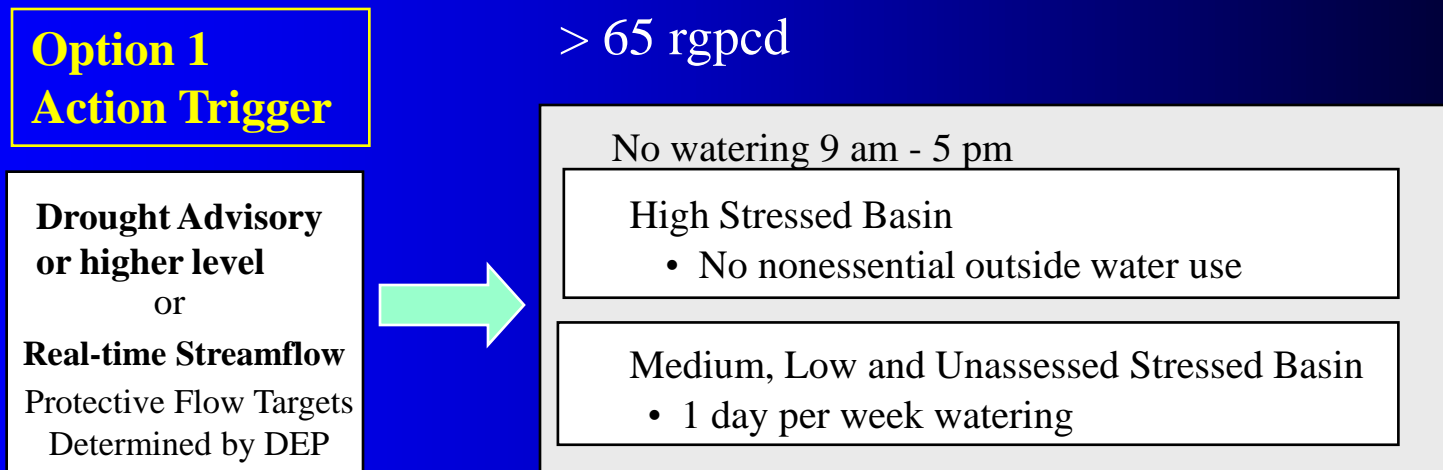
Index gage flows - represent least-altered flow in Massachusetts and indicate a healthy stream habitat

Concord River Basin

Limits on Nonessential Outdoor Water Use

Permit Requirement: By May 2012

Water Use Restriction Allowance on Withdrawals



- If below 65 RGPCD, permittee implements their own plan with DEP minimums of nonessential outdoor water use from 9 am to 5 pm.
- Exemptions may apply to communities with seasonal populations and/or water supply reservoirs.

Concord River Basin

Limits on Nonessential Outdoor Water Use

Permit Requirement: By May 2012

Water Use Restriction Allowance on Withdrawals

> 65 rgpcd

Option 2
Action Trigger

Seasonal Approach
May 1 thru Sept. 30



No watering 9 am - 5 pm

High Stressed Basin

- 1 day per week watering

Medium, Low and Unassessed Stressed Basin

- 2 days per week watering

MDMTF declares a Drought Advisory or higher level

High Stressed Basin

- No nonessential outside water use

Medium, Low and Unassessed Stressed Basin

- 1 day per week watering

- If below 65 RGPCD, permittee implements their own plan with DEP minimums of no nonessential outdoor water use from 9 am to 5 pm.
- Exemptions may apply to communities with seasonal populations and/or water supply reservoirs.

WMA use of DCR demand projections

Example Town A:

Total authorized volume: 0.29 mgd
(1988-2008 WMA Permit)
No registered volume

Base ADD: 0.18 mgd
Base RGPCD: 58
Base UAW: 3.5%

Performance
standards
met

Increase to 65 / 10

58 / 3.5%

Projection Years	High/Medium Stress 65/10 Years 1 -5	Years 6 – 10	Low Stress Years 11 - 15	Years 16 - 20	Current Trends
2008-2013	0.25	0.23	0.22	0.22	0.21
2013-2018	0.26	0.26	0.24	0.24	0.22
2018-2023	0.27	0.27	0.27	0.26	0.23
2023-2028	0.28	0.28	0.28	0.28	0.24



MassDEP Water Management Act Program

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