



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

IAN A. BOWLES  
Secretary

LAURIE BURT  
Commissioner

December 28, 2009

Wayland Water Department  
Attn: Jack Mitchell  
41 Cochituate Road  
Wayland MA 01778

Town: Wayland  
PWS Number: 3315000  
WMA Permit #: 9P4-3-14-315.01  
Program: Water Management Act  
Action: 5-Year Review Order to Complete

Dear Mr. Mitchell:

The Department of Environmental Protection ("MassDEP") is beginning its 5-Year Review of the Water Management permit issued to the Wayland Water Department under the Water Management Act (MGL 21G). We have conducted an initial compliance review of the permit. Based upon this review we have a number of questions that need to be addressed.

Regulations governing the 5-Year Review of the Water Management Program 310 CMR 36.33(4) require all permit holders to apply for review of their permit. MassDEP requires you complete and return the enclosed 5-Year Review Request Form, together with a response to the attached Order to Complete, **by February 26, 2010**, to: MassDEP, Attn: Duane LeVangie, One Winter Street, Boston, MA 02108.

If you have any questions concerning the permit review process, please contact me at 617-292-5706 or by E-mail at [Duane.LeVangie@state.ma.us](mailto:Duane.LeVangie@state.ma.us).

Sincerely,

Duane LeVangie, Manager  
Water Management Program

Cc: Wayland Board of Selectmen, 41 Cochituate Road, Wayland MA 01778  
Jen Pederson, MWWA (via E-Mail)

Enclosure: Water Conservation Questionnaire (Wayland Water only)

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This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD# 1-866-539-7622 or 1-617-574-6868.

MassDEP on the World Wide Web: <http://www.mass.gov/dep>

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**ORDER TO COMPLETE  
THE 5-YEAR REVIEW FOR PERMITS IN THE CONCORD RIVER BASIN  
MASSACHUSETTS WATER MANAGEMENT ACT, M.G.L. c 21G**

**WAYLAND WATER DEPARTMENT ("Wayland")  
PERMIT # 9P4-3-14-315.01**

MassDEP has begun the 5-Year Review of Wayland's Water Management permit. This Order to Complete is a description of the additional information required to complete the 5-Year Review of your permits. MassDEP may, at its option, agree to a request for an extension of the time allowed to submit all or part of the additional information required, if the request is received in writing by February 26, 2010. Please note that failure to respond by the order deadline date could result in enforcement action by MassDEP. MassDEP is conducting this 5-Year Review to assess Wayland's compliance with its existing permit conditions and to determine what modifications may be necessary based upon recent water use and recently implemented policy and standards.

Following the completion of the review of your response to this Order to Complete MassDEP will be preparing a draft of the modified permit issued to the Town of Wayland, Board of Selectmen (as opposed to the Water Department) for your review and comment. Any modified conditions of your renewed permit will be based on your response, and will be consistent with the Massachusetts *Water Conservation Standards* approved by the Water Resource Commission in July 2006 these standards can be found at:

[http://www.mass.gov/Eoeea/docs/eea/water/water\\_conservation\\_standards.pdf](http://www.mass.gov/Eoeea/docs/eea/water/water_conservation_standards.pdf)

MassDEP looks forward to working with you as we begin to finalize the review of your Water Management permit. Please submit the following requested information and documentation as depicted in bold text to MassDEP-Water Management Program, Attn: Duane LeVangie, One Winter Street, Boston, MA 02108. **Additionally, please sign and return the enclosed "Water Management Act Permit 5-Year Review Request" form.**

## EXISTING PERMIT CONDITIONS

### 1. Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume

The total (registered plus permitted) authorized withdrawal volume for Wayland from the Concord River Basin was 1.77 million gallons per day (MGD) for the period from 10/17/2003 to 8/31/2011. Based on the Annual Statistical Reports submitted, MassDEP has determined that Wayland is in compliance with the authorized annual withdrawal volume from 2005 through 2008.

Wayland’s wells 3315000-01G through 3315000-07G are WMA registered only; therefore those sources are limited to the total registered volume. Wayland has reported total volumes from the registered wells in compliance with the registered volume.

Wayland	2008	2007	2006	2005
Total Authorized Volume	1.77	1.77	1.77	1.77
Actual Withdrawal	1.50	1.75	1.57	1.64
Registered Volume	1.66	1.66	1.66	1.66
Actual Withdrawal from Registered Sources	1.29	1.49	1.24	1.35

### 2. Special Condition 2, Maximum Authorized Daily Withdrawal Volume

This condition specifies that the maximum daily volume that Wayland is authorized to withdraw from the Chamberlain Well is the Zone II rate. The maximum daily withdrawal volume reported on the 2005 and 2006 ASRs is an exceedance of the approved rate. Further review of the monthly withdrawal volumes indicates that the exceedances were most likely not prolonged and the max daily volumes reported for 2007 and 2008 were in compliance.

Well Name	Approved Rate	2008	2007	2006	2005
Chamberlain Well (-08G)	0.828	0.674	0.602	1.039	0.848

### 3. Special Condition 3, Zone II Delineations

Wayland has an approved Zone II delineation for the Chamberlain Well and for the seven registered wells. No further Zone II work is required.

### 4. Special Condition 4, Wellhead Protection

Wayland was required to demonstrate compliance with 310 CMR 22.21(2) Wellhead Protection requirements for the Chamberlain Well by October 30, 2003. MassDEP review of Wayland’s Water Supply Protection District Bylaw indicates that the bylaw is not sufficient and needs to be amended. Contact Catherine Hamilton of MassDEP Boston (617) 556-1070

for a detailed description of the necessary changes. **Submit to MassDEP draft amendments to the Water Supply Protection District Bylaw for review and approval.** For the portion of the approved Zone II area that extends into surrounding communities Wayland is required to meet Best Effort compliance. Until the applicable surrounding communities pass wellhead protection requirements that satisfy the Regulations, MassDEP's Best Effort Requirement must be repeated for new source approvals (including replacement wells); monitoring waiver applications; WMA water withdrawal permit reviews or amendments; Zone II re-delineations; and Sanitary Survey stipulations. Wayland's Zone II for the Chamberlain Well extends into the town of Sudbury. **Submit to the appropriate municipal officials in Sudbury a request that their groundwater protection controls be amended to include the Zone II area for the Chamberlain Well and to meet Massachusetts wellhead protection requirements of the Drinking Water Regulations (310 CMR 22.21). Submit a copy of the request to MassDEP as part of your response to this Order to Complete.** The request should include a map depicting the Zone II delineation and a copy of 310 CMR 22.21(2).

5. Special Condition 5, Water Conservation Requirements

**Complete and return the enclosed Water Conservation Questionnaire for Public Water Suppliers.** This document can be also downloaded from the Internet at <http://www.mass.gov/dep/water/laws/outline.htm#wrcform>.

Metering

Wayland is required to have 100% metering of its distribution system including all public buildings. The 2008 ASR indicates that the distribution system is 99% metered and that all public buildings are not metered. **Which service connections are not metered? Provide a schedule to install meters on those connections.** Annual calibration of master meters is required; however the 2008 ASR states that the meters were last calibrated in 2007. **Does Wayland have a program to insure that master meters are calibrated annually?** Additional questions regarding Wayland's metering program are included on the enclosed *Water Conservation Questionnaire*.

Leak Detection and Repair

Wayland has completed partial leak detection surveys throughout the years and reported that all leaks were repaired. The modified permit to be issued as a result of this review will require full surveys every three years unless UAW exceeds 10% any year and does not increase by 5% within one year. Additional questions regarding the leak detection and repair program are included on the enclosed *Water Conservation Questionnaire*.

Plumbing , Pricing and Education

Questions regarding the plumbing, pricing and education requirements are included on the enclosed *Water Conservation Questionnaire*.

Water Main Flushing

Wayland has reported water main flushing and other confidently estimated municipal uses on the ASR as required.

## MODIFIED PERMIT CONDITIONS

As noted above, MassDEP will be modifying Wayland’s Water Management permit subject to the July 2006 Massachusetts *Water Conservation Standards*. The modified permit will have conditions that will require the following, at a minimum:

- Residential water use no greater than 65 gallons per capita per day;
- Unaccounted for water no greater than 10%;
- Seasonal limits on nonessential outdoor water use; and
- Offset Feasibility Studies for permittees that exceed the baseline withdrawal volume (Baseline) established for each permittee.

### 8. Residential Gallons per Capita Day (RGPCD) and Unaccounted for Water (UAW)

The table below specifies RGPCD and UAW values as calculated by MassDEP from information submitted on Wayland’s Annual Statistical Reports filed for 2005 through 2008. Wayland entered into an Administrative Consent Order agreement with MassDEP in 2002 that outlined numerous requirements intended to reduce both the RGPCD and UAW.

	2008	2007	2006	2005
RGPCD	70	87	87	104
UAW	16	21	17	3.6

### 9. Seasonal Limits on Nonessential Outdoor Water Use

Under the modified permit, Wayland may be required to limit summer water withdrawals by either a calendar trigger (May 1 to September 30) or by a streamflow trigger related to the USGS gage 01099500 - Concord River below River Meadow Brook, Lowell. Nonessential outdoor water use will be restricted from 9 am to 5 pm and may be further restricted to the number of days per week depending on the calculated RGPCD for the previous year.

### 10. Water Withdrawals that Exceed Baseline Withdrawal Volumes

Baseline water use is determined from the annual average withdrawal volumes for 2003 to 2005, the registered volume, or the 2005 withdrawal volume, whichever value is highest. The proposed baseline withdrawal volume for Wayland is 1.66 MGD, or 605.9 MGY, the registered withdrawal volume. Beginning with the second full calendar year after the modification of this permit, Wayland will need to perform an offset feasibility study if the withdrawal volume for sources in the Concord River Basin exceeds the baseline withdrawal volume. The requirement for conducting an offset feasibility study is intended to minimize the impact of increased water withdrawals by requiring permit holders to use the most cost effective and locally appropriate method for “keeping water local”. MassDEP has determined that a wide variety of activities exist for returning water to the basin or preventing water loss in the basin, such as reducing seasonal or non-essential outside water

use, reducing infiltration and inflow, recharge of stormwater, and retrofitting existing development using low impact development principles.



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**WATER MANAGEMENT PERMIT  
5-YEAR REVIEW REQUEST  
WAYLAND WATER DEPARTMENT**

Regulations governing the Water Management Program 310 CMR 36.33(4) require that all permit holders file a request for review every five years. MassDEP requires your signature authorizing the 5-Year Review. Please sign the document below, attach it to the additional information requested in MassDEP's letter, and return it to MassDEP **by February 26, 2010**. Upon receipt of the information MassDEP will begin a final review of permit #9P4-3-14-315.01.

Please return all information to:

MassDEP-WMA Program  
Attn: Duane LeVangie  
1 Winter Street  
Boston, MA 02108

**Certification Statement**

I certify, under penalty of law, that this review request and all attachments were prepared under my supervision, in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

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Signature/Title

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Date