



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WESTERN REGIONAL OFFICE

436 Dwight Street • Springfield, Massachusetts 01103 • (413) 784-1100

DEVAL L. PATRICK
Governor

TIMOTHY P. MURRAY
Lieutenant Governor

IAN A. BOWLES
Secretary

ARLEEN O'DONNELL
Commissioner

Board of Water Commissioners
Belchertown Water District
2 Jabish Street
Belchertown, MA 01007

February 1, 2007

Re: Belchertown - WMA
Belchertown Water District
WMA Permit# 9P-1-06-024.01
5 Year Review and Permit Modification

Dear Board Members:

Attached please find the following documents:

- Findings of Fact in Support of the Modified Permit Decision; and
- DRAFT Water Management Act Permit 9P-1-06-024.01 issued to the Belchertown Water District

The Department anticipates issuing the final permit on March 1, 2007. Please review the draft permit. If you have any questions regarding the draft permit and would like to meet and discuss them prior to final issuance, please contact Jim Bumgardner at (413) 755-2270.

Sincerely,

Deirdre Cabral
Drinking Water / Municipal Services Chief
Resource Protection

Cc with attachments:

Jim Bumgardner, MassDEP WERO, Duane Levangie, MassDEP Boston WMA
Michael Gorski, MassDEP WERO Regional Director
Timothy Lofland, Superintendent, Belchertown Water District

File locations: Y:\DWP Archive\WERO\Belchertown-DRAFT Permit 9P-1-06-024.01-WMA-2007-02-01
WERO File: W:\brp\ws\WMA\Permits\5 Year Permit Review\Belchertown\BelchertownModPermit07.doc

Communication for Non-English Speaking Parties (310 CMR 1.03(5)(a))

English

This document is important and should be translated immediately.

Spanish

Este documento es importante y se debe traducir inmediatamente.

Portuguese

Este original é importante e deve ser traduzido imediatamente.

Italian

Questo documento è importante e dovrebbe essere tradotto immediatamente.

Greek

Αυτό το έγγραφο είναι σημαντικό και πρέπει να μεταφραστεί αμέσως.

French

Ce document est important et devrait être traduit immédiatement.

Chinese (traditional)

這個文件重要和應該立刻被翻譯。

这个文件重要和应该立刻被翻译。



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**DRAFT Findings of Fact in Support of the Decision to Issue a Modified Permit
In the Connecticut River Watershed
Water Management Permit #9P-1-06-024.01**

The Massachusetts Department of Environmental Protection (the Department or MassDEP) has completed its 5 Year Review of the Belchertown Water District Water Management Act (WMA) permit

The Water Management Act

The Water Management Act requires that the Department issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- Reasonable conservation consistent with efficient water use;
- Reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, flood plains; and
- Reasonable economic development and job creation.

To better achieve the balance of competing water uses mandated by the Act, the Department has adopted the "Water Management Policy For Permit and Permit Amendment Applications and 5-Year Review, Effective Date: April 2, 2004" and the "Guidance Document for Water Management Act Permitting Policy, Effective Date: January 17, 2006". The Policy, WMA Policy BRP/ DWM/DW/P04-1, and Guidance, Guidance BRP/DWM/DW/G05-01, can be found on the Department's web site at <http://www.mass.gov/dep/water/laws/policies.htm#wmgt>. The Policy and Guidance identify specific performance standards and conditions to be applied to new Water Management permits and to existing permits at the time they are amended, during 5-year permit review, or permit renewal. The Department has applied these performance standards and conditions in the Belchertown Water District (BWD) permit.

In determining the performance standards in Water Management permits, the Department relies primarily upon the stressed basin determinations contained in the Water Resources Commission's (WRC) Stressed Basins Report approved December 13, 2001, and upon future revisions to these stressed basin determinations by the WRC. The Department also conducts reviews of other available research and reports by the United States Geological Survey, the Department's Watershed Water Quality Assessment Reports and any other pertinent reports available for specific river basins.

BWD's permitted source is located in the Connecticut River Watershed, which is identified as a low stress basin by the WRC's Stressed Basins Report. The map of stressed basins can be reviewed at the following link: <http://www.mass.gov/dep/water/laws/policies.htm#wmgt> under "Water Management Policies", Flow Stress Map. The Policy and Guidance establish the following performance standards for all permittees that withdraw water from low stress river basins:

1. Residential gallons per capita day water use (RGPCD) of 80 gallons or less;
2. Unaccounted for water (UAW) of 15% or less;

While these performance standards represent the minimum standards required for compliance with the Permit, the Department believes that they are reasonable standards for effective water conservation and that through the implementation of all the terms and conditions of Water Management permits, permittees can exceed the performance standards for RGPCD and UAW.

The Guidance, as revised on January 17, 2006, provides implementation and enforcement guidelines for permitting. It establishes the following:

- timelines for compliance with the performance standards;
- procedures and requirements for permittees that fail to document compliance with the performance standards within those timelines.

Belchertown Water District's Water Withdrawal History

Belchertown Water District (BWD) is registered for an average annual daily withdrawal volume of 0.19 million gallons per day (mgd) in the Chicopee River Watershed (Registration #1-08-024.01). In keeping with the Department's policy not to "split" WMA registration volumes within a municipality when the town is in two or more watersheds, that volume is applied to this permit in the Connecticut River Watershed. Consequently, portions of the withdrawals listed in the following Table are from the Chicopee River watershed.

Year	Total Annual Withdrawal (mgd)
2005	0.28
2004	0.27
2003	0.24
2002	0.24
2001	0.25
2000	0.25
1999	0.28
1998	0.25
1997	0.24
1996	0.22
1995	0.22

Findings of Fact for the Performance Standards in the BWD Water Management Permit

As required by MGL c 21G, s 11 and 310 CMR 36.00, the Department makes the following Findings of Fact in support of the Permit, and includes herewith its reasons for approving the Permit and for imposing the conditions of approval.

Findings of Fact for Special Permit Conditions

In issuing permits, the Department looks primarily at site-specific impacts and other issues specific to the system, such as impacts to nearby streams, wetlands, or other water users, justification of long-term demand projections and the capacity of permitted withdrawal points. The conditions are intended to ensure the efficient use of water and to mitigate the potential impact of withdrawals.

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume: This Condition reflects the registered withdrawal volume of 0.19 mgd and a permitted increase of 0.18 mgd **for a total authorized withdrawal of 0.37 mgd through November 30, 2008.** The additional authorized withdrawal volume is based on water needs forecasts prepared by the Department of Conservation and Recreation, Office of Water Resources (formerly DEM).

Special Condition 2, Maximum Authorized Daily Withdrawals from each Withdrawal Point: This Condition reflects the approved groundwater withdrawal rate for the Daigle Well of 1.3 mgd. The maximum daily withdrawal rate is equal to the rate approved by the Department for Zone II delineation. The authorized daily maximum withdrawal rate from the Daigle Well far exceeds the maximum authorized annual average withdrawal for BWD. Therefore, the Department does not expect that withdrawals at or near the maximum daily withdrawal rate for the Daigle Well will be sustained for extended periods of time. The maximum daily withdrawal from the Daigle Well in 2005 was 0.318 mgd.

Special Condition 3, Zone of Contribution Delineations: This requirement has been met and no further delineations are required as a condition of this permit.

Special Condition 4, Wellhead Protection: BWD is in compliance with the wellhead protection requirements and no further action is required in this permit.

Special Condition 5, Wetlands and Vernal Pool Monitoring: The Department has reviewed the wetlands monitoring reports submitted by BWD and its consultants and has removed the requirement to perform annual wetlands and vernal pool monitoring for the remaining duration of this permit.

Special Condition 6, Performance Standard for Residential Gallons Per Capita Day Water Use: Using the information reported in the 2005 Annual Statistical Report, the Department calculated the RGPCD for BWD at 70.6 gallons per person per day.

Special Condition 7, Performance Standard for Unaccounted for Water: Using information provided in the 2005 Annual Statistical Report, the UAW for BWD was 20%.

Special Condition 8, Water Conservation Requirements: This Condition is included to incorporate the Water Conservation Standards for the Commonwealth of Massachusetts reviewed and approved by the Water Resources Commission in July 2006.

Special Condition 9, Requirement to Report Raw and Finished Water Volumes: This Condition requires that the raw water withdrawal volume, necessary to evaluate compliance with the conditions

included in this permit, is accurately reported. In the case of the Daigle well, the raw water is the same as the finished water because BWD does not provide filtration treatment of that source that requires water use.

The summary of permit conditions above as part of the Department's findings of fact is not intended to, and should not be construed as, modifying any of the Permit conditions included herein. In the event of any ambiguity between the summary and the actual permit conditions, the Permit language shall be controlling.



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This permit is issued pursuant to the Massachusetts Water Management Act (the Act) for the sole purpose of authorizing the withdrawal of a volume of water as stated herein and subject to the following special and general conditions. This permit conveys no right in or to any property beyond the right to withdraw the volume of water for which it is issued.

PERMIT NUMBER: 9P-1-06-024.01 **RIVER BASIN: Connecticut River**

PERMITTEE:

Belchertown Water District
 2 Jabish Street
 Belchertown, MA 01007

ISSUANCE DATE: August 25, 1994

MODIFICATION DATES: February 1, 2003, February 28, 2007

EXPIRATION DATE: November 30, 2013

NUMBER OF WITHDRAWAL POINTS:

Groundwater: 1
 Surface Water: 0

USE: Public Water Supply Municipal

DAYS OF OPERATION: 365

LOCATION(S): **Table 1: Withdrawal Point Identification**

Withdrawal Point Name	PWS Source ID Code
Daigle Well	1024000-05G

SPECIAL PERMIT CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes the Belchertown Water District (Permittee or BWD) to withdraw water from the Connecticut River Watershed at the rate described below in Table 2. The volume reflected by this permit is in addition to the 0.19 million gallons per day (MGD) authorized to BWD under Water Management Act Registration #1-08-024.01 for withdrawal from the Chicopee River Watershed. The permitted withdrawal volume is expressed both as an annual average daily withdrawal rate (million gallons per day or mgd) and as a total annual withdrawal volume (million gallons per year or mgy) for each five-year period of the permit term.

This permit does not authorize BWD to withdraw greater than its registered volume of 0.19 MGD from the Chicopee River Basin. BWD is authorized to withdraw no more than 0.19 MGD plus the registration threshold from the Chicopee River Basin (Jabish Brook wells). The total combined BWD withdrawal from both the Chicopee River and Connecticut River Basins shall not exceed the Maximum Authorized Annual Average Withdrawal Volume in Table 2 for the Permit + Registration.

The Department of Environmental Protection (the Department) bases these withdrawal volumes on the raw water withdrawn from the authorized withdrawal points, and will use the raw water amount to assess compliance with the registered and permitted withdrawal volumes.

Table 2: Maximum Authorized Withdrawal Volumes

5-Year Periods		Total Raw Water Withdrawal Volumes			
		Permit		Permit + Registration*	
		Daily Average Permit (MGD)	Annual Permit (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period One Years 1-5	8/25/1994 to 11/30/1998	0.1	36.5	0.29	105.85
Period Two Years 6-10	12/1/1998 to 11/30/2003	0.15	54.75	0.34	124.1
Period Three Years 11-15	12/1/2003 to 11/30/2008	0.18	65.7	0.37	135.05
Period Four Years 16-20	12/1/2008 to 11/30/2013	0.21	76.65	0.4	146

* Volumes noted are in effect only if no change to registered volume occurs at the January 1, 2008 registration renewal date.

2. Maximum Authorized Daily Withdrawals from Each Withdrawal Point

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily volumes listed below without specific advance written approval from the Department. The authorized maximum daily volume is the approved rate of each source. In no event shall the combined withdrawals from the individual withdrawal points exceed the withdrawal volumes authorized above in Special Condition 1.

Well Name	PWS Source ID Code	Maximum Daily Rate (MGD)
Daigle Well	1024000-05G	1.3

3. Zone of Contribution Delineations

Department records show that the Daigle Well has MassDEP approved Zone II delineations. No further Zone II work is required as a condition of this permit.

4. Water Supply Source Protection

Wellhead Protection

Department records indicate that the protections in place for the Daigle Well meets the requirements of 310 CMR 22.21(2), therefore, no further wellhead protection work is required. A letter from MassDEP dated October 8, 2004 confirmed you compliance with the wellhead protection regulations.

5. Wetlands and Vernal Pool Monitoring

Department review of the wetlands monitoring reports submitted by BWD and its consultants indicates that no appreciable change in the nearby wetland species dominance has occurred over the permit periods. Therefore, the Department hereby removes the requirement to perform annual wetlands and vernal pool monitoring for the remaining duration of this permit.

6. Performance Standard for Residential Gallons Per Capita Day Water Use

The Department's performance standard for BWD's residential gallons per capita day (RGPCD) is 80 gallons. BWD shall be in compliance with the performance standard by December 31, 2009. BWD shall report its RGPCD water use annually in its Annual Statistical Report (ASR) and document compliance with this performance standard in its ASR for 2009 and each year thereafter.

BWD submitted information in its 2005 ASR sufficient to allow the Department to calculate the BWD RGPCD for 2005. The results of that calculation are that the BWD RGPCD is 70.6 gallons per person per day. Therefore BWD was in compliance with the performance standard during 2005.

BWD shall report its RGPCD and the calculation used to derive that figure as part of its ASR including, without limitation, the source of the data used to establish the service population and the year in which this data was developed.

See Appendix A for additional information on the requirements if the performance standard for RGPCD is not met.

7. Performance Standard for Unaccounted for Water

The Department's performance standard for BWD's unaccounted for water (UAW) is 15% of overall water withdrawal. BWD shall be in compliance with the performance standard by December 31, 2009. BWD shall report its UAW annually in its Annual Statistical Report (ASR) and document compliance with this performance standard in its ASR for 2009 and each year thereafter.

BWD submitted information in its 2005 ASR sufficient to allow the Department to calculate the BWD UAW for 2005. The results of that calculation are that the BWD is 20%. Therefore BWD was not in compliance with the performance standard during 2005.

BWD shall report its UAW and the calculation used to derive that figure as part of its ASR.

See Appendix B for additional information on requirements if the performance standard for UAW is not met.

8. Water Conservation Requirements

At a minimum, BWD shall implement the following conservation measures forthwith and shall be in compliance with these measures on or before December 1, 2008. The Department recognizes that BWD is currently implementing a number of these requirements. Compliance with the water conservation requirements shall be reported to the Department upon request or by December 1, 2008, the date of the next Review/Renewal of the permit, unless otherwise noted below.

Table 5: Minimum Water Conservation Requirements	
System Water Audits and Leak Detection	
1.	At a minimum, conduct a full leak detection survey every three years. The first full leak detection survey shall be completed no later than February 28, 2010 .
2.	Perform a leak detection survey of the entire distribution system within one year whenever the percentage of unaccounted for water increases by 5% or more (for example an increase from 3% to 8%) over the percentage reported on the ASR for the prior calendar year. Within 60 days of completing the leak detection survey, BWD shall submit to the Department for its review a report detailing the leak detection survey, any leaks uncovered as a result of the survey or otherwise, dates of repair and the estimated water savings as a result of the repairs.
3.	Conduct field surveys for leaks and repair programs in accordance with the <u>AWWA Manual 36</u> .
4.	BWD shall have repair reports available for inspection by the Department. BWD shall establish a schedule for repairing leaks that is at least as stringent as the following: <ul style="list-style-type: none"> - Leaks of 3 gallons per minute or more shall be repaired within 3 months of detection. - Leaks of less than 3 gallons per minute at hydrants and appurtenances shall be repaired as soon as possible. - Leaks of less than 3 gallons per minute shall be repaired in a timely manner, but in no event more than 6 months from detection, except that leaks in freeway, arterial or collector roadways shall be repaired when other roadwork is being performed on the roadway. <p>Leaks shall be repaired in accordance with BWD's priority schedule including leaks up to the property line, curb stop or service meter, as applicable. BWD shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.</p>
Metering	
1.	Calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2.	BWD reports that it's system is 100% metered in its 2005 ASR. All water distribution system users shall have properly sized service lines and meters that meet AWWA calibration and accuracy performance standards as set forth in <u>AWWA Manual M6 – Water Meters</u> , by November 30, 2013 .
3.	BWD shall have an ongoing program to inspect individual service meters to ensure that all service meters accurately measure the volume of water used by your customers. The metering program shall include regular meter maintenance, including testing, calibration, repair, replacement and checks for tampering to identify and correct illegal connections. The plan shall continue to include placement of sufficient funds in BWD's annual water budget to calibrate, repair, or replace meters as necessary.

Table 5: Minimum Water Conservation Requirements	
Pricing	
1.	Establish a water pricing structure that includes the full cost of operating the water supply system by December 1, 2008 . Evaluate rates every three to five years and adjust costs as needed. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into prices.
2.	BWD shall not use decreasing block rates. Decreasing block rates which charge lower prices as water use increases during the billing period, are not allowed by M.G.L. Chapter 40 Section 39L.
Residential and Public Sector Conservation	
1.	BWD shall meet the standards set forth in the Federal Energy Policy Act, 1992 and the Massachusetts Plumbing Code.
2.	Meter or estimate water used by contractors using fire hydrants for pipe flushing and construction.
3.	Municipal buildings <ul style="list-style-type: none"> • By January 1, 2008, BWD shall submit to the Department a status report detailing which municipally owned public buildings in the BWD service area have been retrofitted with water saving devices (faucet aerators, low flow shower heads and low flow toilets) and which of those buildings have yet to be retrofitted, along with a schedule to complete the retrofitting by January 1, 2012. • On or before January 1, 2012, BWD shall demonstrate to the Department's satisfaction that a "Best Effort" was made by BWD to persuade the Town to make those retrofits. <p>Note municipally owned public buildings that may be scheduled for rehabilitation or demolition after the January 1, 2012 deadline for completing the retrofits, may with the Department's approval, be exempted from this condition based on the schedule of work. Status report required above should identify those buildings and schedule for repairs/demolition.</p>
Industrial and Commercial Water Conservation	
1.	BWD shall review the use records for its industrial, commercial and institutional water users and develop an inventory of the largest water users. BWD shall develop and implement an outreach program designed to inform and (where appropriate) work with its largest industrial, commercial and institutional water users on ways to reduce their water use by November 30, 2008 . Such outreach plans can include, but are not limited to: information on water audits, meter sizing, water reuse, low-flow plumbing fixtures, mandatory outdoor water use restrictions, suggestions for contacting trade associations for process specific information on water use reductions, and information on contacting the Executive Office of Environmental Affairs Office of Technical Assistance for Toxics Use Reduction (OTA) which offers a range of assistance and information to help facilities improve water use efficiency and reduce wastewater discharge. OTA can be contacted at (617) 626-1060 or at www.mass.gov/envir/ota .
2.	Upon request by the Department, BWD shall report on industrial, commercial and institutional water conservation including the results of its review of water use records for industrial, commercial and institutional water users, the inventory of the largest water users, copies of any outreach materials distributed to industrial, commercial and institutional water users, and to the extent practical, a summary of water use reductions or savings that have resulted. Upon receipt of this report, the Department will take whatever action it deems appropriate to promote the interests of the Water Management Act, including without limitation requiring BWD to take additional actions to reduce industrial, commercial and institutional water use.
Public Education and Outreach	
1.	Develop and implement a Water Conservation Education Plan. BWD's Water Conservation Education Plan shall be designed to educate BWD's water customers of ways to conserve water. Without limitation, BWD's plan may include the following actions: <ul style="list-style-type: none"> • Include in bill stuffers and/or bills, a work sheet to enable customers to track water use and conservation efforts and estimate the dollar savings; • Public space advertising/media stories on successes (and failures); • Conservation information centers perhaps run jointly with electric or gas company; • Speakers for community organizations; • Public service announcements; radio/T.V./audio-visual presentations;

Table 5: Minimum Water Conservation Requirements	
	<ul style="list-style-type: none">• Joint advertising with hardware stores to promote conservation devices;• Use of civic and professional organization resources;• Special events such as Conservation Fairs;• Develop materials that are targeted to schools with media that appeals to children, including materials on water resource projects and field trips; and• Make multilingual materials available as needed.
2.	Upon request of the Department, BWD shall report on its public education and outreach effort, including a summary of activities developed for specific target audiences, any events or activities sponsored to promote water conservation and copies of written materials.

9. Requirement to Report Raw and Finished Water Volumes

BWD does not currently have a filtration treatment system. Should treatment be added to the system, BWD shall report raw water volumes for each water withdrawal point and finished water for each filtration treatment system annually on its ASR.

GENERAL PERMIT CONDITIONS (applicable to all permittees)

No withdrawal in excess of 100,000 gallons per day over the registered volume (if any) shall be made following the expiration of this permit, unless before that date the Department has received a renewal permit application pursuant to 310 CMR 36.00.

1. **Duty to Comply** The permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw water so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The permittee or the permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine any property for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by the Department pursuant to MGL c 21G ss 15-17, MGL c 150 ss 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to a transfer application on forms provided by the Department requesting such approval and received by the Department at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The permittee shall complete and submit annually, on a form provided by the Department, all of the information required by said form including, without limitation, a certified statement of the withdrawal. Such report shall be received by the Department by the date specified on the form each year. Such report must be mailed or hand delivered to:

Department of Environmental Protection
Drinking Water Program
Water Management Program
One Winter Street, 6 th Floor
Boston, MA 02108

7. **Duty to Maintain Records** The permittee shall maintain withdrawal records and other information in sufficient detail to demonstrate compliance with this permit.
8. **Metering** All withdrawal points included within the permit shall be metered within one year of the date of issuance of the permit. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.

APPEAL RIGHTS AND TIME LIMITS

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing under the provisions of MGL c 30A. Any such request must be made in writing, by certified mail and received by the Department within twenty-one (21) days of the date of receipt of this permit. No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by

certified mail or delivered by hand to the local water resources management official in the city or town in which the withdrawal point(s) is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

CONTENTS OF HEARING REQUEST

The regulations at 310 CMR 1.01(6)(b) require the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of the Department is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of this permit.

FILING FEE AND ADDRESS

The hearing request, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

EXEMPTIONS

The filing fee is not required if the appellant is a city or town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

WAIVER

The Department may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of the Department that the fee will create an undue financial hardship. A person, seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts, which support the claim of undue hardship.

Appendix A – Residential Gallons Per Capita Day

I. Compliance Plan Requirement

If BWD fails to document compliance with the RGPCD performance standard in its **2009** ASR, or in any ASR thereafter, then BWD must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall:

- a. meet the requirement set forth below in Section II;
- b. include measures to be implemented to meet the performance standard; and
- c. include the schedule for implementing such measures.

The filing of a RGPCD Plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to BWD's failure to meet the performance standard.

If a RGPCD Plan is required, BWD must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its RGPCD Plan annually at the time it files its ASR; and
- b. continue to implement the RGPCD Plan until it complies with the performance standard and such compliance is documented in BWD's ASR for the calendar year in which the standard is met.

II. Contents of a Residential Gallons Per Capita Day Compliance Plan

At a minimum, all RGPCD Compliance Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the performance standard;
- b. analysis of the cause of the failure to meet the performance standard;
- c. description and schedule of the actions that will be taken to meet the performance standard; and
- d. analysis of how the actions described in II.c. will address the specific circumstances that resulted in the failure to meet the performance standard.

RGPCD Plans may be amended to revise the actions that will be taken to meet the performance standard. Amended RGPCD Plans must include the information set forth in paragraph above.

At a minimum, all RGPCD Plans submitted in response to failure to meet the RGPCD performance standard must include implementation of at least one of the following residential conservation programs:

- a. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
- b. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets); or
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require the installation of moisture sensors or similar climate related control technology on all automatic irrigation systems.

If BWD is already implementing one or more of these programs, it must include in its RGPCD Plan the continued implementation of such program(s), as well as implementation of at least one additional program. All programs must include a public information component designed to inform customers of the program and to encourage participation in the program.

Without limitation, RGPCD Plans submitted in response to failure to meet the RGPCD performance standard may include the following actions in addition to those outlined in the paragraph above:

- a. the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
- b. a program that provides rebates or other incentives for the installation of moisture sensors or similar climate related control technology on automatic irrigation systems;
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction include water saving devices and low water use appliances;
- d. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction minimize lawn area and/or irrigated lawn area, maximize the use of drought resistant landscaping, and maximize the use of top soil with a high water retention rate;
- e. the implementation of a program to encourage the use of cisterns or rain barrels for outside watering; and
- f. the implementation of monthly or quarterly billing.

Appendix B – Unaccounted for Water

UAW is defined as the residual resulting from the total amount of water supplied to a distribution system as measured by master meters, minus the sum of all amounts of water measured by consumption meters in the distribution systems, and minus confidently estimated and documented amounts used for certain necessary purposes.

Examples of UAW include, but are not limited to: leakage, meter inaccuracies (unless they fall under the category of adjustment per results of source meter calibration described in the ASR), errors in estimation of stopped meters, unauthorized hydrant openings, illegal connections, data processing errors, and undocumented fire fighting uses.

Examples of uses that can be confidently estimated and documented in writing include storage tank overflow and drainage; water main flushing and flow testing; fire fighting; bleeding or blow-offs; sewer and stormwater system flushing; and cleaning and street cleaning. Generally, leakage is considered to be UAW, however, individual water main breaks can be discounted on a case-by-case basis. Any adjustment in the calculation of UAW made as a result of confidently estimated uses shall be documented as required in the ASR.

I. Compliance Plan Requirement

If BWD fails to document compliance with the UAW performance standard in its 2009 ASR, or in any ASR thereafter, then BWD must file with that ASR an Unaccounted for Water Compliance Plan (UAW Plan) which shall:

- a. meet the requirements set forth below in Section II;
- b. include measures to be implemented to meet the performance standard; and
- c. include the schedule for implementing such measures.

The filing of a UAW Plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to BWD's failure to meet the performance standard.

If a UAW Plan is required, BWD must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its UAW Plan annually at the time it files its ASR; and
- b. continue to implement the UAW Plan until it complies with the performance standard and such compliance is documented in BWD's ASR for the calendar year in which the standard is met.

II. Contents of an Unaccounted for Water Compliance Plan

BWD has the choice to file a UAW Plan with measures tailored to the specific needs of its water supply system (Individualized UAW Plan) or a UAW Plan that includes Best Management Practices (BMP UAW Plan).

At a minimum, all UAW Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the applicable performance standard;
- b. analysis of the cause of the failure to meet the performance standard;

- c. description and schedule of the actions that will be taken to meet the performance standard; and
- d. analysis of how the actions described in II.c. will address the specific circumstances that resulted in the failure to meet the performance standard.

UAW Plans may be amended to revise the actions that will be taken to meet the performance standard. Amended UAW Plans must include the information set forth in the paragraph above.

Individualized UAW Compliance Plan

Without limitation, Individualized UAW Compliance Plans submitted in response to failure to meet the UAW performance standard may include any of the actions set forth in the BMP UAW Compliance Plan below.

BMP UAW Compliance Plan

At a minimum, all BMP UAW Plans submitted in response to failure to meet the UAW performance standard must include all of the following actions:

- a. within one year of filing the UAW Plan, complete a water audit and leak detection survey of the entire system and submit completed audit and survey to the Department; within one year of completing the audit and leak detection survey, conduct sufficient repairs to reduce by 75% (by water volume) all leaks detected in the survey; and within one year of completing such repairs, conduct additional repairs of leaks detected in the survey as may be necessary to reduce permittee's UAW to 10% or less;
- b. implementation of a program that ensures the inspection and evaluation of all water meters and, as appropriate, the repair, replacement and calibration of water meters in accordance with the following schedule:

Large Meters (2" or greater) - within one year of filing the BMP UAW Plan
Medium Meters (1" or greater and less than 2") - within two years of filing the BMP UAW Plan
Small Meters (less than 1") – within 5 years of filing the BMP UAW Plan;

- c. implementation of monthly or quarterly billing by **November 30, 2013**; and
- d. within one year of filing the UAW Plan, implementation of a water pricing structure that achieves sufficient revenues to pay the full cost of operating the system including, without limitation, the costs of repairs under paragraph a., the costs of meter repairs, replacements and calibrations under paragraph b., the costs of employees and equipment, and ongoing maintenance and capital costs.