

Guidance Document for Water Management Act Permitting Policy

Permit and Permit Amendment Applications and 5-Year Reviews
Guidance # BRP/DWM/DW/G05-01 (Supersedes Guidance # BRP/DWM/DW/G04-1)
Effective Date: January 17, 2006

I. Applicability

This Guidance applies to all DEP permits issued, modified, or renewed under the Water Management Act on or after the effective date of this Guidance. Provisions that do not apply directly to a permittee (e.g., non public water suppliers) may be modified as appropriate to achieve the purposes of this Guidance.

This Guidance shall not apply to DEP permits under the Water Management Act for which an administrative appeal or judicial review is pending at the time of its effective date. This Guidance shall not create rights, duties, obligations or defenses, implied or otherwise, by any person.

DEP reserves the right to exercise its discretion to vary from the standards and conditions set forth in this Guidance as appropriate.

II. Residential Gallons Per Capita Day (rgpcd)

1. Evaluate compliance based upon the following Performance Standards:

- 65 rgpcd in high and medium stressed basins¹
- 80 rgpcd in low stressed and unassessed basins

2. Require compliance with the Performance Standard by the end of the second full calendar year following the effective date of the permit. Require permittees to document such compliance in their Annual Statistical Report (ASR) for the second full calendar year following the permit's effective date. A permittee failing to document compliance with the Performance Standard in its ASR for the second full calendar year following the permit's effective date, or in any ASR thereafter, must file with that ASR a Compliance Plan (Plan) which shall meet the requirements of Appendix A, include measures to be implemented to meet the Performance Standard by the next permit renewal or 5-year review (whichever is sooner), and include the schedule for implementing such measures.² The permittee must document compliance with its Plan annually at the time it files its ASR. The permittee must continue to implement the Plan until it complies with the Performance Standard and such compliance is documented in its ASR for the calendar year in which the standard is met.

¹ For purposes of this Guidance, the Department relies upon the stressed basin determinations contained in the Water Resources Commission's Stressed Basins Report approved December 13, 2001, and upon future revisions to these stressed basin determinations by the Water Resources Commission.

² The filing of a Compliance Plan shall not affect the Department's authority to take enforcement against any permittee who exceeds the Enforcement Margin at the end of the second full calendar year following the permit's effective date, or at any time thereafter. This authority includes, without limitation, the authority of the Department to require additional or different compliance measures, and to impose a different schedule, than those set forth in the permittee's Plan filed pursuant to paragraph II.2 above.

3. DEP will employ an Enforcement Margin in exercising its enforcement discretion with regard to permittees in high and medium stressed basins that fail to comply with the Performance Standard by the end of the second full calendar year following the permit's effective date. Permittees whose rgpcd exceeds the Performance Standard but does not exceed 72 are within the Enforcement Margin. This Enforcement Margin applies only to the first permit renewal or 5-year review (whichever is sooner) issued to each permittee following the effective date of this Guidance.

DEP will provide enforcement forbearance until the next permit renewal or 5-year review (whichever is sooner) to a permittee who exceeds the Performance Standard at the end of the second full calendar year following the permit's effective date so long as the permittee: (1) demonstrates in its ASR for the second full calendar year following the permit's effective date, and in subsequent ASRs, that it has not exceeded the Enforcement Margin; (2) complies with its Plan; (3) timely files the submissions required under paragraph II.2 above; and (4) continues to make demonstrable progress towards meeting the Performance Standard.

III. Unaccounted for Water (UAW) as a Percentage of Overall Water Withdrawal

1. Evaluate compliance based upon the following Performance Standards:

- 10% UAW in high and medium stressed basins
- 15% UAW in low stressed and unassessed basins

2. Require compliance with the Performance Standard by the end of the second full calendar year following the effective date of the permit. Require permittees to document such compliance in their Annual Statistical Report (ASR) for the second full calendar year following the permit's effective date. A permittee failing to document compliance with the Performance Standard in its ASR for the second full calendar year following the permit's effective date, or in any ASR thereafter, must file with that ASR a Compliance Plan (Plan) which shall meet the requirements of Appendix B, include measures to be implemented to meet the Performance Standard by the next permit renewal or 5-year review (whichever is sooner), and include the schedule for implementing such measures.³ The permittee has the choice to file an Individualized Plan with compliance measures tailored to the specific needs of the permittee's system or to file a Plan that includes the Best Management Practices (BMPs) set forth in Appendix B. The permittee must document compliance with its Plan annually at the time it files its ASR. The permittee must continue to implement the Plan until it complies with the Performance Standard and such compliance is documented in its ASR for the calendar year in which the standard is met.

3. DEP will employ an Enforcement Margin in exercising its enforcement discretion with regard to permittees in high and medium stressed basins that fail to comply with the Performance Standard by the end of the second full calendar year following the permit's effective date. Permittees whose UAW exceeds the Performance Standard but does not exceed 15% are within the Enforcement Margin.⁴ This Enforcement Margin applies only to the first permit renewal or 5-year review (whichever is sooner) issued to each permittee following the effective date of this Guidance.

³ The filing of a Compliance Plan shall not affect the Department's authority to take enforcement against any permittee who exceeds the Enforcement Margin at the end of the second full calendar year following the permit's effective date, or at any time thereafter (for Individualized Plans). This authority includes, without limitation, the authority of the Department to require additional or different compliance measures, and to impose a different schedule, than those set forth in the permittee's Plan filed pursuant to paragraph III.2 above.

⁴ In certain cases, a permittee will know at the time of permit issuance, renewal or 5-year review that it will likely exceed the Enforcement Margin after two full calendar years following the permit's effective date, despite best efforts to meet the Performance Standard. In such cases, the Department will consider providing the permittee with enforcement forbearance at the time of permit issuance, renewal or 5-year review provided the permittee agrees to and complies with an enforceable schedule to implement appropriate measures to reduce unaccounted for water.

a) Individualized Compliance Plan-In order to meet the requirement to file a Compliance Plan, as set forth in paragraph III.2 above, a permittee may choose to file an individualized Plan with compliance measures tailored to the specific needs of the permittee's system. In such case, DEP will provide enforcement forbearance until the next permit renewal or 5-year review (whichever is sooner) to a permittee who exceeds the Performance Standard at the end of the second full calendar year following the permit's effective date so long as the permittee: (1) demonstrates in its ASR for the second full calendar year following the permit's effective date, and in subsequent ASRs, that it has not exceeded the Enforcement Margin; (2) complies with its Plan; (3) timely files the submissions required under paragraph III.2 above; and (4) continues to make demonstrable progress towards meeting the Performance Standard.

b) BMP Compliance Plan-In order to meet the requirement to file a Compliance Plan, as set forth in paragraph III.2 above, a permittee may choose to include in its Plan all of the actions listed in the BMP Compliance Plan as set forth in Appendix B.4. In such case, DEP will provide enforcement forbearance until the next permit renewal or 5-year review (whichever is sooner) to the permittee so long as the permittee: (1) demonstrates in its ASR for the second full calendar year following the permit's effective date that it has not exceeded the Enforcement Margin; (2) complies with its Plan; and (3) timely files the submissions required under paragraph III.2 above. A permittee meeting these conditions will be considered by DEP to be making demonstrable progress towards meeting the Performance Standard.

IV. Summer Limits on Withdrawals⁵

1. Permittees in high and medium stressed basins are required to limit summer withdrawals by implementing one of the following two options.

Option 1: Calendar Trigger

Impose the following restrictions on nonessential outdoor water use between May 1st and September 30th:

a) No nonessential outdoor water use allowed, except that permittees in high stressed basins with a summer to winter withdrawal ratio of 1.2 or less and all permittees in medium stressed basins may use sprinklers for lawn irrigation purposes outside the hours of 9 AM and 5 PM up to *two* days per week.

b) No nonessential outdoor water use allowed, except that permittees in high stressed basins with a summer to winter withdrawal ratio of greater than 1.2 may use sprinklers for lawn irrigation purposes outside the hours of 9 AM and 5 PM *one* day per week.

c) Upon the declaration of a drought level of "Watch" (or higher) by the Massachusetts Drought Management Task Force⁶ for the region in which the permittee's withdrawal source(s) is located, the restrictions on nonessential outdoor water use set forth in Option 2 a) and b) below must be implemented and remain in place until the drought level is returned to "Advisory" or "Normal".

⁵ Surface water permittees must comply with the requirements of this Performance Standard unless the Department approves alternative measures to protect the aquatic habitat needs of streams. Such alternative measures must be based upon site-specific conditions and may include, without limitation, releases of water downstream.

⁶ This information is available at www.mass.gov/dcr/waterSupply/rainfall/drought.htm

Option 2: Stream Flow Trigger

Impose the following restrictions on nonessential outdoor water use whenever stream flow falls below the US Fish and Wildlife's New England Aquatic Base Flow default value of 0.50 cubic feet per second per square mile (cfs/m) at an identified United States Geologic Survey (USGS) gauge or other approved monitoring point for three consecutive days from May 1st through September 30th⁷:

- a) No nonessential outdoor water use allowed, except that permittees in high stressed basins with a summer to winter withdrawal ratio of 1.2 or less and all permittees in medium stressed basins may use sprinklers for lawn irrigation purposes outside the hours of 9 AM and 5 PM *one* day per week.
- b) No nonessential outdoor water use allowed by permittees in high stressed basins with a summer to winter withdrawal ratio of greater than 1.2.

Once implemented, these restrictions shall remain in place until streamflow meets or exceeds the applicable streamflow standard for seven consecutive days.

2. Permittees are required to implement and enforce the restrictions in paragraph IV.1 above starting no later than the second calendar year following the permit's effective date. Permittees who have restrictions on summer withdrawals in effect at the time of the permit's effective date shall continue to implement and enforce such restrictions until superseded by the restrictions in paragraph IV.1 above.
3. The category of restrictions applicable to the permittee during the second calendar year following the permit's effective date will be based upon the permittee's average summer to winter withdrawal ratio for the three years prior to permit issuance. Starting with the third calendar year following the permit's effective date, the category of restrictions applicable to the permittee will be based upon the permittee's summer to winter withdrawal ratio for the preceding year.
4. Permittees are required to document implementation and enforcement of the restrictions at the time they file their Annual Statistical Reports.
5. As used herein, "nonessential outdoor water use" includes 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 uses include the irrigation of lawns, except by means of a hand-held hose outside the hours of 9 AM and 5 PM; washing of vehicles other than by means of a commercial car wash except as necessary for operator safety; and the washing of exterior building surfaces, parking lots, driveways or sidewalks except as necessary to apply paint, preservatives, stucco, pavement or cement.

Examples of acceptable outdoor water uses outside the hours of 9 AM and 5 PM include 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 only; and the irrigation of public parks and recreational fields.

⁷ This default value may be replaced by new stream flow standards published by USGS, DCR, WRC, or DFW and adopted by DEP, or by stream flow thresholds previously adopted by DEP that continue to apply to a basin.

The Department recommends that all irrigation by means of sprinklers include the use of moisture sensors or other similar control technology.

V. Water Withdrawals That Exceed Baseline Withdrawal Volumes

1. DEP encourages permittees to proactively promote conservation measures⁸ as a way to reduce demand on their systems. By reducing demand, conservation measures will help permittees: (1) maintain withdrawal volumes below Baseline, thereby avoiding the need to implement Offsets; and (2) minimize withdrawal volumes above Baseline, thereby reducing the extent of Offsets required.

2. As used herein, the terms “Basin,” “Baseline,” “Offset” and “Offset Feasibility Study” mean as follows:

Basin-the area upstream of the nearest USGS Gauge used to determine that basin’s stress classification, as identified in the Water Resources Commission’s Stressed Basin Report approved December 13, 2001.

Baseline-volume withdrawn the prior calendar year in compliance with the Water Management Act, the average volume withdrawn in compliance with the Water Management Act for the prior 3 years, or the registered volume, whichever is higher.

Offset-measure to compensate for a permittee’s withdrawal in excess of its Baseline by returning water to the Basin or preventing water loss from the Basin. Without limitation, Offsets may include stormwater recharge, wastewater return, infiltration and inflow removal, and private well regulation.

Offset Feasibility Study- a study that: (a) identifies Offsets reasonably likely to manage the water balance within the Basin so that the impacts to the Basin from withdrawals in excess of a supplier’s Baseline are eliminated or minimized; (b) conducts a detailed comparative evaluation of the effectiveness, difficulty of implementation, short and long term reliability, costs, risks, and benefits of the Offsets identified in (a); and (c) results in the classification of Offsets identified in (a) that are feasible to implement and Offsets identified in (a) that are not feasible to implement. The information and reasoning used to perform the study must be documented and described in sufficient detail to support the results of the study.

3. Requirement To Perform An Offset Feasibility Study

In *high* stressed basins, a permittee must perform an Offset Feasibility Study (Study) the first time the permittee’s withdrawals for a calendar year exceed that permittee’s Baseline, beginning with the filing of the Annual Statistical Report (ASR) for the *first* full calendar year following the permit’s effective date. Within 60 days of the filing of an ASR indicating that a Study is required, the permittee must submit a Study Scope of Work to DEP for approval. Within 6 months of DEP’s approval of the Study Scope of Work, the permittee must submit the completed Study to DEP for approval. DEP’s approval of the Study Scope of Work and the completed Study will be presumed if DEP does not issue a written approval or denial of such submission within 60 days of the date submitted to DEP for approval.

In *medium* stressed basins, a permittee must perform an Offset Feasibility Study (Study) the first time the permittee’s withdrawals for a calendar year exceed that permittee’s Baseline, beginning with the filing of the

⁸ e.g., retrofitting existing development with low water use appliances and fixtures

ASR for the *second* full calendar year following the permit's effective date. Within 60 days of the filing of an ASR indicating that a Study is required, the permittee must submit a Study Scope of Work to DEP for approval. Within 6 months of DEP's approval of the Study Scope of Work, the permittee must submit the completed Study to DEP for approval. DEP's approval of the Study Scope of Work and the completed Study will be presumed if DEP does not issue a written approval or denial of such submission within 60 days of the date submitted to DEP for approval.

4. Requirements For Implementing The Results Of The Offset Feasibility Study

In medium and high stressed basins, the permittee must: (a) implement the results of the Study upon the filing of any subsequent ASR indicating that the permittee's withdrawals for a calendar year exceed that permittee's Baseline; (b) document such implementation annually at the time it files its ASR; and (c) continue to implement the results of the Study as long as the permittee's withdrawals exceed Baseline.⁹

DEP reserves the right to require that a Study be performed and that the results be implemented in low stressed and unassessed basins, as appropriate.

VI. Reporting Requirements

To accurately assess permit compliance, DEP will condition all permits to require standard and consistent reporting of data including, without limitation, the requirement that the raw water volumes withdrawn from individual sources and the finished water volume for the entire system be reported. In addition, public water suppliers will be required to provide a detailed account of how residential gallons per capita day and unaccounted for water were calculated.

VII. Streamflow and Other Monitoring

Streamflow monitoring will be performed through the USGS stream gauge network in the Commonwealth. However, additional monitoring of, and reporting on, streamflow, pond elevations, wetlands or specific sensitive receptors may be required as a permit condition to help evaluate impacts for required mitigation.

VIII. Review of Permit and Permit Amendment Applications

Permit or permit amendment applications seeking new sources and/or requesting increased authorized withdrawal volumes must evaluate those sources and increased withdrawals based on the method described in the "Site Screening Process for Siting a New or Expanded Source of Public Water – February 5, 2001." For a description of the site screening process see DEP webpage: www.state.ma.us/dep/brp/wtrm/sitescr.htm. The Site Screening process is a desktop screening tool to evaluate a withdrawal impact from a groundwater source on an unregulated stream, and will also be used to evaluate authorized withdrawal increases from multiple existing sources.

The withdrawal volumes proposed by a permit application for an increase in volumes from an existing source(s), or through adding a new source through a permit or permit amendment, will be compared to natural streamflow. Where the water withdrawal volume is equal to or greater than 50% of natural August Median flow in a nearby stream as evaluated with USGS STREAMSTATS within the Site Screening

⁹ As of the effective date of this Guidance, DEP has convened a work group to develop specific guidelines for implementing the offset requirements set forth herein. In the meantime, DEP will consider crediting against a Permittee's future offset obligations measures implemented after the effective date of this Guidance that return water to the basin from which it was withdrawn or prevent water loss from a basin.

method, applicants will be advised that the application will receive additional scrutiny. Withdrawals equal to or greater than 50% of natural August Median flow are considered to have significant flow impact and will encounter more rigorous review by DEP, including more detailed instrumentation for pumping test design, needs assessment, and alternatives analysis.

Where the natural August Median flow cannot be determined through STREAMSTATS, a surrogate method acceptable to DEP, such as a reference basin transform or other streamflow analysis, may be submitted for DEP's review and approval.

Appendix A

Compliance Plan-Residential Gallons Per Capita Day (rgpcd)

1. At a minimum, all rgpcd Compliance Plans must include a detailed: (a) description of the actions taken by the permittee during the prior calendar year to meet the applicable Performance Standard; (b) analysis of the cause of the permittee's failure to meet the Performance Standard; (c) description and schedule of the actions that will be taken to meet the Performance Standard by the next permit renewal or 5-year review (whichever is sooner); and (d) analysis of how the actions described in (c) will address the specific circumstances that resulted in the permittee's failure to meet the Performance Standard.
2. Compliance Plans may be amended to revise the actions that will be taken to meet the Performance Standard. Amended Compliance Plans must include the information set forth in paragraph 1(a)-(d).
3. Information and supporting documentation sufficient to demonstrate compliance with the Compliance Plan must be submitted annually by the permittee at the time it files its Annual Statistical Report.
4. At a minimum, all Compliance Plans for 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 moisture sensors or similar climate related control technology on all automatic irrigation systems. A permittee already implementing one or more of these programs must include in its Compliance 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.
5. Without limitation, Compliance Plans for failure to meet the rgpcd Performance Standard may include the following actions in addition to those outlined in paragraph 4:
 - (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 sites for 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)

1. At a minimum, all UAW Compliance Plans must include a detailed: (a) description of the actions taken by the permittee during the prior calendar year to meet the applicable Performance Standard; (b) analysis of the cause of the permittee's failure to meet the Performance Standard; (c) description and schedule of the actions that will be taken to meet the Performance Standard by the next permit renewal or 5-year review (whichever is sooner); and (d) analysis of how the actions described in (c) will address the specific circumstances that resulted in the permittee's failure to meet the Performance Standard.
2. Compliance Plans may be amended to revise the actions that will be taken to meet the Performance Standard. Amended Compliance Plans must include the information set forth in paragraph 1(a)-(d).
3. Information and supporting documentation sufficient to demonstrate compliance with the Compliance Plan must be submitted annually by the permittee at the time it files its Annual Statistical Report.
4. BMP Compliance Plan

At a minimum, all BMP Compliance Plans for failure to meet the UAW Performance Standard must include all of the following actions:

- (a) within one year of filing the Compliance Plan, complete a leak detection survey of the permittee's entire system and submit completed survey to DEP; within one year of completing the 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 Compliance Plan
 - Medium Meters (1" or greater and less than 2")-within two years of filing the Compliance Plan
 - Small Meters- (less than 1")-by the next permit renewal or 5-year review (whichever is sooner);
 - (c) implementation of monthly or quarterly billing by the next permit renewal or 5-year review (whichever is sooner); and
 - (d) within one year of filing the Compliance 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 4(a), the costs of meter repairs, replacements and calibrations under paragraph 4(b), the costs of employees and equipment, and ongoing maintenance and capital costs.
5. Individualized Compliance Plan

Without limitation, Individualized Compliance Plans for failure to meet the UAW Performance Standard may include any of the actions set forth in paragraph 4 above.