



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker  
Governor

Karyn E. Polito  
Lieutenant Governor

Matthew A. Beaton  
Secretary

Martin Suuberg  
Commissioner

July 19, 2016

DCR Ponkapoag Golf Course  
Attn: Nick Gove  
Department of Conservation and Recreation  
695 Hillside Street  
Milton, MA 02186

Town: Canton  
WMA Permit Application #: 9P4-4-19-050.02  
Program: Water Management Act  
Permit Application: BRP WM03  
MassDEP Transmittal: X265074  
Action: Final Permit

Dear Mr. Gove:

Please find the following attached:

- Findings of Fact in Support of the issuance of Permit #9P4-4-19-050.02;
- Final Water Management Act (WMA) Permit #9P4-4-19-050.02 for the DCR Ponkapoag Golf Course.

If you have any questions regarding this information, please contact Julie Butler at 617-292-5552 or via email at [Julie.Butler@state.ma.us](mailto:Julie.Butler@state.ma.us).

Sincerely,

Rebecca Weidman  
Division of Watershed Management  
Bureau of Water Resources

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Y:\DWPARCHIVE\SERO\2016\Canton-PonkapoagGolf 9P441905002-WMA Final Permit-2016-07-19  
eCC: Anne Carroll, DCR Office of Water Resources  
Michael Galvin, DCR Civil Engineer  
Michael Misslin, DCR Bureau of Engineering Chief Engineer  
Ian Cooke, Neponset River Watershed Association Executive Director  
Mark Brady, Ponkapoag Golf Course Superintendent

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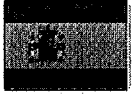
**Massachusetts Department of Environmental Protection**  
**One Winter Street, Boston MA 02108 • Phone: 617-292-5751**

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**1.03(5)(a)**



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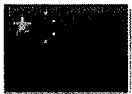
**2 Español (Spanish):**

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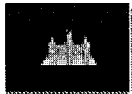
**5 Ayisyen (franse kreyòl) (Haitian) (French Creole):**

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradui imedyatman. Si ou bezwen dokiman sa a tradui, tanpri kontakte Divèsite Direktè MassDEP a nan nimewo telefòn ki nan lis pi ba a.



**6 Việt (Vietnamese):**

Tài liệu này là rất quan trọng và cần được dịch ngay lập tức. Nếu bạn cần dịch tài liệu này, xin vui lòng liên hệ với Giám đốc MassDEP đa dạng tại các số điện thoại được liệt kê dưới đây.



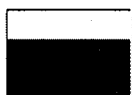
**7 ប្រទេសកម្ពុជា (Kmer (Cambodian):**

ឯកសារនេះគឺមានសារៈសំខាន់និងគួរត្រូវបានបកប្រែភ្លាមៗ ប្រសិនបើអ្នកត្រូវបានបកប្រែ ឯកសារនេះសូមទំនាក់ទំនងភ្នាក់ងារនាយក MassDEP នៅលេខទូរស័ព្ទដែលបានរាយនាងក្រោម។



**8 Kriolu Kabuverdianu (Cape Verdean):**

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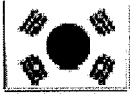


**9 Русский язык (Russian):**

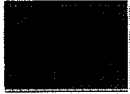
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**10 العربية (Arabic):**

هذه الوثيقة الهامة وينبغي أن تترجم على الفور. اذا كنت بحاجة الى هذه الوثيقة المترجمة، يرجى الاتصال مدير التنوع في MassDEP على أرقام الهواتف المدرجة أدناه.

**11 한국어 (Korean):**

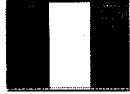
이 문서는 중요하고 즉시 번역해야 합니다. 당신이 번역이 문서가 필요하다면 아래의 전화 번호로 MassDEP의 다양성 감독에 문의하시기 바랍니다.

**12 հայերեն (Armenian):**

Այս փաստաթուղթը շատ կարևոր է եւ պետք է թարգմանել անմիջապես. եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանվել դիմել MassDEP բազմազանությունը տնօրեն է հեռախոսահամարների թվարկված են ստորել.

**13 فارسی (Farsi (Persian):**

این سند مهم است و باید فوراً ترجمه شده است. اگر شما نیاز به این سند ترجمه شده، لطفاً با ما تماس تنوع مدیر MassDEP در شماره تلفن های ذکر شده در زیر.

**14 Français (French):**

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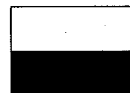
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यह दस्तावेज महत्वपूर्ण है और तुरंत अनुवाद किया जाना चाहिए. आप अनुवाद इस दस्तावेज की जरूरत है, नीचे सूचीबद्ध फोन नंबरों पर MassDEP की विविधता निदेशक से संपर्क करें.



# Department of Environmental Protection

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Commissioner

## **Findings of Fact in Support of Final Water Management Permit #9P4-4-19-050.02 DCR Ponkapoag Golf Course**

The Department of Environmental Protection ("MassDEP" or "the Department") has completed its review of the Department of Conservation and Recreation (DCR) Ponkapoag Golf Course's Water Management Act (WMA) permit application. This review was conducted in regard to the permit for the DCR Ponkapoag Golf Course (Ponkapoag) to withdraw water from the Boston Harbor Basin. The Department hereby issues the Water Management Permit #9P4-4-19-050.02 (the "Permit") in accordance with the Water Management Act (M.G.L. c.21G). The Department makes the following Findings of Fact in support of the attached Permit, and includes herewith its reasons for issuing the Permit and for the conditions of approval imposed, as required by M.G.L. c.21G, s. 11 and 310 CMR 36.00. The Permit is being issued since such action is necessary for the promotion of the purposes of M.G.L. c. 21G. The Department may modify, suspend or terminate the Permit, after notice and hearing, for violations of its conditions, of M.G.L. c. 21G, or of regulations adopted or orders issued by the Department, and when deemed necessary for the promotion of the purposes of the Water Management Act.

### **Withdrawal Description and History**

DCR currently holds WMA registration #4-19-050-04 to withdraw 0.17 million gallons per day (MGD) of water over a 210-day season (April – October), equivalent to 35.7 million gallons per year (MGY) from Ponkapoag Brook in the Boston Harbor Basin. The WMA permit will be for a new withdrawal point that does not increase the authorized withdrawal of 0.17 MGD. The new withdrawal point, Well #1, was installed in 2008, and pumps into a lined irrigation pond. Both Well #1 and the lined irrigation pond are located on the Ponkapoag property at 2167 Washington Street, Canton, MA 02021.

The issuance of this permit is in response to a water withdrawal permit application from DCR for the purpose of golf course irrigation. Ponkapoag is a 36-hole golf course, which includes Course #1 and Course #2. Well #1 irrigates Course #1, while Course #2 is irrigated by Ponkapoag Brook. Irrigation system improvements are planned for Course #2, including a second well and pond; however, the improvements are subject to state funding that is not yet available, and their completion date cannot be estimated at this time.

### **The Water Management Act (M.G.L.c.21G)**

The WMA requires the Department to issue permits that balance a variety of factors, including without limitation:

- Impact of the withdrawal on other water sources;

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- Water available within the safe yield of the water source;
- Reasonable protection of existing water uses, land values, investments and enterprises;
- Proposed use of the water and other existing or projected uses of water from the water source;
- Municipal and Massachusetts Water Resources Commission (WRC) water resource management plans;
- 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.

### **Sustainable Water Management Initiative (SWMI) and Water Management Regulation Revisions**

In 2010 the Executive Office of Energy and Environmental Affairs (EEA) convened the Sustainable Water Management Initiative (SWMI) for the purpose of incorporating the best available science into the management of the Commonwealth's water resources. SWMI was a multi-year process that included a wide range of stakeholders and support from the Departments of Environmental Protection, Fish and Game, and Conservation and Recreation. In November 2012 the *Massachusetts Sustainable Water Management Initiative Framework Summary* (<http://www.mass.gov/eea/docs/eea/water/swmi-framework-nov-2012.pdf>) was released.

On November 7, 2014, the Department adopted revised Water Management Regulations at 310 CMR 36.00 that incorporate elements of the SWMI framework and the Water Conservation Standards adopted by the Massachusetts WRC. The regulations reflect a carefully developed balance to protect the health of Massachusetts' water bodies while meeting the needs of businesses and communities for water.

Without limitation, the Department has incorporated the following into Water Management permitting:

- Safe yield determinations for the major river basins based on a new methodology developed through SWMI (see description that follows);
- Environmental protections developed through SWMI, including without limitation;
  - protection for coldwater fish resources;
  - minimization of withdrawal impacts in areas stressed by groundwater use;
  - mitigation of the impacts of increasing withdrawals; and
- The special permit conditions in each Water Management Act permit.

### **Safe Yield in the Boston Harbor Basin**

Among the minimum permit factors Section 7 requires is a determination by the Department that permitted water withdrawals are within the safe yield of the water source from which they are made. Section 2 of the Water Management Act defines "safe yield" as: "the maximum dependable withdrawal that can be made continuously from a water source including ground or surface water during a period of years in which the probable driest period or period of greatest water deficiency is likely to occur: provided, however, that such dependability is relative and is a function of storage and drought probability."

For the purposes of the Water Management Program, the Department considers water sources to be the river basins delineated by the MA Water Resources Commission at 313 CMR 4.03. A map of the major river basins has been developed by the Department of Conservation and Recreation and can be viewed in their guidance

document “A Guide to the Interbasin Transfer Act and Regulations” or at <http://www.mass.gov/eea/images/dcr/watersupply/intbasin-ipswichriver/basin.jpg>.

This Permit is being issued under the Safe Yield methodology adopted by the Department on November 7, 2014, and described in the Regulations at 310 CMR 36.13. The Department has used the methodology described in the Regulations to calculate the safe yield for each river basin.

Under Section 11 of the Water Management Act, the Department cannot issue permits when the combined registered and permitted allocated withdrawal volumes exceed the safe yield of the water source. As of the issuance date of this Permit, the total allocated withdrawal volumes do not exceed the safe yield for the Boston Harbor Basin. This Permit does not affect the Boston Harbor Basin’s combined allocated withdrawal volumes because the Permit does not increase Ponkapoag’s authorized withdrawal volume.

#### **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 special conditions are intended to ensure the efficient use of water and to mitigate the potential impact of withdrawals. The following Findings of Fact are intended to describe the rationale, and to provide additional detail, for each of the special conditions in the Permit. This Findings of Fact also explain any changes to Special Permit Conditions from prior Permits, when applicable. This summary of permit special conditions is not intended to, and should not be construed as, modifying any of the permit special conditions. In the event of any ambiguity between this summary and the actual permit conditions, the permit language shall control.

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

Special Condition 1 reflects the permitted withdrawal volume of 0.17 MGD over a 214-day seasonal period (April – October). Ponkapoag’s actual water use has been below this value. The average daily withdrawal volumes for the system for 2013, 2014, and 2015 were 0.07, 0.08, and 0.12 MGD, respectively. The number of days of operation in the Permit will be 214 rather than the 210 in Ponkapoag’s WMA registration in order to properly reflect the number of calendar days from April through October.

#### **Special Condition 2, Maximum Authorized Daily Withdrawal Volume from Each Withdrawal Point**

Special Condition 2 reflects the volume of groundwater withdrawal expressed as a maximum daily rate for the source included in the Permit. The maximum authorized daily withdrawal volume for Well #1 is 0.317 MGD, which was determined by the well’s pumping rate during a 2008 aquifer test, as noted in Section 3.2.1.3 of Ponkapoag’s 2008 Supplemental Final Environmental Impact Report.

#### **Special Condition 3, Water Conservation and Seasonal Demand Management Plans**

In Attachment A of its WM03 application, Ponkapoag outlined its water conservation program. It noted that recent irrigation improvements were based on DEP’s Golf Course Water Use Policy, and that its water conservation program was presented in section 3.2.3 of the SFEIR submitted to MEPA. The SFEIR included a Best Management Practices table that mirrors the WMA guidance for golf courses. This table constitutes the water conservation plan of the Permit.

Consistent with good water conservation practices, permitted golf courses will be required to implement a drought triggered Seasonal Demand Management Plan (SDMP) as a condition of their Water Management Permit. The SDMP, at a minimum, restricts nonessential outdoor water use between May 1<sup>st</sup> and September 30<sup>th</sup> when the Massachusetts Drought Management Task Force declares a drought level of “Advisory” or higher (“Watch, Warning or Emergency”) for the region in which the golf course is located.

The SDMP shall also be implemented at times when streamflow falls below a designated flow trigger measured at an assigned, web-based, real-time U.S. Geologic Survey (USGS) stream gage from May 1st through September 30th. At a minimum, restrictions shall commence when streamflow falls below the trigger for three consecutive days. The streamflow-triggered response actions shall be consistent with the drought-triggered response actions at the Advisory level. Once implemented, the restrictions shall remain in place until streamflow at the assigned USGS local stream gage meets or exceeds the trigger streamflow for seven consecutive days. The low-flow statistic being applied, referred to as the “7-day low-flow statistic,” is the median value of the annual 7-day low flows for the period of record for the assigned gage. The 7 day low-flow statistic is expected to respond more quickly to low-flow conditions than the Drought Management Task Force Drought Declaration.

Ponkapoag has been assigned the following USGS stream gage: #01105554 – Neponset River at Greenlodge St near Canton, MA. The 7-day low flow at this site is 18 cubic feet per second (cfs). Should the reliability of the flow measurement at the Neponset River gage be so impaired as to question its accuracy, the Permittee may request the Department’s review and approval to transfer to another gage to trigger restrictions. The Department reserves the right to require the use of a different gage.

Ponkapoag shall be responsible for tracking the Massachusetts Drought Management Task Force drought declarations and recording when drought-triggered restrictions are implemented. Ponkapoag shall also be responsible for tracking streamflows and recording when streamflow-triggered restrictions are implemented. See the SDMP and attached USGS WaterAlert instructions for tracking information.

The SDMP is intended to address the necessary minimums of acceptable demand management required as dry conditions begin to impact our environment from May through September. Of particular importance in developing your SDMP and evaluating its effect on your irrigation is the recognition of nonessential outside water uses. The Department considers the irrigation of tees and greens as essential uses, but fairways and roughs less so.

Section C of the SDMP provides three options for water use reduction. Two options for water use reduction are in table format with the third option being an open-ended alternative approach. The Acres Table requires that you identify the number of acres you irrigate for tees and greens, fairways, roughs, landscaping and ornamentals, along with a percent reduction per unit area with worsening drought. The Time Table requires that you identify irrigation in timing reduction cycles.

As part of its WMA permit application, Ponkapoag submitted the SDMP Acres Table as its irrigation-reduction approach. The Department has accepted Ponkapoag’s proposed SDMP and it is included as a condition of this Permit.

#### **Special Condition 4, Streamflow Trigger Requirements and Coldwater Fisheries Resource Protection**

Per MEPA requirements, Ponkapoag has taken steps to reduce impacts to Ponkapoag Brook, which is a Coldwater Fisheries Resource (CFR) on the property. For instance, the installation and use of Well #1 was

intended to reduce summertime impacts to Ponkapoag Brook, as all withdrawals previously came from the brook. Also, long-term monitoring was conducted between 1996 and 2012 to monitor impacts on rare wildlife habitats and populations. A weir on Ponkapoag Brook was reconstructed in 2013 with a bypass valve to allow for continuous flow. Additionally, stormwater management improvements were made, including the construction of a detention basin to slowly release stormwater into the brook.

MEPA requirements also include monitoring of stage and discharge in Ponkapoag Brook. Monitoring began in the 2015 operating season at the Route 138 culvert on the golf course property, which was determined to be the best place for measuring discharge. DCR installed a staff gage and transducer at this location. DCR further committed to cease withdrawals from Ponkapoag Brook when the streamflow falls below a trigger of 0.28 cfs, which equates to a trigger flow value of 0.64 cfs at the Route 138 culvert. This commitment will be implemented once all irrigation improvements are complete and Ponkapoag Brook is not relied upon as the sole source of irrigation water on either course.

Ponkapoag shall continue monitoring stage and discharge in Ponkapoag Brook. Specifically, stage shall be recorded daily by onsite staff, and discharge shall be measured using a velocity meter at least once per month. DCR contracted with USGS Northborough Water Science Center to monitor Ponkapoag Brook streamflow beginning in April 2016. The discharge data will be available online at the USGS web site once a rating curve is established.

**Special Condition 5: Chapter 30, Section 61 Findings.**

This condition acknowledges Ponkapoag's preparation of an Environmental Impact Report under MEPA. In conditioning this permit, the Department ensured that the applicant will use all feasible means or measures to avoid, minimize, or mitigate Damage to the Environment. Measures that the Department deems necessary to mitigate or prevent harm to the environment are included in Special Conditions of this permit. After conducting its review of the information provided, the Department has determined that the withdrawal, as conditioned in the Permit, will not cause Damage to the Environment.

In addition to the permit conditions proposed above, please be aware of the following WMA requirements for environmental protections developed through SWMI:

Minimization of Withdrawal Impacts in Areas Stressed by Groundwater Use

Minimization of groundwater withdrawal impacts in stressed subbasins requires permittees with permitted groundwater sources in subbasins<sup>[1]</sup> with net groundwater depletion of 25% or more during August to minimize their withdrawal impacts on those subbasins to the greatest extent feasible.

Ponkapoag's groundwater source is located in subbasin 21039, which is -6.9% August net groundwater depleted (i.e. it is a surcharged subbasin). Therefore, minimization requirements do not apply to this permit.

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<sup>[1]</sup> Subbasins used for WMA permitting are the 1,395 subbasins delineated by the U.S. Geological Survey in *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins* (Weiskel et al., 2010, USGS SIR 2009-5272).



Mitigation of the Impacts of Increasing Withdrawals

WMA regulations require mitigation, where feasible, for withdrawal requests over a baseline volume. Baseline withdrawal means the volume of water withdrawn during calendar year 2005 plus 5%, or the average annual volume withdrawn from 2003 through 2005 plus 5%, whichever is greater provided that:

- (a) baseline cannot be less than a permittee's registered volume;
- (b) baseline cannot be greater than the permittee's authorized volume for 2005; and
- (c) if, during the period from 2003 to 2005, the permittee's withdrawals from the water source were interrupted due to contamination of the source or construction of a treatment plant, the Department will use best available data to establish a baseline volume from the water source.

The calculated baseline withdrawal volume for Ponkapoag is 35.70 MGY or 0.17 MGD, which is Ponkapoag's registered volume. Water withdrawal volumes reported by Ponkapoag from 1997 through 2014 ranged from 0.03 to 0.10 MGD according to the Department's records, which are below the baseline volume.

In the future, if Ponkapoag foresees the need for a new WMA permit for additional withdrawal volume, Ponkapoag must submit and implement a mitigation plan. Activities eligible for mitigation credit might include the recent course improvements noted in the WM03 application, such as:

- weir reconstruction in 2013, which featured a bypass valve to allow continuous flow into Ponkapoag Brook; and
- drainage improvements and maintenance aimed at managing stormwater flow from upstream development, such as the construction of a detention basin for slow release of flow into Ponkapoag Brook.



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Commissioner

## WATER WITHDRAWAL PERMIT MGL c 21G

This issuance of Permit #9P4-4-19-050.02 is approved pursuant to the Massachusetts Water Management Act (WMA) for the sole purpose of authorizing the withdrawal of a volume of water as stated below and subject to the following special and general conditions. This permit conveys no right in or to any property.

**PERMIT NUMBER:** 9P4-4-19-050.02 **RIVER BASIN:** Boston Harbor

**PERMITTEE:** DCR Ponkapoag Golf Course  
Department of Conservation and Recreation  
695 Hillside Street  
Milton, MA 02186

**ISSUANCE DATE:** TBD

**EXPIRATION DATE:** February 28, 2030

**TYPE AND NUMBER OF WITHDRAWAL POINTS:**

Groundwater: 1  
Surface Water: 0

**USE:** Golf course irrigation

**DAYS OF OPERATION:** 214 (April – October)

**LOCATION:**

**Table 1: Withdrawal Point Identification**

<u>Source</u>	<u>Latitude</u>	<u>Longitude</u>
Well #1	42.19053 N	71.11352 W

## SPECIAL CONDITIONS

### 1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes Ponkapoag to withdraw 0.17 million gallons per day (MGD) or 35.70 million gallons per year (MGY) of water over 214 days (April through October) annually in the Boston Harbor Basin (Table 2). The number of days of operation in the Permit is 214 rather than the 210 in Ponkapoag's registration in order to properly reflect the number of calendar days from April through October. The volumes reflected below are not increasing the rate previously registered to Ponkapoag but are instead authorizing withdrawal volumes from an additional withdrawal point.

**Table 2: Maximum Authorized Average Annual Withdrawal Volume**

Permit Periods	Permit		Permit + Registration	
	Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
TBD to 2/28/2020	0	0	0.17	35.70
3/1/2020 to 2/28/2025	0	0	0.17	35.70
3/1/2025 to 2/28/2030	0	0	0.17	35.70

### 2. Maximum Authorized Daily Withdrawal Volume

Withdrawals from the Ponkapoag withdrawal point Well #1 are not to exceed the approved maximum daily volume listed below (Table 3) without specific advance written approval from the Department.

**Table 3. Maximum Authorized Daily Withdrawal Volume**

<u>Source</u>	<u>Maximum Daily Rate</u>
Well #1	0.317 MGD

3. **Water Conservation and Seasonal Demand Management Plans**

Ponkapoag submitted a Best Management Practices table (Table 4) that mirrors the WMA guidance for golf courses. This table constitutes the water conservation plan of the Permit.

Table 4. Best Management Practices

TABLE 3-3 BEST MANAGEMENT PRACTICES		
Currently Implemented	To be Implemented	Best Management Practices
X		Water use is 100% metered.
	X	Source meters are regularly calibrated.
	X	New and existing irrigation ponds are lined with impervious material.
X		Implementation of an irrigation system inspection and maintenance program that includes leak detection and repair, sprinkler head maintenance and replacement.
X		Regular inspection of course to determine irrigation needs.
X		Implementation of a Turf Management Plan.
X		Use of soil sensors and/or soil samples to determine soil moisture content.
	X	Use of weather stations to program irrigation cycles.
	X	Use of low trajectory sprinkler heads.
X		Elimination of irrigation whenever possible, such as in rough areas.
X		Limited ornamental watering.
X		Employee training in water conservation and management.
	X	Utilization of drought tolerant grasses and shrubs.
X		Regular aerating of turf to increase the percolation of water into the soil.
X		Use of mulch materials in planting beds to improve water-holding capacity.
	X	Raising turf height during dry weather and drought conditions.
	X	Reuse of wastewater and/or stormwater for irrigation.

As defined by the WMA, irrigation to establish new turf during the months of May and September is considered an essential water use not subject to restrictions in the WMA Program's SDMP.

Ponkapoag shall limit nonessential outdoor water use through mandatory restrictions from May 1<sup>st</sup> through September 30<sup>th</sup> as outlined in the Seasonal Demand Management Plan (SDMP) and 7-day low flow trigger instructions (attached). At a minimum, restrictions shall commence when the Massachusetts Drought Management Task Force declares a drought level of "Advisory" or higher ("Watch, Warning or Emergency") for the region in which the golf course is located, or when streamflow falls below the 7-day low flow trigger for three consecutive days. The streamflow-triggered response actions shall follow the drought-triggered response actions at the Advisory level.

Once implemented, the 7-day low flow restrictions shall remain in place until streamflow at the assigned USGS local stream gage meets or exceeds the trigger streamflow for seven consecutive days. Ponkapoag has been assigned USGS stream gage #01105554 – Neponset River at Greenlodge St near Canton, MA. The 7-day low flow at this site is 18 cubic feet per second (cfs). Should the reliability of the flow measurement at the Neponset River gage be so impaired as to question its accuracy, the Permittee may request the Department's review and approval to transfer to another gage to trigger restrictions. The Department reserves the right to require use of a different gage.

Ponkapoag selected an acres-reduction approach, which requires that irrigation be reduced by acres (Table 5).

**Table 5. Ponkapoag Acres-Reduction in its SDMP**

Massachusetts Drought Levels	Watering Less Irrigated Acreage as Drought Severity Increases							
	Watering allowed up to designated percent							
	Irrigated Tees & Greens		Irrigated Fairways		Irrigated Roughs		Irrigated Landscape & Ornaments	
Action Levels	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres
Normal	100%	13	100%	44	100%	11	100%	0.25
Advisory †^	100%	13	80%	35.2	50%	5.5	*	XXX
Watch †	100%	13	60%	26.4	*	XXX	*	XXX
Warning †	100%	13	40%	17.6	*	XXX	*	XXX
Emergency **	TBD	TBD	TBD	TBD	*	XXX	*	XXX

† Nonessential outdoor irrigation use shall not occur between the hours of 9 am and 5 pm, except that hand-watering of hot spots may occur at any time

^Advisory-level reductions should also be implemented when the 7-day low flow trigger is hit.

\* No irrigation allowed.

\*\* Mitigation actions to be determined by the Governor's Emergency Proclamation.

Ponkapoag shall be responsible for tracking the Massachusetts Drought Management Task Force drought declarations and recording when drought-triggered restrictions are implemented. Ponkapoag shall also be responsible for tracking streamflows and recording when streamflow-triggered restrictions are implemented. Nothing in this permit shall prevent the Permittee from implementing water use restrictions that are more restrictive than those set forth in this permit.

#### 4. **Streamflow Trigger Requirements and Coldwater Fisheries Resource Protection**

MEPA requirements include monitoring of stage and discharge in Ponkapoag Brook. Monitoring began in the 2015 operating season at the Route 138 culvert on the golf course property, which was determined to be the best place for measuring discharge. DCR installed a staff gage and transducer at this location.

Ponkapoag shall continue monitoring stage and discharge in Ponkapoag Brook. Specifically, stage shall be recorded daily by onsite staff, and discharge shall be measured using a velocity meter at least once per month. Beginning in April of 2016, DCR contracted with USGS Northborough Water Science Center to monitor Ponkapoag Brook streamflow beginning in April 2016. The discharge data will be available online at the USGS web site once a rating curve is established.

#### 5. **Chapter 30, Section 61 Findings**

The Environmental Impact Report for the Ponkapoag Project, EOE #10573, has been carefully considered prior to issuing this permit. In conditioning this permit, the Department ensured that the

applicant will use all feasible means or measures to avoid or minimize adverse environmental impacts. Measures that the Department deems necessary to mitigate or prevent harm to the environment are included in the conditions of this permit. The Department has made its permitting decision under applicable law on a balancing, where appropriate, of environmental and socioeconomic objectives, as mandated by 301 CMR 11.00.

**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 and in compliance with 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 over which Permittee has authority, title or control, 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 M.G.L. c. 21G, §§ 15-17, M.G.L. c. 150, § 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 36.33.
6. **Duty to Report** The Permittee shall submit annually, on a form provided by the Department, a certified statement of the withdrawal. Such report is to be received by the Department by the date specified by the Department. Such report must be submitted as specified on the report form.
7. **Duty to Maintain Records** The Permittee shall be responsible for maintaining withdrawal and all other records as specified by this permit.
8. **Metering** Withdrawal points shall be metered. Meters shall be calibrated annually. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.
9. **Right to Amend, Suspend or Terminate** The Department may amend, suspend or terminate the permit in accordance with M.G.L. c. 21G and 310 CMR 36.29.

**APPEAL RIGHTS AND TIME LIMITS**

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing as described herein and in accordance with the procedures described at 310 CMR 36.37. Any such request must be made in writing, by certified mail or hand delivered and received by the Department within

twenty-one (21) days of the date of receipt of this permit. The hearing request, including proof of payment of the filing fee, must be mailed to:

Case Administrator  
MassDEP Office of Appeals and Dispute Resolution  
One Winter Street  
Boston, MA 02108

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 community in which the withdrawal point 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**

310 CMR 1.01(6)(b) requires 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 his permit.

#### **FILING FEE AND ADDRESS**

The Department's fee transmittal form, 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

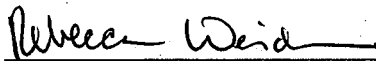
The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

#### **EXEMPTIONS**

The filing fee is not required if the appellant is a municipality (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.



Rebecca Weidman  
Director of the Division of Watershed Management

July 19, 2016  
Date





### Seasonal Limits on Nonessential Outdoor Water Use using 7-Day Low Flow Trigger

Ponkapoag Golf Course shall limit nonessential outdoor water use through mandatory restrictions from May 1<sup>st</sup> through September 30<sup>th</sup> as outlined in below. To the extent feasible, all summer outdoor water use should take place before 9 am and after 5 pm when evaporation and evapotranspiration rates are lower.

#### 7-Day Low Flow Triggered Restrictions

Ponkapoag should implement the "Advisory" level water use reductions outlined in its Acres-Reduction Seasonal Demand Management Plan (SDMP):

When USGS stream gage 01105554 –Neponset River at Greenlodge St near Canton, MA falls below the 7-day low-flow statistic **18 cfs** for three (3) consecutive days.

Once implemented, the restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.

#### Instructions for Accessing Online Streamflow Information

**Streamflow information** is available at the USGS National Water Information System (NWIS) Web Interface. The USGS NWIS default shows Massachusetts streamflows in real time, i.e., the most recent, usually quarter-hourly, reading made at each USGS stream gage.

Seasonal Limits on Nonessential Outdoor Water Use are implemented when the mean daily streamflow falls below the designated trigger. The mean daily flow is not calculated until after midnight each day when the USGS computes the hourly data into a mean daily streamflow. As a result, permittees must use the mean daily streamflow from the preceding day when tracking streamflows.

**Mean daily streamflow gage** readings are available at the USGS NWIS Web Interface at <http://waterdata.usgs.gov/ma/nwis/current/?type=flow>.

- Scroll down to 01105554 – Neponset River at Greenlodge St Near Canton, MA.
- Click on the gage number.
- Scroll down to "Provisional Date Subject to Revision – Available data for this site" and click on the drop down menu.
- Click on "Time-series: Daily data" and hit GO.
- Scroll down to the "Available Parameters" box. Within the box, be sure "Discharge (mean)" is checked, then, under "Output Format" click "Table" and hit GO.
- Scroll down to "Daily Mean Discharge, cubic feet per second" table and find the current date on the table.
- Compare the cubic feet per second (cfs) measurement shown on the table to the cfs shown under 7-Day Low Flow Triggered Restrictions above.

