



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

Kathleen A. Theoharides  
Secretary

Martin Suuberg  
Commissioner

### DRAFT

April 25, 2022

Woodland Golf Club  
Attention: Christopher Donadio  
1897 Washington Street  
Auburndale, MA 02166

City/Town: Newton  
Program: Water Management Act (WMA)  
WMA Permit #: 9P4-3-20-207.01  
Action: Draft Permit Modification

Dear Mr. Donadio:

Please find the following attached:

- DRAFT Findings of Fact in Support of the modification of permit #9P4-3-20-207.01; and,
- DRAFT Water Management Act Permit #9P4-3-20-207.01 for the Woodland Golf Club.

Consistent with 310 CMR 36.27(6) - (8) of the revised Water Management Act Regulations promulgated on November 7, 2014, MassDEP will now publish notice in the Environmental Monitor that a DRAFT Permit is available for review and comment for 30 days. Notice of the public comment period will also be sent to all registrants, permittees and those having non-consumptive use statements within the Charles River Basin. MassDEP expects to issue the final permit within 30 days of the close of the public comment period.

The signature on this cover letter indicates formal issuance of the attached documents. If you have any questions regarding this information, please contact Linjun Yao at [Linjun.Yao@mass.gov](mailto:Linjun.Yao@mass.gov).

Sincerely,

Duane LeVangie, Chief  
Water Management Program  
Bureau of Water Resources

ecc: Julia Blatt, Massachusetts River Alliance

Sara Bower, Mass Rivers Alliance

Julie Wood, Charles River Watershed Association

[mass.gov.sharepoint.com/W:DWPArchive\NERO\Newton-Woodland G.C.-WMA Draft Permit-2022-4-25](https://mass.gov/sharepoint.com/W:DWPArchive\NERO\Newton-Woodland G.C.-WMA Draft Permit-2022-4-25)

This information is available in alternate format. Contact Glynis Bugg at 617-348-4040.

TTY# MassRelay Service 1-800-439-2370

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**Massachusetts Department of Environmental Protection**  
**One Winter Street, Boston MA 02108 • Phone: 857 262-0606**  
**Communication for Non-English-Speaking Parties - 310 CMR 1.03(5)(a)**



**1 English:**

This document is important and should be translated immediately. If you need this document translated, please contact MassDEP's Diversity Director at the telephone numbers listed below.



**2 Español (Spanish):**

Este documento es importante y debe ser traducido inmediatamente. Si necesita este documento traducido, por favor póngase en contacto con el Director de Diversidad MassDEP a los números de teléfono que aparecen más abajo.



**3 Português (Portuguese):**

Este documento é importante e deve ser traduzida imediatamente. Se você precisa deste documento traduzido, por favor, entre em contato com Diretor de Diversidade da MassDEP para os números de telefone listados abaixo.



**4(a) 中國（傳統）(Chinese (Traditional)):**

本文件非常重要，應立即翻譯。如果您需要翻譯這份文件，請用下面列出的電話號碼與 MassDEP 的多樣性總監聯繫。



**4(b) 中国（简体中文）(Chinese (Simplified)):**

本文件非常重要，应立即翻译。如果您需要翻译这份文件，请用下面列出的电话号码与 MassDEP 的多样性总监联系。



**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 ឯកសារនេះសូមទំនាក់ទំនងឆ្លោចជាមួយក MassDEP នៅលេខទូរស័ព្ទដែលបានរាយ ខាងក្រោម។



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

*Es documento é importante e deve ser traduzido imidiatamente. Se bo precisa des documento traduzido, por favor contacta Director de Diversidade na MassDEP's pa es numero indicode li d'boche.*



**9 Русский язык (Russian):**

Этот документ является важным и должно быть переведено сразу. Если вам нужен этот документ переведенный, пожалуйста, свяжитесь с директором разнообразия MassDEP по адресу телефонных номеров, указанных ниже.



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



10 العربية (Arabic):

هذه الوثيقة الهامة وينبغي أن تترجم على الفور. إذا كنت بحاجة إلى هذه الوثيقة المترجمة، يرجى الاتصال مدير التنوع في PMassDE 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 ստորև.



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 PMassDE در شماره تلفن های ذکر شده در زیر.



14 Français (French):

Ce document est important et devrait être traduit immédiatement. Si vous avez besoin de ce document traduit, s'il vous plaît communiquer avec le directeur de la diversité MassDEP aux numéros de téléphone indiqués ci-dessous.



15 Deutsch (German):

Dieses Dokument ist wichtig und sollte sofort übersetzt werden. Wenn Sie dieses Dokument übersetzt benötigen, wenden Sie sich bitte Diversity Director MassDEP die in den unten aufgeführten Telefonnummern.



16 Ελληνική (Greek):

Το έγγραφο αυτό είναι σημαντικό και θα πρέπει να μεταφραστούν αμέσως. Αν χρειάζεστε αυτό το έγγραφο μεταφράζεται, παρακαλούμε επικοινωνήστε Diversity Director MassDEP κατά τους αριθμούς τηλεφώνου που αναγράφεται πιο κάτω.



17 Italiano (Italian):

Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, si prega di contattare la diversità Direttore di MassDEP ai numeri di telefono elencati di seguito.



18 Język Polski (Polish):

Dokument ten jest ważny i powinien być natychmiast przetłumaczone. Jeśli potrzebujesz tego dokumentu tłumaczone, prosimy o kontakt z Dyrektorem MassDEP w różnorodności na numery telefonów wymienionych poniżej.



19 हिन्दी (Hindi):

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



# Department of Environmental Protection

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## **Findings of Fact in Support of DRAFT Permit Issuance Water Management Permit #9P4-3-20-207.01 Woodland Golf Club**

The Department of Environmental Protection (the Department or MassDEP) makes the following Findings of Fact in support of the attached DRAFT Water Management Act Permit modification #9P4-3-20-207.01 and includes herewith its reasons for issuing the Draft Permit and for conditions of approval imposed, as required by M.G.L. c. 21G, § 11. The issuance of this modified permit is in response to a review of Woodland Golf Club's (Woodland or the Club) existing permit for golf course irrigation. Consistent with 310 CMR 36.31(3) the Department conducted this review to evaluate Woodland Golf Club's compliance with their exiting permit's conditions. The Department's modification to the permit are in accordance with 310 CMR 36.29, in order to make it consistent with changes made to the Water Management Act Regulations in 2014.

The Woodland Golf Club holds a Water Management registration statement (#3-20-207.02) for an average daily withdrawal volume of 0.21 million gallons per day (MGD) over 210 days per year (April – October), and 44.16 million gallons per year (MGY) from Well #1 off Grove Street.

On May 20, 2003, Woodland Golf Club received Water Management Act Permit #9P4-3-20-207.01 to add Well #2 off Washington Street as an approved source and add flexibility and improve the irrigation system of the Woodland Golf Club. Permit #9P4-3-20-207.01 did not increase the total authorized system-wide withdrawal above the 44.16 MGY authorized in the registration.

On August 11, 2020, MassDEP issued an Order to Complete (OTC) outlining specific information that was required to review the Club's permit. Woodland responded on November 9, 2020.

**MassDEP adopted revised Water Management Regulations at 310 CMR 36.00 on November 7, 2014, (described in greater detail below). Since that time, The Department has been working closely with each Water Management Act (WMA) permittee to fully**

**consider all aspects of their individual situations and ensure thoughtful and implementable permits.**

### **The Permit Extensions**

The renewed permit issued on February 26, 2010, had an expiration date of February 28, 2029. In 2010, the permit was extended for two years by Section 173 of Chapter 240 of the Acts of 2010, the Permit Extension Act. In 2012, the Permit Extension Act was amended by chapter 238 of the Acts of 2012, and the permit was again extended an additional two years to February 28, 2033. That date was further extended by 462 days due to COVID-19 Order No. 42, “Order Resuming State Permitting Deadlines and Continuing to Extend the Validity of Certain State Permits,” issued on July 2, 2020. The expiration date for all permits going forward in the Charles River Basin will be June 5, 2034.

### **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;
- 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.

### **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 the Safe Yield in the Charles River Basin section of this document);
- 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 Charles River Basin**

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. As of the date of issuance of this permit, the safe yield for the Charles River Basin is 65.2 million gallons per day (MGD), and total registered and permitted withdrawals are 44.12 MGD. The maximum withdrawals that will be authorized in this permit, and all other permits currently under review by the Department within the Charles River Basin, will be within the safe yield and may be further conditioned as outlined in the regulations. As noted above this permit does not allocate any additional withdrawal volumes, so it will not impact the safe yield of the Charles Basin.

### **Findings of Fact for Permit Conditions in Woodland's Water Management Act Permit**

The following Findings of Fact for the special conditions included in the permit generally describe the rationale and background for each special condition in the DRAFT permit. 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**, reflects the previously registered and permitted volume of 0.21 million gallons per day (MGD) over the 210-day, April – October irrigation season for a total of 44.16 million gallons per year (MGY). This rate has not been changed from the previous permit.

**Special Condition 2, Maximum Authorized Daily Withdrawal From Withdrawal Point**, reflects that Well #2 is authorized to withdraw a maximum daily withdrawal volume of 0.24 MGD, based on the withdrawal data submitted by the Club in the OTC response on November 9, 2020, and the pumping test results included in the original permit application. This daily withdrawal volume is not to be exceeded without prior approval from MassDEP. Well #1 is registered and as such does not have maximum daily pumping rates.

### **Special Condition 3, Water Conservation Requirements**

Woodland submitted an update of their water conservation efforts on November 9, 2020, as part of its Order to Complete (OTC) response. This condition has been revised to reflect their existing efforts combined with the Best Management Practices that Woodland Golf Club indicated as

being implemented (according to the attached Seasonal Demand Management Plan). This combination constitutes the water conservation requirements of the renewed permit.

#### **Special Condition 4, Seasonal Demand Management Plan**

Consistent with sound 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 1 (Mild Drought) or higher Level 2 (Significant Drought), Level 3 (Critical Drought), Level 4 (Emergency Drought) 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 USGS stream gage from May 1<sup>st</sup> through September 30<sup>th</sup>. 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 Mild Drought 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 State’s Drought Level Declaration.

The Woodland Golf Club has been assigned the USGS stream gage #01104500 on the Charles River in Waltham, MA. The 7-day low flow at this site is 35 cubic feet per second (cfs). Should the reliability of the flow measurement on Charles River at Waltham gage be so impaired as to question its accuracy, the Permittee may request MassDEP’s review and approval to transfer to another gage to trigger restrictions. MassDEP reserves the right to require use of a different groundwater trigger.

The Woodland Golf Club shall be responsible for tracking the Massachusetts Drought Management Task Force drought declarations and recording when drought-triggered restrictions are implemented. Woodland Golf Club shall also be responsible for tracking streamflow and recording when streamflow-triggered restrictions are implemented. See the SDMP in Table 4 and attached USGS Water Alert instructions for tracking information (Appendix A).

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 in evaluating its effect on your Golf Club’s irrigation, is the recognition of nonessential outside water uses. MassDEP 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 the Order to Complete (OTC) responses in 2020, Woodland Golf Club submitted an updated SDMP using the Time Table reductions. MassDEP has accepted Woodland Golf Club's proposed SDMP and it is included as a condition of this renewed DRAFT permit.

Please note that all permitted golf courses will be required to notify MassDEP when you put your SDMP or other required restrictions in place. Copies of the notification forms for golf courses can be found at <https://www.mass.gov/info-details/outdoor-water-use-restrictions-for-cities-towns-and-golf-courses>.

**Special Condition 5, Minimization of Groundwater Withdrawal Impacts in Stressed Subbasins**, requires permittees with permitted groundwater sources in subbasins<sup>1</sup> with a net groundwater depletion (NGD) of 25% or more during August to minimize their withdrawal impacts on those subbasins to the greatest extent feasible, through an extension of water conservation and demand management that go beyond standard the Water Management Act permit requirements.

Since Woodland's permitted source is located in Subbasin 21043, which has August net groundwater depletion of 39.8%, greater than 25%. Woodland Golf Club is required to minimize their withdrawal impacts on Subbasin 21043.

As part of the Order to Complete response, Woodland Golf Club outlined the following conservation measures that go beyond standard the Water Management Act permit requirements.

- Use of water storage ponds.
- Lining irrigation ponds with impervious material where permissible.
- Install and use an on-site weather station combined with an automated irrigation system.
- Reduction of irrigation rates in secondary rough areas and, where possible, elimination of irrigation in non-play areas.
- Installation of low-pressure alarms on water pumps.
- Installation of high efficiency nozzles.
- Improving irrigation uniformity through careful evaluation of design criteria such as nozzle size, spacing, scheduling coefficient and pressure selection.
- Implement Green Maintenance Practices, including using native, drought-tolerant plants, or mulch materials in landscaping.
- Installation of low evaporation gravel pathways.
- Employee training in water conservation and proper course management.

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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 Impacts for Withdrawals that Exceed Baseline Withdrawals** requires mitigation of the impacts of withdrawals above the permittee's baseline, which in Woodland Golf Club's case is their registered volume of 0.21 MGD or 44.16 MGY. Mitigation is not required at this time because volumes greater than the baseline are not allocated by this permit. Should Woodland Golf Club need more than 0.21 MGD over the 210 days period, they will need to file and obtain a new permit and provide the required mitigation if feasible.

**Coldwater Fish Resource Protection** was incorporated into the Water Management Regulations in November 2014. Coldwater Fish Resource Protection is not a condition of this permit because the Club's withdrawal do not impact any waters that MA Division of Fisheries and Wildlife has identified as supporting coldwater fish at this time.



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## **DRAFT WATER WITHDRAWAL PERMIT #9P4-3-20-207.01 Woodland Golf Club**

This renewal of Permit #9P4-3-20-207.01 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:** 9P4-3-20-207.01

**RIVER BASIN:** Charles River

**PERMITTEE:** Woodland Golf Club

**EFFECTIVE DATE:** TBD

**EXPIRATION DATE:** June 5, 2034\*

\* The original expiration date for this permit was February 28, 2029. The expiration date was extended by four years by St. 2010, c. 240, as amended by St. 2012, c.238, collectively known as the Permit Extension Act. The expiration date was further extended by 462 days due to COVID-19 Order No. 42, "Order Resuming State Permitting Deadlines and Continuing to Extend the Validity of Certain State Permits," issued on July 2, 2020.

**NUMBER OF WITHDRAWAL POINTS:** 1

Groundwater: 1

**USE:** Golf Course Irrigation

**DAYS OF OPERATION:** 210

**LOCATION(S):**

Source	Latitude	Longitude	Location
Well #2	42° 20' 9.23" N	71° 14' 42.88" W	Washington Street, Newton

This information is available in alternate format. Contact Glynis Bugg at 617-348-4040.

TTY# MassRelay Service 1-800-439-2370

MassDEP Website: [www.mass.gov/dep](http://www.mass.gov/dep)

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## SPECIAL CONDITIONS

### 1. Maximum Authorized Annual Average Withdrawal Volume

This Permit authorizes Woodland Golf Club to withdraw water from the Charles River Basin at the rate described below (Table 1). The permitted 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). This permit does not authorize average withdrawal above the 44.16 MGY authorized under WMA Registration #3-20-207.02.

The Department of Environmental Protection (“MassDEP”) will use the water withdrawal volume from all authorized withdrawal points to assess compliance with the permitted withdrawal volume.

**Table 1. Maximum Authorized Withdrawal Volumes**

Permit Periods	Total Water Withdrawal Volumes			
	Permit		Permit + Registration	
	Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
TBD to 06/6/2029	0.0	0.0	0.21	44.16
06/6/2029 to 06/5/2034*	0.0	0.0	0.21	44.16

\* The original expiration date for this permit was February 28, 2029. The expiration date was extended by four years by St. 2010, c. 240, as amended by St. 2012, c.238, collectively known as the Permit Extension Act. The expiration date was further extended by 462 days due to COVID-19 Order No. 42, “Order Resuming State Permitting Deadlines and Continuing to Extend the Validity of Certain State Permits,” issued on July 2, 2020.

### 2. Maximum Authorized Daily Withdrawals from Withdrawal Point

Withdrawals from the point shall not to exceed the approved maximum daily volumes listed below (Table 2) without specific advance written approval from MassDEP.

**Table 2. Maximum Daily Withdrawal Volumes**

Source	Maximum Daily Volume (MGD)
Well #2	0.24

### 3. Water Conservation Requirements

The Water Conservation Practices Utilized at the Club, submitted as part of its renewal application, have been combined with the Best Management Practices that Woodland indicated are implemented (according to the Order to Complete (OTC) response and the

Seasonal Demand Management Plan included in Special Condition 4). This combination constitutes the water conservation requirements of the modified DRAFT permit.

**Table 3. Water Conservation Requirements**

a. Metering 100% of water use, and calibrating source meters annually.
b. Implementation of an irrigation system inspection and maintenance program that includes the following on a routine basis: <ul style="list-style-type: none"><li>• Leak detection and repair: Daily monitoring of the golf course to ensure no leaks throughout the system are present.</li><li>• Weekly Sprinkler head maintenance and replacement to ensure proper trajectory, pressure, and rotation</li><li>• Weekly cleaning or replacing clogged nozzles.</li></ul>
c. Use of portable soil moisture sensors and golf weather apps to increase the efficiency of the irrigation system
d. Irrigating in the early morning or evening hours when evaporation rates are at their lowest, to extent practicable to maintain the turf
e. Regular aerating of turf to increase the percolation of water into the soil
f. Use of mulch materials in planting beds to improve water-holding capacity of the landscaping
g. Use of environmentally safe wetting agents to improve water infiltration and minimize evaporation
h. Use of low water use or native drought tolerant plants to the greatest extent practicable
i. Employee training in water conservation and management

#### **4. Seasonal Demand Management Plan**

The Woodland Golf Club 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). At a minimum, restrictions shall commence when the Massachusetts Drought Management Task Force declares a Level 1- Mild Drought or higher Level 2- Significant Drought, Level 3-Critical Drought, or Level 4-Emergency Drought 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) groundwater gage from May 1<sup>st</sup> through September 30<sup>th</sup>. At a minimum, restrictions shall commence when streamflow falls below the trigger for three consecutive days. 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 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 Level Declaration.

Woodland Golf Club has been assigned USGS stream gage 01104500 on the Charles River in Waltham, MA. The 7-day low flow at this site is 35.0 cubic feet per second (cfs).

Woodland Golf Club selected a time-reduction approach, which requires that the club reduces irrigation by time (Table 4).

**Table 4. Woodland Golf Club Time-Reduction in its SDMP**

Irrigating for Shorter Durations as Drought Severity Increases Reduced Minutes in Irrigation Cycles								
Massachusetts Drought Levels	Irrigated Tees & Greens		Irrigated Fairways		Irrigated Roughs		Irrigated Landscape & Ornamentals	
	Percent	Time (min.)	Percent	Time (min.)	Percent	Time (min.)	Percent	Time (min.)
Normal	Full cycle	<b>6</b>	Full cycle	<b>12</b>	Full Cycle	<b>15</b>	100%	<b>15</b>
Mild Drought or WMA Permit Trigger is reached	Full cycle	<b>6</b>	80% <sup>†</sup>	<b>9.6</b>	50% <sup>†</sup>	<b>7.5</b>	0%**	
Significant Drought	Full cycle	<b>6</b>	60% <sup>†</sup>	<b>7.2</b>	0%			
Critical Drought	Full cycle	<b>6</b>	40% <sup>†</sup>	<b>4.8</b>				
Emergency ***	TBD		0%				0%	
<sup>†</sup> Irrigation use shall not occur between the hours of 9 a.m. and 5 p.m., except that hand-watering of hot spots may occur at any time ** Courses whose core business includes a special event venue may continue to irrigate gardens, flowers and ornamental plants by means of hand-held hose or drip irrigation *** Additional actions to be determined by the Governor’s Emergency Proclamation.								

Golf permittees must notify MassDEP within 14 days of the effective date for triggering and implementing their SDMP. Notification is required for the initial implementation only each year. Copies of the notification forms for golf courses can be found at <https://www.mass.gov/info-details/outdoor-water-use-restrictions-for-cities-towns-and-golf-courses>

## 6. Minimization of Groundwater Withdrawal Impacts in Stressed Subbasins

The Woodland Golf Club shall minimize the impacts of its groundwater withdrawal from Irrigation Well #2 in Subbasin 21043, by implementing the following measures:

- Use of water storage ponds.
- Lining irrigation ponds with impervious material where permissible.
- Install and use an on-site weather station combined with an automated irrigation system.

- Reduction of irrigation rates in secondary rough areas and, where possible, elimination of irrigation in non-play areas.
- Installation of low-pressure alarms on water pumps.
- Installation of high efficiency nozzles.
- Improving irrigation uniformity through careful evaluation of design criteria such as nozzle size, spacing, scheduling coefficient and pressure selection.
- Implement Green Maintenance Practices, including using native, drought-tolerant plants, or mulch materials in landscaping.
- Installation of low evaporation gravel pathways.
- Employee training in water conservation and proper course management.

### **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.

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Duane LeVangie  
Water Management Program Chief  
Bureau of Water Resources

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Date

### **Appendix A – Instructions for Accessing Streamflow Website 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 quarterly 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 01104500 on the Charles River in Waltham, 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 “00060 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 Streamflow Triggered Restrictions above.

Woodland Golf Club shall document compliance with the Seasonal Nonessential Outdoor Water Use Restrictions annually. All permitted golf courses must notify MassDEP within 14 days of the effective date for triggering and implementing their SDMP. Notification is required for the initial implementation only each year. Copies of the notification forms for golf courses can be found at <https://www.mass.gov/info-details/outdoor-water-use-restrictions-for-cities-towns-and-golf-courses>.