



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Bethany A. Card
Secretary

Martin Suuberg
Commissioner

October 18, 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: Final Permit Modification

Dear Mr. Donadio:

Please find the following attached:

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

The signature on this cover letter indicates formal issuance of the attached documents. If you have any questions regarding this matter, please contact Linjun Yao at 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
Heather Miller, Charles River Watershed Association

<https://massgov.sharepoint.com/:f:/t/sites/DEP-BWR/DWPArchive/NERO/Newton-Woodland G.C.-Final Permit-9P4320207.0-WMA-2022-10-18>



Communication for Non-English-Speaking Parties

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 number listed below.

Español Spanish

Este documento es importante y debe ser traducido de inmediato. Si necesita este documento traducido, comuníquese con la Directora de Diversidad de MassDEP al número de teléfono que aparece más abajo.

Português Portuguese

Este é um documento importante e deve ser traduzido imediatamente. Se precisar de uma tradução deste documento, entre em contato com o Diretor de Diversidade da MassDEP nos números de telefone listados abaixo.

繁體中文 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聯絡 MassDEP 多元化負責人。

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 的多元化主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradwi l imedyatman. Si ou bezwen dokiman sa a tradwi, tanpri kontakte Direktè Divèsite MassDEP la nan nimewo telefòn endike anba.

Việt Vietnamese

Tài liệu này rất quan trọng và cần được dịch ngay lập tức. Nếu quý vị cần dịch tài liệu này, xin liên lạc với Giám đốc Đa dạng của MassDEP theo các số điện thoại ghi dưới đây.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះគឺសំខាន់ហើយត្រូវបានបកប្រែភ្លាមៗ។ ប្រសិនបើអ្នកត្រូវការឱ្យគេបកប្រែឯកសារនេះ:

សូមទាក់ទងមកនាយកផ្នែកពិធីកម្មរបស់ MassDEP តាមលេខទូរស័ព្ទខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Kel dokumentu li é inportáti y debe ser traduzidu imediatamenti. Se bu meste di kel dokumentu traduzidu, pur favor kontakta Diretor di Diversidádi di MassDEP na numeru abaxu indikadu.

Contact **Glynis L. Bugg, Acting Diversity Director/Civil Rights 857-262-0606**

Massachusetts Department of Environmental Protection

One Winter Street, Boston MA 02108

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>

(Version revised 7.22.2022) 310 CMR 1.03(5)(a)

Русский Russian

Это важный документ, и он должен быть безотлагательно переведен. Если вам нужен перевод данного документа, пожалуйста, свяжитесь с директором по вопросам многообразия (Diversity Director) компании MassDEP по указанному ниже телефону .

العربية Arabic

هذه الوثيقة مهمة ويجب ترجمتها على الفور. إذا كنت بحاجة إلى هذه الوثيقة مترجمة، يرجى الاتصال بمدير التنوع PMassDE على أرقام الهواتف المدرجة أدناه.

한국어 Korean

이 문서는 중요하고 즉시 번역해야 합니다. 이 문서의 번역이 필요하시다면, 아래의 전화 번호로 MassDEP의 다양성 담당 이사에 문의하시기 바랍니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է և պետք է անմիջապես թարգմանվի:
Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանել, դիմեք MassDEP-ի բազմազանություն տնօրենին ստորև նշված հեռախոսահամարով:

فارسی Farsi Persian

این سند مهم است و باید فوراً ترجمه شود.
اگر به ترجمه این سند نیاز دارید، لطفاً با مدیر بخش تنوع نژادی MassDEP به شماره تلفن ذکر شده در زیر تماس بگیرید.

Français French

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

Deutsch German

Dieses Dokument ist wichtig und sollte sofort übersetzt werden. Sofern Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an den Diversity Director MassDEP unter der unten aufgeführten Telefonnummer.

Ελληνική Greek

Το παρόν έγγραφο είναι σημαντικό και θα πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του παρόντος εγγράφου, παρακαλούμε επικοινωνήστε με τον Διευθυντή Διαφορετικότητας του MassDEP στους αριθμούς τηλεφώνου που αναγράφονται παρακάτω.

Italiano Italian

Comunicazione per parti che non parlano inglese. Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, potete contattare il Direttore di Diversità di MassDEP al numero di telefono elencato di seguito.

Język Polski Polish

Dokument ten jest ważny i powinien zostać natychmiast przetłumaczony. Jeśli potrzebujesz przetłumaczonej wersji dokumentu, prosimy o kontakt z dyrektorem ds. różnorodności MassDEP pod jednym z numerów telefonu wymienionych poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका तुरंत अनुवाद किया जाना चाहिए. यदि आपको इस दस्तावेज का अनुवाद करने की आवश्यकता है, तो कृपया नीचे सूचीबद्ध टेलीफोन नंबरों पर मासडेपस डाइवर्सिटी के निदेशक से संपर्क करें.

Contact **Glynis L. Bugg, Acting Diversity Director/Civil Rights 857-262-0606**
Massachusetts Department of Environmental Protection
One Winter Street, Boston MA 02108

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Findings of Fact in Support of Final 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 Water Management Act Permit modification #9P4-3-20-207.01 and includes herewith its reasons for issuing the 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 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 1st and September 30th 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 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 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 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 subbasins¹ 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.

¹ 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.

Response to Comments

The Charles River Watershed Association (CRWA) filed a comment letter on May 25, 2022, which identified support for the water conservation and minimization measures included within this permit, and requested that Woodland be required to report annually on the effectiveness of their conservation and minimization efforts. While not requiring an annual report, the Department has included a requirement that Woodland provide a report with the 2023 Annual Report that documents their efforts to implement the additional items outlined in the Minimization requirements in Special Condition 6. Future updates may be requested at permit reviews and renewals.

CRWA also requested that MassDEP reduce Woodland's registered volumes because their use has been so far below that volume in recent years and their wells are located in a subbasin (21043) that is stressed both biologically (BC 5) and hydrologically (GWC 4). The WMA Registration Program allowed water users to register their existing water withdrawals based on their average water use from January 1, 1981, through December 31, 1985. The registration program established a renewable right to continue existing water withdrawals over 100,000 gallons per day (gpd) on average. The regulations at 310 CMR 36.10(3) state the following: "Upon the filing of a request for renewal by the date established in 310 CMR 36.10(2), and demonstration of compliance with the requirements of the expiring registration statement, such person shall be entitled to continue the existing withdrawal for a period of ten additional years."



Department of Environmental Protection

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Bethany A. Card
Secretary

Martin Suuberg
Commissioner

FINAL 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: October 18, 2022

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

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)
10/18/2022 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 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"> • Leak detection and repair: Daily monitoring of the golf course to ensure no leaks throughout the system are present. • Weekly Sprinkler head maintenance and replacement to ensure proper trajectory, pressure, and rotation • Weekly cleaning or replacing clogged nozzles.
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 1st through September 30th 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 1st through September 30th. 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	6	Full cycle	12	Full Cycle	15	100%	15
Mild Drought or WMA Permit Trigger is reached	Full cycle	6	80% [†]	9.6	50% [†]	7.5	0%**	
Significant Drought	Full cycle	6	60% [†]	7.2	0%			
Critical Drought	Full cycle	6	40% [†]	4.8				
Emergency ***	TBD		0%				0%	
[†] 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.

With their 2023 Annual Report, Woodland shall document their efforts to implement each of the minimization activities outlined above.

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.



Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

10/18/2022

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>.