



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

DRAFT

August 7, 2025

Tim Curty
Mill Valley Golf Links
380 Mill Valley Road
Belchertown, MA 01007

City/Town: Belchertown
Program: Water Management Act (WMA)
WMA Permit #: 9P2-1-08-024.03
Action: **Draft** Renewed Permit

Dear Mr. Curty:

Please find the following attached:

- **DRAFT** Findings of Fact in Support of the renewal of Permit #9P2-1-08-024.03; and,
- **DRAFT** Water Management Act Permit #9P2-1-08-024.03 for Mill Valley Golf Links.

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 following the August 07, 2025, publication of the Environmental Monitor. Notice of the public comment period will also be sent to all registrants, permittees and those having non-consumptive use statements within the Chicopee River Basin. MassDEP expects to issue the final permit within 30 days of the close of the public comment period.

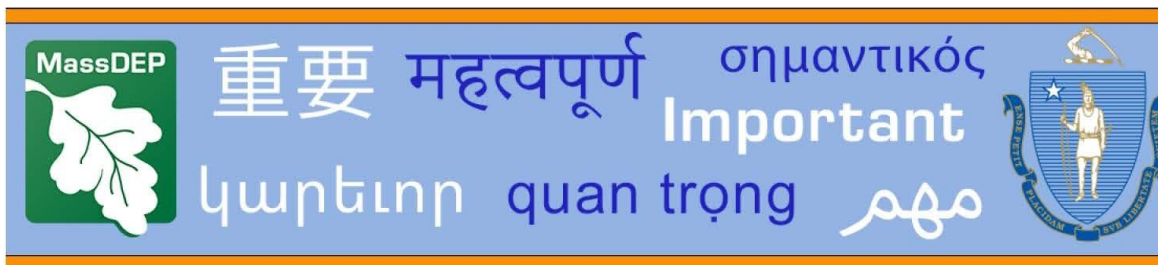
If you have any questions regarding this information, please contact Brittany Segill at (617) 960-6598 or via e-mail at Brittany.Segill@mass.gov.

Sincerely,

Duane LeVangie, Chief
Water Management Program
Bureau of Water Resources

Ecc: Andrea Donlon, Connecticut River Conservancy
Ron Rhodes, Connecticut River Conservancy
Lydia Olson, Massachusetts Rivers Alliance

[https://massgov.sharepoint.com/sites/DEP-BWR/DWPWMA/Permit Renewals/Chicopee/Belchertown/Mill Valley/Belchertown-Mill Valley Golf Links-9P2108024.03-Draft Permit-08.07.2025](https://massgov.sharepoint.com/sites/DEP-BWR/DWPWMA/Permit%20Renewals/Chicopee/Belchertown/Mill%20Valley/Belchertown-Mill%20Valley%20Golf%20Links-9P2108024.03-Draft%20Permit-08.07.2025)



Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

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繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

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Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmanal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយគួរត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEP តាមរយៈលេខទូរស័ព្ទដែលបានរាយដូចខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu imediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telefoni menxionadu di baixo.

Contact Deneen Simpson 857-406-0738

Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114

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

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة وتجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다. 본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն: Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود. اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice (*Direktor für Umweltgerechtigkeit in Massachusetts*) unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।

Contact Deneen Simpson 857-406-0738

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DRAFT Findings of Fact in Support of Water Management Permit #9P2-1-08-024.03 Mill Valley Golf Links

The Department of Environmental Protection (the Department or MassDEP) makes the following Findings of Fact in support of the attached Water Management Act Permit Renewal #9P2-1-08-024.03, 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 permit is in response to a water withdrawal permit renewal application submitted on March 31, 2016, by Mill Valley Golf Links (Mill Valley) for the purpose of golf course irrigation.

Mill Valley Water Withdrawal History

Original Permit: Mill Valley operates a 18-hole public golf course in Belchertown, Massachusetts. The course is irrigated with water withdrawn from the Chicopee River Basin under Water Management Act Permit #9P2-1-08-024.03, issued on March 20, 2007. Mill Valley applied for this permit on August 31, 2005, as required by an Administrative Consent Order with Penalty (ACOP). The Permit authorized Mill Valley to withdraw an average daily withdrawal of 0.154 million gallons per day (MGD) from its Well #1 over 210 days per year from April to November.

Permit Extension Act: The original expiration date for all Water Management permits in the Chicopee River Basin was May 31, 2013. In 2010 this date was extended for two years to May 31, 2015, 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 Chicopee River Basin permits were extended an additional two years to May 31, 2017.

On January 4, 2016, MassDEP informed Mill Valley that additional time would be needed before making a determination on the permit renewal applications in order to ensure that all permit renewal applicants fully understood the new Water Management Regulations (discussed below), and to give proper consideration to all permit renewal applications. Pursuant to M.G.L. c. 30A, § 13, and 310 CMR 36.18(7), Mill Valley's Permit remains in full force and effect until MassDEP issues a final decision on the 2016 permit renewal application.

Permit Renewal Application: On March 31, 2016, Mill Valley applied to MassDEP to renew their permit in the Chicopee River Basin. On April 10, 2024, MassDEP issued a Permit Renewal Order to Complete (OTC) outlining specific information that was required to renew Mill Valley's permit. Mill Valley responded on May 27, 2024.

The expiration date for all WMA permits going forward in the Chicopee River Basin will be May 31, 2033, in order to restore the staggered permitting schedule set forth in the Water Management Regulations.

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 Chicopee 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 Chicopee 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 Chicopee River Basin is 353.1 million gallons per day (MGD), and total registered and permitted withdrawals are 203.72 MGD. The maximum withdrawals that will be authorized in this permit, and all other permits currently under review by the Department within the Chicopee 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 Chicopee River Basin.

Findings of Fact for Permit Conditions in Mill Valley'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 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, authorizes withdrawals only up to the threshold volume, or less than 0.10 million gallons per day (MGD) and not more than 9 million gallons during any three consecutive months from April through November. Special Condition 1 indicates that Mill Valley has the potential to withdraw an average of 0.154 MGD over 210 days (32.34 MGY) from April through November¹, if a permit amendment (BRPWM02) with appropriate mitigation is applied for and issued by MassDEP.

This condition is based on the following considerations:

- Mill Valley’s recent withdrawals have consistently remained below the 0.10 MGD threshold volume, which does not meet the permitting threshold.
- Well #1, Mill Valley’s only authorized withdrawal point is limited to a maximum daily withdrawal of 0.10 MGD.
- As outlined in Special Condition 5, withdrawals at the previously authorized volume of 0.154 MGD would require significant mitigation, especially as a Tier 3 Permittee, which has not proven to be necessary at this time.
- Setting this limit allows Mill Valley to maintain their permit while exempting them from mitigation requirements until withdrawals exceed 0.10 MGD.

Should Mill Valley need to increase their withdrawal amount beyond the threshold volume, they must obtain a permit amendment (BRPWM02) prior to making withdrawals that equal or exceed 0.10 MGD. In the amendment application, they must include a mitigation plan for review and approval. Upon approval of the amendment and mitigation plan, the permittee may be authorized to withdraw up to the originally authorized volume of 0.154 MGD.

Mill Valley Reported Water Use 2023-2019					
Year	2023	2022	2021	2020	2019
Average Daily Withdrawal over 210-day Irrigation Season (MGD)	0.02	0.03	0.03	0.03	0.03
Annual Total Withdrawal over 210-day Irrigation Season (MGY)	3.93	6.65	5.26	7.19	5.14

Special Condition 2, Maximum Authorized Daily Withdrawal, specifies the maximum daily withdrawal rate for Mill Valley’s withdrawal point, Well #1. The approved maximum daily withdrawal rate of 0.10 MGD is based on the results of a pumping test conducted on the well. The Department recognizes that the maximum approved daily withdrawal rate for the only approved Mill Valley source is less than the originally approved average daily withdrawal rate of 0.154 MGD, as noted above and a reason for limiting the average annually daily withdrawal to less than the threshold volume. If Mill Valley determines in the future that Well #1 needs the additional capacity to supply the demand for additional irrigation water, Mill Valley will be required to obtain a permit amendment to increase its maximum daily withdrawal volume from Well #1 or to add an additional source.

¹ MassDEP calculates this average daily withdrawal volume by dividing the actual total volume withdrawn from April through November by 210 days.

Mill Valley has consistently exceeded this limit. To prevent future enforcement action, Mill Valley must remain below this maximum daily withdrawal rate or apply for a permit amendment as stated previously.

Authorized and Reported Maximum Daily Withdrawal Rate (MGD) for 2023 – 2019						
Source Name	Maximum Authorized Daily Rate	2023	2022	2021	2020	2019
Well 1	0.10	0.12	0.13	0.13	0.13	0.13

Special Condition 3, Water Conservation Requirements sets forth the required conservation measures (the Best Management Practices) in Mill Valley’s Seasonal Demand Management Plan.

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 Secretary of the Executive Office of Energy and Environmental Affairs declares a Level 1- Mild Drought, Level 2- Significant Drought, Level 3- Critical Drought, or Level 4- Emergency Drought for the region in which the golf course is located, or
- streamflow falls below the designated 7-day low flow trigger measured at an assigned, web-based, real-time USGS stream gage. The streamflow-triggered response actions are the same as the drought-triggered response actions for Level 1- Mild Drought. The 7-day low-flow statistic being applied is the median value of the annual 7-day low flows for the period of record. The 7-day low flow trigger provides additional protections to streamflows when flows are very low.
 - 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.
 - Mill Valley has been assigned the USGS stream gage #01176000 – Quaboag River at W. Brimfield, MA. The 7-day low flow at this site is 29.71 cubic feet per second (cfs). Should the reliability of the flow measurement on Quaboag River at W. Brimfield 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.

Mill Valley shall be responsible for tracking the Secretary of the Executive Office of Energy and Environmental Affairs drought declarations and recording when drought-triggered restrictions are implemented. Mill Valley 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 the environment from May through September. Of particular importance in developing your SDMP and in evaluating its effect on your golf course’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 identifies the number of acres irrigated for tees and greens, fairways, roughs, landscaping and ornamentals, along with a percent reduction per unit area with worsening drought. The Time-Table identifies irrigation in timing reduction cycles.

Mill Valley has chosen the Time-Table option set forth in the SDMP. Special Condition 4 requires implementation of the reductions called for in the Time-Table submitted as part of Mill Valley's SDMP. Like all golf courses, Mill Valley is required to notify MassDEP when the SDMP or other required restrictions are implemented. Copies of the notification form can be found at <https://www.mass.gov/info-details/outdoor-water-use-restrictions-for-cities-towns-and-golf-courses>.

Special Condition 5, Mitigation of Impacts for Withdrawals that Exceed Baseline, require that permittees requesting an increase above their baseline withdrawal rate undertake mitigation activities commensurate with the impact of their increased withdrawals.² Special Condition 5 sets out the required mitigation.

Baseline withdrawal is 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.

Mill Valley's baseline is 0 MGD because it does not hold a WMA registration and did not make recorded withdrawals during the 2003-2005 baseline period. MassDEP acknowledges that Mill Valley was withdrawing water during the baseline period since they were in operation and applied for a WMA permit on August 31, 2005. Due to a lack of supporting documentation, MassDEP cannot determine what was withdrawn by Mill Valley during those years and cannot confidently provide an accurate baseline.

Permittees whose withdrawals over baseline will result in an adverse change to the BC or GWC of a subbasin may be required to provide additional indirect mitigation for the withdrawal. In subbasin 17061 (where Mill Valley is located), any groundwater withdrawals greater than 0.018 MGD will change the GWC and anything greater than 0.0474 MGD will change the BC, which means that Mill Valley's proposed withdrawals of 0.154 would meet the criteria for a Tier 3 permit because their withdrawals are above baseline and will change a category (both categories change as noted). Tier 3 permits require twice as much indirect mitigation, where

² The Water Management Regulations 310 CMR 36.14(1)(b), establishes a groundwater withdrawal category (GWC) based on the ratio of 2000 to 2004 groundwater withdrawal volume to the unimpacted median monthly flow for August and represents conditions during the late summer bioperiod (July thru September). The Water Management Regulations, 310 CMR 36.14(1)(a), also establish a biological category (BC) for each subbasin based on the simulated 2000 to 2004 existing condition of aquatic habitat using fluvial fish community characteristics as the surrogate indicator variable.

For purposes of mitigation, renewed permits are classified in one of three categories: Tier 1 (no increase above baseline; no mitigation required), Tier 2 (increase above baseline but no change in GWC or BC of a subbasin; mitigation of increase over baseline required) or Tier 3 (increase above baseline causes a subbasin's GWC or BC category to change, therefore additional indirect mitigation may be required above that of Tier 2, and a demonstration that there is no alternative source that is less environmentally harmful will be required). Mill Valley's renewal application meets the Tier 3 classification for applicants because the requested volume is greater than the baseline volume and changes the GWC or BC Category.

feasible. Special Condition 5 therefore requires Mill Valley implement a Mitigation Plan should withdrawals of 0.10 MGD or more be necessary. Note that a permitted volume of 0.154 MGD, equates to 15 indirect mitigation credits, which gets doubled to 30 indirect credits due to the Tier 3 status.

Given Mill Valley has not withdrawn above the 0.10 MGD permitting threshold for the past 5 years, and appreciating the work involved in mitigating for the full requested allocation (0.154 MGD), MassDEP has held the currently authorized volume at 0.099 MGD which is below the permitting threshold. Therefore, MassDEP has determined that Mill Valley need not implement a mitigation plan until such time as it known that actual withdrawals will exceed the permitting threshold volume of 100,000 gallons per day on average for any period of three consecutive months, from a total withdrawal of not less than 9,000,000 million gallons. Should the permittee wish to increase their withdrawal amount beyond this limit, they must file an application for a permit amendment (BRPWM02) prior to making withdrawals over the threshold volume. The amendment application must include a mitigation plan for review and approval. Upon approval of the amendment and mitigation plan, the permittee may be authorized to withdraw up to the originally allocated volume of 0.154 MGD.

In accordance with the Water Management Regulations, 310 CMR 36.22(6)(a), **direct mitigation options** must be evaluated before indirect mitigation activities. Direct mitigation activities include surface water releases, sewer system inflow/infiltration (I/I) improvement, stormwater recharge, and the retirement of existing allocation volumes. Mill Valley has not identified any direct mitigation activities and has limited feasible options to do so.

Indirect Mitigation: If direct mitigation volumes are less than the amount to be mitigated, then indirect mitigation activities are evaluated. Existing golf courses, such as Mill Valley, may mitigate their additional withdrawals through participation in the Audubon Cooperative Sanctuary Program (ACSP). Credit is awarded commensurate with withdrawal volumes over baseline that must be mitigated. As noted, 30 indirect mitigation credits are required for Mill Valley to mitigate the withdrawal of 0.154 MGD (the 15 indirect mitigation credits are doubled due to Tier 3 status) over baseline.

Credit available: A participating golf course can receive between three and nine indirect mitigation credits for partial certification. A golf course that receives full ACSP Certification will receive a maximum of twelve indirect mitigation credits. Mill Valley will need to consult with MassDEP to determine what other mitigation options may be feasible to complete their credits, beyond what the ACSP can provide.

Credit review criteria: The ACSP assists a golf course in developing a plan for certification for six key environmental components: Environmental Planning, Wildlife and Habitat Management, Chemical Use Reduction and Safety, Water Conservation, Water Quality Management; and Outreach and Education.

A participating golf course must receive recognition in Environmental Planning and Water Conservation as a prerequisite for indirect mitigation credit. A golf course may then choose among Wildlife and Habitat Management, Chemical Use Reduction and Safety, or Water Quality Management, worth three credits each, for a maximum of nine credits. A golf course that receives full certification in all six components, including Outreach and Education, will receive twelve credits.

Criteria for Existing Courses in Need of Additional Water over Baseline	Credits
Certification in components of the Audubon Cooperative Sanctuary Program (ACSP) for up to a maximum of 12 credits	
<ul style="list-style-type: none"> Environmental Planning Water Conservation 	Prerequisite for credit
Plus certification in at least two of the following three components for up to a maximum of 9 credits	

• Wildlife and Habitat Management	3 credits
• Chemical Use Reduction and Safety	3 credits
• Water Quality Management	3 credits
Full ACSP Certification in Environmental Planning, Water Conservation, Wildlife and Habitat Management, Chemical Use Reduction and Safety, Water Quality Management and Outreach and Education.	12 credits

Minimization of Groundwater Withdrawal Impacts in Stressed Basins requires permittees with groundwater sources in subbasins with a net ground water depletion (NGD³) of 25% or more during August to minimize their withdrawal impacts on those subbasins to the greatest extent feasible through water conservation and demand management measures that go beyond standard WMA permit requirements.

Mill Valley's permitted groundwater source is located in subbasin 17061, which has an August NGD of 0.9%. Therefore, the renewed WMA Permit does not require minimization.

Coldwater Fish Resource Protection Coldwater Fish Resource Protection was also incorporated into the Water Management Regulations in November 2014. Coldwater Fish Resource Protection is not a condition of the Renewed WMA Permit because Mill Valley has a single withdrawal point which does not appear to impact any waters that the MA Division of Fisheries and Wildlife has identified as supporting coldwater fish in subbasin 17061 at this time.

³ The Water Management Regulations, 310 CMR 36.03, define August net groundwater depletion to mean the unimpeded median flow for August minus 2000-2004 groundwater withdrawals plus 2000-2004 groundwater returns described by U.S. Geological Survey in Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover and Water Quality for Massachusetts Stream Basins.



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Secretary

Bonnie Heiple
Commissioner

DRAFT WATER WITHDRAWAL PERMIT
#9P2-1-08-024.03
Mill Valley Golf Links

This renewal of Permit #9P2-1-08-024.03 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: 9P2-1-08-024.03 **RIVER BASIN:** Chicopee

PERMITTEE: Mill Valley Golf Links
380 Mill Valley Road
Belchertown, MA 01007

EFFECTIVE DATE: TBD

EXPIRATION DATE: May 31, 2033

NUMBER OF WITHDRAWAL POINTS: 1 Groundwater Point

USE: Golf Course Irrigation

DAYS OF OPERATION: 210

LOCATION(S):

Source	Source #	Location
Well #1	WM11564-1G	380 Mill Valley Rd, Belchertown

SPECIAL CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes Mill Valley Golf Links (Mill Valley) to withdraw water from the Chicopee River Basin at the rate described in Table 1. The permitted rate is expressed both as a peak average daily withdrawal rate (million gallons per day or MGD), and as a total three month maximum (million gallons or MG). If Mill Valley obtains an amended permit, with the necessary mitigation, Mill Valley may be authorized for increased withdrawals up to 0.154 MGD, as described in Table 1A. MassDEP's review of the permit amendment application will include a review of Mill Valley's mitigation opportunities available at the time.

The Department of Environmental Protection (MassDEP or the Department) bases the withdrawal rate on the raw water withdrawn from the authorized withdrawal point and will use the raw water rate to assess compliance with the permitted withdrawal rate.

Table 1. Maximum Authorized Withdrawal Volumes Over Any 3 Consecutive Months

Permit Periods	Total Authorized Water Withdrawal Volumes	
	Daily Average (MGD)	Three Month Maximum (MG)
TBD to 5/31/2028	< 0.10	< 9.00
6/01/2028 to 5/31/2033	< 0.10	< 9.00

Table 1A. Maximum Authorized Withdrawal Volumes with Permit Amendment

Permit Periods	Total Authorized Water Withdrawal Volumes	
	Daily Average (MGD)	Total Annual (MGY)
TBD to 5/31/2028	0.154	32.34
6/01/2028 to 5/31/2033	0.154	32.34

2. Maximum Authorized Daily Withdrawals from Withdrawal Point

Withdrawals from the following source is not to exceed the approved maximum daily rate listed in Table 2 without advance approval from the Department.

The Department recognizes that the maximum approved daily withdrawal rate for Irrigation Well #1 is less than the approved average daily withdrawal rate. This means that Mill Valley cannot exceed its daily maximum withdrawal of 0.10 MGD without obtaining a permit amendment that either includes a second pumping test that verifies a higher daily maximum or for a new withdrawal point.

Table 2. Maximum Daily Withdrawal Volumes

Source	Maximum Daily Rate (MGD)
Well #1	0.10

3. Water Conservation Requirements

The Water Conservation Practices utilized at Mill Valley submitted as part of its renewal application have been combined with the Best Management Practices that Mill Valley indicated as being implemented (according to the Order to Complete (OTC) responses and the Seasonal Demand Management Plan) are included in this Special Condition. This combination constitutes the water conservation requirements of the Renewed WMA Permit as outlined in Table 3.

Table 3. Water Conservation Requirements

a.	Metering 100% of water use, and calibrating source meters annually.
b.	New and existing irrigation ponds are lined with impervious material.
c.	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.
d.	Use of portable soil moisture sensors and golf weather apps to increase the efficiency of the irrigation system
e.	Irrigating in the early morning or evening hours when evaporation rates are at their lowest, to extent practicable to maintain the turf
f.	Improve irrigation uniformity through evaluation of design criteria such as nozzle size, spacing, scheduling coefficient and pressure selection.
g.	Use of rain shutoff switches on new and existing irrigation systems.
h.	Regular aerating of turf to increase the percolation of water into the soil
i.	Use of mulch materials in planting beds to improve water-holding capacity of the landscaping
j.	Use of environmentally safe wetting agents to improve water infiltration and minimize evaporation
k.	Use of low water use or native drought tolerant plants to the greatest extent practicable
l.	Employee training in water conservation and management

4. Seasonal Demand Management Plan

Mill Valley 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 a Level 1-Mild Drought or higher is declared by the Secretary of Energy and Environmental Affairs, or when streamflow falls below the trigger for three consecutive days. Once implemented, the restrictions shall remain in place until the Drought Level returns to Normal or streamflow at the assigned USGS local stream gage meets or exceeds the trigger streamflow for seven consecutive days. The low-flow statistic being applied is referred to as the 7-day low-flow statistic.

Mill Valley has been assigned stream gage #01176000 on the Quaboag River at W. Brimfield, MA. The 7-day low flow at this site is 29.71 cubic feet per second (cfs). Should the reliability of the flow measurement on the Quaboag River at W. Brimfield gage be so impaired as to question its accuracy, the Permittee may request subject to MassDEP's review and approval transfer to another gage to trigger restrictions. MassDEP reserves the right to require use of a different gage as a trigger.

Mill Valley selected a time-reduction approach, which requires that Mill Valley reduce the time it spends irrigating both golf courses. See Table 5 below.

Mill Valley shall be responsible for tracking the drought declarations and recording when drought-triggered restrictions are implemented. Mill Valley shall also be responsible for tracking streamflow and recording when streamflow-triggered restrictions are implemented. See Appendix A for streamflow tracking information.

Table 4. Mill Valley Golf Links Time-Reduction in its SDMP

Massachusetts Drought Levels	Irrigating Less Acreage as Drought Severity Increases Watering allowed up to designated percent							
	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	150	Full cycle	180	Full cycle	--	Full cycle	--
Level 1- Mild Drought or WMA SDMP Streamflow Trigger (71 cfs) is reached	Full cycle	150	80% [†]	144	50% [†]	--	0%	0
Level 2- Significant Drought	Full cycle	150	60% [†]	108	0%	0	0%	0
Level 3- Critical Drought	Full cycle	150	40% [†]	72	0%	0	0%	0
Level 4- Emergency Drought**	TBD**	TBD	0%	0%	0%	0	0%	0

[†] Irrigation shall not occur between the hours of 9 am and 5 pm, except that hand-watering of hot spots may occur at any time.

** Mitigation 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>

5. Mitigation of Impacts for Withdrawals that Exceed Baseline

This permit authorizes Mill Valley to withdraw up to the threshold volume for permitting under the Water Management Act, with the potential through a permit amendment, to increase up to 0.154 MGD.

Given Mill Valley is withdrawing significantly less than their allocated volume, MassDEP has determined that Mill Valley does not need to complete its mitigation activities until their peak 3-month withdrawal volumes equals or exceeds 9 million gallons. Prior to withdrawing the threshold volume or more, Mill Valley is required to obtain a permit amendment WM-02, and include a mitigation plan outlining what activities they will undertake to mitigate withdrawals above the baseline volume. Mill Valley has a baseline of 0.0 MGD and will need to mitigate 0.154 MGD if they seek the full permitted volume.

General Permit Conditions (applicable to all Permittees)

- 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 up to the authorized volume 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 MassDEP to enter and examine any property, inspect and monitor the withdrawal, and inspect and copy any relevant records, 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 MassDEP pursuant to M.G.L. c. 21G, §§ 15-17, M.G.L. c. 111, § 160, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until MassDEP approves such transfer in writing, pursuant to a transfer application on forms provided by MassDEP requesting such approval and received by MassDEP at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The Permittee shall submit annually, on a form provided by MassDEP, a certified statement of the withdrawal. Such report is to be received by MassDEP by the date specified by MassDEP. Such report must be mailed or hand delivered to the address specified on the report form.
7. **Duty to Maintain Records** The Permittee shall be responsible for maintaining withdrawal records as specified by this permit.
8. **Metering** Withdrawal points shall be metered. Meters shall be calibrated annually. Meter shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.
9. **Amendment, Suspension or Termination** The Department may amend, suspend or terminate this permit in accordance with M.G.L. c. 21G or 310 CMR 36.29

APPEAL RIGHTS AND TIME LIMITS

Any person aggrieved by this decision may request an adjudicatory hearing on this Permit by timely filing a Notice of Claim for an Adjudicatory Appeal ("Notice of Claim") in accordance with 310 CMR 36.37 and 310 CMR 1.01 within twenty-one (21) days of its receipt of this Permit. The Notice of Claim shall state specifically, clearly and concisely the facts that are grounds for the appeal, the relief sought, and any additional information required by applicable law or regulation. A copy of this Permit shall be included with a Notice of Claim. No request for an appeal of this Permit shall be validly filed unless a copy of the request is sent at the same time 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 Permittee, unless such person notifies the Permittee of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

The Notice of Claim and supporting documentation must be sent by certified mail or hand delivered to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
100 Cambridge Street, Suite 900
Boston, MA 02114

In addition, the Department's fee transmittal form, together with a valid check made payable to the Commonwealth of Massachusetts in the amount of \$100 for the appeal filing fee, if required, must be mailed to:

Commonwealth of Massachusetts Lock Box

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

The Notice of Claim may be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver.

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

MassDEP may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of MassDEP 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

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 for 3 consecutive days. 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, Permittee 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 Gage Number on the the Quaboag River at W. Brimfield, MA.
- Click on the gage number #01176000.
- Click on “Data Inventory” at the top of the page.
- Click on “Daily Data” in the dropdown menu.
- 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.

Mill Valley Golf Links 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>.