

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

November 8, 2017

Kings Way Golf Club
Attn: Joseph A. Goulart Jr., Superintendent
64 Kings Circuit
Yarmouthport, MA 02675

Town: Yarmouth
WMA Permit #: Permit 9P-4-22-351.04
Program: Water Management Act
Action: Final Permit Renewal

Dear Mr. Goulart:

Please find the following attached:

- Findings of Fact in Support of the renewal of Permit #9P-4-22-351.04; and
- Final Water Management Act Permit #9P-4-22-351.04 for Kings Way Golf Club.

If you have any questions concerning this letter, please contact Julie Butler at (617) 292-5552 or Julie.Butler@state.ma.us.

Sincerely,

Rebecca Weidman
Division of Watershed Management
Bureau of Water Resources

eCC: Tom Cambareri, Cape Cod Commission

Y:DWPArchive\SERO\2017\Yarmouth-Kings Way 9P42235104-WMA Final Permit Renewal-2017-11-08

This information is available in alternate format. Call the MassDEP Diversity Office at 617-556-1139. TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper



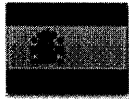
Massachusetts Department of Environmental Protection
One Winter Street, Boston MA 02108 • Phone: 617-292-5751
Communication For Non-English Speaking Parties

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.



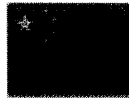
2 Español (Spanish):

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。



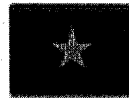
4(b) 中国 (简体中文) (Chinese Simplified):

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.



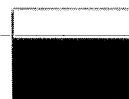
7 ប្រទេសកម្ពុជា (Kmer (Cambodian):

ឯកសារនេះគឺមានសារៈសំខាន់ណាស់ត្រូវបានបកប្រែភ្លាមៗ ប្រសិនបើអ្នកត្រូវបានបកប្រែ ឯកសារនេះសូមទំនាក់ទំនងនឹងអគ្គនាយក MassDEP នៅលេខទូរស័ព្ទដែលបានរាយនាមក្រោម។



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.

**10 العربية (Arabic):**

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

**11 한국어 (Korean):**

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

**12 հայերեն (Armenian):**

Այս փաստաթուղթը շատ կարևոր է եւ պետք է թարգմանել անմիջապես. Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանվել դիմել MassDEP բարձրագույնությունը սնտրեն 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 MassDEP 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 दस्तावेज 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

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

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

Findings of Fact in Support of Water Management Permit #9P-4-22-351.04 Town of Yarmouth

The Department of Environmental Protection ("MassDEP" or "the Department") has completed its review of the Kings Way Golf Club Water Management Act (WMA) permit renewal application. This review was conducted in regard to the permit for Kings Way Golf Club ("Kings Way") to withdraw water from the Cape Cod Basin. The Department hereby issues the Water Management Permit #9P-4-22-351.04 (the "Permit") in accordance with the Water Management Act (M.G.L. 21G). The Department makes the following Findings of Fact in support of the attached Permit, and includes herewith its reasons for issuing the Permit and for the conditions of approval imposed, as required by M.G.L. c.21G, s. 11 and 310 CMR 36.00. The Permit is being issued since such action is necessary for the promotion of the purposes of M.G.L. c. 21G. The Department may modify, suspend or terminate the Permit, after notice and hearing, for violations of its conditions, of M.G.L. c. 21G, or of regulations adopted or orders issued by the Department, and when deemed necessary for the promotion of the purposes of the Water Management Act.

The Department 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.

Withdrawal Description and History

On January 31, 1992, in response to the application for a permit to withdraw water from the Cape Cod Basin for the Kings Way Golf Club, the Department approved the application in accordance with M.G.L. 21 G. On June 25, 2010, in response to the application to transfer the Water Management Permit from Kings Way Golf Club to the Kingsway Trust/The Golf Club at Yarmouthport, the Department approved the transfer. In April 2017, the golf course name returned to the original Kings Way Golf Club; a permit transfer was not required because no change in ownership occurred.

Since the issuance of the 1992 permit, Kings Way has been authorized to withdraw from the Cape Cod Basin a total of 0.096 million gallons per day (MGD) over a 184-day season (May – October), or 17.70 million gallons per year (MGY). This permit renewal lowers the authorized withdrawal to its baseline volume, which is 17.13 MGY (0.093 MGD). As discussed below, mitigation is required if withdrawals exceed the baseline volume. Kings Way elected to lower its authorized withdrawal volume rather than mitigate the impacts of withdrawals over baseline.

The system operates two groundwater sources, known as Station 1 and Station 2. The course has three lined ponds but they are not part of the irrigation system. This Permit does not authorize a new withdrawal source.

The Permit Extensions

Kings Way's permit was issued on January 31, 1992 and was originally set to expire on November 30, 2010. Because the expiration dates for all Water Management permits were extended for four years by Chapter 240 of the Acts of 2010 and as amended by the Chapter 238 of the Acts of 2012, collectively known as the Permit Extension Act, the Department accepted a renewal application from Kings Way dated August 19, 2010. The Department published notice of the permit renewal application in the Environmental Monitor on September 22, 2010. No comments were received.

In addition, in a letter of September 25, 2015, the Department informed Kings Way that the Department would need additional time before making a determination on the application in order to ensure that all permit renewal applicants in the Cape Cod Basin fully understood the new Water Management Regulations (discussed below), and to give proper consideration to all permit renewal applications within the basin. Pursuant to M.G.L. c. 30A, § 13, and 310 CMR 36.18(7), Kings Way's permit continued in force and effect until the Department issued this final decision on the permit renewal application. The expiration date for all permits going forward in the Cape Cod Basin will be November 30, 2030, in order to restore the staggered permitting schedule set forth in the 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 description that follows);
- Environmental protections developed through SWMI, including without limitation;
 - protection for coldwater fish resources;
 - minimization of withdrawal impacts in areas stressed by groundwater use;
 - mitigation of the impacts of increasing withdrawals; and
- The special permit conditions in each Water Management Act permit.

Safe Yield in the Cape Cod 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 Cape Cod Basin is 266.0 million gallons per day (MGD), and total registered and permitted withdrawals are 51.99 MGD, leaving 214.01 MGD potentially available. This permit renewal actually reduces the allocated volumes in the Cape Cod Basin by 0.003 MGD or 0.57 MGY. The maximum withdrawals that are authorized in this permit, and all other permits currently under review by the Department within the Cape Cod Basin, will be within the safe yield and may be further conditioned as outlined in the regulations.

Findings of Fact for Special Permit Conditions

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 Findings of Fact also explain any changes to special conditions from prior permits, when applicable. This summary of permit special conditions is not intended to, and should not be construed as, modifying any of the permit special conditions. In the event of any ambiguity between this summary and the actual permit conditions, the permit language shall control.

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume

Special Condition 1 authorizes an annual average withdrawal volume of 17.13 million gallons per year (MGY) of water, or 0.093 million gallons per day (MGD) over 184 days annually from its two groundwater sources (Pump Station 1 and Pump Station 2) in the Cape Cod Basin. In recent history, Kings Way reported a total withdrawal volume in exceedance of 17.13 MGY in 2010 (20.22 MGY) and 2012 (18.23 MGY). Kings Way attributed the exceedances to mainline leaks caused by mechanical problems. Because leaks are typically detected through a pressure drop, Kings Way expects such exceedances to occur rarely moving forward. Kings Way will continue to report its withdrawals from the permitted wells in the WMA Annual Report Forms.

Special Condition 2, Maximum Daily Withdrawal Volume

Special Condition 2 authorizes a maximum daily withdrawal volume of 0.56 MGD from each of the two source wells (Pump Station 1 and Pump Station 2). The reported maximum daily volumes in Kings Way's Annual Report Forms have never exceeded this volume.

Special Condition 3, Water Conservation and Seasonal Demand Management Plan

Consistent with good water conservation practices, permitted golf courses are 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 of “Advisory” or higher (“Watch, Warning or Emergency”) for the region in which the golf course is located.

The SDMP shall also be implemented at times when groundwater levels at a USGS monitoring well fall below a groundwater trigger for 60 consecutive days. The monthly trigger levels are the period of record’s monthly 25th percentile depth to water levels in a local well, as determined and published by the USGS. Restrictions could start on May 1, so monitoring of the well shall begin on March 1 of each year. Once implemented, the restrictions shall remain in place until the daily value of the groundwater levels at the assigned USGS monitoring well have recovered to less than the trigger for 30 consecutive days (when the water table elevation has risen above the trigger level).

Kings Way has been assigned the following USGS monitoring well: # 413930070190901 – MA-A1W 306 Barnstable, MA. The monthly groundwater trigger values are shown in Attachment A of the Permit. Should the reliability of the groundwater measurements at this well be so impaired as to question its accuracy, the Permittee may request The Department’s review and approval to transfer to another well to trigger restrictions. The Department reserves the right to require use of a different well.

Kings Way shall be responsible for tracking the Massachusetts Drought Management Task Force drought declarations and recording when drought-triggered restrictions are implemented. Kings Way shall also be responsible for tracking groundwater levels and recording when groundwater-triggered restrictions are implemented. See the groundwater- and drought-tracking instructions (Attachment B) for guidance.

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 course’s irrigation, is the recognition of nonessential outdoor water uses. The Department considers the irrigation of tees and greens as essential uses, but fairways and roughs less so.

Section C of the SDMP provides two options for water use reduction in table format. 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 reductions based on changes to the timing of irrigation cycles.

Kings Way submitted an SDMP in 2010 titled the *Irrigation Management, Water Conservation, and Seasonal Demand Management Plan*, which included the Time Table reduction approach. This SDMP was incorporated into the previous permit. The plan has been updated (Attachment A), and its conditions and requirements have been incorporated into the renewed permit.

Water Withdrawals that Exceed Baseline Withdrawal Volumes

The renewed permit does not include a condition that requires mitigation of withdrawals over a baseline volume. As noted previously in these Findings of Fact, Kings Way elected to lower its authorized withdrawal volume to the baseline volume in order to avoid mitigation. Although exceedances of the

baseline volume have occurred in the past, they were attributed to mainline leaks that are likely to be a rare occurrence in the future.

Minimization of Groundwater Withdrawal Impacts in Stressed Subbasins, requires permittees with permitted groundwater sources in subbasins¹ with net groundwater depletion of 25% or more during August to minimize their withdrawal impacts on those subbasins to the greatest extent feasible.

Because the Kings Way's permitted sources are located where August net depletion has not been established, minimization measures are not required.

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 Kings Way's withdrawals do not impact any waters that MA Division of Fisheries and Wildlife has identified as supporting coldwater fish at this time.

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).



Department of Environmental Protection

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

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

WATER WITHDRAWAL PERMIT MGL c 21G

This issuance of Permit #9P-4-22-351.04 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: 9P-4-22-351.04 **RIVER BASIN:** Cape Cod

PERMITTEE: Kings Way Golf Club
64 Kings Circuit
Yarmouthport, MA 02675

ISSUANCE DATE: November 8, 2017

EXPIRATION DATE: November 30, 2030

TYPE AND NUMBER OF WITHDRAWAL POINTS:

Groundwater: 2
Surface Water: 0

USE: Golf course irrigation – Kings Way Golf Club

DAYS OF OPERATION: 184 (May – October)

LOCATION:

Table 1. Withdrawal Point Identification

Source	Latitude	Longitude	Location
Pump Station 1	41° 42' 40" N	70° 12' 53" W	Kings Circuit, Yarmouth
Pump Station 2	41° 42' 59" N	70° 12' 52" W	Kings Circuit, Yarmouth

SPECIAL CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This Permit authorizes an annual average withdrawal volume of 17.13 million gallons per year (MGY) of water, or 0.093 million gallons per day (MGD) over 184 days annually from its two groundwater sources (Pump Station 1 and Pump Station 2) in the Cape Cod Basin. Kings Way Golf Club will continue to report its withdrawals from the permitted well in the WMA Annual Report Forms.

Table 2. Maximum Authorized Annual Average Withdrawal Volumes per Permit Period

Permit Periods	Permit	
	Daily Average (MGD)	Total Annual (MGY)
11/8/2017 to 11/30/2020	0.093	17.13
12/1/2020 to 11/30/2025	0.093	17.13
12/1/2025 to 11/30/2030	0.093	17.13

2. Maximum Authorized Daily Withdrawal Volume

Withdrawals from Kings Way Golf Club's permitted source are not to exceed the approved maximum daily rate listed in Table 3 without advance written approval from the Department.

Table 3. Maximum Authorized Daily Withdrawal Volume

Source	Maximum Daily Rate
Pump Station 1	0.56 MGD
Pump Station 2	0.56 MGD

3. Water Conservation and Seasonal Demand Management Plan

Kings Way Golf Club's updated Irrigation Management, Water Conservation, and Seasonal Demand Management Plan is included as a condition of the renewed permit (Attachment A). Kings Way Golf Club shall continue to implement water conservation measures in accordance with the attached plan.

Kings Way Golf Club shall limit nonessential outdoor water use from May 1st through September 30th as outlined in the Seasonal Demand Management Plan (SDMP) and in the instructions for tracking groundwater levels and drought declarations (Attachment B). At a minimum, reductions shall commence when the Massachusetts Drought Management Task Force declares a drought level of "Advisory" or higher ("Watch, Warning or Emergency") for the Cape Cod & Islands Region, or when groundwater levels fall below the groundwater triggers for 60 consecutive days. The groundwater-triggered response actions shall follow the drought-triggered response actions at the Advisory level.

Once implemented, the groundwater-triggered reductions shall remain in place until the daily value of the groundwater levels at the assigned USGS monitoring well have recovered to less than the trigger for 30 consecutive days (when the water table elevation has risen above the trigger level). Kings Way Golf Club has been assigned the following USGS monitoring well: #413930070190901 – MA-A1W 306 Barnstable, MA. The groundwater trigger values are provided in Attachment A and are the monthly 25th percentile depth-to-water levels for the period of record, as determined and published by the USGS. Should the reliability of the groundwater measurements at this well be so impaired as to question their accuracy, the Permittee may request the Department's review and approval to transfer to another well to trigger restrictions. The Department reserves the right to require use of a different well.

Kings Way Golf Club shall be responsible for tracking the Massachusetts Drought Management Task Force drought declarations and recording when drought-triggered restrictions are implemented. Kings Way Golf Club shall also be responsible for tracking groundwater levels and recording when groundwater-triggered restrictions are implemented. See the attached groundwater- and drought-tracking instructions for guidance. Nothing in this permit shall prevent the Permittee from implementing water use restrictions that are more restrictive than those set forth in this permit.

GENERAL PERMIT CONDITIONS (applicable to all Permittees)

No withdrawal in excess of 100,000 gallons per day over the registered volume (if any) shall be made following the expiration of this permit, unless before that date the Department has received a renewal permit application pursuant to and in compliance with 310 CMR 36.00.

1. **Duty to Comply** The Permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The Permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw water so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The Permittee or the Permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine any property over which Permittee has authority, title or control, for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by the Department pursuant to M.G.L. c. 21G, §§ 15-17, M.G.L. c. 150, § 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to a transfer application on forms provided by the Department requesting such approval and received by the Department at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.33.

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

APPEAL RIGHTS AND TIME LIMITS

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing as described herein and in accordance with the procedures described at 310 CMR 36.37. Any such request must be made in writing, by certified mail or hand delivered and received by the Department within twenty-one (21) days of the date of receipt of this permit. The hearing request, including proof of payment of the filing fee, must be mailed to:

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

No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by certified mail, or delivered by hand to the local water resources management official in the community in which the withdrawal point is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

CONTENTS OF HEARING REQUEST

310 CMR 1.01(6)(b) requires the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of the Department is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of his permit.

FILING FEE AND ADDRESS

The Department's fee transmittal form, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

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

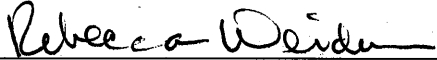
The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

EXEMPTIONS

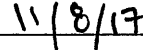
The filing fee is not required if the appellant is a municipality (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

WAIVER

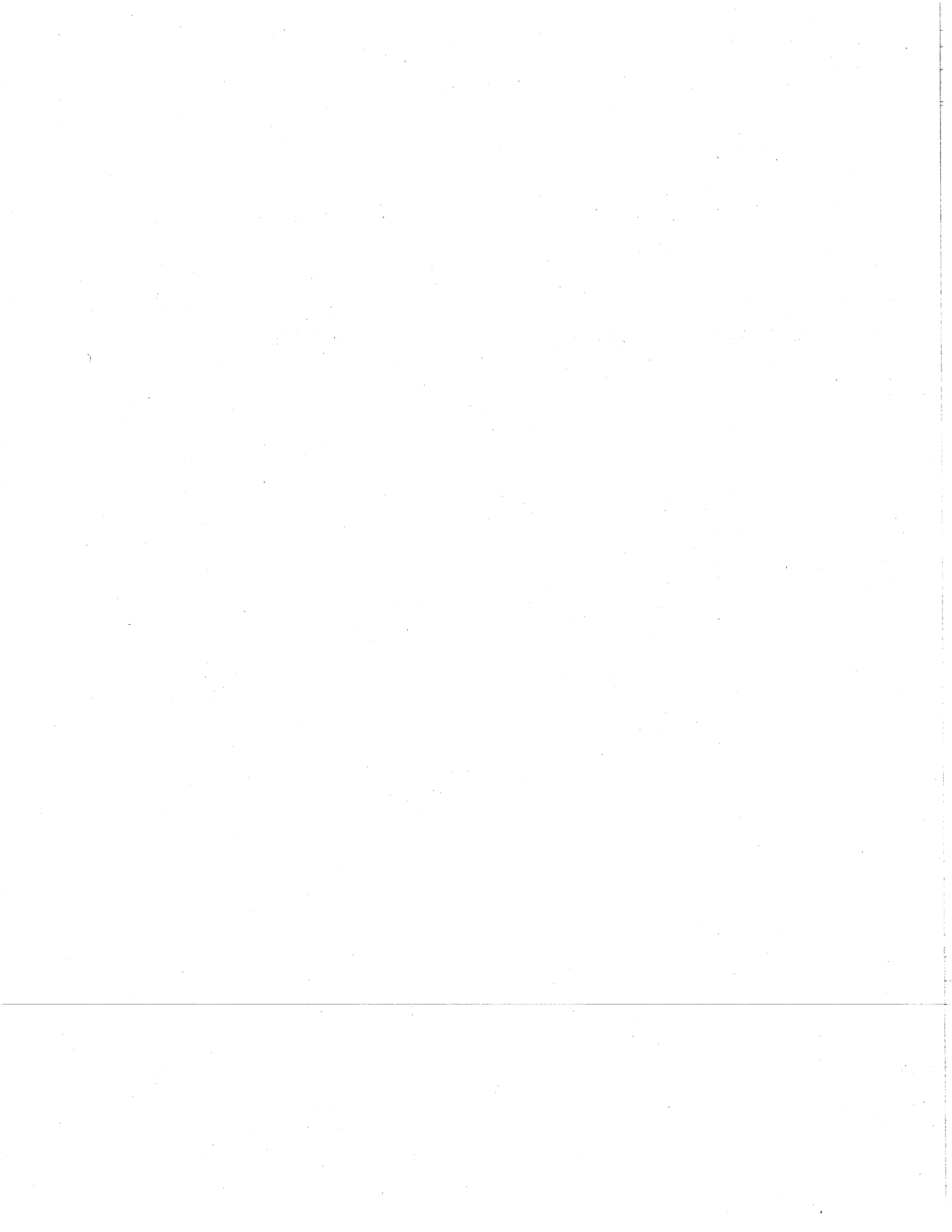
The Department may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of the Department that the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts which support the claim of undue hardship.



Rebecca Weidman, Director
Division of Watershed Management
Boston Office



Date



ATTACHMENT A

IRRIGATION MANAGEMENT, WATER CONSERVATION, AND SEASONAL DEMAND MANAGEMENT PLAN

1. Kings Way Golf Club (Kings Way) shall implement the Seasonal Demand Management Plan (SDMP) in Table A-1 between May 1st and September 30th each year. This timed approach shall be used to reduce water use during drought levels of Advisory through Warning by limiting the length of irrigation cycles. Under a Drought Emergency, mitigation actions are determined by the Governor’s Emergency Proclamation.

Advisory-level reductions shall also be implemented when groundwater levels at the assigned USGS monitoring well (# 413930070190901 – MA-A1W 306 Barnstable, MA) fall below a groundwater trigger for 60 consecutive days. Restrictions could start on May 1, so monitoring of the well shall begin on March 1 of each year. Once implemented, the restrictions shall remain in place until the daily value of the groundwater levels at the assigned USGS monitoring well have recovered to less than the trigger for 30 consecutive days (when the water table elevation has risen above the trigger level). The monthly groundwater trigger values are shown in Table A-2.

Table A-1. Seasonal Demand Management Approach for Water-Use Reductions

Massachusetts Drought Levels	Irrigation Less Volume as Drought Severity Increases						
	Reduced Minutes in Irrigation Cycles						
	Irrigated Tees & Greens	Irrigated Fairways		Irrigated Roughs		Irrigated Landscape & Ornaments	
Percent		Percent	Time (min)	Percent	Time (min)	Percent	Time (min)
Normal	100% (Full Cycle)	100%	20	100%	20	100%	15
Advisory †^	100%	80%	16	50%	10	*	XXX
Watch †	100%	60%	12	*	XXX	*	XXX
Warning †	100%	40%	8	*	XXX	*	XXX
Emergency **	TBD	TBD	TBD	*	XXX	*	XXX

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

^Advisory-level reductions shall also be implemented when the assigned groundwater trigger is hit.

* No irrigation allowed.

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

Kings Way shall be responsible for tracking the Massachusetts Drought Management Task Force drought declarations and recording when drought-triggered restrictions are implemented. Kings Way shall also be responsible for tracking groundwater levels and recording when groundwater-triggered restrictions are implemented. See the groundwater- and drought-tracking instructions (Attachment B) for guidance.

ATTACHMENT A

Table A-2. Groundwater trigger levels for MA-A1W 306 Barnstable, MA

Groundwater-Level Triggers (feet below ground surface)						
March	April	May	June	July	August	Sept
25.77	25.36	25.33	25.47	25.91	25.95	26.37

2. Kings Way shall continue to implement the following Best Management Practices (BMPs) for water conservation and course management.
- Water use is 100% metered
 - Source meters are regularly calibrated
 - Implementation of an irrigation system inspection and maintenance program that includes leak detection and repair, sprinkler head maintenance and replacement.
 - Regular inspection of course to determine irrigation needs
 - Implementation of a Turf Management Plan
 - Monitoring of soil moisture
 - Use of a weather station to generate irrigation cycles
 - Use of computer control irrigation system, including offsite access through remote computers to change schedules or turn off system when weather conditions change. Televent Systems data provider is used to monitor current and future weather conditions, evapotranspiration rates, and dew points. This system provides real time weather radar which allows for the best application and conservation of water.
 - Use of rain sensors to shut off irrigation cycles
 - Replacement of older sprinkler heads with improved heads with lower, more uniform trajectory and more consistent operation
 - Use of wetting agents and growth regulators
 - Use of drought tolerant grasses and shrubs
 - Regular aerating of turf to increase the percolation of water into the soil
 - Use of a proper turf nutrient program, vertical mowing, rolling and hand watering to create a healthy, strong turf which requires less water
 - Use of mulch materials in planting beds to improve water-holding capacity
 - Elimination of irrigation whenever possible, such as in rough areas
 - Limited ornamental watering
 - Employee training in water conservation and management

ATTACHMENT B

Instructions for Accessing U.S. Geologic Survey Groundwater Level and Massachusetts Drought Advisory Information

Groundwater level information is available at the USGS National Water Information System (NWIS): Web Interface. The USGS NWIS default shows Massachusetts groundwater levels in real time, i.e., the most recent, usually hourly, water level measured and recorded at each USGS monitoring well.

Seasonal Limits on Nonessential Outdoor Water Use are implemented when the daily mean depth to water level exceeds the designated trigger for 60 consecutive days (*i.e.*, when the depth to water becomes larger than the trigger value as the water table elevation declines). The daily water level is compared to the trigger for that month. **To determine if restrictions must be implemented on May 1 it is necessary to monitor the daily water level in March and April.**

Mean daily groundwater level readings are available at the USGS NWIS Web Interface at http://waterdata.usgs.gov/ma/nwis/current/?type=gw&group_key=county_cd

- Scroll down to 413930070190901 MA-A1W 306 Barnstable, MA.
- Click on the station number.
- On the pull-down menu “Available data for this site” choose “Daily data”.
- Under “Available Parameters” click on “72019 Water level, depth L”.
- Under “Output format” click on “Table” and enter the number of days of records (the default is 7 days; entering 60 will give you the past 60 days of data) and hit “GO”.
- The table provides the “Daily Mean Depth to water level, feet below land surface” for the most recent number of days chosen.
- Compare each day’s value to its month’s trigger value (25th percentile) in your permit. Outdoor water use restrictions must be implemented when the daily depth to water has been at or below (*i.e.* a greater value than) the trigger values for 60 consecutive days.

Drought Advisory information is available at the Massachusetts Department of Conservation and Recreation (DCR) Drought Status Website at <http://www.mass.gov/eea/agencies/dcr/water-res-protection/water-data-tracking/drought-status.html>

- The color coded map displays the six drought regions in Massachusetts. Restrictions are implemented when a Drought Advisory, Watch, Warning or Emergency is announced in your region through the DCR website.

