Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

July 19, 2016

Town of Scituate
Attn: Patricia Vinchesi, Town Administrator
600 Chief Justice Way
Scituate, MA 02066

Scituate – Widow's Walk Golf Course
WMA Permit #9P4-4-21-264.01
Program: Water Management Act
Action: Permit Renewal

Dear Ms. Vinchesi,

Please find the following attached:

- Findings of Fact in Support of the renewal of Permit #9P4-4-21-264.01; and,
- Final Water Management Act Permit #9P4-4-21-264.01 for the Widow's Walk Golf Course.

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

Sincerely,

Rebecca Weidman
Division of Watershed Management
Bureau of Water Resources

Y:\DWPARCHIVE\SERO\2016\Scituate-Widow'sWalk 9P442126401-WMA Final Permit Renewal-2016-07-19
Y:\DWPWMA\Permit Renewals\Scituate-Widow'sWalk 9P442126401-WMA Final Permit Renewal-2016-07-19
ecc: Samantha Woods, Executive Director, North and South Rivers Watershed Association
Todd Hugill, Widows Walk Superintendent, IGM, Inc.
Julia Blatt, Mass River Alliance

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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)

Contact Michelle Waters-Ekanem, Diversity Director/Civil Rights: 617-292-5751 TTY# MassRelay Service 1-800-439-2370. http://www.mass.gov/eea/agencies/massdep/service/justice/
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5 Ayisyen (franse kreyòl) (Haitian) (French Creole):
Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradui imedyatman. Si ou bezwen dokiman sa a tradui, tanpri kontakte Divèsite Direktè MassDEP a nan nimewo telefòn ki nan lis pi ba a.

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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.

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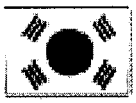
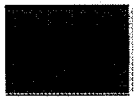
هذه الوثيقة الهامة وينبغي أن تترجم على الفور. اذا كنت بحاجة الى هذه الوثيقة المترجمة، يرجى الاتصال مدير التنوع في MassDEPعلى أرقام الهواتف المدرجة أدناه.



11 한국어 (Korean):
이 문서는 중요하고 즉시 번역해야합니다. 당신이 번역이 문서가 필요하면 아래의 전화 번호로 MassDEP의 다양성 감독에 문의하시기 바랍니다.



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

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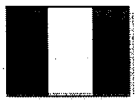
این سند مهم است و باید فورا ترجمه شده است.
اگر شما نیاز به این سند ترجمه شده، لطفا با ما تماس تنوع مدیر MassDEP در شماره تلفن های ذکر شده در زیر.



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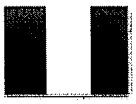

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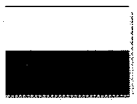

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Findings of Fact in Support of
Final Water Management Permit #9P4-4-21-264.01
Town of Scituate

The Department of Environmental Protection ("MassDEP" or "the Department") makes the following Findings of Fact in support of the attached Final Water Management Permit #9P4-4-21-264.01, and includes herewith its reasons for issuing the Permit and for conditions of approval imposed, as required by M.G.L. c.21G, s. 11. The Permit is being issued since such action is necessary for the promotion of the purposes of M.G.L. c. 21G. The issuance of this permit is in response to a water withdrawal permit renewal application by the Town of Scituate for the purpose of golf course irrigation.

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

Widow's Walk Golf Course (Widows Walk) is authorized to withdraw from the South Coastal Basin a total of 0.09 million gallons per day (MGD) over a 214-day season (April – October), or 19.32 million gallons per year (MGY). The system currently operates one source, known as the Kent Street Well. The original permit was issued on May 10, 2000 to the Town of Scituate. This Permit does not authorize an increase in water withdrawal volume, nor does it add a new withdrawal source.

The Permit Extensions

WMA permits issued during the first 20-year permitting cycle for the South Coastal Basin expired on August 31, 2010. All permittees seeking to renew their Water Management permit were required to file a renewal application on or before May 31, 2010. Widows Walk filed a timely renewal application and received a one-year Interim Permit, to August 31, 2011, to continue operations while the permit renewal review was ongoing. The Department published notice of the permit renewal application in the Environmental Monitor on June 23, 2010.

Subsequently, the expiration dates for all Water Management permits were extended for four years by Chapter 240 of the Acts of 2010 as amended by Chapter 238 of the Acts of 2012, collectively known as the Permit Extension Act. In addition, in a letter of September 25, 2015, the Department informed Widows Walk 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 South Coastal 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), Widows Walk's permit continues in force and effect until the Department issues a final decision on the permit renewal application.

The expiration date for all permits going forward in the South Coastal Basin will be August 31, 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 the Safe Yield in the South Coastal 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.

Safe Yield in the South Coastal 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 South Coastal Basin is 70.1 million gallons per day (MGD), and total registered and permitted withdrawals are 47.4 MGD, leaving 22.7 MGD potentially available. The maximum withdrawals that will be authorized in this

permit, and all other permits currently under review by the Department within the South Coastal Basin, will be within the safe yield and may be further conditioned as outlined in the regulations.

Findings of Fact for Permit Conditions in Widows Walk`s Water Management Act Permit

The following Findings of Fact for the special conditions include 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, reflects the permitted withdrawal volume of 0.09 MGD over a 214 day seasonal period (April – October). Widows Walk's actual water use has been below this value. The average daily withdrawal volumes for the system for 2012, 2013, and 2014 were 0.067, 0.062, and 0.069 MGD, respectively.

Special Condition 2, Maximum Authorized Daily Withdrawal Volume from Each Withdrawal Point, reflects the volume of groundwater withdrawal expressed as a maximum daily rate for each source included in the Permit. The maximum authorized daily withdrawal volume for the Kent Street Well is 0.21 MGD.

Special Condition 3, Water Conservation and Reporting Requirements
The Widows Walk Water Conservation Plan, submitted as part of its permit renewal application, has been combined with the Best Management Practices that Widows Walk 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 good water conservation practices, permitted golf courses will be required to implement a drought triggered Seasonal Demand Management Plan (SDMP) as a condition of their Water Management Permit. The SDMP, at a minimum, restricts nonessential outdoor water use between May 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 streamflow falls below designated flow trigger measured at an assigned, web-based, real-time U.S. Geologic Survey (USGS) stream gage from May 1st through September 30th. At a minimum, restrictions shall commence when streamflow falls below the trigger for three consecutive days. The streamflow-triggered response actions shall be consistent with the drought-triggered response actions at the Advisory level. Once implemented, the restrictions shall remain in place until streamflow at the assigned USGS local stream gage meets or exceeds the trigger streamflow for seven consecutive days. The low-flow statistic being applied, referred to as the "7-day low-flow statistic", is the median value of the annual 7-day low flows for the period of record for the assigned gage. The 7 day low-flow statistic is expected to respond more quickly to low-flow conditions than the Drought Management Task Force Drought Declaration.

Widows Walk has been assigned the following USGS stream gage: #01105730 – Indian Head River at Hanover, MA. The 7-day low flow at this site is 4.9 cubic feet per second (cfs). Should the reliability of the flow measurement at the Indian Head River gage be so impaired as to question its accuracy, the Permittee may request the Department's review and approval to transfer to another gage to trigger restrictions. The Department reserves the right to require use of a different gage.

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

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

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

As part of the WMA permit renewal application, Widows Walk submitted an SDMP using the Time Table reductions. The Department has accepted Widows Walk's proposed SDMP and it is included as a condition of this renewed permit.

Special Condition 5, Mitigation of Impacts for Withdrawals that Exceed Baseline Withdrawals
The renewed permit will include a condition that requires mitigation of withdrawals over a baseline volume, if feasible, if future withdrawals exceed the assigned baseline volume. Baseline withdrawal means the volume of water withdrawn during calendar year 2005 plus 5%, or the average annual volume withdrawn from 2003 through 2005 plus 5%, whichever is greater provided that:

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

The calculated baseline withdrawal volume for Widows Walk is 15.42 MGY or 0.07 MGD, which is the 2005 withdrawal volume plus 5%. Over its 16-year permitting history, Widows Walk's water use exceeded 15.42 MGY twice, in 2007 and 2015.

Because Widows Walk's authorized volume exceeds its baseline volume, a mitigation plan is required. Mitigation options were discussed when the Department met with Widows Walk on February 29, 2016. It was decided that Widows Walk's Audubon Cooperative Sanctuary Program accreditation would provide sufficient mitigation. Widows Walk shall submit proof of 1) its membership payment with its Annual Report Form each year, and 2) its recertification with the Annual Report Form every 3 years.

Minimization of Groundwater Withdrawal Impacts in Stressed Subbasins, requires permittees with permitted groundwater sources in subbasins[1] with net groundwater depletion of 25% or more during August to minimize their withdrawal impacts on those subbasins to the greatest extent feasible.

Because Widows Walk`s permitted source is located in a subbasin 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 Widows Walk'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).

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WATER WITHDRAWAL PERMIT
MGL c 21G

This renewal of Permit #9P4-4-21-264.01 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: 9P4-4-21-264.01 **RIVER BASIN:** South Coastal

PERMITTEE: Town of Scituate
600 Chief Justice Cushing Way
Scituate, MA 02066

RENEWAL DATE: July 19, 2016

EXPIRATION DATE: August 31, 2030

TYPE AND NUMBER OF WITHDRAWAL POINTS:
Groundwater: 1
Surface Water: 0

USE: Golf course irrigation – Widow's Walk Golf Course

DAYS OF OPERATION: 214 (April – October)

LOCATION:

Table 1: Withdrawal Point Identification

Source	Latitude	Longitude
Kent Street Well	42 10 43	70 43 22

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MassDEP Website: www.mass.gov/dep

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SPECIAL CONDITIONS

1. **Maximum Authorized Annual Average Withdrawal Volume**

This permit authorizes Widows Walk to withdraw 0.09 million gallons per day (MGD) or 19.32 million gallons per year (MGY) of water over 214 days (April through October) annually from its Kent Street well in the South Coastal Basin (Table 2). The number of days of operation in the renewed permit was changed from 210 to 214 to properly reflect the total number of calendar days from April through October.

Table 2: Maximum Authorized Average Annual Withdrawal Volume

Permit Periods	Daily Average (MGD)	Total Annual (MGY)
7/19/2016 to 8/31/2020	0.09	19.32
9/1/2020 to 8/31/2025	0.09	19.32
9/1/2025 to 8/31/2030	0.09	19.32

2. **Maximum Authorized Daily Withdrawal Volume**

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

Table 3. Maximum Authorized Daily Withdrawal Volume

Source	Maximum Daily Rate
Kent Street Well	0.21 MGD

3. **Water Conservation Requirements**

The Widows Walk Water Conservation Plan, submitted as part of its permit renewal application, has been combined with the Best Management Practices that Widows Walk indicated as being implemented (according to the attached Seasonal Demand Management Plan). This combination constitutes the water conservation requirements of the renewed permit (Table 4).

Table 4. Water Conservation Requirements

1. Metering 100% of water use, and calibrating source meters at least once per year.
2. Implementation of an inspection and maintenance program that includes the following on a routine basis: o *Leak detection and repair*: daily monitoring of the golf course insures no leaks throughout the system are present o *Sprinkler head maintenance and replacement* as needed to ensure proper trajectory,

pressure, and rotation o *Pond HDPE liner investigation:* the liner is inspected as water levels allow to ensure the integrity of the liner has not been compromised o *Pump maintenance:* the 3 pumps that control the output of water on to the golf course are monitored regularly for flow, pressure, and overall integrity.
3. Use of a computerized-control irrigation system that allows for irrigation of only those areas in need. Each irrigation head is controlled as a lone entity, providing concise control over water usage.
4. Hollow-tine aeration of all irrigated turf a minimum of twice yearly. This practice alleviates compaction and allows water to more freely percolate through the root zone. All putting greens (3 acres) shall be aerated to a depth of 11 inches twice yearly. Aeration to this depth allows for better gas exchange in the root zone and a significant lengthening of the roots. This practice has allowed reduction of water usage through deep and infrequent irrigation practices.
5. Use of low-trajectory sprinkler heads
6. Irrigating in the early morning or evening hours when evaporation rates are at their lowest
7. Use of mulch materials in planting beds to improve water-holding capacity of the landscaping
8. Raising turf height during drought conditions
9. Use of soil sensors and/or soil samples to monitor soil moisture
10. Use of environmentally safe wetting agents to improve water infiltration and minimize evaporation
11. Use of drought-tolerant turf grass and shrubs
12. Reduction of irrigation rates in secondary rough areas and, where possible, elimination of irrigation in non-play areas
13. Employee training in water conservation and management

4. <u>Seasonal Demand Management Plan</u>

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

Once implemented, the 7-day low flow restrictions shall remain in place until streamflow at the assigned USGS local stream gage meets or exceeds the trigger streamflow for seven consecutive days. Widows Walk has been assigned USGS stream gage #01105730-Indian Head River at Hanover, MA. The 7-day low flow at this site is 4.9 cubic feet per second (cfs). Should the reliability of the flow measurement at the Indian Head River gage be so impaired as to question its accuracy, the Permittee may request the Department's review and approval to transfer to another gage to trigger restrictions. The Department reserves the right to require the use of a different gage.

Widows Walk selected a time-redution approach, which requires that you reduce irrigation by time (Table 5).

Table 5. Widows Walk Time-Reduction in its SDMP

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

† Nonessential outdoor irrigation use shall not occur between the hours of 9 am and 5 pm, except that hand-watering of hot spots may occur at any time.
^ Advisory-level reductions should also be implemented when the 7-day low flow trigger is hit
* No irrigation allowed
** Mitigation actions to be determined by the Governor`s Emergency Proclamation.

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

5. **Mitigation Plan**

The Widows Walk baseline volume is 15.42 MGY, or 0.07 MGD. Widows Walk shall mitigate the impacts of its withdrawals above baseline by maintaining its Audubon Cooperative Sanctuary Program accreditation. Widows Walk shall submit proof of 1) its membership payment with its Annual Report Form each year, and 2) its recertification with the Annual Report Form every 3 years.

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

Rebecca Weidman, Director
Division of Watershed Management
Boston Office

July 19, 2016
Date

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

Widows Walk Golf Course shall limit nonessential outdoor water use through mandatory restrictions from May 1st through September 30th as outlined in below. To the extent feasible, all summer outdoor water use should take place before 9 am and after 5 pm when evaporation and evapotranspiration rates are lower.	
7-Day Low Flow Triggered Restrictions	Widows Walk should implement the "Advisory" level water use reductions outlined in its Acres-Reduction Seasonal Demand Management Plan (SDMP): When USGS stream gage 01105730 –Indian Head River at Hanover, MA falls below the 7-day low-flow statistic **4.9 cfs** for three (3) consecutive days. Once implemented, the restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.

Instructions for Accessing 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 01105730 –Indian Head River at Hanover, MA.
- Click on the gage number.
- Scroll down to "Provisional Date Subject to Revision – Available data for this site" and click on the drop down menu.
- Click on "Time-series: Daily data" and hit GO.
- Scroll down to the "Available Parameters" box. Within the box, be sure "Discharge (mean)" is checked, then, under "Output Format" click "Table" and hit GO.
- Scroll down to "Daily Mean Discharge, cubic feet per second" table and find the current date on the table.
- Compare the cubic feet per second (cfs) measurement shown on the table to the cfs shown under 7-Day Low Flow Triggered Restrictions above.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Water Management Act Program

Seasonal Demand Management Plan
For Permitted Water Management Golf Courses

Widow's Walk Golf Course
Facility Name
9P442126401
Permit #
Scituate
City or Town

Plan Requirements

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Permitted golf courses with irrigation sources under the Water Management Act (WMA) are required to implement a Seasonal Demand Management Plan (SDMP) at permit renewal that, at a minimum, reduces nonessential outdoor water use[1] based on the criteria below.

The SDMP must be consistent with the following when a "Drought Advisory" or greater level (i.e., Watch, Warning or Emergency) is declared by the Massachusetts Drought Management Task Force[2] (MDMTF) from May 1st to September 30th.

During a Drought Advisory or greater level, nonessential outdoor water use shall not occur between the hours of 9 am to 5 pm when evapotranspiration rates are highest. Hand-watering of hot spots may occur at anytime as necessary.

During a Drought Advisory or greater level, reductions are required in the irrigation (as applicable) of fairways and roughs consistent with those percentages outlined in Section C of this document.

During a Drought Emergency, should the Governor proclaim a state of Emergency, more stringent water use reductions may be required. At a minimum, all non-essential water use (including fairways and roughs) must cease.

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SOUTHEAST REGION

Restrictions shall be based on the drought level for the MDMTF region where the golf course is located. Drought levels may be monitored at: http://www.mass.gov/dcr/watersupply/rainfall/drought.htm.

Golf course facility managers shall be responsible for tracking drought declarations and recording when restrictions are implemented.

Complete and return this document to your MassDEP Regional Office.

Should you have any questions, contact Duane LeVangie at 617-292-5706, or Tom LaMonte at 617-292-5532.

A. Golf Facility Information

Widow's Walk Golf Course
Facility Name
Scituate
City/Town
Todd Hugill
Course Manager
781-545-1016
Phone Number
widowswalk@igminc.net
8/11/10
Date

[1] "Nonessential outside water use" means uses that are not required: (a) for health or safety reasons; (b) by regulation; (c) for the production of food and fiber; (d) for the maintenance of livestock; or (e) to meet the core functions of a business. Examples of nonessential outdoor water use includes: the irrigation of lawns or landscaping, washing vehicles, parking lots, driveways and/or sidewalks, etc.

Examples of essential water use not subject to restrictions are: irrigation to establish a new lawn during the months of May and September; irrigation for the production of food and fiber or the maintenance of livestock; irrigation by plant nurseries as necessary to maintain stock; irrigation by golf courses as necessary to maintain greens and tees, and limited fairway watering; and irrigation of public parks and recreational fields.

[2] See Massachusetts Drought Management Task Force at http://www.mass.gov/dcr/watersupply/rainfall/drought.htm.

Massachusetts Department of Environmental Protection
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B. Best Management Practices (BMPs)

Check the following BMPs for water conservation and management that you implement.

☒ Yes ☐ No 1. Water use is 100% metered.

☒ Yes ☐ No 2. Source meters are regularly calibrated.

☒ Yes ☐ No 3. New and existing irrigation ponds are lined with impervious material.

☒ Yes ☐ No 4. Implementation of an irrigation system inspection and maintenance program that includes leak detection and repair, sprinkler head maintenance and replacement.

☒ Yes ☐ No 5. Regular inspection of course to determine irrigation needs.

☒ Yes ☐ No 6. Implementation of a Turf Management Plan.

☒ Yes ☐ No 7. Use of soil sensors and/or soil samples to monitor soil moisture.

☐ Yes ☒ No 8. Use of weather stations to generate irrigation cycles.

☒ Yes ☐ No 9. Use of computer control irrigation system.

☒ Yes ☐ No 10. Use of low trajectory sprinkler heads.

☒ Yes ☐ No 11. Use of wetting agents.

☒ Yes ☐ No 12. Use of drought tolerant grasses and shrubs.

☒ Yes ☐ No 13. Regular aerating of turf to increase the percolation of water into the soil.

☒ Yes ☐ No 14. Use of mulch materials in planting beds to improve water-holding capacity.

☒ Yes ☐ No 15. Elimination of irrigation whenever possible, such as in rough areas.

☒ Yes ☐ No 16. Limited ornamental watering.

☒ Yes ☐ No 17. Employee training in water conservation and management.

☒ Yes ☐ No 18. Raising turf height during dry weather and drought conditions.

☐ Yes ☒ No 19. Reuse of wastewater and/or stormwater for irrigation.

Comment:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Water Management Act Program
Seasonal Demand Management Plan
For Permitted Water Management Golf Courses

Widow's Walk Golf Course
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C. Seasonal Demand Management Approach for Water Use Reductions

Demand management protocols frequently require more stringent water use reductions as the water supply availability worsens and triggers dictate when different responses are needed.

The two tables below reflect two approaches to indicate water use reductions. You may choose to complete (fill in the appropriate table) the Acres Table or the Time Table to reflect your water use reduction approach, or otherwise describe your specific water use reduction plan (Option 3). The Acres Table reduces water use by limiting the number of irrigated acres for fairways, roughs, and ornamentals. Notice the water use acreage percent reduction per unit area. The Time Table reduces irrigation by limiting the length of irrigation cycles.

Check and complete Option 1, 2 or 3.

☐ Check box if choosing Option 1.

1. ACRES TABLE (Fill in number of acres in all blank cells)

Massachusetts Drought Levels	Watering Less Irrigated Acreage as Drought Severity Increases Watering allowed up to designated percent							
Action Levels	Irrigated Tees & Greens		Irrigated Fairways		Irrigated Roughs		Irrigated Landscape & Ornamentals	
	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres
Normal	100%		100%		100%		100%	
Advisory †	100%	XXX	80%		50%		*	XXX
Watch †	100%	XXX	60%		*	XXX	*	XXX
Warning †	100%	XXX	40%		*	XXX	*	XXX
Emergency **	TBD	TBD	TBD	TBD	*	XXX	*	XXX

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

* No irrigation allowed.

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

Massachusetts Department of Environmental Protection
Bureau of Resource Protection – Water Management Act Program

Seasonal Demand Management Plan
For Permitted Water Management Golf Courses

Widow's Walk Golf Course
Facility Name
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City or Town

C. Seasonal Demand Management Approach for Water Use Reductions

☒ Check box if choosing Option 2.

2. TIME TABLE (Fill in time in minutes in all blank cells)

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

* No irrigation allowed.

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

Along with completing one of the tables, provide any additional description or narrative explanation as warranted on how your golf course plans to implement required irrigation reductions as drought conditions worsen. This could be through such practices as: limited rotation of sprinkler heads, limits on water pressure, limiting irrigation to hot spots, eliminate non-target watering, etc. (Attach additional pages as necessary.)

☐ Check box if choosing Option 3.

3. Alternative Approach

The Department offers flexibility for equivalent irrigation use reductions. Golf courses that have developed an equivalent plan that quantifies real water use reductions by other means that can relate to the Massachusetts Drought Management Task Force action levels, may submit their plan for the Department's review and approval.

(Attach additional pages as necessary.)