



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

September 6, 2023

George Rogers
A.D. Makepeace Co.
158 Tihonet Road
Wareham, MA 02324

RE: Water Management Act
Permit No. 9P2-4-24-310.03
Final BRP WM 01 Transfer & WMA Permit
Renewal

Dear Mr. Rogers:

The Massachusetts Department of Environmental Protection (MassDEP) received a BRP WM 01 transfer application on February 15, 2022 to transfer three sources registered (42431033) and permitted (9P242431003) with the Water Management Act (WMA) from A.D. Makepeace Company, Inc to United Cape Cod Cranberry, Inc. MassDEP had also previously received a 20-Year Cranberry Permit Renewal Application from the A.D. Makepeace Co., Inc on May 20, 2015. This renewed permit reflects the updated permit requirements. Please find the following attached documents:

- Findings of Fact in Support of the Final Permit Decision.
- Water Management Act Permit for withdrawals by A.D. Makepeace Company in the Buzzards Bay Basin.

If you have any questions regarding the permit, please contact Shi Chen at shi.chen@mass.gov or 857-360-0042.

Sincerely,

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

cc: Jim McLaughlin and Branden Costa, DEP, SERO
Brian Wick, Cape Cod Cranberry Growers Association
Julia Blatt and Sarah Bower, Mass Rivers Alliance
Steve Hurley, Adam Kautza, Jason Zimmer, DFW

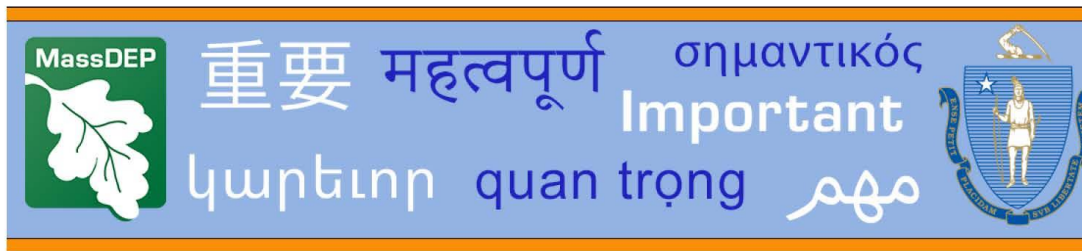
This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.

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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

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

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

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

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
ហើយកម្មវិធីត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEP តាមរយៈលេខទូរស័ព្ទដែលបានរាយនាមខាងក្រោម។

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**

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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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Findings of Fact in Support of Final Permit Decision Water Management Act Permit #9P2-4-24-310.03 A.D. Makepeace Company

The Massachusetts Department of Environmental Protection (the Department) makes the following *Findings of Fact* in support of the attached final renewed and transferred Water Management Act (WMA) Permit #9P2-4-24-310.03 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 by A.D. Makepeace Co., Inc (the “applicant”) and an application to partially transfer the water withdrawal permit from A.D. Makepeace to United Cape Cod Cranberry, Inc for the purpose of cranberry cultivation at three existing cranberry bogs.

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 worked closely with the cranberry industry to fully consider all aspects of the permit requirements to ensure thoughtful and implementable permits.

The Permit Extensions

WMA permits issued during the first 20-year permitting cycle for the Buzzards Bay Basin were due to expire on May 31, 2011. 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. The expiration date for the applicant’s permit was extended to May 31, 2015.

A.D. Makepeace filed a timely renewal application for their Water Management permit on May 20, 2015. Subsequently, in a letter of March 28, 2016, MassDEP informed the applicant that MassDEP would need additional time before making a determination on the application in order to ensure that all permit renewal applicants in the Buzzards Bay 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), the applicant’s permit, continues in force and effect until MassDEP issues a final decision on the permit renewal application.

Note that recent promulgation of revised regulations (310 CMR 36.00) have adjusted permit expiration dates in several basins, including the Buzzards Bay Basin, so all permits moving forward in this basin will have a September 4, 2032 expiration date.

The Water Management Act (M.G.L.c. 21G)

The Water Management Act (Act) requires that MassDEP issue permits that balance a variety of factors including without limitation:

- Impact of the withdrawal on other sources of water;
- Time of year when the withdrawal will be made;
- Water available within the safe yield of the 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, floodplains; 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* (<https://www.mass.gov/files/documents/2016/08/wf/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 Buzzards Bay River Basin section of this document);
- Water conservation and performance standards reviewed and approved by the WRC in July 2018 (<https://www.mass.gov/files/documents/2018/09/11/ma-water-conservation-standards-2018.pdf>), including without limitation;

- 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 Buzzards Bay Basin

This permit is being issued under the Safe Yield methodology adopted by MassDEP 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 Buzzards Bay Basin water source is 148.40 million gallons per day (MGD), and total allocated withdrawals are 83.78 MGD. The maximum withdrawals that will be authorized in this permit, and all other permits currently under review by the Department within the Buzzards Bay Basin, will be within the remaining safe yield and may be further conditioned as outlined in the regulations.

Findings of Fact for Permit Conditions in A.D. Makepeace Company's Water Management Permit

The Department has developed a set of permit conditions at 310 CMR 36.28 that are considered for inclusion in each permit. Not all of these permit conditions apply to every permitted water withdrawal. In addition, some permits have unique permit conditions to address site-specific issues.

Findings of Fact for A.D. Makepeace Company Permit Conditions

In the case of A.D. Makepeace Company:

- permit conditions specific to public water suppliers do not apply;
- there are no vernal pools or wetlands requiring monitoring to assess withdrawal impacts;
- there are coldwater fish resources (CFR) identified near the bogs at White Island Pond ID# 31 (see list of locations in permit) and the Bartlett's Marsh Pond ID# 32. Neither of those bogs have been in production since 2015 and therefore there is no impact on the CFRs at this time;
- minimization requirements do not apply because A.D. Makepeace's three permitted groundwater sources are located where August net depletion has not been established;
- water conservation measures specific to cranberry production are required; and
- mitigation is required because this permit authorizes water withdrawals for cranberry production greater than the permittee's authorized withdrawal volume for 2005.

The following Findings of Fact are intended to describe the rationale, and to provide some additional detail, for each of the special conditions in the A.D. Makepeace Company's permit. The summary of permit conditions, as part of MassDEP's findings of fact, is not intended to, and should not be construed as, modifying any of the Permit conditions. In the event of any ambiguity between the summary and the actual permit conditions, the Permit language shall be controlling.

Special Condition 1, Authorized Annual Withdrawal Volume, sets an annual average withdrawal volume of 0.586 million gallons per day (MGD) for the cultivation of 130.72 acres of

cranberry bog located in Wareham, Plymouth, and Carver in the Buzzards Bay Basin. The permitted volume is in addition to the 1518.5 registered acres (12.32 MGD) allocated to A.D. Makepeace Company's in WMA Registration #4-24-310.33.

Special Condition 2, Authorized Cranberry Acreage, lists the permittee's acreage in the basin.

Special Condition 3, Screening, requires mesh screens be installed at the pump intake to the Walsh Bog on Tihonet Pond in Wareham.

Special Condition 4, Water Conservation Requirements, reflects the need to continue implementing the Conservation Plan developed and approved by the USDA Natural Resources Conservation Service (NRCS). Within 5 years of the issuance of this permit, the Permittee shall review its Conservation Plan with a certified conservation planner and update as needed. Thereafter, the Plan shall be reviewed every 5 years or if major changes are made to the farm or its operating practices, such as those defined under 310 CMR 10.04 "Normal Improvements of Land in Agricultural Use", then those plans shall be updated as soon as possible. The Department will be confirming your efforts to review and update your plan as necessary in the future, based on the timelines required or the changes made in the future.

The Conservation Plan shall assure that the permittee has implemented where applicable water conservation BMPs for all of its bogs, including:

1. annual flume and dike repair maintenance;
2. use of low-volume sprinkler heads;
3. on-site water supply/tailwater recovery system;
4. return of all unconsumed water back to the water supply/tailwater recovery system;
5. laser leveling of bog sections; and
6. sequential flooding of bog.

The NRCS Conservation Farm plan shall document any exceptions from these BMPs.

Special Condition 5, Mitigation of Withdrawals over 2003-2005 Baseline, Cranberry Chart Book is required because A.D. Makepeace has added additional acreage since 2005 (originally registered for 1380.16 acres and later received credits to develop an additional 138.34 acres). Mitigation for cranberry permittees that have or will increase the acreage in production above the volumes being irrigated in 2005 is to obtain and operate the bogs utilizing the recommendations and Best Management Practices outlined in the most recent Cranberry Chart Book to the extent feasible.

The Permittee is required to implement the recommendations of the most recent Cranberry Chart Book to reduce the impacts of the permitted water withdrawals and include cultivation best management practices that provide water quality benefits by:

1. optimizing the use of fertilizer per The Best Management Practice Guide and UMass Cranberry Chart Book recommendations for nutrient management;
2. retaining excess nutrients through an on-site water supply/tailwater recovery system; and reducing, whenever possible, nutrient and pesticide applications.

Coldwater Fish Resource Protection was incorporated into the Water Management Regulations in November 2014. According to the Fishway Operations and Maintenance Plan prepared by the Massachusetts Division of Marine Fisheries on February 17, 2022, the White Island and Bartletts Marsh bogs have not been in operation since 2015. In addition, the Massachusetts Division of Fisheries and Wildlife is the owner of the White Island Pond Dam and fish ladder and is responsible for the operation and maintenance of the fishway. Therefore, there is no impact on the Coldwater Fish Resource now and the Coldwater Fish Resource is not a condition of this permit. Should there be operation changes at the White Island and Bartletts Marsh bogs, A.D. Makepeace Company shall notify MassDEP and the Coldwater Fish Resource Protection permit condition will be reviewed and amended if necessary.

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. Minimization of Groundwater Withdrawal Impacts is not a condition of this permit because AD Makepeace's three permitted groundwater sources are located where August net depletion has not been established, minimization measures are not required.

General Conditions applicable to all WMA permits are included.

The Department utilized the following information during the review of the application: the Massachusetts Geographic Information System (GIS). The data layers used included: 1997 through 2017 aerial photography, water supply layers, wetlands-related layers, natural habitat layers, DFW Coldwater Fisheries layer, flood zones and USGS maps.

Please note annual reporting requirements, your renewal date, and any conditions that may apply. The regulations governing this statement can be found at 310 CMR 36.00-36.44. DEP's Timely Action and Fee Provision, 310 CMR 4.00, authorizes an annual compliance fee for Water Management Act registrations and permits. Please also note that this permit is for cranberry cultivation only; any change in use is subject to Department review and may require a permit application.

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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Commissioner

WATER WITHDRAWAL PERMIT M.G.L. c. 21G

This permit is issued pursuant to the Massachusetts Water Management Act 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 beyond the right to withdraw the volume of water for which it is issued.

PERMIT NUMBER: 9P2-4-24-310.03 WATERSHED: Buzzards Bay

PERMITTEE: A.D. Makepeace Company
 158 Tihonet Road
 Wareham, Massachusetts 02571

EFFECTIVE DATE: September 6, 2023

EXPIRATION DATE: September 4, 2032*

* Promulgation of revised regulations (310 CMR 36.00) have adjusted permit expiration dates in this basin.

USE: Cranberry Cultivation

DAYS OF OPERATION: 365

NUMBER OF WITHDRAWAL POINTS: 48

 Groundwater (GW): 3

 Surface Water (SW): 45

LOCATION(S):

<u>ID/Source</u>	<u>GW/SW</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Location</u>
1 New Mosquito Dam	<u>SW</u>	41-47-25	70-43-50	off Tihonet Rd., Wareham
2 Tihonet Pond (S.W.)	<u>SW</u>	41-47-13	70-43-05	off Tihonet Rd., Wareham

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.

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57 Tihonet Pond (Walsh)	<u>SW</u>	41-47-38	70-43-10	Farm to Market Rd., Wareham
60 Tihonet Pond SE	<u>SW</u>	41-47-21	70-42-45	off Tihonet Rd., Wareham
3 Locke Res. East	<u>SW</u>	41-46-56	70-44-07	off Rt. 195, Wareham
59 Locke Res. West	<u>SW</u>	41-46-56	70-44-09	off Rt. 195, Wareham
55 Locke Lift Pump	<u>SW</u>	41-46-50	70-43-39	off Rt. 195, Wareham
7 Alice Res.	<u>SW</u>	41-47-31	70-41-58	Charge Pd. Rd., Wareham
27 West Branch	<u>SW</u>	41-47-53	70-40-19	Maple Springs Rd, Wareham
28 East Branch	<u>SW</u>	41-47-49	70-39-22	off Agawam Rd., Wareham
29 Engine House Res.	<u>SW</u>	41-47-22	70-40-34	Maple Springs Rd, Wareham
30 Glen Charlie Res.	<u>SW</u>	41-47-15	70-39-41	Maple Springs Rd, Wareham
32 Bartletts Marsh	<u>SW</u>	41-47-40	70-37-58	off Morrison St, Wareham
42 E. Wareham Mill Pond	<u>SW</u>	41-46-22	70-40-20	off Plymouth Rd., Wareham
48 Parker Mill Pond	<u>SW</u>	41-46-48	70-42-40	off Tihonet Rd., Wareham
49 Rosebrook Well	<u>GW</u>	41-47-46	70-44-08	Charlotte Furnace, Wareham
50 Rosebrook #1	<u>SW</u>	41-47-41	70-44-10	Charlotte Furnace, Wareham
51 Rosebrook #2	<u>SW</u>	41-47-25	70-44-16	Charlotte Furnace, Wareham
54 Rosebrook Lift Pump	<u>SW</u>	41-47-24	70-44-22	Charlotte Furnace, Wareham
52 Rosebrook #3	<u>SW</u>	41-47-43	70-44-24	Charlotte Furnace, Wareham
53 Rosebrook #4	<u>SW</u>	41-47-44	70-44-39	Charlotte Furnace, Wareham
9 Carver Res.	<u>SW</u>	41-49-26	70-42-32	off Tihonet Rd., Plymouth
56 Carver Lift Pump	<u>SW</u>	41-49-20	70-42-11	off Tihonet Rd., Plymouth
10 Easthead Res.	<u>SW</u>	41-50-21	70-41-24	off Cranberry Rd., Carver
11 Edwards Res.	<u>SW</u>	41-48-45	70-44-04	off Wareham St., Carver
43 Edwards Well	<u>GW</u>	41-48-42	70-44-15	East of Wareham St., Carver
12 Harwich Upper	<u>SW</u>	41-48-21	70-44-34	off Wareham St., Carver
13 Harwich Lower	<u>SW</u>	41-48-16	70-44-18	off Wareham St., Carver
14 Racoon Pond	<u>SW</u>	41-49-15	70-43-12	off Federal Rd., Carver
15 Golden Field Pond	<u>SW</u>	41-49-09	70-43-34	off Federal Rd., Carver
44 Smith Hammond Well	<u>GW</u>	41-49-15	70-43-45	off Federal Rd., Carver
19 Lincoln Res.	<u>SW</u>	41-55-00	70-45-01	off Bunny's Rd., Carver
20 Pinewood Lake	<u>SW</u>	41-54-52	70-44-39	off Bunny's Rd., Carver
21 Churchill Res.	<u>SW</u>	41-54-18	70-45-07	off Pond St., Carver
40 Hammond Res.	<u>SW</u>	41-48-07	70-43-49	off Hammond St., Carver

41 So. Howes Res.	<u>SW</u>	41-54-30	70-44-42	off S. Meadow St., Carver
4 Frog Foot West	<u>SW</u>	41-48-32	70-42-59	off Tihonet Rd., Plymouth
5 Frog Foot Main	<u>SW</u>	41-48-28	70-42-09	off Tihonet Rd., Plymouth
6 Oak Swamp	<u>SW</u>	41-48-16	70-41-28	off S. Line Rd., Plymouth
8 Slug Stream	<u>SW</u>	41-49-44	70-42-00	off Tihonet Rd., Plymouth
39 Beese Res.	<u>SW</u>	41-48-32	70-38-28	off Agawam Rd., Plymouth
31 White Island Pond	<u>SW</u>	41-49-10	70-37-05	off Squirrel Rd, Plymouth
61 White Island Pond West	<u>SW</u>	41-49-06	70-37-12	off Squirell Rd, Plymouth
33 Long Pond	<u>SW</u>	41-51-21	70-36-31	W. Long Pd. Rd., Plymouth
34 Halfway Pond	<u>SW</u>	41-51-08	70-36-40	Halfway Pd. Rd. Plymouth
35 Kennard/Eagle Hill	<u>SW</u>	41-49-57	70-37-32	off Agawam Rd., Plymouth
36 Fawn Pond	<u>SW</u>	41-49-40	70-38-00	off Agawam Rd., Plymouth
37 Deer Pond	<u>SW</u>	41-49-16	70-37-27	off Wareham Rd., Plymouth

SPECIAL CONDITIONS

1. Authorized Annual Withdrawal Volume

This permit authorizes the withdrawal of water from sources in the Buzzards Bay Basin. The permitted withdrawal rate is in addition to the 12.32 million gallons per day (MGD) authorized in WMA Registration #42431033. The permitted volume is expressed in millions of gallons, both as an average daily volume that may be withdrawn, and as a total volume that may be withdrawn annually from this source for the permit term.

Withdrawals are authorized as follows:

	Authorized Withdrawal Volume			
	Permit		Registration + Permit	
Permit Period	Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
9/06/2023 to 9/4/2032	0.586	213.89	12.32+0.586 = 12.906	4497.3+213.89 = 4711.19

2. Authorized Cranberry Acreage

This permit authorizes A.D. Makepeace Company to withdraw water from the following permitted withdrawal points in addition to the WMA Registration #42431033 in the Buzzards Bay Basin.

A.D. Makepeace Company
WMA Permit #9P2-4-24-310.03

<u>Bog/Property</u>	<u>Registered Acreage</u>	+	<u>Permitted Acreage</u>	=	<u>Total Acreage</u>
New Mosquito Dam	1.27		0.19		1.46
Tihonet Pond	102.07		3.68*		105.75
Locke Res. East	26.40		1.48*		27.88
Frog Foot West	9.22		0.94		10.16
Frog Foot Main	70.72		0.54		71.26
Oak Swamp	18.75		0.00		18.75
Alice Res.	13.43		0.21		13.64
Slug Stream	42.29		6.04**		48.33
Carver Res.	22.94		27.26**		50.20
Easthead Res.	158.31		0.96		159.27
Edwards Res.	25.96		0.59		26.55
Harwich Upper	17.78		25.83**		43.61
Harwich Lower	39.95		0.12		40.07
Raccoon Pond	19.07		0.39		19.46
Golden Field	49.62		0.02		49.64
Lincoln Res.	35.07		0.12		35.19
Pinewood Lake	79.14		0.71		79.85
Churchill Res.	12.88		0.32		13.20
West Branch	7.78		0.47		8.25
East Branch	72.57		0.61		73.18
Engine House	21.03		0.27		21.30
Glen Charlie	73.43		2.66*		76.09
White Island	93.76		0.84		94.60
Bartletts Marsh	16.18		0.00		16.18
Long Pond	10.68		0.00		10.68
Halfway Pond	31.61		0.11		31.72
Kennard/Eagle	41.53		1.23		42.76
Fawn Pond	7.29		0.17		7.46
Deer Pond	5.30		0.00		5.30
Beese Res.	9.89		0.21		10.10
Hammond Res.	11.58		0.00		11.58
So. Howes Res.	3.00		0.00		3.00
E. Wareham Mill Pond	17.09		2.33*		19.42
Parker Mill Pond	7.05		0.17		7.22
Rosebrook #1	10.00		16.04***		26.04
Rosebrook #2	0.00		4.31***		4.31
Rosebrook #3	20.00		20.70***		40.70
Rosebrook #4	0.00		3.62***		3.62
Tihonet Pond (Walsh)	9.10		0.77		9.87
Locke Res. West	32.50		6.81**		39.31
Old Orchard Bog	19.42		0.00		19.42
TOTAL	1380.16		130.72 (+138.34 Credits)		1649.22

* Minor expansion or bog restoration projects.

** Areas of significant new construction.

*** Acreage previously registered to another grower that was transferred to A.D. Makepeace without the registered water rights. Also includes some areas of new construction.

Note: All other differences between registered and permitted acreage likely represent "squaring-off" of existing acreage or more accurate accounting of existing acreage.

3. Screening (revised 6/4/2003)

The Department acknowledges that 1/4" mesh screens have been installed at the pump intake to the Walsh Bog on Tihonet Pond in Wareham. The screen is meant to restrict the maximum withdrawal velocity to 0.5 ft per second (fps). This condition is consistent with a plan submitted by G.A.F. Engineering, Inc. and with the discussions held between representatives of G.A.F. and the Division of Marine Fisheries. This condition shall apply to any future withdrawal at this site; for example, if the large pump house is repaired, then any intake to it shall be screened to conform to the 0.5 fps maximum velocity.

4. Water Conservation Requirements

A.D. Makepeace Company previously had Conservation Plans approved by a certified USDA Natural Resources Conservation Service conservation planner. A.D. Makepeace shall review this Conservation Plan with a certified USDA Natural Resources Conservation Service conservation planner within 5 years of issuance of this permit. The Permittee shall review its Conservation Plan with a certified conservation planner, and update as needed, every 5 years thereafter, or if major changes are made to the farm or its operating practices, such as those defined under 310 CMR 10.04 "Normal Improvements of Land in Agricultural Use", then those plans shall be updated as soon as possible. The Department will be confirming your efforts to review and update your plan as necessary in the future, based on the timelines outlined above or the major changes made to the farm.

A.D. Makepeace Company shall adhere to the following Water Conservation Best Management Practices (BMP's) as applicable. The BMPs will be defined as follows:

The BMPs are broken up into two categories: Structural BMPs and Operational BMPs. The BMPs are further defined as:

Structural BMPs

- Land Smoothing: bogs laser leveled (or equivalent) to 6 inches.
- Implementation of tail water recovery system or return of water to source of origin.
- Sprinkler Irrigation systems (in lieu of flood irrigation) including construction or replacement of main water lines, and water control structures (dike and flumes) in accordance with the recommendations contained in the "Irrigation Management" Best Management Practice Guidelines, published by the University of Massachusetts, Cranberry Experiment Station.
- Construction of interior dikes to divide bog parcels into sections that will conserve water.

Operational BMPs

Operational BMPs shall include the following BMPs published by the University of Massachusetts Cranberry Experiment Station.

- "Irrigation Management": Covering the use of tensiometers, water level float and irrigation system performance.
- "Frost Management": Covering the need for monitoring weather conditions, tolerance and irrigation system performance.

- “Flood Management”: Covering the use of sequential harvesting, and winter flooding.
- “Water Resource Protection and Enhancement”: Covering the definition of use of tailwater and laser leveling.
- Best Management Practices for Cranberry Growers with Anadromous Fish, Published by the Cape Cod Cranberry Growers’ Association, 1998.

5. Mitigation of Withdrawals over 2003-2005 Baseline: Chart Book

The Permittee is required to mitigate the impacts of these permitted withdrawals because they have increased the acreages since 2005.

The Permittee shall review and implement, as applicable, guidance from the most recent update of the Cranberry Chart Book, published and distributed by the University of Massachusetts Cranberry Experiment Station. The Chart Book is provided free of charge and is freely available on the UMass Cranberry Experiment Station’s website. The Permittee shall register its contact information with the Experiment Station to receive the annual Chart Book editions.

Specific provisions of the Permittee’s implementation of the Chart Book that mitigate the impacts of the permitted water withdrawals include cultivation best management practices that provide water quality benefits by:

1. optimizing the use of fertilizer per The Best Management Practice Guide and UMass Cranberry Chart Book recommendations for nutrient management;
2. retaining excess nutrients through an on-site water supply/tailwater recovery system; and
3. reducing, whenever possible, nutrient and pesticide applications.

Permittees will be required to attest to adherence to applicable Cranberry Chart Book guidance upon the Department’s request and at the time of the next permit renewal.

The NRCS Conservation Farm plan shall document any exceptions from these BMPs.

GENERAL 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** (If Applicable). Transferring cranberry withdrawals to another use requires the authorized volume be verified based on actual water use at the bog(s) to be transferred.
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.

APPEALS

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

A.D. Makepeace Company
WMA Permit #9P2-4-24-310.03

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. The filing fee is not required if the appellant is a city, town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, along with the hearing request, an affidavit setting forth the facts believed to support the claim of undue financial hardship.



Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

September 6, 2023

Date