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COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
NORTHEAST REGIONAL OFFICE

205B Lowell Street, Wilmington, MA 01887 • (978) 694-3200

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Lieutenant Governor

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Commissioner

RECEIVED

MAY 25 2006

May 24, 2006

MEPA

RE: **METHUEN-Merrimack River Basin**  
**Name:** Emerald Pines Golf Club  
**Water Management Permit #** 9P2-3-13-181.02  
**Program:** Water Management Act  
**Action:** Permit Issuance  
**Transmittal Number:** W060483

Mr. Lawrence Kady, Manager  
R & D Development Realty, LLC  
203 South Broadway, Suite 2  
Salem, New Hampshire 03079

Dear Mr. Kady:

Please find the attached documents:

- Findings of Fact in Support of the Permit Decision, and
- Water Management Act Permit # 9P2-3-13-181.02 (Merrimack River Basin) issued to Emerald Pines Golf Club, Howe Street, Methuen, Massachusetts.

If you have any questions regarding the Permit Amendment and would like to discuss, please contact Kellie O'Keefe by e-mail at [Kellie.Okeefe@state.ma.us](mailto:Kellie.Okeefe@state.ma.us) or by phone at (978) 694-3248.

Sincerely,

Eric Worrall  
Deputy Regional Director  
Bureau of Resource Protection

cc: DWP/Boston Office (no attachment)  
Stephen W. Smith, GeoHydrocycle, Inc., 151B California St., Newton, MA 02458  
Raymond Difiore, 41 Pleasant Street, Methuen, MA 01844  
EOEA, MEPA, 100 Cambridge Street, Suite 900, Boston, MA 02114

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**Findings of Fact in Support of the Permit Amendment Decision  
Water Management Permit # 9P2-3-13-181.02**

The Massachusetts Department of Environmental Protection (“MassDEP”) has completed its review of Emerald Pines Golf Club’s (“Emerald Pines”) Water Management Act Permit application to withdraw water from six (6) groundwater locations within the Merrimack River Basin. These sources are proposed to supply seasonal irrigation water to the golf course.

**The Water Management Act**

The Act requires that MassDEP issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- 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.

To better achieve the balance of competing water uses mandated by the Act, MassDEP has adopted the “Water Management Policy For Permit and Permit Amendment Applications and 5-Year Review, Effective Date: April 2, 2004” and the “Guidance Document for Water Management Act Permitting Policy, Effective Date: January 17, 2006”. The Policy, WMA Policy #: BRP/ DWM/DW/P04-1, and Guidance, Guidance #BRP/DWM/DW/G05-01, can be found on MassDEP’s web site at <http://www.mass.gov/dep/brp/wtrm/wtrmregs.htm>. The Policy and Guidance identify specific Performance Standards and conditions to be applied to new Water Management permits and to existing permits at the time they are amended, during 5-year permit review or permit renewal.

**Finding of Fact for the Performance Standards in Emerald Pines Golf Club’s Water Management Permit**

As required by MGL c. 21G, § 11 and 310 CMR 36.00, MassDEP makes the following Findings of Fact in support of the Permit, and includes herewith its reasons for approving the Permit and for imposing the conditions of approval. The summary of any Permit conditions should not be construed as modifying any of the Permit conditions. In the event of any conflict or ambiguity between this letter and the Permit, the Permit language shall control.

In applying the Performance Standards in Water Management permits, MassDEP relies primarily upon the determinations of relative stress established by the Water Resource Commission’s Stressed Basins Report approved December 13, 2001. MassDEP also reviews other available research, such as reports by the United States Geological Survey, MassDEP’s 303/305 Water Quality Assessment Reports and any other pertinent reports available for specific river basins.

Emerald Pines’s sources are located in the Merrimack River Basin, which is identified as a low stressed basin.

The map of stressed basins can be reviewed at the following link:  
<http://www.mass.gov/dep/brp/wtrm/files/stresmap.htm>.

While the more stringent Performance Standards required of permitted users in High and Medium Stressed Basins have not been applied to withdrawals by Emerald Pines in the Merrimack River Basin, it is MassDEP's intent that all users should meet the goal of minimizing water withdrawals through the implementation of conservation and operational measures to minimize potential adverse impacts on the river basin. This should include minimizing any leakage and regular reviews of operations to identify applicable conservation measures and schedule their implementation.

#### **Finding of Fact for Specific Permit Conditions**

In issuing permits in the Merrimack River Basin, MassDEP looked primarily at site-specific impacts and other issues specific to the system such as impacts to nearby streams, wetlands or other water users, as a means to justify long-term demand projections and the capacity of permitted withdrawal points. The conditions are intended to ensure the efficient use of water and to mitigate the potential impact of withdrawals. The Emerald Pines golf course is a new facility.

**Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume**, reflects the total permitted withdrawal volume of 26.42 million gallons per year ("MGY"), or a daily authorized withdrawal of 0.17 million gallons per day ("MGD") based on a 153 day seasonal irrigation period, for the first two year grow-in period. The total permitted withdrawal will then be reduced to 18.31 MGY, or 0.12 MGD for the remainder of the permit period following grow-in, through November 30, 2014. Because the golf course irrigation is a seasonal use, the total annual withdrawal volume is weighted to reflect days of withdrawal. To assess compliance with the permitted withdrawal volumes, MassDEP will base this withdrawal volume on the raw water withdrawn and consumed from the authorized withdrawal points.

**Special Condition 2, Maximum Authorized Daily Withdrawals from each Withdrawal Point**, reflects withdrawal rates based on the stabilized rates observed during a 5-day pumping test. Impacts on private wells, nearby streams and wetlands were evaluated during the pumping test and determined to be insignificant at the approved pumping rates as summarized in the pumping test report and supplemental submission dated August 30, 2005. Actual withdrawals at the facility will be less than those pumping rates used during the pumping test and therefore groundwater drawdown should be less than observed, further minimizing any impacts.

#### **Special Condition 3, Water Conservation Requirements**

The golf course is required to implement Best Management Practices and promote water conservation at the facility. The water conservation plan includes an employee awareness program.

A state-of-the art, computer based irrigation system is planned for the Emerald Pines Golf Club. This system will include precipitation monitoring weather stations and will be programmed to respond to the specific water needs of the turf on any given day. Groundwater use will be monitored at the wellheads using totalizing meters on each of the six wells. To minimize evaporative losses from the irrigation system, low trajectory heads will be used to distribute water to the course.

**Special Condition 4, Requirement to Report Raw and Consumptive Water Volumes**, ensures that the information necessary to evaluate compliance with the conditions included herein is accurately reported by outlining specific water volumes that must be calculated and reported annually to MassDEP.

**Section 61 Findings:** Pursuant to M.G.L Chapter 30, Sections 61-62H, this project was reviewed as EOEA # 13246. The proponent filed an Environmental Notification Form (ENF) with the Secretary of Environmental Affairs. The Secretary issued a Certificate detailing the scope of study for the Environmental Impact Report (EIR). A Draft EIR was prepared and submitted and on January 14, 2005,

the Secretary issued a Certificate on the Draft EIR, including issues to be addressed in the Final EIR. The proponent filed the Final EIR on August 31, 2005 and a Certificate was issued by the Secretary on October 15, 2005, stating that the Final EIR adequately and properly complied with MEPA and its implementing regulations.

The Department has reviewed the MEPA documents and the documents submitted in connection with the application for a permit. Based upon its review, the Department finds that implementation of the terms and conditions of this permit constitute all feasible measures to avoid damage to the environment and will minimize and mitigate such damage to the maximum extent practicable. Implementation of the mitigation measures will occur in accordance with the terms and conditions set forth in the permit.

**WATER WITHDRAWAL PERMIT  
MGL 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 herein 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:** 9P2-3-13-181.02

**RIVER BASIN:** Merrimack

**PERMITTEE:** Emerald Pines Golf Club  
c/o R & D Development  
Howe Street  
Methuen, MA 01844

**ISSUANCE DATE:** May 24, 2006

**EXPIRATION DATE:** November 30, 2014

**NUMBER OF WITHDRAWAL POINTS:**

Groundwater: 6  
Surface Water: 0

**USE and DAYS OF OPERATION:**

Golf Course Irrigation - 153 (May-September)

**LOCATIONS:**

**Table 1: Withdrawal Point Identification**

<b>Name</b>	<b>Source ID Code</b>
BR-1	NA
BR-2	NA
BR-3	NA
BR-4	NA
BR-5	NA
BR-6	NA

NA = Not Applicable

**SPECIAL CONDITIONS**

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

This permit authorizes the Emerald Pines Golf Club (“Emerald Pines”) to withdraw water from the Merrimack River Basin at the rate described below. The permitted volume is expressed in millions of gallons, both as an average daily withdrawal rate (“MGD”), and as a total annual withdrawal volume

in million gallons per year (“MGY”) for each year of the five-year period of the permit term. The Department of Environmental Protection (“MassDEP”) bases these withdrawal volumes on the raw water withdrawn and consumed from the authorized withdrawal points. To assess compliance with the permitted withdrawal volumes.

**Table 2: Authorized Withdrawal Volumes**

5-Year Periods		Total Raw Water Withdrawal Volumes	
		Permit	
		Daily Average (MGD)	Total Annual (MGY)
Period One Years 2-5	12/1/1994 to 11/30/1999	No permit	No permit
Period Two Years 6-10	12/1/1999 to 11/30/2004	No permit	No permit
Period Three Years 11-15	12/1/2004 to 11/30/2009	0.17	26.42
Period Four Years 16	12/1/2009 to 11/30/2014	0.12	18.31

**2. Maximum Authorized Daily Withdrawal Volume for each Withdrawal Point**

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily volumes listed below without specific advance written approval from of MassDEP. The authorized maximum daily volume is the approved rate of each source.

**Table 3: Maximum Daily Withdrawal Volume**

Well Name	Maximum Daily Rate (MGD)
BR-1	0.06
BR-2	0.06
BR-3	0.06
BR-4	0.06
BR-5	0.06
BR-6	0.06

**3. Water Conservation Requirements**

The Emerald Pines Golf Club shall implement the following Best Management Practices for water conservation and report on its efforts to comply with submission of the annual report as required in General Permit Condition # 6 below.

- Metering of all uses including irrigation and ancillary withdrawals from on-site sources such as potable supplies for clubhouses, banquet facilities, restrooms, etc.;
- Calibrating master meters annually;
- Potential for lining of existing and new irrigation ponds with impervious materials;

- Employee awareness program for water conservation;
- Irrigation system maintenance program that includes:
  - maintenance practices such as rescheduling hours of irrigation;
  - efforts to check spacing of sprinklers so there is no overlap watering or watering of streets and sidewalks;
  - Use of wetting agents;
  - Installation of tensiometers (soil moisture meters) and automated sprinkler systems which control irrigation based upon turf conditions;
  - Sprinkler operation and maintenance including installation of low trajectory sprinkler systems;
  - Leak detection (pressure testing) and repair of leaks for all sprinkler systems;
  - Integrated Pest Management.

#### 4. Requirement to Report Raw and Consumptive Withdrawal Volumes

Emerald Pines shall report the following at the time of the submittal of the Annual Report:

- Metered withdrawal volumes from individual withdrawal points.

#### General Permit Conditions

No withdrawal in excess of the permitted volume shall be made following the expiration of this permit, unless before that date the Department has received a renewal permit application pursuant to 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 up to the authorized volume so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The permittee or the permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine any property 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 MGL c 21G ss 15-17, MGL c 150 ss 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 36.37.

6. **Duty to Report** The permittee shall submit annually, on a form provided by the Department, a certified statement of the withdrawal, such report to be received by the Department by the date specified on the form each year. Such report must be mailed or hand delivered to:

Department of Environmental Protection  
Drinking Water Program  
Water Management Program  
One Winter Street, 6th Floor  
Boston, MA 02108

7. **Duty to Maintain Records** The permittee shall be responsible for maintaining daily withdrawal records.
8. **Metering** All withdrawal points included within the permit shall be metered within one year of the date of issuance of the permit. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.

#### **APPEAL RIGHTS AND TIME LIMITS**

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing. Any such request must be made in writing, by certified mail and received by the Department within twenty-one (21) days of the date of receipt of this permit. 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 city or town 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 this permit.

#### **FILING FEE AND ADDRESS**

The hearing request, 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 city or town (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.

**Communication for Non-English Speaking Parties (310 CMR 1.03(5)(a))**

**English**

This document is important and should be translated immediately.

Spanish

*Este documento es importante y se debe traducir inmediatamente.*

Portuguese

*Este original é importante e deve ser traduzido imediatamente.*

Italian

*Questo documento è importante e dovrebbe essere tradotto immediatamente.*

Greek

*Αυτό το έγγραφο είναι σημαντικό και πρέπει να μεταφραστεί αμέσως.*

French

*Ce document est important et devrait être traduit immédiatement.*

**Chinese (traditional)**

這個文件重要和應該立刻被翻譯。  
这个文件重要和应该立刻被翻译。