

May 12, 2004

Mr. Roland Bartl, AICP, Town Planner
Town of Acton Planning Department
Town Hall
472 Main Street
Acton, MA 01740

PRINCIPALS

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Lester B. Smith, Jr.

Victoria H. Fletcher, RLA

**Subject: Quail Ridge Country Club
Irrigation Well Use**

Dear Mr. Bartl:

As a follow-up to the Quail Ridge Country Club meeting of March 11, 2004, Epsilon Associates has met with Mr. Mike Toohill of ENSR to review the proposed use of site wells for irrigation purposes. As agreed at the meeting of March 11th, the purpose of this subsequent meeting was to establish irrigation well use criteria and/or monitoring requirements to insure that site well use would not have a negative effect on community water supplies within one-half mile of the site.

As you are aware, three bedrock wells have been completed on-site with individual well yields capable of supplying all or a significant portion of the irrigation demand for the Quail Ridge Golf Course (Wells BE-2, BE-5 and BE-7). Beginning January 23 and ending January 30, 2002, Wells BE-2 and BE-7 were subjected to a combined 5-day/7-day pump test with each well pumped at 75 gallons per minute. Well BE-7 was similarly subjected to a 5-day pump test at a rate of 150 gpm on September 5 through 10, 2002. The results of these pump tests are detailed in the report *Quail Ridge Country Club Water Management Act Application* dated December 20, 2002, copies of which were submitted to the Planning Board and subsequently to Mr. Toohill.

Epsilon Associates met with Mr. Toohill at the ENSR offices on May 4, 2004. The discussion at that meeting focused on the results of past pump tests and the Administrative Consent Order (ACO) agreed to by the Department of Environmental Protection and the Quail Ridge Country Club LLC as regards water use at the Quail Ridge Country Club. Based on this discussion the following actions were determined appropriate to insure the responsible use of the site irrigation wells:

- 1.) Per the letter of March 19, 2004 from Mr. Ronald Peabody as regards the meeting of March 11, 2004, Well BE-2 "is not to be used at this time."

- 2.) In conjunction with the site irrigation ponds, Well BE-7 will be the sole irrigation production well and will be utilized at a rate below Water Management Act thresholds, per ACO conditions 9C and 9D.
- 3.) Well BE-5 will be utilized as an emergency back-up well only. If and when Well BE-5 is utilized, water levels in Well BE-1 will be monitored daily. If and when water levels in Well BE-1 exhibit 10 or more feet of drawdown following the initiation of the use of Well BE-5, use of Well BE-5 will cease.

It was noted that during the pump test of Well BE-5, Well BE-1 and the off-site Great Road Condominium Irrigation well experienced similar levels of drawdown (approximately 10 and 13 feet, respectively). While these levels of drawdown are not severe and would not affect the use of wells at these locations, they are deemed the maximum acceptable without further pump testing of Well BE-5. Given the limitations of the ACO and the adequate yield of BE-7, designation of the use of BE-5 as a back-up well was deemed acceptable at this time.

Finally, as noted in the above referenced report, the pump test of Well BE-7 exhibited no influence on the Water District of Acton municipal wells. As noted therein, the Water District of Acton ceased operation of the Conant I well prior to the initiation of the pump test of Well BE-7 and monitored water levels in the well throughout the test. As also noted therein, review of the data supplied by the Water District of Acton confirmed that the pumping of Well BE-7 had no influence on that well. A copy of the water level record for the Conant I well as supplied by the Water District of Acton is attached.

Should you have any questions regarding the above information, please do not hesitate to contact me directly at 978-461-6225, or Jessie Cadigan at 978-461-6209.

Sincerely,

EPSILON ASSOCIATES, Inc.



Victoria Fletcher
Principal

Cc: R. Peabody, NorthWest Development, LLC