

April 25, 1985

Chairman, Planning Board
City of Newburyport
Newburyport, Massachusetts

RE: Evergreen Estates and Country Club
Preliminary Subdivision Plan

Dear Members of the Board:

Enclosed is a preliminary subdivision application and plan for the proposed Evergreen Estates and Country Club. The property is located on Ferry Road and abuts St. Mary's Cemetery, Interstate 95, Newburyport Well No. 2 and several residential lots. BSC Engineering is submitting this application on behalf of the Evergreen Development Company.

The subdivision consists of 20 residential lots and a 9-hole golf course on 53± acres of land formerly used for sand and gravel mining operations. The plan, as proposed, is in conformance with the City subdivision and zoning regulations and incorporates comments and suggestions of several city officials.

In order to address the major issue previously raised concerning development of this property, BSC Engineering has performed additional investigations. The condition and characteristics of the City of Newburyport Well No. 2, located on an abutting property, were collected and reviewed to determine potential impacts from the proposed development. Four observation wells were also installed on the site of the proposed project to determine depth to bedrock and aquifer characteristics. Additional information for other nearby properties was also collected.

As a result of our analysis of existing data and new test borings, we believe the following conclusions can be reached with respect to potential impacts of the project on the City's Well No.2:

- o A bedrock outcrop exists near the property line between the project site and the Well No. 2 property. This bedrock high extends from west to southeast across the site, forming an impermeable barrier to groundwater.
- o The recharge area for Well No. 2 is probably small in size, consisting of the City owned well property, the residential area to the west, north along Ferry Road, and east to residential and cemetery properties east of the site including most of the project roadway.

Chairman, Planning Board
City of Newburyport
Page 2
April 25, 1985

- o The storm water discharge for the roadway will be located in the south central portion of the property, out of the primary recharge area of the well and 1600 feet away from it. Based on discussions with city officials the amount of salt that would be applied to the proposed road has been estimated.
- o Under "worst case" conditions, (ie: all salt applied to the road reached the well), an increase in sodium content from 25.000 gm/l to 25.25 mg/l could occur. However, this assumes all road drainage will be discharged into the primary recharge area. This has not been proposed. Instead, the proposed discharge and retention area is located on the far side of the bedrock high, out of the primary recharge area and therefore, the effects on the well will be minimal or undetectable.
- o In summary, by locating the proposed stormwater discharge on the opposite side of the bedrock high and out of the primary recharge area there will be no significant impact of the water quality of Well No. 2.

If there are any questions or additional information is required, please contact me at your convenience.

Very truly yours,

BSC ENGINEERING



Robert J. Ingram, Ph.D.
Group Manager
Permitting and Ecological Services

Enclosure