Andrew Port

From:	Gove, Doug <doug.gove@aecom.com></doug.gove@aecom.com>
Sent:	Friday, August 11, 2017 10:55 AM
То:	Andrew Port
Cc:	DeNatale, Doug; Ted Angelakis; Anthony Furnari; Gove, Doug
Subject:	RE: Newburyport Well No. 2 Groundwater Levels
Attachments:	IMG_5949.jpg; IMG_5950.jpg

Hi Andy,

Attached are a couple of photos that show that the Evergreen Golf Course during a high groundwater event. I am not sure of the date of these pictures but they are believed to be from either June 2006 or March 2010.

Doug Gove, P.E.

Associate Vice President Direct +1 978-905-2981 Fax +1 978-905-2101 Mobile +1 617-721-7005 doug.gove@aecom.com

AECOM

250 Apollo Drive Chelmsford, Massachusetts 01824 Front Desk +1 978-905-2100 www.aecom.com

Built to deliver a better world

LinkedIn Twitter Facebook Instagram

From: Gove, Doug
Sent: Thursday, August 10, 2017 4:19 PM
To: Andrew Port (APort@CityofNewburyport.com)
Cc: DeNatale, Doug; Gove, Doug; Ted Angelakis (TAngelakis@CityofNewburyport.com);
AFurnari@CityofNewburyport.com
Subject: Newburyport Well No. 2 Groundwater Levels

Hi Andy,

As part of our evaluation of the pump test results at the Evergreen Golf Course, we reviewed historic groundwater levels at the Well No. 2 for the period from November 2000 to June 2016. The groundwater levels were recorded by Water Department Staff and are summarized for observation well OB-6 in the attached spreadsheet. Observation well OB-6 (B-6 in figure below) is 700 feet southwest of Well No. 2, and is assumed to represent ambient groundwater conditions since it is apparently outside the influence of pumping. OB-6 is also adjacent to the golf course site. Based on our review of the data, we found a 14.4 foot fluctuation in groundwater levels at OB-6 with a high groundwater elevation of 59.4 feet (MSL) in June 2006 and a low of 45.0 feet (MSL) in November 2016. Per the figure below, groundwater elevations at the Evergreen Golf Course could be 1 to 2 feet higher than what was observed at OB-6 meaning a groundwater level of between 60 and 61 feet (MSL) was possible on the golf course in June 2006.

We are bringing this information to your attention so that the City can use it in their review of the subdivision plans. It would appear that the groundwater elevations show that there could have been two occasions when there was widespread flooding at the golf course site --- both in June 2006 and in March 2010. These high groundwater elevations should be considered when evaluating the potential water quality risks to the Well No. 2 supply both during construction of the development and after the construction is completed.



Please let us know if you have any questions.

Thanks,

Doug Gove, P.E.

Associate Vice President Direct +1 978-905-2981 Fax +1 978-905-2101 Mobile +1 617-721-7005 doug.gove@aecom.com

AECOM

250 Apollo Drive Chelmsford, Massachusetts 01824 Front Desk +1 978-905-2100 www.aecom.com

Built to deliver a better world



