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Steve Winkley's procedure is consistent with standard practice but falls short in details and the devil is in the details. His interpretation of the geology and hydrogeology is a reasonable conceptual site model.

The location of proposed observation wells was not plotted on Figure 1 - he suggests wells that could be used.

"At least five observation wells in addition to Well 1 and 2 should be monitored during the 72-hour pumping test as well as the pre-test and recovery periods. One well should be located less than 30 feet from the pumping well, a second well should be no farther than 300 feet from the pumping well, a third observation well should be within 300 to 700 of the pumping well, and a fourth observation well is to be located further than 700 feet from the pumping well (see Figure 1). In addition, an observation well must be located outside of the expected influence of the pumping well to determine background conditions during the pumping test. The other observation wells must be located in a representative manner to best define the hydrogeologic characteristics of the aquifer with respect to the new production well and other on-site and off-site pumping wells. If possible, a representative sample of nearby homeowner wells and other neighboring wells (such as those north of Route 104A) are to be monitored during the pre-test, pumping test, and recovery periods as well."

I agree with the necessity of an observation well within 30 feet of the pumping well; however, I would suggest it be within 20 feet of the pumping well as this is a highly productive aquifer and the pumping well is likely to have a very steep cone. This well is vital for identifying the efficiency of the pumping well.

Other observation wells should be located along the axis of the suspected deepest part of the aquifer as he mentioned 300 to 700 feet north and south of the pumping well. Additional observation wells should be located at the suspected eastern and western lateral extent of the aquifer.

The new wells at the former fish farm (west of cemetery) should be included if the Town can get permission, as well as any existing observation wells from previous efforts as long as the Town can produce boring logs for the wells. It does not make sense to use an observation well if we do not know the geology of the aquifer the well is finished in.

I think it is imperative that the location of the observation wells be determined as soon as possible because it is likely that new observation wells may need to be installed.

Ed