

ARTICLE 7
HYDROGEOLOGIC ANALYSIS AND WATER QUALITY TESTING

§ 180-701. Test Required

A hydrogeologic analysis and water quality testing shall be required prior to the approval of any subdivision or land development plan representing more than ten (10) dwelling units, or a non-residential use or uses which individually or collectively have an anticipated daily water usage demand of four thousand (4,000) gallons per day or more, which proposes to utilize an on-site community public water supply system or individual private wells. However, this requirement will not apply to any single-family residential development where individual lots are larger than one (1) acre.

§ 180-702. Test Standards & Procedures

- A. No person shall propose the use of an on-site public water supply system or individual wells for a development activity described in § 180-801, without first administering the aquifer test required by this Article and meeting the minimum requirements of § 180-803.
1. Test Objective. The objectives of an aquifer test shall be one or more of the following:
- a. To obtain sufficient data for the calculations of aquifer performance, including the coefficients of transmissibility and storage, permeability, long-term well yield, and specific capacity.
 - b. To determine the location and character of geologic boundaries.
 - c. To ascertain the effects of well interference between on-site wells and surrounding off-site wells.
- B. Test Standard. The aquifer test shall establish that the proposed well(s) is (are) capable of supplying potable water at the minimum rate of four hundred (400) gallons per day per dwelling unit or in the case of non-residential use, the anticipated daily water flow, at a demand rate of not less than ten (10) gallons per minute for one (1) hour, either with or without the use of a storage system. The test shall also establish that no significant adverse impact will result to other existing on-site and surrounding wells.
- C. Test Supervision and Evaluation. The aquifer test shall be conducted under the supervision of a Professional Geologist or Professional Engineer, using testing procedures hereinafter set forth. The geologist or engineer shall be responsible for notifying the Township a minimum of three (3) days prior to the test. He or she will also summarize the test and its significance and make recommendations as to the suitability of the well or wells for the intended uses. The final report of the supervising person shall include an opinion as to whether the proposed use of the well will have an impact upon other existing wells in the immediate surrounding area. The supervising person shall provide the Township with a copy of all field notes and test results.

Test Method. The method for conducting the aquifer test shall be as follows:

An aquifer test shall be conducted for a minimum of twelve (12) hours at a constant rate of pumping. The test well, shall be the one proposed for the specified development activity for which the test is conducted. Two (2) observation wells

which have hydraulic continuity with the pumped well are required. The preferred method of analysis of the aquifer test data is the non-equilibrium formula, although other methods are available and may be used. These include various methods of analysis of either the drawdown or recovery data.

Collection of Data. Data shall be collected in conjunction with the aquifer test as follows:

1. Prior to the test:
 - a. Collection of geologic data of the area to be tested including well logs, if available.
 - b. History of water level fluctuations in the area when available.
 - c. The location, relative elevations and static water levels in the pumped well and the observation well or wells.
2. During the test: A standard aquifer test field data sheet will be required for a pumped well and each observation well. The data sheet shall include columns for listing:
 - a. Date.
 - b. Elapsed time since pumping started/stopped to the nearest 10th of a minute.
 - c. Depth to water below land surface to the nearest 10th of a foot.
 - d. Drawdown and recovery in feet and 10ths of feet.
 - e. Observed discharge at specified intervals in gallons per minute.
3. Following the test:

A report shall be prepared summarizing all project information and analyses including findings and recommendations regarding the adequacy of the groundwater supply for the proposed development. In accordance with recognized principles of well hydraulics, graphs shall be included to show time drawdown and time recovery for the pumped well and the observation wells. A distance drawdown graph will be required for anticipated rates of pumping. Computation of the coefficients of transmissibility and storage as well as the rate of pumping, time and drawdown are required as well as recharge and other hydrogeologic data which maybe considered necessary to satisfy the test objectives.

- F. Impacts during Testing. The Applicant shall be fully responsible for mitigating any impacts to adjacent water supplies which occur as a result of the testing.

§180-703. Water Quality Test

A water quality test shall be conducted concurrently with any aquifer test required in § 180-801 of this Ordinance. Such tests shall be conducted by a Pennsylvania Department of Environmental Protection (PA DEP) certified laboratory. The quality of the water tested shall meet the minimum public drinking water standards as set forth by PA DEP's current standards, or be capable of treatment to attain said standard of quality. If an on-site community system is proposed, the PA DEP required "New Source" analyses will be required.