

## **Comments on EGLE Guidance for Aquifer Test Work Aquifer Test Technical Advisory Group**

In January 2020, a group of eight consultants, three EGLE staff, and Jim Nicholas met to discuss the draft EGLE Guidance for Aquifer Test Work. The consultants comprise a group of experienced hydrogeologists who routinely conduct aquifer tests as part of the WWAP and for development of public water supply. Following the meeting, the consultants provided written comments to Nicholas. This document synthesizes and summarizes those comments.

Comments can be grouped into three themes:

- First, consultants need access to local information that EGLE may have and which would better inform their plans. They believe this would save them, their clients, and EGLE time and money.
- Second, the guidelines should not require anything beyond that included in legislation relevant to the WWAP. Additional work or information may be suggested along with a clear rationale for it.
- Third, a workplan should not be required prior to conducting an aquifer performance test (APT). As an alternative, we recommend using a checklist to ensure all information the department needs is included, and encourage consultation if there are unusual circumstances.

These three themes are explained more fully below.

Prior to conducting an APT, the hydrogeologist should consult with EGLE staff. EGLE staff will often have access to better data in a WMA than what is used in the WWAT. Access to these data may improve the design, performance, and analysis of an APT. If data in the WWAT, or updated data for T and S, could be made available in a GIS compatible format, and which Zone the WMA is in and if requests for LQW have been denied, this might reduce the need for or time for a pre-APT consultation with EGLE staff. (Note—the WUAC Model Committee is working on a parallel recommendation to make more current, local data available to consultants.)

The requirements for an APT are clearly described in Part 32706c(12)(a). The Guidance for Aquifer Test Work (Guidance) suggests, and in some cases, requires, data or information that go beyond the stated requirements for the APT (for instance, precipitation monitoring and two observation wells). The Guidance should suggest the circumstances where additional data or information may be useful.

The objective of an APT is included in Part 32706c(12)(a)vi. If an applicant for a LQW has additional objectives, the Guidance should ask what those are and how those objectives will be met.

The preparation, review, and potential revision of a workplan is costly and time consuming. Aquifer test design, performance, and analysis are well-documented in scientific literature, textbooks, and manuals. A competent hydrogeologist will do their work correctly. Additionally,

the Guidance for a workplan assumes hydrogeologic knowledge that may not be available until wells are drilled at the site. Much of what is asked for in workplan can be provided when the APT documentation is submitted for SSR. The Aquifer Test Technical Advisory Group believes that submittal, review, and approval of an APT workplan is not needed and is an unnecessary additional workload for consultants and EGLE staff.

Rather than submitting a workplan prior to an APT, the Guidance should provide a checklist to be submitted with the APT documentation. The checklist should include all of the requirements of Part 32706c(12)(a), along with space for explanatory information (for example, the type of water-level measurement equipment and its accuracy). Additionally, a checklist could include information not required by Part 32706c(12)(a), such as well locations, well construction, and conceptual model of the site hydrogeology. A checklist could also include additional data that may be warranted, such as that described in the next paragraph.

Additional data or information beyond that required may be warranted under some circumstances. The guidance should note those circumstance and suggest additional data or information. For instance, if it is going to rain before, during or immediately after an APT, precipitation data may be needed to properly interpret drawdown and recovery data. Or, recovery data may need to be collected for more than 24 hours after an APT longer than 24 hours. (Note that the Information Guide for LQW has water-level measurement frequencies that are not consistent with Part 32706c(12)(a).)

Two additional notes: (1) The Information Guide for LQW, Table 1, includes 12 data collection methods which provide different types of information that may be relevant to a SSR. The Guidance should specify the circumstances that require an APT rather than another data collection method. (2) Where applicable and consistent with an APT for Part 32706c(12)(a).), the Guidance should refer to ODWMA-399-003 and the Information Guide for LQW.

The Aquifer Test Technical Advisory appreciated the opportunity to meet together and discuss the Guidance with EGLE staff. We are hopeful that our comments will improve the Guidance, streamline the process, and save time for EGLE, hydrogeologic consultants, and their clients.