

Appendix B

Triggered Source Water Monitoring (TSWM) Requirements
Step-by-Step Example
Purchase Water Systems & Parent Systems

Triggered Source Water Monitoring (TSWM) Requirements Purchase Water System Example

The following is a step-by-step guide of TSWM Procedures for a purchase water supply and their parent water supply.

A water supply purchases 100% of its water from a Ground Water System (GWS). Each month, this purchase GWS collects each month 3 routine distribution samples for total coliform.

On Tuesday December 12th, 2009 the purchase system is contacted by the lab by telephone and notified that one of the three distribution samples collected on Monday December 11th is total coliform-positive (but fecal and/or E. coli negative). All the other routine distribution samples collected on December 11th are negative. Below describes the next steps.

Step 1

The operator of the purchase system must collect three repeat samples. One distribution must be collected at total coliform (TC) positive location, the second within 5 service connections downstream of the TC positive location, and the third within 5 service connections upstream of TC positive sample. All must be collected within 24-hours, or in this example, by Wednesday December 13th.

The operator must also contact the originating ground water source system. This contact must be made within 24-hours of receiving notification of the TC positive sample from the laboratory or Illinois EPA. The operator should document whom he notified at the parent supply as well as the telephone number, date, time, and a very brief description of the conversation/situation.

Step 2

Once the parent supply is notified, the next action will depend on whether or not the parent supply has been issued a triggered source water monitoring (TSWM) special exceptions permit (SEP). (*See page 9-4 of this chapter*)

YES, the parent supply does have a TSWM SEP issued by the Illinois EPA.

The parent supply is done. The purchase system will only need to complete the requirements specified under the Total Coliform Rule for distribution repeat samples.

NO, the parent supply does not have a TSWM SEP issued by the Illinois EPA (or their past TSWM SEP has been revoked). **Proceed to Step 3.**

Step 3

The parent supply must conduct TSWM since they did not have a TSWM SEP. One total coliform and *E. coli* sample must be collected from each active well within 24-hours of notification from the purchase supply.

If the well sample result comes back *E. coli* positive, **proceed to Step 4.**

If the well sample is negative for both total coliform and *E. coli*, no further well sampling is required for TSWM.

Step 4

Since one of the well repeat samples was *E. coli* positive, the parent supply must issue public notice immediately after notification of the positive *E. coli* result (and in no case later than 24-hours). Please see **Chapter 1 Public Notification Appendix C** of this Handbook for example template/requirements.

The parent supply must also contact each water supply that receives their water (whether the water is received directly or indirectly). This contact must be made immediately (within 24-hours). The operator should document whom he notified at the purchase supply as well as the telephone number, date, time, and a very brief description of the conversation/situation.

The purchase system must then also issue public notice immediately after the notification to them from the parent system of the positive *E. coli* well result (and in no case later than 24-hours). Please see **Chapter 1 Public Notification Appendix C** of this Handbook for example template/requirements.

Additional Notes

- (1) In the example above, only one routine distribution was originally positive that triggered TSWM. If multiple routine distribution samples are positive, then an equal number of source water samples must be collected from each source (Step 3).

For example, a system collects 4 total coliform samples each month for the TCR. If three of those samples are total coliform positive, the parent GWS would be required (within 24 hours) to take three *E. coli* samples at each well or a total of 6 source samples. The intent of the rule is to identify contamination of the source. Multiple TC+ in the distribution system means more triggered samples are collected, which means a better body of data is available on the quality of that source. Please make sure the parent GWS is aware of the number of routine coliform samples that test TC+.

- (2) Under Step 2, a TSWM SEP is mentioned. How do I know if my GWS has one and/or how can I get one if we do not have one? First, the TSWM SEPs are not applicable to purchase systems since these SEPs are only applicable to raw water well testing. Secondly, when a parent GWS is initially issued a TSWM SEP by the Illinois EPA, they are sent written notification. This notification should be kept by the GWS. If still not sure, call the Illinois EPA Ground Water Rule Coordinator at 217-785-0561. Likewise, if you know you do not have a TSWM SEP and would like to discuss the evaluation criteria to obtain one, please contact the Coordinator.
- (3) If you collect distribution routine samples throughout the month (and do not have a TSWM SEP) and have multiple distribution positives on different days, then the rule of thumb is to treat each as a new detection and call the parent supply each time. If you think its already been established that it's a distribution deficiency resulting in the multiple detections, please contact the Ground Water Rule Coordinator at 217-785-0561 to discuss eliminating the TSWM until the distribution deficiency is resolved. However, please remember that TSWM sampling is due within 24-hours so any contact with the Illinois EPA must be made quickly to still allow time for TSWM should your request be denied.
- (4) If you cannot meet the 24-hour TSWM sampling timeframe for reason beyond your control, please contact the GWR Coordinator at 217-785-0561 or your Illinois EPA Regional Office and request an extension (extension must be obtained prior to the 24-hours expiring, not after the fact).