Potential Economic Impact of Implementing The Revised Total Coliform Rule in NR 809

The Department of Natural Resources (department) analyzed the potential economic impact of implementing the Revised Total Coliform Rule (RTCR) in Wisconsin. Cost estimates for implementation of the new requirements were derived using available data. These estimates were compared to the costs associated with the current implementation of the Total Coliform Rule (TCR), implemented in Wisconsin since 1989.

The vast majority of the public water systems that will be affected by this rule are non-municipal groundwater systems, serving fewer than 1,000 customers. Surface water systems, ground water systems under the direct influence (GWUDI) of surface water, and systems serving more than 1,000 customers are not allowed reduced monitoring frequencies under the current or revised total coliform rules.

Although the RTCR does not allow deviation from rule requirements, some features of the rule allow for implementation flexibility as long as the department chooses options that ensure public health protection equivalent to that provided by the RTCR as promulgated by the Environmental Protection Agency (EPA). In the preamble to the promulgated RTCR, EPA "…encourages States to make any necessary modifications to their regulations to make the most efficient use of limited State resources and to better integrate these rules for systems with little-to-no distribution system, provided that the revisions satisfy the primacy requirements for both the GWR [Ground Water Rule] and the RTCR."

The department analyzed five potential options for implementing the rule. Three of the five options attempt to achieve the efficient use of limited state resources allowed for in the rule preamble. The economic impact of the department's selected option is presented here. Details of the other options considered are presented in the appendix.

Background

EPA promulgated the RTCR in February 2013. The department has primacy to administer the Safe Drinking Water Act (SDWA) in Wisconsin. To continue to maintain primacy, the department must revise Chapter NR 809, Safe Drinking Water, to incorporate provisions that are as stringent as those promulgated by EPA.

The RTCR increases public health protection against waterborne pathogens in public drinking water systems. Some of the salient changes in the RTCR include:

- Eliminating the maximum contaminant level (MCL) for total coliforms.
- Retaining the MCL for *Escherichia coli* (*E. coli*).
- Requiring annual site visits for systems to remain on reduced monitoring.
- Establishing start-up procedures for public water systems that cease operations seasonally and depressurize their distribution system.

- Requiring an abbreviated system assessment (Level 1 Assessment) following a confirmed total coliform positive.

- Prescribing a rigorous system assessment (Level 2 Assessment) following an *E. coli* MCL exceedance or two consecutive total coliform triggers.

- Retaining the requirement to issue "boil water" notices whenever systems exceed the *E. coli* MCL.

Estimated Implementation Costs

The department considered five options for implementation of the RTCR. The least expensive option was selected. Estimated ranges of costs for the selected option are included in Table 1. For a detailed description of all options considered, please see Appendix 1 at the end of this document.

Cost ranges ("lowest", "median", and "highest") were calculated to account for the variability in the type and complexity of the water supply systems regulated. The analysis compared the costs of implementing each of the options to the cost of administering the total coliform rule (TCR) as it is currently in effect in Wisconsin. Cost information for the proposed options is summarized in Table 1.

Table 1. Estimated costs of implementing the RTCR in Wisconsin

Option	Range	Monitoring Costs	Estimated Total Cost of Triggered Level 2 Assessments	Estimated Total Cost of Site Visits to Remain on Reduced Monitoring	Estimated Start-up Procedure Costs	Estimated Boil Water Costs	Estimated Total Costs	Difference from Current	Percent Difference from Current
Current practice before rule revision	Lowest	$1,866,159	$9,734	N/A	N/A	$53,250	$1,929,143	N/A	N/A
	Median	$1,866,159	$19,469	N/A	N/A	$106,500	$1,992,128	N/A	N/A
	Highest	$1,866,159	$38,938	N/A	N/A	$177,500	$2,082,597	N/A	N/A
W3 (Selected option)	Lowest	$1,893,915	$46,488	$250,979	$125,150	$1,887	$2,318,419	$389,276	120%
	Median	$1,893,915	$92,976	$250,979	$500,600	$3,774	$2,742,245	$750,117	138%
	Highest	$1,893,915	$400,371	$250,979	$1,251,500	$6,291	$3,803,055	$1,720,459	183%

Basis for Estimates

The cost estimates in Table 1 and Appendix 1 were generated using the following conditions or assumptions:

- Labor hourly rates are $37.92 and $41.28, including fringe benefits, for Water Supply Specialists and Water Supply Engineers, respectively. (Based on the average classification

rate as of 1/24/15)

- Annual site visits performed by county staff are set at $25.00 per visit by county staff and $15.25 per hour for DNR LTE staff.
- "Boil water" costs do not include the cost of producing any required associated public notices.
- Level 2 Assessment costs for Wisconsin options W1, W2, and W3 at the "highest" range set include analyzing a large volume sample at $700.00 per sample.
- Costs of shock-chlorinating a system would only be incurred if an official boil water notice occurs.
- Monitoring costs do not include the cost of mailing samples to a laboratory.
- Monitoring costs are net, without subsidy or assignment of an entity paying for them.
- Analysis cost for combined total coliform and *E. coli* testing is $27 per sample.
- All Door County Transient Non-community (TN) groundwater systems with a population ≤ 1,000 will remain on quarterly monitoring.
- Annual site visits to remain on reduced monitoring take two (2), four (4), or eight (8) hours to complete for the "lowest", "median", and "highest" range set, respectively.
- Start-up costs for all seasonal systems remain the same under all five options.

Selected Option

In the selected option, the department and county contractors and DNR LTE staff will complete the annual site visit requirement and a more rigorous assessment process at TNs to remain eligible for annual (reduced) monitoring. Other-than-municipal (OTM), Non-transient (NN), and Municipal (MC) systems will remain on their respective routine monitoring frequencies. All NNs and TNs will undergo Level 2 Assessments instead of Level 1 Assessments for confirmed total coliform detections, and will not go on increased monitoring following 2 Level 1 assessment triggers in a rolling 12-month period.