

# 61-58.16

## Ground Water Rule

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## **A. Applicability.**

This part R.61-58.16 applies to all public water systems that use ground water except that it does not apply to public water systems that combine all of their ground water with surface water or with ground water under the direct influence of surface water prior to treatment under 40 CFR 141, Subpart H. For the purposes of this part, “ground water system” is defined as any public water system meeting this applicability statement, including consecutive systems receiving finished ground water.

## **B. General Requirements.**

The requirements of R.61-58.16 constitute national primary drinking water regulations. Systems subject to this part must comply with the following requirements:

(1) Sanitary survey information requirements for all ground water systems as described in R.61-58.16.D.

(2) Microbial source water monitoring requirements for ground water systems that do not treat all of their ground water to at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer as described in R.61-58.16.E

(3) Treatment technique requirements, described in R.61-58.16.F, that apply to ground water systems that have fecally contaminated source waters, as determined by source water monitoring conducted under R.61-58.16.E, or that have significant deficiencies that are identified by the Department or that are identified by EPA under the Safe Drinking Water Act section 1445. A ground water system with fecally contaminated source water or with significant deficiencies subject to the treatment technique requirements of R.61-58.16.F must implement one or more of the following corrective action options: correct all significant deficiencies; provide an alternate source of water; eliminate the source of contamination; or provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer.

(4) Ground water systems that provide at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer are required to conduct compliance monitoring to demonstrate treatment effectiveness, as described in R.61-58.16.F(2).

(5) If requested by the Department, ground water systems must provide the Department with any existing information that will enable the Department to perform a hydrogeologic sensitivity assessment. For the purposes of this part R.61-58.16, “hydrogeologic sensitivity assessment” is a determination of whether ground water systems obtain water from hydrogeologically sensitive settings.

## **C. Compliance Date.**

Ground water systems must comply, unless otherwise noted, with the requirements of R.61-58.16 beginning December 1, 2009.

## **D. Sanitary Surveys For Ground Water Systems.**

(1) Ground water systems must provide the Department, at the Department’s request, any existing information that will enable the Department to conduct a sanitary survey.

(2) For the purposes of R.61-58.16, a "sanitary survey," as conducted by the Department, includes, but is not limited to, an onsite review of the water source(s) (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.

(3) The sanitary survey must include an evaluation of the applicable components listed in paragraphs R.61-58.16.D(3)(a) through (h).

- (a) Source.
- (b) Treatment including corrosion control treatment and water quality parameters as applicable.
- (c) Distribution system.
- (d) Finished water storage.
- (e) Pumps, pump facilities, and controls.
- (f) Monitoring, reporting, and data verification.
- (g) System management and operation.
- (h) Operator compliance with Department requirements.

#### **E. Ground Water Source Microbial Monitoring and Analytical Methods.**

(1) Triggered source water monitoring.

(a) General Requirement. A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (1)(a)(i) and either (1)(a)(ii) or 1(a)(iii) of this section exist.

(i) The system does not provide at least 4 log treatment of viruses (using inactivation, removal, or a Department approved combination of 4 log virus inactivation and removal) before or at the first customer for each ground water source; and either

(ii) The system is notified that a sample collected under R.61 58.5.G(1) is total coliform-positive and the sample is not invalidated under R.61 58.5.G(3) until March 31, 2016, or

(iii) The system is notified that a sample collected under R.61-58.17.E through R.61-58.17.H is total coliform-positive and the sample is not invalidated under R.61-58.17.D(3) beginning April 1, 2016.

(b) Sampling Requirements. A ground water system must collect, within 24 hours of notification of the total coliform-positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under R.61 58.5.G(1) until March 31, 2016, or collected under R.61-58.17.E through R.61-58.17.H beginning April 1, 2016, except as provided in R.61-58.16.E(1)(b)(ii).

(i) The Department may extend the 24 hour time limit on a case by case basis if the system cannot collect the ground water source sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Department must specify how much time the system has to collect the sample.

(ii) If approved by the Department, systems with more than one ground water source may meet the requirements of R.61 58.16.E(1)(b) by sampling a representative ground water source or sources. If directed by the Department, systems must submit a triggered source water monitoring plan for Department approval that identifies one or more ground water sources that are representative of each monitoring site in the system's sample siting plan under R.61 58.5.G(1) until March 31, 2016, or under R.61-58.17.D beginning April 1, 2016, and that the system intends to use for representative sampling under this paragraph.

(iii) Until, March 31, 2016, a ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of R.61 58.5.G(2) and to satisfy the monitoring requirements of R.61 58.16.E(1)(b) for that ground water source only if the Department approves the use of E.coli as a fecal indicator for source water monitoring under R.61- 58.16.E(1). If the repeat sample collected from the ground water source is E.coli- positive, the system must comply with R.61 58.16.E(1)(c).

(i) Beginning April 1, 2016, a ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of R.61-58.17 and to satisfy the monitoring requirements of R.61-58.16.E(1)(b) for that ground water source only if the Department approves the use of E. coli as a fecal indicator for source water monitoring under R.61-58.16.E(1) and approves the use of a single sample for meeting both the triggered source water monitoring requirements in R.61-58.16.E(1) and the repeat monitoring requirements in R.61-58.17.I. If the repeat sample collected from the ground water source is E. coli-positive, the system must comply with R.61-58.16.E(1)(c).

(c) Additional Requirements. If the Department does not require corrective action under R.61-58.16.F(1)(b) for a fecal indicator positive source water sample collected under R.61-58.16.E(1)(b) that is not invalidated under R.61 58.16.E(4), the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator positive sample.

(d) Consecutive and wholesale systems.

(i) In addition to the other requirements of R.61 58.16.E(1), a consecutive ground water system that has a total coliform-positive sample collected under R.61 58.5.G(1) until March 31, 2016, or under R.61-58.17.E through R.61-58.17.H beginning April 1, 2016 must notify the wholesale system(s) within 24 hours of being notified of the total coliform-positive sample.

(ii) In addition to the other requirements of R.61 58.16.E(1), a wholesale ground water system must comply with R.61 58.16.E(1)(d)(ii)(A) and R.61 58.16.E(1)(d)(ii)(B).

(A) A wholesale ground water system that receives notice from a consecutive system it serves that a sample collected under R.61 58.5.G(1) until March 31, 2016, or collected under R.61-58.17.E through R.61-58.17.H beginning April 1, 2016, is total coliform-positive must, within 24 hours of being notified, collect a sample from its ground water source(s) under R.61-58.16.E(1)(b) and analyze it for a fecal indicator under R.61-58.16.E(3).

(B) If the sample collected under R.61-58.16.E(1)(d)(ii)(A) is fecal indicator positive, the wholesale ground water system must notify all consecutive systems served by that ground water source of the fecal indicator positive sample within 24 hours of being notified of the ground water source sample monitoring result and must meet the requirements of R.61-58.16.E(1)(c).

(e) Exceptions to the triggered source water monitoring requirements. A ground water system is not required to comply with the source water monitoring requirements of R.61-58.16.E(1) if either one of the following conditions exists:

(i) The Department determines, and documents in writing, that the total coliform- positive sample collected under R.61 58.5(G)(1) until March 31, 2016, or under R.61-58.17.E through R.61-58.17.H beginning April 1, 2016, is caused by a distribution system deficiency; or

(ii) The total coliform-positive sample collected under R.61 58.5(G)(1) until March 31, 2016, or under R.61-58.17.E through R.61-58.17.H beginning April 1, 2016, is collected at a location that meets Department criteria for distribution system conditions that will cause total coliform-positive samples.

(2) Assessment source water monitoring. If directed by the Department, ground water systems must conduct assessment source water monitoring that meets Department-determined requirements for such monitoring. A ground water system conducting assessment source water monitoring may use a triggered source water sample collected under R.61-58.16.E(1)(b) to meet the requirements of R.61-58.16.E(2). Department-determined assessment source water monitoring may include, but not be limited to the following:

(a) Collection of a total of 12 ground water source samples that represent each month the system provides ground water to the public.

(b) Collection of samples from each well unless the system obtains written Department approval to conduct monitoring at one or more wells within the ground water system that are representative of multiple wells used by that system and that draw water from the same hydrogeologic setting.

(c) Collection of a standard sample volume of at least 100 mL for fecal indicator analysis regardless of the fecal indicator or analytical method used.

(d) Analysis of all ground water source samples using one of the analytical methods listed in R.61-58.16.E(3) for the presence of E. coli, enterococci, or coliphage.

(e) Collection of ground water source samples at a location prior to any treatment of the ground water source unless the Department approves a sampling location after treatment.

(f) Collection of ground water source samples at the well itself unless the system's configuration does not allow for sampling at the well itself and the Department approves an alternate sampling location that is representative of the water quality of that well.

(3) Analytical methods.

(a) A ground water system subject to the source water monitoring requirements of R.61-58.16.E(1) must collect a standard sample volume of at least 100 ml for fecal indicator analysis regardless of the fecal indicator or analytical method used.

(b) A ground water system must analyze all ground water source samples collected under R.61-58.16.E(1) for E.coli, enterococci, or coliphage using EPA-approved methods listed in 40 CFR 141.402(c)(2) (Federal Register 11-8-2006 edition).

(4) Invalidation of a fecal indicator positive ground water source sample.

(a) A ground water system may obtain Department invalidation of a fecal indicator positive ground water source sample collected under R.61-58.16.E(1) only under the conditions specified as follows:

(i) The system provides the Department with written notice from the laboratory that improper sample analysis occurred.

(ii) The Department determines and documents in writing that there is substantial evidence that a fecal indicator positive ground water source sample is not related to source water quality.

(b) If the Department invalidates a fecal indicator positive ground water source sample, the ground water system must collect another source water sample under R.61-58.16.E(1) within 24 hours of being notified by the Department of its invalidation decision and have it analyzed for the same fecal indicator using the analytical methods listed in 40 CFR 141.402(c)(2) (Federal Register 11-8-2006 edition). The Department may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Department will specify how much time the system has to collect the sample.

(5) Sampling location.

(a) Any ground water source sample required under R.61-58.16.E(1) must be collected at a location prior to any treatment of the groundwater source unless the Department approves a sampling location after treatment.

(b) If the system's configuration does not allow for sampling at the well itself, the system may collect a sample at a Department-approved location to meet the requirements under R.61-58.16.E(1) if the sample is representative of the water quality of that well.

(6) New sources. If directed by the Department, a ground water system that places a new ground water source into service after November 30, 2009, must conduct assessment source water monitoring under R.61-58.16.E(2). If directed by the Department, the system must begin monitoring before the ground water source is used to provide water to the public.

(7) Public notification. A ground water system with a ground water source sample collected under R.61-58.16.E(1) or (2) that is fecal indicator positive and that is not invalidated under R.61-58.16.E(4), including consecutive systems served by the ground water source, must conduct public notification under R.61-58.6.E(2).

(8) Monitoring violations. Failure to meet the requirements of R.61-58.16.E(1) through (6) is a monitoring violation and requires the ground water system to provide public notification under R.61-58.6.E(4).

## **F. Treatment technique requirements for ground water systems.**

(1) Ground water systems with significant deficiencies or source water fecal contamination.

(a) The treatment technique requirements of R.61-58.16.F must be met by ground water systems when a significant deficiency is identified or when a ground water source sample collected under R.61-58.16.E(1)(c) is fecal indicator positive.

(b) If directed by the Department, a ground water system with a ground water source sample collected under R.61-58.16.E(1)(b), R.61-58.16.E(1)(d), or R.61-58.16.E(2) that is fecal indicator positive must comply with the treatment technique requirements of R.61-58.16.F.

(c) When a significant deficiency is identified at a Subpart H public water system that uses both ground water and surface water or GWUDI, the system must comply with R.61-58.16.F except in cases where the Department determines that the significant deficiency is in a portion of the distribution system that is served solely by surface water or GWUDI.

(d) Unless the Department directs the ground water system to implement a specific corrective action, the ground water system must consult with the Department regarding the appropriate corrective action within 30 days of receiving written notice from the Department of a significant deficiency, written notice from a laboratory that a ground water source sample collected under R.61-58.16.E(1)(c) was found to be fecal indicator positive, or direction from the Department that a fecal indicator positive sample collected under R.61-58.16.E(1)(b), R.61-58.16.E(1)(d), or R.61-58.16.E(2) requires corrective action. For the purposes of R.61-58.16, significant deficiencies include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the Department determines to be causing, or have the potential for causing, the introduction of contamination into the water delivered to consumers.

(e) Within 120 days, or earlier if directed by the Department, of receiving written notification from the Department of a significant deficiency, written notice from a laboratory that a ground water source sample collected under R.61-58.16.E(1)(c) was found to be fecal indicator positive, or direction from the Department that a fecal indicator positive sample collected under R.61-58.16.E(1)(b), R.61-58.16.E(1)(d), or R.61-58.16.E(2) requires corrective action, the ground water system must either:

(i) Have completed corrective action in accordance with applicable Department plan review processes or other Department guidance or direction, if any, including Department-specified interim measures; or

(ii) Be in compliance with a Department-approved corrective action plan and schedule subject to the following conditions:

(A) Any subsequent modifications to a Department-approved corrective action plan and schedule must also be approved by the Department.

(B) If the Department specifies interim measures for the protection of public health pending Department approval of the corrective action plan and schedule or pending completion of the corrective action plan, the system must comply with these interim measures as well as with any schedule specified by the Department.

(f) Corrective action alternatives. Ground water systems that meet the conditions of R.61-58.16.F(1)(a) or (b) must implement one or more of the following corrective action alternatives:

(i) Correct all significant deficiencies.

(ii) Provide an alternate source of water.

(iii) Eliminate the source of contamination.

(iv) Provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(g) Special notice to the public of significant deficiencies or source water fecal contamination.

(i) In addition to the applicable public notification requirements of R.61- 58.6.E(2), a community ground water system that receives notice from the Department of a significant deficiency or notification of a fecal indicator positive ground water source sample that is not invalidated by the Department must inform the public served by the water system under R.61-58.12.C(11)(f) of the fecal indicator positive source sample or of any significant deficiency that has not been corrected. The system must continue to inform the public annually until the significant deficiency is corrected or the fecal contamination in the ground water source is determined by the Department to be corrected under R.61- 58.16.F(1)(e).

(ii) In addition to the applicable public notification requirements of R.61- 58.6.E(2), a non-community ground water system that receives notice from the Department of a significant deficiency must inform the public served by the water system in a manner approved by the Department of any significant deficiency that has not been corrected within 12 months of being notified by the Department, or earlier if directed by the Department. The system must continue to inform the public annually until the significant deficiency is corrected. The information must include:

(A) The nature of the significant deficiency and the date the significant deficiency was identified by the Department.

(B) The Department-approved plan and schedule for correction of the significant deficiency, including interim measures, progress to date, and any interim measures completed.

(C) For systems with a large proportion of non-English speaking consumers, as determined by the Department, information in the appropriate language(s) regarding the importance of the notice or a telephone number or address where consumers may contact the system to obtain a translated copy of the notice or assistance in the appropriate language.

(iii) If directed by the Department, a non-community water system with significant deficiencies that have been corrected must inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction under R.61-58.16.F(1)(g)(ii).

(2) Compliance monitoring

(a) Existing ground water sources. A ground water system that is not required to meet the source water monitoring requirements of R.61-58.16 because it provides at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for any ground water source before December 1, 2009, must notify the Department in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the specified ground water source and begin compliance monitoring in accordance with R.61-58.16.F(2)(c) by December 1, 2009. Notification to the Department must include engineering, operational, or other information that the Department requests to evaluate the submission. If the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source, the system must conduct ground water source monitoring as required under R.61-58.16.E.

(b) New ground water sources. A ground water system that places a ground water source in service after November 30, 2009, that is not required to meet the source water monitoring requirements of R.61-58.16 because the system provides at least 4-log treatment of viruses (using inactivation, removal, or a



Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source must comply with all of the requirements of R.61-58.16.F(2)(b)(i) to (iii).

(i) The system must notify the Department in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a Department- approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source. Notification to the Department must include engineering, operational, or other information that the Department requests to evaluate the submission.

(ii) The system must conduct compliance monitoring under R.61- 58.16.F(2)(c) within 30 days of placing the source in service.

(iii) The system must conduct ground water source monitoring under R.61-58.16.E if the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(c) Monitoring requirements. A ground water system subject to the requirements of R.61-58.16.F(1), R.61-58.16.F(2)(a), or R.61-58.16.F(2)(b) must monitor the effectiveness and reliability of treatment for that ground water source before or at the first customer as follows:

(i) Chemical disinfection

(A) A ground water system that serves greater than 3,300 people must continuously monitor the residual disinfectant concentration using analytical methods specified in 40 CFR 141.74(a)(2) at a location approved by the Department and must record the lowest residual disinfectant concentration each day that the water from the ground water source is served to the public. The ground water system must maintain the Department determined residual disinfectant concentration every day the ground water system serves the water from the ground water source to the public. If there is a failure in the continuous monitoring equipment, the ground water system must conduct grab sampling every four hours until the continuous monitoring equipment is returned to service. The system must resume continuous residual disinfectant monitoring within 14 days.

(B) A ground water system that serves 3,300 or fewer people must monitor the residual disinfectant concentration using analytical methods specified in 40 CFR 141.74(a)(2) at a location approved by the Department and record the residual disinfection concentration each day that the water from the ground water source is served to the public. The ground water system must maintain the Department-determined residual disinfectant concentration every day the ground water system serves water from the ground water source to the public. The ground water system must take a daily grab sample during the hour of peak flow or at another time specified by the Department. If any daily grab sample measurement falls below the Department-determined residual disinfectant concentration, the ground water system must take follow up samples every four hours until the residual disinfectant concentration is restored to the Department-determined level. Alternatively, a ground water system that serves 3,300 or fewer people may monitor continuously and meet the requirements of R.61-58.16.F.(2)(c)(i)(A).

(ii) Membrane filtration. A ground water system that uses membrane filtration to meet the requirements of R.61-58.16 must monitor the membrane filtration process in accordance with all Department-specified monitoring requirements and must operate the membrane filtration in accordance with all Department-specified compliance requirements. A ground water system that uses membrane filtration is in compliance with the requirement to achieve at least 4-log removal of viruses when the following conditions are met:

(A) The membrane has an absolute molecular weight cut-off or an alternate parameter that describes the exclusion characteristics of the membrane that can reliably achieve at least 4-log removal of viruses.

(B) The membrane process is operated in accordance with Department-specified compliance requirements.

(C) The integrity of the membrane is intact.

(iii) Alternative treatment. A ground water system that uses a Department- approved alternative treatment to meet the requirements of R.61-58.16 by providing at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer must:

(A) Monitor the alternative treatment in accordance with all Department-specified monitoring requirements.

(B) Operate the alternative treatment in accordance with all compliance requirements that the Department determines to be necessary to achieve at least 4-log treatment of viruses.

(3) A ground water system may discontinue 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source if the Department determines and documents in writing that 4-log treatment of viruses is no longer necessary for that ground water source. A system that discontinues 4-log treatment of viruses is subject to the source water monitoring and analytical methods requirements of R.61-58.16.E.

(4) Failure to meet the monitoring requirements of R.61-58.16.F(2) is a monitoring violation and requires the ground water system to provide public notification under R.61-58.6.E(4).

#### **G. Treatment technique violations for ground water systems.**

(1) A ground water system with a significant deficiency is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Department) of receiving written notice from the Department of the significant deficiency, the system:

(a) Does not complete corrective action in accordance with any applicable Department plan review processes or other Department guidance and direction, including Department specified interim actions and measures, or

(b) Is not in compliance with a Department-approved corrective action plan and schedule.

(2) Unless the Department invalidates a fecal indicator positive ground water source sample under R.61-58.16.E(4), a ground water system is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Department) of meeting the conditions of R.61-58.16.F(1)(a) or R.61-58.16.F(1)(b), the system:

(a) Does not complete corrective action in accordance with any applicable Department plan review processes or other Department guidance and direction, including Department-specified interim measures, or

(b) Is not in compliance with a Department-approved corrective action plan and schedule.

(3) A ground water system subject to the requirements of R.61-58.16.F(2)(c) that fails to maintain at least 4-log treatment of viruses (using inactivation, removal, or a Department-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source is in violation of the treatment technique requirement if the failure is not corrected within four hours of determining the system is not maintaining at least 4-log treatment of viruses before or at the first customer.

(4) Ground water systems must give public notification under R.61-58.6.E(3) for the treatment technique violations specified in R.61-58.16.G(1), G(2), and G(3).

## **H. Reporting and recordkeeping for ground water systems.**

(1) Reporting. In addition to the requirements of R.61-58.6.B, a ground water system regulated under R.61-58.16 must provide the following information to the Department:

(a) A ground water system conducting compliance monitoring under R.61-58.16.F(2) must notify the Department any time the system fails to meet any Department-specified requirements including, but not limited to, minimum residual disinfectant concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within four hours. The ground water system must notify the Department as soon as possible, but in no case later than the end of the next business day.

(b) After completing any corrective action under R.61-58.16.F(1), a ground water system must notify the Department within 30 days of completion of the corrective action.

(c) If a ground water system subject to the requirements of R.61-58.16.E(1) does not conduct source water monitoring under R.61-58.16.E(1)(e)(ii), the system must provide documentation to the Department within 30 days of the total coliform positive sample that it met the Department criteria.

(2) Recordkeeping. In addition to the requirements of R.61-58.6.D, a ground water system regulated under R.61-58.16 must maintain the following information in its records:

(a) Documentation of corrective actions shall be kept for a period of not less than ten years.

(b) Documentation of notice to the public as required under R.61-58.16.F(1)(g) shall be kept for a period of not less than three years.

(c) Records of decisions under R.61-58.16.E(1)(e)(ii) and records of invalidation of fecal indicator positive ground water source samples under R.61-58.16.E(4) shall be kept for a period of not less than five years.

(d) For consecutive systems, documentation of notification to the wholesale system(s) of total coliform-positive samples that are not invalidated under R.61-58.5.G(3) until April 1, 2016, or under R.61-58.17.D beginning April 1, 2016, shall be kept for a period of not less than five years.

(e) For systems, including wholesale systems, that are required to perform compliance monitoring under R.61-58.16.F(2):

(i) Records of the Department-specified minimum disinfectant residual shall be kept for a period of not less than ten years.

(ii) Records of the lowest daily residual disinfectant concentration and records of the date and duration of any failure to maintain the Department- specified minimum residual disinfectant concentration for a period of more than four hours shall be kept for a period of not less than five years.

(iii) Records of Department-specified compliance requirements for membrane filtration and of parameters specified by the Department for Department-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than four hours shall be kept for a period of not less than five years.