

3745-9-08 **Well disinfection.**

- (A) A public water system well shall be disinfected at the time of completion after construction, installation, development, alteration, or repair, and before supplying water for human consumption.
- (B) The standard "AWWA C654-03, Disinfection of Wells," shall be used as a guide except for the topics presented in sections 4.2, 4.5, and 5 that are otherwise specified in paragraphs (C), (D) and (E) of this rule.
- (C) These disinfection procedures shall apply.
  - (1) All loose debris, sediment, mineral encrustation and bacterial slime shall be removed from the well prior to disinfection.
  - (2) Disinfectant shall be slowly poured into the well by wetting the inside casing circumference, drop pipe, and electrical cable.
  - (3) Disinfectant concentration in the water column shall be initially at least one hundred milligrams per liter chlorine. A public water system may use an alternative disinfectant concentration following consultation with the district office staff of the district in which the public water system is located, provided the disinfection procedure will ensure complete disinfection and includes:
    - (a) A mechanical cleaning of the well casing to remove loose debris, sediment, mineral encrustation and bacterial slime before disinfection;
    - (b) Monitoring of the pH and chlorine residual; and
    - (c) Maintaining at least fifty milligrams per liter free chlorine residual throughout the water column.
  - (4) Water in the well shall be agitated or surged to ensure even dispersal of the disinfectant throughout the entire water column.
  - (5) Disinfectant contact time shall be at least eight hours.
  - (6) Disinfectant shall be thoroughly flushed or dissipated from the well before supplying water for human consumption.
  - (7) When calcium hypochlorite is used for disinfection, the tablets or granules shall be completely dissolved in water prior to placement into the well. Sodium hypochlorite solution shall be used within the manufacturer's posted expiration date. Sodium hypochlorite solution with fragrance additives shall not be used for disinfection.
  - (8) With prior consultation with the district office, buffering chemical that has standard ANSI/NSF 60 certification may be used to enhance disinfection efficacy. The director may require submission of chemical disinfection procedures with specifications for the method, equipment, chemicals, and

testing for residual chemicals.

- (9) Disinfectant shall have ANSI/NSF 60 certification.
- (D) After disinfection, a well shall be flushed and total chlorine undetectable for a minimum of fifteen minutes before sampling. The well may be placed in service when two consecutive samples collected from the well at least thirty minutes apart are total coliform-negative. Microbiological and total chlorine samples shall be analyzed in accordance with Chapter 3745-89 and rule 3745-81-27 of the Administrative Code.
- (E) If a sample is reported positive for total coliforms, a system must:
- (1) Continue to flush the well and collect samples to achieve compliance with paragraph (D) of this rule, or
  - (2) Repeat the well chlorination procedures as described in paragraph (C) of this rule if necessary to achieve compliance with paragraph (D) of this rule.
- (F) A system with a well unable to meet the requirement of paragraph (D) of this rule after the second chlorination must consult with the director for corrective action which may include compliance with paragraph (B) of rule 3745-81-42 of the Administrative Code.

[Comment: "Standard ANSI/NSF 60, Drinking Water Treatment Chemicals - Health Effects, December 11, 2009, Document Number NSF/ANSI 60-2009a." This rule incorporates this standard or specification by reference. At the effective date of this rule, a copy may be obtained from "NSF International, 789 N Dixboro Road, PO Box 130140, Ann Arbor, MI 48113-0140," (734)769-8010, [www.nsf.org](http://www.nsf.org). This document is available for review at "Ohio EPA, Lazarus Place Government Center, 50 W. Town Street, Suite 700, Columbus, OH, 43215-3425."]

[Comment: "Standard AWWA C654-03, Disinfection of Wells," effective date November 1, 2003, catalog number 43654. This rule incorporates this standard or specification by reference. At the effective date of this rule, a copy may be obtained from "AWWA Bookstore, 666 W. Quincy Avenue, Denver, CO, 80235-3098," (303)795-2114, [www.awwa.org](http://www.awwa.org). This document is available for review at "Ohio EPA, Lazarus Government Center, 50 W. Town Street, Suite 700, Columbus, OH 43215-3425."]

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