

## CHAPTER 62-04-07 WATER SUPPLY AND DISTRIBUTION

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### **62-04-07-01. Quality of water supply**

. Only potable water shall be accessible to plumbing fixtures supplying water for drinking, bathing, culinary use, or the processing of food, medical, or pharmaceutical products.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

### **62-04-07-02. Identification of potable nonpotable water.**

In all buildings where dual water distribution systems, one potable water and the other nonpotable water, are installed each system shall be identified either by color marking or metal tags as required in ANSI A 13.1-1959 or other appropriate method as may be approved by the administrative authority.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

### **62-04-07-03. Water required.**

Every building equipped with plumbing fixtures and used for human occupancy or habitation shall be provided with a potable supply of cold water in the amounts and at the pressures specified in this chapter. For residences or buildings in which people are employed, hot water shall be provided.

Every building shall have a private and individual connection to the public water supply system or a private water supply approved by the administrative authority of this article. Exception to this section shall be approved in writing by the administrative authority.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

### **62-04-07-04. Protection of potable water supply.**

1. **General.** A potable water supply system shall be designed, installed, and maintained in such manner as to prevent contamination from nonpotable liquids, solids, or gases from being introduced into the potable water supply through cross-connections or any other piping connections to the system.
2. **Interconnections.** Interconnection between two or more public water supplies shall be permitted only with the approval of the health authority having jurisdiction.
3. **Cross-connection control.** Cross-connections are prohibited except when and where, as approved by the authority having jurisdiction, suitable protective devices are installed, tested, and maintained to insure proper operation on a continuing basis.

4. **Individual water supplies.** Cross-connections between an individual water supply and a potable public supply shall not be made unless specifically approved by the authority having jurisdiction.
5. **Toxic materials.** Piping conveying potable water shall be constructed of nontoxic material.
6. **Chemicals and other substances.** No chemicals or other substances that could produce either toxic conditions, taste, odor, or discoloration in a potable water system shall be introduced into or used in such systems.
7. **Painting of water tanks.** The interior surface of a potable water tank shall not be lined, painted, or repaired with any material which will affect either the taste, odor, color, or potability of the water supply when the tank is placed in or returned to service.
8. **Used piping.** Piping which has been used for any other purpose than conveying potable water shall not be used for conveying potable water.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

#### **62-04-07-05. Water pumping and storage equipment.**

1. **Pumps and other appliances.** Water pumps, filters, softeners, tanks, and all other appliances and devices used to handle or treat potable water shall be protected against contamination.
2. **Prohibited location of potable supply tanks.** Potable water gravity tanks or manholes of potable water pressure tanks shall not be located directly under any soil or waste piping.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

#### **62-04-07-06. Disinfection of potable water system.**

New or repaired potable water systems shall be disinfected prior to use whenever required by the authority having jurisdiction. The method to be followed shall be that prescribed by the health authority or, in case no method is prescribed by the health authority, the following:

1. The pipe system shall be flushed with clean, potable water until no dirty water appears at the points of outlet.
2. The system or part thereof shall be filled with a water-chlorine solution containing at least fifty parts per million of chlorine and the system or part thereof shall be valved off and allowed to stand for twenty-four hours.
3. The system or part thereof shall be filled with a water-chlorine solution containing at least two hundred parts per million of chlorine and allowed to stand for three hours.
4. Following the allowed standing time the system shall be flushed with clean potable water until no chlorine remains in the water coming from the system.
5. The procedure shall be repeated if it is shown by a bacteriological examination made by the authority that contamination still persists in the system.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

#### **62-04-07-07. Water supply system materials.**

1. **Water distribution system pipe.** Water distribution system pipe shall be of brass pipe, copper tube, or copper pipe, galvanized wrought iron pipe, galvanized open-hearth iron pipe, or galvanized steel pipe. Copper tube when used underground shall not be less than type L and when used above ground not less than type M.
2. **Fittings.** The materials of which water supply system pipe fittings are made shall conform to the type of piping materials used in the water supply system. The fittings shall have no ledges, shoulders, or reductions which can retard or obstruct flow in the piping.
3. **Material strength.** All materials used for water piping must be suitable for use with the maximum temperature and pressure and velocities that may be encountered in the installation, including temporary increases and surges.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

#### **62-04-07-08. Water supply control valves.**

1. **Valves in dwelling units.** All water closets and kitchen sinks shall have individual fixture valves installed. Valves must also be installed for each bath, shower, powder room, or fixture group. A group of fixtures means two or more fixtures adjacent to each other in the same family unit, but not necessarily in the same room. In a one family unit, one or two bathrooms back to back or one over the other may be considered a group. However, in each dwelling unit with two or more bathroom groups not adjacent to each other, one or more control valves or individual fixture valves shall be provided so that each group may be isolated from the other.

In more than single family dwelling units, one or more control valves shall be provided so that the water to any plumbing fixture or group of fixtures in any one dwelling unit may be shut off without stopping flow of water to fixtures in other dwelling units. These valves shall be accessible inside the building unit controlled.

2. **Riser valves.** Except in single family dwellings a valve shall be installed at the foot of each water supply riser. In multistory buildings a valve shall be installed at the top of each water supply downfeed pipe and also at the base where required to isolate this riser for servicing.
3. **Individual fixture valves.** In occupied buildings other than dwellings, the water service line to each fixture or other piece of equipment shall be provided with a valve or fixture stop to shut off the water to the fixture or to the room in which it is located. Except in single family dwellings, sill cocks and wall hydrants shall be separately controlled by a valve inside the building.
4. **Valve to be accessible.** All water supply control valves shall be placed so as to be accessible for service and maintenance.
5. **Control valve design.** Except to single fixtures, control valves on all water lines shall when fully opened have a cross sectional area not less than eighty-five percent of the cross sectional area of the line in which they are installed.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04

#### **62-04-07-09. Water supply distribution.**

1. **Supply demand.** The supply demand in gallons per minute in the building water distributing system shall be determined on the basis of the load in terms of supply fixture units and of the

relationship between load and supply demand as shown in the tables contained in subsection 2 of section 62-03-10-13.

2. **Size of fixture supply.** The minimum sizes of a fixture supply pipe shall be as shown in the table contained in subsection 2 of section 62-03-10-14. The fixture supply pipe shall be extended to within at least thirty inches [76.2 centimeters] of the point of connection to the fixture, and be within the same area and physical space as the point of connection to the fixture. Not more than two fixtures shall be supplied by a one-half inch [12.7 millimeter] pipe. All future fixture connections must be considered in sizing pipe at the time of initial installation.
3. **Existing installations.** Pipe sizes in existing installations may be increased but shall not be decreased.
4. **Minimum size inlet and outlet.** The minimum size inlet and outlet piping to water softeners and water filters must be not less than the distribution pipe served. Control valves must be installed in the inlet and outlet lines. A bypass valve must be installed between the inlet and outlet line valves.

**History:** Amended effective January 1, 1992.

**General Authority:** NDCC 43-18.1-03

**Law Implemented:** NDCC 43-18.1-04