

Wisconsin Department of Commerce SPS 382.41

SPS 382.41 Cross connection control.

(1) Scope. The provisions of this section set forth the requirements for the protection of water within water supply systems when and where there is the possibility of contamination due to cross connections or backflow conditions.

Note: The Department of Natural Resources governs the operation and design of community water systems and under s. NR 811.09 requires the supplier of water to develop and implement a comprehensive cross connection control program.

(2) Materials.

(a) All devices, assemblies and mechanisms intended to protect water supplies relative to cross connection or backflow shall be of a type recognized and approved in accordance with ch. SPS 384 and as described in sub. (4).

(b) All methods including barometric loops and air gaps intended to protect water supplies relative to cross connection or backflow shall be constructed of materials suitable for water supply systems in accordance with ch. SPS 384.

(3) General requirements. Water supply systems and the connection of each plumbing fixture, piece of equipment, appliance or nonpotable water piping system shall be designed, installed and maintained in such a manner to prevent the contamination of water supplies by means of cross connections.

(a) Types of cross connection control.

1. Water supply systems shall be protected against contamination due to cross connections or backflow conditions by one of the methods or devices specified in Table 382.41-1 depending upon the situation or Table 382.41-2 depending upon the specific application or use, and the limitations specified in sub. (4).

2. For the situations described in par. (b) 3., cross connection control shall be provided as part of the fixture fitting outlet or in the water supply piping for the fixture fitting outlet.

(b) Classifications. For the purposes of this section:

1. The designation of a high hazard or low hazard situation shall be determined on the basis of how a toxic or nontoxic solution is intended or recommended by the manufacturer of the solution to interface with the potable water supply system.

2.

a. A continuous pressure situation shall be considered to exist when a pressure greater than atmospheric within the water supply system exists for more than 12 continuous hours.

b. A noncontinuous pressure situation shall be considered to exist if the conditions in subd. 2. a. do not occur.

3. A high hazard cross connection situation shall be considered to exist for a connection of the water supply system to:

- a. Any part of the drain system; and
 - b. Any other piping system conveying water from nonpotable sources, including but not limited to lakes, rivers, streams or creeks.
4. Except as provided in subd. 5., a high hazard cross connection situation shall be considered to exist at:
- a. A water supply hose bibb, faucet, wall hydrant, sill cock or other outlet which terminates with hose threads allowing a hose to be attached;
 - b. A water supply faucet, wall hydrant or other outlet which terminates with a serrated nipple allowing a hose to be attached;
 - c. A water supply faucet, hydrant or outlet serving a sink used for building maintenance in a public building;
 - d. A chemical pot-feeder or automatic chemical feeder is installed to serve a boiler, cooling tower or chilled water system; and
 - e. In the water supply piping connecting to the outlet of a fire hydrant for any purpose other than fire suppression.
5. A cross connection shall not be considered to exist at the hose threaded outlet installed for the sole purpose of:
- a. Draining a water supply system or any portion thereof;
 - b. Obtaining water quality samples of the water supply system or any portion thereof; or
 - c. Connecting individual residential automatic clothes washers.

6.

- a. A high hazard situation shall be considered to exist for the connection of 2 water supply systems one supplied by a public water supply and the other system supplied by a private well.

Note: The interconnection of a public water supply system and another source of water is addressed in s. NR 811.09 and must be approved by the Department of Natural Resources.

- b. Except as provided in subd. 7., a low hazard situation shall be considered to exist for the connection of a piping system, including but not limited to automatic fire sprinkler systems, standpipe systems, and processing purposes, which provides potable water for nonrequired potable water uses.