

SANITARY & IMPROVEMENT DISTRICT NO. 5
BACKFLOW PREVENTION RESOLUTION
ADOPTED APRIL 20, 1995

WHEREAS, Sanitary and Improvement District No. 5 of Cass County, Nebraska, is a duly organized and existing Sanitary and Improvement District within the State of Nebraska created pursuant to the provisions of Sections 31-727 through 31-770 Neb. Rev. Stat. 1943, as amended;

WHEREAS, under Section 31-732 Neb. Rev. Stat. 1943, as amended, said District through its Board of Trustees is authorized to exercise as a corporation all powers necessary to carry out the purposes of said District, including under Section 31-733 Neb. Rev. Stat. 1943, as amended, having authority to pass all necessary orders, rules, and regulations for the necessary conduct of its business and to carry into effect the objects for which such District was formed;

NOW, THEREFORE, BE IT RESOLVED AND ORDAINED by the Board of Trustees of Sanitary and Improvement District No. 5 of Cass County, Nebraska, as follows:

A Resolution to add provisions for a program preventing backflow and backsiphonage into the Public Water Supply System, and the elimination of cross connection of structural arrangements which could result in backflow and backsiphonage into the Public Water Supply System; and to declare an effective date.

Section 1. STATEMENT OF POLICY.

A. Purpose: The purpose of this resolution is:

1. To protect the public potable water supply of the SID No. 5 water system from contamination or pollution by containing within the consumer's internal distribution system or private water system contaminants or pollutants which could backflow through the service connection into the public potable water supply.

2. To promote the elimination, containment, isolation, or control of existing cross connections, actual or potential, between the public or consumer's potable water systems and non-potable water systems, plumbing fixtures and industrial-process systems.

3. To provide for the maintenance of a continuing program of cross connection control which will systematically and effectively prevent the contamination or pollution of all potable water systems.

B. Application: This resolution shall apply to all premises serviced by the public potable water system within SID No. 5.

C. Policy: This resolution will be reasonably interpreted. It is the District's intent to recognize the varying degrees of hazard and to apply the principle that the degree of protection shall be commensurate with the degree of hazard.

The District shall be primarily responsible for protection of the public potable water distribution system from contamination or pollution due to backflow or contaminants or pollutants through the water service connection. The cooperation of all consumers is required to implement and maintain the program to control cross connections. The consumer is responsible for preventing contamination of the water system within the consumer's own premises.

Section 2. DEFINITIONS:

A. The following definitions shall apply in the interpretation and enforcement of this resolution.

1. "Air gap separation" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the overflow level rim of the receptacle.

2. "Approved tester" means a person qualified to make inspections; to test and repair backflow retention/cross connection control devices; and who is approved by the District.

3. "Authorized representation" means any person designated by the District to administer this cross connection control resolution.

4. "Auxiliary water supply" means any water source system, other than the public water supply, that may be available in the building or premises.

5. "Backflow" means the flow other than the intended direction of flow, or any foreign liquids, gases, or substances into the distribution system of a public water supply.

6. "Backsiphonage" means the flowing back of water, or other foreign liquids, gases, or substances into the water distribution system due to negative pressure in the piping of the water distribution system.

7. "Backflow prevention device" means any device, method, or type of construction intended to prevent backflow into a potable water system provided backflow preventers have been tested and approved by a reputable testing laboratory.

8. "Consumer" means the owner or person in control of any premises supplied by or in any manner connected to a public water system.

9. "Containment" means protection of the public water supply by installing a cross connection control device or air gap separation on the main service line to a facility, or as an installation within equipment handling potentially hazardous materials.

10. "Contamination" means an impairment of the quality of the water by sewage, process fluids, or other wastes to a degree which could create the actual hazard to the public health through poisoning or through spread of disease by exposure.

11. "Cross connection" means any physical link, between a potable water supply and any other substance, fluid, or source, which makes possible contamination of the potable water supply due to the reversal of flow of the water in the piping or distribution system.

12. "Degree of Hazard" means an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

a. Hazard-Health- any condition, device, or practice in the water supply system and its operation which could create or may create a danger to the health and well-being of the water consumer.

b. Hazard-Plumbing- a plumbing type cross connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air gap separation or backflow prevention device.

c. Hazard-Pollutional- an actual or potential threat to the physical properties of the water system or to the consumer's potable water system but which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be dangerous to health.

d. Hazard-System- an actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system, or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system.

13. "Isolation" means protection of a facility service line by installing a cross connection control device or air gap separation on an individual fixture, appurtenance or system.

14. "Pollution" means the presence of any foreign substance (organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

15. "Public Potable Water System" means any publicly or privately owned water system supplying water to the general public which is satisfactory for drinking, culinary, and domestic purposes and meets the requirements of the Nebraska Department of Health and the Drinking Waters Standards.

16. "Service Connection" means the terminal end of a service line from the public water system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

17. "District" or "SID No. 5" means Sanitary and Improvement District No. 5 of Cass County, Nebraska.

Section 3. CROSS CONNECTIONS PROHIBITED.

- A. No water service connection shall be installed or maintained to any premises where actual or potential cross connections to the public water supply system may exist unless such actual or potential cross connections are abated or controlled to the satisfaction of the District or its authorized representative.
- B. No connection shall be installed or maintained whereby an auxiliary water supply may enter a public water supply system.
- C. No water service connection shall be installed or maintained to any premises in which the plumbing system, facilities, and fixtures have not been constructed and installed using acceptable plumbing practices considered by the District as necessary for the protection of health and safety and in accordance with the National Plumbing Code.

Section 4. SURVEY AND INVESTIGATIONS.

- A. The consumer's premises shall be open at all reasonable times to the District or its authorized representative, to conduct surveys and investigations of water use practices within the consumer's premises to determine whether there are actual or potential cross connections in the consumer's water system.
- B. On request by the District or its authorized representative, the consumer shall furnish requested information on water use practices within his premises and in the consumer's water system.
- C. On request by the District or its authorized representative, the consumer shall conduct periodic surveys of water use practices on the premises of the consumer's water system to determine whether there are actual or potential cross connections. The consumer shall provide the survey results to the District or its authorized representative.

Section 5. WHERE PROTECTION IS REQUIRED.

- A. An approved backflow prevention device shall be installed between the service connection and the point of potential backflow into a consumer's water supply system when in the judgment of the District or authorized representative a health, plumbing, pollution or system hazard exists.
- B. An approved air gap separation or reduced pressure principle backflow prevention device shall be installed at the service connection or within any premises where, in the judgment of the District, the nature and extent of activities on the premises, or the materials used in connection with the activities, or materials stored on the premises, would present an immediate and dangerous hazard to health should a cross connection occur, even though such cross connection may not exist at the time the backflow prevention device is required to be installed. This includes but is not limited to the following situations:
 - 1. Premises having an auxiliary water supply.

2. Premises having internal cross connections that are not correctable, or intricate plumbing arrangements which make it impractical to ascertain whether or not cross connections exist.

3. Premises where entry is restricted so that inspections for cross connections cannot be made with sufficient frequency or at sufficiently short notice to assure the cross connections do not exist.

4. Premises having a repeated history of cross connections being established or reestablished.

5. Premises, which due to the nature of the enterprise therein, are subject to recurring modification or expansion.

6. Premises on which any substance is handled under pressure so as to permit entry into the public water supply system, or where a cross connection could reasonably be expected to occur. This shall include the handling of process waters and cooling waters.

7. Premises where toxic or hazardous materials are handled.

C. The following types of facilities fall into one or more of the categories or premises where an approved air gap separation or reduced pressure principle backflow prevention device may be required by the District or its authorized representative or the Nebraska Department of Health to protect the public water supply and must be installed at these facilities unless all hazardous or potentially hazardous conditions have been eliminated or corrected by other methods to the satisfaction of the District or its authorized representative and the Nebraska Department of Health:

1. Agricultural chemical facilities.

2. Auxiliary water systems, wells.

3. Premises having water recirculating systems as used for boilers or cooling systems.

4. Bulk water loading facilities.

5. Car washes, automobile servicing facilities.

6. Chill water systems.

7. Feedlots.

8. Fire protection systems.

9. Hazardous waste storage and disposal sites.

10. Irrigation and lawn sprinkler systems.

11. Laundries and dry cleaning.
12. Petroleum processing or storage plants.
13. Beauty salons.
14. Schools.
15. Sewage pumping stations.
16. Nursing home.
17. Dental office.
18. Mortuary.
19. Hospital.
20. Doctor's office.
21. Livestock watering.
22. Other commercial or industrial facilities which may constitute potential cross-connection.

D. Fertilizer injection systems which fertilize lawns through in-ground sprinkler systems connected to the public potable water supply of SID No. 5 are hereby prohibited.

Paragraph D of Section 6 was adopted July 16, 2001 by the SID board.

Section 6. TYPE OF PROTECTION REQUIRED.

A. The type of protection required by this resolution shall depend on the degree of hazard which exists, as follows:

1. An approved air gap separation shall be installed where the potable water system may be contaminated with substances that could cause a severe health hazard.

2. An approved air gap separation or an approved reduced pressure principle backflow prevention device shall be installed where the public potable water system may be contaminated with a substance that could cause a health hazard.

3. An approved air gap separation or an approved reduced pressure principle backflow prevention device or an approved double check valve assembly shall be installed where the public potable water system may be polluted with substances that could cause a pollutional hazard not dangerous to health.

Section 7. BACKFLOW PREVENTION DEVICES.

Any backflow prevention device required by this resolution shall be of a model or construction approved by the District or its authorized representative and the Nebraska Department of Health.

1. Air gap separation to be approved shall be at twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one inch.

2. Double check valve assemblies or reduced pressure principle backflow prevention devices shall appear on the current list of approved backflow prevention devices established by the Nebraska Department of Health, unless the device was installed at the time this resolution was passed and complies with required inspection and maintenance.

Section 8. INSTALLATION.

A. Backflow prevention devices required by this policy shall be installed at a location in a manner approved by the District or its authorized agent. All devices shall be installed at the expense of the consumer, unless the District or its authorized representative agrees otherwise.

B. Backflow prevention devices installed at the service connection shall be located on the consumer's side of the water meter (if one is installed) or the corporation stop, as close to the meter or corporation stop as is reasonably practical, and prior to any other connection.

C. Backflow prevention devices shall be conveniently accessible for maintenance and testing, protected from freezing, and where no part of the device will be submerged or subject to flooding by any fluid. All devices shall be installed according to manufacturer's recommendations.

Section 9. TESTING.

Backflow and backsiphonage prevention devices designed to be tested shall be tested for proper operation annually or when necessary in the opinion of the District or its authorized representative. Actual testing shall be at the expense of the consumer, unless the District or its authorized representative agree otherwise. Any required maintenance or repairs shall be at the expense of the consumer and subject to the approval of the District. If testing shall require entry into the premises, the District's authorized representative shall give notice setting forth a proposed date and time to the consumer at least ten (10) working days in advance by First Class mail. If the consumer cannot make the premises available for inspection on that date and time, the consumer shall contact the District's authorized representative to arrange another date and time.

Section 10. AUTHORIZED REPRESENTATIVE: AUTHORITY.

The authorized representative shall have the authority to issue any order consistent with the provisions of this resolution in order to protect the public health and safety. Any order of the authorized representative shall be in writing and shall clearly state the nature of the order,

compliance requirements, and set a reasonable date by which compliance must be met. All orders will be mailed to the consumer by First Class mail.

Section 11. APPEALS.

In the event that is claimed that the true intent and meaning of this resolution has been wrongfully interpreted by the authorized representative; that the time allowed for compliance with any order of the authorized representative is too short; or that conditions peculiar to the particular premise make it unreasonably difficult to meet the literal requirements prescribed by this resolution, the owner may file a written notice of appeal with the Clerk of the Board of Trustees within ten (10) days after the decision or order of the authorized representative has been made. The Board of Trustees shall hear all appeals and shall have the power and authority, when appealed to, to modify the decision or order of the authorized representative. Such a decision shall be final subject only to any remedy which the aggrieved party may have at law or equity.

Appeals shall be in writing and shall state the reason for the appeal.

Section 12. VIOLATION AND PENALTIES.

A. The District or its authorized representative shall deny or discontinue the water service to any premises or any consumer wherein any backflow prevention device required by this policy is not installed, tested and maintained in a manner acceptable to the District or its authorized representative, or if it is found that the backflow prevention device has been removed or bypassed, or if an unprotected cross connection exists.

B. Water service to such premises shall not be restored until the consumer is in compliance with this cross connection resolution to the satisfaction of the District or its authorized representative.

Section 13. LIABILITY CLAIMS.

The authorized representative shall be relieved from personal liability. The District shall hold harmless the authorized representative when acting in good faith and without malice, from all personal liability for any damage that may occur to any person or property as a result of any act required or authorized by this title, or by reason of any act or omission of the authorized representative in the discharge of his duties hereunder. Any suit brought carrying out the provision of the title shall be defended by the District, or the District's insurance carrier, if any, through final determination of such proceeding.

Section 14. REPEAL OF RESOLUTIONS AND EFFECTIVE DATE.

That any other resolution passed and approved prior to the passage, approval and publication or posting of this resolution and in conflict with its provision, is hereby repealed. This resolution shall take effect and be in full force from and after its passage, approval, and publication or posting as required by law.