

ORDINANCE # 00-01

AN ORDINANCE ESTABLISHING A SYSTEM OF CROSS CONNECTION CONTROL BETWEEN THE PUBLIC WATER SYSTEM AND PRIVATE PREMISES TO PREVENT CONTAMINATION OF THE PUBLIC WATER SYSTEM.

**NORTH KOOTENAI WATER DISTRICT
KOOTENAI COUNTY, IDAHO**

Be it ordained by the Board of Directors of the North Kootenai Water District, Kootenai County, Idaho, as follows:

WHEREAS, the State of Idaho requires that each water system in the State of Idaho establish a system of control to prevent the contamination of the public water system by private premises connected to the public water system now and in the future; and

WHEREAS, the State of Idaho, Division of Environmental Quality, has notified North Kootenai Water District that a cross connection control plan must be adopted for the District by April 30, 2000, now, therefore, be it further ordained by the Board of Directors of the North Kootenai Water District as follows:

Purpose:

The purpose of this Ordinance, in conjunction with IDAPA 16.01.08 Idaho Rules for Public Drinking Water Systems, and section 1003 of the Uniform Plumbing Code, is to protect the public health by the control and prevention of actual and potential cross-connections by requiring the proper installation and safeguarding of service lines leading to premises where cross-connections exist or are likely to occur, by periodic inspection and by regulating plumbing within premises or to the public water system itself. An additional purpose is 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 delivered by the water systems of the District.

Applicability:

This Ordinance applies throughout the District to every premises and the owners and occupants thereof served by the water system of the District. It applies to all systems installed prior to or after its enactment. Every owner and occupant of any premises covered by the Ordinance is responsible for compliance with its terms and shall be

strictly liable for all damage incurred as a result of failure to comply with the express terms and provisions contained herein.

Enforcement:

The District Manager will administer the provisions of this Ordinance. Any deviation, modification, or changes from approved standards must be approved by the District Manager.

Definitions:

AIR GAP (AG) SEPARATION: The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to tank, plumbing fixture, or other device and the flood level rim of the receptacle, and must be at least double the diameter of the supply pipe measured vertically above the flood level rim of the vessel. In no case may the gap be less than one inch (1”).

AUXILIARY SUPPLY: Any water source or system other than the North Kootenai Water District water system that may be available in the building or on the premises.

BACKFLOW: The flow other than the intended direction of flow, of any foreign liquids, gases, or substances into the distribution of the public water system.

- A. **“Back Pressure”** means backflow caused by a pump, elevated tank, boiler, or other means that could create pressure within the system greater than the potable water supply system.
- B. **“Back Siphonage”** means a form of backflow due to a negative or sub-atmospheric pressure within the water system.

BACKFLOW PREVENTION ASSEMBLY: An assembly to counteract back pressures or prevent back siphonage.

CROSS-CONNECTION: Any physical arrangement whereby a public water system is connected, directly or indirectly, with any other nonpotable water system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains, or may contain, contaminated water, sewage, or other waste liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water system as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or change-over devices, or other temporary or permanent devices through which, or because of which, backflow may occur are considered to be cross-connections.

DOUBLE-CHECK VALVE ASSEMBLY (DCVA): An assembly composed of two (2) single, independently acting check valves, including resilient seated tightly closing shut-

off valves located at each end of the assembly and equipped with properly located resilient seated test cocks for testing the watertightness of each check valve.

PRESSURE VACUUM BREAKER BACKSIPHONAGE PREVENTION ASSEMBLY

(PVBA): An assembly containing an independently operating internally loaded check valve and an independently operating internally loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with properly located resilient seated test cocks and tightly closing resilient seated shut-off valves attached at each end of the assembly. This assembly is designed to protect against a backsiphonage condition only.

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY

(RPBA): An assembly incorporating two (2) or more check valves and an automatically operating differential relief valve located between the two (2) checks. Two (2) resilient seated shut-off valves, one located at each end of the assembly and equipped with properly located resilient seated test cocks for testing. The assembly must operate to maintain the pressure in the zone between the two (2) check valves, less than the pressure on the public water system side of the assembly. At cessation of normal flow, the pressure between the check valves must be less than the supply pressure. In case of leakage of either check valve the differential relief valve must operate to maintain the reduced pressure by discharging to the atmosphere. When the inlet pressure drops below two (2) pounds per square inch, the relief valve must open to the atmosphere thereby providing an atmospheric zone between the two (2) check valves.

Cross-Connections Prohibited:

- A. All cross-connections, whether or not they are controlled by automatic devices such as check valves or by hand-operated mechanisms such as gate valves or stop clock, are prohibited.
- B. Any reinjection of water by individual, commercial, or industrial uses, to the public water system is specifically prohibited. Water-to-water and water-to-air heat exchangers are considered a cross-connection because of health risks. Any modifications allowing reinjection are prohibited.
- C. Failure on the part of persons, firms, or corporations, to discontinue the use of all cross-connections and to physically separate cross-connections is sufficient cause for the immediate discontinuance of public water services to the premises.

Installation of Backflow Prevention Assemblies:

Backflow prevention assemblies shall be installed at the service connection or within any premises where in the judgment of the District Manager the nature and extent of activity 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 does not exist at the time the backflow prevention device is required to be installed. This includes:

- A. Premises having auxiliary water supply.
- B. Premises having internal cross-connections that are not correctable, or intricate plumbing arrangements that make it impractical to ascertain whether or not cross-connections exist.
- C. Premises where entry is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficient short notice to assure that cross-connections do not exist.
- D. Premises having a repeated history of cross-connections being established or reestablished.
- E. Premises on which any substance is handled under pressure so as to permit entry into the public water system, or where a cross-connection could reasonably be expected to occur. This includes the handling of process waters and cooling waters.
- F. Premises where materials of a toxic or hazardous nature are handled such that if back siphonage should occur, a serious health hazard may result.
- G. The following types of facilities require mandatory service protection, including but not limited to:
 - 1. Hospitals, mortuaries, clinics;
 - 2. Laboratories;
 - 3. Piers and docks;
 - 4. Sewage treatment plants;
 - 5. Food or beverage processing plants;
 - 6. Chemical plants using a water process;
 - 7. Metal plating industries;
 - 8. Petroleum processing or storage plants;
 - 9. Radioactive material processing plants or nuclear reactors;
 - 10. Car washes;
 - 11. Hot water and steam boilers for individual, commercial and industrial uses;
 - 12. Others specified by the District Manager

Plan Review:

All backflow prevention assemblies, which are required to be installed, shall be shown and specified on all required building and engineering plans. District approval of the

intended assembly installation is required prior to water service being provided by the District.

Types of Backflow Prevention Assemblies Required:

The type of prevention device required depends on the degree of hazard that exists:

- A. An air gap separation or reduced principle backflow prevention assembly shall be installed where the water supply may be contaminated by sewage, industrial waste of a toxic nature or other contaminant, which could cause a health or system hazard.
- B. In the case of a substance which may be objectionable but not hazardous to health, an air gap separation or a reduced pressure principle backflow prevention assembly, or a double-check valve assembly shall be installed.
- C. Lawn sprinkler systems, which are supplied by District water only, shall be required to have a double check valve backflow prevention assembly, or a pressure vacuum breaker assembly, or atmospheric vacuum breaker assembly depending on the design of the sprinkler system and potential risk to the potable water supply. Backflow prevention assemblies larger than one inch (1") will submit design and approval will be made by the District Manager. All backflow prevention assemblies shall be of a type approved by the Idaho Department of Health and Welfare, Division of Environmental Quality.

Location:

Backflow prevention assemblies required by this Ordinance must be installed at the meter on metered accounts, at the property line of the premises when meters are not used, or at a location designated by the District Manager so as to be readily accessible for maintenance and testing, where no part of the device will be submerged or hidden from proper inspection.

Installation:

Backflow prevention assemblies required by the Ordinance must be inspected and approved by the District Manager.

Acceptable Types:

Any protective device required by this Ordinance shall be a model approved by the District Manager. A double-check valve assembly or a reduced pressure principle backflow prevention assembly will be approved if it has successfully passed

performance tests of the University of Southern California, Foundation for Cross Connection Control and Hydraulic Research, or other testing laboratories satisfactory to the District Manager. Backflow prevention assemblies which are in service but are not listed shall be permitted to remain in service provided they:

- A. Were listed on the current Approved Cross Connection Control Assembly List at the time they were installed,
- B. Are properly maintained,
- C. Are commensurate with the degree of hazard, and
- D. Are tested and successfully pass the test annually.

When these assemblies are moved, or require more than minimum maintenance, they shall be replaced by an assembly that is on the current list of approved assemblies. To maintain their approval status all assemblies must be delivered to the job site and be installed with the shut-off valves #1 and #2 and test cocks which are supplied by the device manufacturer.

Approval of Assemblies;

The term "approved assembly" shall mean any backflow prevention assembly, which has satisfactorily completed laboratory and field test by an independent laboratory recognized by the Idaho Department of Health and Welfare, Division of Environmental Quality. A backflow device shall be of the correct type as required by the District and be selected from the State approved list.

Annual Inspection Required:

The reduced pressure principle backflow assembly and the double-check valve assembly must be inspected annually or more often when successive inspections indicate failure.

Testing and Maintenance of Assemblies:

Each backflow prevention assembly shall be tested to ensure that it functions properly:

- A. Upon installation.
- B. After repairs.
- C. After being relocated, moved, or reinstalled.

D. Annually.

The assembly owner shall be notified one month prior to the date for annual testing. It is then the assembly owner's responsibility to acquire the services of a certified tester to test the assembly and provide the District a copy of the test results. If the test indicates the assembly must be repaired, a record of the repair work and a report of a satisfactory final test must be sent to the District. The annual testing of backflow prevention assemblies must be done prior to any repair work or flushing of the relief valve, to properly reestablish it's operating status. Failure to test and maintain backflow prevention assemblies is grounds for the District to discontinue water service.

Termination of Services; Criminal Penalties; Civil Remedies:

The failure of the customer to cooperate in the installation, maintenance, test or inspection of backflow prevention assemblies required by this Ordinance is grounds for termination of water services to the premises. Reconnection of a service which has been disconnected from the North Kootenai Water District water system for noncompliance with this Ordinance shall be a misdemeanor. Each day of a violation shall be considered a separate offense. Each offense may be punishable by a fine of up to three hundred dollars (\$300.00) and/or one hundred eighty (180) days in jail. The Ordinance may also be enforced by appropriate civil action in a court of competent jurisdiction.

Repealer Clause:

All other Ordinances or resolutions of this District, or parts thereof, in so far as they are in conflict with this Ordinance, are repealed and rescinded.

Severability Clause:

If any section, paragraph, sentence, or provision hereof or the application thereof to any particular circumstance shall ever be held invalid or unenforceable, such holding shall not affect the remainder hereof, which shall continue in full force and effect and applicable to all circumstances in which it may validly apply.

Change by Resolution:

The District reserves the right to make changes by resolution at a regular meeting of the Board of Directors of the District.

Enforceability Clause:

The District shall enforce and seek remedies for breaches of the terms of this Ordinance, as provided by the Laws of the State of Idaho.

Effective Date:

This Ordinance shall be in full force and effective upon its publication according to law in the Coeur d'Alene Press, a newspaper of general circulation in the District, and hereby designated as the official newspaper for the publication of this Ordinance.

Passed and adopted this 27th day of April, 2000.

ATTEST:

Maimie L. Moore
DISTRICT SECRETARY

J. Dean Kauters (acting)
DISTRICT CHAIRMAN