

ORDINANCE NO. 91-5

AN ORDINANCE OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT
ESTABLISHING CONTROL OF CROSS-CONNECTIONS

BE IT ENACTED, by the Board of Directors of the GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT, El Dorado County, California, as follows:

Article 1. CROSS-CONNECTION CONTROL - GENERAL POLICY

Section 1.1 Purpose. The purpose of this Ordinance is:

To protect the public potable water supply of the Georgetown Divide Public Utility District from the possibility of contamination or pollution by isolating within the water user's internal distribution system(s) or its water user's private water system(s) such contaminants or pollutants which could backflow or back-siphon into the public water supply system; and

To promote the elimination or control of existing cross-connections, actual or potential, between its water user's in-plant potable water system(s) and non-potable water systems, plumbing fixtures and industrial piping systems; and

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 systems.

It is the intent of this Ordinance to recognize that there are varying degrees of hazard and to apply the principle that the degree of protection should be commensurate with the degree of hazard.

Section 1.2 Responsibility. The Georgetown Divide Public Utility District shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connection. If, in the judgment of said Georgetown Divide Public Utility District, an approved backflow prevention assembly is required at the Georgetown Divide Public Utility District's water service connection to any water user's premises, for the safety of the water system, the General Manager, or his authorized representative, shall give notice in writing to said water user to install an approved backflow prevention assembly at each service connection to his premises. The water user shall immediately install such approved assembly or assemblies at his own expense; and failure, refusal or inability on the part of the water user to install said assembly or assemblies immediately shall constitute a ground for discontinuing water service to the premises until such device or devices have been properly installed.

Article 2. DEFINITIONS

Section 2.1 Auxiliary Water Supply. Any water supply on or available to the premises other than the District's approved public potable water supply. These auxiliary waters may include water from another purveyor's public potable water supply or any natural source(s) such as a well, spring, river, stream, irrigation canals or systems, etc., or "used waters" or "industrial fluids." These waters may be polluted or contaminated or they may be objectionable and constitute an unacceptable water source

over which the District does not have sanitary control.

Section 2.2 Backflow. The reverse flow of water or other liquids, gases, mixtures or substances into the distributing pipes of the District's water supply system from any source or sources other than its intended source.

Section 2.3 Backflow Preventer. An approved backflow prevention assembly or means designed to prevent backflow.

- a. Air-Gap. 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 flow level rim of said vessel. An approved air-gap shall be at least double the diameter of the supply pipe, measured vertically, above the top rim of the vessel; and, in no case less than one inch. When an air-gap is used at the service connection to prevent the contamination or pollution of the District's potable water system, an emergency by-pass shall be installed around the air-gap system and an approved reduced pressure principle assembly shall be installed in the by-pass system.
- b. Reduced Pressure Principle Assembly. An assembly of two independently operating, approved check valves with an automatically operating differential relief valve between the two check valves, tightly closing, resilient seated shut-off valves on either side of the check valves, plus properly located test cocks for the testing of the check and relief valves. The assembly shall operate to maintain the pressure in the zone between the two check valves at a level less than the pressure on the District's water supply side of the device. At cessation of normal flow the pressure between the two check valves shall be less than the pressure on the public water supply side of the device. In case of leakage of either of the check valves, the differential relief valve shall operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere. To be approved, these assemblies must be readily accessible for in-line maintenance and testing and be installed in a location where no part of the device will be submerged.
- c. Double Check Valve Assembly. An assembly of two independently operating, approved check valves with tightly closing, resilient seated shut-off valves on each side of the check valves, plus properly located test cocks for the testing of each test valve. To be approved, these assemblies must be readily accessible for in-line maintenance and testing.
- d. Atmospheric Vacuum Breakers. The Atmospheric Vacuum Breaker shall be located such that the critical level (C-L) is at least 6 inches above the highest sprinkler head or any portion of plumbing served by the sprinkler system with absolutely no means of shut off on the discharge side of the vacuum breaker.
- e. Pressure Vacuum Breaker. The Pressure Vacuum Breaker shall be located such that the critical level (C-L) is (a) at least 13 inches above the highest point reached by any water beyond the device; and (b) not less than 12 inches above the surrounding grade or floor. The Pressure Vacuum Breaker shall be readily accessible for

maintenance and testing. The Pressure Vacuum Breaker shall not be subjected to back-pressure. Only industrial (nonpotable) fluid may be supplied from beyond the Pressure Vacuum Breaker.

Section 2.4 Backflow Prevention Assembly. Approved by the Georgetown Divide Public Utility District as meeting the current applicable specifications and standards of the University of Southern California's Foundation for Cross-Connection Control and Hydraulic Research for approved backflow prevention assemblies.

Section 2.5 Board. The Board of Directors of said District.

Section 2.6 Certified Tester. Any individual with current California/Nevada Section American Water Works Association general certification for testing backflow prevention assemblies.

Section 2.7 Contamination. Means an impairment of the quality of the District water by sewage, industrial fluids or waste liquids, compounds, chemicals or other materials to a degree which creates an actual hazard to the public health through poisoning or through the spread of disease.

Section 2.8 Cross-connection. Any physical connection or arrangement of piping or fixtures between two otherwise separate piping systems, one of which contains potable water and the other non-potable water or industrial fluids of questionable safety, through which, or because of which, backflow may occur into the District's water system. A water service connection between the District's distribution system and a water user's water distribution which is cross-connected to a contaminated fixture, industrial fluid system or with a potentially contaminated supply or auxiliary water system, constitutes one type of cross-connection. Other types of cross-connections include connectors such as swing connections, removable sections, four-way plug valves, spools, dummy sections of pipe, swivel or change-over devices, sliding multiport tube, solid connections, etc.

Section 2.9 Cross-connections, Controlled. A connection between the District's water system and a non-potable water system with an approved backflow prevention assembly properly installed that will continuously afford the protection commensurate with the degree of hazard.

Section 2.10 Cross-connection Control by Containment. The installation of an approved backflow prevention assembly at the water service connection to any water user's premises where it is physically and economically infeasible to find and permanently eliminate or control all actual or potential cross-connections within the water user's water system; or, it shall mean the installation of an approved backflow prevention assembly on the service line leading to and supplying a portion of a water user's water system where there are actual or potential cross-connections which cannot be effectively eliminated or controlled at the point of cross-connection.

Section 2.11 District. The Georgetown Divide Public Utility District, El Dorado County, California.

Section 2.12 General Manager. The General Manager of the Georgetown Divide Public Utility District is invested with the authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this ordinance.

Section 2.13 Hazard, Degree of. The term is derived from the District's evaluation of the potential risk to public health and the adverse effect of the hazard upon the District's water system.

- a. Hazard - Health. Any condition, device, or practice in the water supply system and its operation which could create, or in the judgment of the General Manager or his authorized representative may create a danger to the health and well-being of the District's water users. An example of a health hazard is a structural defect, including cross-connections, in a water supply system.
- b. Hazard - Plumbing. A plumbing type cross-connection in a water user's potable water system that has not been properly protected by a vacuum breaker, air-gap separation or backflow prevention assembly. Unprotected plumbing type cross-connections are considered to be a health hazard.
- c. Hazard - Pollutational. An actual or potential threat to the physical properties of the water system or to the potability of the District's 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 District's water system or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system.

Section 2.14 Industrial Fluids System. Any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollutational or plumbing hazard if introduced into the District's water supply. This may include, but not be limited to: polluted or contaminated waters; all types of process waters and "used waters" originating from the District's water systems which may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkalies, circulated cooling waters connected to an open cooling tower and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; contaminated natural water such as from wells, springs, streams, rivers, irrigation canals or systems, etc.; oils, gases, glycerine, paraffins, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other purposes or for fire-fighting purposes.

Section 2.15 Pollution. Means the presence of any foreign substances (organic, inorganic, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality 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.

Section 2.16 Premises. Any property, equipment, or apparatus where or in which water is used.

Section 2.17 Reports. A District form for reporting the results of tests, inspections, repairs, maintenance, relocations and replacement of backflow preventers.

Section 2.18 Specialist. The authorized representative of the General Manager delegated with the responsibility of implementing an effective Cross-Connection Control Program and for the enforcement of the provisions of this Ordinance.

Section 2.19 Water - Nonpotable. Water which is not safe for human consumption or which is of questionable potability.

Section 2.20 Water - Potable. Any water, which, according to recognized standards, is safe for human consumption.

Section 2.21 Water - Service Connections. The terminal end of a service connection from the District's water system; i.e., where the District loses jurisdiction and sanitary control over the water at its point of delivery to the water user's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. If there is no meter, the service connection is at the property line. There shall be no unprotected takeoffs from the service line ahead of any meter or backflow prevention assembly. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the District's water system.

Section 2.22 Water - Used. Any water supplied by the District from the District's water system to a water user's water system after it has passed through the point of delivery and is no longer under the sanitary control of the District.

Section 2.23 Water Users. Any persons or entity to whom water is furnished by the District.

Article 3. REQUIREMENTS

Section 3.1 Water System.

- a. The water system shall be considered as made up of two parts: The District system and the water user's system.
- b. District system shall consist of the source facilities and the distribution system; and shall include all those facilities of the water system under the complete control of the District, up to the point where the water user's system begins.
- c. The source shall include all components of the facilities utilized in the production, treatment, and delivery of water to the distribution system.
- d. The distribution system shall include the network of conduits and storage tanks used for the delivery of water from the source to the water user's system.
- e. The water user's system shall include those parts of the facilities beyond the termination of the District's distribution system which are utilized in conveying District-delivered domestic water to points of use.

Section 3.2 Policy.

- a. No water service connection to any water user shall be installed or maintained by the District unless the water supply is protected as required by State laws and regulations and this Ordinance. Service of water to any water user shall be discontinued by the District if a backflow preventer required by this Ordinance is not installed, correctly tested, and maintained, or if it is found that a backflow preventer assembly has been removed, by-passed, or if an unprotected cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected.
- b. The water user's system shall be open for inspection at all reasonable times to authorized representatives of the District to determine whether cross-connections or other structural or sanitary hazards, including viola-

tions of these regulations, exist. When such a condition becomes known, the District's Board of Directors shall deny or immediately discontinue service to the water user by providing for a physical break in the service line until the water user has corrected the condition(s) in conformance with State statutes, El Dorado County regulations and District ordinances relating to plumbing and water supplies and the regulations adopted pursuant thereto.

- c. An approved backflow prevention assembly shall also be installed on each service line to a water user's water system at or near the property line or immediately inside the building being served; but, in all cases, before the first branch line leading off the service line wherever one or more of the following conditions exist:
1. In the case of a water user having an auxiliary water supply which is not, or may not be, of safe bacteriological or chemical quality and which is not acceptable as an additional source by the General Manager, the District's water system shall be protected against backflow from the water user by installing a backflow preventer in the service line appropriate to the degree of hazard. If the water user elects to abandon a well, the pump and motor serving the well must be permanently removed and the top three feet of the well below ground level must be sealed with concrete.
 2. In the case of premises on which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the District's water system, the District's system shall be protected against backflow from the premises by installing a backflow preventer in the service line appropriate to the degree of hazard. This shall include the handling of process waters and waters originating from the District's system which have been subject to deterioration in quality.
 3. In the case of premises having (1) internal cross-connection that cannot be permanently corrected and controlled, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross-connections exist, the District's water system shall be protected against backflow from the premises by installing a backflow preventer in the service line at the service connection.
- d. The type of backflow preventer required under subsections c. 1, 2, 3 shall depend upon the degree of hazard which exists as follows:
1. In the case of any premises where there is an auxiliary water supply as stated in subsection 3.2.c.1. of this section and it is not subject to any of the following rules, the District's water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly.
 2. In the case of any premises where there is water or substance that would be objectionable but not

hazardous to health, if introduced into the District's water system, the District's water system shall be protected by an approved double check valve assembly or a reduced pressure principle backflow prevention assembly.

3. In the case of any premises where there is any material dangerous to health which is handled in such a fashion as to create an actual or potential hazard to the District's water system, including fire sprinkler systems, the District's water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, tank trucks, mobile water using equipment, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries and plating plants.
 4. In the case of any premises where there are "uncontrolled" cross-connections, either actual or potential, the District water system shall be protected by an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly at the service connection.
 5. In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross-connection survey, the District's water system shall be protected against backflow from the premises by the installation of a backflow prevention assembly in the service line. In this case, maximum protection will be required; that is, an approved air-gap separation or an approved reduced pressure principle backflow prevention assembly shall be installed in each service to the premises.
- e. Approved Assembly. Any backflow prevention assembly required herein shall be a model and size approved by the Georgetown Divide Public Utility District. The term "Approved Backflow Prevention Assembly" shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association entitled:

AWWA C506-84 Standards for Reduced Pressure Principle and Double Check Valve Backflow Prevention Devices, or as said standard may be revised;

and, have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California established by

Specifications of Backflow Prevention Assemblies
- Section 10 of the most current issue of the
MANUAL OF CROSS-CONNECTION CONTROL.

Said AWWA and FCCC&HR standards and specifications have been adopted by the Georgetown Divide Public Utility District. Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with the said AWWA standards and FCCC&HR specifications.

The following testing laboratory has been qualified by the Georgetown Divide Public Utility District to test and certify backflow preventers:

Foundation for Cross-Connection Control
and Hydraulic Research
University of South California
University Park
Los Angeles, California 90089

- f. Installation. All backflow prevention assemblies shall be installed according to District specifications as adopted from State of California guidelines and the latest edition of the University of South California's Foundation for Cross-connection Control and Hydraulic Research Manual of Cross-connection Control.
- g. Enforcement. When a cross-connection is found to exist:
1. In the event of an immediate and significant health hazard the water service to the source of said hazard shall be immediately discontinued at the direction of the General Manager, or his designated representative. A physical break between the District's system and the water user's system shall be required. The water supply is to remain inactive until correction has been approved by the District's Inspectors.
 2. The water user shall be notified in writing by the District of the findings and the corrective action required to be completed within a reasonable time. If there is evidence that corrective action has not been taken, a second notice shall be sent to the water user. If the water user fails to respond to the second notice to correct violations within 10 days, the water user shall be notified by certified mail to appear before the District's General Manager for an office hearing to show cause for non-compliance. The request shall establish a specific date, time and place for the office hearing. If the office hearing does not provide evidence that corrective action is being taken or the water user does not appear for the office hearing, the District's General Manager may order the water supply discontinued to the water user's premises in order to protect the District's water supply. The water supply is to remain inactive until correction has been approved by the District's Inspectors.
- h. It shall be the duty of the water user at any premise where backflow prevention assemblies are installed to have certified inspections and operational tests made at least once per year. In those instances where the District deems the hazard to be great enough, it may require certified inspections at more frequent intervals. These inspections and tests shall be at the expense of the water user and shall be performed by an independent, certified tester. It shall be the duty of the District Inspection Department to see that these timely tests are made. The water user shall notify the District in advance when the tests are to be undertaken so that he or his representative may witness the tests if it is so desired. These assemblies shall be repaired, overhauled or replaced at the expense of the water user whenever said assemblies are found to be defective, improperly installed or improperly located. Records of such tests, replacement parts, repairs, overhaul or relocation shall be kept and made available

to the District, the El Dorado County, Division of Environmental Management, the owner of the backflow prevention assembly, and the tester. All parts for repair or replacement shall be equal in quality to those supplied by the manufacturer of the assembly being repaired. No assembly can be altered in any way from its original design, material, or operational characteristics.

- i. All presently installed backflow prevention assemblies which do not meet the requirements of this section but were approved assemblies for the purposes described herein at the time of installation and which have been properly maintained and installed, shall, except for the inspection and maintenance requirements under subsection 3.2.h., be excluded from the requirements of these rules so long as the District is assured that they will satisfactorily protect the District's system. Whenever the existing backflow prevention assembly is moved from the present location or requires more than minimum maintenance or when the District finds that the maintenance constitutes a hazard to health, the unit shall be replaced by a backflow prevention assembly meeting the requirements of this section.

Article 4. SEVERABILITY CLAUSE

Section 4.1 If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this Ordinance, or any part thereof, is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance or any part thereof. The Board hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared invalid.

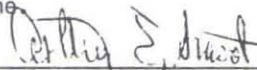
Section 4.2 Supersedes Former Ordinances. This Ordinance amends Ordinance No. 92-1, Section 7-10 and supersedes said Section of Ordinance 92-1.

PASSED AND ADOPTED by the Board of Directors of the Georgetown Divide Public Utility District at its duly held Regular Meeting on the 11th day of December, 1991.

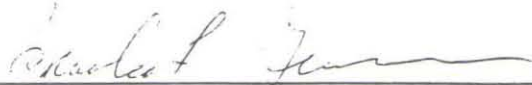
AYES: Directors Arthur E. Smoot, Wade B. Milner, Troy Daffern, Robert E. Flynn and John C. Lampson.

NOES: None.

ABSENT: None.


ARTHUR E. SMOOT, President
Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

ATTEST:


CHARLES F. GIERAU, Clerk and ex officio Secretary
Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT