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TECHNICAL SERVICES
DRINKING WATER PROGRAM

RALEIGH WATER DISTRICT

RESOLUTION 1-01

CROSS CONNECTION PROGRAM

WHEREAS, it is the responsibility of the Raleigh Water District to protect its drinking water by instituting and enforcing a cross connection program pursuant to Chapter 333, Division 61, of the Oregon Administrative Rules. NOW, THEREFORE, BE IT RESOLVED that the Board of the Raleigh Water District adopts as follows:

A cross connection control program for the Raleigh Water District is hereby provided.

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1:01 DEFINITIONS

- (1) "Approved backflow prevention assembly" or "backflow assembly" or "assembly" means an assembly to counteract backpressures or prevent back siphonage. This assembly must appear on the list of approved assemblies issued by the State of Oregon Health Department.
- (2) "Auxiliary supply" means any water source or system other than the public water system, which may be available in the building or on the premises.
- (3) "Backflow" means the flow in the direction opposite to the normal flow or the introduction of any foreign liquids, gases, or substances into the water system of the District's water.
- (4) "Boresight" or "Boresight to daylight" means providing adequate drainage for backflow prevention assemblies installed in vaults through the use of an unobstructed drain pipe.
- (5) "District" or "The District" shall mean the Raleigh Water District.
- (6) "Contamination" means the entry into, or presence, in a public water supply system, of any substance, which may be deleterious to health, and/or quality of the water.
- (7) "Cross connection" means any physical arrangement where a public water system is connected, directly or indirectly, with any other non-drinkable water system or auxiliary system, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp coolers, or any other device which contains, or may contain, contaminated water, sewage, or other 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 changeover

devices, or other temporary or permanent devices through which, or because of which, backflow may occur are considered to be cross connections.

- (8) "Degree of hazard" means the low or high hazard classification that shall be attached to all actual or potential cross connections.
- (9) "Manager" means the District Manager of the Raleigh Water District, or it's authorized agent.
- (10) "Double check valve backflow prevention assembly" or "double check assembly" or "double check" means an assembly, which consists of two independently operating check valves, which are spring-loaded or weighted. The assembly comes complete with a isolation valve on each side of the checks, as well as test cocks to test for tightness.
- (11) "Health hazard" means an actual or potential threat of contamination, of a physical or toxic nature to the public potable water system, or the consumer's potable water system that would be a danger to health.
- (12) "High hazard" means the classification assigned to an actual or potential cross connection that potentially could allow a substance that may cause illness or death, due to backflow, into the potable water supply.
- (13) "Low hazard" means the classification assigned to an actual or potential cross connection that potentially could allow a substance that may be objectionable, but not hazardous to one's health, due to backflow, into the potable water supply.
- (14) "Plumbing hazard" means an internal or plumbing-type cross connection in a consumer's potable water system that may be either a polluttional or contamination-type hazard. This includes, but is not limited to, cross connections to toilets, sinks, lavatories, wash trays, domestic washing machines and lawn sprinkling systems. Plumbing-type connections can be located in man types of structures including homes, apartment houses, hotels and commercial or industrial establishments.
- (15) "Point of use isolation" means the appropriate backflow prevention within the customer's water system at the point at which the actual or potential cross connection exists.
- (16) "Pollution hazard" means an actual or potential threat to physical properties, of the water system or the potability of the public or the consumer's potable water system, but which would not constitute a health or system hazard, as defined. The maximum degree of intensity of pollution to which the potable water system could be degraded, under this definition would cause a nuisance or be aesthetically objectionable, or could cause minor damage to the system or its appearance.
- (17) "Potable water supply" means any system of water supply intended, or used, for human consumption, or other domestic use.
- (18) "Premises" or "premise" means any piece of property to which water is provided including all improvements< mobile structures and structures located on it.
- (19) "Premise isolation" means the appropriate backflow prevention at the service connection between the public water system and the water user.
- (20) "Reduced pressure principle backflow prevention assembly" or "reduced pressure principle assembly" or "RP assembly" shall mean an assembly containing two independently acting approved check valves together with a hydraulically-operated, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first

check valve. The assembly shall include properly located test cocks and tightly closing shut-off valves at the end of the assembly.

- (21) "System hazard" means an actual or potential threat of severe danger to the physical properties of the public or consumer's potable water system, or of a pollution or contamination that would have a detrimental effect on the quality of the potable water in the system.
- (22) "Thermal expansion" means heated water that does not have the space to expand.

1:02 PURPOSE

The purpose of this resolution is to protect the water supply of the Raleigh Water District from contamination or pollution due to any existing or potential cross connections.

1:03 CROSS CONNECTIONS REGULATED

No cross connections shall be created, installed, used or maintained within the territory served by Raleigh Water District, except in accordance with this resolution.

1:04 BACKFLOW PREVENTION ASSEMBLY

- (1) A cross connection inspector employed by or contracted with the Raleigh Water District shall carry out inspections and surveys of each property and will require an assembly commensurate with the degree of hazard to be installed at the service connection.
- (2) The minimum protection of an approved double check valve assembly must be installed at every service connection served by Raleigh Water District.
- (3) The property owner is responsible for all cross connection control within the premises.
- (4) The property owner is responsible for providing adequate protection against thermal expansion.
- (5) Any mobile units or apparatus which uses District water within the District's system shall first obtain a permit from the District and comply with all restrictions and fees.
- (6) The use of any type of chemical spray attachment connected to premise plumbing, including garden hose fertilizers and pesticide applicators, is prohibited with the District's water system.
- (7) The use of any type of radiator flush kits attached to the premise plumbing is prohibited within the District's water system.

1:05 INSTALLATION REQUIREMENTS

To ensure proper operation and accessibility of all backflow prevention assemblies, the following requirements shall apply to the installation of these assemblies.

- (1) No part of the backflow prevention assembly shall be submerged in water or installed in a location subject to flooding. If installed in a vault or basement, adequate drainage shall be provided.
- (2) Assemblies must be installed immediately downstream of the water meter, before any branch in the line. Alternate locations must be approved in writing by the District prior to installation.
- (3) The assembly must be protected by the property owner from freezing and other severe weather conditions.

- (4) All backflow prevention assemblies shall be of a type and model approved by the State of Oregon Health Division and Raleigh Water District.
- (5) Only assemblies specifically approved by the Oregon Health Division for vertical installation may be installed vertically.
- (6) The assembly shall be readily accessible with adequate room for maintenance and testing. Assemblies 2-inches and smaller shall have at least 6-inches of clearance on all sides of the assembly. All assemblies larger than 2-inches shall have a minimum clearance of 12-inches on the back side, 24-inches on the test cock side, 12-inches below the assembly and 36-inches above the assembly. "Y" pattern double check valve assemblies shall be installed so that the checks are horizontal and the test cocks face upward.
- (7) If written permission is granted to install the backflow assembly inside of the building, the assembly must be readily accessible during regular working hours of 8:00 AM to 4:30 PM, Monday through Friday.
- (8) An assembly installed inside of the premises and installed 5-feet above the floor must be equipped with a rigidly and permanently installed scaffolding acceptable to the District. This installation must also meet the requirements set out by the U.S. Occupational Safety and Health Administration (OSHA) and the State of Oregon OSHA and health codes.
- (9) RP Assemblies may be installed in a vault only if relief valve discharge can be drained to daylight through a "boresight" type drain. The drain shall be of adequate capacity to carry the full rated flow of the assembly and shall be screened on both ends.
- (10) An approved air gap shall be located at the relief valve orifice. This air gap shall be at least twice the inside diameter of the incoming supply line, as measured vertically, above the top rim of the drain, and in no case less than 1-inch.
- (11) Upon completion of installation of any additional assemblies within the premises, the District must be notified and all assemblies must be inspected and tested, as required in section 1:07. All back flow assemblies must be registered with the District. Registration shall consist of date of installation, make, model, size, serial number of the backflow assembly, location, and initial test report.
- (12) Any pressure drop caused by the installation of a backflow assembly is not the responsibility of the District.
- (13) All new construction must install an approved assembly at the service connection. The type of assembly shall be commensurate with the degree of hazard as determined by a certified inspector. If the use of the property has not been determined, an RP assembly must be installed.

1:06 ACCESS TO PREMISES

Authorized employees of the District, with proper identification, shall have access during the hours of 8:00 AM to 4:30 PM to all parts of a premise and within the building to which water is supplied. However, if any water user refuses access to a premise or to the interior of a structure during these hours for inspection by a cross connection specialist appointed by the District, a reduced pressure principle backflow prevention assembly (RP assembly) must be installed at the service connection to the premise.

1:07 ANNUAL TESTING AND REPAIRS

All backflow assemblies installed within the territory served by the District shall be tested immediately upon installation and at least annually thereafter by a state certified tester to perform the required tests. All such assemblies found not functioning properly shall be promptly repaired or replaced at the expense of the property owner. If any such assembly is not promptly repaired or replaced, the District may deny or discontinue water to the premise. The District may set fees to cover the cost of this service.

1:08 COSTS OF COMPLIANCE

All costs associated with purchase, installation, inspections, testing, replacement, maintenance, parts, and repairs of the backflow assembly are the financial responsibility of the property owner.

1:09 TERMINATION OF SERVICE

Failure on the part of any customer to discontinue the use of all cross connections and to physically separate cross connections is sufficient cause for immediate discontinuance of public water service to the premises. (OAR chapter 333-61-070, section 1).

1:10 CONSTITUTIONALITY AND SAVING CLAUSE


That if any provision, section, sentence, clause or phrase of this Resolution, or the application of the same to any person or set of circumstances are for any reason held to be unconstitutional, void, invalid, or for any reason unenforceable, the validity of the remaining portions of this resolution or its application to other persons or circumstances shall not be affected thereby, it being the intent of the Board of Commissioners of the Raleigh Hills Water District in adopting, and the Board Chair in approving this Resolution that no portion hereof or provision or regulation contained herein shall become inoperative or fail by reason of any constitutionality or invalidity of any other portion, provision, or regulation.

1:11 EFFECTIVE DATE

In as much as this Resolution is necessary for the immediate preservation of the public health, an emergency is hereby declared to exist, and this resolution shall be in full force and effect from and after its adoption by the Board of Commissioners.

Adopted by the Board of Commissioners this 15th day of March 2001.

RALEIGH WATER DISTRICT

By 
Bob Maddock, Chair

ATTEST:

By 
Bob Roseta, Secretary