

NESKOWIN REGIONAL WATER DISTRICT  
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## **RESOLUTION 2017-2**

### **Cross Connection Regulations**

WHEREAS, OREGON Administrative Rules, Chapter 333-61-070 states that water suppliers shall undertake programs for controlling and eliminating cross connections.

BE IT RESOLVED, THAT the Board of Commissioners of the Neskowin Regional Water District hereby adopts the following regulations in order to protect the public health of water consumers by the control of actual and/or potential cross connections to customers.

#### ***CROSS CONNECTION / BACKFLOW PREVENTION PROGRAM Policies and Procedures:***

The Neskowin Regional Water District follows guidelines established by the following regulatory agencies in determining the appropriate backflow prevention device for any given situation:

- Oregon Health Authority, Drinking Water Services (DWS) — OAR 333-61-025, OAR 333-61-0070, OAR 333—61—0071,
- American Water Works Association (AWWA), Standards C510, C511, and Manual M14,
- AWWA Pacific Northwest Section — Cross-Connection Control Manual, Seventh edition, April 2012, and
- University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research — Manual of Cross Connection Control, Tenth Edition, October 2009.

## Definitions

- “Approved” means accepted by the Oregon Health Division and/or the Neskowin Regional Water District.
- “Auxiliary Water Supply” means any water supply that is or may be cross connected to the public water supply system.
- “Backflow” means the flow of water, other liquids, gases, or other substances, back into the potable water supply within a customer’s facility and/or the public water system. Backflow occurs due to a differential pressure existing between two different points within a continuous fluid system and may occur due to either backsiphonage or backpressure.
- “Cross Connection” means any physical arrangement whereby a public water system is connected, directly or indirectly, with any non-potable or unapproved water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains, or may contain, contaminated water, liquid, gases, sewage or other waste, of unknown or unsafe quality which may be capable of contaminating the public water supply as a result of backflow.
- “District” means the Neskowin Regional Water District.
- “Division” means the Oregon State Health Division.
- “Potable Water” means safe drinking water.
- “Shall” means a mandatory requirement.
- “Irrigation” means any permanently in ground infrastructure used to water plants.
- “Hard Plumbed” means any water line designed to be permanent.

The installation or maintenance of a cross connection which will endanger the water quality of the potable water supply system of the District shall be unlawful and is prohibited. Any such cross connection now existing or hereafter installed is hereby declared to be a public hazard and the same shall be abated. The control or elimination of cross connections shall be in accordance with this resolution and in compliance with the Oregon Administrative Rules Chapter 333, Public Water Systems (333-61-070 and 333-61-099). The District shall have the authority to establish requirements more stringent than state regulations if it deems that the conditions so dictate.

The Neskowin Regional Water District (NRWD) will conduct inspections and/or surveys in order to determine the existence of, or potential for, cross connections to the public water supply. Whenever a water user or the owner of the premises obtaining water from Neskowin Regional Water District’s public water system adds any chemical or substance to the water, they shall notify the NRWD.

*The type of backflow prevention required shall be commensurate with the degree of hazard that exists:*

- An approved air gap of at least twice the inside diameter, but not less than one inch, of the incoming supply line measured vertically above the top rim of the vessel, or an approved reduced pressure backflow assembly (RPBA) or reduced pressure detector assembly (RPDA) shall be installed where the substance which could backflow poses a health hazard (contaminant).
- An approved double check valve assembly (DCVA) or double check detector assembly (DCDA) shall be installed where any substance other than potable water could backflow and pose a non-health hazard (pollutant).
- An approved pressure vacuum breaker assembly (PVBA), spill resistant vacuum breaker assembly (SVBA), or an atmospheric vacuum breaker (AVB) shall be installed where the substance that could backflow poses a non-health hazard (pollutant) and where there is no possibility of backpressure in the downstream piping. A shutoff valve may be installed on the line downstream of a PVBA or SVBA, but shall not be installed downstream of an AVB.

The following are premises regarded as health hazards and require isolation by an approved air gap or reduced pressure principle type of assembly:

- 1) Agricultural (e.g. farms, dairies).
- 2) Beverage bottling plants.
- 3) Car washes.
- 4) Chemical plants.
- 5) Commercial laundries and dry cleaners.
- 6) Premises where both reclaimed and potable water are used.
- 7) Film processing plants.
- 8) Food processing plants.
- 9) Medical centers (e.g., hospitals, medical clinics, nursing homes, veterinary clinics, dental clinics, blood plasma centers).
- 10) Premises with irrigation systems that use the water supplier's water with chemical additions (e.g., parks, playgrounds, golf courses, cemeteries, housing estates).
- 11) Laboratories.
- 12) Metal plating industries.
- 13) Mortuaries.
- 14) Petroleum processing or storage plants.
- 15) Piers and docks.
- 16) Radioactive material processing plants and nuclear reactors.
- 17) Wastewater lift stations and pumping stations.
- 18) Wastewater treatment plants.
- 19) Premises with piping under pressure for conveying liquids other than potable water and the piping is installed in proximity to potable water piping.
- 20) Premises with an unapproved auxiliary water supply that is connected to a potable water supply.
- 21) Premises where the NRWD is denied access or restricted access for survey.
- 22) Premises where the water is being treated by the addition of chemicals or other additives.
- 23) Premises with Pools, Spas or Ponds that have a hard plumbed water connection.

The water user or owner of the premises where one or more backflow prevention (i.e., RPBA, DCVA, PVB, SVBA, DCDA, or RPDA) have been installed shall have the assemblies tested by an Oregon-certified tester at least once per year. The NRWD may require more frequent tests at facilities that pose an extreme health risk and for assemblies that repeatedly fail.

Backflow prevention assemblies found not to be functioning properly shall be repaired by the water user or owner of the assembly or the NRWD may deny or discontinue water service. After a backflow assembly is repaired, installed or moved, the assembly shall be tested prior to use. Tests performed by Oregon-certified testers shall be in conformance with procedures established by the Foundation for Cross Connection Control and Hydraulic Manual of Cross Connection Control, Tenth Edition, October 2009, University of California.

Non-health hazard assemblies (i.e., DC, DCDA, PVB, and SVBA) that fail to function properly, or the established test procedure, shall be repaired or replaced within 30 days. Health hazard (i.e., RP and RPDA) that fail to function properly, or fail the established test shall be repaired or replaced within 30 days. If a Neskowin Regional Water District Cross Connection Specialist determines that the hazard poses a threat to public safety, the assembly must be replaced immediately. Delay in repair is cause for discontinuance of water service until repair and re-testing prove the assembly to be functioning properly.

Reports on backflow assembly tests shall be prepared by an Oregon-certified tester and copies sent to the water user or the owner of the assembly. In addition, copies of all such reports shall be provided to the NRWD. Test reports shall arrive at the NRWD within 10 working days of the test date per OAR 333-061-(15)(a). Test reports that are illegible and/or incomplete will not be accepted. Reports for DCDA's and RPDA's should include the detector meter reading, preferably on the test report for the bypass assembly. A master list of backflow prevention assemblies (service location, number of assemblies, month due) installed within the Neskowin Regional Water District's water distribution system boundaries will be made available through a Public Records Request by contacting the Neskowin Regional Water District Office.

During construction of new water systems (water mains, valves, hydrants, services lines, and other appurtenances), no connection to the Neskowin Regional Water District's existing system shall be made until the new system has passed both pressure and bacteriological testing and has been accepted by the NRWD. All water used for flushing and testing shall be metered and delivered to the new waterline through a DWS-approved backflow prevention assembly, the assembly shall be tested by an Oregon certified backflow tester and the tester shall provide a passing test report to a Neskowin Regional Water District Cross Connection Specialist for review prior to its use. Only Neskowin Regional Water District staff is authorized to operate water distribution system valves. Following acceptance of the new water main, final connection to the existing system shall be done under the supervision of Neskowin Regional Water District staff.

## **Types of Water Service**

*Domestic* — backflow prevention is required on services that:

- Are commercial in nature (includes multi-family dwellings),
- Are greater than or equal to two-inches in diameter,
- Have piping higher than 32 feet above the water main, or
- Have a potential hazard to the public water supply, at the discretion of the NRWD (includes but not limited to, new or existing wells).

*Irrigation* — backflow prevention is required on all irrigation systems. Annual assembly testing should be completed prior to the beginning of each irrigation season — July 1<sup>st</sup>, at the latest.

*Fire protection* — backflow prevention is required on all fire sprinkler systems except:

- Single family residential fire protection systems using approved potable water pipe and materials, and allow for periodic flow through during each 24 hour period.

An approved DCDA or RPDA shall be installed on all non-residential fire sprinkler systems. The distance between the water main and the DCDA or RPDA shall be 40 feet or less.

*Private fire hydrants* — hydrants that dead-end 40 feet or more from the water main:

Require a DCDA or RPDA, to be installed at the owner's property line. Any hydrant with a run greater than 40 feet will be considered a private hydrant and require backflow prevention (DCDA or RPDA). Backflow prevention assemblies will be installed at a location adjacent to the water meter or point of delivery. With approval from the NRWD, the assembly may be installed immediately inside the building being served, but in all cases, before the first branch line leading off the service line.

## **Non-Compliance**

The Neskowin Regional Water District may deny or discontinue water service to any premises:

- Where access for cross connection inspection is denied,
- Where there is a failure to install a required assembly,
- When repairs to a failed assembly are not made within the established time period, or
- When required tests are not completed.

"Annual Testing Due" reminder letters will be mailed to each account's responsible party identified in Neskowin Regional Water District's billing database two weeks before the beginning of the month in which the backflow assembly testing is due. If a test report is not received by the NRWD within 60 days after the end of the month due, the account will be considered non-compliant and subject to water shut-off. The NRWD will coordinate with customers when taking action to discontinue water service for non-compliance with this policy. NRWD service charges for discontinuing water service shall apply. Water meters for new construction or irrigation will be locked off until required backflow prevention is installed and ready for testing.