

SUBURBAN EAST SALEM WATER DISTRICT

CROSS CONNECTION RULES & REGULATIONS

90.010. DEFINITIONS. Wherever the following words are used herein they shall have the meanings ascribed to them in this section:

(f) Manager means the manager of Suburban East Salem Water District [SESWD] or his authorized representative.

(h) Fire protection service means a connection to the public water mains intended only for the extinguishment of fires and the flushing necessary for its proper maintenance.

(i) Irrigation service means a connection intended for seasonal use and delivering water which is not discharged to the sanitary sewer.

90.150. DEFINITIONS. As used in Section 90.150 to 90.210 unless the context indicates otherwise, the following definitions shall apply:

(a) Air gap separation means the physical vertical separation between the free flowing discharge end of a potable water supply pipe line and the open or nonpressure receiving vessel.

(b) Approved backflow prevention device means a device which has been approved by the Oregon Health Division, Human Resources Department, for preventing backflow.

(c) Atmospheric vacuum breaker - also known as syphon breaker - means a mechanical device consisting of a single check valve in the supply line and a valve member opening to the atmosphere when the pressure in the line drops to atmospheric. Device must be approved by the Oregon Health Division, Human Resources Department, as a backflow preventor.

(d) Auxiliary water supply means any supply of water used to augment the supply obtained through the SESWD water system which serves the premises in question.

(e) Backflow means the flow of water or other fluids in the direction opposite to the normal flow.

(f) Check valve means a valve that permits flow in only one direction.

(g) Contaminant means any physical, chemical, biological, or radiological substance or matter in water which may render the water nonpotable, as per the Oregon statutes.

(h) Customer system means all plumbing, piping, and appurtenances on the customer's side of the point of metering or connection.

(i) Double check valve assembly (DC Device) means an assembly of two independently acting check valves with shutoff valves on each side of the check valve assembly and test ports for checking the water tightness of each check valve. Device must be approved by the Oregon Health Division, Human Resource Department.

(j) Facility survey means an on-site review of the water source, facilities, equipment, operation, and maintenance for the purpose of evaluating the hazards to the drinking water supply.

(k) Pressure vacuum breaker assembly (PVB Device) means a mechanical device consisting of one or two spring loaded check valves in the supply line and a spring loaded air inlet on the downstream side of the check valve(s) which will open to atmosphere when the pressure in the device drops below one pound per square inch. The complete assembly consists of two shut-off valves and two test ports for checking water tightness of the check valve. Device must be approved by the Oregon Health Division, Human Resources Department, as a backflow preventor.

(l) Reduced pressure principle backflow prevention device (RP Device) means a device for preventing backflow incorporating two check valves, a differential relief valve located between the two valves and two shutoff valves, one on each side of the assembly, test ports for checking the water tightness of the check valves and the operation of the relief valve. Device must be approved by the Oregon Health Division, Human Resources Department.

(m) Safe drinking water means water which has sufficiently low concentrations of microbiological, inorganic chemical, organic chemical, radiological, or physical substances so that individuals drinking such water at normal levels of consumption will not be exposed to disease organisms or other substances which may produce harmful physiological effects.

(n) Secondary contaminant means those contaminants which at the levels generally found in drinking water do not present an unreasonable risk to health, but do:

- (1) Have adverse effects of the taste, odor, and color of water; and/or
- (2) Produce undesirable staining of plumbing fixtures; and/or
- (3) Interfere with the public water supply.

(o) Service connection means the point of delivery (water meter) at or near the property line.

90.160. CUSTOMER SYSTEM OPEN FOR INSPECTION. The customer system shall be open for inspection to perform a facility survey at all reasonable times to the manager or his agent to determine whether cross connections or other structural or sanitary hazards including violations of these regulations exist. When such a condition becomes known, the manager or his agent shall cause the service to the premises to be immediately discontinued or denied by a physical break in the service until the customer has corrected the condition in conformance with these regulations.

90.170. BACKFLOW PREVENTION REQUIREMENTS. (a) Backflow prevention devices shall be installed on each service line of the customer's 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 the following conditions exist:

(1) There is an auxiliary water supply which is or can be connected to the potable water piping.

(2) Where there is piping for conveying liquids other than potable water and where that piping is installed and operated in a manner which could cause a cross connection.

(3) There are cross connections or intricate plumbing arrangements which make it impracticable to ascertain whether or not cross connections exist.

(4) In the case where there has been a history of repeating the same or similar cross connection or a backflow even though these have been removed or disconnected.

(5) Where there is a building over three stories in height or any plumbing system that is greater than or equal to thirty feet above the SESWD main from which it is served.

(6) Where there is backflow or back siphonage potential.

(7) Where the system is not open for inspection.

(8) Where the system is subject to being submerged by hazardous substance.

(b) The type of protective device required under subsection (a) shall be commensurate with the degree of hazard which exists as follows:

(1) 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 principle backflow prevention "RP" device shall be installed where the substance which could backflow is a contaminant or hazardous to health. Examples of premises where these conditions may exist include sewage treatment plants, pump stations, sewage piping, chemical manufacturing plants, hospitals, mortuaries, plating plants, car washes, medical clinics, and auxiliary water systems.

(2) An approved double check valve assembly shall be installed where the substance which could backflow is a secondary contaminant.

(3) An approved pressure vacuum breaker may be installed where the substance which could backflow is objectionable but does not pose an unreasonable risk to health and where there is no possibility of back pressure in the downstream piping. A shutoff or control valve may be installed on the line downstream of a pressure vacuum breaker.

(4) In the case of irrigation systems and with the approval of the manager or his agent, an approved pressure vacuum breaker may be permitted, provided no back pressure is possible and no chemical or material injection or mixing exist.

(5) In the case of all private fire services, an approved backflow prevention device installed to SESWD construction specifications shall be required. The manager may require a monitoring meter or detection system to detect unauthorized use or leakage within the system. The type of backflow prevention device shall be as follows:

(A) An approved double check valve assembly shall be required for low and medium hazards. Low hazards are systems with no Fire Department pumper connection, auxiliary water supplies, chemical additives, or detectable cross connection, serving a building three stories or less, and not serving more than ten sprinkler heads. Medium hazards are systems with pumper connection but no auxiliary water supplies available, chemical or additives, detectable cross connection, and serving a building three stories or less.

(B) An approved reduced pressure principle backflow prevention device shall be required for high hazard. High hazards are systems with auxiliary water supplies, chemical additives, detectable cross connections, or a building exceeding three stories.

90.180. PROTECTIVE DEVICES TO HAVE APPROVAL OF Manager. All backflow prevention devices required herein shall be of a type and model approved by the Oregon Health Division, Human Resources Department.

90.190. OWNER'S DUTY FOR INSPECTION. It shall be the duty of the device owner at any premise where backflow protective devices are installed to have thorough inspections and leakage tests made immediately upon installation of device and at least once a year, or more often in those instances where successive inspections indicate repeated failure. The frequency of these tests or the replacement of the device because of repeated failure is at the discretion of the manager. These inspections, tests, repairs, and/or replacement of devices shall be at the expense of the device owner, be performed by the manager or his agent or a competent device tester who is approved by the Oregon Health Division, Human Resources Department. Test and repair or replacement shall be performed within 30 days from receipt of notice to test. The device owner is required to contact a tester who can perform the work in the necessary period. It shall be the duty of the manager to see that these tests are made. The device owner shall notify the manager or his agent a minimum of 48 hours in advance when the test is to be performed, so that he may witness the test if he so desires. Records of such tests, repairs, and overhaul shall be kept and a copy submitted to the manager within 30 days of completed tests.

90.200. PREVIOUSLY INSTALLED BACKFLOW DEVICES EXCLUDED FROM REQUIREMENTS. Backflow prevention devices installed before the effective date of Section 90.150 TO 90.210 which were approved at the time they were installed but are not on the current list of approved devices, shall be permitted to remain in service provided they are properly maintained, are commensurate with the degree of hazard, are tested at least annually, and perform satisfactorily. When devices of this type are moved, or require more than minimum maintenance, they shall be replaced by devices which are on the list of approved devices by the Oregon Health Division, Human Resources Department.

90.210. WATER SERVICE DENIED UPON FAILURE TO MEET REQUIREMENTS. The manager or his agent shall cause the water service to the premises to be immediately discontinued or denied by a physical break in the service until the customer has corrected the following condition as required in Section 90.150 to Section 90.210.

(1) In the case of extreme emergency, or where a reduced pressure principle backflow device is required, and where an immediate threat to life or public health is found to exist.

(2) In other cases after a reasonable length of time allowed as determined by the manager, the test, repairs and/or replacement of devices, or any other requirement within these regulations are not performed.

Revised this eighth (8th) day of October 1991.

Signed this eighth (8th) day of October 1991.

Harold Reynolds
Secretary, Board of Commissioners
Suburban East Salem Water District

ccrules.rev

PREVIOUSLY INSTALLED BACKFLOW PREVENTER DEVICES FROM
REQUIREMENTS. Backflow prevention devices installed before the
effective date of Section 90.150.10 to 90.150.15 shall be approved
if they were installed but are not on the current list of
approved devices, shall be permitted to remain in service until
they are properly maintained, are consensually with the district
and are tested at least annually, and periodic maintenance
records of this type are maintained, or replaced within 90 days
of approval, they shall be replaced by devices which are on the
list of approved devices by the Oregon Health Division, Water
Resources Department.

90.150.10 WATER SERVICE DENIED UPON FAILURE TO MEET
REQUIREMENTS. The manager or his agent shall cause the water
service to the premises to be immediately discontinued or denied if
a physical break in the service until the contractor has corrected
the following condition as required in Section 90.150.10 to Section
90.150.15.

(1) In the case of extreme emergency, or where a reduced
pressure backflow device is required, and there is
an immediate threat to life or public health, a reduced