**Resolution No. 462 (AMENDED)**

**CROSS CONNECTION CONTROL ORDINANCE**

FINDING OF FACT:

Whereas it is the water purveyor's responsibility to provide water to the customer that meet state water quality standards; and

Whereas it is the water purveyor's responsibility to prevent the contamination of the public water supply system; and

Whereas cross connections within the customer's plumbing system pose a potential source for the contamination of the public water supply system;

Now be it resolved that the EAST WENATCHEE WATER DISTRICT establishes the following service policy to protect the public water supply system from the risk of contamination. For public health and safety, this policy shall apply equally to all new and existing customers.

PREVENTION OF CONTAMINATION:

The customer's plumbing system, starting from the termination of the purveyor's water service, shall be considered a potential high health hazard requiring the isolation of the customer's premise by a purveyor approved, customer installed and maintained air gap. The air gap shall be located at the end of the purveyor's service pipe. Water Shall only be supplied to the customer through this purveyor approved air gap.

Notwithstanding the aforesaid, the purveyor, upon assessing the risk of contamination posed by the customer's plumbing system and use of water, may allow the customer to connect directly to the water service, i.e., without a purveyor approved air gap. Permission for the direct connection to the water service will be at the sole discretion of the purveyor, and will be based on the following terms and limitations:

1. The customer agrees to take all measures necessary to prevent the contamination of the plumbing system within their premise and the purveyor's distribution system that may occur from backflow through a cross connection. These measures shall include the prevention of supply from the purveyor's system that may occur by reason of routine system maintenance or during emergency conditions, such as a water main break.
2. The customer agrees to install, operate and maintain at all times their plumbing system in compliance with the current edition of the plumbing code having jurisdiction as it pertains to the prevention of contamination, and protection from thermal expansion due to a closed system that could occur with the present or future installation of backflow preventers on the customer's service and/or at plumbing fixtures.

3. For cross connection control or other public health related surveys, the customer agrees to provide free access for the employees of the purveyor to all parts of the premise during reasonable working hours of the day for routine surveys, and at all times during emergencies.
4. The customer agrees to install all backflow prevention assemblies requested by the purveyor, and to maintain those assemblies in good working order. The assemblies shall be of a type, size and make approved by the purveyor and the State (Provincial) Health Authority. The assemblies shall be installed in accordance with all standards established by the purveyor.
5. The customer agrees to have all backflow prevention assemblies tested upon installation, annually thereafter or when requested by the purveyor, after repair and after relocation. All testing shall be done by a purveyor approved and Washington State Department of Health certified backflow prevention assembly tester (BAT). The results of the tests shall be reported within 30 days to the purveyor on a form provided by or approved by the purveyor.
6. The customers agrees to obtain prior approval from the purveyor for all changes in water use, and alterations and additions to the plumbing system, and shall comply with any additional requirements imposed by the purveyor for cross connection control.
7. The customer acknowledges the right of the purveyor, in keeping with changes to Washington State Department of Health or the purveyor's risk management policies, to impose retroactive requirements for additional cross connection control measures.
8. The customer acknowledges the right of the purveyor to discontinue water supply within 72 hours of giving notice, or a lesser period of time if required to protect the public health, if the customer fails to cooperate in the installation, maintenance, repair, inspection or testing of backflow prevention assemblies or air gaps required by the purveyor.
9. The customer agrees to indemnify and hold harmless the purveyor for all contamination of the customer's plumbing system or the purveyor's distribution system that results from an unprotected or inadequately protected cross connection within their premise. This indemnification shall pertain to all backflow conditions that may arise from the purveyor's suspension of water supply or reduction of water pressure, recognizing that the air gap separation otherwise required would require the customer to provide adequate facilities to collect, store and pump water for their premise.

The administrator of the East Wenatchee Water District shall establish the priority for the survey and repeat survey of new and existing premises for cross connections, based on the risk management policies established by the East Wenatchee Water District, and the minimum requirements imposed by the Washington State Department of Health. The administrator shall establish standards and procedures governing the application, installation, approval and testing of assemblies, and other related tasks, in accordance with the Washington State Department of Health, and the American Water Works Association - Pacific Northwest Section "Manual of Cross Connection Control," Sixth Edition, or latest edition thereof; and may establish such other more stringent requirements deemed necessary to reduce the risk of contamination of the public water supply system.

The survey of a customer's premise shall be for sole purpose of establishing the purveyor's minimum requirements for the protection of the public water supply system, commensurate with the purveyor's assessment of the degree of hazard. It shall not be assumed by the customer or other regulatory agencies that the purveyor's survey, requirements for the installation of backflow prevention assemblies, lack of requirements for the installation of backflow prevention assemblies, or other actions by personnel employed by the purveyor, constitutes an approval of the customer's plumbing system, or an assurance to the customer of the absence of cross connection therein.

## DEFINITIONS

**ACCESSIBLE:**

In reference to the installation of backflow preventers, accessible shall mean that such backflow preventers shall be placed so that they can be reached for testing and/or maintenance safely, but may allow access panels, doors, etc.

**ADMINISTRATIVE AUTHORITY:**

An individual, department, or other agency given the responsibility and authority by a state, province, county, city or other political entity created by law to administer and enforce the provision of a cross connection control program.

**AIR GAP:**

The vertical physical separation between the free flowing discharge end of the potable supply line and the overflow rim of the receiving vessel. In an "approved" air gap, the separation must be at least twice the inside diameter of the supply line, but never less than one-inch. When the air gap is within three pipe diameters (measured horizontally) of a wall, the air gap shall be increased to three times the incoming pipe diameter, or four times the effective opening for intersecting walls.

**APPROVAL/APPROVED:**

Approved in writing by the health authority or other agency having jurisdiction.

**ASPIRATION:**

The use of the venturi principle (a sub-atmospheric pressure condition caused by an increase of velocity in a water line through a localized restriction) to introduce a second substance in the water supply.

**ASSE:**

ASSE is the abbreviation for the American Society of Sanitary Engineering.

**ATMOSPHERIC VACUUM BREAKER (AVB)**

A device which contains a float check (poppet), a check seat and an air inlet vent. When water pressure is reduced to a gauge pressure of zero of below, the float check drops, allowing air to enter the device, preventing back siphonage. It is designed to protect against back-siphonage only.

**AUXILIARY WATER SUPPLY:**

Any water supply on, or available to, a premise in addition to the purveyor's approved public potable water supply.

**AUXILIARY WATER SUPPLY - APPROVED:**

An auxiliary water supply which has been investigated and approved by the health authority, meets water quality regulations, and is accepted by the water purveyor.

**AUXILIARY WATER SUPPLY - UNAPPROVED:**

An auxiliary water supply which is not approved by the health authority and the water purveyor.

**AWWA:**

AWWA is the abbreviation for the American Water Works Association.

**BACKFLOW:**

The flow of water or other liquids, gases or solids from any source back into the customer's plumbing system or the water purveyor's water distribution system.

**BACKFLOW PREVENTION ASSEMBLY:**

The nomenclature "assembly" refers to a backflow preventer which are designed to be in-line tested and repaired, and to meet the head loss and flow requirements of the recognized approval authority. The "assembly" consists of the backflow prevention unit, two resilient seated shutoff valves, and test cock(s).

**BACKFLOW PREVENTION DEVICE:**

The nomenclature "device" refers to a backflow preventer that is not designed for in-line testing.

**BACKFLOW PREVENTION ASSEMBLY TESTER-CERTIFIED (BAT):**

See Certified Backflow Assembly Tester.

**BACKPRESSURE:**

Water pressure which exceeds the operating pressure of the pressure of the purveyor's potable water supply.

**BACKSIPHONAGE:**

Backflow due to a negative or reduced pressure within the purveyor's potable water supply.

**BAROMETRIC LOOP (BL):**

A loop of pipe rising at least 35 feet at its uppermost point, above the highest point on the downstream piping.

**CAS:**

CAS is the abbreviation for the Canadian Standards Association.

**CAPILLARY ACTION:**

A form of backflow where liquids can be drawn into small openings of a water outlet by capillary action. Capillary action (or attraction) is the energy that causes a liquid to adhere to the internal walls of a small pipe, overcoming the internal cohesion of the liquid.

**CERTIFIED BACKFLOW ASSEMBLY TESTER:**

A person who is certified by the administrative authority having jurisdiction to test backflow prevention assemblies.

**CERTIFIED CROSS CONNECTION CONTROL SPECIALIST/INSPECTOR:**

A person who is certified by the administrative authority having jurisdiction to administer a cross connection control program and to conduct cross connection surveys.

**CHECK VALVE:**

The term "check valve" is a generic term used for a variety of valves that specifically allow flow in one direction only. The variety of such valves include slanting disc checks, silent checks (wafer or globe), automatic control checks, rubber flapper checks, double disc swing checks, swing checks (internally or externally weighted), and a spring loaded check. A check valve in an approved assembly must be an approved check valve (components of double check valve assemblies, reduced pressure backflow assemblies, pressure vacuum breakers etc.) that is drip-tight in the normal direction of flow when the inlet pressure is at least one p.s.i.

**CONFINED SPACE:**

Any space having a limited means of egress and not intended for continuous occupancy, which is subject to the accumulation of toxic or flammable contaminants or an oxygen deficient atmosphere.

**CONTAINMENT:**

To restrict or limit the flow of contaminated or polluted water to the meter or service connection where the public water enters the private (customer's) water system. The two systems are separated by a back flow preventer commensurate with the degree of hazard. (See also Premise Isolation.)

**CONTAMINATION:**

An impairment of the quality of the potable water which creates an actual hazard to the public health through poisoning or through the spread of diseases by sewage, industrial fluids or waste. Also defined as severe or high hazard. Also see **Pollution and Maximum Contaminant Level.**

The term "contamination" used in EPA and state drinking water regulations "Maximum contamination level" bestows a different meaning than that used in describing a cross connection hazard.

**CRITICAL LEVEL:**

The point on a vacuum breaker which determines the minimum elevation above the flood level rim of the fixture or receptacle served at which the vacuum breaker may be installed.

**CROSS CONNECTION:**

A cross connection is any actual or potential physical connection between a potable water line and any pipe, vessel, or machine containing a non-potable fluid or has the possibility of containing a non-potable fluid, such that it is possible for the non-potable fluid to enter the water system by backflow. A cross connection could be any physical arrangement whereby a potable water supply is connected, directly or indirectly, with any non-potable or un-approved water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or any 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 imparting contamination to the potable water supply as a result of backflow. See also **Point of Hazard.**

**DOUBLE CHECK DETECTOR ASSEMBLY (DCDA):**

An approved assembly consisting of two approved double check valve assemblies, set in parallel, equipped with a meter on the bypass line to detect small amounts of water leakage or use

**DOUBLE CHECK VALVE ASSEMBLY (DCVA)**

An approved assembly consisting of two independently operating check valves, loaded to the closed position by springs or weights, and installed as a unit with, and between, two resilient seated shutoff valves and having suitable connections for testing.

**DISTRIBUTION SYSTEM:**

The network of pipes and other facilities which are used to distribute water from the source, treatment, transmission, or storage facilities to the water user.

**DUAL DISTRIBUTION SYSTEM:**

A facility with two water systems, one potable and the other non-potable. The purpose of the non-potable water system is to reduce the cost of the potable water supply.

**FLOOD LEVEL:**

The highest level to which water, or other liquid, will rise within a tank or fixture (i.e. the overflow rim of the receiving vessel).

**GRAY WATER:**

Gray water is untreated household waste water which has not come into contact with sewage. Gray water can include used water from kitchen sinks, dishwasher waste water, bathtubs, showers, bathroom wash basins and water from clothes washing machines and laundry tubs.

**HAZARD-PLUMBING:**

"Plumbing Hazard" is a cross-connection in a customer's potable water system.

**HAZARD-PUBLIC HEALTH:**

A condition, device or practice which is conducive to the introduction of waterborne disease organisms, or harmful chemical, physical, or radioactive substances into a potable water system, and which presents an unreasonable risk to health.

**HEALTH AUTHORITY:**

The appropriate state or provincial departments or districts of public health or, in some cases, a local agency having jurisdiction.

**HEAT SINK:**

The use of the purveyor's potable water system as a heat sink, by taking water from a water main, passing it through a heat exchanger and then returning the warm water back to the purveyor's potable water system.

**HIGH HEALTH HAZARD:**

A physical or toxic hazard which could be detrimental to ones health.

**HOSE FAUCET VACUUM BREAKER (HFVB):**

Hose faucet vacuum breakers are vacuum breakers that are either incorporated into or attached onto the hose faucet (hose bib) threads.

**INDUSTRIAL WATER:**

See Process Water.

**INDUSTRIAL PIPING SYSTEM:**

A customer's "industrial piping" system refers to that piping system that transmits, confines, or stores any fluids that are not approved potable water. Such a system would include all pipes, tanks, fixtures, equipment and other extensions of the non-potable water system.

**IN-PLANT ISOLATION:**

The practice of installing backflow prevention assemblies at the point of hazard to protect one or more actual or potential cross connections within a premise. See **Point of Hazard.**

**INTERNALLY-LOADED CHECK VALVE:**

A check valve which is internally loaded, either by springs or weights, to the extent it will be drip tight with a l p.s.i. differential in the direction of flow.

**INTERNAL PROTECTION:**

Internal isolation is the practice of installing backflow prevention assemblies to protect an area within a customer's facility.

**LOCAL ENFORCEMENT AUTHORITY:**

Authorized agent of the regulatory authority and/or the water purveyor.

**LOW HEALTH HAZARD:**

A low hazard means those contaminants which, at the levels found in the water, could cause aesthetic problems such as adverse effects on the taste, odor and color of the water or have a detrimental effect on the quality of the purveyor's potable water supply, but which does not present a danger to health.

**MAXIMUM CONTAMINANT LEVEL (MCL):**

The maximum amount of a contaminant allowed in a sample of water according to federal and state (provincial) regulations. The importance of this to cross connection is that the presence of a higher level than at the source may signify the occurrence of a cross connection incident.

**NON-POTABLE FLUID:**

Any water, other liquid, gas, or other substance which is not safe for human consumption, or is not a part of the public potable water supply as described by the health authority.

**NON-POTABLE PIPING SYSTEM:**

A piping system which is made of non-potable material. Such materials are to be considered non-potable if they can affect either the aesthetics or degradation of the healthfulness of the water. Examples of such pipe are black iron and certain plastics.

**PATHOGENIC:**

"Pathogenic" means a specific agent (bacterium, virus or parasite) causing or capable of causing disease.

**POLLUTION:**

An impairment of the quality of the public potable water supply which does not create a hazard to the public health but which does adversely affect the aesthetic qualities of such potable waters for domestic use. Also defined as low hazard. See Also **Contaminant** and **Maximum Contaminant level.**

An impairment of the quality of potable water which creates an actual hazard to the public health through poisoning or through the spread of diseases by sewage, industrial fluids or waste. Also defined as high hazard.

**POINT OF HAZARD:**

The point where a real or potential cross-connection (potable water coming in contact with non-potable water, gases, or other fluids) can be determined. More obvious points include fixtures and any systems including boilers, fire protection services, or any system where the possibility of chemical contact or stagnation exists).

**POTABLE WATER:**

Water which is safe for human consumption, free from harmful or objectionable materials, as described by the health authority. (See **Safe Drinking Water.**)

**PREMISE ISOLATION:**

The practice of protecting the public potable water supply by installing backflow prevention assemblies at or near the point where water enters the premise. This type of protection does not provide protection to personnel on the premise.

**PRESSURE VACUUM BREADER ASSEMBLY (PVBA):**

An approved assembly consisting of a spring loaded check valve loaded to the closed position, an independently operating air inlet valve loaded to the open position and installed as a unit with and between two resilient seated shutoff valves and with suitable connections for testing. It is designed to protect against back siphonage only.

**PRIVATE HYDRANT:**

Any hydrant which is not owned, operated or maintained by the local water purveyor or his agent.

**PROCESS WATER:**

Water that is directly connected to, or could come in contact with, an extreme high hazard situation, and must never be consumed by humans.

**REASONABLE RISK:**

The amount of risk acceptable to a prudent and reasonable water purveyor using reasonable diligence.

**RECLAIMED WATER:**

Wastewater that has been treated for non-potable use within the same facility or premise. Examples of use would be irrigation and for industrial use.

**REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA):**

An approved assembly consisting of two independently operating check valves, spring loaded to the closed position, separated by a spring loaded differential pressure relief valve loaded to the open position, and installed as a unit with and between two resilient seated shutoff valves and having four suitable test cocks for checking the water tightness of the check valves and the operation of the relief valve.

**REDUCED PRESSURE DETECTOR ASSEMBLY (RPDA):**

An approved assembly consisting of two approved reduced pressure backflow assemblies, set in parallel, equipped with a meter on the bypass line to detect small amounts of water leakage or use. This unit must be purchased as a complete assembly. The assembly may be allowed on fire line water services in place of an approved reduced pressure backflow assembly upon approved by the local water purveyor.

**SAFE DRINKING WATER ACT:**

The Safe Drinking Act was legislation that was enacted by the United State Congress in 1974 to ensure that the public is provided with safe drinking water, thereby protecting the public welfare.

**SAFE DRINKING WATER:**

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

**SERVICE CONNECTION:**

"Service Connection" means the piping connection by means of which water is conveyed from the water purveyor's distribution main to a customer's premise. For a community water system, the portion of the service connection which conveys water from the distribution main to the customer's property line, or to the service meter where provided, is under the jurisdiction of the water purveyor.

**SYSTEM HAZARD:**

The actual or potential threat of severe danger to the physical characteristics, as well as serious water quality deterioration of public and private plumbing systems, such as, the damage caused by air or steam in piping systems not designed for such substances.

**THERMAL EXPANSION:**

Thermal expansion is the pressure increase due to a rise in water temperature. The problem becomes acute in heated water piping systems when such system becomes "closed" due to a backflow preventor which disallows expansion beyond that point.

**TOXICITY:**

The degree to which a substance is toxic, that is poisonous, in relating to affecting the potability of the water supply.

**UNREASONABLE RISK TO HEALTH:**

A risk to health which is not necessary or acceptable to the water purveyor and/or consumer; a term used to distinguish what type of backflow prevention should be required. See also **Reasonable Risk.**

**USC FCCCHR:**

"USC FCCCHR" is the abbreviation for the University of Southern California Foundation for Cross Connection Control and Hydraulic Research. It is an agency which tests and approves backflow prevention assemblies by approved standards.

**USED WATER:**

Any potable water which is no longer in the purveyor's distribution system. In most cases, the potable water has moved past (downstream of) the water meter and/or the property line.

**WATER PURVEYOR:**

Any agency, subdivision of the state, municipal corporation, firm company, mutual or cooperative association, institution, partnership, person or other entity that owns or operates a public potable water system. It also means the authorized agents of such entities as listed above.

**WATER SYSTEM:**
"Water System" means a system for the provision of piped water for human consumption.

Adopted this 4th, day of March, 1999, by the Board of Commissioners of the East Wenatchee Water District, Douglas County Washington at a regular meeting thereof.

Mike McCourt, President

ATTEST:

Larry Witte, Secretary
/sr

**EAST WENATCHEE WATER DISTRICT**
**`APPLICATION FOR WATER SERVICE**
**(Cross Connection Control Ordinance)**

OWNER'S NAME:_____

MAILING ADDRESS:_____

SERVICE LOCATION ADDRESS:_____

_____

CITY STATE ZIP HOME NO. WORK NO.

COMPLETE PROPERTY DESCRIPTION:_____

_____

The undersigned applicant hereby applies for a water connection to the above described property. The applicant is the owner of the described property or the authorized agent of the owner. By signing this application, the applicant agrees, as a condition of the East Wenatchee Water District providing and continuing service to the above described property, to comply with all provisions of the current Resolution #462, or the latest revision thereof, and other such rules and regulations now existing or which may be established from time to time governing the public water system. The applicant specifically agrees to install and maintain at all times their plumbing system in compliance with the most current edition of the plumbing code having jurisdiction as it pertains to the prevention of water system contamination, prevention of pressure surges and thermal expansion in their water piping. For thermal expansion, it shall be assumed that a check valve is installed by the East Wenatchee Water District on the water service pipe. Further, the applicant agrees not to make a claim against the East Wenatchee Water District or its agents or employees for damages and/or loss of production, sales or service, in case of water pressure variations, or the disruption of the water supply for water system repair, routine maintenance, power outages, and other conditions normally expected in the operation of a water system.

_____ _____

Applicant's Signature Date

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(FOR EAST WENATCHEE WATER DISTRICT'S USE ONLY)