

POLICY GOVERNING CROSS-CONNECTIONS, AUXILIARY INTAKES, BYPASSES, AND INTERCONNECTIONS

It is agreed by Winchester Utilities that the following provisions for controlling cross-connections shall apply to the Winchester Water System and to all customers of the water system as deemed by the Winchester City Ordinance No. 785.

SECTION 1. DEFINITIONS

The following definitions and terms shall apply in the interpretation and administration of this policy:

- A. PUBLIC WATER SYSTEM: The water works system which furnishes water to the Winchester Water System (WWS) is recognized by the Tennessee Department of Environment and Conservation (TDEC).
- B. CROSS-CONNECTIONS: Any physical arrangement whereby a WWS is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains, or may contain, contaminated water, sewage, or other waste or liquid of unknown or unsafe quality, which may be capable of imparting contamination to the WWS as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices through which, or because of which, backflow could occur are considered to be cross-connections.
- C. AUXILIARY WATER SUPPLY: Any water supply on or available to the premises other than the purveyor's approved public potable water supply.
- D. BACKFLOW: The flow of water or other liquids, mixtures, or substances, under positive or reduced pressure in the distribution pipes of potable water supply from any source other than its intended source.
- E. BACKFLOW PREVENTERS: A device or means designed to prevent backflow or back-siphonage.
 - 1. Double Detector Check Valve Assembly: An assembly of two (2) independently operating spring-loaded check valves with tightly closing shut-off valves on each side of the check valves, plus properly located cocks for the testing of each check valve, a bypass line with a smaller unit, as described above, and a U.S. gallons meter for the detection of improper usage of water.

2. **Reduced Pressure Principle Backflow Preventer:** An assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two (2) check valves, tightly closing shut-off valves on each side of the check valves properly located test cocks for the testing of the check valves and the relief valve.
- F. **BACK-SIPHONAGE:** The flow of water or other liquid mixtures of substances into the distribution pipes of potable water supply system from any source other than its intended source caused by the reduction of pressure in the potable water supply system.
- G. **BYPASS:** Any system of piping or other arrangement whereby the water may be diverted around any part or portion of the backflow prevention device(s).
- H. **CONTAINMENT:** A method of backflow prevention which requires a backflow prevention device at the water service entrance.
- I. **CONTAMINANT-POLLUTANT:** A substance that will impair the quality of the water to a degree that it creates a health hazard to the public leading to illness or the spread of disease.
- J. **DEVICE:** A District approved, readily testable, fully-assembled device with appurtenances fit for the particular application and capable of containing water of a lesser-known quality from the District's distribution system and/or the customer's domestic system.
- K. **HEALTH SERVICE FACILITY:** A facility which offers life-saving or vital life-prolonging health services to the public, i.e., hospitals and dialysis clinics, etc.; however, does not include clinics, dental offices, medical doctor offices, which do not routinely administer life-giving or vital life-prolonging health services on a critical-needs basis and which would turn such over to those other facilities fitting this definition. (Note: Any dispute as to whether a facility falls within this definition will be on the health provider.)
- L. **INTERCONNECTION:** Any system of piping or other arrangement whereby the WWS is connected directly with a sewer, drain, conduit, pool, storage reservoir, or other device, which does or may contain sewage or other waste, or liquid which would be capable of imparting contamination to the public water system.
- M. **DISTRICT:** Winchester Water System including Franklin County, and parts of Grundy and Moore Counties.

- N. WATER SERVICE ENTRANCE: That point in the owner's water system beyond the sanitary control of the district generally considered being the outlet end of the water meter after the protective device and always before any unprotected branch.
- O. CROSS-CONNECTION AGENT: The Cross-Connection Agent, or his delegated representative, in charge of WWS is vested with the authority and responsibility for the implementation of a Cross-Connection Control Program and for the enforcement of the provisions of the Ordinance.
- P. OUTLET: A passage or vent for letting something out.

SECTION 2. COMPLIANCE WITH TCA

The WWS is to comply with Sections 68-221-701 through 68-221-720 of the Tennessee Code Annotated (TCA), as well as the Rules for Public Water Systems, legally adopted in accordance with this code, which pertain to cross-connections, auxiliary water supplies, bypasses, and interconnections and establish an effective on-going program to control these undesirable water uses.

SECTION 3. REGULATED

No person shall cause a cross-connection, auxiliary intake, bypass, or interconnection to be made, or allow one to exist for any purpose whatsoever, unless the construction and operation of same has been approved by the Tennessee Department of Health and Environment; and the operation of such cross-connection, auxiliary intake, bypass, or interconnection is at all times under the supervision of the General Manger of the public water system.

SECTION 4. INSPECTIONS

Winchester Utilities (WU) personnel shall inspect and document all properties served by the WWS where cross-connections with the water system are deemed possible. The frequency of inspections and re-inspections based on potential health hazards involved shall be established by WU in accordance with guidelines acceptable to the TDEC. WU or its authorized representative shall have the right to enter, at any reasonable time, any property served by a connection to WWS for the purpose of inspecting the piping system or systems thereof for cross-connections, auxiliary intakes, bypasses, or interconnections. On request, the owner, lessee, or tenant of any property so

served shall furnish to the inspection agency any pertinent information regarding the piping system or systems on such property. The refusal of such information or refusal of access, when reasonably requested, shall be deemed evidence of the presence of cross-connections.

SECTION 5. ENFORCEMENT

Any person who now has cross-connections, auxiliary intakes, bypasses, or interconnections in violation of this policy shall be allowed a reasonable time within which to comply with the provision of this policy. The allotted time required completing the necessary repairs shall be designated by WU after a thorough investigation of the existing conditions has been made by WU.

The failure to correct conditions threatening the safety of the public water system, as prohibited by this policy and the TCA, Section 68-221-711, within a reasonable time and within the time limits set by WU, shall be grounds for denial of the water service. If proper protection has not been provided after a reasonable time, the WU shall give the customer legal notification that the water service is to be discontinued and physically separate the WWS from the customer's on-site piping system in such a manner that the two systems cannot again be connected by an unauthorized person.

Where cross-connections, interconnections, auxiliaries, intakes, or bypasses are found that constitute an extreme hazard of immediate concern of contaminating the WWS the WWS shall require that immediate corrective action be taken to eliminate the threat to the public water system. Immediate steps shall be taken to disconnect the public water supply from the on-site piping system unless the hazard(s) is/are corrected immediately.

SECTION 6. APPLICATION

Where the nature of use of the water supplies to the premises by the WWS is such that it is deemed by WWS:

- A. That the owner and/or tenant of the premises cannot or is not willing to demonstrate to the official in charge of the system, or his representative, that the water use and protective feature of the plumbing are such as to propose no threat to the safety or potability of the water system; and/or
- B. That the nature and mode of operation within the premises are such that frequent alterations are made to the plumbing; and/or

- C. That there is likelihood that protective measures may be subverted, altered, or disconnected.

Then the WWS or its designated representative shall require the use of an approved device on the service line serving the premises to assure that any contamination that may originate on the customer's premises is contained therein. The protective device(s) shall be a reduced Pressure zone-type Backflow Preventer approved by the TDEC as to the manufacturer, model, and size. The method of installation of backflow protective devices shall be approved by WWS prior to installation, and shall comply with the criteria set forth by the TDEC. The installation shall be at the expense of the owner or tenant of the premises. Personnel or Designated Representatives of the WWS shall have the right to inspect and test device(s) on an annual basis or whenever deemed necessary. Water service should not be disrupted to test the device(s) without the knowledge of the occupant of the premises.

Where the use of water is critical to the continuance of normal operations or protection of life, property or equipment, duplicate devices shall be provided to avoid the necessity of discontinuing water service to test the device(s). Where it is found only one device has been installed and continuance of service may be critical, the WWS shall notify the occupant of premises of plans to discontinue water service and arrange for a mutually acceptable time to test the device(s). The WWS shall require the owner/tenant of the premises to make all repairs indicated within the time allotted, and the expense of such repairs shall be borne by the owner or tenant of the premises. These repairs shall be made by qualified personal acceptable to WWS.

The failure to maintain backflow prevention devices in proper working order shall be grounds for discontinuing water service to the premises. Likewise, the removal, bypassing, or altering of a protective device, or the installation thereof, so as to render the device ineffective, shall constitute grounds for discontinuance of water service. Water service to such premises shall not be restored until the owner/tenant has corrected or eliminated such conditions or defects to the satisfaction of WWS.

SECTION 7.

The potable water system made available on the properties served by the Public Water System shall be protected from possible contamination as specified herein. Any water outlet which could be used for potable or domestic purposes and which is not supplied by the potable system must be labeled in a conspicuous and reasonable manner as:

WATER UNSAFE

FOR DRINKING

Minimum acceptable sign shall have WHITE letters a minimum of one-inch high located on a RED background.

SECTION 8.

The requirements contained herein shall apply to all premises served by WWS regardless of political subdivision boundaries, and are hereby made a part of the conditions required to be met for the Winchester's WWS to provide water service to any premises. Such action, being essential for the protection of the water distribution system against the entrance of contamination, which may render the water unsafe health-wise, or otherwise undesirable, shall be enforced rigidly without regard to location of premises, relative to boundaries of any political subdivision.

SECTION 9.

Whenever any person neglects or refuses to comply with any of the provisions of this policy, the WWS shall discontinue the WWS service to any premises within which there is found to be, or the possibility exists, a cross-connection, auxiliary intake, bypass or interconnection. Water service shall not be restored until such cross-connection, auxiliary intake, bypass, or interconnection has been discontinued. Health Service Facilities shall not be turned off until given ninety (90) days' notice except where there is a serious hazard because of a cross-connection, auxiliary intake, bypass or interconnection.

SECTION 10.

Incorporated herein by reference is the Cross-Connection Control Program.

CROSS-CONNECTION CONTROL PROGRAM

I. PURPOSE

- A. To protect the WWS from the possibility of contamination or pollution by isolating, within its customers internal distribution system, contaminants or pollutants which could backflow or back-siphon into the public water system.
- B. To promote the elimination or control of existing cross-connections, actual or potential, between its customer's own water system and the Public Water Systems.
- C. To provide for the maintenance of a continuing program of cross-connection control, which will effectively prevent the contamination or pollution of all public water systems by cross-connection.

II. AUTHORITY

- A. The Federal Safe Drinking Water Act of 1974 and the statutes of the State of Tennessee, Department of Environment and Conservation, state that the water purveyor has the primary responsibility for preventing water from unapproved sources, or any other substances, from entering the public potable water system.
- B. These rules and regulations are adopted by the WWS.

III. RESPONSIBILITY

The WWS through its authorized Cross-Connection Agent shall be responsible for the protection of the water distribution system from contamination or pollution due to the backflow or back-siphonage of contaminants or pollutants through the water service connection. If, in the judgment of the Cross-Connection Agent of WWS, an approved backflow device is required at the utility's water service connection to any customer's premises, the Cross-Connection Agent, or their delegated agent(s), shall give notice in writing to said customer to install an approved backflow prevention device(s) at each service connection to their premises. The customer shall, within ninety (90) days, install such approved device(s), at his own expense; and failure or refusal, or inability on the part of the customer to install said device or devices within ninety (90) days shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

IV. ADMINISTRATION

- A. The utility will operate a cross-connection control program under the direction of state certified Cross-Connection personnel. The Cross-Connection Agent for the utility will be so certified.
- B. The program is to include the keeping of necessary records, which at a minimum fulfills the requirements of the federal laws, EPA regulations, state statutes, and the TDEC's Cross-Connection Regulations and is approved by the Board of Public Utilities.
- C. The owner and/or tenant who utilizes the water supply of the utility whether a signed-up customer or not shall allow their property or property under their control to be inspected for possible cross-connections and shall follow the provisions of the utility's program. At all times, the owner/tenant shall provide for the safety of the utility's personnel and third parties when inspecting the property.
- D. The utility requires that the public water supply be protected by containment; the owner shall be responsible to protect the water supply at and immediately after the water meter. (See drawings-Specifications.)
- E. The owner/tenant may have to comply with other applicable codes that affect the appurtenances that are used to supply water, i.e. the plumbing code of the City of Winchester.

V. REQUIREMENTS

- A. District
 - 1. For new installations, the district will review plans, provide on-site evaluation for determining the type of backflow preventer required and its location and perform inspection and testing. The owner/developer must arrange and schedule the appointments for these inspections and preconstruction reviews.
 - 2. For pre-existing facilities prior to the start of this program, the utility will perform surveys, evaluations, and inspection of plans and/or premises and inform the owner/tenant by letter of any corrective action deemed necessary, the method of achieving the correction, and the time allowed for the correction to be made. Ordinarily, ninety (90) days will be allowed; however, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in question.

3. In those non serious or non-hazardous situations, the utility shall inform the owner/tenant by letter of any failure to comply by the time of the first re-inspection. The utility will allow an additional thirty (30) days for the correction. In the event the owner/tenant fails to comply with the necessary corrections by the time of the second re-inspection, the utility will inform the owner/tenant by letter that the water service to the premises will be terminated within a period not to exceed five (5) days. In the event that the owner/tenant informs the utility of extenuating circumstances as to why the correction has not been made, an extension of time may be granted by the utility; but in no case will the extension exceed an additional ninety (90) days.
4. If the utility determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

B. OWNER/TENANT

1. The Owner/Tenant shall be responsible for the elimination or protection of all cross-connections on his premises. This shall be on a continuing basis.
2. The Owner/Tenant, after having been informed by a letter from the utility, shall at his expense, install, maintain and repair, any and all backflow preventers on their premises.
3. The Owner/Tenant shall correct any malfunction of the backflow preventer, which is revealed by periodic testing.
4. The Owner/Tenant shall inform the utility of any cross-connection of which the Owner/Tenant is aware but which the utility has not found.
5. The Owner/Tenant shall not install a bypass around any backflow preventer unless there is a backflow preventer of the same type on the bypass. Owners or Tenants who cannot shut down operations for testing of the device(s) must supply additional and/or parallel devices necessary to allow testing to take place. (Ref. Attachment A)
6. The Owner/Tenant shall install backflow preventers in a manner approved by the utility. (Ref. Attachment A)

7. The Owner/Tenant shall install only backflow preventers approved by the utility.
8. The Owner/Tenant will be required to install a backflow preventer at the service entrance if a private water source is maintained, even if it is not cross-connected to the utility's system.
9. In the event the Owner/Tenant installs plumbing to provide potable water for domestic purposes, which is on the utility's side of the backflow preventer, such plumbing must have its own backflow preventer installed.

VI. PERIODIC TESTING

- A. Reduced pressure principle backflow devices shall be tested and inspected at least annually.
- B. Periodic testing shall be performed by the utility's certified tester or their delegated representative.
- C. The testing done by the utility shall be conducted during the utility's regular business hours.
- D. Any backflow preventer, which fails during a periodic test, will be repaired or replaced within thirty (30) days of the test date. Upon completion of the repair, the device will be re-tested by the utility's appointed representative to insure correct operation. High hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. The certified tester will have authority to make final determination as to whether a hazardous situation exists. In other situations, a compliance date of not more than thirty (30) days after the test will be established. Parallel installation of two (2) devices is an effective means of the Owner/Tenant insuring uninterrupted water service during testing or repair of devices; and this is strongly recommended when the Owner/Tenant desires such water service continuity.

VII. RECORDS

The utility will initiate and maintain master files on customer cross-connection tests and/or inspections.

VIII. COMPLIANCE-ENFORCEMENT

Where it is deemed by the Cross-Connection personnel that the Owner/Tenant is not complying with the Cross-Connection Policy or not properly responding so as to make timely corrections, the utility shall have the right to turn the water service off at the meter to said property/facility. The Owner/Tenant shall have no recourse against the utility for any physical or economic damages as a result of said shut-off of service. Unless there is a serious threat, the utility will make every attempt to send notification of discontinuance of water service to the billing address.

**INSTALLATION CRITERIA
FOR
BACKFLOW PREVENTION DEVICES**

WU is prohibited by law from installing or maintaining a water service connection to a customer's private water system where cross-connection or backflow hazard exists or will probably exist, unless the public water supply system is properly protected against backflow.

The customer is responsible for the installation, operation and maintenance of such backflow prevention devices as may be necessary for the protection of the community water system.

All newly built commercial facilities will be equipped with reduced pressure backflow prevention devices in the main water service before any branch connections. Residential requirements for backflow prevention shall be as determined by WU.

The following existing commercial facilities will be equipped with reduced pressure backflow prevention devices in the main water service before any branch connections, but not limited to:

1. Apartments
2. Barber Shops
3. Beverage Bottling Plant
4. Beauty Shops
5. Beauty Schools and Colleges
6. Cannery
7. Car Wash
8. Chemical Plants
9. Dairy Farms
10. Film Laboratory
11. Food Processing Plant
12. Greenhouse (including residential)
13. Health Service Facility
14. Home for Aged
15. Hospital (human and animal)
16. Hotels and Motels
17. Irrigation Systems (all types including residential)
18. Laboratory
19. Meat Packing House and Rendering Plants

20. Medical Buildings
21. Metal Plating Plant
22. Mobile Home Parks
23. Morgue, Mortuary or Autopsy Facility
24. Nursery, Botanical
25. Office Complex (occupancy unknown)
26. Penal Institutions and Jails
27. Petroleum Process and Storage Plant
28. Printing Company
29. Sanitarium
30. Schools
31. Sewerage Treatment Plant and Sewerage Pump Stations
32. Stockyard
33. Shopping Center (occupancy unknown)
34. Chicken Houses
35. Hog Farms
36. Veterinarian Hospitals
37. Animal Shelters