

City of LaVergne, Tennessee
Municipal Water System
Cross Connection Control Program

June 2007
Updated January 2009
Updated July 13, 2012

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Vice Mayor
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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER SUPPLY
Nashville Environmental Field Office
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Nashville, Tennessee 37216

RECEIVED JUL 20 2012
[Handwritten signature]

July 17, 2012

File 442-66

Mr. Thomas Champagne
Project Manager, LaVergne Water Department
700 Bon Aqua Drive
LaVergne, Tennessee 37086

*Program Updated
July 13, 2012*

RE: Cross-Connection Control Plan and Ordinance - Accepted
LaVergne Water Department
PWSID# 0000386, Rutherford County

Dear Mr. Champagne:

The Division of Water Supply received revisions to your updated Cross-Connection Control Program on July 16, 2012. After review, Division staff have found that the plan is acceptable for use by your water system. Please keep this plan in a location accessible to water system staff and Division personnel. If you have any questions regarding this or any other matter, feel free to contact Bradley King at (615) 687-7054 or me at (615) 687-7031.

Sincerely,

Michael Murphy
Manager, Division of Water Supply
Nashville Environmental Field Office

cc: Central Office
File

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I. PURPOSE

1. To protect the public potable water supply served by the City of La Vergne Department of Public Works from the possibility of contamination or pollution by isolating, within its customers internal distribution system, such contaminants or pollutants which could back-flow or back-siphon into the public water system.
2. To promote the elimination or control of existing cross-connections, actual or potential, between its customers in-plant potable water system, and non-potable systems.
3. To provide for the maintenance of a continuing program of cross-connection control, which will effectively prevent the contamination or pollution of all potable water systems by cross-connection. (Ord. #2007-17, June, 2007)
4. The City of La Vergne Department of Public Works is to comply with Section 68-221-711 of the Tennessee Code Annotated, as well as the Rules of Public Water Systems, legally adopted in accordance with this policy/ordinance, which pertain to cross-connections, auxiliary intakes, bypasses, and interconnections, and establish an effective, ongoing program to control these undesirable water uses. (Revised January 2009)

II. AUTHORITY

1. The Federal Safe Drinking Water Act of 1974, and the statutes of the State of Tennessee under Tennessee Code Annotated, §§ 68-221-701 through 68-221-720, the water purveyor has the primary responsibility for preventing water from unapproved sources, or any other substances, from entering the public potable water system.
2. City of LaVergne Department of Public Works, Rules and Regulations adopted. (Ord. #91-11, Jan., 1992), (Amended Ord # 2007-17, June, 2007)

III. RESPONSIBILITY

The Director of Public Works shall be responsible for the protection of the public potable 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 Director of Public Works, an approved backflow device is required at the city's water service connection to any customer's premises, the director, or his delegated agent, shall give notice in writing to said customer to install an approved backflow prevention

device at each service connection to his premises. The customer shall, within 30 days install such approved device, or devices, at his own expense, and failure or refusal, or inability on the part of the customer to install said device or devices within thirty (30) days, shall constitute a ground for discontinuing water services to the premises until such device or devices have been properly installed. (Ord. #91-11, Jan.1992) (Amended Ord. # 2007-17, June, 2007)

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 Environment and Conservation and the operation of such cross-connections, auxiliary intake, bypass, or interconnection is at all times under the direct supervision of the Cross-Connection Control Manager/Coordinator of the Public Water System. (Revised January 2009)

IV. ADMINISTRATION

1. The department will maintain and operate a cross-connection control program, to include the keeping of necessary records, which fulfills the requirements of the Tennessee Department of Environment and Conservation Cross-Connection Regulations and is approved by the same. It shall be unlawful for any person to cause a cross-connection to be made or allow one to exist for any purpose whatsoever unless the construction and operation of same have been approved by the Tennessee Department of Environment and Conservation, and the operation of such cross-connection is at all times under the direction of the manager of the Public Water System. (Revised January 2009)
2. The owner/customer shall allow his property to be inspected for possible cross-connections, shall supply all test reports and pay all required fees, and shall follow the provisions of the department's program and the Tennessee Department of Environment and Conservation regulations if a cross-connection is permitted. (Revised January 2009)
3. If the department requires that the public water supply be protected by containment, including all fire sprinkler systems, the owner/customer shall be responsible for water quality beyond the outlet end of the containment device and should utilize appropriate fixture outlet protection for that purpose. (Revised January 2009)

The owner/customer may utilize public health officials, or personnel from the department, or their delegated representatives, or may retain department approved and State certified contractors to assist him in the

survey of his facilities and to assist him in the selection of proper fixture outlet devices, and the proper installation of these devices. (Ord. #91-11, Jan. 1992), (Amended Ord. # 2007-17, June, 2007) (Revised January 2009)

V. REQUIREMENTS

1. Department

- a. On all new installations, the department will provide on-site evaluation and/or inspection of plans in order to determine the type of backflow prevention assembly that will be required, will issue permit, and perform inspection and record all testing procedures and maintain an testing file. In any case, a minimum of a dual check valve will be required in any new residential construction. All new fire sprinkler systems will be installed and tested as required by the Fire Marshal, and all testing reports and installation details will be supplied to the Department prior to the issuance of the Certificate of Occupancy. (Revised January 2009)
- b. All commercial and industrial buildings must be protected by a reduced pressure backflow assembly device. (Revised May 2012)
- c. The department will not allow any potential or perceived cross-connection to remain unless it is protected by an approved backflow prevention assembly for which a permit has been issued and which will be regularly tested to insure satisfactory operation. (Revised January 2009)
- d. The department shall inform the owner/customer at the time of inspection ~~by letter~~, of any failure to comply. At the department's discretion, but not to exceed 30 days, the owner/customer shall comply with the required corrections. In the event the owner/customer fails to comply with the necessary correction by the time of the re-inspection, the department will inform the owner/customer, that the water service to the owner's/customer's premises shall be terminated within a period not to exceed seven (7) days. In the event that the owner/customer informs the department of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the department but in no case will exceed an additional seven (7) days. (Revised May 2012)
- e. If the department determines at any time that a serious threat to the public water system or public health exists, the water service will be terminated immediately. (Revised January 2009)

- f. The department shall have on file, a list of private contractors who are certified backflow device testers. All charges for these backflow prevention assembly tests will be paid by the owner/customer of the building or property. All backflow prevention assembly testing reports shall be supplied by the owner/customer to the department at initial installation, any required re-testing, and all annual testing as required by this program, on forms supplied by the department. (Revised May 2012)
- g. Any owner/customer deemed by the department to be a high health risk shall have an approved backflow device in place before water service is turned on; a high-risk owner/customer shall have an approved backflow assembly device in place within fifteen (15) days after water service being turned on; a low-risk owner/customer shall have an approved backflow assembly device in place within thirty (30) days after water service being turned on. (Revised May 2012)
- h. The department has a goal to randomly survey/re-survey 5% of the total residential cross-connections annually (Revised June 2012).

2. Owner/Customer

- a. The owner/customer shall be responsible for the elimination or protection of all cross-connections on his premises. (Revised January 2009)
- b. The owner/customer, after having been informed by the department, shall at his expense, install, maintain, and test, or have tested, any and all backflow prevention assemblies on his premises. (Revised May 2012)
- c. The owner/customer shall inform the department of any proposed or modified cross-connections and also any existing cross-connections of which the owner/customer is aware but has not been found by the department. All costs associated with the correction of these items are the responsibility of the owner/customer. (Revised January 2009)
- d. Non-payment of fees or other failures to comply with the La Vergne Cross Connection Control Program will result in disconnection of service and will be subject to all charges for disconnection and reconnection of service. (Ord. #91-11, Jan. 1992) (Amended Ord. # 2007-17, June, 2007) (Revised May 2012)

- e. All residential lawn irrigation systems will require a reduced pressure principle assembly. Residential customers with pools, saunas, or hot tubs not filled by a hard pipe directly or indirectly connected may be allowed to use an air gap and an atmospheric vacuum breaker at the hose bibb. However, if the pool or vessel is connected directly or indirectly by a hard line, a reduced pressure backflow preventer is required at minimum. (Revised May 2012)

VI. DEGREE OF HAZARD

The department recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of approved reduced pressure principle backflow prevention devices or double check valves. (Ord. #91-11, Jan. 1992) (Amended Ord. # 2007-17, June, 2007)

VII. PERMITS

1. Cross-connection permits are required for each backflow prevention assembly device on new building construction or remodeling and shall be obtained from the City of LaVergne Water Billing Department. A fee will be charged for the permit. (Revised May 2012)
2. Permits are non-transferable. Permits are subject to revocation and become immediately revoked if the owner/customer should so change the type of cross-connection or degree of hazard associated with the service, or if the device is replaced. New owners must obtain a new permit from the Water Billing department, and pay the current permit fee. (Revised January 2009)
3. Any owner/customer having a private well or other private water source, must have a permit if the well or source has the potential to or is cross-connected to the department's system. Permission to cross-connect will be denied by the department. The owner/customer shall be required to install a backflow prevention assembly device at the service entrance if a private water source is maintained, even if it is not cross-connected to the department's system. (Revised May 2012)

VIII. PERIODIC TESTING

1. All backflow prevention assemblies shall be tested on at least a 12-month basis. All assemblies failing test procedures established by the Tennessee Department of Environment and Conservation Division of Water Supply

shall be repaired or replaced, and retested. (Revised May 2012)

2. The periodic testing conducted by the department shall be conducted during the department's regular business hours. Exceptions to this will occur when at the request of the owner/customer, which may require additional charges to cover the increased costs to the department. (Revised January 2009)

3. Backflow prevention assembly devices will be tested more frequently than specified in (1) above, in cases where there is a history of test failures and the department feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional test will be borne by the owner/customer. (Ord. #91-11, Jan. 1992) (Amended Ord. # 2007-17, June, 2007) (Revised January 2009)

IX. RECORDS

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

X. FORMS

Appendix I contains the typical cross connection control program forms and documents for the use of the department. These forms may be revised at the department's discretion. (Revised May 2012)

XI. FEES AND CHARGES

The department will establish a list of fees and charges.

XII. BACKFLOW PREVENTION ASSEMBLY INSTALLATION REQUIREMENTS

Minimum acceptable criteria for installation of backflow prevention assemblies shall include the following:

1. All backflow prevention assemblies shall be installed at minimum in the approved orientation as indicated by the latest Approved List.

2. All new assemblies installed must be on the Approved Assemblies List maintained by the Division of Water Supply and existing assemblies must have status of approved.

3. Installation of assemblies shall be performed by person granted authority by the water provider. All backflow prevention assemblies installed in fire protection systems must be performed by persons possessing a fire sprinkler contractor license. Evidence of current certification and license must be on file with the Cross-Connection Control Coordinator/Manager before any installation or testing of the devices can be performed.
4. All assemblies shall be installed in accordance with the manufacturer installation instructions and by the State of Tennessee installation guide, from the State Manual or policies on cross-connection control, unless such instructions are in conflict with this policy, in which case the policy/ordinance shall control, and shall possess all test cocks and fittings required for testing the assembly. All test cocks will be fitted with adapters and all fittings shall permit direct connection to test kits used by the department.
5. The entire assembly including test cocks and valves shall have safe, permanent access for testing and repair and shall meet all confined space requirements of OSHA/TOSHA (Revised June 2012).
6. Reduced Pressure Backflow Prevention Assemblies shall be located so that the relief valve discharge port is a minimum of twelve (12) inches, plus nominal diameter of the supply line, above the floor surface. The maximum height above the floor surface shall not exceed sixty (60) inches.
7. Clearance of devices from wall surfaces or other obstructions shall be a minimum of six (6) inches; or if a person must enter the enclosure for repair or testing, the minimum distance shall be twenty-four inches.
8. Devices shall be protected from freezing, vandalism, mechanical abuse, and from any corrosive, sticky, greasy, abrasive, or other damaging substance.
9. Devices shall be positioned where discharge from a relief port will not create undesirable conditions. An approved air gap shall separate the relief port from any drainage system. Such air-gap shall not be altered without the specific approval of the department.
10. Devices shall be located in an area free from submergence or flood potential and cannot be placed in a pit.
11. **All** devices shall be adequately supported to prevent sagging.

12. An approved strainer shall be installed immediately upstream of all backflow prevention assemblies or shut-off valve, except on fire lines, using only non-corrosive fillings (e.g. brass or bronze) in the device assembly.
13. Gravity drainage is required on all installations. Below ground installations shall not be permitted for Reduced Pressure Principle Assemblies (detectors).
14. Fire hydrant drains shall not be connected to the sanitary sewer, and fire hydrants shall not be installed in such manner that back siphonage or backflow through the drain may occur.
15. Where jockey (low volume-high pressure) pumps are utilized to maintain elevated pressure, as in fire protection system, the discharge of the pump shall be on the downstream side of any check valve or backflow prevention assembly. Where the supply for the jockey pump is taken from the upstream supply side of the check valve or backflow prevention assembly, a backflow prevention assembly of the same type(s) required on the main line shall be installed on the supply line.
16. Fixed position, high volume fire pumps shall be equipped with suction limiting control to modulate the pump if the residual line pressure reaches 20 psi. If line pressure drops below 20 psi, the pump will shut off to protect the distribution system. This shut off system must be tested annually for proper operation and report of the test must be sent to the office of Cross-Connection Control.

XIII. WELLS

1. Any premises supplied by an additional source of water, other than that supplied by the La Vergne Department of Public Works, such as a well, must file with the La Vergne Department of Public Works a statement attesting that no cross connection exists on the premises. Such statement must include the location and a description of all additional water sources utilized on the premises and shall contain an agreement that no cross connections shall be permitted. Maximum backflow protection shall be required on all public water supplies to the premises. (See Appendix II-5 for Well User Agreement) (Revised June 2012).
2. Wells shall be visually inspected and re-inspected on an annual basis by an inspector to ensure no cross connection can exist (Revised June 2012).

Appendices

APPENDIX I
DEFINITIONS

DEFINITIONS

1. "Approved." Any condition, method, device, procedure accepted by the Tennessee Department of Environment and Conservation, Division of Water Supply and the City of La Vergne, Department of Public Works. (Revised January 2009)
2. "Auxiliary Water Supply." Any water supply, on or available, to the premises other than water supplied by the public water system. (Revised January 2009)
3. "Backflow." The reversal of the intended direction of flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of a potable water system from any source. (Revised January 2009)
1. "Backflow Prevention Assembly." An approved assembly designed to prevent backflow. (Revised January 2009)
 - a. "Air gap." A physical separation between the free flowing discharge end of a potable water supply line and an open or non-pressurized receiving vessel. (Revised January 2009)
 - b. "Approved Air Gap". An air gap separation with a minimum distance of at least twice the diameter of the supply line when measured vertically above the overflow rim of the vessel, but in no case less than one (1) inch. (Revised January 2009)
 - c. "Atmospheric Vacuum Breaker." A device which prevents back-siphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in water system.
 - d. "Barometric Loop." A fabricated piping arrangement rising at least thirty-five (35) feet at its topmost point above the highest fixture it supplies. It is utilized in water supply systems to protect against back-siphonage.
 - e. "Double Check Detector Assembly." A specially designed assembly composed of line size approved double check valve assembly, with a bypass containing a water meter and approved double check valve assembly specifically designed for such application. The meter shall register accurately for very low flow up to 3 gallons per minute and shall show a registration of all rates of flow. This assembly shall only be used to protect against non-health hazards and is designed

primarily for use on fire sprinkler systems. (Revised January 2009)

- f. "Double Check Valve Assembly." An assembly of two internally loaded check valves, either spring loaded or internally weighted, installed as a unit between tightly closing resilient seated shutoff valves and fitted with properly located resilient seated test cocks. This type of device shall only be used to protect against non-health hazard pollutants. (Revised January 2009)
- g. "Double Check Valve with Intermediate Atmospheric Vent." A device having two (2) spring loaded check valves separated by an atmospheric vent chamber.
- h. "Hose Bibb Vacuum Breaker." A device which is permanently attached to a hose bibb and which acts as an atmospheric vacuum breaker.
- i. "Pressure Vacuum Breaker Assembly." An assembly consisting of one or two independently operating spring loaded check valves (and an independently operating spring loaded air inlet valve located on the discharge side of the check valve(s), with tightly closing shutoff valve(s) on each side of the check valves and properly located test cocks for testing valves. This assembly is approved for internal use only and is not approved for premise isolation by the State of Tennessee. (Revised January 2009)
- j. "Reduced Pressure Principle Detector Assembly." A specifically designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a bypass containing a water meter and approved reduced pressure principle backflow prevention assembly specifically designed for such application. The meter shall register accurately for very low flow rates up to 3 gallons per minute and shall show registration for all flow rates. This assembly shall be used to protect against non-health and health hazards and used for internal protection. (Revised January 2009)
- k. "Reduced Pressure Principle Assembly." An assembly consisting of two (2) independently acting approved check valves together with hydraulically operating, mechanically independent, pressure differential relief valve located between the check valves and below the first check valve. These units shall be located between two tightly closing resilient seated shut-off valves as an assembly and equipped with properly located resilient seated test cocks. (Revised January 2009)

1. "Residential Dual Check." An assembly consisting of two (2) spring loaded, independently operating check valves without tightly closing shut-off valves and test cocks. Generally employed immediately downstream of the water meter to act as a containment device.
5. "Backpressure." A pressure in the downstream piping that is higher than the supply pressure. (Revised January 2009)
6. "Back-siphonage." Negative or sub-atmospheric pressure in the supply piping. (Revised January 2009)
7. "Bypass." Any system of piping or other arrangement whereby water may be diverted around a backflow prevention assembly, meter, or any other public water system control device. (Revised January 2009)
8. "Containment." A method of backflow prevention which requires a backflow prevention device at the public water service entrance. (Revised January 2009)
9. "Contamination." The introduction or admission of any foreign substances that cause illness or death. (Revised January 2009)
10. "Contaminant." Any substance introduced into the public water system that will cause illness or death. (Revised January 2009)
11. "Cross-Connection." Any physical arrangement whereby public water 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 contaminating the public water supply as a result of backflow caused by the manipulation of valves, because of ineffective check valves or backpressure valves or because of any other arrangement. (Revised January 2009)
12. "Cross Connection Control Coordinator/Manager." The person who is vested with the authority and responsibility for the implementation of the Cross-Connection Control Program and for the provision of this ordinance/policy. (Revised January 2009)
13. "Customer." Any natural or artificial person, business, industry, or governmental entity that obtains water, by purchase or without charges, from the water system. (Revised January 2009)

14. "Department." City of LaVergne Department of Public Works, Water Distribution System or their designee. (Revised January 2009)
15. "Direct Cross Connection." An actual or potential cross-connection subject to backsiphonage and backpressure. (Revised January 2009)
16. "Failed." The status of a backflow prevention assembly determined by a performance evaluation based on the failure to meet all minimums set forth by the approved testing procedure. (Revised January 2009)
17. "Fire System Classifications Protection." The classes of fire protection systems, as designated by the American Water Works Association "M14" for cross-connection control purposes based on water supply sources and the arrangement of supplies, are as follows.
 - a. **Class 1:** Direct connection to the public water main only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no anti-freeze or other additives of any kind; all sprinkler drains discharging to the atmosphere, dry well or other safe outlet.
 - b. **Class 2:** Same as Class 1, except booster pumps may be installed in connection from the street mains.
 - c. **Class 3:** Direct connection to the public water supply mains in addition to any one or more of the following: elevated storage tanks; fire pumps taking suction from above ground covered reservoirs or tanks; and pressure tanks.
 - d. **Class 4:** Directly supplied from public water supply mains, similar to Class 1 and Class 2, with an auxiliary water supply dedicated to fire department use and available to premises, such as an auxiliary supply located within 1,700 feet of the pumper connection.
 - e. **Class 5:** Directly supplied from public water supply mains and interconnection with auxiliary supplies such as pumps taking suction from reservoirs exposed to contamination, or from rivers, ponds, wells or industrial water systems: where antifreeze or other additives are used.
 - f. **Class 6:** Combined industrial and fire protection systems supplied from the public water mains only, with or without gravity storage or pump suction tanks. (Revised January 2009)
18. "Fixture Isolation." A method of backflow prevention in which a backflow prevention assembly is located to correct a cross-connection at an in-plant location rather than at an water service entrance.

19. “Hazard, Degree of.” A term derived from evaluation of the potential risk to public health and the adverse effect of the hazard upon the public water system. (Revised January 2009)
1. “Hazard, Health.” A cross-connection or potential cross-connection involving any substance that could, if introduced in the public water supply, caused death, illness, and the spread disease also known as a **High Hazard**. (Revised January 2009)
21. “Hazard, Plumbing.” A cross connection located in a customer’s potable water system plumbing that is not properly protected by an approved air gap or backflow prevention assembly. (Revised January 2009)
22. “Indirect Cross Connection.” An actual or potential cross connection subject to back siphonage only. (Revised January 2009)
23. “Industrial Fluid.” Any fluid or solution that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration that could constitute a health, system, pollution, or plumbing hazard if introduced into the public water supply. This shall include, but is not limited to: polluted or contaminated water, all type of process water or used water originating from the public water system and that may have deteriorated in sanitary quality; chemicals; plating acids and alkalis; circulating cooling water connected to an open cooling tower; cooling towers that are chemically or biologically treated or stabilized with toxic substance; contaminated natural water systems; oil, gases, glycerin, paraffin, caustic, and acid solutions, and other liquids or gases used in industrial processes, or for fire purposes. (Revised January 2009)
24. “Inspection.” An onsite evaluation of an establishment to determine if backflow prevention assemblies are needed by the customer to protect the public water system from actual or potential cross connections. (Revised January 2009)
25. “Interconnection.” Any system of piping or other arrangement whereby a public water supply is connected directly with a sewer, drain, conduit, or other device, which does, or may carry sewage or not. (Revised January 2009)
26. "Owner." Any person who has legal title to, or license to operate or habitat in, a property upon which a cross-connection inspection is to be made or upon which a cross-connection is present.

27. "Passed." The status of a backflow prevention assembly determined by a performance evaluation in which the assembly meets all minimums set forth by the approved testing procedure. (Revised January 2009)
28. "Performance Evaluation." An evaluation of an approved Double Check Valve Assembly or Reduced Pressure Principle Assembly (including approved Detector assemblies) using the latest approved testing procedures in determining the status of the assembly. (Revised January 2009)
29. "Person." Any individual, partnership, company, public or private corporation, political subdivision, or agency of the state department, agency or instrumentality of the United States or any other legal entity.
30. "Permit." A document issued by the department, which allows the use of a backflow prevention assembly.
31. "Pollutant." A substance in the public water system that would constitute a non-health hazard and would be aesthetically objectionable if introduced into the public water supply. (Revised January 2009)
32. "Pollution." The presence of a pollutant or substance in the public water supply that degrades its quality so as to constitute a non-health hazard. (Revised January 2009)
33. "Potable Water." Water that is safe for human consumption as prescribed by Tennessee Department of Environment and Conservation, Division of Water Supply. (Revised January 2009)
34. "Public Water Supply." An entity that furnishes potable water for general use and which is recognized as the public water supply by Tennessee Department of Environment and Conservation, Division of Water Supply. (Revised January 2009)
35. "Public Water System." A water system furnishing water to the general public for general use which is recognized as a public water supply by the State of Tennessee. (Revised January 2009)
36. "Service Connection." The point of delivery to the customer's water system; the terminal end of a service connection from the public water system where the department loses jurisdiction and control over the water. "Service Connection" shall include connections to fire hydrants and all other temporary or emergency water service connections made to the public water system. (Revised January 2009)

37. "State." The State of Tennessee, Tennessee Department of Environment and Conservation, Division of Water Supply. (Revised January 2009)
38. "Survey." An evaluation of a premise by a water system performed for the determination of actual or potential cross connection hazards and the appropriate backflow prevention needed. (Revised January 2009)
39. "Water Service Entrance." That point in the owner's water system beyond the sanitary control of the public water system; generally considered to be the outlet end of the water meter and always before any unprotected branch. (Revised January 2009)
40. "Water System." The water system operated, whether located inside or outside the corporate limits thereof, shall be considered as made up of two (2) parts, the Utility System and the Customer System.
 - a. The Utility System shall consist of the facilities for the production, treatment, storage, and distribution of water and shall include all those facilities of the water system under the complete control of the water department, up to the point where the Customer's System begins (i.e. downstream of the water meter). See Public Water Supply.
 - b. The Customer System shall include those parts of the facilities beyond the termination of the water department distribution system that are utilized in conveying water to the point of use. (Revised January 2009)

APPENDIX II
SAMPLE FORMS

CONNECT FORM FOR WATER SERVICE RESIDENCE

1. **FILL OUT THIS FORM COMPLETELY.**
2. **PHOTO ID**
3. **LEASE AGREEMENT (RENTERS)
SETTLEMENT STATEMENT (OWNERS)**
4. **\$50 NON REFUNDABLE SERVICE FEE**

FOR OFFICE USE ONLY

ACCOUNT# _____

SERVICE ORDER# _____

TODAY'S DATE
____/____/____

DATE SERVICE
NEEDED
____/____/____

NAME: _____

SERVICE ADDRESS: _____

SOC SEC # _____

DRIVER'S LIC# _____ STATE _____

PHONE# _____ CELL _____

MAILING ADDRESS (IF DIFFERENT FROM ABOVE)

EMPLOYED BY: _____ PHONE _____

ADDRESS: _____
CITY STATE ZIP

PLEASE
CIRCLE ONE

OWN RENT

\$50 SERVICE FEE
CASH CHECK
CREDIT CARD

SPOUSE / ROOMATE NAME: _____

SOC SEC# _____ PHONE# _____

IN CASE OF EMERGENCY (SOMEONE NOT LIVING WITH YOU THAT WE MAY CONTACT)

RELATIVE OR CONTACT NAME: _____

ADDRESS: _____ PHONE# _____

PREVIOUS HOME ADDRESS: _____

HAVE YOU HAD WATER SERVICE IN LA VERGNE BEFORE? YES NO

IF YES, WHAT WAS THE STREET ADDRESS? _____

I AGREE THAT THIS APPLICATION IS SUBJECT TO THE WATER DEPT. RULES & REGULATIONS, COPIES OF WHICH ARE OPEN FOR INSPECTION AT THE OFFICE OF THE WATER DEPT. AND THAT THESE RULES & REGULATIONS ARE PART OF THIS AGREEMENT.

SIGNATURE: _____ DATE: ____/____/____

(SERVICE IS NON-TRANSFERABLE)

RESIDENTIAL SURVEY - WATER CROSS CONNECTIONS

NAME: _____

ADDRESS: _____

HOT TUB: YES ___ NO ___

WATER TREATMENT SYSTEM: YES ___ NO ___ (POINT OF ENTRY)

POOL: YES ___ NO ___

IRRIGATION: YES ___ NO ___

BACKFLOW DEVICE: YES ___ NO ___ UNKNOWN ___

LA VERGNE CROSS CONNECTION BACKFLOW ASSEMBLY TEST REPORT

PASS
 FAIL

Service Address _____

Name of Premises _____ Location of Device _____

Device _____
Number/Manufacturer Model Size Serial Number

Test Kit _____
Manufacturer Serial Number Date Certified

RP DCDA DC RPDA

Reduced Pressure Principle Assembly

Relief Valve Opening Point	Check Valve #2 Backpressure Test	Check Valve #1	#2 Shutoff Valve	Check Valve #2
Opened at _____ psid	Closed Tight <input type="checkbox"/>	Held at _____ psid	Closed Tight <input type="checkbox"/>	Held at _____ psid
Did not open <input type="checkbox"/>	Leaked <input type="checkbox"/>	Leaked <input type="checkbox"/>	Leaked <input type="checkbox"/>	Leaked <input type="checkbox"/>

Date _____ Certified Tester # _____

Test by (signature) _____ Print Name _____

I certify that I have tested the above assembly and it meets the performance requirements for the State of Tennessee.

Comments: _____

All repairs must be completed for retest within _____ days.

Failure to have repairs done within given time frame may result in water service interruption without further notice. For assistance or questions please call Jeff Johnson at 615-967-5056.

Print Name _____

Customer's Signature _____

White- Office Yellow- Tester Pink- Customer

Residential Survey - Water Cross Connections

Address: _____

Date: _____

Hot Tub: Yes _____ No _____ Vacuum Breaker _____ Hard (Direct) Piped _____

Pool: Yes _____ No _____ Vacuum Breaker _____ Hard (Direct) Piped _____

Irrigation: Yes _____ No _____

Backflow Device: Yes _____ No _____

Other: _____

Steps Taken: _____

Inspector: _____ Date: _____

Well User Agreement

In accordance with the LaVergne Department of Public Works cross connection control program, a private well or auxiliary water source may not be connected in any manner to the public water supply unless proper protection against cross connection is provided. Only Reduced Pressure Backflow Preventers or approved air gaps may be used for protection. These devices must have prior approval by the department. Customers not in compliance with this rule will have their water service discontinued.

This serves as notification that a well will be utilized at the following address:

Please type or print

I (we) understand and agree that this system is, and shall remain totally segregated from the public water supply, and no unapproved or unauthorized cross connections, auxiliary intakes, bypasses, or interconnections will be permitted without the written approval of the Tennessee Department of Environment and Conservation and the LaVergne Department of Public Works.

I (we) further understand and agree that should an auxiliary water supply be connected to the public water system at the above address, maximum cross connection control equipment in the form of an approved air gap or reduced pressure backflow prevention device shall be installed to protect the public water supply.

Name: _____

Signature: _____

City of La Vergne, TN Date: _____

Cross Connection Program Account Number: _____

Backflow Permit Meter Number: _____

Customer Name: _____ Unit Serial Number: _____

Service Address: _____

Business: (circle one) Yes No Irrigation: (circle one) Yes No

Permit Fee: \$25 Method of Payment: _____

Customer Signature: _____

Employee Signature: _____

*Permit is per.device, non-transferable.
White: Cross Connection Program- Pink: Water Billing Yellow: Customer

APPENDIX III

CROSS CONNECTION CONTROL GENERAL INFORMATION

CROSS CONNECTION CONTROL GENERAL INFORMATION

State Law-Tennessee Code Annotated (Section 68-221-701 through 68-221-720)

Tennessee Code Annotated, Section 68-221-701 through 68-221-720, places the responsibility on the public water system, i.e. the La Vergne Department of Public Works, for supplying safe water to its customers and controlling cross connection hazards. This law specifically prohibits the water purveyor from installing or maintaining a water service connection to a customer where cross connections or backflow hazards exists or have a potential to exist. The Tennessee Department of Environment and Conservation requires that all public water suppliers have an ongoing Cross Connection Control Program. Local authorities must adopt a policy which authorizes cross connection control program activities. The program must include provisions for public education routine on-site inspections, enforcement, installation, testing and repair, and records maintenance.

The program relating to cross connection control was approved by the City of La Vergne, Board of Mayor and Aldermen in June, 2007. This policy provides for the implementation and operation of a program to effectively control cross connection hazards. This program specifically prohibits cross connections and makes provisions regarding the policies and operational aspects of program. The LaVergne Department of Public Works is responsible for the enforcement of this policy and has developed the following policies and procedures for the implementation and maintenance of this program.

Cross Connection Control Program Policies

Cross Connection Control Permits:

A cross connection control permit shall be required for the installation, testing, repair or alteration of any backflow prevention device connection to the public water supply for water service, fire protection or any other purpose. Anyone wishing to install, test or repair a backflow prevention device shall provide proof of valid cross connection control certification and a certificate of liability insurance, prior to the issuance of a permit. The cost of the permit is \$25.00 for each device to be installed, tested or repaired. A permit may be obtained in the LaVergne Department of Public Works office during normal business hours. At the time of permit issuance, the applicant should receive the following information:

Minimum Acceptable Installation Criteria for Backflow Prevention Devices

The LaVergne Department of Public Works has developed criteria for the installation of backflow prevention devices. These criteria establish a minimum standard for the proper installation of backflow prevention devices in the jurisdiction of the LaVergne Department of Public Works.

List of Currently Approved Backflow Prevention Devices

Only devices currently approved by the Foundation for Cross-Connection Control (FCCC&GR) and the Tennessee Department of Environment and Conservation, Division of Water Supply may be used for the control of cross connection hazards. Information on recently approved devices may be obtained from the Division of Water Supply or the manufacturer.

Cross Connection Control Certification

Valid, State of Tennessee issued, Certification of Special Training and Demonstration of Competency in the Installation, Maintenance and Testing of Backflow Prevention Devices is required to install, test or repair backflow prevention devices serviced by the LaVergne Department of Public Works. Proof of certification (photocopy of the certificate) shall be filed with the Department prior to the issuance of a permit for any of the above mentioned work. The following organizations can provide information on certification:

Fleming Environmental Training Center
2022 Blanton Drive
Murfreesboro, TN 37129-2912
Phone: (615)898-8090

Tennessee Assn. of Utility Districts
P.O. Box 2529
Murfreesboro, TN 37133-2529
Phone: (615)896-9022

Certificate of Liability Insurance

Any person installing, testing or repairing any backflow prevention device shall maintain on file with the Cross Connection Control Program Administrator a current copy of a valid Certificate of Liability Insurance in an amount of not less than \$500,000.00. Proof of insurance shall be on file prior to the issuance of any permit.

Internal Protection

In addition to the mainline backflow prevention device(s), internal protection of the potable water supply may be required. Internal protection is utilized to prevent the contamination of potable water after it has entered the customer's water piping system. In such cases, additional backflow prevention devices are necessary to isolate specific areas or sources of potential contamination.

Statement Required-Wells

Any premises supplied by an additional source of water, other than that supplied by the LaVergne Department of Public Works, such as a well, must file with the LaVergne Department of Public Works a statement attesting that no cross connection exists on the premises. Such statement must include the location and a description of all additional water sources utilized on the premises and shall contain an agreement that no cross connections shall be permitted. Maximum backflow protection shall be required on all public water supplies to the premises.

Installation/Testing Report and Tag

Any person installing, repairing, or testing any backflow prevention device shall, upon completion of the work, affix a completed "Installation/Tester Tag" upon the device. The tester of any backflow prevention device shall also complete and return the "Cross Connection Control Device Installer/Tester Report" prior to the approval of the device. The certified person doing the actual work upon the device shall complete the information on both items in their entirety. The Cross Connection Control Program Administrator shall inspect all newly installed devices, and shall attach either a blue "approved" or a red "rejected" tag. No devices shall be inspected or approved unless a completed "Installation/Tester Tag" is affixed to the device. If any device is rejected, the inspector will notify the person identified on the green tag.

All backflow prevention devices shall be tested at least annually by a person possessing a valid certification from the Tennessee Department of Environment and Conservation, Division of Water Supply, as outline above. A permit shall be required for this testing and records of all backflow prevention device testing shall be submitted to the department upon completion of each test.

State Program Information

The State of Tennessee, Department of Environment and Conservation, Division of Water Supply regulates and approves all municipal cross connection control programs. Further information regarding State requirements for a cross connection control program may be obtained from:

Department of Environment and Conservation
Division of Water Supply
6th Floor, L&C Tower
401 Church Street
Nashville, TN 37243-1549

APPENDIX IV

ORDINANCE 2007-17