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APPENDIX

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B. MADISONVILLE WATER SYSTEM CROSS-CONNECTION
CONTROL PLAN APP-B-1

APPENDIX B
MADISONVILLE WATER SYSTEM
CROSS-CONNECTION CONTROL PLAN¹

PURPOSE.

This plan describes the Madisonville Water System program of action designed to inform the public of the danger of cross-connection, to identify possible cross-connections, to insure that cross-connection control devices are installed where needed, and to set forth a schedule of annually testing and or repair of the installed control devices.

INFORMING THE PUBLIC.

Few members of the general public are aware of the potential public health danger from cross-connections. By informing the public of the potential health hazards from cross-connections a greater degree of cooperation for this program should be gained. The following measures will be used to inform our customers about the need for cross-connection control:

1. Reminders with water bills at least once each year.
2. Reminders attached to CCR reports yearly.
3. Posters at the water system office displayed one (1) month out of each quarter.
4. Furnish the local newspaper an example of a cross-connection contamination or pollution incider once each year.
5. Personal visits to commercial, industrial, and agricultural customer to explain the need for cross-connection control.
6. Contact made with developers to explain cross-connection control requirements as early as possible in the planning or construction stages.

The goal of all these measures will be that it is the customer's responsibility to eliminate or control cross-connections. Failure to do so (may or will), result in the termination of water services.

¹This plan was added to § 18-302 by Ord. #12-191-0, June 2012.

IDENTIFYING CROSS-CONNECTIONS.

The customer list will be reviewed again in an effort to identify those customers who are likely to have cross-connections, as far as practical. Such customers will be grouped into two (2) risk categories (e.g., very high and high) according to the degree of probable risk. In general those customers considered likely of being of the greatest potential threat to the water system will be visited first. Examples of very high risk customers would be: sewage treatment plants, hospitals, mortuaries, laboratories, pest exterminators, agricultural suppliers of bulk fertilizers, pesticides, herbicides, etc., manufacturers, chemical processors, dry cleaners, air washers, etc. Examples of some establishments that may be of somewhat lower risk would include such premises as: laundry mats, school, water treatment plants, restaurants and other food establishments, dairies, etc.

SCHEDULING VISITS TO VERY HIGH RISK CUSTOMERS.

When the reviewed list of customers with a very high degree of cross-connection risk has been put together, a schedule of on-site visits will be made. It is the goal of the City of Madisonville to complete visits to all customers identified in a timely manner. Our goal is to complete as soon as possible.

VISITS TO HIGH RISK CUSTOMERS.

When the very high risk customers have been visited, a schedule of visits to other high risk customers will be prepared as soon as possible. Other locations will likely be identified that will be added to the list of customers to receive either first or second priority.

VISITS TO NEW COMMERCIAL, INDUSTRIAL AND BUSINESS CUSTOMERS.

The City of Madisonville will continue to identify any new establishments while in the planning or early construction stages. The planned users of water will still be investigated. Cross-connection devices will be specified at needed locations. It is the City of Madisonville objective to have any needed backflow prevention devices installed during construction before water service is provided for new customers.

A CONTINUING PROGRAM OF SEARCH FOR CROSS-CONNECTIONS.

Visits will continue to be made to any remaining commercial, industrial, or institutional customers as well as agricultural customers where water is used directly in production or maintenance operations. In addition residential customers who may create cross-connection hazards will be identified and

visited. It is the goal of the City of Madisonville to revisit all premises where cross-connections have been corrected or where cross-connections are considered likely to be created at least annually following the initial visit.

FIELD VISITS PROCEDURES.

During cross-connection visits, a field sheet will be completed showing details of significant findings. Information to be recorded on the field sheet will include date of visit, customers name, mailing address, telephone number, person(s) contacted, description and locations of cross-connection problems, corrected action needed, etc.

Any cross-connection hazards found will be explained to the persons assisting in making the surveys. If there is any (1) uncertainty of the part of the individual making the survey as to what protective action should be taken or (2) the customer disagrees strongly as to the need for correction, the customer will be informed that the information obtained during the survey will be reviewed with the management of the water system and, with the systems consulting engineer or technical advisor. A written report containing any recommendations will be mailed to the customer as soon as possible.

ACTION TAKEN WHEN A CROSS-CONNECTION IS IDENTIFIED.

When a cross-connection is found, the following action will be taken:

1. Whenever possible, take immediate action to eliminate or reduce the cross-connection hazard.
2. Inform the customer by letter within ten (10) working days of finds and of required backflow control measures and a time limit for completing the corrective action.
 - A. Time limit may vary depending on difficulty of making correction up to a maximum of (ninety (90) days for high risk and fourteen (14) days for very high risk).
 - B. Customer will be asked to discuss with a representative of the water system any problems that may arise in meeting this time limit.
 - C. The customer will be supplied a list of acceptable backflow prevention devices and criteria to be followed in its installation and urged to ask for the water systems representative to visit the site to review details of the proposed installation immediately before starting the work.

- D. The customer will also be informed in writing of the water systems willingness to assist in identifying and correcting any remaining internal cross-connection problems for the protection of the occupants of the premises, insuring cross-connection control devices are installed and maintained.

INSPECTION OF INSTALLED- BACKFLOW PREVENTION DEVICES.

As soon as possible after the customer has installed a backflow prevention device(s), but no later than thirty (30) days for high hazard sites, fourteen (14) for very high hazard sites after the scheduled date for completion, the corrective measures will be inspected by a water system employee. The inspection will determine if the corrective measures have been installed correctly and any reduced pressure backflow prevention device, double check valve assembly, or pressure type vacuum breaker will be tested by a qualified individual using approved test equipment and test procedures.

ACTION TO BE TAKEN AFTER INSPECTION.

If the control device is installed properly and it functions properly, the customer will be advised of having been approved by a city employee, and added to a master list of backflow devices. If the device is not installed or if it does not function properly, the customer will be given thirty (30) days for high hazard and fourteen (14) days for very high hazard sites to complete installation or make required changes in installation or repairs. After reinspection, failure to have a properly functioning cross-connection device installed will result in possible termination of water services. In such an event services will only be started again by having a functioning control device installed and by paying a meter installation fee.

ANNUALLY TESTING OF CROSS-CONNECTION CONTROL DEVICES.

Each installed cross-connection control device will be inspected. All reduced pressure backflow prevention devices, double check valve assemblies and (pressure type vacuum breakers, if found) will be tested:

1. Upon initial installation.
2. Whenever disassembled for cleaning and repairs.
3. Annually as follows:
 - a. Reduced pressure backflow preventer - at least once every twelve (12) months, or more frequently for high risk situations.
 - b. Double check valve assemblies - at least once every twelve (12) months.

- c. Pressure type vacuum breaker - at least once every twelve (12) months.
4. When protective device is suspected of malfunctioning or in need of repairs.
5. When a protective device is found to be defective, a time frame will be given to the customer for proper repair(s). The customer will have ninety (90) days for high hazard and fourteen (14) days for very high hazard locations.

Test will be performed by a qualified water system or by another qualified individual holding a valid certificate, whose services will be secured by the water system as needed. Test procedures and equipment will conform to the latest, Edition of the Manual of Cross-Connection Control, Test reports of backflow prevention devices will be maintained as a part of the water systems permanent records, as well as being added to a master list of devices.

Where an air-gap separation, atmospheric vacuum breaker, dual check valve with atmospheric vent, etc., is being relied upon for protection from backflow, these devices will be inspected at least annually to determine that they have not been removed or altered as to be ineffective, and that the device is in good state of repair and is functioning properly. Attention will be given to any changes in water use patterns that may require a more positive protection plan.

PERSONNEL TO CARRY OUT PLAN.

This plan will be carried out by the City of Madisonville distribution department. Our goal will be to check at least one hundred (100) new customers, on a yearly time schedule. Also, we intend to devote two (2) to four (4) employee days of effort to carrying out the cross-connection control program each month of the year.

RECORDS.

Records will be maintained to document the Madisonville Water Systems efforts to protect against backflow. A file will permit ready review of findings of on-site visits, corrections required, correspondence, test records, etc., of the various premises visited. Data to be recorded for various on-site surveys will include such information as name and/or address of premises, owner's name and address, date of visit, person(s) contacted, cross-connection found, corrections needed, and date by which corrective measures need to be taken. In addition a file(s) will be utilized in scheduling routine revisits to inspect and test pressure type backflow devices and inspect air-gap separations, atmospheric vacuum breakers, etc. The file(s) will contain essential information on the type of protection, date installed, manufacturer, model, size, and serial number, where

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applicable, a brief history of previous inspections and/or test, date of test results, also the name of the inspector/tester, etc.