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FIELD SERVICES  
DRINKING WATER PROGRAM

## Cross Connection Control Ordinance

### MOBILIFE WATER CO.

PURPOSE: The purpose of this ordinance is to provide a basis for implementing the State [Provincial] Drinking Water Regulations, enacted to ensure safe drinking within the water systems which serve the public.

INTERPRETATION: Any interpretations of this document regarding scope, intent, degree of hazard or type of protection required, will be subject to the current accepted guidelines of the State [Province], at the time of the interpretation, and the regulations established herein.

DEFINITIONS: As used in this document, unless the context indicates otherwise, the following shall apply:

Air Gap Separation - The physical vertical separation between the free flowing discharge end of a potable water supply pipe line and the open or non-pressure receiving vessel.

Approved Backflow Prevention Assembly - An assembly which has been approved by the State [Province] and this City, for preventing backflow.

Atmospheric Vacuum Breaker - (also known as an anti-syphon valve) A device consisting of a single check valve in the supply line that opens to the atmosphere when the pressure in the line drops to atmospheric.

Auxiliary Water Supply - Any supply of water used to augment the supply obtained through the Purveyor's water system which serves the premises in question.

Backflow - The flow of water or other fluids in the direction opposite to the normal flow.

Backflow Prevention Assembly Tester - An individual who is Certified by the State [Province] and approved by the City, to test Backflow Prevention Assemblies.

Check Valve - A valve that permits flow in only one direction.

Contaminant - Any physical, chemical, biological, or radiological substance or matter in water which may render the water non-potable, according to State [Provincial] regulations.

Cross Connection - Any link or channel between piping which carries potable drinking water and the piping or fixtures which carry non-potable water or other substances.

Cross Connection Inspector - An individual Certified by the State [Province] and approved by the City, to inspect for cross connections.

Customer System - All plumbing, piping, and appurtenances on the customer's side of the point of metering or connection.

Double Check Valve Assembly - An assembly of two independently acting check valves with a shut off valve on each side of the two check valves. The assembly also has test ports for checking the water tightness of each check valve. The assembly must be an approved Backflow Prevention Assembly.

Double Detector Check Valve Assembly - Same as a Double Check Valve Assembly with the addition of a water meter and an additional Double Check Valve Assembly bypassing the main line assembly for the purpose of measuring low or proportional flow. The entire assembly must be an approved Backflow Prevention Assembly.

Facility Survey - An on-site review of the water source, facilities, equipment, operation, and maintenance for the purpose of evaluating the hazards to the drinking water supply.

Pressure Vacuum Breaker Assembly - A mechanical assembly consisting of one spring loaded check valve in the supply line and a spring loaded air inlet on the downstream side of the check valve which will open to atmosphere when the pressure in the assembly drops below one pound per square inch. The complete assembly consists of two shut off valves and two test ports for checking water tightness of the check valve. The Assembly must be an approved Backflow Prevention Assembly.

Reduced Pressure Backflow Prevention Assembly - (RP) An assembly for preventing backflow incorporating two check valves, a differential relief valve located between the two check valves, two shut-off valves, one on each end of the assembly, test ports for checking water tightness of the check valves and the operation of the relief valve. The Assembly must be an approved Backflow Prevention Assembly.

Reduced Pressure Detector Assembly - (RPD) Same as an RP Assembly with the addition of a water meter and an additional RP Assembly bypassing the main line Assembly for the purpose of measuring low or proportional flow. The complete Assembly must be an approved Backflow Prevention Assembly.

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

Secondary Contaminant - Contaminants which at levels generally found in drinking water do not present unreasonable risk to health, but do adversely affect taste, odor or color.

Service Connection - The point of delivery of water at or near the property line, generally at the water meter.

CUSTOMER SYSTEM OPEN FOR INSPECTION: The customer system shall be open for "Facility Survey" at all reasonable times to the Purveyor to determine whether cross connections or other structural or sanitary hazards including violations of these regulations exist. When such a condition becomes known, the Purveyor's Cross Connection Inspector shall cause the service to the premises to be immediately discontinued or denied by a physical break in the service until the customer has corrected the condition in conformance with these regulations.

BACKFLOW PREVENTION REQUIREMENTS: Backflow prevention assemblies shall be installed on each service line of a customer's system at or near the property line or immediately inside the building being served, but in all cases before the first branch line leading off the service line wherever any of the following conditions exist:

- 1) There is an auxiliary water supply which is, or could be, connected to the potable water piping.
- 2) Where there is piping for conveying liquids other than potable water, and where that piping is installed and operated in a manner which could cause a cross connection.
- 3) There are cross connections or intricate plumbing which make it impractical to ascertain whether or not a cross connection exists.
- 4) In the case where there has been a history of repeating the same or similar cross connection or a backflow, even though these have been removed or disconnected.
- 5) Where there is a building over two stories in height or any plumbing system that is greater than or equal to thirty feet above the water main from which it is served.
- 6) Where fire hydrants or fire systems are connected to the potable domestic water service within the property being served.
- 7) Where a single water service is used to supply three or more dwellings.
- 8) Where the water meter serving the property is one and one half inch or larger.
- 9) Where there is backflow or backsiphonage potential.

- 10) Where any fixture is subject to being submerged.
- 11) Where the system is not open for inspection.

THE TYPE OF BACKFLOW PROTECTION REQUIRED: The type of protection required shall be commensurate with the degree of hazard which exists as follows:

- 1) An approved Air Gap of at least twice the inside diameter, but not less than one inch, of the incoming supply line measured vertically above the top rim of the vessel, or an approved Reduced Pressure Backflow Prevention Assembly shall be installed where the substance which could backflow is a “contaminant” or potentially hazardous to health. Example of premises where these conditions may exist include hospitals, mortuaries, car washes, medical clinics, auxiliary water systems, boilers sewage piping, etc.
- 2) An approved Double Check Valve Assembly shall be installed where the substance which could backflow is a secondary contaminant. Example would include landscape irrigation systems, multiple dwelling units served by a single water service, etc.
- 3) An approved Pressure Vacuum Breaker or an Atmospheric Vacuum Breaker shall be installed where the substance which could backflow is objectionable but does not pose a risk to health and where there is no possibility of backpressure in the downstream piping.
- 4) In the case of all private fire services, an approved Backflow Prevention Assembly installed to the Purveyor’s construction specifications shall be required. The Purveyor may require a monitoring meter or detection system to detect unauthorized use or leakage within the system. The type of Backflow Prevention Assembly shall be as follows:
  - a) Low Hazard - Systems with or without a pumper connection but no auxiliary water supplies available, chemicals or additives, or other detectable cross connections require an Approved Double Check Valve Assembly.
  - b) High Hazard - Systems with auxiliary water supplies, chemical additives, or other detectable cross connection shall require an approved Reduced Pressure Backflow Prevention Assembly.

APPROVAL OF ASSEMBLIES: All Backflow Prevention Assemblies required under this ordinance shall be of a type and model approved by the State [Province] and this Purveyor.

OWNER'S DUTY FOR INSPECTION: It shall be the duty of the assembly owner of any premise where backflow assemblies are installed to have the assembly tested and certified as working immediately upon installation of the assembly, and at least once a year, or more often in those instances where successive inspections indicate repeated failure. The frequency of these tests or the replacement of the assembly because of repeated failure is at the discretion of the Purveyor. The tests, repairs, and or replacement of any Backflow Prevention Assembly shall be at the expense of the assembly owner and performed by a Backflow Prevention Assembly Tester who is currently certified by the State [Province] and approved by the Purveyor. Test, repair and or replacement shall be performed within thirty days of the test due date. The assembly owner is required to contact a Tester who can perform the test in the necessary time period. The Purveyor will notify the owner each year when the assembly is due for testing. The assembly owner shall notify the Purveyor a minimum of forty eight (48) hours in advance of when a test is to be performed, so that the Purveyor's Cross Connection Inspector may witness the test if they so desire. Records of such tests, repairs, and or replacement shall be submitted to the Purveyor within ten (10) days of such tests, repairs or replacement.

PREVIOUSLY INSTALLED ASSEMBLIES: Backflow Prevention Assemblies which were approved at the time they were installed but are not on the current list of approved assemblies, shall be permitted to remain in service provided they are properly maintained, are commensurate with the degree of hazard, are tested at least annually, and perform satisfactorily. When assemblies of this type are moved, or require more than minimum maintenance, they shall be replaced by assemblies which are on the list of approved assemblies by the State [Province] and approved by the Purveyor.

ENFORCEMENT: The Cross Connection Inspector shall cause the water service to the premises to be immediately discontinued or denied by a physical break in the service until the customer has corrected the condition in conformance with this ordinance in any of the following situations:

- 1) When it becomes known that a condition such as a cross connection, plumbing, structural or sanitary hazard, or other violation of this ordinance is present.
- 2) In those cases of extreme emergency, and where an immediate threat to life or public health is found to exist.
- 3) When, in other cases and after a reasonable length of time has been allowed as determined solely by the Purveyor's Cross Connection Inspector, the tests, repairs, and or replacement of assemblies or any other requirement within this ordinance is not performed in accordance with this ordinance.

**SEVERABILITY:** The provisions of this ordinance or severable. If any portion of this ordinance is held by a court of competent jurisdiction to be invalid or unenforceable for any reason, such determination shall not affect the validity of the remainder of the ordinance or its application to any other ordinance.