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CITY OF BAYFIELD WATER UTILITY CROSS-CONNECTION CONTROL PROGRAM



DRINKING WATER
IT'S YOUR RESPONSIBILITY TOO!

Established in 1913.

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Created 6/24/2010
Updated 1/31/2012

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CITY OF BAYFIELD WATER UTILITY **CROSS-CONNECTION CONTROL PROGRAM**

(1) DESCRIPTION. The City of Bayfield Water Utility, under the direction of the Department of Natural Resources Code NR 810.15, is required to develop and implement a cross-connection control program. The objective of this program is to prevent contamination of the municipal potable water supply through illegal interconnections between private, auxiliary, or emergency water supplies and the City's potable water distribution system.

(a) **RESIDENTIAL.** The Water Utility operators are the designated inspectors for all residential properties. For clarification purposes, rental properties containing four or fewer rental units will be deemed to be residential properties. The inspection guidelines are outlined in the Department of Administrative Code SPS 382.41. The Utility shall determine if a cross-connection exists, inform the customer whether or not a cross-connection exists, assess the severity of the interconnection, and determine if it can be corrected while still on-site. In the case that the cross-connection can be corrected immediately, corrections shall be made and the Utility will note that the residence is in compliance. If the cross-connection cannot be corrected while on-site, the Utility will inform the customer of the cross-connection and then schedule an appointment no less than 30 days from the initial inspection date to determine if the corrections were made. The Water Utility will have approved hose connection backflow preventers (ASSE 1052) available for purchase at inspection time. Customers will have the option of placing the cost of these backflow preventers on their water bill.

(b) **COMMERCIAL / INDUSTRIAL.** The Water Utility shall mail a letter and an inspection form to all commercial/industrial accounts, requiring each to have a licensed inspector or plumber perform a cross-connection inspection on their premises. Upon completion of the inspection, the inspector or plumber will notify the Water Utility of all illegal interconnections. Each commercial/industrial customer is then required to correct all illegal interconnections at their expense. The licensed inspector or plumber shall then indicate that the inspection is in compliance. The business representative and the inspector must then sign the inspection form, keep their designated copies, and forward the completed inspection form to the Water Utility.

(2) LOCAL AUTHORITY. Chapter 378 – Water Utility - Section 378-32 Cross connection control.

(3) SCHEDULE FOR INSPECTION / REINSPECTION. Inspection of residential properties shall take place every 10 years unless otherwise authorized by the Department of Natural Resources. Inspection of all non-residential properties shall take place at a minimum of every 2 years. The frequency of required inspections or reinspections, based on potential health hazards involved, may be shortened by the Utility. Records of inspections shall be kept at the City of Bayfield Water Utility office, located at 125 South First Street, and saved until the next compliant inspection is completed.

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(4) DESCRIPTION OF APPROVED METHODS AND DEVICES. The Water Utility references the Department of Administration Code SPS 382.41 for a list of approved methods and devices.

(5) FINAL OR DISCONTINUANCE OF WATER SERVICE.

- (a) **RESIDENTIAL**. The Water Utility shall make at least three attempts, no less than two months apart, to contact and schedule appointments with customers. Contacts may include phone conversations, phone messages, face-to-face conversations, and written notices left at the customer's residences. All attempts at contacts, no-shows, and cancelled appointments will be documented. In the event the Water Utility deems it necessary, the Water Utility shall provide records of contacts and non-compliance to the Public Works Committee. The Utility then reserves the right to follow the steps outlined in the Public Service Commission Code PSC 185.37 (11a. – 11f.).
- (b) **COMMERCIAL / INDUSTRIAL**. The Water Utility shall mail an initial letter outlining the cross-connection inspection directive, along with a commercial cross-connection inspection form and a list of local plumbers. Commercial customers will be given six months to have their inspections completed. Documentation of completed inspections will be kept on record at the Water Utility. Commercial customers who neglect to have the inspection completed after the initial six months shall be sent a follow-up letter and given an additional six months to comply. A second follow-up letter will be sent after the second six months has elapsed without a completed inspection. The customer shall then be given another six months to comply. In the event that a completed inspection is not submitted by the end of the third six month period, the Water Utility shall forward records of contact and non-compliance to the Public Works Committee. The Utility then reserves the right to follow the steps outlined in the Public Service Commission Code PSC 185.37 (11a. – 11f.).

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of the tank. If the tank is to remain in service during the inspection or the water will be sent to the distribution system following the inspection, all of the following requirements apply:

1. A minimum 0.5 mg/l chlorine residual shall be maintained in the tank throughout the inspection.
2. All equipment shall be dedicated for potable water use and is disinfected with a 200 ppm chlorine solution.
3. For all concrete ground reservoirs with cracks or signs of leakage, the top shall be soaked with water and the interior shall be checked for leaks.
4. A minimum of 2 bacteriologically safe samples shall be obtained from the tank after the inspection, one following the inspection and one 24 hours later.
5. A minimum pressure of 35 psi shall be maintained throughout the distribution system during the inspection.

(c) *Diver inspections.* Diver inspections shall involve the use of a commercial diver tethered to, and in communication with, the outside. Procedures shall be done in accordance with Section 4.4 of AWWA Standard C652-02 and Section 12.0 of the Consensus Standards for Commercial Diving and Underwater Inspection. The department recommends that the tank be removed from service during the inspection. If the tank is to remain in service during the inspection or if the water will be sent to the distribution system following the inspection, all of the following requirements apply:

1. A minimum 0.5 mg/l chlorine residual shall be maintained in the tank throughout the inspection.
2. All equipment shall be dedicated for potable water use and shall be disinfected with a 200 ppm chlorine solution. The inspector shall also be disinfected.
3. The inspection of the tank shall be done after the sediment is removed from the bottom of tank and shall include a visual inspection of any expansion joints.
4. For all concrete ground reservoirs with cracks or signs of leakage, the top shall be soaked with water and the interior shall be checked for leaks.
5. A minimum of 2 bacteriologically safe samples shall be obtained from the tank after the inspection, one following the inspection and one 24 hours later.

(d) *Robotic inspections.* Robotic inspections shall involve a rover unit with a fiber optic tether and video camera and shall include cleaning capabilities. If the tank is to remain in service during the inspection or if the water will be sent to the distribution system following the inspection, all of the following requirements apply:

1. A minimum 0.5 mg/l chlorine residual shall be maintained in the tank throughout the inspection.
2. All equipment entering the tank shall be dedicated for potable water use and be disinfected with a 200 ppm chlorine solution.
3. For all concrete ground reservoirs with cracks or signs of leakage, the top shall be soaked with water and the interior shall be checked for leaks.
4. A minimum of 2 bacteriologically safe samples shall be obtained from the tank after the inspection, one immediately following the inspection and one 24 hours later.

(3) DEPARTMENT NOTIFICATION. The department's regional drinking water staff person shall be given 48 hours prior notice of the date and time of the inspection.

(4) INSPECTION REPORT SUBMITTAL. Upon completion of the water storage facility inspection, a completed department report form shall be submitted to the department's regional drinking water staff person documenting the condition of the storage facility. The water supplier shall submit copies of any additional reports and videos prepared by the inspector.

Note: The report forms are available from the department's regional or central office drinking water program staff.

(5) MANHOLE COVER GASKET. Following all inspections and maintenance, the integrity of the gasket between the access manhole cover and curbing shall be checked and replaced if necessary to prevent the entrance of dust and insects. If no gasket is present,

one meeting s. NR 811.64 (7) requirements shall be provided to prevent the entrance of dust and insects.

History: CR 09-073: cr. Register November 2010 No. 659, eff. 12-1-10.

NR 810.15 Cross connections and interconnections. Unprotected cross-connections are prohibited. Cross-connections shall be protected as required in s. SPS 382.41. Water system interconnections are prohibited except as provided in sub. (2). In addition the following requirements shall be met:

(1) CROSS CONNECTION CONTROL PROGRAM. In order to protect the public water supply system, the water supplier for every municipal water system shall develop and implement a comprehensive cross connection control program for the elimination of all existing unprotected cross-connections and prevention of all future un-protected cross connections to the last flowing tap or end-use device. The program may include providing public education materials in lieu of inspections of low hazard portions of residential or commercial facilities. Low hazard areas consist of normal kitchen and bathroom fixtures. The water supplier shall keep a current record of the cross connection control program available for annual review by the department. The cross connection control program shall include:

(a) A complete description of the program and the administration procedures, including designation of the inspection or enforcement agency or agencies.

(b) Local authority for implementation of the program, such as ordinance or other governing rule.

(c) A time schedule for public education materials, surveys and follow up surveys of consumer premises for cross connections including appropriate record keeping. Unless otherwise authorized by the department, water suppliers for each municipal water system shall cause a survey to be conducted for every residential service a minimum of once every ten years or on a schedule matching meter replacement. Public educational materials, when being provided in lieu of low hazard inspections, shall be provided to the customer no less than every 3 years and with every cross connection survey. Unless a detailed alternative schedule is included in the cross connection control program and is approved by the department, water suppliers for each municipal water system shall cause a survey to be conducted for every industrial, commercial and public authority service a minimum of once every 2 years. Commercial properties of similar or lesser risk to residential properties may follow the same schedule as residential properties. Completed survey results shall be maintained by the water supplier until corrections and follow up surveys have been made.

(d) A complete description of the methods, devices, and assemblies which will be used to protect the potable water supply. Compliant methods, devices and assemblies are listed in s. SPS 382.41.

(e) Provisions for denial or discontinuance of water service, after reasonable notice, to any premises where an unprotected cross connection exists or where a survey could not be conducted due to denial.

(f) Submission to the department of a copy of an ordinance establishing a cross connection control program, an annual report including a total number of all service connections by category, and a report indicating the number of surveys completed in each category for that year.

(2) INTERCONNECTIONS WITH OTHER ACCEPTABLE WATER SOURCES. Interconnections between the public water supply system and another source of water are prohibited unless permitted by the department in individual cases. Approval of the department shall be obtained prior to the interconnection.

History: CR 09-073: cr. Register November 2010 No. 659, eff. 12-1-10; correction in (intro), (1) (d) made under s. 13.92 (4) (b) 7., Stats., Register January 2012 No. 673.

NR 810.16 Local well regulation program. Water suppliers for municipal water systems and communities served by a municipal water system, shall implement a program for the regulation of wells which are not part of the municipal water system and are located on premises served by the municipal water system.

SPS 382.41 Cross connection control. (1) SCOPE.

The provisions of this section set forth the requirements for the protection of water within water supply systems when and where there is the possibility of contamination due to cross connections or backflow conditions.

Note: The Department of Natural Resources governs the operation and design of community water systems and under s. [NR 811.09](#) requires the supplier of water to develop and implement a comprehensive cross connection control program.

(2) MATERIALS. (a) All devices, assemblies and mechanisms intended to protect water supplies relative to cross connection or backflow shall be of a type recognized and approved in accordance with ch. [SPS 384](#) and as described in sub. [\(4\)](#).

(b) All methods including barometric loops and air gaps intended to protect water supplies relative to cross connection or backflow shall be constructed of materials suitable for water supply systems in accordance with ch. [SPS 384](#).

(3) GENERAL REQUIREMENTS. Water supply systems and the connection of each plumbing fixture, piece of equipment, appliance or nonpotable water piping system shall be designed, installed and maintained in such a manner to prevent the contamination of water supplies by means of cross connections.

(a) *Types of cross connection control.* 1. Water supply systems shall be protected against contamination due to cross connections or backflow conditions by one of the methods or devices specified in Table 382.41-1 depending upon the situation or Table 382.41-2 depending upon the specific application or use, and the limitations specified in sub. [\(4\)](#).

2. For the situations described in par. [\(b\) 3.](#), cross connection control shall be provided as part of the fixture fitting outlet or in the water supply piping for the fixture fitting outlet.

(b) *Classifications.* For the purposes of this section:

1. The designation of a high hazard or low hazard situation shall be determined on the basis of how a toxic or nontoxic solution is intended or recommended by the manufacturer of the solution to interface with the potable water supply system.

2. a. A continuous pressure situation shall be considered to exist when a pressure greater than atmospheric within the water supply system exists for more than 12 continuous hours.

b. A noncontinuous pressure situation shall be considered to exist if the conditions in subd. [2. a.](#) do not occur.

3. A high hazard cross connection situation shall be considered to exist for a connection of the water supply system to:

a. Any part of the drain system; and

b. Any other piping system conveying water from nonpotable sources, including but not limited to lakes, rivers, streams or creeks.

4. Except as provided in subd. [5.](#), a high hazard cross connection situation shall be considered to exist at:

a. A water supply hose bibb, faucet, wall hydrant, sill cock or other outlet which terminates with hose threads allowing a hose to be attached;

b. A water supply faucet, wall hydrant or other outlet which terminates with a serrated nipple allowing a hose to be attached;

c. A water supply faucet, hydrant or outlet serving a sink used for building maintenance in a public building;

d. A chemical pot-feeder or automatic chemical feeder is installed to serve a boiler, cooling tower or chilled water system; and

e. In the water supply piping connecting to the outlet of a fire hydrant for any purpose other than fire suppression.

5. A cross connection shall not be considered to exist at the hose threaded outlet installed for the sole purpose of:

a. Draining a water supply system or any portion thereof;

b. Obtaining water quality samples of the water supply system or any portion thereof; or

c. Connecting individual residential automatic clothes washers.

6. a. A high hazard situation shall be considered to exist for the connection of 2 water supply systems one supplied by a public water supply and the other system supplied by a private well.

Note: The interconnection of a public water supply system and another source of water is addressed in s. [NR 811.09](#) and must be approved by the Department of Natural Resources.

b. Except as provided in subd. [7.](#), a low hazard situation shall be considered to exist for the connection of a piping system, including but not limited to automatic fire sprinkler systems, standpipe systems, and processing purposes, which provides potable water for nonrequired potable water uses.

Note: Cross connection control devices used in conjunction with automatic fire sprinkler systems are to be listed by an acceptable testing agency for such an application under the standards governing the design and installation of automatic fire sprinkler systems.

7. A cross connection situation shall not be considered to exist when a multipurpose piping system serves a one- or 2-family dwelling provided the sprinkler system is constructed of materials and joints suitable for water distribution systems as specified in ss. [SPS 384.30 \(4\) \(e\)](#) and [384.40](#), respectively.

(c) *Containment.* 1. For sewerage treatment facilities which are required to conform with ch. [NR 110](#), in addition to the cross connection control required for each potable water usage or water outlet, a reduced pressure principle backflow preventer shall be installed:

a. In the water service to each building or structure within the complex;

b. In the private water main upstream of all water services serving the facility; or

c. In the water distribution system upstream of all water outlets and in the process piping network upstream of all points of use, if both a water distribution system and a process network is contained within the same building or structure.

2. For marinas, wharves and docks where potable water outlets are provided to serve boats or ships, in addition to the cross connection control required for each potable water outlet or usage, a reduced pressure principle backflow preventer shall be installed in the water supply system to limit backflow into the water supply source.

3. The installation of a cross connection control device in the water supply system for a building or structure shall not alleviate the requirement to provide cross connection control for the connection of each plumbing fixture, piece of equipment, appliance or other piping system.

(d) *Prohibitions.* The use of a toxic solution as a heat transfer fluid in single-wall heat exchanger for potable water is prohibited.

(e) *Existing automatic fire sprinkler systems.* An alteration, modification or addition to an existing automatic fire sprinkler shall necessitate conformance with this section, if the:

1. Existing water supply line to the existing sprinkler system is increased in diameter; or

2. Existing device or method which had been previously recognized to address cross connection concerns is to be removed or replaced.

Table 382.41-1
Acceptable Cross Connection Control Methods, Devices or Assemblies

Methods or Assemblies of Cross Connection Control (Standard)	Situations and Conditions								
	Backpressure				Backsiphonage				
	Low Hazard		High Hazard		Low Hazard		High Hazard		
	Contin- ous	Noncon- tinuous	Contin- ous	Noncon- tinuous	Contin- uous	Noncon- tinuous	Contin- uous	Noncon- tinuous	
Pressure		Pressure		Pressure		Pressure		Pressure	
Air-gap Fittings for use with Plumbing Fixtures, Appliances, and Appurtenances (ASME A112.1.3)					X	X	X	X	
Air Gaps (ASME A112.1.2)	X	X	X	X	X	X	X	X	
Atmospheric Vacuum Breaker (CAN/CSA B64.1.1)						X		X	
Backflow Preventers with Intermediate Atmospheric Vent (ASSE 1012)	X	X			X	X			
Barometric Loops					X	X	X	X	
Dual Check Valve Type with Atmospheric Port Backflow Preventer (CAN/CSA B64.3)	X	X			X	X			
Hose Connection Backflow Preventers (ASSE 1052)	X ^a	X	X ^a	X	X ^a	X	X ^a	X	
Hose Connection Vacuum Breakers (CAN/CSA B64.2 and B64.2.2)	X ^a	X	X ^a	X	X ^a	X	X ^a	X	
Hose Connection Vacuum Breakers (ASSE 1011)	X ^a	X	X ^a	X	X ^a	X	X ^a	X	
Pipe Applied Atmospheric Type Vacuum Breakers (ASSE 1001)						X		X	
Pressure Vacuum Breaker Assembly (ASSE 1020)					X	X	X	X	
Reduced Pressure Principle Backflow Preventers And Reduced Pressure Fire Protection Principle Backflow Preventers (ASSE 1013)	X	X	X	X	X	X	X	X	
Reduced Pressure Principle Backflow Preventer (CAN/CSA B64.4)	X	X	X	X	X	X	X	X	
Spill Resistant Vacuum Breaker (ASSE 1056 and CAN/CSA B64.1.3)					X	X	X	X	
Vacuum Breaker (CAN/CSA B64.1.2)					X	X	X	X	

^a See limitation listed under s. [SPS 382.41 \(4\) \(c\) 1. a.](#)

Table 382.41–2**Acceptable Cross Connection Control Methods, Devices or Assemblies for Specific Applications**

Methods or Assemblies (Standard)	Types of Application or Use
Backflow Preventer for Beverage Dispensing Machines (ASSE 1022)	Beverage dispensers
Chemical Dispensing Systems (ASSE 1055)	Chemical dispensing systems
Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies (ASSE 1015)	Automatic fire sprinkler systems and standpipe systems Water-based fire protection system
Double Check Detector Fire Protection Backflow Prevention Assemblies (ASSE 1048)	Automatic fire sprinkler systems and standpipe systems Water-based fire protection system
Double Check Detector Valve Type Backflow Preventer (CAN/CSA B64.5)	Automatic fire sprinkler systems and standpipe systems Water-based fire protection system
Dual Check Backflow Preventer Wall Hydrant — Freeze Resistant Type (ASSE 1053)	Hose threaded outlet connection
Hand Held Showers (ASSE 1014)	Hand held shower assemblies
Laboratory Faucet Type Vacuum Breakers (CAN/CSA B64.7)	Laboratory faucets
Laboratory Faucet Vacuum Breakers (ASSE 1035)	Laboratory faucets
Pressurized Flushing Devices (Flushometers) For Plumbing Fixtures (ASSE 1037)	Flushometer plumbing fixtures
Reduced Pressure Detector Fire Prevention Backflow Prevention Assemblies (ASSE 1047)	Automatic fire sprinkler systems
Trap Seal Primer Valves, Water Supply Fed (ASSE 1018)	Traps for drain systems
Vacuum Breaker Tees [s. SPS 382.41 (5) (j)]	Water treatment devices
Wall Hydrants, Frost Proof Automatic Draining Anti-Backflow Type (ASSE 1019), types A or B	Hose threaded outlet connections
Water Closet Flush Tank Ball Cocks (ASSE 1002)	Gravity water closet flush tanks

(4) LIMITATIONS. (a) Cross connection control devices shall be limited in use in accordance with the respective standard, unless otherwise specifically permitted under this subsection.

(b) 1. Except for a deck-mounted device, a pipe applied atmospheric vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least 6" above all of the following:

a. The flood level rim of the receptor serving the water supply port.

b. The highest point downstream from the device where back-pressure would be created.

c. The highest point of an injection or aspiration port.

2. A deck-mounted pipe applied atmospheric type vacuum breaker shall be installed such that the bottom of the device or the critical level mark on the device is at least one inch above all of the following:

a. The flood level rim of the receptor serving the water supply port.

b. The highest point downstream from the device where back-pressure would be created.

c. The highest point of an injection or aspiration port.

(c) 1. a. The use of a hose connection backflow preventer, dual check backflow preventer wall hydrant-freeze resistant or a hose connection vacuum breaker in a continuous pressure situation shall be limited to campgrounds and marinas.

b. The use of a hose connection backflow preventer and a hose connection vacuum breaker shall be limited to the discharge side of a control valve such as a faucet or hose bibb.

2. A hose connection backflow preventer and a hose connection vacuum breaker may not be employed in backpressure situations of more than 10 feet of water column.

(d) A backflow preventer with intermediate atmospheric vent:

1. May not be employed in backpressure situations of more than 150 psig; and

2. May not serve boilers having a maximum steam pressure setting greater than 15 psig or a maximum water pressure setting greater than 30 psig.

(e) 1. A reduced pressure principle backflow preventer and a reduced pressure detector backflow preventer may not be subjected to a backpressure greater than twice the rated working pressure of the device.

2. A reduced pressure principle backflow preventer and a reduced pressure detector backflow preventer which serve a water-based fire protection system may have a test outlet located between the number 2 check valve and the number 2 listed indicating control valve.

3. A reduced pressure principle backflow preventer and a reduced pressure detector backflow preventer which are 2" or smaller in size and which serve a water-based fire protection system are not required to have a test cock on the number one listed indicating control valve.

(f) A hand-held shower may not be employed in backpressure situations of more than 5 feet of water column.

(g) 1. A double check backflow prevention assembly and a double check detector assembly backflow preventer may not be subjected to a backpressure greater than twice the rated working pressure of the device.

2. A double check backflow prevention assembly and a double check detector assembly backflow preventer which serve a water-based fire protection system may have a test outlet located between the number 2 check valve and the number 2 listed indicating control valve.

3. A double check backflow prevention assembly and a double check detector assembly backflow preventer which are 2" or smaller in size and which serve a water-based fire protection system are not required to have a test cock on the number one listed indicating control valve.

(h) A water supply fed trap seal primer valve shall be installed such that the bottom of the device or the critical level as marked on the device is at least 12" above:

1. The connection to the trap; and
2. The highest point downstream from the device where back-pressure would be created.

(i) A vacuum breaker wall hydrant, freeze resistant automatic draining type or a freeze resistant sanitary yard hydrant, may not be employed in backpressure situations of more than 10 feet of water column.

(k) 1. A pressure type vacuum breaker assembly shall be installed such that the bottom of the device or the critical level mark on the device is at least 12" above all of the following:

- a. The flood level rim of the receptor serving the water supply port.
- b. The highest point downstream from the device where back-pressure would be created.
- c. The highest point of an injection or aspiration port.

2. A pressure vacuum breaker assembly shall be located only outside.

(L) A laboratory faucet backflow preventer may not be employed in backpressure situations of more than 6 feet of water column.

(m) The cross connection control device to serve a hose bibb or hydrant that penetrates an exterior wall of a heated structure may not prevent a hose bibb or hydrant from being freeze resistant automatic draining as required under s. SPS 382.40 (8) (a).

(n) A spill resistant vacuum breaker shall be installed so that the bottom of the device or the critical level mark on the device is at least 12" above all of the following:

1. The flood level rim of the receptor serving the water supply port.
2. The highest point downstream from the device where back-pressure would be created.
3. The highest point of an injection or aspiration port.

(5) INSTALLATION. (a) An air gap for cross connection control shall conform to ASME A112.1.2.

Note: See Appendix for further explanatory material.

(b) Cross connection control methods, devices and assemblies shall be installed in accordance with the manufacturer's written installation specifications and this chapter. The methods, devices and assemblies shall be accessible for inspection, testing, maintenance and replacement.

Note: See s. SPS 384.30 (5) (c).

(c) Cross connection control devices shall be protected from freezing.

(d) 1. A cross connection control device may not be located in uninhabitable spaces susceptible to flooding.

2. A cross connection control device which has one or more vent ports may not be located in a pit, vault or depression which is below the adjacent grade or floor level, even if the pit, vault or depression is provided with a drain at the bottom of the pit.

(e) 1. Vent ports of cross connection control devices shall be positioned:

- a. Away from areas where toxic gases and fumes may accumulate;

b. Downward or protected to protect the ports from falling debris; and

c. So as to drain dry.

2. Cross connection control devices or assemblies shall be so located that any vent ports are provided with an air gap so as to comply with s. SPS 382.33 or ASME A112.1.3.

3. a. If a reduced pressure principle backflow preventer or a reduced pressure detector backflow preventer is located within a building, a drain or receptor shall be provided to receive the discharge from the vent ports of the device. If a floor drain is to receive the discharge from the vent ports of a reduced pressure principle backflow preventer or a reduced pressure detector backflow preventer, the flow or pathway of the discharge may not create a nuisance.

b. Where drain piping is provided for the discharge from a vent port, an air gap in accordance with par. (a) shall be provided between the vent port and the drain piping.

c. Where a receptor is provided for the discharge from a vent port, an air gap in accordance with par. (a) shall be provided between the vent port and the receptor.

(f) The installation of a reduced pressure principle backflow preventer, a reduced pressure fire protection principle backflow preventer, a reduced pressure detector backflow preventer, a reduced pressure detector fire protection backflow prevention assembly, a double check backflow prevention assembly, a double check detector assembly backflow preventer, a pressure vacuum breaker assembly and a spill resistant vacuum beaker shall conform to all of the following limitations:

1. The minimum distance between the floor, surface or platform which is to provide access and the lowest point of the assembly may not be less than 12".

2. The maximum distance between the floor, surface or platform which is to provide access and the lowest point of the assembly may not be more than 7 feet.

3. The minimum distance between a ceiling or other obstruction and the highest point of the assembly may not be less than 18".

4. The minimum distance between a wall or other obstruction and the back and ends of the assembly may not be less than 4".

5. The minimum distance between a wall or other obstruction and the front of the assembly may not be less than 24".

Note: See Appendix for further explanatory material.

(g) The discharge outlet of local waste piping serving a cross connection control device shall be visible and not be located within a concealed space.

(h) No control valve may be placed downstream from a pipe applied atmospheric type vacuum breaker or a laboratory faucet backflow preventer.

(i) A barometric loop to provide cross connection control for backsiphonage shall be formed by creating a loop in the potable water supply piping upstream to the source of cross connection.

1. The loop shall extend at least 35 feet above:

a. The highest point downstream from the loop where back-pressure would be created; and

b. The point of discharge.

2. No outlets for potable water use shall be installed downstream of the peak of the loop.

(j) Vacuum breaker tees shall be assembled such that:

1. The bottom of the horizontal portion of the tee is installed at least one inch above the flood level rim of the receptor;

2. The inside diameter of the tee is equal to or greater than the inside diameter of the drain piping from the water treatment device;

3. The tee is installed in such a position that the discharge will not create a nuisance;

4. The piping upstream of the tee is of a type suitable for water distribution in accordance with s. SPS 384.30 (4) (e).

5. The vent portion of the tee is equal to or greater than the inside diameter of the drain piping from the water treatment device; and

6. The vent port of the tee is:

a. Positioned away from areas where toxic gases and fumes may accumulate; and

b. Constructed to protect the port from falling debris.

(k) A chemical dispensing system shall be connected to the water distribution system in either of the following manners:

1. The fixture supply shall be individually connected to the water distribution system.

2. The fixture supply shall be installed with a pressure bleeding device. The pressure bleeding device shall create a visually free flow of water through the atmosphere from the faucet connection into the fixture drain.

History: 1-2-56; r. (2) through (7), *Register, October, 1971, No. 190*, eff. 11-1-71; r. and recr. *Register, November, 1972, No. 203*, eff. 12-1-72; renum. from H 62.14, *Register, July, 1983, No. 331*, eff. 8-1-83; renum. from ILHR 82.14 and am. (1) (h) 17, r. (2), *Register, February, 1985, No. 350*, eff. 3-1-85; r. and recr. *Register, February, 1994, No. 458*, eff. 3-1-94; am. (2) (a), Tables 82.41-1, 2, (4) (c), (e) to (i), (k) to (m), (5) (e) 3. a., (i), cr. (4) (n), r. and recr. (5) (b), (f), r. (5) (h), *Register, February, 1997, No. 494*, eff. 3-1-97; correction in (4) (n) made under s. 13.93 (2m) (b) 1., Stats., *Register, February, 2000, No. 530*; am. (3) (a) 2., (4) (k) 1. and (5) (a), r. and recr. (4) (b) and (n), and Tables 82.41-1 and 82.41-2, cr. (4) (k) 1. c. and (5) (L), *Register, December, 2000, No. 540*, eff. 1-1-01; CR 02-002; am. (3) (intro.), (5) (a), Tables 82.41-1 and 2, renum. (5) (i) to (L) to be (5) (h) to (k) *Register April 2003 No. 568*, eff. 5-1-03; CR 04-035; cr. (3) (b) 4. d., am. Tables 82.41-1 and -2, 82.41 (2), (3) (a) 1. and (b) 7. *Register November 2004 No. 587*, eff. 12-1-04; CR 08-055; cr. (3) (b) 4. e., am. (4) (c) 1. a., (f), (i), (n), (5) (a), (e) 2., (f) (intro.), Tables 82.41-1 and 82.41-2 *Register February 2009 No. 638*, eff. 3-1-09; corrections in (6) made under s. 13.92 (4) (b) 1. and 7., Stats., *Register February 2009 No. 638; CR 09-050*; r. (6) *Register December 2009 No. 648*, eff. 1-1-10; CR 10-064; am. (1), (5) (e) 2., Table 82.41-2 *Register December 2010 No. 660*, eff. 1-1-11; correction in (2) (a), (b), (3) (a) 1., (b) 7., (4) (m), (5) (e) 2., (j) 4., Table 382.41-1, Table 382.41-2 made under s. 13.92 (4) (b) 7., Stats., *Register December 2011 No. 672*.

Subchapter V — Special Plumbing Installations

SPS 382.50 Health care and related facilities.

(1) GENERAL. The provisions of this section shall set forth the requirements for the design, installation and maintenance of devices, fixtures and equipment which are installed in health care and related facilities.

(2) FIXTURES AND EQUIPMENT. (a) *Special fixtures and equipment.* 1. ‘Requirements for ice manufacture and storage.’ Machines for manufacturing ice or any device for handling or storage of ice shall be located in an area not subject to contamination.

2. ‘Sterilizers and washer sanitizers.’ a. Sterilizers and washer sanitizers shall discharge by means of indirect waste.

b. The indirect waste piping shall discharge by means of air-gap.

3. ‘Aspirators.’ Aspirators which require the use of water shall be provided with approved cross connection control.

(b) *Spouts and actions.* The selection of spouts and actions on plumbing fixtures shall comply with this section and Table 382.50-1.

1. ‘Spouts’. Lavatories and sinks accessible to patients shall have the water supply spout mounted so that its discharge point is a minimum distance of 5" above the flood level rim of the fixture.

2. ‘Actions.’ All fixtures used by medical and nursing staff, and all lavatories used by patients and food handlers shall be equipped with valves that can be operated without the use of hands. Where wrist blade handles are used for this purpose, the handles shall not exceed 4 1/2" in length, except handles on scrub sinks and clinical sinks shall be no less than 6" long.

(c) *Floor drain prohibition.* 1. Except as provided in subd. 2., floor drains may not be installed in operating or delivery rooms.

2. Floor drains may be installed in cystoscopic rooms. The drain shall contain a non-splash, horizontal-flow flushing bowl beneath the drain plate.

(3) WATER SUPPLY SYSTEMS. (a) *Hospital water supply systems.* Water supply systems serving hospitals shall comply with all of the following:

1. All hospitals shall be provided with at least 2 water services. Whenever more than one water main is available, the connections shall be made to different water mains.

2. Each water service connection shall adequately serve the total building water supply demand as specified in s. SPS 382.40 (7).

Note: The installation of two water services or a private water main may require the installation of a check valve. Refer to ch. NR 811 for more information.

(b) *Hospital, community-based residential facility, inpatient hospice and nursing home water supply systems.* 1. Water supply systems serving a hospital, community-based residential facility, inpatient hospice or nursing home shall comply with all of the following:

a. Except as provided in subd. 1. b., a single control valve may serve an area where 4 or fewer patient care units exist and where each unit contains not more than 2 persons.

b. A water supply serving an intensive care patient care unit shall be individually valved.

2. All water distribution piping shall be insulated in accordance with chs. SPS 361 to 366.

3. Cold water shall be supplied to lavatories or sinks located in patient rooms.

4. A hot water distribution system shall be under constant recirculation to provide continuous hot water at each hot water outlet, except that uncirculated hot water distribution piping may not exceed 25 feet in developed length.

5. Water provided to patient showers, therapeutic equipment and all types of baths shall be installed with control valves which automatically regulate the temperature of the water supply to the fixture fitting outlet within a temperature range of 110°F to 115°F. Such control valves shall automatically reduce flow to 0.5 gpm or less when the water supply to the fitting outlet exceeds 115°F or when loss of cold water pressure occurs.

Note: See Appendix A-382.50 (3) (b) 5. for sketches showing various design options.

6. Hot water distribution systems shall be installed and maintained to provide bacterial control by one of the following methods:

a. Water stored and circulation initiated at a minimum of 140°F and with a return of a minimum of 124°F.

b. Water chlorinated at 2 mg/L residual.

Note: Additional information may be contained in ASHRAE Guideline 12-2000, Minimizing the Risk of Legionellosis Associated with Building Water Systems. This standard is published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE); 1791 Tullie Circle, N.E., Atlanta, GA 30329, phone: (800) 5-ASHRAE or (404) 636-8400 ext. 507; fax: (404) 321-5478; e-mail: orders@ashrae.org; or online at www.ashrae.org.

c. Another disinfection system approved by the department.

7. A water distribution system may not be designed, installed and maintained so that the maximum temperature to fixture fitting outlets accessible to patients exceeds 115°F.

Note: See s. SPS 382.40 (5) and ch. DHS 124 for additional requirements for circulation systems.

8. Except as provided in subd. 7., a water distribution system may not be designed, installed and maintained so that the maximum temperature to fixture fitting outlets exceeds 180°F.

Bayfield Code of Ordinances

Chapter 378

Water Utility

§ 378-32. Cross-connection control.

- A. Definition. A "cross-connection" shall be defined as any physical connection or arrangement between two otherwise separate systems, one of which contains potable water from the City water system, and the other, water from a private source, water of unknown or questionable safety, or steam, gases, or chemicals, whereby there may be a flow from one system to the other, the direction of flow depending on the pressure differential between the two systems.
- B. Cross-connections prohibited. No person, firm or corporation shall establish or permit to be established or maintain or permit to be maintained any cross-connection. No interconnection shall be established whereby potable water from a private, auxiliary or emergency water supply other than the regular public water supply of the City may enter the supply or distribution system of said municipality, unless such private, auxiliary or emergency water supply and the method of connection and use of such supply shall have been approved by the Water Utility and by the Wisconsin Department of Natural Resources. [Amended 10-18-2006 by Ord. No. 335]
- C. Inspections. It shall be the duty of the Water Utility to cause inspections to be made of all properties served by the public water system where cross-connections with the public water system are deemed possible. Residential properties serviced by the Utility shall be inspected at a minimum of one time every 10 years. All nonresidential properties serviced by the Utility shall be inspected at a minimum of every two years. The Utility may, but is not required to, perform the cross-connection inspection of the owner's property. If, in the opinion of the Utility, it is beyond the scope of the Utility to provide a complete inspection, the property owner must, at his/her own expense, have the plumbing inspected for cross-connections by a State of Wisconsin certified cross-connection inspector/surveyor or by a State of Wisconsin licensed plumber. The frequency of required inspections and reinspections, based on potential health hazards involved, may be shortened by the Utility. The Utility shall charge fees as approved by the State of Wisconsin Public Service Commission for on-premises follow-up visits by Utility personnel for reinspection due to customer noncompliance and for after-hours inspections or reinspections. [Amended 7-14-2008 by Ord. No. 343]
- D. Right to inspect. Upon presentation of credentials, the representative of the Water Utility shall have the right to request entry at any reasonable time to examine any property served by a connection to the public water system of the City for cross-connections. If entry is refused, such representative shall obtain a special inspection warrant under § 66.0119, Wis. Stats. On request the owner, lessee or occupant of any property so served shall furnish to the inspection agency any pertinent information regarding the piping system or systems on such property.
- E. Discontinuation of service. The Water Utility is hereby authorized and directed to discontinue water service to any property wherein any connection in violation of this section exists, and to take such other precautionary measures deemed necessary to eliminate any danger of contamination of the public water system. Water service shall be discontinued only after reasonable notice and opportunity for hearing under Ch. 68, Wis. Stats., except as provided in Subsection F. Water service to such property shall not be restored until the

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cross-connection(s) has been eliminated in compliance with the provisions of this section.

- F. Immediate discontinuation. If it is determined by the Water Utility that a cross-connection or an emergency endangers public health, safety or welfare and requires immediate action, and a written finding to that effect is filed with the City Clerk and delivered to the customer's premises, service may be immediately discontinued. The customer shall have an opportunity for hearing under Ch. 68, Wis. Stats., within 10 days of such emergency discontinuance.
- G. State code adopted. The City adopts by reference the State Plumbing Code of Wisconsin being Chs. Comm 81 to 87, Wis. Adm. Code.
- H. Section not to supersede other ordinances. This section does not supersede the State Plumbing Code and any City plumbing ordinances but it supplementary to them.

(11) REFUND AT TERMINATION OF SERVICE. Upon termination of service, the deposit with accrued interest, shall be credited to the final bill, and the balance shall be returned within 30 days of issuing the final bill.

(12) ARREARAGES. An arrearage owed by a customer may be deducted from the customer's deposit under the following conditions:

(a) Except as provided in par. **(c)**, a deposit may be used by the utility only to satisfy an arrearage occurring after the deposit was made;

(b) If the utility deducts an arrearage from a customer deposit, it may require the customer to bring the deposit up to its original amount. Failure of the customer to do so within 20 days of mailing a written request for payment is a ground for disconnection;

(c) When a deposit is refunded to the customer, the utility may first deduct any arrearage owed by the customer, whether the arrearage arose prior to or after the date of the deposit.

History: Cr. Register, January, 1997, No. 493, eff. 2-1-97; CR 01-033: am. (4) (b), Register October 2001 No. 550, eff. 11-1-01.

PSC 185.37 Disconnection and refusal of service.

(1) (a) In no circumstances shall the cumulative time before notice of disconnection be less than 20 days after the date of issuance of the bill. An account may be deemed delinquent for the purpose of disconnection after such period has elapsed.

(b) At least 10 calendar days prior to disconnection, the utility shall give a written notice of disconnection upon a form approved by the commission and which conforms to the requirements of sub. **(11)** unless excepted elsewhere.

(c) When a customer, either directly or through the commission, disputes a disconnection notice, the utility shall investigate any disputed issue and shall attempt to resolve that issue. During this investigation, utility service shall not be disconnected over this matter.

(d) If a disputed issue cannot be resolved pursuant to s. **PSC 185.39 (1)**, the utility shall inform the customer of the right to contact the commission.

(1m) Prior to disconnecting a jointly-metered property containing more than one rental dwelling unit and where service is in the property owner's or manager's name, the utility shall first make an attempt to transfer the debt to the property owner's or manager's residence or office service. If a transfer is permitted under sub. **(7) (a)** the utility shall pursue available collection efforts at the owner's or manager's property prior to disconnecting the jointly-metered property.

(2) Utility service may be disconnected or refused for any of the following reasons:

(a) Failure to pay a delinquent account or failure to comply with the terms of a deferred payment agreement (see s. **PSC 185.38**);

(am) Delinquency in payment for service received by a previous account holder or customer at the premises to be served, if an account is transferred to a new account holder or customer and the previous account holder or customer continues to be an occupant of the dwelling unit to be served.

(b) Failure to pay for an outstanding account balance with the utility owing at a previous address and for which there is no agreement or arrangement for payment and it is not in dispute but remains outstanding;

(c) Failure to comply with deposit or guarantee arrangements as specified in s. **PSC 185.36** or **185.361**;

(d) Diversion of service around the meter;

(e) Refusal or failure to permit authorized utility personnel to read the meter at least once every 4 months where the utility bills monthly or bimonthly, or at least once every 9 months where the utility bills quarterly or less frequently than quarterly. The 4- or 9-month period begins with the date of the last meter reading;

(f) Refusal or failure to permit authorized utility personnel access to the base meter;

(g) Violation of the utility's rules pertaining to the use of service in a manner which interferes with the service of others or to the operation of nonstandard equipment, if the customer has first been notified and provided with reasonable opportunity to remedy the situation;

(h) Failure to comply with Wisconsin statutes, commission rules, or commission orders pertaining to utility service;

(i) Failure to pay costs or fees incurred by and awarded to the utility by a court of law, for pursuit of collection of bills, or failure to pay extraordinary collection charges as allowed and specified in the utility's tariffs filed with the commission;

(j) Failure to comply with the utility's rules or if the customer uses a device that unreasonably interferes with communications or signal services used for reading meters;

(k) Failure of an applicant for utility service to provide adequate verification of identity and residency, as provided in sub. **(5) (a)**;

(L) Failure of an applicant for utility service to provide the information set forth in ss. **PSC 185.33 (18) (a), (b)** and **(c)**.

(3) A utility may disconnect utility service without prior notice where a dangerous condition exists for as long as the condition exists. Upon disconnection, the utility shall provide a written explanation of the dangerous condition.

(4) Service may be discontinued with a written 24-hour notice for nonpayment of a bill covering surreptitious use of water.

(5) (a) Any one of the items under subd. **1.** or any **2.** of the items under subd. **2.** shall constitute adequate verification of identity and residency, although a utility may accept other forms of verification:

1. Photo identification card, driver's license, or U.S. military card;

2. Social security card, birth or baptismal certificate, or letter of identification from a social service agency or employer.

(b) An applicant denied or refused service because of this subsection shall be informed in writing of the opportunity to dispute the matter through the commission, and shall be provided with the address and telephone number of the commission.

(6) A public utility may disconnect residential utility service, without notice, where it has reasonable evidence that utility service is being obtained by potentially unsafe devices or potentially unsafe methods that stop or interfere with the proper metering of the utility service.

(7) (a) Account arrears incurred by an owner or property manager for rental residential dwelling units may be transferred, without regard to class of service, to the home or office account of the owner or property manager.

(b) The utility shall send written notice of the planned transfer of the account arrears to the owner or property manager prior to making the transfer.

(c) If the transferred account arrears remain unpaid, the utility may disconnect the owner's or property manager's residence or office service, provided that the utility complies with the disconnection provisions of s. **PSC 185.37**.

(8) Utility service may not be disconnected or refused for any of the following reasons:

(a) Nonpayment of a delinquent account over 6 months old where collection efforts have not been made within that period of time unless the passage of additional time results from other provisions of this chapter or from good faith negotiations or arrangements made with the customer;

(b) Failure to pay for merchandise or charges for nonutility service billed by the utility, except where authorized by law as in s. **PSC 185.33 (1) (h)**;

(c) Failure to pay for a different type or class of utility service, except as provided by sub. (7) (c);

(d) Failure to pay the account of another customer as guarantor of that account;

(e) Failure to pay charges arising from any underbilling occurring more than one year prior to the current billing;

(f) Failure to pay an estimated bill other than a bill rendered pursuant to an approved billing tariff or the customer upon request refuses to permit the reading of the meter during normal business hours;

(g) For the intentional removal or eviction of a tenant from rental property;

(h) The utility may not disconnect service in affected counties when a heat advisory, heat warning, or heat emergency issued by the national weather service is in effect. A utility shall make reasonable attempts to reconnect service to an occupied dwelling that has been disconnected when an occupant states that there is a potential threat to health or life that results from the combination of the heat and loss of service. The utility may require that an occupant produce a licensed physician's statement or notice from a public health, social services, or law enforcement official which identifies the medical emergency for the occupant. Upon expiration of the heat advisory, heat warning, or heat emergency, the utility may disconnect service to a property that was reconnected during this period without further notice if an appropriate payment arrangement has not been established.

(8m) If the utility is provided notice that there are extenuating circumstances, such as infirmities of aging, developmental, mental or physical disabilities, the use of life support systems, or like infirmities incurred at any age, or the frailties associated with being very young, the utility shall take these circumstances into consideration and ensure compliance with s. [PSC 185.37](#) (10) prior to disconnecting service.

(9) Residential water utility service to an occupied dwelling may not be disconnected during the period November 1 to April 15 if the water service is a necessary part of a dwelling's heating system.

(10) (a) Notwithstanding any other provision of this section, a utility may not disconnect service or refuse to reconnect service to a residential customer if disconnection shall aggravate an existing medical or protective services emergency of the occupant, a member of the customer's family or other permanent resident of the premises where service is rendered and if the customer conforms to the procedures described in par. (b).

(b) A utility shall postpone the disconnection of service, or reconnect the service if disconnected, for 21 days to enable the occupant to arrange for payment, if the occupant produces a licensed Wisconsin physician's statement or notice from a public health, social services, or law enforcement official which identifies the medical or protective services emergency and specifies the period of time during which disconnection shall aggravate the circumstances. The postponement may be extended by renewal of the statement or notice. During this 21 days of service, the utility and occupant shall work together to develop resources and make reasonable payment arrangements in order to continue the service on a permanent basis. Further postponements may be granted if there is evidence of reasonable communication between the utility and occupant in attempting to make arrangements for payment.

(c) During the period service is continued under the provisions of this subsection, the customer shall be responsible for the cost of residential utility service. However, no action to disconnect that service shall be undertaken until expiration of the period of continued service. Any customer who is in this continued service category shall be admitted into appropriate and special payment plan programs the utility may offer.

(d) If there is a dispute concerning an alleged existent medical emergency, either party shall have the right to an informal review

by the commission staff. Pending a decision after informal review, residential utility service shall be continued, provided that the occupant has submitted a statement or notice as set forth in par. (b).

(11) (a) A utility shall not disconnect service unless written notice by first class mail is sent to the customer or personally served upon a responsible party at least 10 calendar days prior to the first date of the proposed disconnection except as provided in subs. (3), (4), and (7). If the billing address is different from the service address, notice shall be posted at each individual dwelling unit of the service address not less than 5 days before disconnection. If access is not possible, this notice shall be posted, at a minimum, to all entrances to the building and in the lobby. The notice shall contain: 1) the date of the notice; 2) the proposed date of disconnection; and 3) that, if feasible, the occupants may apply to the utility to accept responsibility for future bills and avoid disconnection of service. Refusal or acceptance of the application for service is subject to those conditions set out in this chapter. If disconnection is not accomplished on or before the 20th day after the first notice date, a subsequent notice shall be left on the premises not less than 24 hours nor more than 48 hours prior to the disconnection unless the customer and the utility agree to extend the 20-day time period.

(b) The utility shall make a reasonable effort to have a personal or telephone contact with the residential customer prior to disconnection. If a contact is made, the utility shall review the reasons for the pending disconnection of service, and explain what actions shall be taken to avoid disconnection.

(c) The utility shall keep a record of these contacts and contact attempts.

(d) When a residential customer, either directly or through the commission, disputes a disconnection notice under s. [PSC 185.37](#), the utility shall investigate any disputed issue and shall attempt to resolve that issue. During this investigation, utility service shall not be disconnected over this matter.

(e) If a disputed issue cannot be resolved, the utility shall inform the customer of the right to appeal to the commission.

(f) Disconnection notice shall be given on a form approved by the commission, and shall contain the following information:

1. The name and address of the customer and the address of the service, if different;

2. A statement of the reason for the proposed disconnection of service and that disconnection shall occur if the account is not paid, or if arrangement is not made to pay the account under deferred payment agreement, or if other suitable arrangements are not made, or if equipment changes are not made. If disconnection of service is to be made for default on a deferred payment agreement, the notice shall include an explanation of the acts of the customer which are considered to constitute default;

3. A statement that the customer shall communicate immediately upon receipt of the notice with the utility's designated office, listing a telephone number, if the customer disputes the notice of delinquent account, if the customer wishes to negotiate a deferred payment agreement as an alternative to disconnection, if any resident is seriously ill, or if there are other extenuating circumstances, as the presence of infants or young children in the household, the presence of aged, or persons with disabilities in the household, the presence of residents who use life support systems or equipment or residents who have mental retardation or other developmental or mental disabilities;

4. A statement that residential utility service shall be continued for up to 21 days during serious illness if the account holder submits a statement or notice pursuant to sub. (10);

5. A statement that the customer may appeal to the commission staff in the event that the grounds for the proposed disconnection or the amount of any disagreement remains in dispute after the customer has pursued the available remedies with the utility.

(12) Service shall not be disconnected on a day, or on a day immediately preceding a day, when the business offices of the utility are not available to the public for the purpose of transacting all business matters unless the utility provides personnel which are readily available to the customer 24 hours per day to evaluate, negotiate, or otherwise consider the customer's objection to the disconnection as provided under s. **PSC 185.39**, and proper service personnel are readily available to restore service 24 hours per day.

(13) Notwithstanding any other provision of this chapter, utility service may not be refused because of a delinquent account if the customer or applicant provides, as a condition of future service a deposit or guarantee, as governed by s. **PSC 185.36**, or a voucher agreement. If the guarantor has agreed to be responsible for payment of all future bills, the customer shall be notified of the billing arrangement and of the ability to reject the proposed arrangement.

History: Cr. *Register, January, 1997, No. 493*, eff. 2-1-97; **CR 01-033**: am. (1) (b), (2) (e) and (L), (8) (h), (9) and (11) (a), cr. (1m), (2) (am) and (8m), *Register October 2001 No. 550*, eff. 11-1-01.

PSC 185.38 Deferred payment agreement. **(1)** A utility is required to offer deferred payment agreements to residential accounts and encouraged to offer such agreements to other customers.

(2) Every deferred payment agreement entered into due to the customer's inability to pay the outstanding bill in full shall provide that service shall not be discontinued if the customer pays a reasonable amount of the outstanding bill, agrees to pay the remaining outstanding balance in installments, and agrees to pay the current bill by the due date.

(3) For purposes of determining reasonableness in sub. **(2)**, the parties shall consider the customer's ability to pay, including the following factors:

- (a) Size of the delinquent account;
- (b) Customer's payment history;
- (c) Time that the debt has been outstanding;
- (d) Reasons why the debt has been outstanding;
- (e) Any other relevant factors concerning the circumstances of the customer such as household size, income, and necessary expenses.

(4) A deferred payment agreement offered by a utility shall state immediately preceding the space provided for the customer's signature and in bold face print at least 2 sizes larger than any other print used, that:

- (a) You have the right to suggest a different payment agreement;
- (b) If you believe the terms of this agreement are unreasonable, DO NOT SIGN IT;
- (c) If you and the utility cannot agree on terms, you may ask the commission to review the disputed issues;
- (d) If you sign this agreement, you agree that you owe the amount due under the agreement;
- (e) Signing this agreement does not affect your responsibility to pay for your current service. Allowing any bill for current service to become delinquent places you in default of this agreement.

(4m) A utility that does not require a written deferred payment agreement shall communicate to the customer all points listed in sub. **(4)** except those pertaining to a signature when making the arrangement with the customer. A utility shall send written confirmation of a deferred payment agreement upon customer request. The commission may require a utility to use written deferred payment agreements if it has evidence that the terms of the agreements are not being effectively communicated to customers.

(5) A delinquent amount, including late payment charges covered by a deferred payment agreement, shall not be subject

to an additional late payment charge if the customer meets the payment schedule, including the current bill required by the agreement. A deferred payment agreement shall not include a finance charge.

(6) If an applicant for utility service or current customer has not fulfilled terms of a deferred payment agreement and there has not been a significant change in the customer's ability to pay since the agreement was negotiated, the utility shall have the right to disconnect pursuant to disconnection of service rules (s. **PSC 185.37**) and under such circumstances, it shall not be required to offer subsequent negotiation of a deferred payment agreement prior to disconnection.

(7) Any payments made by a customer solely in compliance with a deferred payment agreement, and not as part of a payment for other utility services, shall first be considered as payment toward the deferred payment agreement with any remainder credited to the current bill. Payments made to satisfy a current bill for utility service, which may include a portion for a deferred payment agreement, shall be credited as set forth in s. **PSC 185.33 (4)**.

(8) If a deferred payment agreement cannot be reached because the customer's offer is unacceptable to the utility, the utility shall inform the customer in writing why the customer's offer was not acceptable.

History: Cr. *Register, January, 1997, No. 493*, eff. 2-1-97; **CR 01-033**: cr. (4m), *Register October 2001 No. 550*, eff. 11-1-01.

PSC 185.39 Dispute procedures. **(1)** Whenever the customer disputes the utility's request for a deposit or other guarantee, or advises the utility's designated office prior to the disconnection of service that all or any part of any billing as rendered is in dispute, or that any matter related to the disconnection or refusal of service is in dispute, the utility shall:

- (a) Investigate the dispute promptly and completely;
- (b) Advise the customer of the results of the investigation;
- (c) Attempt to resolve the dispute;
- (d) Provide the opportunity for residential customers, nonresidential customers at utility discretion, per s. **PSC 185.38 (1)** to enter into a deferred payment agreement when reasonable in order to resolve the dispute.

(2) (a) After the customer has pursued the available remedies with the utility, the customer may request that the commission staff informally review the disputed issue and recommend terms of settlement.

(b) A request for informal review may be made in any reasonable manner such as by written or telephone request directed to the commission. Either by telephone or written request, the commission staff may request the utility to investigate the dispute.

(c) The utility shall designate employees for responding to commission complaints who are readily available and have an appropriate and sufficient authority level for investigating and resolving concerns raised by the commission and its staff. Utilities shall provide the names of the designated employees to the commission and shall promptly inform the commission of any changes in these designations. A utility shall respond to the public service commission staff's request for an investigation by attempting to contact the complainant within 48 hours for most circumstances, or 4 hours in an emergency situation, and by providing a response to the commission within 10 business days. Staff may extend this time period if the utility requests more time to complete its investigation. Based on information provided by the utility and the customer, the commission staff shall make an informal determination for settlement of the dispute and communicate that determination to both parties. Either party to the dispute may request and receive the commission staff determination, and the basis for it, in writing. Commission staff shall inform any customer disputing an informal determination of the right to pursue a formal review.

City of Bayfield

Office of the Public Works Director
125 South First Street - P.O. Box 1170
Bayfield, Wisconsin 54814
Phone (715) 779-5731
citypublicworks@cityofbayfield.com

Today, we will be performing the initial cross-connection inspection required by the Department of Natural Resources Code NR 810.15. In the case that we do not find cross-connections, we will note that your household is in compliance. If a cross-connection is noted, the following steps will be taken:

- 1) If cross-connection can be corrected by the homeowner while we are still on-site, we will note that the household is in compliance.
- 2) If cross-connection cannot be corrected immediately, a follow up inspection will be performed within 30 days.
- 3) If violations have not been corrected at the 30 day inspection, your water service may be shut off.

Your cooperation in this matter is appreciated.

Tom Kovachevich, PWD
Nick Wszalek, Utility Operator
City of Bayfield Utility

SPS 382.41 Cross-connection control. (1) SCOPE. The provisions of this section set forth the requirements for the protection of this section set forth the requirements for the protection of potable water within water supply systems when and where there is the possibility of contamination due to cross connections or backflow conditions.

Note: The Department of Natural Resources governs the operation and design of community water systems and under s. NR 810.15 requires the supplier of water to develop and implement a comprehensive cross connection control program.

Established in 1913.

City of Bayfield

Office of the Public Works Director
125 South First Street - P.O. Box 1170
Bayfield, Wisconsin 54814
Phone (715) 779-5731
citypublicworks@cityofbayfield.com

CROSS-CONNECTION INSPECTION REPORT

Date of Inspection: _____

Name: _____

Address: _____

Phone Number: _____ Acct #: _____

Inspection Checklist:

- | | Yes | No |
|---------------------------------------|------------|-----------|
| 1. Private well | [] | [] |
| 2. Public water | [] | [] |
| 3. Water softener | [] | [] |
| 4. Boilers | [] | [] |
| 5. Illegal plumbing piping | [] | [] |
| 6. Faucets below rim | [] | [] |
| 7. Irrigation system | [] | [] |
| 8. Threaded hose bib faucets | [] | [] |
| 9. Drain tile, floor drain connection | [] | [] |
| 10. Illegal discharge | [] | [] |

Action Taken:

- [] None
[] Yes (See Below)

1. Does cross connection exist [] []

2. Owner informed [] []

Date of Notification: _____

3. Correction made [] []

Date corrections made: _____

4. Immediate disconnection [] []

Date of disconnection: _____

5. Service re-instated [] []

Date service re-instated: _____

Comments: _____ ***Thank you for your time!*** _____

Water Utility Representative Signature: _____

Customer Signature: _____

Established in 1913.

CITY OF BAYFIELD UTILITY

BACKFLOW PREVENTER BILLING FORM

DATE _____

CUSTOMER NAME _____

CUSTOMER ADDRESS _____

ACCOUNT NO. _____

ITEM:

[] DRAINABLE _____ X \$ _____ = \$ _____
[] STANDARD _____ X \$ _____ = \$ _____
[] FROST FREE _____ X \$ _____ = \$ _____
TOTAL \$ _____

[] BILL MY UTILITY ACCOUNT

CUSTOMER SIGNATURE

CITY OF BAYFIELD UTILITY: _____

SIGNATURE

City of Bayfield

Office of the Public Works Director
125 South First Street - P.O. Box 1170
Bayfield, Wisconsin 54814
Phone (715) 779-5731
citypublicworks@cityofbayfield.com

DATE: _____

Subject: Cross-Connection Control Ordinance 378-32 Compliance

Dear Customer:

The Wisconsin Department of Natural Resources (WDNR) requires enforcement of the City's Cross-Connection Control Ordinance Section 378-32. A cross-connection is defined as "any physical connection or arrangement between two otherwise separate systems, one of which contains the potable water from the City water system and the other, water from a private source, water of unknown or questionable safety, or steam, gases or chemicals, whereby there may be flow from one system to the other, the direction of the flow depending on the pressure differential between the two systems." This situation may become dangerous if backflow results. Backflow protections are accomplished through physical additions or alternative arrangements to plumbing systems. It is not only in the interest of other water customers and the Water Utility, but also in your employee's and your business' interest that such potentially dangerous situations not be present.

Please complete and return the enclosed Cross-Connection Control Inspection Form by _____ . The form must be certified by a plumber/inspector licensed in the State of Wisconsin (after the inspection of the entire property) and also signed by a representative of your organization. For your convenience, a list of local plumbers is included on the back side of this page.

Please call the City of Bayfield Utility at 715-779-5731, if you have any questions.

Sincerely,

City of Bayfield Utility

Established in 1913.

City of Bayfield

Office of the Public Works Director
125 South First Street - P.O. Box 1170
Bayfield, Wisconsin 54814
Phone (715) 779-5731
citypublicworks@cityofbayfield.com

DATE: _____

Re: Cross-Connection Inspection Program

Dear Customer,

On _____ we mailed a letter with information and instructions to you regarding the State of Wisconsin DNR cross-connection initiative, as well as the City of Bayfield's local Ordinance 378-32 which addresses compliance with the directive. The directive is meant to help insure a safe water supply for all of the Utility's water customers.

We have not yet received the completed **Cross-Connection Control Inspection Form** that was included in the initial correspondence mailed to you. We have included another copy of the form, and a list of local plumbers (see reverse side) with this letter for your convenience.

Should you have questions regarding the Cross-Connection Control Inspection Program please contact us **immediately** at 715-779-5731.

The Cross-Connection Control Inspection Form is to be completed and returned to the City of Bayfield Utility no later than _____.

Thank you for your cooperation on this matter.

Sincerely,

City of Bayfield Utility

Established in 1913.

City of Bayfield
Office of the Public Works Director
125 South First Street - P.O. Box 1170
Bayfield, Wisconsin 54814
Phone (715) 779-5731
citypublicworks@cityofbayfield.com

DATE: _____

Re: Cross-Connection Inspection Program

Dear Customer,

On _____, and _____, we mailed letters with information and instructions to you regarding the State of Wisconsin DNR cross-connection initiative, as well as the City of Bayfield's local Ordinance 378-32 which addresses compliance with the directive. The directive is meant to help insure a safe water supply for all of the Utility water customers.

We have not yet received the completed **Cross-Connection Control Inspection Form** that was included in the first and second correspondences mailed to you. We have included another copy of the form with this letter for your convenience.

Should you have questions regarding the Cross-Connection Control Inspection Program please contact us **immediately** at 715-779-5731.

The Cross-Connection Control Inspection Form is to be completed and returned to the City of Bayfield Utility no later than _____. The Utility reserves the right to implement the discontinuation of service steps outlined in the Public Service Commission Code 185.37, if the completed cross-connection inspection is not received by the aforementioned due date.

Thank you for your cooperation on this matter.

Sincerely,

City of Bayfield Utility

Established in 1913.

CITY OF BAYFIELD COMMERCIAL CROSS CONNECTION CONTROL INSPECTION FORM

BUSINESS / OWNER NAME _____

ADDRESS: _____ CITY: _____ ST: _____ ZIP: _____

PREMISES: BUSINESS: MULTIPLE FAMILY: # of UNITS: _____ APARTMENT: # of UNITS: _____ CONDOMINIUM: # of UNITS: _____

INSPECTION INFORMATION

INSPECTION DATE: _____

NUMBER OF WATER METERS:

POTABLE WATAER: _____

INSPECTION COMPLIANCE:

YES NO

LAWN IRRIGATION: _____

FIRE PROTECTION: _____

WELL: _____

HAZARD INFORMATION

TYPE OF WATER USED	Y/N	QTY	PORPERLY ISOLATED	APPROVED DEVICE	REQUIREMENT(S) DEVICE TPE/A.S.S.E. #
1.CONTAINMENT SEVICE	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> DCV/1015 <input type="checkbox"/> VDCV/1012 <input type="checkbox"/> DC/1024
2.FIRE PROTECTION SYSTEM	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> DCV/1015
3.WATER SOFTENER	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> AG
4.LAUNDRY SINK	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> HBVB/1011 <input type="checkbox"/> REMOVE THREADS
5.INSIDE HOSE BIBB(S)	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> HBVB/1011 <input type="checkbox"/> CAP
6.WATER CLOSET(S)	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> ASBC/1002
7.REFRIDGERATOR/ICE MAKER	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> AG
8.HOT TUB/WHIRLPOOL	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> PVD/1020 <input type="checkbox"/> SVB/1056
9.BOILER	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> VDCV/1012
10.HUMIDIFIER	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> AG <input type="checkbox"/> RPBP/1013
11.SOLAR HOT WATER	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> VDCV/1012
12.OUTSIDE HOSE BIBB(S)	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> AFHBVB/1011 OR 1019
13.LAWN IRRIGATION SYSTEM	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> PVB/1015 <input type="checkbox"/> SVB/1056 <input type="checkbox"/> AVB/1001
14.SWIMMING POOL	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> PVB/1015 <input type="checkbox"/> AG <input type="checkbox"/> AVB/1001
15.RO/DI UNIT	<input type="checkbox"/> Y <input type="checkbox"/> N	_____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> AG <input type="checkbox"/> DCV/1024

ADDITIONAL NOTES: _____

EXISTING TESTABLE DEVICES W/A.S.S.E.#

CONTAINMENT DEVICE	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> DCV/1015
FIRE PROTECTION SYSTEM	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> DCV/1015
HOT TUB/WHIRLPOOL	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> PVB/1020 <input type="checkbox"/> SVB/1056
BOILER	<input type="checkbox"/> RPBP/1013
HUMIDIFIER	<input type="checkbox"/> RPBP/1013
SOLAR HOT WATER	<input type="checkbox"/> RPBP/1013
LAWN IRRIGATION SYSTEM	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> PVB/1020 <input type="checkbox"/> SVB/1056
SWIMMING POOL	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> PVB/1020 <input type="checkbox"/> SVB/1056
OTHER	<input type="checkbox"/> RPBP/1013 <input type="checkbox"/> DCV/1015 <input type="checkbox"/> PVB/1020 <input type="checkbox"/> SVB/1056

ADDITIONAL NOTES: _____

DEVICES PROVIDED			
HBVB INSTALLED	<input type="checkbox"/> Y <input type="checkbox"/> N	QTY	_____
AFHBVB INSTALLED	<input type="checkbox"/> Y <input type="checkbox"/> N	QTY	_____

Owner Signature: _____

Inspector Signature: _____ Date: _____

Why is an inspector here?

An important part of managing the cross connection control program requires regular inspections of facilities with a potential of having cross connections to the public water supply. The inspection frequency is scheduled at intervals based on the degree of hazard.

What do I need to do?

As a water customer you have certain responsibilities to help protect the public water supply:

- 1) Provide access for the inspector during the visit of your facility.
- 2) Become familiar with the cross connection control regulations addressed in the Wisconsin department of Commerce Admin. Code and Dept. of Natural Resources.
- 3) Have backflow prevention devices registered through the Department of Commerce and tested annually by a certified tester.

What is the City Staff committed to do?

The City of Bayfield Water Department staff is committed to providing quality, cost efficient service in the production, treatment, testing and delivery of safe drinking water to all residential, commercial and industrial users.

Safe and reliable drinking water is a carefully manufactured product. In order to help ensure safe drinking water the City of Bayfield Water Department has adopted a Cross Connection Control Program. This program is a part of our effort to ensure safe and reliable drinking water.

Questions regarding this program or other water quality issues may be directed to the City of Bayfield Water Department.

Internet Resources:

Wisconsin State Legislature

www.legis.state.wi.us/

City of Bayfield Water Department
125 South First Street
P.O. Box 1170
Bayfield, WI 54814

DRINKING WATER

IT'S
YOUR
RESPONSIBILITY
TOO!



“What Do You
Mean I Might Be
Contaminating
The Water?”

WHAT IS A CROSS CONNECTION

I t's true!

You can pollute your own drinking water without even realizing it. Elimination of cross connections will help protect the water we drink. The Safe Drinking Water Act of 1974 established national standards for drinking water. The State, Local Governments or Water Utilities are responsible for the enforcement of these standards, and the supervision of the public water supply. It is the responsibility of Local Government or Local Water Utilities to deliver safe drinking water to your tap.

W hat is a cross connection?

A cross connection is a direct or potential arrangement of drinking water piping that is or can be connected to a questionable source. An example is the common garden hose submerged in a swimming pool or a bucket of detergent or other contaminated water. Other examples are supply lines connected to boilers, process equipment, or bottom-fed tanks. When the proper conditions occur water can flow backwards (backflow) in a piping system allowing contaminated water to flow into the drinking water through a cross connection. There are two ways that contaminated water can backflow into the drinking water: back-siphonage or backpressure.

W hat is back-siphonage?

Back-siphonage is the reversal of normal flow in a system caused by negative pressure (vacuum or partial vacuum) in the supply piping.

W hat factors can cause back-siphonage?

Back-siphonage can be created when there is stoppage of the water supply due to repairs or breaks in the city main or increased demand at a location such as fire fighting.

W hat is backpressure?

Backpressure is the reversal of normal flow in the system due to downstream pressure being greater than the supply pressure.

W hat factors can cause a backpressure condition?

Backpressure can occur in any pressurized system such as boilers, elevated tanks, or recirculating systems. For example a boiler operating under 15-20 lbs. pressure would backflow into the potable water anytime the supply is below 15-20 lbs. Sometimes all this requires is flushing the toilet!

W hat is a cross connection control program?

This is a combined cooperative effort between plumbing and health officials, municipalities, water utilities and property owners to establish and administer guidelines for controlling cross connections and implementing means to ensure their enforcement so that the public drinking water supply will be protected both in the city main and within buildings.

W hat is the most common form of cross connection?

Ironically, the ordinary garden hose is the most common offender as it can be easily connected to the drinking water supply and used for a variety of potentially dangerous applications.

W hat is the difference between pollution and contamination?

Pollution of the water supply does not constitute an actual health hazard, although the quality of the water is impaired with respect to taste, odor or utility. Contamination of the water supply, however, does constitute an actual health hazard; the consumer being subjected to potentially lethal water borne disease or illness.

W hat is meant by "Degree of Hazard"?

The degree of hazard is a commonly used phrase utilized in cross connection programs and is simply a determination of whether the substance in the nonpotable system is toxic (health hazard) or non-toxic (non-health hazard).

W hat is the difference between toxic and a non-toxic substance?

A toxic substance is any liquid, solid or gas which when introduced into the water supply creates, or may create a danger to the health and well being of the consumer. An example is treated boiler water. A non-toxic substance is any substance that may create a nonhealth hazard, is a nuisance or is aesthetically objectional. Non-toxic substances pollute the potable water, for example: food, such as sugar, soda pop, etc...

Selecting the proper backflow prevention device is mandatory. There are four basic methods or products that can be used to prevent backflow.

W hat are the basic methods or products for protection against backflow?

- 1) Air Gap
- 2) Atmospheric Vacuum Breakers: which also includes hose connection vacuum breakers
- 3) Pressure Type Vacuum Breakers
- 4) Reduced Pressure Principle Backflow Preventers

A re there any regulations regarding cross connections?

Yes, cross connection control and backflow prevention issues are addressed in the Wisconsin Administrative Code, Safety and Professional Services, Chapter 382, section SPS 382.41; and Department of Natural Resources, Chapter 810, section NR 810.15, cross connections and interconnections.

Backflow prevention assemblies must be registered through the Wisconsin Department of Commerce and tested upon installation, any time maintenance is conducted on the assembly and at least once a year thereafter by a certified tester.