

PLEASE CONTACT THE CITY OF HUDSON WATER UTILITY AT 715.386.4760 x145 AFTER PRINTING THIS INFORMATION PACKET. WE WOULD LIKE TO REVIEW THIS INFORMATION WITH YOU TO ENSURE THE PROCESS OF INSTALLING A SECOND METER GOES AS SMOOTHLY AS POSSIBLE.

Guide for Installation of Backflow Preventers for Irrigation Systems & Installation of Irrigation (Second) Water Meters

New & Existing Irrigation Systems

Registration & Testing

Wisconsin Uniform Plumbing Code Section requires all pressure & reduced pressure type backflow preventers be registered with the Wisconsin Department of Commerce. More importantly, the Wisconsin Uniform Plumbing Code requires that all backflow preventers be tested by a licensed tester and the results reported to the Wisconsin Department of Commerce and Hudson Water Utility at the following intervals:

- 1.) At the time of installation.
- 2.) Anytime repairs or alterations are made to the system.
- 3.) At least annually.

PLEASE NOTE: THE WISCONSIN DNR ADMINISTRATIVE CODE & HUDSON MUNICIPAL ORDINANCE AUTHORIZES THE WATER UTILITY TO SHUT OFF A WATER SERVICE FOR FAILURE TO PROPERLY MAINTAIN, REGISTER, OR PERFORM THE REQUIRED TESTING OF BACKFLOW PREVENTERS ASSOCIATED WITH IRRIGATION SYSTEMS. NON-COMPLIANCE IS A PUBLIC HEALTH THREAT TO YOUR HOUSEHOLD AND THE COMMUNITY.

Second Meter Installations for Existing Irrigation Systems

Prior to the installation of a second water meter, the homeowner must provide the Hudson Water Utility with a completed Water Meter Set Application. The backflow preventer's Wisconsin Department of Commerce Registration Number and the testing history of the device will be necessary as part of the application. If a registration number can not be provided and/or the testing history is not available, it will be the homeowner's responsibility to register and/or test the device before the second water meter can be installed. Results of testing from a licensed tester and a completed registration form are necessary prior to a second meter being installed.

Second Meter Installation for Outside Hose Bibs (Faucet)

A second meter can be installed to supply hose bibs used for irrigation purposes. However, only water lines serving exterior hose bibs can be installed downstream of the secondary meter. All domestic water lines must be metered through the primary water meter. All hose bibs must be protected with existing vacuum breakers or have new vacuum breakers installed prior to the installation of a second water meter.

City of Hudson Contact Information

City of Hudson Water Utility: 715-386-4760
Troy Timm: 715-381-3884

State of Wisconsin Registration Forms & Assistance

Wisconsin Department of Commerce: www.commerce.state.wi.us
Wisconsin Department of Commerce – La Crosse Office: 608-789-5535
Wisconsin Department of Commerce – Hayward Office: 715-634-4870

Licensed Backflow Device Testers

Mark Buscherfeld – Hurlburt Plumbing & Heating
N6705 State Hwy 25
Durand, WI 54736
715.238.4422 License #203505

Tim Deyoung - Countryside Plumbing & Heating
321 Wisconsin Drive
New Richmond, WI 54017
715.246.2660 License # 664713

Brian Wert Inspection Agency, Inc.
726E Hwy 12 Suite 105
Hudson, WI 54016
715.386.5410 License #70609

Mark Iverson – Evergreen Irrigation
617 County Rd J
Roberts, WI 54023
715.684.9125 License #46672

Joe Richie – Backflow Services LLC
PO Box 65
Roberts, WI 54023
651.235.2362 License #1338780

James Ober
1538 Sequoia Lane
New Richmond, WI 54017
651.505.0430
c) 507.254.7194 License #265968

Greg Kane – ERS Testing LLC
983 101st St.
Roberts, WI, 54023
715.441.8758 License #1339948

Aaron Hanson – Nature’s Touch Irrigation
535 Old Hwy 35
Hudson, WI 54016
715.381.7015/612.221.1834

Dale Hudson - Boldt’s Plumbing & Heating
820 Main St
Baldwin, WI 54002
715.760.0305

Munson Plumbing Service
P.O. Box 265
753 Knowles Ave.
New Richmond, WI 54017
715.246.2482 License #245902

Badger State Plumbing & Heating
2507 Fortune Dr
Eau Claire, WI 54703 License #222202

Chris Mattice
3534 Sterling Heights Dr Suite #E
River Falls, WI 54022
651.925.6827 License #1465929

Licensed Plumbers w/ 2nd Meter & Backflow Device Installation Experience

Tim Deyoung - Countryside Plumbing & Heating
321 Wisconsin Dr E
New Richmond, WI 54017
715.246.2660 License # 664713

Dale Hudson-Boldt’s Plumbing & Heating
820 Main St
Baldwin, WI 54002
715.760.0305

Steiner Plumbing, Electric, and Heating
N8230 945th St
River Falls, WI 54022
715.425.5544 License #225451

Badger State Plumbing & Heating
2507 Fortune Dr
Eau Claire, WI 54703 License #222202

Mr. Rooter Plumbing
994 130th Avenue
New Richmond, WI 54017
715.246.0611 License #5619

TL Sinz Plumbing
E5609 708TH Ave
Menomonie, WI 54751
715.235.2644 License #139462

Munson Plumbing Service
P.O. Box 265
753 Knowles Ave.
New Richmond, WI 54017
715.246.2482 License #245902

**City of Hudson
Water Meter Set Application**

Application Date: _____

Application for: Meter Set ____ Water Service: ____ Date Needed: _____

Applicant Name: _____

Address: _____

Phone #: _____

Owner's Name: _____

Service Address: _____

Plumber/Address: _____

Irrigation System
Installer/Address: _____

____ Domestic Service

____ Irrigation System Service

____ New

____ Existing

Backflow Device Registration Number: _____ Type of Device: _____

Test Results: Yes ____ No ____ If yes, date: _____ Provide Copy.

____ Outside Hose Bibs Only (Verify Installed w/Vacuum Breakers)

Size of Service: ____ 3/4 ____ 1" ____ 1 1/2 " ____ 2" ____ 4" ____ 6"

Size of Meter: ____ 5/8" ____ 3/4" ____ 1" ____ 1 1/2" ____ 2" ____ 4"

Notice: No installation of any meter or water service and location of same shall be allowed without prior approval of the Public Water Utility Director or duly authorized representative of the Hudson Public Utilities Commission.

The attached sheet shows a typical meter installation. These guidelines for meter installations shall be adhered to along with Hudson Public Water Utilities Commission Technical Specifications for water main and service construction. All persons now receiving a water supply from the Hudson Public Water Utility, or who may hereafter make application, shall be considered as having agreed to be bound by the rules and regulations as filed with the Public Service Commission of Wisconsin and the Wisconsin Department of Natural Resources.

Signature of Applicant: _____
Date

Approved By: _____
Date

Comments: _____

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(13) CROSS CONNECTION CONTROL REGISTRATION. (a) Registration, as specified in sub. (1) (c), shall be submitted in a format acceptable to the department.

Note: The forms required in this chapter are available from the Safety and Buildings Division, P.O. Box 7162, Madison, WI 53707-7162, or at telephone (608) 266-3151 and (608) 264-8777 (TTY), or at the Safety and Buildings' web site at www.commerce.state.wi.us.

(b) The form for registering cross connection control devices and assemblies with the department shall include at least all of the following information:

1. The building or facility name and address where the device or assembly is or will be installed.

2. The location of the cross connection control device or assembly within the building or facility.

3. A description of the cross connection control device or assembly including the size, model number, serial number and manufacturer.

4. The name of the owner or owner's agent submitting the registration form and contact information.

(c) Each registration form submitted shall be accompanied by the appropriate fee in accordance with s. Comm 2.645.

(d) Upon receipt of a completed registration form, the department shall issue written confirmation of registration including a department assigned identification number for each cross connection control device or assembly.

(e) Upon permanent removal or replacement of any reduced pressure principle backflow preventer, reduced pressure fire protection principle backflow preventer, spill resistant vacuum breaker, reduced pressure detector fire protection backflow prevention assembly, or pressure vacuum breaker, the owner shall notify the department in writing using a format acceptable to the department.

(14) PENALTIES. Penalties for violations of this chapter shall be assessed in accordance with s. 145.12, Stats.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; am. (1) (intro.), r. and recr. Tables 82.20-1 and 82.20-2, r. (5), renum. (6) to (12) to be (5) to (11), cr. (5) (intro.) and (12), Register, May, 1988, No. 389, eff. 6-1-88; correction in (1) (b) 1. made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1988, No. 389; am. (4) (c) 2. intro. and 4. a. and b., Register, February, 1991, No. 422, eff. 3-1-91; am. (4) (c) 3.a., Register, August, 1991, No. 428, eff. 9-1-91; am. (1) (intro.), (a), (4) (a) to (c) 1., (5) (a), (b) and Tables 82.20-1 and 82.20-2, renum. (4) (d) and (e) to be (4) (d) 1. a. and b. and am. (4) (d) 1. a., cr. (4) (d) 2., Register, February, 1994, No. 458, eff. 3-1-94; correction in (7) made under s. 13.93 (2m) (b) 7., Stats., Register, February, 1994, No. 458; corrections made under s. 13.93 (2m) (b) 7., Stats., Register, October, 1996, No. 490; am. Tables 82.20-1, 2, (1) (b) 2., Register, February, 1997, No. 494, eff. 3-1-97; correction in (13) made under s. 13.93 (2m) (b) 7., Stats., Register, February, 2000, No. 530; am. Tables 82.20-1 and 82.20-2, r. (4) (b), Register, July, 2000, No. 535, eff. 9-1-00; cr. (4) (e), r. and recr. (11) and (12), am. Table 82.20-1, Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: am. (1) (intro.) and Tables 82.20-1 and 82.20-2, r. and recr. (1) (a), r. (1) (b) 2. and (4) (d), renum. (1) (b) (intro.), and 1., (4) (c), (e) and (13) to be (1) (b) 1. and 2., (4) (b), (d) and (14) and am. (4) (b) (intro.) and 2. (intro.), cr. (1) (c), (4) (e) and (13) Register April 2003 No. 568, eff. 5-1-03; CR 02-129: am. (title), (1) (intro) and (c), and (13) (e) Register January 2004 No. 577, eff. 2-1-04; CR 04-035: am. Tables 82.20-1 and 82.20-2 Register November 2004 No. 587, eff. 12-1-04; CR 06-119: am. (5) (intro.), (12) (a) 3. and (b) 3. Register July 2007 No. 619, eff. 8-1-07; CR 08-055: am. (1) (c) (intro.), (4) (b) 2. (intro.), (13) (e), Tables 82.20-1 and 82.20-2 Register February 2009 No. 638, eff. 3-1-09; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638.

Comm 82.21 Testing and inspection. (1) TESTING OF PLUMBING SYSTEMS. Except as provided in par. (a), all new plumbing and all parts of existing systems which have been altered, extended or repaired shall be tested as specified in sub. (2) to disclose leaks and defects before the plumbing is put into operation.

(a) *Waiver of testing.* 1. The testing of the plumbing shall not be required where the installation does not include the addition, replacement, alteration or relocation of any water distribution, drain or vent piping.

2. a. Field testing the installation of a storm building sewer and a storm private interceptor main sewer is not required.

b. The joints and connections to be employed for storm building sewer piping shall conform with s. Comm 84.40 (1) (a).

(b) *Local inspection.* Where the plumbing is installed in a municipality having a local inspector, the testing of the plumbing

shall be done in the presence of a plumbing inspector, except as provided in subd. 1. b.

1. 'Notice of inspection.' a. The plumber responsible for the installation shall notify the plumbing inspector in person, by telephone or in writing when the work is ready for inspection.

b. Testing may be done without the presence of the inspector, if the master plumber responsible for the installation obtains the inspector's permission to provide a written test report in a format acceptable to the inspector.

Note: See the appendix for a sample affidavit form.

2. 'Preparations for inspection.' When the installation is ready for inspection, the plumber shall make such arrangements as will enable the plumbing inspector to inspect all parts of the plumbing system. The plumber shall have present the proper apparatus and appliances for making the tests, and shall furnish such assistance as may be necessary in making the inspection.

3. 'Rough-in inspection.' A rough-in inspection shall be made when the plumbing system is roughed-in and before fixtures are set. Except as provided in subd. 1., plumbing work shall not be closed in, concealed, or covered until it has been inspected and approved by the plumbing inspector and permission is granted to do so.

4. 'Final inspection.' a. Upon completion of the plumbing installation and before final approval is given, the plumbing inspector shall inspect the work.

b. Municipalities may require that a final test be conducted in accordance with sub. (2) (h) and that the final test, when required by the municipality, shall be observed by the plumbing inspector.

5. 'Reinspections.' Whenever the plumbing official finds that the work or installation does not pass any initial test or inspection, the necessary corrections shall be made to comply with this chapter. The work or installation shall then be resubmitted for inspection to the plumbing inspector.

(c) *Inspection of one- and 2-family dwellings.* The inspection of plumbing installations for one- and 2-family dwellings shall be in accordance with ss. Comm 20.08 to 20.11.

(2) INSTALLATION PROVISIONS. (a) *General.* The testing of plumbing installations shall be conducted in accordance with this paragraph.

1. 'Equipment, material and labor for tests.' All equipment, material and labor required for testing a plumbing system or part thereof shall be furnished by the plumber responsible for the installation.

2. 'Exposure of work.' Except as provided in pars. (b) and (c), all new, altered, extended or replaced plumbing shall be left uncovered and unconcealed until it has been tested. Where the work has been covered or concealed before it is tested, it shall be exposed for testing.

(b) *Sanitary building sewer and sanitary private interceptor main sewer.* A sanitary building sewer and a sanitary private interceptor main sewer shall be tested for leaks and defects with water or air before or after being covered in accordance with either subd. 1. or 2. The test for leaks and defects may be applied to the entire building sewer or private interceptor main sewer or in sections. For the purposes of this subdivision, the testing of a building sewer or private interceptor main sewer is not required to include the manholes serving the sewer.

1. The building sewer or private interceptor main sewer shall be tested by insertion of a test plug at the point of connection with the public sewer. The sewer shall then be filled with water under a head of not less than 10 feet. The water level at the top of the test head of water shall not drop for at least 15 minutes.

2. The air test shall be made by attaching an air compressor testing apparatus to any suitable opening, and, after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of 3 pounds per square inch. This pressure shall be held without introduction of additional air for a period of at least 15 minutes.

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(c) *Building drain.* The entire building drain with all its branches, receptacles and connections shall be brought so far as practical to the surface or grade of the basement floor and shall be tested with water or air in accordance with par. (g).

(d) *Drain and vent systems.* The piping of a drain and vent systems, including conductors, shall be tested upon completion of the rough piping installation with water or air in accordance with par. (g).

(e) *Private water mains and water services.* Private water mains and water services shall be inspected before being covered. The private water mains and water services shall be tested and proven water tight under water pressure not less than the working pressure under which it is to be used. The water used for testing shall be obtained from a potable source of supply.

Note: Standard NFPA 24 for combination water services and combination private water mains may include more stringent requirements for testing.

(f) *Water distribution system.* The piping of a water distribution system shall be tested and proved water tight under a water pressure not less than the working pressure under which it is to be used. The water used for tests shall be obtained from a potable source of supply.

(g) *Test methods for drain and vent systems.* A test for water-tightness shall be applied to the entire drain and vent system at one time or to the entire system in sections after the rough piping has been installed in accordance with either subd. 1. or 2.

1. If applied to the entire system, all openings in the piping shall be tightly closed, except the highest opening, and the system shall be filled with water to the point of overflow. If the system is tested in sections, each opening shall be tightly plugged except the highest opening of the section under test, and each section shall be filled with water, but a section shall not be tested with less than a 10 foot head of water. In testing successive sections, at least the upper 10 feet of the next preceding section shall be tested, so that no joint or pipe in the building, except the uppermost 10 feet of the system, is subjected to a test of less than a 10 foot head of water. The water shall be kept in the system or in the portion under test for at least 15 minutes before inspection starts. The system shall then be tight at all points.

2. The air test shall be made by attaching an air compressor testing apparatus to any suitable opening, and, after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of 5 pounds per square inch or sufficient to balance a column of mercury 10" in height. This pressure shall be held without introduction of additional air for a period of at least 15 minutes.

(h) *Final test.* Where required by the local plumbing inspector, after the plumbing fixtures have been installed and the traps filled with water, the connections shall be tested and proved gas and watertight by either one of the methods specified in subd. 1. or 2.

1. The smoke test shall be made by introducing a pungent, thick smoke, produced by one or more smoke machines, into the completed system. When the smoke appears at stack openings on the roof, the openings shall be closed and a pressure equivalent to a one inch water column shall be built and maintained for the period of the inspection.

2. The air test shall be made by attaching a gauge to any suitable opening and, after closing all other inlets and outlets in the system, adding air into the system until a pressure equivalent to a one inch water column exists. The pressure shall remain constant for at least a 5-minute test period without the introduction of additional air.

History: Cr. Register, February, 1985, No. 350, eff. 3-1-85; r. and recr. (1) (d) 5., am. (1) (d) 7. intro., Register, May, 1988, No. 389, eff. 6-1-88; correction in (1) (c) made under s. 13.93 (2m) (b) 7., Stats., Register, May, 1988, No. 389; renun. (1) (a) and (2) (b) to (i) to be (1) (a) 1. and (2) (a) to (h), r. (2) (a), cr. (1) (a) 2. and (3), r. and recr. (1) (d) 1. (intro.), am. (1) (d) 2. (intro.), Register, February, 1994, No. 458, eff. 3-1-94; am. (3) (b) 3., Register, October, 1996, No. 490, eff. 11-1-96; am. (3), Register, February, 1997, No. 494, eff. 3-1-97; r. and recr. (2) (a) and (3), cr. Table 82.21-1, Register, December, 2000, No. 540, eff. 1-1-01; CR 02-002: r. and recr. (1) (b) 4. b. and (2) (d), am. (1) (d) 8. b. Register April 2003 No. 568, eff. 5-1-03; CR 04-035: am. Table 82.21-1 Register November 2004 No. 587, eff. 12-1-04; CR

08-055: am. (title) and (1) (intro.), r. and recr. (1) (b) 1. b., r. (2) and Table 82.21-1, renun. (1) (d) and (3) to be (2) and Comm 82.22 (9) Register February 2009 No. 638, eff. 3-1-09; corrections in (1) (b) 4. b., (2) (a) 2., (b) (intro.), (c), (d), (g) (intro.) and (h) (intro.) made under s. 13.92 (4) (b) 7., Stats., Register February 2009 No. 638.

Comm 82.22 Maintenance and repairs. (1) GENERAL.

(a) All plumbing systems, both existing and new, and all parts thereof, shall be maintained in a safe and sanitary condition.

(b) All devices or safeguards that are required by this chapter shall be maintained in good working order.

(c) The owner shall maintain plumbing systems.

(2) **EXISTING SYSTEMS.** (a) Except as specified in par. (b), any existing plumbing system may remain and maintenance continue if the maintenance is in accordance with the original system design and any of the following:

1. The plumbing system was installed in accordance with the code in effect at the time of installation.

2. The plumbing system conforms to the present code.

(b) When a hazard to life, health or property exists or is created by an existing system, that system shall be repaired or replaced.

Note: A cross connection is considered a health hazard by the department.

(c) Existing sewers and water services may only be connected to new buildings when determined by examination and test to conform to the requirements of this chapter.

(3) **FIXTURES REPLACED.** (a) When a fixture, appliance or section of pipe is replaced, the replacement fixture, appliance or pipe shall conform to the provisions of this chapter.

(b) Where the existing drain or vent piping does not conform to the current provisions of this chapter, the department may require the new fixtures to be provided with deep seal traps.

(4) **PLUMBING REUSED.** (a) 1. Except as provided in par. (b) plumbing materials, fixtures or devices removed and found to be in good condition may be reused if such reuse is approved by the department or a local plumbing inspector.

2. The owner of the building or facility in which the reused materials are to be installed shall provide written consent.

(b) Water supply piping materials may only be reused when the intended use involves an equal or higher degree of hazard than the previous use as specified in Table 82.70-1.

(5) **REPAIRS.** All repairs to fixtures, devices or piping shall be completed in conformance with the provisions of this chapter, except repair clamps or bands may be used for emergency situations.

(6) **DEMOLITION OF STRUCTURES.** When a structure is demolished or removed, all sanitary sewer, storm sewer and water supply connections shall be sealed and plugged in a safe manner.

(7) **DEAD ENDS.** If a dead end is created in the removal of any part of a drain system, all openings in the drain system shall be properly sealed.

(8) **TESTING OF CROSS CONNECTION CONTROL ASSEMBLIES.** (a) The performance testing requirements of this subsection apply to all cross connection control assemblies regardless of date of installation.

Note: For further clarification see Table 82.22-1.

(b) 1. A performance test shall be conducted for the assemblies listed in Table 82.22-1 at all of the following intervals:

a. At the time of installation.

b. Immediately after repairs or alterations to the assembly have occurred.

c. At least annually.

2. The performance test shall be conducted using the appropriate test standard for the assembly as specified in Table 82.22-1.

3. A cross connection assembly performance test shall be conducted by an individual registered by the department in accordance with s. Comm 5.99.