RULES CERTIFICATE

Department of Commerce

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

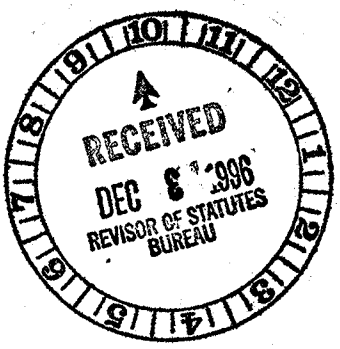
I, William J. McCoshen, Secretary of the Department of Commerce, and custodian of the official records of said department, do hereby certify that the annexed rule(s) relating to plumbing plans and adopted standards
(Subject)

were duly approved and adopted by this department.

I further certify that said copy has been compared by me with the original on file in the department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand at 4:00 p.m. in the city of Madison, this 2nd day of December A.D. 19 96

Secretary



part 1-1-97
part 2-1-97

ORDER OF ADOPTION

Department of Commerce

Pursuant to authority vested in the Department of Commerce by section(s) 145.02 (2) and (3)(g) and (h)

_____ Stats., the Department of Commerce [X] creates; [X] amends;

[X] repeals and recreates; [X] repeals and adopts rules of Wisconsin Administrative Code chapter(s):

Comm 5	Credentials
ILHR (Comm) 2	Fee Schedule
ILHR 51	Definitions and Standards (Building and HVAC)
ILHR 82 and 84	Plumbing Design, Construction, Installation and Products
(number)	(Title)

The attached rules shall take effect on the first day of the month following publication in the Wisconsin Administrative Register pursuant to section 227.22, Stats.

Adopted at Madison, Wisconsin this

date: December 2, 1996

DEPARTMENT OF COMMERCE

Secretary

State of Wisconsin \ Department of Commerce

RULES in FINAL DRAFT FORM

Rule No.: Chapters ILHR 82 and 84

Relating to: Plumbing Plans and Adopted Standards

Clearinghouse Rule No.: 96-063

The Department of Commerce (formerly Industry, Labor and Human Relations) proposes an order to repeal ILHR 82.41 (5) (h); to renumber and amend ILHR 82.11 (165) and ILHR 82.11 (165m); to amend Comm 5.99 (3) (b) to (e), ILHR Table 2.64-1 item 16., ILHR 51.21 (9), ILHR 51.23 (2) (c) 1., ILHR 51.23 (10) 1. and 2., ILHR 82.11 (89m), ILHR 82.11 (125m), ILHR 82.11 (161m), ILHR 82.11 (171m), ILHR Table 82.20-1, ILHR Table 82.20-2 item 1., ILHR 82.20 (1) (b) 2., ILHR 82.21 (3), ILHR 82.41 (2) (a), ILHR Table 82.41-1, ILHR Table 82.41-2, ILHR 82.41 (4) (c), (e), (f), (g), (h), (i), (k), (l) and (m), ILHR 82.41 (5) (e) 3. a., ILHR 82.41 (5) (i), ILHR Table 84.30-1 and ILHR 84.30 (5) (c) 7., 11., 12., 13. and 14.; to repeal and recreate ILHR 82.41 (5) (b), ILHR 82.41 (5) (f), ILHR Tables 84.60-1 to -12, ILHR 84 Appendix A-Tables 84.30-8 and -9 and ILHR 84 Appendix A-84.40; and to create Comm 5.99 (3) (f), ILHR 82.11 (18m), ILHR 82.11 (52), ILHR 82.11 (81h), ILHR 82.41 (4) (n) and ILHR 84.30 (5) (c) 16. and 17., relating to plumbing plans and adopted standards.

* *

Analysis of Proposed Rules

Statutory Authority: Section 145.02 (2) and (3)(g) and (h), Stats.
Statutes Interpreted: Section 145.02 (3)(intro.) and (g), Stats.

The Department of Commerce is responsible for adopting and enforcing administrative rules relative to the design, construction, installation and inspection of plumbing. Under the rules of chapter ILHR 82, plans and specifications for specified types of plumbing installations in public buildings are required to be submitted for review to the department or to an agent municipality.

The current rules require plans and specifications to be submitted for review for plumbing installations in public buildings involving 6 or more plumbing fixtures. The proposed rules change the plan submittal threshold from 6 or more to 11 or more plumbing fixtures.

The rules of chapter ILHR 82 also cover the installation of cross connection control devices. The proposed rules contain revisions to the installation requirements for cross connection control devices that require annual testing.

The proposed rules also include updating of all of the adopted standards in the Plumbing Code. Because of this standards update, several rule changes are included in order to maintain consistent terminology for the various plumbing products.

* *

SECTION 1. Comm 5.99 (3) (b) to (e) is amended to read:

Comm 5.99 (3) (b) Reduced pressure detector ~~assembly~~ backflow preventers;

(c) ~~Vacuum breakers - anti-siphon, pressure type~~ Pressure vacuum breaker assembly;

(d) Double check detector assembly backflow preventers; ~~and~~

(e) Double check backflow prevention assemblies.; and

SECTION 2. Comm 5.99 (3) (f) is created to read:

Comm 5.99 (3) (f) Back siphonage backflow vacuum breakers.

SECTION 3. ILHR Table 2.64-1 item 16 is amended to read:

Table 2.64-1
(partial)

Type of Review	Fee
16. Cross connection control devices:	
Reduced pressure principle backflow preventer	$110.00 per device
Reduced pressure detector ~~assembly~~ backflow preventer	$110.00 per device
~~Vacuum breaker - anti-siphon, pressure type~~ Pressure vacuum breaker assembly	$110.00 per device
Back siphonage backflow vacuum breaker	$110.00 per device

SECTION 4. ILHR 51.21 (9) is amended to read:

ILHR 51.21 (9) CROSS CONNECTION CONTROL. (a) A standpipe system ~~with a fire department connection and the standpipe system~~ connecting to a ~~domestic~~ water supply system or to a municipal water main shall be protected against backflow conditions in accordance with s. ILHR 82.41. If a reduced pressure principle backflow preventer or a reduced pressure detector ~~assembly~~ backflow preventer is used as the type of cross connection control, plans for the device shall be submitted for review in accordance with s. ILHR 82.20 (1).

(b) Cross connection control devices shall be tested in accordance with s. ILHR 82.21 (3).

SECTION 5. ILHR 51.23 (2) (c) 1. is amended to read:

ILHR 51.23 (2) (c) 1. If a reduced pressure principle backflow preventer or a reduced pressure detector ~~assembly~~ backflow preventer is used as the type of cross connection control, plans for the device shall be submitted for review in accordance with s. ILHR 82.20 (1).

SECTION 6. ILHR 51.23 (10) 1. and 2. is amended to read:

ILHR 51.23 (10) ~~1.~~ (a) If a reduced pressure principle backflow preventer or a reduced pressure detector ~~assembly~~ backflow preventer is used as the type of cross connection control, plans for the device shall be submitted for review in accordance with s. ILHR 82.20 (1).

~~2.~~ (b) Cross connection control devices shall be tested in accordance with s. ILHR 82.21 (3).

SECTION 7. ILHR 82.11 (18m) is created to read:

ILHR 82.11 (18m) "Back siphonage backflow vacuum breaker" means a type of cross connection control device which contains a check valve force-loaded closed and an air inlet vent valve force loaded open to atmosphere, positioned downstream of the check valve, and located between and including 2 tightly closing shut-off valves and 2 test cocks.

SECTION 7M. ILHR 82.11 (52) is created to read:

ILHR 82.11 (52) "Control valve" means a device that will stop the flow of water in the water supply system or water-based fire protection system.

SECTION 8. ILHR 82.11 (81h) is created to read:

ILHR 82.11 (81h) "Hose connection backflow preventer" means a type of cross connection control device which consist of 2 independent checks, force loaded or biased to a closed position, with an atmospheric vent located between the 2 check valves, which is forced loaded or biased to an open position, and a means for attaching a hose.

SECTION 9. ILHR 82.11 (89m) is amended to read:

ILHR 82.11 (89m) "Laboratory faucet ~~vacuum breaker~~ backflow preventer" means a type of cross connection control device which consists of 2 independently acting check valves force loaded or biased to a closed position and between the check valves a means for automatically venting to atmosphere force loaded or biased to a open position.

SECTION 10. ILHR 82.11 (125m) is amended to read:

ILHR 82.11 (125m) "Reduced pressure detector ~~assembly~~ backflow preventer" means a type of reduced pressure principle type backflow preventer which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly.

SECTION 11. ILHR 82.11 (161m) is amended to read:

ILHR 82.11 (161m) "Trap seal primer, water supply fed" means a type of valve designed to supply water to the trap in order to provide and maintain the water seal of the trap.

SECTION 12. ILHR 82.11 (165) is renumbered (117h) and amended to read:

ILHR 82.11 (117h) "~~Vacuum breaker, anti-siphon, pressure type~~ Pressure vacuum breaker assembly" means a type of cross connection control device which consists of an independently operating internally loaded check valve and an independently operating loaded air inlet located on the discharge side of the check valve, a tightly closing shut-off valve located at each end of the assembly, and test cocks.

SECTION 13. ILHR 82.11 (165m) is renumbered (108m) and amended to read:

ILHR 82.11 (108m) "~~Vacuum breaker, pipe~~ Pipe applied atmospheric type vacuum breaker" means a type of cross connection control device where the flow of water into the device causes a float to close an air inlet port and when the flow of water stops the float falls and forms a check valve against backsiphonage and at the same time opens the air inlet port to allow air to enter and satisfy the vacuum.

SECTION 14. ILHR 82.11 (171m) is amended to read:

ILHR 82.11 (171m) "Wall hydrant, ~~frost proof~~ freeze resistant automatic draining~~, anti-backflow~~ type vacuum breaker" means a type of device which is designed and constructed with anti-siphon and back pressure preventive capabilities and with means for automatic post shut-off draining to ~~prevent~~ resist freezing.

SECTION 15. ILHR Table 82.20-1 is amended to read:

Table 82.20-1
SUBMITTALS TO DEPARTMENT

Type of Installation
1. All plumbing, new installations, additions and alterations, regardless of the number of plumbing fixtures involved, to be installed in health care facilities.

Table 82.20-1 (Continued)

2. Plumbing, new installations, additions and alterations involving ~~6~~ 11 or more plumbing fixtures, to be installed in buildings owned by a metropolitan or sanitary sewer district.[a]

3. Plumbing, new installations, additions and alterations involving ~~6~~ 11 or more plumbing fixtures, to be installed in buildings owned by the state.[a]

4. Engineered plumbing systems.

5. Controlled roof drainage systems.

6. Reduced pressure principle backflow preventers and reduced pressure detector ~~assembly~~ backflow preventers.

7. ~~Vacuum Breakers - anti-siphon, pressure type~~ Pressure vacuum breaker assembly.

8. Back siphonage backflow vacuum breaker

Note a: A water heater is to be counted as a plumbing fixture.

SECTION 16. ILHR Table 82.20-2 item 1 is amended to read:

Table 82.20-2
SUBMITTALS TO DEPARTMENT OR AGENT MUNICIPALITY
(Partial Table)

Type of Plumbing Installation
1. New installations, additions and alterations to drain systems, vent systems, water service systems, and water distribution systems involving ~~6~~ 11 or more plumbing fixtures to be installed in public buildings.[a,b]

SECTION 17. ILHR 82.20 (1) (b) 2. is amended to read:

ILHR 82.20 (1) (b) 2. 'Local review.' An agent municipality may require by local ordinance the submittal and review of plumbing plans for those installations involving ~~5~~ 10 or less plumbing fixtures.

SECTION 18. ILHR 82.21 (3) is amended to read:

ILHR 82.21 (3) MAINTENANCE AND TESTING OF CROSS CONNECTION CONTROL DEVICES. (a) All cross connection control devices shall be maintained in accordance with the appropriate standard.

(b) 1. A performance test shall be conducted for a reduced pressure principle backflow preventer, a reduced pressure detector ~~assembly~~ backflow preventer, a double check backflow prevention assembly, a double check detector assembly backflow preventer, ~~and vacuum breaker - anti-siphon, pressure type~~ a pressure vacuum breaker assembly and a back siphonage backflow vacuum breaker:

a. At the time of installation;

b. Immediately after repairs or alterations to the device have occurred; and

c. At least annually.

2. a. The performance test for a reduced pressure principle backflow preventer shall be conducted in accordance with ASSE 5010-1013-1.

b. The performance test for a reduced pressure detector ~~assembly~~ backflow preventer shall be conducted in accordance with ASSE 5010-1047-1.

c. The performance test for a double check backflow prevention assembly shall be conducted in accordance with ASSE 5010-1015-1, 5010-1015-2, 5010-1015-3 or 5010-1015-4.

d. The performance test for a double check detector assembly backflow preventer shall be conducted in accordance with ASSE 5010-1048-1, 5010-1048-2, 5010-1048-3 or 5010-1048-4.

e. The performance test for a ~~vacuum breaker - anti-siphon, pressure type~~ pressure vacuum breaker assembly shall be conducted in accordance with ASSE 5010-1020-1.

3. A performance test for a reduced pressure principle backflow preventer, a reduced pressure detector ~~assembly~~ backflow preventer, a double check backflow prevention assembly, a double check detector assembly backflow preventer, ~~and vacuum breaker - anti-siphon, pressure type~~ a pressure vacuum breaker assembly and a back siphonage backflow vacuum breaker shall be conducted by an individual registered by the department in accordance with s. ~~ILHR 81.115~~ Comm 5.99.

4. a. The results of a performance test for a reduced pressure principle backflow preventer, a reduced pressure detector ~~assembly~~ backflow preventer, ~~and a vacuum breaker - anti-siphon pressure type,~~ pressure vacuum breaker assembly, and back siphonage backflow vacuum breaker, shall be forwarded to the department within 60 days of completion of the test.

Note: Performance test results are to be sent to:
~~Bureau of Building Water Systems~~ Division of Safety and Buildings
P.O. Box 7969
Madison, WI 53707

b. The results of performance tests for a reduced pressure principle backflow preventer, a reduced pressure detector ~~assembly~~ backflow preventer, ~~and a vacuum breaker - anti-siphon pressure type,~~ pressure vacuum breaker assembly, and back siphonage backflow vacuum breaker, shall be recorded in a format prescribed by the department.

5. The results of performance tests for a double check backflow prevention assembly, and a double check detector assembly backflow preventer shall be maintained at the site where the device is installed and shall be made available upon request to the department or government entity exercising jurisdiction.

(c) The maintenance and performance testing requirements of this subsection shall also apply to those cross connection control devices installed prior to the effective date of this subsection.

SECTION 18M. ILHR 82.41 (2) (a) is amended to read:

ILHR 82.41 (2) (a) All devices, assemblies and mechanisms intended to protect potable water supplies relative to cross connection or backflow shall be of a type recognized and approved in accordance with ch. ILHR 84 and as described in sub. (4).

SECTION 19. ILHR Table 82.41-1 is amended to read:

Table 82.41-1
ACCEPTABLE CROSS CONNECTION CONTROL METHODS

TYPES or METHODS of CROSS CONNECTION CONTROL	SITUATIONS and CONDITIONS							
	Backpressure				Backsiphonage			
	Low Hazard		High Hazard		Low Hazard		High Hazard	
	Cont Pres	Noncont Pres	Cont Pres	Noncont Pres	Cont Pres	Noncont Pres	Cont Pres	Noncont Pres
Air Gaps (ANSI A112.1.2)	X	X	X	X	X	X	X	X
Pipe Applied Atmospheric Type Vacuum Breakers (ASSE 1001)						X		X
Hose Connection Backflow Preventers (ASSE 1052)	X[a]	X	X[a]	X	X[a]	X	X[a]	X

Table 82.41-1 (Continued)

Hose Connection Vacuum Breakers (ASSE 1011)	X[a]	X	X[a]	X	X[a]	X	X[a]	X
Backflow Preventers with Intermediate Atmospheric ~~Vents~~ Vent (ASSE 1012)	X	X			X	X		
Reduced Pressure Principle Backflow Preventers (ASSE 1013)	X	X	X	X	X	X	X	X
~~Vacuum Breakers Anti-siphon, Pressure Type~~ Pressure vacuum breaker assembly (ASSE 1020)					X	X	X	X
Back siphonage backflow vacuum breaker (ASSE 1056)					X	X	X	X
Barometric Loops					X	X	X	X

Note [a]: See limitation under sub. (4) (c) 1. a.

SECTION 20. ILHR Table 82.41-2 is amended to read:

Table 82.41-2
ACCEPTABLE CROSS CONNECTION CONTROL METHODS FOR SPECIFIC APPLICATIONS

Types or Methods of Cross Connection Control	**Types of Application or Use**
Water Closet Flush Tank Ball Cocks (ASSE 1002)	Gravity water closet flush tanks
Hand Held Showers (ASSE 1014)	Hand-held shower assemblies

Table 82.41-2 (Continued)

Double Check Backflow Prevention Assemblies (ASSE 1015)	Automatic fire sprinkler systems and Standpipe systems
Trap Seal Primer Valves, Water Supply Fed (ASSE 1018)	Traps for drain systems
~~Wall Hydrants, Frost-Proof Automatic Draining Anti-Backflow Type~~ Vacuum Breaker Wall Hydrant, Freeze Resistant Automatic Draining Type (ASSE 1019)	Hose threaded outlet connections
~~Stainless Steel Dual Check Valve Type Backflow Preventer with Vent~~ Backflow Preventer for Carbonated Beverage Machines (ASSE 1022)	Carbonated beverage dispensers, post mix types
Laboratory ~~Faucet Vacuum Breakers~~ Backflow Preventers (ASSE 1035)	Laboratory faucets
Pressurized Flushing Devices (Flushometers) For Plumbing Plumbing Fixtures (ASSE 1037)	Flushometer plumbing fixtures
Reduced Pressure Detector ~~Assembly~~ Backflow Preventer (ASSE 1047)	Automatic fire sprinkler systems
Double Check Detector Assembly Backflow Preventer (ASSE 1048)	Automatic fire sprinkler systems and Standpipe systems
Vacuum Breaker Tees [sub. (5) (k)]	Water treatment devices

SECTION 21. ILHR 82.41 (4) (c), (e), (f), (g), (h), (i), (k), (l) and (m) is amended to read:

ILHR 82.41 (4) (c) 1. a. The use of a hose connection backflow preventer and 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.

(e) 1. A reduced pressure principle backflow preventer and a reduced pressure detector ~~assembly~~ 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 inches 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~~ hand-held shower may not be employed in backpressure situations of more than 2 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 inches 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 inches above:

1. The connection to the trap; and

2. The highest point downstream from the device where backpressure would be created.

(i) A ~~wall hydrant, frost proof automatic draining, anti-backflow type,~~ vacuum breaker wall hydrant, freeze resistant automatic draining type, may not be employed in backpressure situations of more than 10 feet of water column.

(k) 1. ~~An anti-siphon,~~ 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 inches above:

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

b. The highest point downstream from the device where backpressure would be created.

2. ~~An anti-siphon,~~ A pressure ~~type~~ vacuum breaker assembly shall be located only outside.

(l) A laboratory faucet ~~vacuum breaker~~ 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 ~~frost proof and self-~~ freeze resistant automatic draining as required under s. ILHR 82.40 (8) (a).

SECTION 22. ILHR 82.41 (4) (n) is created to read:

ILHR 82.41 (4) (n) A back siphonage backflow vacuum breaker shall be installed so that the bottom of the device or the critical level mark on the device is at least 12 inches above:

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

b. The highest point downstream from the device where backpressure would be created.

SECTION 23. ILHR 82.41 (5) (b) is repealed and recreated to read:

ILHR 82.41 (5) (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. ILHR 84.30 (5) (c).

SECTION 24. ILHR 82.41 (5) (e) 3. a. is amended to read:

3. a. If a reduced pressure principle backflow preventer or a reduced pressure detector ~~assembly~~ 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 ~~assembly~~ backflow preventer, the flow or pathway of the discharge may not create a nuisance.

SECTION 25. ILHR 82.41 (5) (f) is repealed and recreated to read:

ILHR 82.41 (5) (f) The installation of a reduced pressure principle backflow preventer, a reduced pressure detector backflow preventer, a double check backflow prevention assembly, a double check detector assembly backflow preventer, a pressure vacuum breaker assembly and a back siphonage backflow vacuum breaker shall conform to 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 inches.

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 inches.

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

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

SECTION 26. ILHR 82.41 (5) (h) is repealed.

SECTION 27. ILHR 82.41 (5) (i) is amended to read:

ILHR 82.41 (5) (i) No control valve may be placed downstream from a pipe applied atmospheric type vacuum breaker or a laboratory faucet ~~vacuum breaker~~ backflow preventer.

SECTION 28. ILHR Table 84.30-1 is amended to read:

Table 84.30-1
ABOVE GROUND DRAIN AND VENT PIPE AND TUBING
(Partial Table)

Material	Standard
~~Lead~~	~~FS WW P 325B~~
Polyvinyl chloride (PVC)	ASTM D2665; ASTM D1785; ASTM F891[b]

Note a: The installation of synthetic hose is limited in use to indirect waste piping or local waste piping from dishwashers in accordance with s. ILHR 82.33 (9) (d).

Note b: Limited to pipe weight of schedule 40.

SECTION 29. ILHR 84.30 (5) (c) 7., 11., 12., 13. and 14. is amended to read:

7. Backflow preventers with intermediate atmospheric ~~vents~~ vent shall conform with ASSE 1012.

11. ~~Wall hydrants, frost proof automatic draining anti-backflow type~~ Vacuum breaker wall hydrants, freeze resistant automatic draining type shall conform to ASSE 1019.

12. ~~Vacuum breakers - anti-siphon, pressure type~~ Pressure vacuum breaker assemblies shall conform to ASSE 1020.

13. Laboratory faucet ~~vacuum breakers~~ backflow preventers shall conform to ASSE 1035.

14. Reduced pressure detector ~~assembly~~ backflow preventers shall conform to ASSE 1047.

SECTION 30. ILHR 84.30 (5) (c) 16.and 17. is created to read:

ILHR 84.30 (5) (c) 16. Back siphonage backflow vacuum breakers shall conform to ASSE 1056.

17. Hose connection backflow preventers shall conform to ASSE 1052.

SECTION 31. ILHR Tables 84.60-1 to 84.60-12 are repealed and recreated to read:

Table 84.60-1

AHAM	Association of Home Appliance Manufacturers 20 North Wacker Drive Chicago, Illinois 60606
Standard Reference Number	Title
DW-1-92	Household Electric Dishwashers

Table 84.60-2

ANSI	American National Standards Institute, Inc. 1430 Broadway New York, New York 10018
Standard Reference Number	Title
1. A112.1.2-91	Air Gaps in Plumbing Systems
2. A112.6.1M-88	Supports for Off-the-Floor Plumbing Fixtures for Public Use
3 A112.14.1-75 (R1990)	Backwater Valves
4. A112.18.1M-94	Plumbing Fixture Fittings
5. A112.19.1M-90	Enameled Cast Iron Plumbing Fixtures

Table 84.60-2 (Continued)

6.	A112.19.2M-82	Vitreous China Plumbing Fixtures
7.	A112.19.2M-90	Vitreous China Plumbing Fixtures
8.	A112.19.3M-87	Stainless Steel Plumbing Fixtures (Designed for Residential Use)
9.	A112.19.4-94	Porcelain Enameled Formed Steel Plumbing Fixtures
10.	A112.19.5-79(R1990)	Trim for Water Closet Bowls, Tanks and Urinals (Dimensional Standards)
11.	A112.19.6-90	Hydraulic Requirements for Water Closets and Urinals
12.	A112.21.1M-91	Floor Drains
13.	A112.21.2M-83	Roof Drains
14.	A112.26.1M-84	Water Hammer Arrestors
15.	B1.20.1-83(R1992)	Pipe Threads, General Purpose (Inch)
16.	B16.1-89	Cast Iron Pipe Flanges and Flanged Fittings
17.	B16.3-92	Malleable-Iron Threaded Fittings
18.	B16.4-92	Gray Iron Threaded Fittings
19.	B16.5-88	Pipe Flanges and Flanged Fittings (w/1992 Addenda)
20.	B16.9-93	Factory-Made Wrought Steel Buttwelding Fittings
21.	B16.11-91	Forged Fittings, Socket-Welding and Threaded
22.	B16.12-91	Cast Iron Threaded Drainage Fittings
23.	B16.15-85	Cast Bronze Threaded Fittings, Classes 125 and 250
24.	B16.18-84(R1994)	Cast Copper Alloy Solder-Joint Pressure Fittings
25.	B16.22-95	Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings
26.	B16.23-92	Cast Copper Alloy Solder Joint Drainage Fittings - DWV
27.	B16.24-91	Cast Copper Alloy Pipe Flanges and Flanged Fittings, Class 150, 300, 400, 600, 900, 1500 and 2500
28.	B16.26-88	Cast Copper Alloy Fittings for Flared Copper Tubes
29.	B16.28-94	Wrought Steel Buttwelding Short Radius Elbows and Returns
30.	B16.29-94	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV
31.	B16.32-92	Cast Copper Alloy Solder Joint Fittings for Sovent Drainage Systems
32.	B16.42-87	Ductile Iron Pipe Flanges and Flanged Fittings, Classes 150 and 300
33.	B36.19M-85(R1994)	Stainless Steel Pipe
34.	Z21.22-86	Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems (w/1990 Addendum)
35.	Z124.1-87	Plastic Bathtub Units (w/1990 Addendum)
36.	Z124.2-87	Plastic Shower Receptors and Shower Stalls (w/1990 Addendum)
37.	Z124.3-86	Plastic Lavatories (w/1990 Addendum)
38.	Z124.4-86	Plastic Water Closet Bowls and Tanks (w/1990 Addendum)

Table 84.60-3

ARI	Air-Conditioning and Refrigeration Institute 1815 North Fort Myer Drive Arlington, Virginia 22209
Standard Reference Number	Title
ARI-1010-94	Self-Contained Mechanically-Refrigerated Drinking-Water Coolers

Table 84.60-4

ASSE	American Society of Sanitary Engineering P.O. Box 9712 Bay Village, Ohio 44140
Standard Reference Number	Title
1. 1001-90	Pipe Applied Atmospheric Type Vacuum Breakers
2. 1002-86	Water Closet Flush Tank Ball Cocks
3. 1003-93	Water Pressure Reducing Valves
4. 1004-90	Commercial Dishwashing Machines
5. 1005-86	Water Heater Drain Valves
6. 1006-89	Residential Use (Household) Dishwashers
7. 1007-92	Home Laundry Equipment
8. 1008-89	Household Food Waste Disposer Units
9. 1009-90	Commercial Food Waste Grinder Units
10. 1010-82	Water Hammer Arrestors
11. 1011-93	Hose Connection Vacuum Breakers
12. 1012-93	Backflow Preventer with Intermediate Atmospheric Vent
13. 1013-93	Reduced Pressure Principle Backflow Preventers
14. 1014-90	Hand-Held Showers
15. 1015-93	Double Check Backflow Prevention Assembly
16. 1018-86	Trap Seal Primer Valves, Water Supply Fed
17. 1019-93	Vacuum Breaker Wall Hydrants, Freeze Resistant Automatic Draining Type
18. 1020-90	Pressure Vacuum Breaker Assembly
19. 1023-79	Hot Water Dispensers, Household Storage Type, Electrical
20. 1025-78	Diverters for Plumbing Faucets with Hose Spray, Anti-Siphon Type, Residential Applications
21. 1035-93	Laboratory Faucet Backflow Preventers
22. 1037-90	Pressurized Flushing Devices (Flushometers) for Plumbing Fixtures
23. 1047-93	Reduced Pressure Detector Backflow Preventer

Table 84.60-4 (Continued)

24.	1048-93	Double Check Detector Assembly Backflow Preventer
25.	1052-93	Hose Connection Backflow Preventers
26.	1056-93	Back Siphonage Backflow Vacuum Breakers
27.	5010-1013-1-90	Field Test Procedure for a Reduced Pressure Principle Assembly Using A Differential Pressure Gauge
28.	5010-1015-1-90	Field Test Procedure for a Double Check Valve Assembly Using a Duplex Gauge
29.	5010-1015-2-90	Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge - High- and Low-Pressure Hose Method
30.	5010-1015-3-90	Field Test Procedure for a Double Check Valve Assembly Using a Differential Pressure Gauge - High-Hose Method
31.	5010-1015-4-90	Field Test Procedure for a Double Check Valve Assembly Using a Sight Tube
32.	5010-1020-1-90	Field Test Procedure for a Pressure Vacuum Breaker Assembly
33.	5010-1047-1-90	Field Test Procedure for a Reduced Pressure Detector Assembly Using a Differential Pressure Gauge
34.	5010-1048-1-90	Field Test Procedure for a Double Check Detector Assembly Using a Duplex Gauge
35.	5010-1048-2-90	Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge - High- and Low- Pressure Hose Method
36.	5010-1048-3-90	Field Test Procedure for a Double Check Detector Assembly Using a Differential Pressure Gauge - High-Pressure Hose Method
37.	5010-1048-4-90	Field Test Procedure for a Double Check Detector Assembly Using a Sight Tube

Table 84.60-5

ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, Pennsylvania 19428-2959
Standard Reference Number	Title
1. A53-93a	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless, Specification for
2. A74-94	Cast Iron Soil Pipe and Fittings, Specification for
3. A123-89a	Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates and Strip, Specification for
4. A270-90	Seamless and Welded Austenitic Stainless Steel Sanitary Tubing, Specification for

Table 84.60-5 (Continued)

5.	A377-94	Ductile-Iron Pressure Pipe, Standard Index of Specification for
6.	A403/A403M-94a	Wrought Austenitic Stainless Steel Piping Fittings, Specification for
7.	A450/A450M-94	General Requirements for Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes, Specification for
8.	B32-95	Solder Metal, Specification for
9.	B42-93	Seamless Copper Pipe, Standard Sizes, Specification for
10.	B43-94	Seamless Red Brass Pipe, Standard Sizes, Specification for
11.	B75-93	Seamless Copper Tube, Specification for
12.	B88-93a	Seamless Copper Water Tube, Specification for
13.	B152-94	Copper Sheet, Strip, Plate, and Rolled Bar, Specification for
14.	B251-93	General Requirements for Wrought Seamless Copper and Copper-Alloy Tube, Specification for
15.	B302-92	Threadless Copper Pipe, Specification for
16.	B306-92	Copper Drainage Tube (DWV), Specification for
17.	C4-62(R1991)	Clay Drain Tile, Specification for
18.	C14-94	Concrete Sewer, Storm Drain, and Culvert Pipe, Specification for
19.	C33-93	Concrete Aggregates, Specification for
20.	C76-94	Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe, Specification for
21.	C425-91	Compression Joints for Vitrified Clay Pipe and Fittings, Specification for
22.	C443-94	Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets, Specification for
23.	C564-95	Rubber Gaskets for Cast Iron Soil Pipe and Fittings, Specification for
24.	C700-91	Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated, Specification for
25.	D1527-94	Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe, Schedules 40 and 80, Specification for
26.	D1785-93	Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120, Specification for
27.	D2104-93	Polyethylene (PE) Plastic Pipe, Schedule 40, Specification for
28.	D2235-93a	Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings, Specification for
29.	D2239-93	Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter, Specification for
30.	D2241-93	Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR), Specification for
31.	D2282-94	Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe (SDR-PR), Specification for
32.	D2321-89	Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications, Practice for
33.	D2447-93	Polyethylene (PE) Plastic Pipe, Schedules 40 and 80 Based on Outside Diameter, Specification for

Table 84.60-5(Continued)

34.	D2464-94	Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Specification for
35.	D2466-94a	Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40, Specification for
36.	D2467-94	Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80, Specification for
37.	D2468-93	Acrylonitrile-Butadiene-Styrene (ABS), Plastic Pipe Fittings, Schedule 40, Specification for
38.	D2564-93	Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems, Specification for
39.	D2609-93	Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe, Specification for
40.	D2657-90	Heat-Joining of Polyolefin Pipe and Fittings, Specification for
41.	D2661-94a	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings, Specification for
42.	D2662-93	Polybutylene (PB) Plastic Pipe (SIDR-PR), Based on Controlled Inside Diameter, Specification for
43.	D2665-94	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings, Specification for
44.	D2666-93	Polybutylene (PB) Plastic Tubing, Specification for
45.	D2672-94	Joints for IPS Pipe Using Solvent Cement, Specification for
46.	D2680-93	Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping, Specification for
47.	D2683-93	Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing, Specification for
48.	D2729-93	Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Specification for
49.	D2737-93	Polyethylene (PE) Plastic Tubing, Specification for
50.	D2751-93	Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings, Specification for
51.	D2774-94	Underground Installation of Thermoplastic Pressure Piping, Practice for
52.	D2846-93	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems, Specification for
53.	D2852-93	Styrene-Rubber (SR) Plastic Drain Pipe and Fittings, Specification for
54.	D2855-93	Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings, Practice for
55.	D3000-93	Polybutylene (PB) Plastic Pipe (SDR-PR) Based on Outside Diameter, Specification for
56.	D3034-93	Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, Specification for
57.	D3035-93	Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter, Specification for

Table 84.60-5 (Continued)

58.	D3139-89	Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals, Specification for
59.	D3140-90	Flaring Polyolefin Pipe and Tubing, Practice for
60.	D3212-92	Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals, Specification for
61.	D3261-93	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing, Specification for
62.	D3309-93	Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems, Specification for
63.	D3311-92	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns, Specification for
64.	F402-93	Safe Handling of Solvent Cements, Primers and Cleaners Used for Joining Thermoplastic Pipe and Fittings, Practice for
65.	F405-93	Corrugated Polyethylene (PE) Tubing and Fittings, Specification for
66.	F409-93	Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings, Specification for
67.	F437-93	Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Specification for
68.	F438-93	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40, Specification for
69.	F439-93a	Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, Specification for
70.	F441-94	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80, Specification for
71.	F442-94	Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR), Specification for
72.	F477-93	Elastomeric Seals (Gaskets) for Joining Plastic Pipe, Specification for
73.	F493-93a	Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings, Specification for
74.	F628-93	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe with a Cellular Core, Specification for
75.	F656-93	Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings, Specification for
76.	F810-93	Smoothwall Polyethylene (PE) Pipe for Use in Drainage and Waste Disposal Absorption Fields, Specification for
77.	F845-93	Plastic Insert Fittings for Polybutylene (PB) Tubing, Specification for
78.	F876-93	Crosslinked Polyethylene (PEX) Tubing, Specification for
79.	F877-93	Crosslinked Polyethylene (PEX) Plastic Hot- and Cold Water Distribution Systems, Specification for
80.	F891-93a	Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core, Specification for

Table 84.60-6

AWS	American Welding Society 550 N. W. LeJune Road Miami, Florida 33126
Standard Reference Number	Title
AWS A5.8-92	Filler Metals for Brazing and Braze Welding, Specification for

Table 84.60-7

AWWA	American Water Works Association Data Processing Department 6666 West Quincy Avenue Denver, Colorado 80235

	Standard Reference Number	Title
1.	C110/A21.10-93	American National Standard for Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in., for Water and Other Liquids
2.	C111/A21.11-90	American National Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
3.	C115/A21.15-88	American National Standard for Flanged Ductile-Iron and Gray-Iron Pipe with Threaded Flanges
4.	C151/A21.51-91	American National Standard for Ductile-Iron Pipe, Centrifugally Cast, For Water or Other Liquids
5.	C153/A21.53-94	American National Standard for Ductile-Iron Compact Fittings, 3 in. through 16 in. for Water and Other Liquids
6.	C700-90	Cold Water Meters - Displacement Type (w/1991 Addendum)
7.	C701-88	Cold Water Meters - Turbine Type for Customer Service
8.	C702-92	Cold Water Meters - Compound Type
9.	C704-92	Cold Water Meters - Propeller Type for Main Line Applications
10.	C706-91	Cold Water Meters - Direct-Reading Remote Registration Systems for
11.	C707-82(R92)	Cold Water Meters - Encoder-Type, Remote-Registration Systems for
12.	C708-91	Cold Water Meters - Multi-Jet Type
13.	C710-90	Cold Water Meters, Displacement Type - Plastic Main Case (w/ 1991 Addendum)
14.	C900-89	American Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for Water Distribution (w/1992 Addendum)

Table 84.60-8

CISPI	Cast Iron Soil Pipe Institute 5959 Shallowford Road, Suite 419 Chattanooga, Tennessee 37421
Standard Reference Number	Title
1. 301-95	Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Standard Specification for
2. 310-95	Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, Specification for

Table 84.60-9

FMRC	Factory Mutual Research Corp. 1151 Boston-Providence Turnpike Norwood, Massachusetts 02062
Standard Reference Number	Title
1680	Couplings used in Hubless Cast Iron Systems for Drain, Waste or Vent, Sewer, Rainwater or Storm Drain Systems Above and Below Ground, Industrial/Commercial and Residential, January 1989

Table 84.60-10

MSS	Manufacturers Standardization Society of the Valve and Fittings Industry, Inc. 127 Park Street, N.E. Vienna, Virginia 22180
Standard Reference Number	Title
SP-103	Wrought Copper and Copper Alloy Insert Fittings for Polybutylene Systems, 1995 edition

Table 84.60-11

NSF	NSF International 3475 Plymouth Road P.O. Box 130140 Ann Arbor, Michigan 48113-0140
Standard Reference Number	Title
Standard 14-90	Plastic Piping Compounds and Related Materials

Table 84.60-12

WQA	Water Quality Association 4151 Naperville Road Northbrook, Illinois 60062
Standard Reference Number	Title
S-100-85	Household, Commercial and Portable Exchange Water Softners

SECTION 32. ILHR 84 Appendix A-Tables 84.30-8 and -9 is repealed and recreated to read:

A-Tables 84.30-8 and -9. ASTM D2774. The following is a reprint of excerpts from ASTM D2774-94, Practice for Underground Installation of Thermoplastic Pressure Piping.

SECTION 33. ILHR 84 Appendix A-84.40 is repealed and recreated to read:

A-84.40. ASTM F402. The following is a reprint of excerpts from ASTM F402-93, Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings.

(END)

* *

EFFECTIVE DATE

Pursuant to s. 227.22 (2)(intro.), Stats., these rules shall take effect on the first day of the month following publication in the Wisconsin Administrative Register.

* *

Wisconsin
Department of Commerce

123 West Washington Avenue
P.O. Box 7970
Madison, Wisconsin 53707
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Tommy G. Thompson, Governor
William J. McCoshen, Secretary

December 2, 1996

Gary Poulson
Assistant Revisor of Statutes
Suite 800
131 West Wilson Street
Madison, Wisconsin 53703-3233

Douglas LaFollette
Secretary of State
10th Floor
30 West Mifflin Street
Madison, Wisconsin 53703

Dear Messrs. Poulson and LaFollette:

TRANSMITTAL OF RULE ADOPTION

CLEARINGHOUSE RULE NO.: 96-063

RULE NO.: Chapters ILHR 82 and 84

RELATING TO: Plumbing Plans and Adopted Standards

Pursuant to section 227.20, Stats., agencies are required to file a certified copy of every rule adopted by the agency with the offices of the Secretary of State and the Revisor of Statutes.

At this time, the following material is being submitted to you:

1. Order of Adoption.
2. Rules Certificate Form.
3. Rules in Final Draft Form.

Pursuant to section 227.114, Stats., a summary of the final regulatory flexibility analysis is included for permanent rules. A fiscal estimate and fiscal estimate worksheet is included with an emergency rule.

Respectfully submitted,

William J. McCoshen
Secretary