Report From Agency

State of Wisconsin \ Department of Commerce

RULES IN FINAL DRAFT FORM

Rule No.: Chapters Comm 5, 18 and 81 to 84
Relating to: Wisconsin Uniform Plumbing Code
Clearinghouse Rule No.: 10-064

The Wisconsin Department of Commerce proposes an order to repeal Comm 82.31 (14) (g) 2., Comm 82.34 (6) (d), Comm 82.40 (9), Comm 82.41 Table 82.41–2 line 8 and Comm 84.20 (6) (d);

to renumber Comm 81.01 (160m), Comm 82.21 (1) (b) 1. b., Comm 82.31 (14) (g) 3. and 4., Comm 82.40 Table 82.40–1, Comm 82.40 (3) (d) 2. and 3., Comm 82.70 Table 82.70–1 line 11. and Comm 84.20 (6) (e);

to amend Comm 5.06 Table 5.06 line 66., Comm 81.01 (116), Comm 81.01 (166), Comm 81.01 (176) Note, Comm 81.20 Table 81.20–2 line 4., Table 81.20–3e lines 2m. and 5. and Table 81.20–4 lines 25. and 27. to 32., Comm 82.20 Table 82.20–1 footnote b, Comm 82.20 Table 82.20–2 footnote a, Comm 82.30 (6) (a) 2., (b) and (b) 5.a., Comm 82.30 Table 82.30–2, Comm 82.31 (5) (a) 2., Comm 82.31 (6) (c), Comm 82.31 (17) (a) 2., Comm 82.33 Table 82.33–2, Comm 82.34 (title), (1), (2) and (3) intro., (a), (c) title, (c), (e), (g) and (h), Comm 82.34 (4) (a) 2., Comm 82.34 (5) (c) 3. and Note, Comm 82.365 (3) (f) 2., Comm 82.40 (3) (a) title, Comm 82.40 (3) (c) 1., Comm 82.40 (5) (a) and (6) (a), Comm 82.40 (8) (b) 3., 4. 5. and 6., Comm 82.40 Table 82.40–8 (title), Comm 82.40 Table 82.40–10 (title) and Note, Comm 82.41 (1), Comm 82.41 (5) (e) 2., Comm 82.41 Table 82.41–2 line 1, Comm 82.70 Table 82.70–1 lines 1., 2., 6. and 10., Comm 84.30 (4), Comm 84.20 (5) (f) 1., (L) 1., (m) 1. b., (n) 1. a. and (o) 1. a. and (6) (a) and (b), Comm 84.30 Table 84.30–7, Comm 84.30 Table 84.30–8 footnote c and Comm 84.40 (5) (c), (6) (c) and (8) (e);

to repeal and recreate Comm 18.1702 (1), Comm 81.01 (35), and Comm 82.40 (3) (d) 1.;

and to create Comm 5.99 (5) (c), Comm 81.01 (62e), Comm 81.01 (154m), Comm 81.01 (160m), Comm 81.20 Table 81.20–7 line 5c., Comm 82.20 Table 82.20–2 line 10., Comm 82.21 (1) (b) 1. b., Comm 82.21 (1) (d), Comm 82.30 (6) (c), Comm 82.34 (15), Comm 82.40 Table 82.40–1a, Comm 82.40 (3) (d) 2., Comm 82.40 (8) (b) 9., Comm 82.70 Table 82.70–1 line 11., and Comm 83.41 (1) Note, relating to the design, installation or construction, inspection and maintenance of plumbing.

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ANALYSIS OF PROPOSED RULES

1. Statutes Interpreted.

Sections 101.02, 145.02 and 145.13, Stats.

2. Statutory Authority.

Sections 101.02, 145.02 and 145.13, Stats.

3. Related Statute or Rule.

- Chapter Comm 18, Conveyance Systems

- Chapters 20 to 25, Uniform Dwelling Code
- Chapters Comm 60 to 66, Commercial Building Code
- Chapters 81 to 87, Uniform Plumbing Code

4. Explanation of Agency Authority.

Sections 101.02 and 145.02, Stats., grant the Department of Commerce general authority for protecting the health, safety and welfare of the public by establishing reasonable and effective safety standards for the design, installation or construction, inspection and maintenance of plumbing. In accordance with s. 145.13, Stats., the department is also responsible for safeguarding the waters of the state.

5. Summary of Proposed Rules.

The primary revisions to chapters Comm 81 to 84 clarify the existing rules by modifying technical requirements within the standards, reorganizing current requirements and incorporating editorial changes. The major proposed rule changes to these chapters are as follows:

a. Include definitions for various types of wastewater and requirements for wastewater treatment and containment devices. [Comm 81.01 (154) and (160m) and Comm 82.34 (1) and (15)]

b. Modify the identification requirements of water supply systems that pose different degrees of hazard within a building. [Comm 82.40 (3) (d) and Table 82.40-1]

In addition, the proposed rules require 6 hours of continuing education for the renewal of the cross connection control tester license. [Comm 5.99 (4) (c)]

The proposed rules also modify the requirements for sump pumps in elevator pits, and allow the use of standard-sized equipment to meet a more realistic pumping requirement. [Comm 18.1702 (1)]

6. Summary of and Comparison with Existing or Proposed Federal Regulations.

There are several existing federal regulations that relate to the design, installation or construction, inspection and maintenance and repair of plumbing. Some of these regulations require compliance with the 2006 editions of the *International Plumbing Code* (IPC), a national model code developed by the International Code Council (ICC), and the *Uniform Plumbing Code* (UPC), a national model code developed by the International Association of Plumbing and Mechanical Officials.

An Internet-based search of the *United States Code* (USC) found the following existing federal rules that impact plumbing. The Wisconsin Uniform Plumbing Code reflects the requirements currently contained in these federal laws.

- USC Title 24, Volume 5, Chapter XX, Part 3289, Subpart G – The Manufactured Home Construction and Safety Standards revises the plumbing materials, fixtures and equipment installed within or on manufactured homes as of April 1, 2009.

- USC Title 40, Volume 22, Chapter I, Part 141 – The National Primary Drinking Water Regulations established primary drinking water regulations pursuant toe section 1412 of the Public Health Service Act, as amended by the Safe Drinking Water Act. Regulated by the Environment Protection Agency (EPA), the regulations were revised July 1, 2009, and are applicable to public water systems. Subpart I established monitoring requirements for lead and copper in tap water.

- California Assembly Bill No. 1953, Chapter 853 – The Lead Solder, Pipe and Flux Law expands Section 116875 of the Health and Safety Code as contained in USC Title 42, Chapter 6A, Subchapter XII, Part B, Section 300g-6 relating to lead plumbing to include any pipe or plumbing fitting, or fixture intended to convey or dispense water for human consumption. The law, which became effective January 1, 2010, passed both the Assembly and the Senate in 2006 and also revises the term "lead free."

- USC Title 42, Chapter 6A, Subchapter XII, Part F, Section 300j-24 – Lead contamination in school drinking water outlines the testing protocol for lead contamination in drinking water from coolers and other sources at educational agencies, private nonprofit elementary or secondary schools and day care centers. The law became effective in 1999. Currently, legislation is being proposed that would amend this section of the Safe Drinking Water Act.

- USC Title 33, Chapter 26, Subchapter IV, Section 1342 – National Pollutant Discharge Elimination System (NPDES) established Phase I of the storm water program in 1990. Nine years later, Phase II of the program was signed into law and requires smaller communities to develop and implement a comprehensive storm water management program.

An Internet-based search of the 2008 through 2010 issues of the *Federal Register* found a proposed rule relating to energy conservation standards for residential water heaters in the December 11, 2009, issue (Vol. 74, No. 237). The U.S. Department of Energy announced a public meeting to receive comments on its proposed amended energy conservation standards.

7. Comparison with Rules in Adjacent States.

An Internet-based search of the four adjacent states found the following:

- **Illinois** – The Illinois Department of Public Health administers a state-written uniform plumbing code with exceptions for cities that existed prior to Illinois statehood.

- **Iowa** – The Iowa Department of Public Health administers the Iowa Uniform Plumbing Code that recently adopted the 2009 edition of the IPC with amendments.

- **Michigan** – The Michigan Department of Consumer and Industry Services, Bureau of Construction Codes developed the 2003 Michigan Plumbing Code that became effective December 31, 2003. Based on the IPC, the code includes state amendments, and is undergoing its third update and revision in 2010.

- **Minnesota** – The Minnesota Department of Labor and Industry, Building Codes and Standards Division administers the Minnesota Plumbing Code, a state-written uniform code that was revised in 2009.

8. Summary of Factual Data and Analytical Methodologies.

The methodology for the proposed revisions of the Wisconsin Uniform Plumbing Code, chapters Comm 81 to 84, which became effective March 1, 2009, includes a review and assessment by staff of code issues that require clarification.

In addition, the review and assessment process involved the participation of the Plumbing Advisory Code Council (PACC). The members of that Council represent the many stakeholders involved in the plumbing industry including designers, inspectors, labor and building contractors. (A listing of the Plumbing Advisory Code Council is provided at the end of this analysis.)

The proposal to require continuing education for the renewal of a cross connection control tester license was developed by a special task force and approved by the PACC. Stakeholders from across the state served as members of the CCC task force.

The proposed revision relating to sump pump size in elevator pits comes from the Conveyance Safety Code Council and is endorsed by the PACC and the Wisconsin Chapter of the American Society of Sanitary Engineering. All three organizations concur that the current requirement is excessive, and recommend a more practical sump pump size to accommodate ground water seepage into elevator pits.

9. Analysis and Supporting Documents Used to Determine Effect on Small Business or in Preparation of Economic Impact Report.

The department used the Plumbing Advisory Code Council (PACC) to gather and analyze information on potential impacts in complying with both the technical and administrative requirements of the codes. Many small businesses belong to the industry associations that sit on the advisory council. A responsibility of council members is to bring forth concerns that their respective organizations may have with the requirements including economic impact. (A list of the members serving on the PACC is provided at the end of this analysis.)

In addition to posting rule development and council activities on the department's web site, the department offers an Email subscription service that is available to all small businesses. This service provides Email notification of council meetings, meeting agendas and council meeting progress reports so small businesses can follow proposed code changes

10. Effect on Small Business.

The department believes the rules will not increase the effect on small businesses from what the current rules impose on them. An economic impact report is not required pursuant to s. 227.137, Stats.

11. Agency Contact.

Lynita Docken, Program Manager, lynita.docken@wisconsin.gov, (608) 785-9349.

12. Public Hearing Comments.

A public hearing has been scheduled for July 1, 2010. The hearing record on this proposed rulemaking will remain open until July 15, 2010. Written comments on the proposed may be submitted to Lynita Docken at the Department of Commerce, P.O. Box 2689, Madison, WI 53701-2689, or Email at lynita.docken@wisconsin.gov.

Council Members and Representatives

The proposed rules have been developed with the assistance of the Plumbing Advisory Code Council. The members of that citizen advisory council are as follows:

Name	Representing
Paul Wolf	League of Wisconsin Municipalities
Tom Breu	American Society of Plumbing Engineers – Wisconsin
Patrick Casey	Plumbers' Local 75
Hallet Jenkins	Milwaukee City Department of Neighborhood Services
Fred Gardner	Wisconsin Association of Plumbing-Heating-Cooling Contractors
Jeff Kuhn	Plumbing and Mechanical Contractors of SE Wisconsin
Dennis Hoffman	American Society of Sanitary Engineering – Wisconsin Chapter
Gene Shumann	Designer
Charles Hernandez	Plumbing Manufacturers Institute
Joseph Zoulek	Wisconsin Association of Plumbing-Heating-Cooling Contractors

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SECTION 1. Comm 5.06 Table 5.06 line 66. is amended to read:

Table 5.06
TERMS
(Partial Table)

	License, Certification or Registration Category	Term	Expiration Date	Continuing Education Cycle
66.	Cross Connection Control Tester	4 years	Date of Issuance	~~NA~~3 months prior to date of issuance

SECTION 2. Comm 5.99 (5) (c) is created to read:

Comm 5.99 (5) (c) 1. The renewal of a certification as a cross connection control tester which has an expiration date after June 30, 2013 shall be contingent upon the cross connection control tester obtaining at least 6 hours of approved continuing education within the time period specified in s. Comm 5.08 and Table 5.06, except as provided in subd. 2.

2. A person who holds a certification as a cross connection control tester may apply to the department for waiver of the continuing education requirements under subd. 1. on the grounds of prolonged illness or disability or similar circumstances. The department shall consider each application for waiver individually on its merits.

SECTION 3. Comm 18.1702 (1) is repealed and is recreated to read:

Comm 18.1702 Electric elevators. (1) SUMP PUMPS. (a) This is a department exception to the requirements in ASME A17.1 section 2.2.2.3: An elevator pit is exempt from the sump or drain requirement for any of the following situations:

1. The floor of an elevator walk-in pit is level with the adjacent floor.

2. The elevator does not extend to the building's lowest floor level and the pit floor is not in contact with the earth.

3. The pit floor is above adjacent grade where the elevator hoistway shaft has one or more exterior walls.

(b) Substitute the following wording for the requirements in ASME A17.1 section 2.2.2.5: Except as provided in par. (a), in an elevator provided with firefighters' Emergency Operation, one or more sump pumps or drains shall be provided. The aggregate capacity for drainage from the pit shall be one of the following:

1. 30 gpm in a hoistway with one elevator.

2. 50 gpm in a hoistway with two or three elevators.

3. 80 gpm in a hoistway with four elevators.

Note: See s. Comm 82.36 for the width or diameter and depth of a sump pump located in an elevator pit.

(c) This is a department informational note to be used under ASME A17.1 section 2.7.2.1:

Note: See s. Comm 82.33 for prohibition of sumps and sump pumps in elevator machine rooms.

SECTION 4. Comm 81.01 (35) is repealed and recreated to read:

Comm 81.01 (35) "Branch interval" means a vertical measurement of distance, 8 feet or more in developed length, between the connections of horizontal branches to a drainage stack.

Note: See ch. Comm 82 Appendix for explanatory material.

SECTION 5. Comm 81.01 (62e) is created to read:

Comm 81.01 (62e) "Containment tank" means a device with a valved outlet designed to temporarily hold potentially hazardous wastewater for evaluation before discharging to a POWTS or municipal sewer.

SECTION 6. Comm 81.01 (116) is amended to read:

Comm 81.01 (116) "Health care and related facility" means a hospital, nursing home, community−based residential facility, county home, infirmary, inpatient mental health center, inpatient hospice, ambulatory surgery center, adult daycare center, end stage renal facility, facility for the developmentally disabled, institute for mental disease, urgent care center, clinic or medical office, ~~child caring institution,~~ residential care center for children and youth or school of medicine, surgery or dentistry.

SECTION 7. Com 81.01 (154m) is created to read:

Comm 81.01 (154m) "Mixed wastewater" means a combination of domestic and non-domestic wastewater.

SECTION 8. Comm 81.01 (160m) is renumbered (160e).

SECTION 9. Comm 81.01 (160m) is created to read:

Comm 81.01 (160m) "Non-domestic wastewater" means any wastewater that is not domestic wastewater or storm water.

SECTION 10. Comm 81.01 (166) is amended to read:

Comm 81.01 (166) "Offset" means a combination of fittings or bends ~~which brings~~ that makes two changes in direction bringing one section of the pipe out of ~~the~~ line but into a line parallel with the other section.

SECTION 11. Comm 81.01 (176) Note is amended to read:

Comm 81.01 (176) Note: Section 145.01 (10), Stats., reads: "Plumbing" means ~~and includes~~:

(a) 1. All piping, fixtures, appliances, equipment, devices, and appurtenances in connection with ~~the~~ water supply systems, water distribution ~~and~~ systems, wastewater drainage systems, reclaimed water systems, and stormwater use systems, including hot water storage tanks, water ~~softeners~~ treatment devices, and water heaters connected with ~~such water and drainage~~ these systems and also includes the installation thereof.

~~(b)~~ 2. The construction, connection, ~~or~~ installation, service, or repair of any drain or ~~waste~~ wastewater piping system ~~from the outside or proposed outside foundation walls of any building~~ that connects to the mains or other ~~sewage system~~ terminal within the bounds of, or beneath an area subject to easement for highway purposes, including private sewage systems and stormwater treatment and dispersal systems, and the alteration of any such systems, drains or ~~waste~~ wastewater piping.

~~(c)~~ 3. The construction, connection, installation, service, or repair of water service piping ~~from the outside or proposed outside foundation walls of any building~~ that connects to the main or other water utility service terminal within the bounds of, or beneath an area subject to easement for highway purposes and its connections.

~~(d)~~ 4. The water pressure system other than municipal systems as provided in ch. 281.

~~(e)~~ 5. A plumbing and drainage system so designed and vent piping so installed as to keep the air within the system in free circulation and movement; to prevent with a margin of safety unequal air pressures of such force as might blow, siphon or affect trap seals, or retard the discharge from plumbing fixtures, or permit sewer air to escape into the building; to prohibit cross−connection, contamination or pollution of the ~~potable~~ water supply and distribution systems, and to provide an adequate supply of water to properly serve, cleanse and operate all fixtures, equipment, appurtenances and appliances served by the plumbing system.

(br) "Plumbing" does not include any of the following:

1. A rainwater gutter or downspout down to the point that it discharges into a plumbing system, a subsoil drain, or a foundation drain.

2g. A process water reuse system if the process water reuse system is not connected to any plumbing fixture or appliance.

2m. A stormwater culvert under a roadway or walkway that is placed there only to equalize the water level from one end of the culvert to the other end.

3. The practical installation of process piping within a sewage disposal plant.

SECTION 12. Comm 81.20 Table 81.20–2 line 4., Table 81.20–3e lines 2m. and 5. and Table 81.20–4 lines 25. and 27. to 32. are amended to read:

Table 81.20−2
(Partial Table)

ANSI	**American National Standards Institute, Inc.** **1430 Broadway** **New York, New York 10018** **Phone: 212−642−4900** **Web page: www.ansi.org**
Standard Reference Number	**Title**
4. Z124.1.2−2005	Plastic ~~Shower Receptors~~ Bath Tub and Shower ~~Stalls~~ Units

Table 81.20−3e
(Partial Table)

ASME	**American Society of Mechanical Engineers** **345 East 47th Street** **New York, New York 10017** **Phone: 800−843−2763** **Web page: www.infocentral@asme.org**
Standard Reference Number	**Title**
~~2m~~ 2a. A112.6.3−2001 (R2007)	Floor and Trench Drains
5. A112.19.1M−94 ~~(R 2004)~~ (R2000)	Enameled Cast Iron Plumbing Fixtures

Table 81.20−4
(Partial Table)

ASSE	**American Society of Sanitary Engineering** **P.O. Box 9712** **Bay Village, Ohio 4414** **Phone: 440−835−3040** **Web page: www.asse−plumbing.org**
Standard Reference Number	**Title**
25. 1055−~~1997~~ 2009	Chemical Dispensing Systems
27. 5013−~~2004[a]~~ 2009[a]	Minimum Performance Requirements for Testing Reduced Pressure Principle Backflow Preventers (RP) and Reduced Pressure Principle Fire Protection Backflow Preventers (RPF)
28. 5015−~~2004[a]~~ 2009[a]	Minimum Performance Requirements for Testing Double Check Backflow Prevention Assemblies (DC) and Double Check Fire Protection Backflow Prevention Assemblies(DCF)
29. 5020−~~2004[a]~~ 2009[a]	Minimum Performance Requirements for Testing a Pressure Vacuum Breaker Assembly
30. 5047−~~2004[a]~~ 2009[a]	Minimum Performance Requirements for Testing Reduced Pressure Detector Fire Protection Backflow

	Prevention Assemblies (RPDF)
31. 5048–~~2004[a]~~ 2009[a]	Minimum Performance Requirements for Testing Double Check Detector Fire Protection Backflow Prevention Assemblies (DCDF)
32. 5056–~~2004[a]~~ 2009[a]	Minimum Performance Requirements for Testing Spill Resistant Vacuum Breaker

SECTION 13. Comm 81.20 Table 81.20–7 line 5c.is created to read:

Table 81.20−7
(Partial Table)

AWWA	**American Water Works Association** **Data Processing Department** **6666 West Quincy Avenue** **Denver, Colorado 80235** **Phone: 303−794−7711** **Web page: www.awwa.org**
Standard Reference Number	**Title**
5c. C220-2007	Stainless–Steel Pipe, ½ in. (13mm) and Larger

SECTION 14. Comm 82.20 Table 82.20–1 footnote b is amended to read:

Table 82.20–1
SUBMITTALS TO DEPARTMENT
(Partial Table)

[b] For the purposes of plan review submittal, ~~Water~~ water heaters, floor drains, storm inlets, roof drains, multi-purpose piping (MPP) fire sprinklers and hose bibbs are to be ~~counted as plumbing fixtures~~ included in the count.

SECTION 15. Comm 82.20 Table 82.20–2 footnote a is amended to read:

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

[a] For the purposes of plan review submittal, ~~Water~~ water heaters, floor drains, storm inlets, roof drains, multi-purpose piping (MPP) fire sprinklers and hose bibbs are to be ~~counted as plumbing fixtures~~ included in the count. For a phased project such as a mall or office complex fixture count includes all proposed fixtures connected to a common building sanitary sewer, a common water service and all storm sewers serving the building.

SECTION 16. Comm 82.20 Table 82.20–2 line 10. is created to read:

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

Type of Plumbing Installation
10. Mixed wastewater holding device.

SECTION 17. Comm 82.21 (1) (b) 1. b. is renumbered Comm 82.21 (1) (b) 1. c.

SECTION 18. Comm 82.21 (1) (b) 1. b. is created to read:

Comm 82.21 (1) (b) 1. b. Except as permitted in par. (c)., if the inspection is not made by the end of the normal business day following the day of notification, not including Saturday, Sunday or legal holidays, the plumber may proceed with the testing and the installation.

SECTION 19. Comm 82.21 (1) (d) is created to read:

Comm 82.21 (1) (d) The initial testing of cross connection control assemblies shall comply with 82.22 (8).

SECTION 20. Comm 82.30 (6) (a) 2., (b) and (b) 5. a. are amended to read:

Comm 82.30 (6) (a) 2. ~~Where~~ Except as provided in par. (c), where a horizontal branch connects to a drain stack within 2 feet above or below an offset with a change of direction of ~~30~~ 30º to 45º from the vertical and the offset is located 5 or more branch intervals below the top of the stack, the offset shall be vented in accordance with s. Comm 82.31 (5) (a).

(b) *Offsets of more than 45º*. ~~A~~ Except as provided in par. (c), a drain stack with an offset of more than 45º from the vertical shall be installed in accordance with subds. 1. to 5.

5. a. Except as exempted in subd. 5. b., or par. (c), where an offset in a drain stack with a change of more than 45º from vertical is located below 5 or more branch intervals, the offset shall be vented in accordance with s. Comm 82.31 (5) (b).

SECTION 21. Comm 82.30 (6) (c) is created to read:

Comm 82.30 (6) (c) *Exception.* Where an offset is located two or more feet below the lowest branch drain connection to the stack, the venting specified in this subsection and 82.31 (5) (b) is not required.

SECTION 22. Comm 82.30 Table 82.30–2 is amended to read:

TABLE 82.30–2
~~HORIZONTAL AND VERTICAL~~ STACKS AND DRAIN PIPING

Pipe Diameter (inches)	Maximum Number of Drainage Fixture Units That May Drain Through Any Portion of ~~Horizontal and Vertical~~ Drain Piping[a]			
	~~Horizontal~~ Drain Piping Other Than Stacks[ab]	~~Vertical Drain Piping~~[b] Stacks[c]		
		Total Discharge from Side Connections into One Branch Interval[d, e]	~~Vertical Drain Piping~~ Stacks of 3 Branch Intervals or Less	~~Vertical Drain Piping~~ Stacks of More Than 3 Branch Intervals
1 ¼	1	1	2	2
1 ½	3	2	4	8
2	6	6	10	24
3	20	20	48	72
4	160	90	240	500
5	360	200	540	1,100
6	620	350	960	1,900
8	1,400	600	2,200	3,600
10	2,500	1,000	3,800	5,600
12	3,900	1,500	6,000	8,400
15	7,000	~~e~~ f	~~e~~ f	~~e~~ f

a Through any portion of a stack includes all of the flow at the design point.

~~a~~b Does not include building drains and subdrains, building sewers, private interceptor main sewers and forced discharge piping.

~~b~~c Drain stacks may be reduced in size as the drainage load decreases to a minimum diameter of one half of the diameter required at the base of the stack, but not smaller than that required for a stack vent under s. Comm 82.31 (14) (a)

d Into one branch interval includes the discharge from the top fitting of the branch interval and does not include the discharge from the bottom most fitting creating the branch interval.

e Reduction in diameter may occur within a branch interval.

~~c~~f Sizing based on design criteria.

SECTION 23. Comm 82.31 (5) (a) 2. is amended to read:

Comm 82.31 (5) (a) 2. Where the drain stack and offset are sized as building drain as per Table 82.30–3, the ~~vent~~ vents serving the offset of 30 to 45° in a drain stack ~~is~~ are not required.

SECTION 24. Comm 82.31 (6) (c) is amended to read:

Comm 82.31 (6) (c) The upper end of the relief vent required in par. (a) shall connect to the vent stack ~~by means of a wye pattern fitting~~ not less than ~~3 feet~~ 38 inches above the next higher floor level ~~with the highest fixtures~~ where plumbing fixtures are installed that discharge into the drain stack.

SECTION 25. Comm 82.31 (14) (g) 2. is repealed.

SECTION 26. Comm 82.31 (14) (g) 3. and 4. are renumbered Comm 82.31 (14) (g) 2. and 3.

SECTION 27. Comm 82.31 (17) (a) 2. is amended to read:

Comm 82.31 (17) (a) 2. A drain stack may serve as a combination drain and vent system for a kitchen sink and a ~~laundry tray~~ wall outlet fixture with a drainage fixture unit value of 2 or less in accordance with subd. 2. a. to d.

a. One kitchen sink within a dwelling unit, with or without a food waste grinder or dishwasher connection shall connect to the drain stack above the ~~laundry tray~~ wall outlet fixture with a drainage fixture unit value of 2 or less. No other fixtures may connect to the drain stack.

b. The drain stack shall be at least 2~~″~~ inches in diameter below the kitchen sink connection and it shall be at least 4~~″~~ inches in diameter below the ~~laundry tray~~ connection to the lower fixture.

c. In lieu of the minimum sizes as required in subd. 2. b., the entire stack below the kitchen sink connection may be 3~~″~~ inches in diameter.

d. The drain stack shall not offset horizontally above the fixture drain connection for the ~~laundry tray~~ lower fixture.

SECTION 28. Comm 82.33 Table 82.33–2 is amended to read:

Table 82.33-2
WASHER CONNECTIONS

Trap Diameter	Maximum Number of Washers
2 inches	~~2 machines~~ 1 machine
3 inches	3 machines
4 inches	4 machines

SECTION 29. Comm 82.34 (title), (1), (2) and (3) intro., (a), (c) title, (c), (e), (g) and (h) are amended to read:

Comm 82.34 Wastewater treatment ~~devices~~ and holding devices. (1) SCOPE. The provisions of this section set forth the requirements for design and installation of plumbing wastewater treatment and holding devices, appurtenances and systems, including but not limited to interceptors, catch basins, decontamination tanks and dilution and neutralizing basins.

(2) MATERIALS. All piping, devices and appliances for wastewater treatment and holding devices, appurtenances and systems shall be of approved materials in accordance with ch. Comm 84.

(3) GENERAL. Any deleterious waste material which is discharged into a plumbing system shall be directed to a wastewater treatment or holding device. The wastewater treatment or holding device shall be capable of separating, diluting or neutralizing the deleterious waste material to a degree that the wastewater is no longer deleterious. Wastewater treatment or holding devices that retain any waste materials shall be designed and installed to facilitate periodic removal or treatment, or both.

(a) *Treatment for reuse.* 1. Except as limited in subd. 2., graywater, storm water, clear water, blackwater and other wastewaters as approved by the department may be reused in conformance with s. Comm 82.70.

~~1~~2. Except as provided in subd. ~~2~~3., wastewater discharged from water closets or urinals shall not be reused for drinking water.

~~2~~3. All treatment works permitted by the department of natural resources, or a POWTS which includes an in situ soil dispersal or treatment component may treat wastewater discharged from water closets or urinals for reuse.

(c) *Private ~~disposal~~ systems.* The special or industrial wastes from any plumbing system ~~which are not discharged into a public sewer system~~ shall be treated, held or ~~disposed~~ dispersed in compliance with the rules of the state agency having jurisdiction. The treatment, holding or ~~disposal~~ dispersal system shall be installed so as not to endanger any water supply which is or may be used or which may create a nuisance, unsanitary conditions or water pollution.

(e) *Maintenance.* All devices installed for the purpose of intercepting, separating, collecting, holding or treating harmful, hazardous or deleterious materials in liquid or liquid−borne wastes shall be operated and cleaned of intercepted or collected materials or of any residual from treatment at such intervals which may be required to prevent their passage through the interceptor.

(g) *Location.* 1. ~~Interceptors,~~ Wastewater holding devices, interceptors, catch basins and other similar devices shall be accessible for service, maintenance, repair and inspection.

a. No wastewater holding device, interceptor, catch basin or similar device may be surrounded or covered as to render it inaccessible for service or inspection.

b. No wastewater holding device, interceptor, catch basin or similar device may have its top located more than 6 feet above the surrounding floor.

c. Enough space shall be provided to enable the removal of any interior parts of the wastewater holding device, interceptor, catch basin or similar device.

d. At least 18~~″~~ inches of clear space shall be provided above the top of the wastewater holding device, interceptor, catch basin or similar device.

2. An exterior wastewater holding device, interceptor, catch basin or similar device shall not be located within 5 feet of a building or any portion of a building or swimming pool; 10 feet of water service; 2 feet of a lot line and 10 feet of a clearwater cistern.

~~2.~~ 3. An exterior wastewater holding device, interceptor, catch basin~~,~~ or similar device shall not be located within ~~25~~ 10 feet of ~~a water well~~ the high water mark of a lake, stream, pond or flowage.

Note: The department of natural resources under ch. NR 811 and 812 may require additional setbacks. See Appendix for further explanatory material.

(h) *Disposition of retained materials.* Deleterious waste materials retained by ~~an~~ a wastewater holding device, interceptor, catch basin or similar device shall not be introduced into any drain, sewer or natural body of water without approval of the state agency having jurisdiction.

SECTION 30. Comm 82.34 (4) (a) 2. f. is amended to read:

Comm 82.34 (4) (a) 2. f. The basin shall be provided with a cover at least ~~24″~~ 23 inches square or ~~24″~~ 23 inches in diameter.

SECTION 31. Comm 82.34 (5) (c) 3. and Note is amended to read:

Comm 82.34 (5) (c) 3. 'Installation.' a. Grease interceptor tanks may not be located within 5 feet of a building or any portion of the building or swimming pool; 10 feet of a water service; 2 feet of a lot line; 10 feet of a cistern or ~~25~~ 10 feet of a reservoir or high water mark of a lake, stream, pond or flowage.

Note: The department of natural resources under ch. NR ~~113~~ 811 and 812 may ~~requires a minimum setback of 25 feet between a grease interceptor and a well~~ require additional setbacks. See Appendix for further explanatory material.

SECTION 32. Comm 82.34 (6) (d) is repealed.

SECTION 33. Comm 82.34 (15) is created to read:

Comm 82.34 (15) SPECIAL WASTEWATER OR MIXED WASTEWATER TREATMENT OR CONTAINMENT DEVICES. Mixed wastewater treatment and containment devices, decontamination tanks or other special wastewater treatment devices shall discharge to a dispersal or treatment system in accordance with this section or as approved by the department.

Note: A sanitary permit may be required. See ch. Comm 83 for requirements relating to containment tank installation with no valved discharge.

(a) *Installation.* 1. Exterior containment devices or treatment systems for mixed wastewater, decontamination tanks and other special wastewater treatment devices shall not be located within 5 feet of a building or any portion of the building or swimming pool; 10 feet of a water service; 2 feet of a lot line; 10 feet of a clearwater cistern or 10 feet of the high water mark of a lake, stream, pond or flowage.

Note: The department of natural resources under ch. NR 811 and 812 may require additional setbacks. See Appendix for further explanatory material.

2. Exterior containment devices or treatment systems for mixed wastewater, decontamination tanks or other special wastewater treatment devices shall be constructed in accordance with s. Comm 84.25 or as approved by the department.

(b) *Vents*. Vents for mixed wastewater, decontamination tanks and other special wastewater treatment systems shall be sized and installed in accordance with s. Comm 82.31.

(c) *Alarm system.* Containment devices or treatment systems for mixed wastewater, decontamination tanks and other special wastewater treatment devices shall be equipped with an alarm in accordance with s. Comm 82.34 (8) (e).

(d) *Sampling provision.* Containment devices or treatment systems for mixed wastewater, decontamination tanks and other special wastewater treatment devices shall be equipped to allow the collection of a representative sample.

(e) *Pump requirements.* 1. A discharge line serving a containment tank for servicing purposes shall comply with all of the following:

a. A pipe serving as the discharge line shall be of an acceptable type in accordance with ch. Comm 84.

b. A discharge line shall terminate with a service port consisting of a quick disconnect fitting with a removable plug.

c. The service port of a discharge line shall terminate at least 2 feet above final grade.

d. The service port of a discharge line shall be identified as such with a permanent sign with lettering at least 1/2 inch in height.

e. The service port of a discharge line shall be secured to a permanent support that is capable of withstanding the loads and forces placed on the port.

f. A discharge line shall be at least 3 inches in diameter.

2. Where a lift station is employed for servicing a containment tank, the pump discharge line shall conform with subd. 1., except as provided in subd. 3. a. and b.

a. A discharge line from the lift station shall be at least 2 inches in diameter.

b. The lift station pump shall be activated by means of a keyed−switch at the service port.

(f) *Sizing.* The volume of the mixed wastewater treatment or containment device shall be based on anticipated use.

SECTION 34. Comm 82.365 (3) (f) 2. Note is amended to read:

Comm 82.365 (3) (f) 2. **Note:** See Appendix A−82.30 (11) (d) for material reprinted from ss. NR ~~811.16 (4) (d)~~ 811.12 (5) (d) and 812.08. Section NR 811.16 (4) (d) or 812.08 may have additional setback requirements.

SECTION 35. Comm 82.40 (3) (a) title is amended to read:

Comm 82.40 (3) (a) ~~*Potable water required*~~ *Water quality*.

SECTION 36. Comm 82.40 (3) (c) 1. is amended to read:

Comm 82.40 (3) (c) 1. Pursuant to s. NR ~~811.09 (2)~~ 811.07 the interconnection of 2 or more water supply systems, one system served by a public supply source and the other system

served by another supply source is prohibited, unless approved in writing by the department of natural resources.

SECTION 37. Comm 82.40 (3) (d) 1. is repealed and is and is recreated to read:

Comm 82.40 (3) (d) *Identification.* 1. Where buildings or facilities contain water supply systems where the water supply systems have different degrees of hazard, then those water supply systems shall be labeled in accordance with this section.

a. Aboveground piping supplying water other than potable shall be labeled by tags or colored bands according to Table 82.40–1a.

Note: When identifying potable water piping or valves with tags or bands, label according to Table 82.40–1a.

b. Valves supplying other than potable water shall be identified by tags according to Table 82.40–1a.

c. The tags or colored bands shall be placed at intervals of not more than 25 feet. Where piping passes through a wall, floor or roof, the piping shall be so identified on each side of the wall and within each compartment.

d. The colored bands shall be at least 3 inches wide and shall bear text identifying the water or the specific use.

e. Tags used to identify water outlets, valves and piping shall be of metal or plastic in the shape specified in Table 82.40–1a.

f. The lettering on the triangular and circular tags shall be at least 1/2 inch in height.

g. A hose bibb intended to discharge water that does not meet drinking water quality as specified in s. Comm 82.70, shall be labeled as nonpotable or so identified for the specific use or uses, and shall be equipped with a removable handle.

SECTION 38. Comm 82.40 (3) (d) 2. and 3. are renumbered Comm 82.40 (3) (d) 3. and 4.

SECTION 39. Comm 82.40 (3) (d) 2. is created to read:

Comm 82.40 (3) (d) 2. Piping downstream of cross connection control assemblies as listed in Table 82.22–1 shall be labeled with bands or tags as specified in subd. 1. a. to f.

SECTION 40. Comm 82.40 Table 82.40–1 is renumbered Table 82.40–1b.

SECTION 41. Comm 82.40 Table 82.40–1a is created to read:

Table 82.40–1a
DISTRIBUTION AND SERVICE

Supply	Tag and Band Color	Tag Shape	Tag Size	Tag Legend[a]
Potable	Green	Round	3″ diameter	Safe Water
Nonpotable	Yellow	Triangle	4″ sides	Nonpotable Water or Not Safe for Drinking
Reuse (Nonpotable)	Purple	Triangle	4″ sides	Nonpotable Water or Not Safe for Drinking or Specific Use[b]
Device Specific[c]	Gray	Triangle	4″ sides	Specific Use[b]

[a] All nonpotable water outlets shall be identified at the point of use for each outlet with the following legends or as otherwise approved by the department.
[b] Tag should reflect the intended use.
[c] Serving an individual or similar plumbing fixtures or appliances.

SECTION 42. Comm 82.40 (5) (a) and (6) (a) are amended to read:

Comm 82.40 (5) (a) *General*. Water heating systems shall be sized to provide sufficient hot water to supply ~~both the daily requirements and hourly~~ peak ~~loads of the building~~ demand.

(6) (a) *Intermittent flow fixtures.* The load factor for intermittent flow fixtures on water supply piping shall be computed in terms of water supply fixture units as specified in Tables ~~82.40–1~~ 82.40–1a and 82.40–2 for the corresponding fixture and use. Water supply fixture units may be converted to gallons per minute in accordance with Tables 82.40–3 or 82.40–3e.

SECTION 43. Comm 82.40 (8) (b) 3., 4., 5. and 6. are amended to read:

Comm 82.40 (8) (b) 3. If a private water main or a water service crosses a sanitary sewer, the water piping within ~~10~~ 5 feet of the point of crossing shall be installed in accordance with any of the following requirements:

a. ~~At~~ The water piping shall be installed at least 12~~″~~ inches above the top of the sewer ~~from the bottom of the water piping;~~.

b. ~~At~~ The water piping shall be installed at least 18~~″~~ inches below the bottom of the sewer ~~from the top of the water piping; or~~.

c. ~~Within~~ The water or sewer piping shall be installed within a waterproof sleeve made of materials as specified for sanitary building sewers in s. Comm 84.30 (2).

4. ~~Private~~ Except as permitted in subd. 5., private water mains and water services ~~2–1/2″ or larger in diameter~~ shall be installed at least ~~8~~ 5 feet horizontally from any sanitary sewer. ~~The distance shall be measured from center to center of the piping.~~

Note: The Department of Natural Resources has limitations for the separation of water mains and sanitary sewers.

~~5. Except as provided in subd. 6., private water mains and water services 2″ or less in diameter shall be installed at least 30″ horizontally from any sanitary sewer. The distance shall be measured from center to center of the piping.~~

~~6~~ 5. Private water mains and water services ~~2″ or less in diameter~~ may be installed less than ~~30″~~ 5 feet horizontally from a sanitary sewer, ~~if the bottom of the water piping is installed at least 12″ above the sewer, except that portion of a water service within 5 feet of developed length from the point where the water service first enters the building may be less than 12″ above the sewer.~~ if any of the following conditions are met:

a. The bottom of the water piping is installed at least 12 inches above the sewer.

b. The sewer is constructed of materials listed in Table 84.30-2.

c. The water service is 2 inches or less in diameter and is located more than 24 inches from the sewer.

6. The portion of a private water main or water service within 5 feet of developed length from the point where the water service first enters the building may be less than 12 inches above the sewer and within 24 inches of the sewer.

SECTION 44. Comm 82.40 (8) (b) 9. is created to read:

Comm 82.40 (8) (b) 9. No underground water supply storage tank shall be installed within 8 feet of a storage vessel containing a substance of a higher hazard than that contained in the water supply storage tank.

SECTION 45. Comm 82.40 (9) is repealed.

SECTION 46. Comm 82.40 Table 82.40–8 (title) is amended to read:

Table 82.40–8
~~MAXIMUM ALLOWABLE LOAD FOR POLYBUTYLENE TUBING, ASTM D3309 and~~ CHLORINATED POLYVINYL CHLORIDE TUBING, ASTM D2846 and F442, SDR 11; (C=150)

SECTION 47. Comm 82.40 Table 82.40–10 (title) and Note are amended to read:

Table 82.40–10
MAXIMUM ALLOWABLE LOAD FOR CHLORINATED POLYVINYL CHLORIDE TUBING, ASTM F442, SDR 13.5; (C=150)

Note: WSFU means water supply fixture units.
GPM means gallons per minute.
FM means predominately flushometer type water closets or syphon jet urinals.
NP FT means predominately flush tank type water closets or wash down urinals.
NP means not permitted, velocities exceed 8 feet per second.
For using this table, round the calculated pressure loss due to friction to the next higher number shown.
Comm 82.40 (7) (f) and (g) specifies minimum sizes for water distribution piping.
Approved for cold water use only.
Intended use is for MPP systems.

SECTION 48. Comm 82.41 (1) is amended to read:

Comm 82.41 (1) SCOPE. The provisions 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.

SECTION 49. Comm 82.41 (5) (e) 2. is amended to read:

Comm 82.41 (5) (e) 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 ~~ASME A112.1.2~~ s. Comm 82.33 or ASME A112.1.3.

SECTION 50. Comm 82.41 Table 82.41–2 line 1 is amended to read:

Table 82.41–2
ACCEPTABLE CROSS CONNECTION CONTROL METHODS, DEVICES OR ASSEMBLIES FOR SPECIFIC APPLICATIONS
(Partial Table)

Methods or Assemblies (Standard)	**Types of Application or Use**
Backflow Preventer for ~~Carbonated~~ Beverage Dispensing Machines (ASSE 1022)	Beverage dispensers

SECTION 51. Comm 82.41 Table 82.41–2 line 8 is repealed.

SECTION 52. Comm 82.70 Table 82.70–1 lines 1., 2., 6. and 10. are amended to read:

Table 82.70−1
PLUMBING TREATMENT STANDARDS
(Partial Table)

Intended Use Plumbing Treatment	**Standards** [f]
1. Drinking, cooking, food processing, preparation and cleaning, pharmaceutical processing~~,~~ and medical uses	NR 811 and 812 approved sources
2. Personal hygiene, bathing~~,~~ and showering	NR 811 and 812 approved sources
6. ~~Once through cooling~~ Cooling water [b]	pH 6 − 9 [b] ≤ ~~30~~ 50 mg/L BOD_5 ≤ 30 mg/L TSS ~~< 200 fecal coliform cfu/100 mL~~ ~~≥ 1 mg/L and ≤ 10 mg/L free~~ Free chlorine residual 1.0 − 10.0 mg/L [b]
10. Surface irrigation except food crops, vehicle washing, ~~toilet and urinal flushing,~~ clothes washing, air conditioning, soil compaction, dust control, washing aggregate and making concrete [a, c]	pH 6 − 9 [b] ≤ 10 mg/L BOD_5 ≤ 5 mg/L TSS ~~No detectable fecal coliform cfu/100 mL~~ ~~≥ 1 mg/L and ≤ 10 mg/L free~~ Free chlorine residual 1.0 − 10.0 mg/L [b]

SECTION 53. Comm 82.70 Table 82.70–1 line 11. is renumbered line Table 82.70–1 line 12.

SECTION 54. Comm 82.70 Table 82.70–1 line 11. is created to read:

Table 82.70−1
PLUMBING TREATMENT STANDARDS
(Partial Table)

Intended Use Plumbing Treatment	Standards
11. Toilet and urinal flushing	pH 6 − 9 [b] 200 mg/L BOD_5 ≤ 5 mg/L TSS Free chlorine residual .1 mg/L − 4.0 mg/L [b]

SECTION 55. Comm 83.41 (1) Note is created to read:

Comm 83.41 (1) Note: See s. Comm 82.34 (15) for requirements relating to special wastewater or mixed wastewater treatment or containment devices.

SECTION 56. Comm 84.30 (4) is amended to read:

Comm 84.30 (4) WATER SUPPLY SYSTEMS. Water supply systems shall be of such material and workmanship as set forth in this subsection. All materials in contact with water, in a water supply system, shall be suitable for use with ~~potable~~ the water within the system. All pipes and pipe fittings for water supply systems shall be made of a material that contains not more than ~~8.0%~~ 8% lead.

SECTION 57. Comm 84.20 (5) (f) 1., (L) 1., (m) 1. b., (n) 1. a. and (o) 1. a. and (6) (a) and (b) are amended to read:

Comm 84.20 (5) (f) 1. Drinking fountains and water coolers shall conform to ARI 1010 or ASME A112.19.2~~M~~.

(L) 1. Prefabricated plastic showers and shower compartments shall conform to ANSI ~~Z124.2~~ A124.1.2.

(m) 1. b. Vitreous china sinks shall conform to ASME A112.19.2~~M~~.

(n) 1. a. Vitreous china urinals shall conform to ASME A112.19.2~~M~~.

(o) 1. a. Vitreous china water closets shall conform to ASME A112.19.2~~M~~.

(6) (a) Except for circular and semi−circular wash fountains, all faucets and showerheads shall conform to ASME A112.18.1~~M~~ or CAN/ CSA B125.

(b) Circular and semi−circular wash fountains shall conform to the working pressure, burst pressure, discharge rate and product marking requirements of ASME A112.18.1~~M~~ or CAN/CSA B125.

SECTION 58. Comm 84.20 (6) (d) is repealed.

SECTION 59. Comm 84.20 (6) (e) is renumbered Comm 84.20 (6) (d).

SECTION 60. Comm 84.30 Table 84.30–7 is amended to read:

Table 84.30–7
PIPE AND TUBING FOR WATER SERVICES AND PRIVATE WATER MAINS
(Partial Table)

Material	Standard
Crosslinked Polyethylene/ Aluminum/Crosslinked Polyethylene	CAN/CSA B137.10~~,~~; ASTM F1281
Polyethylene (PE)[a]	ASTM D2239; ASTM D2737; ASTM D2104; ASTM D2447; ASTM D3035; AWWA C906; AWWA C901~~–02~~

SECTION 61. Comm 84.30 Table 84.30–8 footnote c is amended to read:

Comm 84.30 Table 84.30−8 footnote [c] Use is limited to pipe 2 ½ inches or less in diameter for sch 80 and 1 inch or less in diameter for sch 40.

SECTION 62. Comm 84.40 (5) (c), (6) (c) and (8) (e) are amended to read:

Comm 84.40 (5) (c) *Threaded joints.* Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. Pipe joint compound or tape shall be used on the male threads only.

(6) (c) *Threaded joints.* Threaded joints shall only be used on pipes of schedule 80 or heavier. Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. The pipe shall be threaded with dies specifically designed for plastic pipe. Thread lubricant or tape approved for such use shall be applied to the male threads only.

(8) (e) *Threaded joints.* Threaded joints shall conform to ~~ANSI~~ ASME B1.20.1. Pipe joint compound or tape shall be used on the male threads only.

(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.

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