

Patching or repairing plumbing systems - When can you do what?

by Lynita Docken, S&B Plumbing Program Manager,
608-785-9349, Ldocken@commerce.state.wi.us

It's a Friday afternoon in January. The temperature is 10 degrees and you've just found a leak in a water service. Because the sun's almost down and it's getting colder by the minute, it's easiest to repair the pipe with a clamp.

This is one of the emergency situations plumbers across Wisconsin run into every winter. How does the code address the circumstance? The code language for repairs is in Comm 82.21(2)(f): "All repairs to fixtures or piping shall be done in conformance with the provisions of this chapter, except repair clamps or bands may be used for emergency situations."

In past years this repair included limited options. The repair coupling (Figure 1) was frequently used for repairs. Recently, options have expanded to kits that include epoxy agents, fabric wraps (Figure 2), and even pipe liners that are forced inside pipe because the original piping material is cracked and expanded.

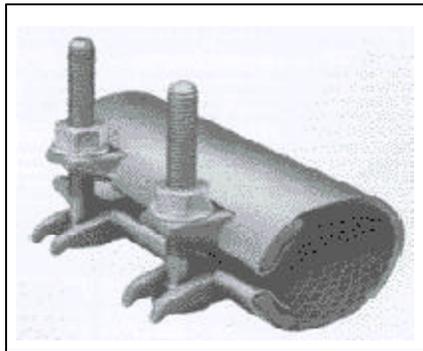
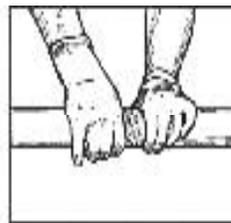
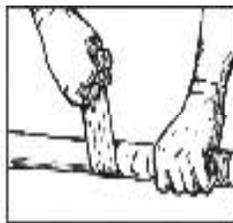


Figure 1. Repair clamp

How can the different repair kits, liners, clamps and bands be used? The code language is clear that "clamps or bands may be used for emergency situations." However, the exact repair materials or pipe liners aren't addressed in the text. Since the purpose of the repair kit is identical to that of the repair clamp, S&B acknowledges the use of patches such as fabric wrap kits, epoxy and other kits sold for plumbing repair. (For the purpose of definition, a repair clamp or a wrapping kit are both "patches.")

Does the plumbing code ever prohibit using a patch for a plumbing system? Sometimes. Only materials that are safe for drinking water are allowed to contact the water supply (Comm 84.30(4)(c)). Drain piping may be patched with any material that



continued on page 6

Figure 2.
Repair kit installation

Wisconsin Plumbing Codes Report

Safety and Buildings Division, Department of Commerce

Volume 17 No. 1

January 2001

Sample S&B email address:
 tbraun@commerce.state.wi.us

Safety and Buildings Offices

Green Bay Office
 2331 San Luis Pl #150
 Green Bay WI 54304
 920-492-5601
 Fax 920-492-5604
 greenbaysch@commerce.state.wi.us

Hayward Office
 10541N Ranch Rd.
 Hayward WI 54843
 715-634-4870
 Fax 715-634-5150
 haywardsch@commerce.state.wi.us

La Crosse Office
 4003 North Kinney
 Coulee Road
 LaCrosse WI 54603
 608-785-9334
 Fax 608-785-9330
 lacrossesch@commerce.state.wi.us

Madison Office
 201 W Washington Ave
 PO 2658
 Madison WI 53701
 608-266-3151
 Fax 608-267-9566
 madisonsch@commerce.state.wi.us

Shawano Office
 1340 E Green Bay St #300
 Shawano WI 54166
 715-524-3626
 Fax 715-524-3633
 shawanosch@commerce.state.wi.us

Waukesha Office
 401 Pilot Ct # C
 Waukesha WI 53188
 262-548-8600
 Fax 262-548-8614
 waukeshasch@commerce.state.wi.us

Plan Review Scheduling

For plan review scheduling for Plumbing and Buildings, call the S&B office numbers listed above, or contact the email address shown. Fax scheduling is possible, 877-840-9172. Information about the project will be needed to schedule the plan review. Any of the offices can schedule the first appropriate plan review available statewide.

Plan review for Private Onsite Wastewater Treatment Systems is provided on a first-come, first-served basis. Contact one of the offices for information.

For scheduling info, also see <http://www.commerce.state.wi.us/SB/SB-DailyDoc.html>.

Direct comments, address, suggestions for articles, etc., to Todd Taylor. Fax 608-264-8795. Telephone 608-267-3606.
 ttaylor@commerce.state.wi.us/
 Madison mailing address above.

Plumbing Consultants

Tom BraunStevens Point715-345-5335
 Don HoughHayward715-634-4804
 Tim JoyceMadison608-825-4724
 Don OremusPelican Lake715-487-6123
 Robert SamuelsWaukesha262-548-8634
 Jim WehingerFriendship608-339-7430
 Jim ZickertEldorado920-872-2656
 Harold Stanlick, Superv.715-726-4520

Plumbing Plan Reviewers

Ryan Boebel.....Madison608-261-6535
 Herman Delfosse.....La Crosse608-789-5535
 Tom Devereaux.....Hayward715-634-3026
 Wes GrubeGreen Bay920-492-5613
 Dan KraftMadison608-266-8075
 Ken PertzbornMadison608-267-2242
 Curt WendorffShawano715-526-9056

Plumbing Products Reviewers

Mike BeckwithMadison608-266-6742
 Dan JensenMadison608-267-5265
 Glen SchlueterMadison608-267-1401

POWTS Plan Reviewers

Tom Devereaux.....Hayward715-634-3026
 Wes GrubeGreen Bay920-492-5613
 Julia LewisWaukesha262-548-8638
 Robert KanterMadison608-261-7735
 Pete Pagel.....Madison608-266-2889
 Jim QuinlanMadison608-266-3937
 Pat ShandorfHayward715-634-7810
 Jerry SwimLa Crosse608-789-7892
 Keith WilkinsonShawano715-524-3630

POWTS Wastewater Specialists

Ross FugillShawano715-524-3629
 Matthew JanzenStevens Point715-345-5336
 Leroy JanskyChippewa Falls715-726-2544
 Carl LippertHayward715-634-3484
 Karl Schultz.....Oshkosh920-424-3311
 Dennis SorensonLa Crosse608-785-9336
 Duane SteinerWest Baraboo608-355-3159
 Allen WendorfMadison608-873-5476
 Harold Stanlick, Superv.262-521-5065

Public Swimming Pool Reviewers

Dan JensenMadison608-267-5265
 Glen SchlueterMadison608-267-1401

The WPCR is a monthly publication delivered to about 9,700 people as part of their certification, license, or registration with the Wisconsin Department of Commerce, Safety and Buildings Division. Subscriptions are also available.
 SBD 8340P

The Department of Commerce does not discriminate on the basis of disability in the provision of services or in employment. If you need this printed material interpreted or in a different form, or if you need assistance in using this service, please contact us, 608-266-3151, TTY 608-264-8777.

Meeting Calendar

Feb. 7, 2001, Wednesday, **Pool Advisory Code Council**, 9 a.m.-3 p.m., Thompson Commerce Center, Rm. 3B, 201 W Washington Ave, Madison, Jean MacCubbin, jmaccubbin@commerce.state.wi.us, 608-266-0955

February 7, 2001, Wednesday, **Uniform Dwelling Code Council**, 9:30 a.m.-2:30 p.m., Wisconsin Builders Association, 4868 High Crossing Blvd, Madison, Duane Hubeler, dhubeler@commerce.state.wi.us, 608-266-1390

February 8, 2001, Thursday, **Fire Safety Code Council**, 9 a.m.-2 p.m., Thompson Commerce Center, Rm 3C, 201 W Washington Ave, Madison, Duane Hubeler, dhubeler@commerce.state.wi.us, 608-266-1390

February 8, 2001, Thursday, **Plumbing Advisory Code Council**, 10 a.m.-3 p.m. Thompson Commerce Center, 1st Floor, Human Resources Conference Rm., 201 W Washington Ave, Madison, Jean MacCubbin, jmaccubbin@commerce.state.wi.us, 608-266-0955

March 8, 2001, Thursday, **Commercial Building Code Council**, 9 a.m.-3 p.m., UW-Madison Agricultural Research Station, 8502 Mineral Point Rd, Verona, Sam Rockweiler, srockweiler@commerce.state.wi.us, 608-266-0797

Contact the listed Code Consultant for information on the meeting agendas, locations, etc. If you have questions concerning technicalities of the codes which are the subjects of the meetings, contact consultants and reviewers in the appropriate program area.

March 21, 2001, Wednesday, **Multifamily Dwelling Code Council**, 9 a.m.-3 p.m., Wisconsin Builders Association, 4868 High Crossing Blvd, Madison, Sam Rockweiler, srockweiler@commerce.state.wi.us, 608-266-0797

S&B Bureau of Integrated Services Management Contacts

Bureau Director: Randy Baldwin, 608-267-9152
Green Bay Office: Brad Johnson, 920-492-5605
Hayward Office: John Spalding, 608-789-4693
LaCrosse Office: John Spalding, 608-789-4693
Madison Office: Tom Kasper 608-267-7586
Mary Jacobson 608-266-8456
Jim Miller 608-266-8072
Credentialing Unit Super., M. Jacobson, above
Mobile Home Unit Super., Malini
Ganeshpillai, 608-266-5333
Shawano Office: Brad Johnson, 715-524-6853
Waukesha Office: Tony Rubio, 262-548-8610

S&B WebSite: <http://www.commerce.state.wi.us/SB/SB-HomePage.html>

For those of you who receive the WPCR free because you have a particular license administered by the Safety and Buildings Division, address changes should be provided to the S&B Credential Unit, madisoncred@commerce.state.wi.us, 608-261-8500.

People with paid subscriptions, may request service and address changes from Material Orders, PO Box 2509, Madison, WI 53701. Fax 608-261-6699. Telephone 608-267-4405. Email phobbs@commerce.state.wi.us

Subscriptions are \$20, payable in advance to the Safety and Buildings Division for 12 monthly issues.

Changes in plan review process for off-lot and multi-structure systems

by Roman Kaminski, S&B POWTS
Program Manager,
715-345-5334,
rkaminski@commerce.state.wi.us

The implementation of the new Comm 83 code has changed some POWTS plan review procedures. For example, the new code does not require that all off-lot systems automatically be submitted to the Safety and Buildings Division for review.

If a county receives an application for a POWTS system that can be reviewed under the provisions of Table 83.22-3, but it happens to be located “off-lot,” the county can complete the design review. That type of submittal does not have to be reviewed by S&B prior to Sanitary Permit issuance. Make sure you check with the county in which your project is located to see what local administrative provisions, such as recording of easement documentation, may be required.

On occasion, we receive an inquiry on how to handle a situation where a property owner decides to install plumbing fixtures in a detached structure on their property.

Typically, there are two scenarios associated with this type of project: 1. The plumbing will be connected to the building sewer or private main interceptor, resulting in two structures served by a common POWTS system, or; 2. The plumbing in the detached structure is served by its own POWTS system.

Under the new code, these types of designs cannot be submitted to the county under the provisions of Table 83.22-3 because this table limits county plan review authority to “POWTS that will serve a single one-or two-family dwelling... and using gravity distribution of the effluent to an in-ground distribution

cell.” (A gravity-flow septic tank/soil absorption system.)

However, a county may request designated agent status under the provisions of Comm 83.23 that allow the county to review POWTS listed in Table 83.22-2. If the designated agent status is granted, a county may then review designs which could include POWTS that serve other than a one- or two-family dwellings.

S&B recently contacted the counties reminding them that, under the new code, they are able to request designated agent status for POWTS plan review. Preliminary responses seem to me to indicate interest in this code provision. We expect that a number of counties will be granted designated agent status for POWTS plan review before the start of the next construction season. As it happens, the information will be printed in the *WPCR*.



Barron County Courthouse and
Barron Community Carillon Bell Tower

State administrative codes and the code update service may be purchased by contacting state Document Sales, 608-266-3358, or 800-362-7253, for credit card purchases. ❖ ❖ ❖ ❖ ❖ ❖

Placing a POWTS in a floodplain

by Roman Kaminski, S&B POWTS Program Manager, 715-345-5334, rkaminski@commerce.state.wi.us

One of the Safety and Buildings Division's Wastewater Specialists was recently asked by several counties how applications for placement of a POWTS in a designated floodplain area are handled under the provisions of the new Comm 83 POWTS code.

Reviews by the S&B or designated agents are outlined in Tables 83.22-1 and 83.22-2. Reviews that may be handled by local governmental units are outlined in Table 83.22-3. Systems located in the floodplain are not specifically identified in any of the tables. An "Application for Development of a Flood Plain" (SBD-6698 form, formerly known as a Plb. 89 form) is no longer required by S&B for development within the floodplain.

When a system is to be located in a floodplain area, the following code sections need to be considered:

1. Comm 83.32(3)(c) states that no part of a POWTS may be installed in a floodway, except as provided in NR 116, in a Department of Natural Resources code.

2. Comm 83.43(8)(g) requires POWTS treatment and holding components installed in areas subject to soil saturation to be anchored to prevent flotation.

3. Comm 83.45(6)(a) requires POWTS treatment and holding tanks to be watertight. And (6)(b) requires vent and observation pipes to terminate 2 feet above the regional flood elevation.

4. Comm 85.40(3)(a)5e requires the site report to include the floodplain elevation and the surface elevation of any adjacent navigable waters or reservoir.

If a POWTS system is proposed to be installed in a floodplain area, it does not automatically mean that the design must be submitted to S&B for review. A county may review and approve a POWTS design that will be located in a floodplain area, as long as the design meets the plan submission criteria identified in Tables 83.22-2 and/or 83.22-3. Most counties have access to detailed floodplain maps and are in the best position to make an accurate determination of acceptability based on that information.

I strongly recommend that soil testers and designers/installers check with the county where the project is located, and the local DNR office, for any applications or permits that may be required for disturbances such as excavation and/or filling in a floodplain area **prior** to POWTS plan submittal to the county or S&B.

Safety and Buildings-related codes are on the Internet,

www.commerce.state.wi.us/SB/SB-CodesListing2000.html

Not all codes are available electronically. Paper copies may be purchased from Document Sales, 800-362-7253, for credit card purchases, or 608-266-3358.

Questions about your continuing education credits?

Check the mailing address back page for a printed line giving your status for inspection-related S&B certifications, licenses, and registrations. Or, call the Credentialing Unit, 608-261-8500. Or, check the S&B WebSite, <http://www.commerce.state.wi.us/SB/SB-HomePage.html>, choose "Credentials."

2001 Safety and Buildings Division Credential Exams

Wausau
Park Inn International,
2001 N Mountain Rd,
Wausau, WI 54401
715-842-0711

Madison
Sheraton Hotel,
706 John Nolen Dr,
Madison, WI 53713
608-251-2300

Milwaukee
Clarion Hotel,
5311 S Howell Ave,
Milwaukee, WI 53207
414-481-2400

All sessions are on Tuesday, except as noted.

January 9	January 16	January 23
February 6	February 13	February 20
March 6	March 13	March 20
April 10	April 10	April 17
May 8	May 15	May 22
June 5	June 12	June 19
None here in July	July 10	July 17
August 7	August 14	August 21
Thurs. Sept. 6	September 11	September 18
October 9	October 16	October 23
November 6	November 13	November 20
December 4	December 11	December 18

Patching or repairing plumbing systems

continued from page 1

will not harm the downstream treatment system and will not release toxic substances into the wastewater stream (Comm 82.10(1) and Comm 83.32(1)(c)), unless those substances are intercepted or treated prior to discharge.

If a patch is safe for a water supply, safe for the environment, and is temporary, it may be used in emergency situations. These patches, clamps, bands, or liners do not need product approval and you will not find them listed in the Wisconsin Plumbing Products Register. Patches include bands, clamps, liners, and any other repair kit designed to be used in the plumbing system.

How long can a patch stay in place? The code isn't specific as to how long an emergency repair band or clamp can remain in place. Usually the patch is intended to get someone through a weekend or a hard piece of winter. Because the code doesn't address the length of time, an inspector's orders or individual circumstances will determine the time length. If an inspector's orders are to permanently repair a piping system within 90 days, the patch

would be required to be replaced with code compliant material within that 90 days. Otherwise, it makes sense to get back to replace the patched material as soon as possible.

Can a patch be used on a new plumbing system? No. Clamps, bands, and repair kits aren't code compliant to repair leaks in new installations. These products are meant for emergency repairs. A patch will not be permitted prior to a plumbing system passing a final test (where required), or until after a system has been existing for an initial period.

Materials that permanently replace building sewer pipe must meet one of the standards listed in Table 84.30-3 (Comm 84.30(2)(c)), so if a liner is installed to permanently serve as a sewer, the liner would be required to meet one of the listed standards or have received alternate approval. The same criteria would hold true for any patch or repair kit. If it is to remain permanently as a part of the plumbing piping system, it must be of a material listed in Comm 84.

If you have questions regarding patches or repairs, contact a plumbing consultant, plan reviewer, or product reviewer listed on page two of this *WPCR*.

Multipurpose piping systems – Only installed by plumbers

By John Lippitt, S&B Fire Safety Program Manager, 608-266-1036, jlippitt@commerce.state.wi.us

I received a telephone call from a plumbing contractor who has a shop on the first floor and his residence on the second floor of a building in the City of Milwaukee. For his own safety, and as a demonstration to potential customers, he is contemplating installing an automatic fire sprinkler system in the building. Under the state Building Code, the residence is considered a Uniform Dwelling Code occupancy because there is only one residential unit with a commercial occupancy below.

The plumber had a couple of clear questions, and was also getting at the fundamental definitions of “Automatic Fire Sprinkler System” and “Multipurpose Piping System.”

Question 1. Given that the second floor residence is a UDC unit, would the state building code consider a NFPA 13D sprinkler system acceptable in the residential unit?

Answer 1. Yes. The UDC is silent on sprinkler fire protection in one- and two-family dwellings. The state does not have any regulations for the design and installation of an “automatic fire sprinkler system” installed in a one- or two-family dwelling. I recommend that a sprinkler contractor install the automatic fire sprinkler system in the home in accordance with NFPA 13D, but use of this standard is only a recommendation.

Question 2. Who, other than a licensed automatic fire sprinkler contractor, may install automatic fire sprinkler systems in one-and two-family residences?

Answer 2. There are three credential options for installing an “automatic fire sprinkler system” in a one- or two-family home: an Automatic Fire Sprinkler Contractor, a Journeyman Sprinkler Fitter, and an Automatic Fire Sprinkler System Apprentice. There are no other options.

If the plumber asking the questions wants an **automatic fire sprinkler system** in his building, he would be required to hire an automatic fire sprinkler contractor to install the system.

However, a master plumber who has completed an approved course as described in Comm 5.91(6)(b)1 may install a **multipurpose piping system** in a one- or two-family dwelling, as specified in Comm 82.40(3)(f). The installation must comply with NFPA 13D and the exceptions listed in the plumbing code. A journeyman plumber or an apprentice plumber working under the supervision of a master plumber who has attended an approved course may install a multipurpose piping system. As the plumber’s dwelling is located above his shop, it is considered a single-family residence. He may install a multipurpose piping system in the dwelling portion of the building.

The scope of our conversation is limited to one- and two-family dwellings, because that is the scope of NFPA 13D. There is a definition in Comm 5.003(30m) which states “multipurpose piping system” means a type of water distribution system conveying water to plumbing fixtures and appliances and automatic fire sprinklers with the intention of servicing both domestic water needs and fire protection needs within a one- or two-family dwelling or manufactured dwelling. The installation of multipurpose piping systems is limited to one- and two-family dwellings.

Let me repeat, in different words, to try to be clear. An “automatic fire sprinkler system” is defined in 145.01(1), Stats. A plumber may not install an automatic fire sprinkler system in any building. “Plumbing” is defined in 145.01(10), Stats. A “multipurpose piping system” supplies water to plumbing fixtures and to residential sprinklers in one- or two-family dwellings. By definition, that is a water distribution system, which is included in the definition of plumbing. A sprinkler fitter may not install a multipurpose piping system in any building.

S&B WebSite: <http://www.commerce.state.wi.us/SB/SB-HomePage.html>

WPCR - January 2001
Safety and Buildings Division
201 W Washington Ave
PO Box 2509
Madison WI 53701

ADDRESS SERVICE REQUESTED

Prst Std
U.S. Postage
PAID
Permit No.
880
Madison WI