

# Public hearing on Comm 82/84 plumbing code rules

A hearing on plumbing rules change proposals for Comm 82 and 84 will be held at 10:30 a.m. on Wednesday, October 6, in room 3C, 201 West Washington Avenue, Madison.

Copies of the draft proposals are available from Roberta Ward, 608-266-8741, rward@commerce.state.wi.us. The information is also on the Safety and Buildings Division WebSite, <http://www.commerce.state.wi.us/SB-RuleChanges.html>.

Interested persons may appear at the hearing and

present comments on the proposed rules. Persons making oral presentations are requested to submit their comments in writing. Other written comments for the hearing record can be sent by October 16 to Jean MacCubbin, Safety and Buildings Division, P.O. Box 2689, Madison, WI 53701-2689.

The proposals were discussed in the August *WPCR*. The information in that *WPCR* is available on the S&B WebSite, <http://www.commerce.state.wi.us/SB-Publications.html>.

## Safety and Buildings' view of Comm 83

Testimony (edited) before the state Senate Agriculture, Environmental Resources, and Campaign Finance Reform Committee by Mike Corry, Safety and Buildings Division Administrator, on the draft revisions to Comm 83, Wisconsin's Private Onsite Wastewater Treatment Systems (POWTS) Code, August 26, 1999

right, Mike Corry



### Background Information

- This proposal is the third major change in the POWTS code. In 1969, the first modern code was adopted requiring that systems treat the wastewater in addition to keeping it underground. The conventional system was approved. In 1980, the Wisconsin Mound was approved for new construction. Since then, additional designs have been put to use in Wisconsin as replacement systems and are used in other states. The proposal is that these other systems be

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# Wisconsin Plumbing Codes Report

Safety and Buildings Division, Department of Commerce

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## 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. 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.

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.

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

## Plumbing Consultants

Tim Joyce ..... Madison ..... 608-825-4724  
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 Don Oremus ..... Pelican Lake ..... 715-487-6123  
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 Herman Delfosse ..... La Crosse ..... 608-789-5535  
 Wes Grube ..... Green Bay ..... 920-492-5613  
 Dan Kraft ..... Madison ..... 608-266-8075  
 Mary Pfaff ..... Waukesha ..... 414-548-8604  
 Dave Russell ..... Madison ..... 608-267-3605  
 Curt Wendorff ..... Shawano ..... 715-526-9056

## Plumbing Products Reviewers

Mike Beckwith ..... Madison ..... 608-266-6742  
 Dan Jensen ..... Madison ..... 608-267-5265  
 Glen Schlueter ..... Madison ..... 608-267-1401

## POWTS Plan Reviewers

Wes Grube ..... Green Bay ..... 920-492-5613  
 Julia Lewis ..... Waukesha ..... 414-548-8638  
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 Jerry Swim ..... La Crosse ..... 608-785-9348  
 Keith Wilkinson ..... Shawano ..... 715-524-3630

## POWTS Wastewater Specialists

Heidi Ferguson ..... Stevens Point ..... 920-779-4818  
 Ross Fugill ..... Shawano ..... 715-524-3629  
 Leroy Jansky ..... Chippewa Falls ..... 715-726-2544  
 Carl Lippert ..... Hayward ..... 715-634-3484  
 Karl Schultz ..... Oshkosh ..... 920-424-3311  
 Dennis Sorenson ..... La Crosse ..... 608-785-9336  
 Duane Steiner ..... West Baraboo ..... 608-355-3159  
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# Event Calendar

Contact the listed Code Consultant for information on the meetings agenda, locations, etc. If you have questions concerning technicalities of the codes which are the subjects of the meetings, contact consultants and reviewers listed on page 2 of this *WPCR*.

Sept. 30, 1999 - Thursday - **NonPoint Performance Standards Implementation Ad Hoc Committee** - 8:30 a.m. to 3 p.m. - PYLE Center, UW Campus, Madison - Jean MacCubbin, 608-266-0955, [jmaccubbin@commerce.state.wi.us](mailto:jmaccubbin@commerce.state.wi.us)

Oct. 5, 1999 - Tuesday - **Automatic Fire Sprinkler Council** - 9:30 a.m. - WHEDA Building, Rm. 4A, 201 W Washington Ave., Madison - Ron Acker, 608-267-7907, [racker@commerce.state.wi.us](mailto:racker@commerce.state.wi.us)

Oct. 6, 1999 - Wednesday - **Public Hearing -- Comm 82 & 84, WI Uniform Plumbing Code** - 10:30 a.m. - WHEDA Building, Rm. 3C, 201 W Washington Ave., Madison - Jean MacCubbin, 608-266-0955, [jmaccubbin@commerce.state.wi.us](mailto:jmaccubbin@commerce.state.wi.us)

Oct. 6, 1999 - Wednesday - **Public Hearing -- Comm 90, Design & Construction of Public Swimming Pools** - 1 p.m. - WHEDA Building, Rm. 3C, 201 W Washington Ave., Madison - Jean MacCubbin, 608-266-0955, [jmaccubbin@commerce.state.wi.us](mailto:jmaccubbin@commerce.state.wi.us)

Oct. 7, 1999 - Thursday - **HVAC Code Council** - 8:30 a.m. to 2 p.m. - WHEDA Building, Rm. 3B, 201 W Washington Ave., Madison - Jean MacCubbin, 608-266-0955, [jmaccubbin@commerce.state.wi.us](mailto:jmaccubbin@commerce.state.wi.us)

Oct. 13, 1999 - Wednesday - **Multifamily Dwelling Code Council** - 9:15 a.m. to 3 p.m. - Wisconsin Builders Association, 4868 High Crossing Blvd, Madison - Sam Rockweiler, 608-266-0797, [srockweiler@commerce.state.wi.us](mailto:srockweiler@commerce.state.wi.us)

Oct. 14, 1999 - Thursday - **Commercial Building Code Council** - 9 a.m. to 3 p.m. - UW Madison Ag Research Station, 8502 Mineral Point Rd, Verona - Sam Rockweiler, 608-266-0797, [srockweiler@commerce.state.wi.us](mailto:srockweiler@commerce.state.wi.us)

Oct. 14, 1999 - Thursday - **Fire Safety Code Council** - 9 a.m. to 3 p.m. - WHEDA Building, Rm. 3B, 201 W Washington Ave., Madison - Duane Hubeler, 608-266-1390, [dhubeler@commerce.state.wi.us](mailto:dhubeler@commerce.state.wi.us)

Oct. 14, 1999 - Thursday - **Plumbing Advisory Code Council** - 8:30 a.m. to 2 p.m. - WHEDA Building, 1st Floor Human Resources Rm., 201 W Washington Ave., Madison - Jean MacCubbin, 608-266-0955, [jmaccubbin@commerce.state.wi.us](mailto:jmaccubbin@commerce.state.wi.us)

Oct. 19, 1999 - Tuesday - **HVAC Code Council** - 8:30 a.m. to 2 p.m. - WHEDA Building, 3rd Floor, Conference Rm. 3B, 201 W Washington Ave., Madison - Jean MacCubbin, 608-266-0955, [jmaccubbin@commerce.state.wi.us](mailto:jmaccubbin@commerce.state.wi.us)

Oct. 26, 1999 - Tuesday - **Energy Conservation** - 8:30 a.m. to 3 p.m. - WHEDA Building, 3rd Floor, Conference Rm. 3B, 201 W Washington Ave., Madison - Diane Meredith, 608-266-8982, [dmeredith@commerce.state.wi.us](mailto:dmeredith@commerce.state.wi.us)

Nov. 11, 1999 - Thursday - **Commercial Building Code Council** - 9 a.m. to 3 p.m. - UW Madison Ag Research Station, 8502 Mineral Point Rd, Verona - Sam Rockweiler, 608-266-0797, [srockweiler@commerce.state.wi.us](mailto:srockweiler@commerce.state.wi.us)

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

## Clarification on heater temps

The July *WPCR* had an article about water heater settings by Tom Guile. The article was reprinted from another publication and was originally meant for national distribution. The article stated that there are regulations for "110 degree water at such facilities as correctional institutions, public buildings, nursing homes, and community-based residential facilities." The Wisconsin Plumbing Code has 110 degree requirements for hot water in health care facilities. There are no other public buildings in which the 110 degree requirement applies. If you have questions on water heater temperature settings, contact a plumbing plan reviewer or consultant listed on page two of this *WPCR*.

# Some plumbing code issues for your consideration

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

The Plumbing Code Advisory Code Council is evaluating issues concerning indirect and local wastes (Comm. 82.33), interceptors and catch basins (Comm 82.34), and other code sections.

\* Should Comm 82.32(3)(b) and (c) be revised to allow means other than trap seal primers for trap seal protection?

\* Should Comm 82.34(5) be revised to require that all commercial kitchen wastes discharge through grease interceptors?

\* Should the drainage fixture unit value for a receptor of indirect waste be based on actual flow to the outlet instead of receptor inlet diameter?

\* Should Comm 82.34(8)(d) be revised to allow service sinks to be receptors for certain types of wastes, including RP valves and water treatment devices?

\* Should grease interceptors be required for commercial establishments, not churches?

\* Should Wisconsin create a subsection to allow water heater temperature and pressure valves, condensate drains, water softeners, and case drains to discharge to the riser of a floor drain?

\* Should Wisconsin include code language to allow interior grease interceptors to be sized by the manufacturers' recommended methods of calculation?

\* Revise the language in s. Comm 82.33 (7)(b) to require an air break to terminate above the water level of a receptors trap?

\* Should Comm 82.33(8)(c)2 be changed to allow residential condensate from furnaces and RP valves to discharge to floor drains?

\* Should the plumbing code allow water heater T&P valves to discharge via air-breaks instead of the currently required air gaps?

\* Should the code allow high temperature water to discharge to any piping material when it is approved by the manufacturer of the piping material?

\* Should the code define which clearwater wastes must discharge via an air gap in Comm 82.33(9)(b)?

\* Should Wisconsin eliminate Comm 82.34(3)(g)3, which requires approval of pre-fabricated catch basins?

\* Should the entire section on garage catch basins, Comm 82.34(4), be revised?

\* Should clearwater wastes be defined?

\* Can a sanitizing compartment of a three-compartment scullery sink be used for food preparation?

Other issues, including water treatment device installation requirements, and wastewater recycling and re-use, will be brought to the council in the near future. If you have concerns or suggestions for any of these issues, contact any Plumbing Code Advisory Council S&B staff member.

Tom Bembnister, Section Chief, Safety and Buildings Division, 13 E Spruce St., Chippewa Falls, 54729, 715-726-4520, tbembnister@commerce.state.wi.us;

Lynita Docken, Program Manager, Safety and Buildings Division, 2226 Rose St., LaCrosse, 54603, 608-785-9349, ldocken@commerce.state.wi.us;

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Jim Miller, Section Chief, Safety and Buildings Division, PO Box 2658, Madison, 53701-2538, 608-266-8072, jhmiller@commerce.state.wi.us.

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. ❖ ❖ ❖ ❖ ❖

# Peat Filter for POWTS receives approval

by Mike Beckwith, S&B Plumbing Product Reviewer, 608-266-6742, mbeckwith@commerce.state.wi.us

A product approval was issued by the Safety and Buildings Division to Premire Tech Ltd. for their Ecoflo Biofilter model ST-650. This product may be installed in conventional soil absorption systems for secondary treatment of domestic wastewater using peat as a treatment media.

An individual unit of this product is recognized to treat a single-day peak wastewater flow of up to 532 gallons. The daily design flow may not exceed 252 gallons per day and the design 20-consecutive-days flow may not exceed 338 gallons per day. The number of units required for a typical system will be based on a daily flow equal to 150 gallons per bedroom for one- and two-family dwellings, or flows listed in Table 12 of Comm 83.

The wastewater that flows to this product must be from a septic tank that uses an effluent filter acceptable to Premier Tech, or an aerobic wastewater treatment unit.

The wastewater may be applied to the product by gravity or be dosed. When the wastewater is dosed, a single dose may not exceed 10 gallons.

The wastewater from the product may discharge directly onto a soil absorption area, which consists of only aggregate. When the wastewater is discharged directly onto a soil absorption area, the unit(s) must be located so as to apply effluent on equal areas of the soil absorption area. The soil absorption area is sized and located in accordance with Comm 83. The depth of the aggregate in the soil absorption area must be at least eight inches, in accordance with the manufacturer's recommendations.

The wastewater may also be collected from the peat filter and directed to a dose tank for discharge to an absorption system conforming to Comm 83. The means of collecting the wastewater is the same as is allowed for a single-pass sand filter. This is done by installing the unit in a tank or lined excavation that has

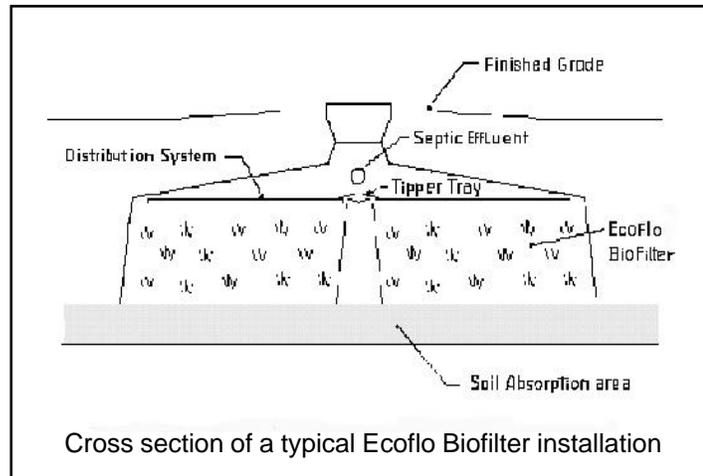
a means of directing the wastewater to another tank or soil absorption area per Comm 83.

The manufacturer requires the peat to be replaced every seven years. This is performed under a service contract that is part of the purchase price of the product. The discharged effluent from this product typically has an average BOD<sub>5</sub> of 15 mg/L, TSS of 10 mg/L and fecal coliform of 25,000 cfu/100 ml.

The product consists of an open-bottom container that measures 4 feet, 4 inches high by 13 feet, 10 inches long by 7 feet, 11 inches wide. The container houses a distribution network that includes a tipper

tray and perforated distribution plates, which cover the peat. The peat is a specially treated sphagnum peat that further treats septic tank effluent prior to dispersal to the soil.

To obtain more information on this product, contact Gerald Tremblay at



Premire Tech Ltd. His mailing address is Premire Tech, P.O. Box 3500, Rivere-du-Loup, Quebec, G5R 4C9, Canada. His telephone number is 418-867-8883. The company's website address is [www.premiretech.com](http://www.premiretech.com). (Note website was under construction at the time this article was written.)

## Questions about your continuing education credits?

Check the mailing address back page for a printed line giving your status for plumbing-related S&B certifications, licenses, and registrations.

Or, call the Credentialing Section, 608-261-8500.

# Opening for technical plumbing code advisor

by Dan Jensen, S&B Plumbing Product Reviewer, 608-267-5265, [djensen@commerce.state.wi.us](mailto:djensen@commerce.state.wi.us).

There is currently an opportunity to participate in the Building Officials and Code Administrators (BOCA) Evaluation Services as a Technical Advisory Committee member. This is an opportunity to learn about innovative products, methods, and materials that are being introduced into the market.

BOCA Evaluation Services (BOCA-ES) is recruiting plumbing system regulators to review submittals of plumbing products, materials, and method of construction for compliance with BOCA national and international codes. BOCA ES is an independent, not-for-profit organization that conducts a voluntary program of evaluation of both traditional and innovative building, plumbing materials, products, and methods of construction.

To better serve the plumbing industry, plumbing submittals will be reviewed under a separate Technical Advisory Committee once recruitment has been finished and committee members are selected.

The Safety and Buildings Division is considering adoption of the International Mechanical Code and the International Building Code. The BOCA committee would afford Wisconsin plumbing regulators an opportunity to become familiar with model codes, as well as keep abreast of the latest innovations changing the way plumbing codes are written and plumbing systems are constructed.

BOCA-ES Research Reports are issued to provide information on how the product, material or method of construction is to be used as a condition of compliance to BOCA international codes.

Committee members will review a research report put together by BOCA staff members from the information submitted by the proponent of the plumbing material, product, or method of construction. A ballot is included with each research report. After reviewing the report, committee

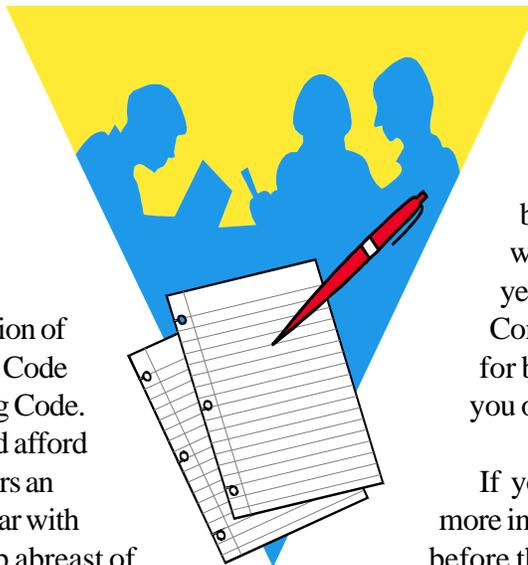
members vote whether or not the plumbing submittal meets the intent or is in compliance with the international code. Committee members have a choice of responding with a vote of, "Proceed with report as submitted," "Proceed with comments," or "Do not proceed." The comments from all committee members are then reviewed by BOCA.

If all comments from committee members are proceed or proceed-with-comments, then a research report or a revised research report is issued. If a do-not-proceed vote is returned to BOCA, then the submitter seeking the report is asked to respond to the concerns raised by the committee. If the concerns raised in balloting cannot be addressed to the satisfaction of the committee, the submitter is denied and the committee's review is completed. If

the concerns are addressed to the satisfaction of the committee, then a research report is issued.

Should you be chosen as one of nine Technical Advisory Committee members you will be asked to become a member of BOCA, and would be required to travel twice a year to the Technical Advisory Committees meetings. One trip is paid for by BOCA, the other is paid for by you or your agency.

If you are interested or you would like more information, contact me (Dan Jensen) before the end of the year at 608-267-5265, [djensen@commerce.state.wi.us](mailto:djensen@commerce.state.wi.us).



**The Safety and Buildings Division is also recruiting for Plumbing Consultant 2 positions. See page 11 of this WPCR.**

# Missed plan review appointments are wasteful

People who make plan review appointments with the Safety and Building Division, and then don't show up or send in the plans, are costing other submitters use of plan review resources.

A review of six months of plan review scheduling evidenced missed appointments affecting 300 hours of work time in the buildings plan review area alone.

That's plan entry time lost scheduling and rescheduling appointments. That's reviewer and supervisor time lost juggling work assignments. In some cases, review time was lost altogether when other plans were not available to review.

In buildings plan review, over the first six months of 1999, 109 different submitters accounted for 147 missed appointments. Five submitters missed three or more appointments.

In the plumbing review area, 37 submitters had 64 missed appointments, with three submitters having

more than three missed sessions.

**S&B sent letters to submitters who missed three or more appointments, warning their scheduling privileges may be revoked if the pattern continues.**

The division fills the gaps with other work as best it can, but can't always help plan submitters who are waiting in line when someone else doesn't show up. Missing appointments are wasting plan review resources.

There are times when plan review submitters just cannot meet the appointment they made, for one reason or another. It's important in those cases that submitters call the office where the appointment is scheduled at least three days in advance, so S&B staff can arrange to have other plans available for the reviewer to work on.

## Hayward office moved Sept. 1

S&B's Hayward office moved to 10541 North Ranch Road on September 1. That is at the intersection of Ranch Road and Highway 77, which is about one-half mile east of the intersection of Highways 77 and 63, on the north end of Hayward.



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Safety and Buildings-related codes are on the Internet  
<http://www.legis.state.wi.us/rsb/code/comm>

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.

# Safety and Buildings participated in 1999 Farm Progress Days

by Leroy Jansky, S&B POWTS Consultant,  
715-726-2544, ljansky@commerce.state.wi.us.

The Safety and Buildings Division was proud to be part of Wisconsin Farm Progress Days this year, held near Lancaster in Grant County on July 13-15.

Several farms in the Town of Beetown shared sponsorship of the annual event, which began back in 1954 and moves to a different county every year. Attendance is in the tens of thousands and there are hundreds of tents, displays, shows, and vendors to keep a person busy for an entire day.

One unique display, highlighting area soils, the soil survey, and uses of the soil was sponsored for the seventh year by the USDA-National Resource Conservation Service (NRCS), the Wisconsin Society of Professional Soil Scientists (WSPSS), and the Safety and Buildings Division (S&B). The three organizations worked together to construct a soil pit showcasing area soils and uses, and recognizing the 100th anniversary of the soil survey in the United States.

There were many visual and several hands-on displays in the 30-foot U-shaped pit that attracted well over two-thousand visitors over the three-day event. Soil monoliths from various soil regions of the state were displayed, as were products of the soil survey which assist farmers, conservationists, planners, and others in need of soils information. NRCS, WSPSS, and S&B personnel were on hand to answer questions about soils, soil survey use, and private onsite wastewater treatment systems (POWTS).

S&B also displayed models of conventional gravel and chamber systems, and at-grade and mound systems, built into the soil pit sidewalls. Our staff were available to answer questions and hand out brochures about onsite technologies on display, and to provoke thought about what might be available for use in the near future. The POWTS display always generates questions, since many of those attending such events are not served by

municipal sewer service. Hopefully, those visiting the soil pit took home a better appreciation of the role of soils in rural living and agriculture.

Next year's Farm Progress Days will be held in Fond du Lac County, July 11-13, 2000.



Soil Survey maps and products were exhibited to emphasize the importance of the information to farmers, conservationists, planners, and others.



Models of POWTS were built into the soil pit.



Visitors went below ground to view some displays at Farm Progress Days.

# Corry's POWTS testimony

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available for use with new housing construction.

- In the 1980 code revision adopting the Wisconsin Mound, the criticisms of the proposal were the same as are being made now: that the code will promote sprawl and farm land conversion, the systems will pollute groundwater, the county staff are overworked and the new code will make things worse, and that the Environmental Impact Statement did not meet Wisconsin Environmental Protection Act requirements.

- There are about 1,990,000 households in Wisconsin. There are an estimated 720,000 residential and commercial buildings served by onsite septic systems at this time.

- Ninety-three percent of septic systems are found in townships. 10,000-12,000 new and 7,000-8,500 replacement systems are installed annually. ...

- Onsite wastewater treatment is one of the most heavily regulated programs in the state. Installers, soil testers, inspectors, maintainers, and designers are all licensed or certified by the state. Continuing education is required for individuals. Every installation is subject to plan review and inspection.

- The department and the 72 counties administer the code.

## **Powts- A "Long-Term" Solution**

Onsite treatment systems are the long-term solution for wastewater treatment in areas of low density. The EPA, in a 1997 report to Congress, reported, "Adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals, particularly in less densely populated areas." The Dane County Regional Planning Commission 1998 report, On-Site Wastewater Systems Management Program, states in its summary of findings that "... on-site systems installed under current codes and management programs are providing safe, economical and environmentally sound wastewater disposal for rural residents." The report further states that "... systems currently being installed are safe, reliable, economical and environmentally sound, exhibiting long, useful service lives and low failure rates."

## **Problems With the Current Code**

- The current code does not meet the requirements of the Chapter 160 Wis. Stats., that contains the Ground Water Protection Standards.

- The code is old, last substantially revised in 1980. Many provisions are outdated and new knowledge and advances in POWTS technology have not been incorporated into the code.

- The current code is subject to numerous variances and interpretations that should be incorporated into the code.

- The code is unclear with respect to retroactivity of provisions.

- System maintenance provisions have not kept pace with newer system designs.

- Current rules discriminate between "new" and "replacement" installation with respect to access to POWTS systems. Owners of new homes do not have access to the same treatment designs as those replacing a system.

## **Strategic Issues**

Land Use - To what extent should Comm 83, a plumbing code intended to protect public health and groundwater, be designed to block construction of homes on lots either zoned residential or otherwise classified by local government to permit the construction?

A second issue was raised in the Assembly hearings concerning federal regulation and the nitrate standard for POWTS systems. We checked with both the state Department of Natural Resources and the federal Environmental Protection Agency about this. First, there are no current federal standards that would affect the code. Second, future standards would only affect cluster systems. Third, some of the POWTS systems approved with the proposed code have nitrate-reducing capability that should be able to meet future standards.

A third issue is the allegation that the proposed systems have not been tested. They have been

continued on page 12

# DNR providing water treatment loans, information

by Megan Matthews of the Wisconsin DNR, 608-266-8172, matthm@dnr.state.wi.us.

The 1996 amendments to the Safe Drinking Water Act included a new state revolving loan fund for drinking water infrastructure. The creation of this fund was among the new statute's most dramatic departures from the past, and among the most important changes in the nation's drinking water program since passage of the original SDWA in 1974. The program provides for loans to public water systems to build, upgrade, or replace water supply infrastructure, to protect public health, and to address federal and state safe drinking water requirements.

With funds from both the federal and state budgets, Wisconsin allocated \$53 million in loans for projects beginning before July 1999, and approximately \$12 million for the next fiscal year. Milwaukee, Oshkosh, Racine, and Wautoma have already received loans to fund a variety of projects, including new water treatment, upgrading existing treatment plants, and construction of new wells.

For more information on Wisconsin's State Revolving Loan Fund, contact Jim Witthuhn of the Department of Natural Resources at 608-267-9659.

For information on how Wisconsin is working on amendments to the SDWA, individuals can visit the DNR website at <http://www.dnr.state.wi.us/org/water/dwg/index.htm>.

There, visitors can access:

- Public water system information for citizens;
- Plan review processes for community water systems;
- Consumer Confidence Reports;
- DNR's water quality database (Select a water system and access a contaminant data table);
- Groundwater publications, sampling and education information;
- Wellhead/Source water protection information;
- Private well information for homeowners;
- Public water system information for owners and operators;
- "The Safe Drinking Water Act, The Pipeline to Clean Water;"
- DNR Drinking Water and Groundwater staff listing;
- Important information for well drillers and pump installers.

## Floods can pose danger to well water

Heavy rains on Wisconsin this summer produced water runoff that could contaminate private wells if surface water is able to overflow a well and carry contaminants into the well and plumbing system.

Contaminated surface water can carry bacteria and other pollutants such as petroleum, manure, salt, and fertilizers into water supplies if the flooding is deep enough to submerge the well head. Well caps are not waterproof, since air must be allowed to enter a well to replace water as it is drawn out.

The Wisconsin Department of Natural Resources is advising home owners with private wells located in low areas and areas that have been subject to flooding to check their wells, well pits, and water systems. The DNR advises to not use the well water for drinking purposes if it appears the well

may have been flooded.

"The first thing to do is to check the well," said Nadene Cable, DNR private well water supply specialist. She said, "If surface water has covered the tops of a well, flooded basements or well pits, then a well system may have become contaminated and the well water should be considered unsafe for consumption."

Anyone who suspects their well may have been contaminated should obtain water from a known, safe source. In an emergency situation, and until a safe water supply can be located, vigorously boiling all water for five minutes will yield water safe for cooking, drinking, and brushing teeth.

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# Employments Opportunities

## Plumbing Consultant 2 - Stevens Point Area, Hayward Area, Green Bay Area

**Department of Commerce; Division of Safety and Buildings.** Starting salary is \$35,579 per year, plus excellent benefits. This classification is represented by the Technical Bargaining Unit. A current vacancy exists in Stevens Point. Future vacancies are anticipated in Hayward and Green Bay. The register established from this recruitment will be used to fill vacancies occurring in those locations during the next 6 – 12 months.

**Duties:** Provide consultation to a variety of parties regarding proper design of plumbing installations, technical code-related inquiries, etc.; perform inspections of plumbing installations in a variety of buildings; determine compliance with state plumbing codes; issue written directives to resolve violations of codes; monitor licenses and registrations of plumbers and apprentices and investigate possible licensure violations; provide instruction to plumbing professionals.

**Knowledge and Skills:** Wisconsin Uniform Plumbing Code; Chapter 145 Stats.; Wisconsin Administrative Code and state statutes governing plumbers' licensing, and plumbing design and installation techniques; engineering principles involved in plumbing; preparation, reading and interpretation of blueprints, designs, plans, and specifications for plumbing systems; assessing plumbing systems; groundwater systems and hydrologic and pneumatic principles and practices as they relate to plumbing systems; cross connection control practices; computations and calculations involved in plumbing; flow theories used in engineering for the plan review function; and effective oral, written and interpersonal communication techniques.

**Special Requirements:** Applicants must have a Journey level Plumber's license, or be registered as a Professional Engineer or Engineer In Training AND be eligible to write the Master Plumber's exam upon completion of the six-month probationary period. Well qualified candidates will be licensed in Wisconsin as a Master Plumber or be eligible to write the Master Plumber's exam within six months of appointment.

**How to Apply:** Apply with the Application for State Employment form (DER-MRS-38), letter of interest, and current detailed resume detailing: 1) Your experience in the inspection, design and/or installation of plumbing systems; 2) Types of buildings for which you designed or installed plumbing systems (i.e. residential, multi-family, manufacturing, etc.); and 3) All relevant licenses and certifications which you currently hold. If you do not currently possess a Master Plumbers license, explain the status of your eligibility to write the exam. Send materials to Dale Bartz; Commerce Human Resources; 201 W. Washington Ave; PO Box 7970; Madison, WI 53707-7970; 608-266-0366; FAX 608-266-0182; E-mail: dbartz@commerce.state.wi.us . Materials will be accepted until the needs of the department are met, with the first review scheduled for the week of September 27. Materials will be evaluated and the most qualified applicants invited to participate in the next step of the selection process.

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## flooding contamination ?

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When surface waters recede or the basement or well pit is pumped dry, then the well should be pumped until the water is clear and free of any mud, sand, or silt. "Once clear, the well needs to be disinfected," Cable explained.

For information on properly disinfecting a well, home owners should can contact a DNR office, plumbers, well drillers, or pump installers.

Once disinfected, the well owner should collect and send a water sample to a certified laboratory to determine if the well water is free of bacteria and other contaminants. Cable said bottles to collect

these samples can be obtained from local health departments or a DNR office.

The DNR recommends sampling all wells at least yearly. A list of laboratories that can perform drinking water tests is on the University of Wisconsin Extension web site <http://www.uwsp.edu/acad/uwexcoop/gndwater/bact.htm> and most yellow pages will list "laboratories."

For more information, contact Nadene Cable, 715-635-4054, or the DNR Bureau of Drinking Water and Ground Water, 608-266-0821.

# POWTS testimony

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tested here and in other states. Other developed countries use these systems. The most common “new” system is the A+4 Mound that was developed and tested by Dr. Converse and others in the late 1980s and has been in use in Wisconsin since 1991 as a replacement system. The sandfilter was developed in Oregon at the same time as the Wisconsin Mound in the early 1980s. Extensive published research exists on the performance of these systems. The EPA recognizes these system types as suitable alternative designs.

## **Expansion of Available Systems for “New Construction”**

The current code discriminates between replacement and "new systems" (first system on the property) in access to optional treatment designs although there is no public health reason for this discrimination. Currently, installation of "new systems" is limited to designs that require two feet of suitable native soil (conventional, at-grade, and standard mound). Replacement systems can be installed on 6-10 inches of suitable native soil. (A+4 Mound, sand filter, and aerobic treatment units (ATU) that discharge to modified dispersal areas). Both new and replacement applications can use a holding tank if permitted by local government.

The distinction between new and replacement systems has caused citizens and counties to avoid the restriction on access to the A+4 Mound by first installing a holding tank and then immediately replacing it with A+4 Mound. This is done at considerable extra cost because two permits and plan approvals are needed, and the installer must return to the site to do the conversion and install the mound.

The proposed code removes the distinction between "new" and replacement sites, and expands the list of approved designs for new construction from four to nine.

## **Themes for development of the Proposed Comm 83**

The proposed code improves the current code in areas that have been subject of frequent criticism.

- **Improved treatment and longevity of systems:** Requires that large particles from the septic tank be prevented from reaching the drainfield. Filters in outlet baffles are a likely solution; Improves system maintenance requirements; Permits use of pretreatment devices to restore failing systems; Increases the specifications for septic tanks to ensure water tightness and increases the protection against collapse.

- **Increased options for designers, planners and homeowners:** Expands access to the full range of POWTS systems to better match the system to the local site and use conditions. The number of approved designs for new construction increases from 4 to 9; Permits access to treatment systems where only holding tanks are now allowed; Removes barriers to access to cluster systems.

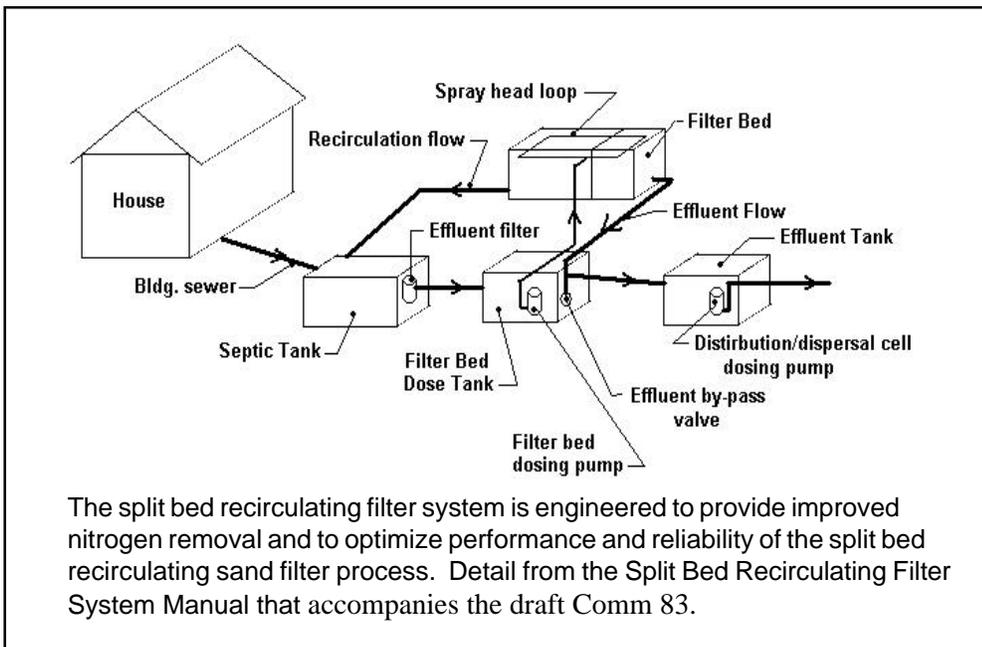
- **Increased county options:** Counties and towns can currently ban or limit holding tanks. The provision is retained; A new code, Comm 91, recognizes privies, composting and incinerating toilets. The code allows local bans or limitations; The code will permit the county to delay, by ordinance, the use of aerobic systems, drip tubing, disinfection units, the A+4 mound, and sand filters for up to 18 months after the adoption of the code. When new pre-approved package designs are approved in the future, the counties may delay the use of these designs for up to 18 months from the date of package approval. The purpose of the delay is to allow time to train staff and installers, and to adjust any other ordinances; Municipal and metropolitan sewage districts will be able to determine when homes need to be hooked up to municipal collections systems; Local government may specify system ownership requirements for cluster systems; Local government may specify additional methods of administration and enforcement of regulations.

- **Improved system installation, maintenance, and reliability:** Each installed system will have a manual detailing the installation instructions, inspection protocol, and a mandatory maintenance schedule

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ranging from 3 years for most systems to 6 months for systems with filter systems that may require more frequent cleaning; This is an expansion of the scope of the monitoring requirements now followed by most counties under the Wisconsin Fund Program. The department has developed an automated tracking system that can be used where counties opt into the state system in lieu of using their own; Installers and inspectors will be required to attend a training class prior to the installation of a new system type. (Training has been held for both the sandfilter

systems were installed prior to 1969 when the first of the modern codes was adopted; For post-1969 systems, the systems will be evaluated under the code in existence at the time it was installed; For pre-1969 systems, before the 3-foot treatment zone was required beneath the drain field trench, those with more than two feet of suitable soil will be presumed to be adequately treating the wastewater. Those with less than 2 feet will be presumed to be failing. Both presumptions are rebuttable. Because all codes since 1969 required the 3 feet of soil, all post 1969 systems will be required to have the 3-foot separation. ...



**Comm 83 and Land Use**

Comm 83 and land use regulations have different purposes and different enabling statutes. Comm 83 is designed to protect public health and groundwater. Land use codes (zoning) are intended to limit the use of public and private lands.

While Comm 83 is not a land use code, it

and mechanical aerobic systems – over 200 attended the August 1998 training program); A new classification titled Mechanical POWTS Maintainer is being created for the personnel that will perform minor maintenance and inspection on mechanical POWTS systems in addition to those currently doing the work. Other likely maintainers are plumbers, septic tank pumpers, and factory-trained individuals; A provision was added that failure to maintain a system could result in the system being classified as a public health hazard and enforcement action taken by the county staff or the state.

affects the use of individual building lots because it currently limits access to POWTS designs for new housing construction. POWTS systems that work on shallow native soils are banned for new construction under the current code.

There are two land use effects of this practice. First, homes with 6-24 inches of native soils are now required to use a holding tank. Second, where holding tanks are banned or the owner chooses not to build with a holding tank, construction of a home on an approved building lot is blocked by the code's denial of access to a working POWTS system.

•Clearly defined retroactivity provisions for existing systems: The current inventory of 720,000 systems was installed under different codes with different siting specifications. About 200,000 of these

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# POWTS testimony

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## COMM 83 and Land Use Control Myths

Two strongly held myths exist with respect to the use of the plumbing code as a land use regulatory tool. The first is that blocking access to the new POWTS designs contained in the proposed code will control development of an area. The second is that the results of the denial of access to POWTS systems are helpful to good planning.

### Myth 1 – Current POWTS Plumbing Code Controls Development

Recent news articles and testimony at the Assembly hearing highlighted the fact that western Dane County has shallow soils. Because the current code prohibits the installation of a treatment system on soils less than 24 inches deep, the myth says that denial of access to these systems will protect western Dane County from development.

The facts are otherwise. A map contained in the 1998 Dane County Regional Planning Commission report on Onsite Wastewater Systems Management Program has a dot for each POWTS system installed in the county. An examination of the map shows that there are as many dots in western Dane County as in eastern and northern Dane County. This demonstrates that the current code is not a deterrent to development of the area and that other factors control where development takes place.

The reason is that the soil maps relied on by planners are useless in determining whether a individual residential lot will accept a POWTS system because the maps are not detailed enough to show the soil types on individual lots. This, coupled with the fact that the distribution of soil types can vary within feet, make the maps useless at the individual lot level.

The Town of Springdale is a good example. Soil maps report that the town lies in an area that is generally unsuited for current POWTS designs. Our soil maps say that 75% of the land is unsuitable. Nevertheless, 111 permits were issued under the current code for new construction between 1990 and 1997. The reason is that the 25% of the soil in Springdale that is suitable for POWTS systems under the code represent sufficient space for 100,000 potential drainfield sites....

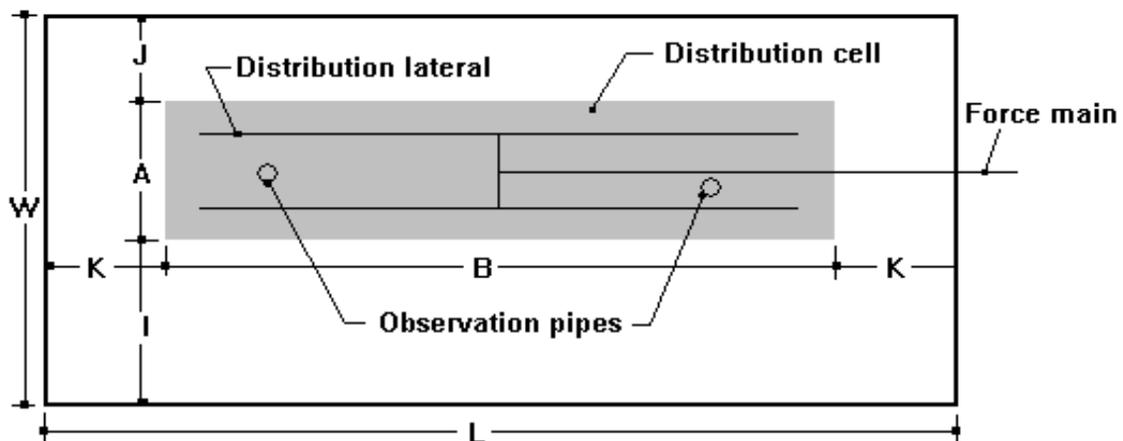
### Myth 2 – The Current System Results in Good Planning

The second myth is that the result of the current code is good for planning, good for urban sprawl control, or good for farmland preservation.

The primary land use affect of the code is limiting where homes are built within the area, not how many are constructed.

#### 1. Where Homes are Constructed?

The current code does more to increase sprawl



Detailed plan view of a mound, from the Mound Component Manual that accompanies the draft code .

than the proposed code. Because soil types can vary within a few feet, the restrictions to access to POWTS designs results in one lot in a subdivision being buildable while the neighboring lot is unbuildable. It is not uncommon to have 5% or more of approved lots wasted because of the restrictions. This decreases the density of the subdivision and causes demand for additional subdivisions and an increase in sprawl. ...

The question is - what public purpose is served by blocking construction of these lots or other lots where local public governments permit the construction? These four lots have gone through some planning and zoning process. In areas where planning and zoning are not done, it is not done at the discretion of the local elected government. What public policy is served when a state level bureaucracy that regulates plumbing steps in and decides to reverse local government decisions and block construction of a home by denying access to a mandated plumbing system?

The current code does more to increase farmland conversion than the proposed code. The current code, which bans the use of treatment systems on suitable soil less than 24 inches deep, steers developers to agricultural lands with deep, well-drained soils. Marginal or unusable farmland with shallow soils is not buildable because of restrictions to access to POWTS designs. The proposed code will remove restrictions on the use of treatment systems on soil 6-24 inches deep, taking developmental pressure off good farmland.

## 2. Number of Homes Constructed?

While it is impossible to predict, it is unlikely that more homes will be built as a result of the proposed code. This is because the supply of suitable land under both the proposed and current code vastly exceeds current demand. About 12,000 new homes are constructed annually with POWTS systems on the 15.5 million acres currently suitable statewide.

Besides being counterproductive as a land use control, there are several other reasons why the code should not be designed to limit land use.

First, the legislature did not give the department

the authority to regulate land use through the plumbing code. The powers of the department as contained in 145.02(1) Wis. Stats., involve safeguarding the “public health and waters of the state.” The statutes do not ask the department to “...control land use by restricting access to plumbing systems.”

Second, the legislature gave local government the power to determine land use. A plumbing code designed to block construction on approved building lots would subvert the purpose of the zoning regulation.

The limitation on the use of various designs is the depth of soil needed for the system. Shown [on the next page] is a table of private, unincorporated land available statewide for each system. The systems are listed in the order of usual preference. The marginal increase value is the estimated actual use, because the lower listed systems are generally avoided because of cost or inconvenience considerations.

This data was compiled from soil mapping data that gave the probability that a given area had soil depths greater than a given depth. For example, a mapping element that reported the probability that a two square mile area had a 40 percent probability that the soils depths were greater than 24 inches, then 512 acres were assigned to the greater than 24-inch group and 768 acres were assigned to the less than 24-inch group. All mapping elements added together statewide generated the data in the table above. This table means that if 100 randomly selected locations of private, unincorporated land were selected, 24 percent of the points would have soil depths in the 6-24 inch range.

The table includes data on private unincorporated land. It shows that there are 6.9 million acres of land with depths in the range of 6-24 inches. Similar data on all state land shows that 8.9 million acres fall in the 6-24 inch range.

Because the soil types are intermixed, it is not possible to tell which land is suitable for installation of

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# POWTS testimony

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a POWTS system from mapping data. A one-acre parcel could have all ranges of soil depth, or just one. The only way to determine suitability is to do onsite soil analysis of each lot.

The proposed code will allow the use of treatment systems in soils in the 6-24 inch range for new construction. The current code only allows the use of the holding tank.

It is inappropriate to characterize the data to say that 8.9 million acres are newly opened for development by the proposed code, under common definitions of development ...

There are about 12,000 new homes built with onsite systems each year. There are 15.5 million acres of private, unincorporated land suitable under the current code, and 22.4 million under the proposed code, a supply that far exceeds the demand statewide.

## Land Use Summary

Maintaining the current code inflicts needless punishment on individual citizens denied the right to build on land zoned residential, without providing the claimed general benefit of land use control. In fact, the current code exacerbates the problem by hindering compact development, and by favoring agricultural land for development.

## Other Code Changes

- The department has agreed with the DNR to propose a change in law that would give DNR sole jurisdiction over systems larger than 12,000 gallons design flow per day. This distinction has been built into the code and a MOU to handle applications that overlap the agencies has been approved by both departments.

- Plat review is minimized in the proposed code because the system adds to classification error and imposes expensive non-value-added procedures.

- NR 140 standards are adopted except for nitrate and the Preventive Action Limit, (PAL) for chloride. Local government authority to specify nitrate reduction in zoning ordinances is recognized by the code.

- The petition for variance provisions are recognized in the code.

**Paper copies of the complete testimony are available from Roberta Ward, 608-266-8741, [ward@commerce.state.wi.us](mailto:ward@commerce.state.wi.us). Electronic copies are on the S&B WebSite, <http://www.commerce.state.wi.us/SB-COMM83RevisionsAndArticles.html>.**

Area Distribution of Private Non-Urban Land in Wisconsin by POWTS Type

System Type	Percent of Land	Marginal Increase	Suitable Soil Depth	Million Acres
Conventional	47	47	56-60 inches	12.9
Standard Mound	57	10	24-56 inches	15.5
A+4 Mound	81	24	6-24 inches	22.4
Holding Tank (1)	100	19	0-6 inches	27.7

(1) If not otherwise banned.

## Attention plan review submitters

Now you can find on the Internet the next available plan review date in each of the S&B plan review offices. You can decide which office to contact to get your review accomplished as soon as possible. (Of course, any of the offices will gladly schedule you in any of the other offices.)

Plumbing, POWTS, Buildings, or Pools reviews.

The plan review availability data is updated each afternoon.

The WebSite address is <http://www.commerce.state.wi.us/SB-DailyDoc.html>.

If you haven't explored the Safety and Buildings Division WebSite, take a look, <http://www.commerce.state.wi.us/SB-DailyDoc.html>.

For more information on the daily review schedule contact Mary Jacobson, 608-266-8456, [mjacobson@commerce.state.wi.us](mailto:mjacobson@commerce.state.wi.us).

For more information about the S&B WebSite, contact Todd Taylor, 608-267-3606, [ttaylor@commerce.state.wi.us](mailto:ttaylor@commerce.state.wi.us).



Watch for this icon on the S&B WebSite programs' pages to access the review availability document.

# Plumbing Seminar Registration Information

Beginning this December, the Safety and Buildings Division will be offering continuing education seminars around the state, with three-hour class sessions in the morning and three-hour class sessions in the afternoon. Classes will include subjects for all types of plumbing licenses, registrations, and certifications. It will be possible for some license categories to receive six hours of continuing education credit. The afternoon **general plumbing** classes will be repeats of the morning classes.

<b>Month</b>	<b>Location of Seminars</b>
December	Madison, Stevens Point, Rhinelander
January	Hayward, Eau Claire, Platteville
February	Green Bay, Fond du Lac, Mauston, Pewaukee

## **Courses being offered for Restricted Service Plumbers, CST's, and POWTS Inspectors**

1. Pressure distribution, Pump wiring and pump selections;
2. Soil evaluation on difficult sites, Petitions to Comm. 83.09(2)(b), and POWTS Questions & Answers.

## **Course being offered for Restricted Appliance Plumbers**

1. Water treatment, Penetrations of fire rated assemblies.

## **Courses being offered for Master and Journeyman Plumbers (No restrictions!)**

1. ADA for plumbers, Discussions on common drain and vent installations; Code change update
2. Water treatment, Penetrations of fire rated assemblies;
3. Pressure distribution, Pump wiring and pump selection;
4. Soil evaluation on difficult Sites, Petitions to Comm. 83.09(2)(b), and POWTS Questions & Answers.

## **Courses being offered for UDC Plumbing Inspectors**

1. ADA for plumbers, Discussions on common drain and vent installations, Code change update
2. Water treatment and Penetrations of fire rated assemblies;

Use the registration form appearing on the next page. Fill it in, cut it out, and mail to the address listed at top right. Only one person per registration form. You can make photocopies. Seating and handout materials are limited. **You may not be able to attend if you do not register 15 days prior to the seminar.** Class confirmations will not be sent to you. Your cancelled check will be your receipt.

For more info, contact Mary Pfaff, S&B Plumbing and POWTS plan reviewer, 414-548-8604, mpfaff@commerce.state.wi.us.

See HTML version of this WPCR  
for registration form. Or, the form  
is available at [http://  
www.commerce.state.wi.us/SB-  
Plumbing1999 ClassesForm.html](http://www.commerce.state.wi.us/SB-Plumbing1999ClassesForm.html).  
Or, a paper version is available  
from Sue Hansen, 608-261-8501.

Specific locations will be announced in next month's *WPCR*.

WPCR - September  
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201 W Washington Ave  
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Madison WI 53701

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