

Fire safety changes to the commercial buildings code are effective in April

A code revision package related to fire safety aspects of the Wisconsin Commercial Building Code, Comm 50-64, was adopted in late January, 2000, and, depending upon official publishing and printing dates, is expected to become effective in April, 2000.

The code changes address building construction, HVAC equipment safety, commodity storage and isolation, and fire protection systems.

Generally, the changes apply to new projects submitted to the Safety and Buildings Division after the effective date.

Included are adoption of new editions of currently adopted National Fire Protection Association (NFPA) standards, as well as 22 new NFPA standards, mostly relating to storage and isolation of various hazardous commodities, and to alternate fire suppression methods.

Several changes follow requirements in the International Building Code, which is being considered for adoption in Wisconsin.

For complete details, consult the applicable codes and adopted standards, drafts of which are available, <http://www.commerce.state.wi.us/SB/SB-CommercialBuildingsProgram.html>.

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S&B and advisory code councils working on adoption of model codes

The Safety and Buildings Division (S&B) of the Department of Commerce and advisory code councils are working on adoption of three parts of a suite of new national model codes. The models, known as the *International Codes*, were developed by the International Code Council (ICC), a joint effort of three national model code groups.

The three ICC codes being concentrated on for adoption are: the *International Building Code (IBC)*, which was first available in January of this year as "IBC 2000," the *International Energy Conservation Code (IECC)*, and the *International Mechanical Code (IMC)*.

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Wisconsin Building Codes Report

Safety and Buildings Division,
Department of Commerce

March 2000



UL urges testing of dry sprinklers

Underwriters Laboratories (UL) is urging property owners whose buildings are equipped with dry fire sprinklers that have "O-ring" water seals to have samples of those sprinklers tested immediately.

Fire sprinkler contractors and installers should alert their customers to the situation, which may merit sprinkler replacements.

UL says that laboratory testing and field reports suggest the sprinklers may not operate in event of a fire because they may require higher water pressures to operate than is available in the building.

Dry sprinklers account for less than three percent of all installed fire sprinklers, and are generally found in locations with harsh environmental conditions, characterized by wide variations in temperature, humidity, and corrosive conditions, such as attics, car

ports, cold storage structures, parking garages, warehouses, and unheated portions of buildings.

UL reports 49 percent of 300 test samples required pressures greater than seven pounds per square inch (psi) to discharge water, and 20 percent required pressures greater than 40 psi to discharge water from the sprinkler.

The installation requirement for water pressure established by the NFPA is 7 psi. A pressure of 40 psi may exceed the water pressure available in some locations.

For more information, contact the UL website, <http://www.ul.com/about/newsrel/nr030300.html>. Underwriters Laboratories Inc. (UL) is an independent, not-for-profit product safety testing and certification organization.

Subscription and address change information

For those of you who receive the *WBCR* free because you have a 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.

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

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. ❖ ❖ ❖ ❖ ❖ ❖

Vacation at the National Building Museum in Washington, D.C.

If you're looking for a different vacation experience, try the National Building Museum in Washington, D.C., created by Congress in 1980 "to celebrate American achievements in architecture, urban planning, construction, engineering and design."

The building was completed in 1887 as the home for the Pension Bureau. It is constructed of 15 million bricks, houses some of the largest Corinthian columns in the world, and has a central hall that is 15 stories high. It has hosted 14 presidential inaugural balls.

For more information, call 222-272-2448, or visit the museum's website, www.nbm.org.



Great Hall at the National Building Museum

Advice of a veteran code official

√ Meet with all involved parties before a major project begins to identify and remove obstacles to early completion of everyone's work.

√ Avoid harsh or critical words. Such words come back to haunt you. If you always maintain a habit of not speaking in a way you might regret if the wrong party heard, you won't slip up when you're socializing.

√ If you can detect a potential problem at an early stage, warning the affected parties as soon as possible can prevent the

possibility of the customer getting into a loss situation and you not getting compliance.

√ Regularly network with your peers on various subjects through personal contacts or participation in professional organizations.

See the second paragraph above.



The Safety and Buildings Division is part of the Wisconsin Department of Commerce. Also in Commerce is.....



The Main Street Program helps communities revitalize their downtowns. The National Main Street Center and state staff offer a comprehensive range of professional services that follow a four-point approach: organization, promotion, design, and economic restructuring. Services include training for community-based program managers; workshops; on-site visits; and ongoing technical support. Contact James Engle, 608/267-0766 or jengle@commerce.state.wi.us.

New codes possible

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IBC - After in-depth study over several years, the advisory councils and S&B have agreed on the general concept of adoption of the IBC, with an expectation of a minimum of Wisconsin amendments.

The division and about a dozen code councils studied specific topical areas of the draft IBC, while the IBC went through national development and hearings. S&B representatives worked in the IBC development process, and were recently appointed to national IBC committees.

A S&B tentative timeline looks to adoption of the IBC in Wisconsin in July, 2001, with a delayed effective date of July, 2002.

An IBC Implementation Task Group was formed by S&B to help the division assist designers, contractors, and code officials in Wisconsin communities with the transition to a new code.

IECC and IMC

- S&B staff and advisory councils reviewed the draft *IMC*, which deals with mechanical systems typically found in buildings, such as heating, ventilation, pressure vessels, hydronics, fuel gas systems, etc., and the *IECC*, which deals with energy conservation in all categories of buildings. The topics in the two model codes are now covered in various codes which S&B administers.

Recommendations have been to adopt the codes, with some amendments. S&B plans to hold public hearings in the fall of 2000 on the two codes,



Firststar Center, Milwaukee, the state's tallest building, 62 floors, 601 feet.



Johnson Wax Building, Racine

adoption of which could occur in spring, 2001. A delay being contemplated for training on the codes could put the effective dates in Wisconsin in late 2001.

IFC - S&B is considering adopting the IBC with amendments to replace references to the International Fire Code (IFC). In 2000 and 2001, the division plans a complete comparison of the two national model fire codes, which are the IFC and NFPA 1 (National Fire Protection Association), with a decision about possibly adopting one of the national model fire codes.

Recent adoption activity - S&B in January provided three days of training about the IBC to S&B commercial building plan review staff. In February, two reviewers attended two weeks of in-depth national training on the IBC and other codes of the ICC suite. There has been an exchange of visits by S&B managers and New York state code officials to discuss mutual consideration of the *International Codes*. (Wisconsin and New York are the only two states that still create their own building codes. New York is looking at adopting the International Codes.)

Contacts - Contacts at the Safety and Buildings Division concerning the International Codes: **IBC** - Jim Smith, jsmith@commerce.state.wi.us, 608-266-0251; **IECC/IMC** - Berni Mattsson, bmattsson@commerce.state.wi.us, 608-266-2725; **IFC** - John Lippitt, jlippitt@commerce.state.wi.us, 608-266-1036.

Cadet Manufacturing recalls in-wall heaters

In cooperation with the U.S. Consumer Product Safety Commission (CPSC), the Cadet Manufacturing Company is recalling approximately 1.9 million in-wall electric heaters under the brand names Cadet and Encore.

The recall includes these models and variants of Cadet and Encore Series: in Series FW, FX, LX, TK, ZA, Z, RA, RK, RLX, RX, and ZC, sold between 1982 and 1999.

According to the CPSC, these heaters may be defective, and could overheat, fail, catch fire, and spew flames and molten particles.

(The recall is distinct from Cadet's 1997 recall program. In the 1997 recall, Cadet offered to provide new over temperature limit control switches for replacement in certain of its heaters.)

Under the terms of the recall, Cadet says it will provide replacement heaters at prices substantially below the normal retail prices for these heaters.



Cadet Model FW

Due to Cadet's 1999 Chapter 11 bankruptcy and reorganization, the company will not provide free replacements or full reimbursements.

If you wish information, call the Cadet Hotline, 800-567-2613, or contact their website, www.cadetco.com.

Events Calendar

April 12, 2000 - Wednesday, **Multifamily Dwelling Code Council**, 9:15 a.m. – 3 p.m., Wisconsin Builders Association, 4868 High Crossing Blvd., Madison, Sam Rockweiler, srockweiler@commerce.state.wi.us, 608-266-0797.

April 27, 2000 - Wednesday, **Fire Safety Code Council**, 9 a.m. - 2 p.m., Thompson Commerce Center, Rm. 201 W Washington Ave., Madison, Duane Hubeler, dhubeler@commerce.state.wi.us, 608-266-1390.

May 2, 2000 - Tuesday, **Automatic Fire Sprinkler Council**, 9:30 a.m., Thompson Commerce Center, Rm. 4A, 201 W Washington Ave., Madison, Ron Acker, racker@commerce.state.wi.us, 608-267-7907.

May 3, 2000 - 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.

May 11, 2000 - Thursday, **Commercial Building Code Council**, 9 a.m. – 3 p.m., UW-Madison

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 pages 14 and 15 of this *WBCR*.

Agricultural Research Station, 8502 Mineral Point Road, Verona, Sam Rockweiler, srockweiler@commerce.state.wi.us, 608-266-0797.

Direct comments, suggestions for articles, etc., to Todd Taylor. Fax 608-264-8795.
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S&B WebSite

<http://www.commerce.state.wi.us/Com/Com-Safety-and-Buildings.html>

Fire safety changes

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•51.02(4)(d), T. 51.02-B Moved the percentage of openings table from Comm 51.03 to the general requirements for exterior walls subsection.

•51.02(24) Moved and revised the fireblocking (formerly firestopping) section from the wood framing section of the structural chapter, because it is a fire safety issue.

•51.02(25) Adopts NFPA 230 for storage of combustible materials. NFPA 230 is a consolidation of the NFPA 231 and lettered NFPA 231 standards, with any sprinkler requirements moved to NFPA 13. This only applies to buildings that are sprinklered, or have rack storage protected by high-expansion foam systems, and contain combustible materials or packaging. This does not apply to buildings that store unpackaged bulk materials such as grain, coal, or similar commodities, commodities covered by other NFPA standards, or materials on plastic shelves on racks.

•51.047 Deletes installation requirements and formally adopts NFPA 80, Standard for Fire Doors and Fire Windows for installation requirements.

•51.047(5) Prohibits fusible links wherever a new fire door is required.

•51.048(1) Formally adopts NFPA 80 for fire window installation, and updates testing standards.

•51.0485 Comm 64.42, Fire Dampers, moves, here. Adopted NFPA 90A for installation and maintenance of fire, smoke and ceiling dampers and removes code installation details.

NFPA 90 highlights:

1. Requires fire dampers for air ducts penetrating containment walls of two-hour or greater fire rating. Fire dampers are also required for air transfer openings in all rated containment walls. (3-3.1.1) (For ducts that penetrate one-hour rated floor-ceilings of covered multi-family housing, Comm 66.32(5) still allows the substitution of six feet of steel duct that leads to an air handling unit, in place of a fire damper.)

2. In general, limits the use of fire dampers in lieu of a rated shaft to ducts that penetrate a single floor. (3-3.2)

3. Allows the substitution of steel subducts for

dampers where branch ducts enter a rated exhaust riser. (3-3.4.4)

•51.049(5) In addition to using putty pads on metal electrical boxes that are closer than 24 inches on opposite sides of a fire-rated wall, allows installation of solid fire-blocking, per Comm 51.02(24), between the boxes. Solid fireblocking includes: nominal 2x4 wood, 3/4 inch plywood, 1/2 inch gypsumboard, or cement fiberboard. May be penetrated with wire holes.

•51.049(6) Clarifies that building joints must maintain fire-resistive ratings of any interrupted fire assemblies.

•51.06(6) Deletes the exception for sprinklering of freezer warehouses with exposed foam insulation. Other exemptions elsewhere in code (Comm 54.01 and 52.013), were also deleted due to various available sprinklering options that do not create a water freezing problem.

•51.08(2) Isolation of hazards. (Note that Comm 66.47 has isolation requirements for Comm 66.)

•(a)3 Clarifies that additional isolation requirements arising from adopted NFPA standards may apply.

•(a)4 Codifies exception for isolation of process heating equipment that is in view of employees.

•(b) Moved isolation of HVAC hazard topics from Comm 64.21 to here, in anticipation of possible International Mechanical Code adoption.

•(b)1.c Restored prohibition of openings within 18 inches of floor in hazard enclosures of Comm 59 heating equipment, to reduce risk of flammable vapors and liquids entering.

•(d) - (o) Revises or adds new storage and isolation of hazard requirements, and adopts standards for electrical generators, fire pumps, flammable and combustible liquids, aerosols, smokeless propellants, fireworks, blackpowder, explosives, LP gas, flammable gases, spray applications, coating and dipping, liquid and solid oxidizers, organic peroxides, and laboratory chemicals.

•(p) General hazard enclosures per Comm Table 51.08-2. Same hourly ratings as before. Adds recycling areas to trash collection rooms, which require a hazard enclosure.

•51.08(3)(b) Clarifies that hazard enclosures

require self-closing doors, rather than automatically closing doors which may be open when a rapidly developing fire occurs within the enclosure.

- 51.20(1) For fire escapes:

- (a) Deletes ambiguous language recommending placing fire escapes against a blank wall.

- (b) Specifies the hourly ratings for the any openings within six feet horizontally of the treads.

- 51.21, 51.22, 51.23, 51.245 - Requires all standpipes, fire extinguishers, fire sprinklers, fire alarm systems and smoke detectors, whether required or not, to comply with applicable codes and standards. Adopts current NFPA standards for inspection, testing, and maintenance of all such new and existing systems.

- 51.21(1) Formally adopts NFPA 14, Standard for the Installation of Standpipe and Hose Systems, with additional modifying code requirements.

- 51.22(3)(a)2 Note. Points out that NFPA 10 and this section will require that when a fire extinguisher is replaced which serves a commercial kitchen with deep-fat frying appliances only (not commercial griddles or residential cooking appliances), it must be replaced with a Type K fire extinguisher for grease fires. NFPA 3-1.2.2 requires the type K extinguisher for commercial deep-fat frying. NFPA 10: 3.7.2 limits travel distance to 30 feet. NFPA 10:2-3.2 requires a placard informing the kitchen staff to use the extinguisher after the fixed fire protection system activates.

- 51.23(2)(a)5 Adds indoor swimming pools as acceptable water supplies for sprinkler systems.

- 51.235 Uses the term, "alternate fire suppression systems," to replace "substitute" systems. Adopts a number of NFPA standards to direct their design, installation, inspection, testing, and maintenance.

- 51.236 Manual-wet sprinkler systems are systems that do not have municipal water supply available. The available water is limited and is supplemented by the responding fire department. These systems are not given any credit under Wisconsin code, but may be required locally. This code section standardizes their installation.

- 51.245(2)(b) References NFPA 90A for duct smoke detectors.

- 51.25 Lists the official adoptions of various

standards referenced in the code.

- 52.013(6)(c) Adopts NFPA 230, in addition to NFPA 13, for high-piled storage.

- 54.01(2)(c) Deletes the previous exception for sprinklering of freezer warehouses with increased area and exit distance.

- 57.16(1)(b)5 In addition to a smoke detector outside each sleeping area, a smoke detector shall be placed in each bedroom. (This applies to transient, multi-unit dwellings, such as hotels and motels, and to high-rise (greater than 60 feet), non-transient, multi-unit dwellings, such as apartment and condominium buildings.)

- 57.16(1)(d) Clarifies that smoke detectors shall be installed per Comm 51.245, which adopts NFPA 72. Note the March 1999 Wisconsin adoption of the 1996 edition required detectors be supplied with building power and battery backup power.

- 58.22 Deletes requirement for one-hour fire enclosures around elevator lobbies in health care facilities.

- 59.12-1 and 2 Footnotes. Clarifies that streets for Comm 59 garage occupancies shall be within 50 feet of the building, the same as for Comm 54 occupancies.

- 62.93(2) and (3) Clarifies that no occupancy separation or class of construction separation is required between non-combustible greenhouses and other occupancies. Requires two-hour separation between combustible greenhouses and other occupancies and classes of construction.

- 64.42 Moves fire damper requirements to Comm 51.0485.

- 64.51(4) Clarifies that NFPA 211 applies for clearances to combustibles, unless the appliance listing requires other clearances.

- 64.67 Commercial kitchen exhaust hoods and fire suppression systems.

- (1) Clarifies the exemption for residential kitchens from the requirements for commercial kitchen exhaust hoods and fire suppression systems.

- (5)(f) Clarifies duct enclosure for both horizontal and vertical ducts of kitchen exhaust hoods. Requires listed insulation material that is tested and classified for the exposure. (YYET classification by

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Revisions to updated NFPA standards adopted in the Wisconsin Building Code

Following is a list of pertinent changes noted in the latest editions of NFPA standards that are adopted in the Wisconsin Building and HVAC Code, Comm 50-64 and Uniform Multi-family Dwelling Code, Comm 66. This is not meant to be an all-inclusive list of every change. Rather, changes were chosen using the following criteria:

- Obvious economic impacts;
- Changes that are retroactive in some sense;
- Changes which affect someone not necessarily familiar with the standards;
- Requirements in the standards that might conflict with any of Wisconsin state codes or statutes; and
- Important information for training purposes.

These adopted standards only apply to the extent that Wisconsin codes specifically reference and apply a standard to an installation. For complete details, consult the codes and adopted standards. NFPA standards are available for purchase at 800-344-3555, www.nfpa.org. (Thanks to the National Fire Sprinkler Association and NFPA for assistance in preparing this summary.)

1. NFPA 13 - 1999, Standard for the Installation of Sprinkler Systems

A. General: NFPA has consolidated sprinkler requirements into this standard from previous editions of NFPA 231, 231C, 231D, 231E, 231F,

and most of NFPA 24, for ease of use of sprinkler designers, installers, and code officials. In addition, NFPA 13 repeats passages from 20 other NFPA standards. Note it is still necessary to reference NFPA 30 - Flammable Liquids, NFPA 30B - Aerosol Products, and NFPA 409 - Aircraft Hangars, for sprinkler-related requirements.

B. Chapter 1 - New chapter on classification of occupancies and commodities. The commodities requirements came from NFPA 231 series standards.

C. Section 3-2.2 - Effective January 1, 2001, sprinklers will be required to be permanently marked with a manufacturer symbol and model number.

D. Section 3-2.3.1 - The table of sprinkler discharge characteristics has eliminated references to orifice sizes, other than nominal K-factors. Requirements for pintels have been removed.

E. Section 3-3.5 - Pipe listed for light-hazard occupancies may be used in ordinary-hazard rooms greater than or equal to 400 square feet in otherwise light-hazard occupancies buildings.

F. Section 3-4.1 - Steel pipe shall not be used for underground mains unless listed for that use. Unlisted pipe may still be used for piping to fire department connections, if coated, wrapped, and internally galvanized.

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Fire safety changes

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UL) Clarifies that firestopping systems are required at penetrations of fire-rated assemblies. These firestops shall meet both F and T ratings, versus just F ratings elsewhere in the code for other penetrations.

•(6)(a) Lists acceptable standards for hood suppression systems.

•(6)(e) Instead of the previously required 6-month maintenance, requires maintenance per listing

and adopted standards.

•(6)(g) Adopts standards for carbon dioxide and water systems fire suppression systems.

•(8) Adopts NFPA 96 for hood maintenance.

•(9) Requires fire extinguishers per Comm 51.22. Requires compatibility of Type K portable fire extinguisher agent with hood suppression system agent.

•66.47(3)(b) Endnote Cross-references to Comm 66.32(4)(c), which allows just a garage separation between lawn mowers, etc., and the apartment building, rather than a two-hour isolation of hazard enclosure.

G. Section 4-5.3.2 - Thermal expansion chambers shall be pre-charged with air pressure where a backflow prevention device is used on an anti-freeze system.

H. Section 5-4.1.2 - In storage applications, sprinklers required with a minimum nominal K-factor of 5.6 for less than 0.20 gpm/ft², K8 for less than 0.34 gpm/ft², and K11 for greater than 0.34 gpm/ft².

I. Section 5-4.6.4 - A two-foot, noncombustible draft curtain shall separate ESFR from standard response spray sprinklers. A four-foot aisle is required below the curtain.

J. Section 5-6.5.2.2, et. al. - Obstruction criteria has been clarified.

K. Section 5-11 - Obstruction rules for early-suppression fast-response sprinklers have been revised.

L. Section 5-13.1.4 - Sprinklers are permitted to just protect localized areas of combustibles in otherwise noncombustible space.

M. Section 5-13.1.1 - Allows omission of sprinklers in less than or equal to 10-square-foot pipe chases, if the piping is noncombustible, pipe penetrations are properly sealed, and the chase is firestopped at each floor level with materials equivalent to the floor construction.

N. Section 5-13.4 - Clarifies that draft curtains and closer-spaced sprinklers are not required around openings penetrating a single floor in an individual living unit.

O. Section 5-13.9.1 - The area occupied by a non-combustible shower/bathtub enclosure is not added to floor area when determining size of a bathroom.

P. Section 6-2 - A maximum 24 inches is allowed between the centerline of a riser and its hanger support that is mounted on a horizontal pipe. Supports for risers in shafts or high bays shall not exceed 25-foot spacing.

Q. Chapter 7 has a number of design changes.

R. Section 9-2.3.3 - Eliminated the requirement that pressure tanks be kept 2/3 full. Now requires the water volume meet the demand, and that pressure be sufficient to push all of the water out of the tank, while maintaining necessary residual pressure.

1. NFPA 13R - 1999, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height

A. Section 2-5.2 Exception 3 - A new exception has been added to clarify that garage doors are not considered obstructions and are permitted to be ignored for placement and calculation of sprinklers.

B. Section 2-6 Exception 5 - For closets on exterior balconies, an exception has been added to permit omission of sprinklers provided there are no unprotected penetrations, as well as no doors between such closets and the dwelling unit.

C. Section A-1-6.2.1 - New appendix material clarifies that piping covered by attic insulation is considered part of the area below the ceiling, not part of the unheated attic area.

1. NFPA 20 - 1999, Standard for Installation of Stationary Pumps for Fire Protection

A. Section 2-7.1.1 - Requires indoor fire pumps be separated from the rest of the building by two-hour fire resistive construction. This may be reduced to one-hour in sprinklered buildings.

B. Section 2-7.1.2 - Requires outdoor pumps be located at least 50 feet away from the protected building.

C. Chapter 5 - Adds positive displacement pumps for water mist and foam systems.

D. Section 11-2.6.3.1 - Provides the measurement procedure for a pump flow test for a foam system.

1. NFPA 54 - 1999, National Fuel Gas Code
Note: Wisconsin adoption is limited to: Comm 64.23(5) for gas piping requirements, and Comm 64.50(1)(d) for engineered gas appliance venting systems.

However, gas appliances that are required to be listed by the code may reference and require compliance with other portions of this standard. This summarizes the gas piping changes only.

A. Section 4.1.6 - The requirement to retain test records for pipe pressure testing is eliminated.

B. Section 4.2.1 - Allows use of fuel gas for leak

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NFPA standards

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detection in higher pressure piping systems in addition to the previously allowed 0.5 psig or less systems. The piping system is still required to be originally pressured tested with an inert gas or air.

C. Section 5.5.7 - Eliminates the sediment trap requirement in gas piping for gas fireplaces.

1. NFPA 72 - 1999, National Fire Alarm Code

A. General: The chapters have been reorganized and renumbered.

B. Section 1-5.4.2.2 - Requires actuation of notification devices within 20 seconds of the actuation of an initiating device.

C. Section 2-1.4.3 - Clarifies that complete coverage within a space is not required when protecting a specific hazard with detectors which are not otherwise required.

D. Chapter 3, Protected Premises Fire Alarm Systems - Has been restructured.

E. Section 3-8.4.1.2.3 - Requires the temporal three standard evacuation signal shall be synchronized within a notification zone to avoid confusion among building occupants.

F. Section 4-3.1.5 - Requires emergency voice/ alarm communication systems to have voice intelligibility because of common distortion problems.

G. Section 4-3.4 - Requires testing of sound levels in sleeping areas with any intervening doors closed if the notification device is outside the sleeping area.

H. Chapter 6 - Created for Public Fire Reporting Systems.

I. Chapter 8 - Revised to allow a performance-based design option for household fire warning equipment in dwellings.

1. NFPA 90A - 1999, Standard for the Installation of Air Conditioning and Ventilating Systems

Note – Wisconsin adoption is limited to:

- Comm 51.0485 for fire, smoke and ceiling damper installation and maintenance,
- Comm 51.245 for duct smoke detectors, and
- Comm 58 and 64.57(2) for hospitals, nursing homes, and detention facilities.

No significant changes noted from previous edition. However, fire damper requirements now apply to all occupancies in lieu of Comm 64.42.

1. NFPA 230 – 1999, Standard for Fire Protection of Storage

Note - Applicability of Wisconsin adoption is determined by the following code sections:

- 51.02(25) - General adoption for combustible storage as scoped by NFPA 230 (see below), and
- 2.013(6)(c) - For specific storage thresholds in 52.013(6)(a) and (b).

A. General - The sprinkler requirements previously contained in the NFPA 231 series standards have been moved to NFPA 13. The remaining non-sprinkler related requirements have been consolidated into this new standard, NFPA 230.

B. Scoping - 1-1.2 and 1-4: Only applies to buildings that are sprinklered, or have rack storage protected by high-expansion foam systems, and contain combustible materials or packaging. Does not apply to buildings that store unpackaged bulk materials such as grain, coal or similar commodities; commodities covered by other NFPA standards or materials on plastic shelves on racks.

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National model fire code consideration in Wisconsin - Background Information

By John Lippitt, Safety and Buildings Division Fire Safety Program Manager

Beginning in the early 1990's, the Safety and Buildings Division developed a long-range goal to adopt a single family of integrated national model codes. This goal was not met at that time because there were three national model code groups to choose from and consensus could not be reached among stakeholders as to which family of model codes would be best for Wisconsin.

In 1994, the division goal really became obtainable with the creation of the International Code Council (ICC), and the move toward development of a single set of building-related codes (See article on page one of this *WBCR*).

In 1997, with the assistance of advisory code councils, S&B began the review and comparison of the draft International Building Code (IBC) to Comm 50-64, the Wisconsin Commercial Building Code. Early in this process it was determined the IBC was interrelated with the developing model International Fire Code (IFC), and that Comm 14, the Wisconsin Fire Prevention Code, would be inadequate to use as a reference from the IBC.

For this reason, S&B staff and some code council members acknowledged the Wisconsin fire code was an issue to be addressed as part of the IBC adoption process.

As you may be aware, Wisconsin's tradition of placing fire-related requirements in the Commercial Building Code is somewhat different than the tradition of the national model code groups. In Wisconsin, many fire safety requirements are specified in the building code, with Comm 14 referencing back to the building code rather than having the rules located in the fire prevention code. Essentially, this makes Comm 14 a maintenance-type document; this is not the same as the national model codes.

The Southern Building Code Congress International (SBCCI), the International Conference of Building Officials (ICBO), the Building and Code

Administrators International (BOCA), and the National Fire Protection Association (NFPA) all had their own individual national model fire code. These were the four national groups that agreed to come together under the ICC to jointly develop the first draft of the IFC. The plan called for the groups to discontinue the development of their individual fire codes and replace those fire codes with the IFC in 2000.

Unfortunately, the new partnership was short lived; before the first draft was published, the NFPA and ICC ended their effort to develop the IFC. As a result of the NFPA and the ICC parting ways, the national scene changed. We now have a choice of national model fire codes, NFPA 1 (NFPA's Fire Prevention Code), and the IFC.

The issue of a choice in model fire codes has been highlighted by some members of the Wisconsin fire service who recommend considering adoption of the NFPA 1 as the base document for the Wisconsin fire code.

As part of the IBC process in Wisconsin, S&B's advisory Fire Safety Code Council was assigned the task of reviewing the fire safety chapters of the IBC. Council members are: David Berenz, Wisconsin AFL-CIO; Dan Burazin, Associated General Contractors of Greater Milwaukee; Larry Burton, American Family Insurance; J. C. Carver, Madison Fire Department; Gregg Cleveland, Marshfield Fire Chief; Steven Fritsche, Milwaukee Building Inspection; Rich Kaiser, Society of Fire Protection Engineers; Gerald Rabas, Meriter Hospital; Russel Spahn, Greenfield Assistant Fire Chief; Robert Stedman, Waukesha Fire Chief; and David Wheaton, Wauwatosa Building Inspection.

At the completion of the IBC review, they were asked to review and compare the IFC to the Wisconsin code requirements. They completed that

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Model fire codes

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task in December of 1999. S&B asked the Fire Safety Code Council to make a recommendation regarding adoption of the IFC to accompany the adoption of the IBC.

At the February 3, 2000, Fire Safety Code Council meeting, the council discussed the model fire code issue and voted on three different motions.

The first motion was made by Cleveland, seconded by Spahn to recommend adoption of NFPA 1 and 101 as the basis for a Wisconsin Fire Code. This motion failed on a 5-5 vote with one abstention. Voting in favor were Berenz (in absentia), Cleveland, Jahn (for Kaiser), Spahn, and Stedman. Voting against were Burton, Carver, Fritsche, Rabas, and Wheaton. Burazin (in absentia) abstained.

After discussion, a second motion was made by Carver, seconded by Wheaton to (a) move ahead with IBC adoption, (b) modify Comm 14 as necessary to match and implement the IBC, and (c)

evaluate NFPA 1 and 101. This motion passed unanimously with all nine present members.

To ensure that this recommendation was viewed as an interim solution, Cleveland made a motion, seconded by Carver, to recommend S&B consider modification of Comm 14 as temporary; the division should proceed with consideration of adoption of a national model fire code. This motion passed unanimously with all nine present members.

The two recommendations of the Fire Safety Code Council were presented by the council chairman Chief Bob Stedman at a March joint meeting of the advisory Multifamily Dwelling Code Council and the advisory Commercial Building Code Council. I anticipate these councils will make recommendations regarding adoption of a model fire code to S&B at council meetings in early April.

Questions about adoption of a national model fire code in Wisconsin may be directed to me, 608-266-1036, or email, jlippitt@commerce.state.wi.us.

Continuing education advertising available in S&B codes reports

There are two kinds of advertising available in the "Wisconsin Plumbing Codes Report" and the "Wisconsin Buildings Codes Report." (Advertising is only accepted for continuing education classes approved by the Safety and Buildings Division.)

Fees for display advertising range from \$40 for a quarter page to \$160 for a full page.

Text classified-style advertising are free.

For information, contact Todd Taylor, taylor@commerce.state.wi.us, 608-267-3606.

The two publications are produced monthly, with deadlines approximately a month before they reach the readers.

Questions about your continuing education credits?

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

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

CERTIFIED MUNICIPALITIES

Per ILHR 50.21, the following municipalities are certified to review plans for new buildings containing less than 5,000 sq. ft. total area; additions to existing buildings where the total area after construction of the addition is less than 5,000 sq.ft.; and alterations to existing building where the area of altered space is less than 10,000 sq. ft. If your project is located in a listed municipality, and meets the size criteria, contact the municipality for plan review. For information regarding the current status of a municipality, call 608-267-7586.

<u>Counties</u>	Fitchburg	Middleton	Port Edwards	Walworth
Eau Claire	Fond du Lac	Milwaukee*	Poynette	Waterford
	Fontana	Monroe	Racine	Waukesha
<u>Cities and Villages</u>	Fort Atkinson	Muskego	Rhineland	Waunakee
Altoona	Franklin	New Berlin	Ripon	Waupun
Antigo	Fredonia	New Richmond	Seymour	Wausau
Augusta	Glendale	Oak Creek	Sheboygan	Wauwatosa
Beloit	Grafton	Oconomowoc	Silver Lake	West Allis
Berlin	Green Bay	Omro	Stevens Point	West Bend
Big Bend	Greenfield	Osceola	Sturgeon Bay	West Milwaukee
Black River Falls	Hartland	Oshkosh	Sun Prairie	Weyauwega
Brookfield	Hortonville	Osseo	Superior	Whitefish Bay
Brownsville	Howard	Paddock Lake	Sussex	Wis. Rapids
Burlington	Janesville*	Plover	Twin Lakes	
Cedarburg	Jackson			
Cudahy	Johnson Creek			
Delafield	Kaukauna			
Dousman	Kenosha			
Dresser	La Crosse			
Eau Claire	Lake Geneva	<u>Towns (County)</u>	Delavan (Walworth)	
Elkhorn	Madison*	Berry (Dane)	Farmington (Polk)	
Elm Grove	Marshfield	Bloomfield (Walworth)	Geneva (Walworth)	
Fall Creek	Mequon	Bristol (Kenosha)	Grand Chute (Outagamie)	
		Cottage Grove (Dane)	Grand Rapids (Wood)	

Municipalities marked with an are authorized to review plans without limit on size of building or project.

- Delavan (Walworth)
- Farmington (Polk)
- Geneva (Walworth)
- Grand Chute (Outagamie)
- Grand Rapids (Wood)
- Hull (Portage)
- LaGrange (Walworth)
- Linn (Walworth)
- Mukwonago (Wauke.)
- Norway (Racine)
- Ottawa (Waukesha)
- Plover (Portage)
- Raymond (Racine)
- Seymour (Eau Claire)
- Somers (Kenosha)
- Springdale (Dane)
- Sugar Creek (Walworth)
- Theresa (Dodge)
- Waterford (Racine)
- Waukesha (Waukesha)
- Wheatland (Kenosha)
- Windsor (Dane)

There is also a group of municipalities having inspection authority for commercial and multifamily buildings, but which do not have plan review authority. (The Safety and Buildings Division does plan review for them.)

Inspections Only

Village of Belgium (Ozaukee)	Town of Pleasant Springs (Dane)
Village of Cambridge (Dane)	Town of Rochester (Racine)
Town of Cedarburg (Ozaukee)	Village of Rochester (Racine)
Town of Lyons (Walworth)	City of So. Milwaukee (Milwaukee)
Town of Madison (Dane)	Village of Sturtevant (Racine)
Town of Oakland (Jefferson)	Town of Summit (Waukesha)
Village of Oregon (Dane)	Village of Thiensville (Ozaukee)

Safety and Buildings Offices

(maps of S&B office locations are available on the WebSite at <http://www.commerce.state.wi.us/SB/SB-Offices.html>)

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

Hayward Office

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Hayward WI 54843
715-634-4870
Fax 715-634-5150
haywardsch@commerce.state.wi.us

La Crosse Office

4003 North Kinney
Coulee Road
La Crosse WI 54603
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lacrossesch@commerce.state.wi.us

Plumbing Consultants

Tim Joyce Madison 608-825-4724
Don Oremus Pelican Lake 715-487-6123
Jim Wehinger Friendship 608-339-7430
Jim Zickert Eldorado 920-872-2656
Tom Bembmister, Superv. Chippewa Falls 715-726-4520

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

Specialty Telephone Contacts

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Elevator Plan Review Brian Rausch 262-521-5444
Heating and Ventilation .. Randy Dahmen 608-266-3162
Historic Buildings Duane Peterson ... 715-524-6852
Hospitals & Nursing Homes, DHFS 608-266-3878
Industrial Hygienists Richard Brandt 262-521-5187
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Lighting Randy Dahmen 608-266-3162
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