

## **Proposals under Consideration April 21-30, 2013**

### **International Property Maintenance Code**

PM 3 - 202 Infestation – Add public health pests and pest residues to definition

PM 4 - 202 Sanitary – Add new definition to reduce ambiguity about problems that spread or support disease

PM 6 -304 Pre-1978 Buildings Exterior and Interior– Paint repair using RRP

PM 9 - 305 Moist Indoor Building Materials – Replace or repair

PM 16 - 705 Carbon Monoxide Alarm – Required with garage or combustion appliance

PM 18 - Environmental Safety (Appendix) – Multiple health-related prohibitions and remedies

**PM3 – 13**  
**202**

**Proponent:** Rebecca Morley, representing National Center for Healthy Housing

**Revise as follows:**

**SECTION 202**  
**DEFINITIONS**

**INFESTATION.** The presence, within or contiguous to, a structure or premises of: insects including cockroaches, fleas, and bedbugs; pest rodents including rats and mice; vermin; or other pests. Visible pest residue or debris constitutes an infestation unless there is clear evidence that the pest is no longer present.

**Reason:** The current definition of infestation would appear to exclude rodents other than rats. However, rodents carry disease and, in the case of mice, may trigger an asthma attack. The proposal applies the term to all rodents.

Cockroaches, fleas and bedbugs are public health problems; the proposal specifies these insects to make clear that they are included.

The proposal clarifies that visible evidence of pest residues is a sufficient basis for action by a code official. The code official does not have to see a live pest. Many of the pests of most concern are nocturnal and their residue is the only evidence available during daylight.

**Cost Impact:** The proposal will not increase the cost of maintenance since this is a definition not a requirement.

**PM3-13**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**202-INFESTATION-PM-MORLEY**

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# PM4 – 13

## 202 (New)

**Proponent:** Rebecca Morley, representing National Center for Healthy Housing

**Add new definition as follows:**

### SECTION 202 DEFINITIONS

**SANITARY.** A condition that is clean and free of *infestation*; rodent residues such as droppings, urine, gnaw marks, grease marks, or nest debris; insect residues such as droppings, debris, or body parts; human or animal waste; mold; wastewater; sewage; rotting material; and accumulation of rubbish or garbage.

**Reason:** Although used extensively in the code, “sanitary” currently lacks a definition. Therefore the varying contexts in which it appears give the word different connotations. As a result, the term is ambiguous allowing for differing interpretations. The ambiguity means that the code official’s interpretation is open to challenge. As a result, code officials may be reluctant to cite for unsanitary conditions absent other violations such as active infestation.

Pest residues that remain after pest elimination may carry infectious diseases and allergens that cause allergies, cause asthma or trigger an asthma attack. Accumulations of rubbish or garbage can provide harborage and a food source for rodents or insects and become the source of disease.

The definition of sanitary addresses those situations commonly understood to spread or support disease. It includes the term infestation to make clear that an infestation is never sanitary.

**Cost Impact:** This code change proposal will not increase the cost of construction.

#### PM4-13

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

202-SANITARY (NEW)-PM-MORLEY

## PM6 – 13

### 304.2.1 (New), 305.3.1 (New), Chapter 8

**Proponent:** Rebecca Morley, representing National Center for Healthy Housing

#### Add new text as follows:

**304.2.1 Disturbance of existing painted surfaces.** In any Group E, I-4, R-2, R-3, R-4 occupancies completed prior to 1978, where repairs disturb painted surfaces, the work shall comply with the information distribution, certification and work practice requirements of 40 CFR 745 for renovations.

**Exception:** Where documentation is provided from an approved test in accordance with 40 CFR 745.82(a)(1) or (2) that proves that the disturbed paint contains lead levels below specified levels, the work is not required to comply with this section.

**305.3.1 Disturbance of existing painted surfaces.** In any Group E, I-4, R-2, R-3, R-4 occupancies completed prior to 1978, where repairs disturb painted surfaces, the work shall comply with the information distribution, certification and work practice requirements of 40 CFR 745 for renovations.

**Exception:** Where documentation is provided from an approved test in accordance with 40 CFR 745.82(a)(1) or (2) that proves that the disturbed paint contains lead levels below specified levels, the work is not required to comply with this section.

#### Add new standard to Chapter 8 as follows:

EPA                      U.S. Environmental Protection Agency

#### 40 CFR 745– July 1, 2012    Lead-Based Paint Poisoning Prevention in Certain Residential Structures

**Reason:** The purpose of this proposed code language for the surfaces of the structure is to incorporate measures that reflect current knowledge about working with paint that may contain lead-based paint and thereby prevent lead poisoning. The code already requires repair of paint in poor condition. This new subsection would further require compliance with federal regulations to promote the safe repair of deteriorated paint that is likely to contain lead. These regulations have been in effect since April 2010. This change would only affect structures likely to contain lead-based paint.

Multiple studies have demonstrated that lead dust, which is caused by deteriorated lead-based paint and some methods of paint repair, is the major source of lead exposure for young children. The dangers associated with exposure to lead based paint hazards are well-known: lead is associated with a range of serious health effects on children, including detrimental effects on cognitive and behavioral development with serious personal and social consequences that may persist throughout their lifetime. More than 36 million pre-1978 US housing units contain lead-based paint.

Sections 304.2 and 305.3 fail to specifically require, on older structures that are likely to contain lead-based paint, the use of precautionary practices in order to prevent the dispersal of lead before, during, and after the repair work, in the course of complying with the code requirement to repair peeling, flaking and chipping paint. The proposal improves the current Code by adding to each section a health-protective requirement to perform the repair safely around lead-based paint, a subject currently acknowledged in the Commentary but not in the Code. The addition of the proposed new language will protect children from lead poisoning by specifying the use of federally – or state - approved lead safe work practices in making the required repairs. The lead-safe work practices are required by EPA effective April 22, 2010, for most renovation, repair and painting work in all pre-1978 homes. The federal renovation rule and this proposal are based on a rebuttable presumption of lead's presence, which allows the property owner to demonstrate that lead is not present to be exempt from the requirements. The proposed new language includes these exceptions: structures built after lead was banned from paint used in residential structures (1977 US; earlier in some US cities; 1909 France, Belgium, Austria), and structures where the deteriorated paint has been documented to not contain lead (such as by a lead-based paint inspection or risk assessment, by the use of a test kit by a certified renovator, or through completion of another government-approved test method or ANSI standard).

The EPA 40 CFR 745 standard is available at <http://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol32/xml/CFR-2012-title40-vol32-part745.xml>.

**Cost Impact:** This change will not increase the cost of maintenance since these federal and state requirements are already in place.

**Staff analysis:** A review of the standard proposed for inclusion in the code, EPA 40 CFR 745 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2013.

#### PM\_-13

Public Hearing: Committee:                      AS                      AM                      D

# PM9 – 13

## 305.3

**Proponent:** Rebecca Morley, representing National Center for Healthy Housing

**Revise as follows:**

**305.3 Interior surfaces.** All interior surfaces, including windows and doors, shall be maintained in good, clean and sanitary condition. Peeling, chipping, flaking or abraded paint shall be repaired, removed or covered. Cracked or loose plaster, decayed wood and other defective surface conditions shall be corrected. Surfaces such as but not limited to wood, textiles, paint, cellulose insulation, and paper, including paper-faced gypsum board, shall have no signs of chronic or persistent excessive moisture. Material discolored or deteriorated by mold or mildew shall be cleaned, dried and repaired and the underlying cause shall be corrected. If the material has decayed or failed beyond repair, it shall be removed and replaced and the and the underlying cause shall be corrected.

**Exception:** Porous materials that do not contain organic material, such as clean unpainted bricks and concrete.

**Reason:** Mold typically grows in buildings affected by water damage. According to the Institute of Medicine of the National Academies' *Damp Indoor Spaces and Health* (2004), mold and damp indoor environments are associated with asthma symptoms in sensitized persons, coughing, wheezing, and upper respiratory tract symptoms. See [www.nap.edu/books/0309091934/html/](http://www.nap.edu/books/0309091934/html/)

In December 2007, the National Center for Healthy Housing (NCHH) and the U.S. Centers for Disease Control and Prevention (CDC) convened an Expert Panel consistent with National Institute of Health guidelines to assess the effectiveness of various interventions to make homes healthier and safer. NCHH and CDC published the report of the experts in January 2009. See [www.nchh.org/LinkClick.aspx?fileticket=2lvaEDNBldU%3d&tabid=229](http://www.nchh.org/LinkClick.aspx?fileticket=2lvaEDNBldU%3d&tabid=229) for the full report.

The Expert Panel reviewed five peer-reviewed research studies on the issue of mold and allergens and concluded that "when implemented together, eliminating moisture intrusion and leaks and removal of moldy items were found to be effective in reducing asthma triggers and reducing exposures." Other provisions of the IPMC address eliminating moisture intrusion. But no provisions require action on building materials with chronic moisture issues including those materials that have failed beyond repair.

This proposal implements the Expert Panel's recommendation while providing flexibility in response to actual conditions – repair for reparable material, replacement for failed material. To ensure the health of the building's occupants, mitigation of moisture problems must be a part of the code.

**Cost Impact:** This code change proposal will increase the cost of maintenance.

### PM9-13

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

305.3-PM-MORLEY

# PM16 – 13

## 705 (New)

**Proponent:** Rebecca Morley, representing National Center for Healthy Housing

**Add new text as follows:**

### **SECTION 705** **CARBON MONOXIDE ALARMS**

**705.1 General.** Carbon monoxide alarms shall be installed in accordance with Section 1103.9 of the International Fire Code in Group R occupancies and in dwellings not regulated as Group R occupancies.

**Reason:** Carbon monoxide (CO) is an odorless, tasteless, invisible gas that kills more than 300 people in homes each year. Thousands more are admitted to the hospital with carbon monoxide poisoning. This is a serious issue that affects people nationwide in all regions of the country.

The International Residential Code requires CO alarms for residences with fuel-fired appliances or attached garages. This change would make the IPMC consistent with the IRC.

This proposal expands on the requirement to specifically include portable fuel burning space heaters since these devices may not be considered an appliance, since these devices may be introduced by the property owner after construction.

The following states have required CO alarms in existing residences: Alaska, California, Colorado, Illinois, Massachusetts, Michigan, Minnesota, Montana, New Jersey, New York, North Carolina, Oklahoma, Oregon, Rhode Island, Vermont and Wisconsin. Deaths from CO are spread throughout the country as residents unwittingly use dangerous methods to stay warm in unusually cold weather.

**Cost Impact:** Yes, this code change proposal will increase the cost of property maintenance. A carbon monoxide alarm typically costs approximately \$25.

#### **PM16-13**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

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705 (NEW)-PM-MORLEY

**IFC language referenced in PM 16 and EB 16**

**1103.9 Carbon monoxide alarms.** Existing Group I or R occupancies located in a building containing a fuel-burning appliance or a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034, and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in the *International Building Code*, or an enclosed parking garage ventilated in accordance with Section 404 of the *International Mechanical Code* shall not be deemed to be an attached garage.

**Exception:** *Sleeping units* or *dwelling units* which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that:

1. The *sleeping unit* or *dwelling unit* is located more than one story above or below any story that contains a fuel-burning appliance or an attached garage;
2. The *sleeping unit* or *dwelling unit* is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.

# PM18 – 13

## Appendix B (New)

**Proponent:** Rebecca Morley, representing National Center for Healthy Housing

**Add new text as follows:**

### **APPENDIX B** **ENVIRONMENTAL SAFETY**

#### **B101** **GENERAL**

**B101.1 Scope.** The provisions of this chapter shall govern the minimum conditions and standards for the environmental safety a premises.

**B101.2 Responsibility.** The owner of a premise shall maintain the premises in compliance with these requirements. A person shall not occupy as owner-occupant, permit another person to occupy, or allow the public to use any premises which does not comply with the requirements of this appendix. Occupants of a dwelling unit, rooming unit or housekeeping unit shall not cause an area or space that they occupy and control to violate the provisions of this appendix.

**B101.3 Approved Testing Methods.** The code official is authorized to require testing or inspection consistent with approved methods as evidence of compliance with this appendix. The code official shall accept results from a recognized agency regularly engaged in conducting tests or furnishing inspection services or from an individual licensed in accordance with the statutory requirements of federal, state, or jurisdiction laws to conduct the testing or inspection. The testing or inspection results shall be deemed sufficient to establish whether a premise is in compliance with the requirements of this appendix. The building owner shall pay the cost of testing or inspection.

**B101.4 Vacating.** When an area is required to be vacated by this chapter due to a hazardous condition, entry shall be prohibited except by persons performing or overseeing the removal of the hazard. The code official shall order the area to be vacated in accordance with Section 108 of this code.

#### **B102** **ANIMAL WASTES**

**B102.1 Exterior accumulations.** Animal wastes shall be contained and disposed of in a safe and sanitary manner so as to control insects, vermin, odor and the spread of disease.

**B102.2 Interior accumulation.** Animal waste shall not be allowed to accumulate in any dwelling unit except in an approved device which is properly maintained to contain excrement and control odor.

#### **B103** **HAZARDOUS BUILDING MATERIALS**

**B103.1 Maintenance.** Building materials containing hazardous substances shall be maintained intact and in such a manner as to prevent the hazardous substances from becoming airborne or ingestible. Substances when present above the following amounts are deemed hazardous:

Asbestos (including vermiculite) – materials containing 1% asbestos by weight or area.

Formaldehyde - materials containing 0.00016% formaldehyde by weight or area.

Lead based paint– 0.5% lead by weight; 1.0 milligrams of lead per square centimeter.

Lead-based paint hazards - dust on floors containing 40 micrograms of lead per square foot; dust on interior window sills containing 250 micrograms of lead per square foot; bare soil in children's play



areas containing 400 parts per million (ppm) of lead; bare soil in areas of the yard that are not children's play areas containing 1200 ppm average.

When another adopted standard conflicts with these allowable levels, the more restrictive shall apply.

**B103.2 Remediation.** When building materials containing hazardous substances are deteriorated or have released hazardous substances, the condition causing the building material to deteriorate or to release hazardous substances shall be corrected and the exposed area shall be cleared of the hazardous substances. The code official is authorized to prohibit occupancy of the affected space as provided by section 108 of this code until the contaminated area and the cause of the building material becoming deteriorated has been remediated or removed.

## **B104** **HAZARDOUS GASES**

**B104.1 Allowable levels.** Within a dwelling unit, the following gases shall not exceed these specified allowable levels:

Carbon monoxide-- 9 PPM averaged over 8 hours; 35 PPM averaged over 1 hour; and 200 PPM maximum concentration as measured in general indoor air not directly above a combustion source.  
Formaldehyde-- 0.05 PPM based on a 60 minute sampling period.  
Radon-- 4 picocuries of radon per liter of air in the lowest occupied level.

When another adopted standard conflicts with these allowable levels, the more restrictive shall apply.

**B104.2 Mitigation.** Gaseous hazardous substances determined by an approved testing method to exceed the levels provided in section B104.1 shall be mitigated. The code official is authorized to order the affected area to be vacated until testing by an approved testing method finds the area to be in compliance with section B104.1.

## **B105** **PESTICIDES**

**B105.1 General.** Pesticides shall be stored in the manner prescribed by the manufacturer and shall be applied only in areas and at concentrations which comply with the labeling of the manufacturer.

**B105.2 Mitigation.** When it is determined by an approved method that a pesticide has been applied in -a location or at a concentration contrary to manufacturer labeling, the code official is authorized to order the area affected by or containing such pesticide to be vacated until the hazard has been mitigated.

**B105.3 Removal.** If a pesticide is stored in a location that does not comply with manufacturer labeling, the code official is authorized to order the area containing such pesticide to be vacated until the pesticide has been properly stored or removed.

## **B106** **CHEMICAL CONTAMINANTS**

**B106.1 Vacating.** When determined by an approved testing method that a dwelling unit is contaminated by a chemical at a concentration and in such a condition as to be hazardous to human health after short term exposure, the code official is authorized to order the dwelling unit to be vacated and remain vacated until the hazard has been abated.

**B106.2 Illegal Methamphetamine manufacturing sites.** A dwelling unit declared by a law enforcement agency or health official to be a site of illegal Methamphetamine manufacture shall be vacated and shall not be occupied until certified by an approved testing method as safe from hazardous materials related to the Methamphetamine manufacturing process.

**B107**  
**BIOLOGICAL HAZARDS**

**B107.1 Waterborne organisms.** When determined by an approved testing method that the domestic water supply of a dwelling unit is contaminated with toxin producing bacteria, human parasite, or other organism deemed by an approved testing method as dangerous to human health, the water supply shall be made safe. The code official is authorized to order the dwelling unit to be vacated until such time as the water supply is safe as determined by an approved testing method. The code official is authorized to permit use of a water purification system capable of removing organisms or use of an alternative water supply on a temporary basis provided the water so supplied is safe for drinking and bathing.

**B107.2 Airborne organisms.** Heating, air conditioning and ventilation systems shall be kept clean and maintained so as to prevent the growth of harmful organisms within the system.

**B108**  
**AIR-BORNE CONTAMINATES**

**B108.1 Air-borne contaminates.** Spaces in which air borne contaminates are generated shall comply with the International Mechanical Code requirements for hazardous exhaust systems. Air-borne contaminates shall not be circulated between tenant spaces or dwelling units except where contaminates have been removed by properly installed and maintained equipment.

**B109**  
**SANITARY CLEANUP**

**B109.1 Sanitary cleanup.** After an event such as sewage spill or flooding makes occupancy of a space unsafe or unhealthful due to sanitation hazards, the space shall not be occupied until the unsafe or unhealthful conditions are removed in accordance with this section.

**B109. 2 Prescriptive methods.** When the prescriptive methods contained in sections B109. 2.1 through B109. 2.2 are used, the hazard shall be deemed to have been abated.

**B109. 2.1 Sewage spills.** All water containing sewage and all sewage solids shall be removed and disposed of in a safe and sanitary manner. Every absorbent material in contact with sewage or water which contains sewage shall be removed. Every non-absorbent material in contact with sewage or water which contains sewage shall be cleaned with detergent and disinfected household bleach in water.

**B109.2.2 Flood damage.** Any material that has been damaged or weakened by water shall be removed. Material saturated by water, such as insulation or gypsum board, shall be removed. All surfaces that support mold growth which have come in contact with water shall be removed or thoroughly dried and treated with a fungicide. All materials and systems required by this code, the International Building Code or the International Residential Code shall be replaced or restored to a dry condition and capable of performing the intended purpose. When flood water is known to be contaminated with harmful chemical compounds, the contamination shall be removed and the area shall be tested and found safe by an approved testing method in addition to the other requirements of this section.

**B110**  
**FOOD STORAGE AND PREPARATION AREAS**

**B110.1 Responsibility.** The occupant of each space with a food storage or preparation area shall be responsible to maintain that area in accordance with this section.

**B110.2 Food preparation areas.** Food preparation areas shall be maintained free of spoiled or rotting foodstuffs. There shall be no accumulated grease on surfaces in food preparation areas, including counters, walls, floors, ceilings, appliances and storage areas.

**B110.3 Food storage.** Food shall be stored in a clean and sanitary condition and be protected from insect or animal pests.

**Reason:** Numerous hazards to health are present in the home environment. The proposed appendix provides parameters for the code official to recognize and address hazards such as those described below.

1. Asbestos products were extensively used in building materials. They continue to be legal to sell and to use. Intact asbestos is not a hazard. It becomes a hazard when damaged or deteriorated and releases friable asbestos. See [www.epa.gov/asbestos/pubs/ashome.html](http://www.epa.gov/asbestos/pubs/ashome.html) for details. The U.S. Environmental Protection Agency (EPA) and most states license asbestos inspectors.
2. Radon is the leading cause of lung cancer in people who have never smoked. U.S. Environmental Protection Agency (EPA) has established a recommended maximum exposure level of four picocuries of radon per liter of air in occupied areas. This level can be achieved through established technology in a cost effective manner. The radon controls also reduce moisture and soil gas intrusion. See [www.epa.gov/radon/pubs/newconst.html](http://www.epa.gov/radon/pubs/newconst.html). Two national organizations and some states certify radon professionals to measure radon levels in residences.
3. Lead can cause permanent damage to a child's brain that is manifested as lower IQ levels, learning disorders and violent behavior. In adults, it can cause hypertension. The levels for lead in dust on floor and window sills are expected result in less than 5% of the children younger than six years of age playing on the floor to be lead poisoned. The current EPA standards of 40 micrograms of lead per square foot on the floor and 100 micrograms of lead per square foot on an interior window sill at 40 CFR Part 745 Subpart D. These levels can result in 15 to 20% of the children playing on the floor to be lead poisoned. See Dixon SL, Gaitens JM, Jacobs DE et al. (2009) Exposure of U.S. children to residential dust lead, 1999-2004: II: The contribution of lead-contaminated dust to children's blood lead levels. *Environmental Health Perspectives* 117(3) at [www.nchh.org/LinkClick.aspx?fileticket=4Q/PvfvDTIs=&tabid=165](http://www.nchh.org/LinkClick.aspx?fileticket=4Q/PvfvDTIs=&tabid=165). EPA and many states certify lead risk assessors, lead inspectors and dust sampling technicians to take the dust samples and make the determination.
4. Drinking water contamination at levels that exceed the contaminant standards established by EPA are unhealthy and can be dangerous. See U.S EPA standard at 40 Code of Federal Regulations Part 141 or [www.epa.gov/safewater/contaminants](http://www.epa.gov/safewater/contaminants). EPA and many states certify drinking water testing laboratories.
5. Arsenic is a known carcinogen and can be toxic. When properly sealed, the health risk is relatively low. However, arsenic from splinters that penetrate the skin can be a serious health problem that can be avoided by repairing wood that shows evidence of splintering.

This is the latest in efforts over several years to add health-related requirements to the code. Because the proposal addresses basic hazards that injure health and threaten life that can be present anywhere in the dwelling, these standards involve more building components and systems covered by more than one section of the IPMC. The proposal clearly enumerates various health issues and describes minimum standards to enable the code official to have a more solid legal standing to address those issues. Although we have proposed it as an appendix, the material could also fit the code as a new Chapter 8.

Past comments concerned testing activities and concern about on what agency testing responsibility may fall. Here we propose that approved methods must be used when testing or inspections are required, and that the code official can order the property owner to pay for testing as needed. The code official is authorized to accept this documentation to establish compliance with other hazards where technical knowledge is required, much in the fashion an engineer's report would be accepted for a structural concern in a building. A clear basis for a decision strengthens the code official's position when challenged on appeal or in court.

**Cost Impact:** This proposal will not increase the cost of construction.

**PM18-13**

Public Hearing:	Committee:	AS	AM	D
	Assembly:	ASF	AMF	DF

**APPENDIX B (NEW)-PM-MORLEY**