

## CHAPTER 11

### CONTENTS OF BUILDINGS AND STRUCTURES

#### SECTION 1100.0 SCOPE

**Sec. 1100.1 GENERAL:** This chapter shall govern the types of contents permitted and protection requirements for contents of spaces in buildings or structures located in the Flood Hazard Area(s).

**Sec. 1100.1.1:** The contents of an improvement consists of all items situated or placed within the confines of a space not permanently and structurally integral with the improvement. Electrical and mechanical equipment that is installed as a building services feature and/or required to be in operation during a flood is covered in Chapters 12 and 13. Contents are restricted by these Regulations whenever they are or potentially may be:

- (1) Hazardous to the general public welfare due to the possibility of spreading highly flammable, explosive, corrosive, or otherwise harmful substances in the event of a flood-induced spill.
- (2) Hazardous to the welfare of other Owners due to the creation of projectiles which could cause damage by impact.
- (3) Hazardous as in (1) or (2) above when stockpiled in quantity, although such items may be permitted if stored in lesser amounts for isolated or occasional use.
- (4) Hazardous to the health or safety of the Owner or to other persons occupying or in the vicinity of the improvement due to the possibility of explosion or electric shock caused by flood water contact with operating mechanical or electrical equipment.
- (5) Vulnerable as a loss to the Owner, necessitating replacement, extensive repair, and/or excessive period of inoperation resulting from prolonged exposure to moisture, clean water, flood water, or the unmitigated effects of flooding.

#### SECTION 1101.0 CLASSES OF CONTENTS

**Sec. 1101.1 APPLICABILITY:** Contents are divided into seven classes according to the degree of flood-proofing required to protect them from becoming hazards or losses as defined above.

- (1) **Class XX** items are extremely hazardous or vulnerable to flood conditions and require their prohibition in the Flood Hazard Areas at all times.
- (2) **Class X** items are sufficiently hazardous or vulnerable to require their prohibition in all spaces below the RFD, i.e., requiring their placement at least one floor level above the RFD.
- (3) **Class 1** items require the protection assured by W1 spaces.
- (4) **Class 2** items require the protection assured by W2 spaces.
- (5) **Class 3** items require only the protection assured by W3 spaces.

(6) Class 4 items are generally not damageable by flood waters moving at low velocities and require the minimum protection given by W4 spaces.

(7) Class 5 items are sufficiently non-hazardous and non-vulnerable to permit their placement in spaces exposed to unmitigated flooding conditions.

**Sec. 1101.2 WAIVER OF RESTRICTION:** Upon approval of the Owner's Contingency Plan, which shall include plans for temporary movement of items to a place of safe refuge above the RFD or in spaces below the RFD where these items are permitted, the Building Official may waive specific content restrictions for non-W1 spaces on non-hazardous items that are movable or for which the degree of water-proofing required by the flood-proofing class can be achieved upon receipt of a flood warning or alert. This waiver of restriction, however, shall not apply to residences and their ancillary spaces; to firms, businesses, or institutions with fewer than 10 permanent employees and their ancillary spaces; or to any spaces which are or would be unoccupied and unattended in their foreseeable normal yearly operation for periods greater than 72 hours; and in no case shall a waiver of restriction be construed to permit the creation of spaces for human habitation.

**Sec. 1101.3 CONTENTS CLASSES FOR TYPICAL ITEMS:** The following chart is intended as an aid to the Owner, Architect/Engineer, and the Building Official in assessing the hazard potential and vulnerability to loss of typical contents of an improvement with respect to criteria listed in 1100.1.1 (1-5). In disputes arising over the classification of particular items or of items not listed below, the Building Official shall be guided by and decide on the basis of those criteria. In no case, however, shall changes of classification for items listed in Classes X and XX be permitted.

**Sec. 1101.3.1:** Contents of a given class may be situated or placed in any space for which a lower-numbered contents class is permitted by these Regulations. For example, items which are listed in Class 3 may also be placed in any spaces in which Class 1 or Class 2 contents are permitted.

**Sec. 1101.3.2:** Temporary placement of items of a given contents class in a space with a higher-numbered flood-proofing class may be permitted in those cases where contingent removal is approved by the Building Official, and in conformance with 1101.2. Temporary placement may be permitted for certain items, subject further to the restrictions of 1101.2 as indicated by numbers in parenthesis in the list; in each case the number in parenthesis is that of the highest-numbered flood-proofing class in which temporary placement may be considered.

	Class
Acetone	XX
Acetylene gas containers	X
Ammonia	XX
Animals (pets, livestock, laboratory specimens)	X(5)
Appliances, electrical	
Washer-dryers, unit air conditioners, lamps refrigerators, sewing machines, electric clocks, etc.	2
Art works (paintings, sculpture, etc.)	1
Barrels, bouyant (empty or non-hazardous contents)	2
Constrained and/or without tops or lids	4
Benzene	XX
Books, magazines, publications	1(3)
Cabinets,	
Solid wood or veneer	2
Metal	4
Calcium carbide	XX

	Class
Carbon disulfide	XX
Cardboard boxes	1
Carpeting and floor rugs	1(3)
Celluloid	XX
Chlorine	XX
Clothing	2(3)
Cotton (loose) wadding or waste	2
Curtains and drapes	2
Fabric (Non-Fast Dyes)	3
Fabric (Fast Dyes)	4
Plastics	X
Drugs - in quantity	
Electrical distribution equipment (Storage only)	4
Waterproof or submersible types	2
Non-waterproof	4
Protected contingently (B)	
Electronic equipment (Storage only)	2(3)
Television, stereo equipment, radios	1
Computers, etc.	
Fabrics (Textile Raw Materials)	3
Non-water-soluble dyes	2
Otherwise	X
Food Products	
Furniture	1
Upholstered	
Unupholstered	2
Wood construction (A)	4
Metal construction, painted	X
Gasoline	XX
Hydrochloric acid	XX
Hydrocyanic (Prussic) acid	XX
Magnesium	X
Matches and sulfur products (in quantity)	1(2)
Mattresses & box springs	
Musical instruments	1
Pianos, organs, violins, etc.	2(3)
All other types	XX
Nitric acid, oxides of nitrogen	2(3)
Oxygen	2
Paints, enamels, varnishes (in quantity)	1
Paper or paper products	
Petroleum products storage	X
(unless buried and constrained)	XX
Phosphorous	XX
Potassium	
Recreation equipment	2(3)
Sports gear, toys	1
Pool tables	

	Class
Scrap metal, constrained	5
Soaps, detergents (in quantity)	X
Sodium	XX
Sulphur	XX
Tires (Open storage)	X
constrained	4
Wood products, raw or finished (in quantity)	X

Notes: (A) Solid wood construction with pinned joints, reinforced corners, and lacquered or factory-baked finishes.  
 (B) Contingent protection shall be protection equal to that of 6 mils of polyethylene sealed to be water-tight or "moth-balled".