

**SUBCHAPTER 11
FLOODPLAIN OVERLAY ZONES**

295-1101. Statutory Authorization. This subchapter is adopted pursuant to the authorization in s. 62.23, Wis. Stats., and the requirements of s. 87.30, Wis. Stats.

295-1103. Finding of Fact. The common council finds that uncontrolled development and use of the floodplains and rivers of the city would impair the public health, safety, convenience, general welfare and tax base.

295-1105. Purposes. This subchapter is intended to regulate floodplain development to:

1. Protect life, health and property.
2. Minimize expenditures of public funds for flood control projects.
3. Minimize rescue and relief efforts undertaken at the expense of taxpayers.
4. Minimize business interruptions and other economic disruptions.
5. Minimize damage to public facilities in the floodplain.
6. Minimize the occurrence of future flood blight areas in the floodplain.
7. Discourage the victimization of unwary land and home buyers.
8. Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners.
9. Discourage development in a floodplain if there is any practicable alternative to locate the activity, use or structure outside of the floodplain.

295-1107. Definitions. In this subchapter:

1. **ACCESSORY STRUCTURE OR USE** means a facility, structure, building or use which is accessory or incidental to the principal use of a property, structure or building. An accessory structure does not contain habitable space.
3. **AH ZONE.** See AREA OF SHALLOW FLOODING.
5. **ALTERATION** means an enhancement, upgrading or substantial change or modification other than an addition or repair to a dwelling or to electrical, plumbing, heating, ventilating, air conditioning or other systems within a structure.
7. **AO ZONE.** See AREA OF SHALLOW FLOODING.
9. **AREA OF SHALLOW FLOODING** means a designated AO, AH, AR/AO, AR/AH or VO zone on a flood insurance rate map with a one percent or greater annual chance of flooding to an average depth of one to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flood may be evident. Such flooding is characterized by ponding or sheet flow.
11. **A-ZONE** means an area shown on the official floodplain zoning map that would be inundated by the regional flood. Such area may be a numbered or unnumbered A-Zone. An A-Zone may or may not be reflective of flood profiles, depending on the availability of data for a given area.
13. **BASE FLOOD** means the flood having a one percent chance of being equaled or exceeded in any given year, as published by the federal emergency management agency as part of a flood insurance study and depicted on a flood insurance rate map.
15. **BASEMENT** means any enclosed area of a building having its floor sub-grade (below ground level) on all sides.
16. **BREAKAWAY WALL** means a wall that is not part of the structural support of the building and is intended, through its design and construction, to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.
17. **BUILDING.** See STRUCTURE.
19. **BULKHEAD LINE** means a geographic line along a reach of navigable water that has been adopted by city ordinance and approved by the Wisconsin department of natural resources pursuant to s. 30.11, Wis. Stats., and which allows limited filling between this bulkhead line and the original ordinary high water mark, except where such filling is prohibited by the floodway provisions of this subchapter.
21. **CAMPGROUND** means any parcel of land which is designed, maintained, intended or used for providing sites for nonpermanent overnight use by 4 or more camping units, or which is advertised or represented as a camping area.

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23. CAMPING UNIT means any portable device, no more than 400 square feet in area, used as a temporary shelter, including but not limited to a camping trailer, motor home, bus, van, pick-up truck, or tent that is fully licensed, if required, and ready for highway use.

25. CERTIFICATE OF COMPLIANCE means a certification that the construction and the use of land or a building, the elevation of fill or the lowest floor of a structure is in compliance with all of the provisions of this subchapter.

27. CHANNEL means a natural or artificial watercourse with definite bed and banks to confine and conduct normal flow of water.

28. COASTAL FLOODPLAIN means an area along the coast of Lake Michigan which is inundated by the regional flood and which is subject to additional hazard due to wave runup.

28.5. COASTAL HIGH HAZARD AREA means an area of special flood hazard extending from offshore to the inland limit of the primary frontal dune along an open coast, and any other area subject to high velocity wave action from storms.

29. COMMISSIONER means the commissioner of neighborhood services or a designated representative.

31. CRAWLWAY OR CRAWL SPACE means an enclosed area below the first usable floor of a building, generally less than 5 feet in height, used for access to plumbing and electrical utilities.

33. DECK means an unenclosed exterior structure that has no roof or sides, but has a permeable floor which allows the infiltration of precipitation.

35. DEVELOPMENT means any artificial change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures; the construction of additions or alterations to buildings, structures or accessory structures; the repair of any damaged structure or the improvement or renovation of any structure, regardless of percentage of damage or improvement; the placement of buildings or structures; subdivision layout and site preparation; mining, dredging, filling, grading, paving, excavation or drilling operations; the storage, deposition or extraction of materials or equipment; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.

37. DRY-LAND ACCESS means a vehicular access route which is above the regional flood elevation and which connects land located in the floodplain to land outside the floodplain, such as a road with its surface above regional flood elevation and wide enough for wheeled rescue and relief vehicles.

39. ENCROACHMENT means any fill, structure, equipment, use or development in the floodway.

40. FEDERAL EMERGENCY MANAGEMENT AGENCY means the federal agency that administers the national flood insurance program.

41. FLOOD INSURANCE RATE MAP means a map on which the federal insurance administration has delineated both the floodplain and the risk premium zones applicable to the community. This map can only be amended by the federal emergency management agency.

43. FLOOD or FLOODING means a general and temporary condition of partial or complete inundation of normally dry land areas caused by one of the following conditions:

a. The overflow or rise of inland waters.

b. The rapid accumulation or runoff of surface waters from any source.

c. The inundation caused by waves or currents of water exceeding anticipated cyclical levels along the shore of Lake Michigan.

d. The sudden increase caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a seiche, or by some similarly unusual event.

45. FLOOD FREQUENCY means the probability of a flood occurrence which is determined from statistical analyses. The frequency of a particular flood event is usually expressed as occurring on the average once in a specified number of years or as a percentage chance of occurring in any given year.

47. FLOOD FRINGE means that portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood and associated with standing water rather than flowing water.

49. FLOOD HAZARD BOUNDARY MAP means a map designating approximate flood hazard areas. Flood hazard areas are designated as unnumbered A zones and do not contain floodway lines or regional flood elevations. This map forms the basis for both the regulatory and insurance aspects of the national flood insurance program until superseded by a flood insurance study and a flood insurance rate map.

51. FLOOD INSURANCE STUDY means a technical engineering examination, evaluation and determination of the local flood hazard areas. It provides maps designating those areas affected by the regional flood and provides both flood insurance rate zones and base flood elevations, and may provide floodway lines. The flood hazard areas are designated as numbered and unnumbered A zones. Flood insurance rate maps that accompany the flood insurance study form the basis for both the regulatory and the insurance aspects of the national flood insurance program.

53. FLOODPLAIN means land which has been or may be covered by flood water during the regional flood. It includes the floodway and the flood fringe, and may include other designated floodplain areas for regulatory purposes.

55. FLOODPLAIN ISLAND means a natural geologic land formation within the floodplain that is surrounded, but not covered, by floodwater during the regional flood.

57. FLOODPLAIN MANAGEMENT means policy and procedures to insure wise use of floodplains, including mapping and engineering, mitigation, education, and administration and enforcement of floodplain regulations.

59. FLOOD PROFILE means a graph or a longitudinal profile line showing the relationship of the water surface elevation of a flood event to locations of land surface elevations along a stream or river.

61. FLOODPROOFING means any combination of structural provisions, changes or adjustments to properties and structures, water and sanitary facilities and contents of buildings subject to flooding, for the purpose of reducing or eliminating flood damage.

63. FLOOD PROTECTION ELEVATION means an elevation of 2 feet of freeboard above the water surface profile elevation designated for the regional flood. See also FREEBOARD.

65. FLOOD STORAGE means those floodplain areas where storage of floodwaters has been taken into account during analysis in reducing the regional flood discharge.

67. FLOODWAY means the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.

69. FREEBOARD means a safety factor expressed in terms of a specified number of feet above a calculated flood level. Freeboard compensates for any factors that cause flood heights greater than those calculated, including ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of watershed urbanization, loss of flood storage areas due to development and aggregation of the river or stream bed.

71. HABITABLE STRUCTURE means any structure or portion thereof used or designed for human habitation.

73. HIGH FLOOD DAMAGE POTENTIAL means the potential that damage could result from flooding that includes any danger to life or health or any significant economic loss to a structure or building and its contents.

75. HIGHEST ADJACENT GRADE means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

77. HISTORIC STRUCTURE means any structure that is one or more of the following:

a. Listed individually in the national register of historic places or preliminarily determined by the secretary of the interior as meeting the requirements for individual listing on the national register.

b. Certified or preliminarily determined by the secretary of the interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the secretary to qualify as a registered historic district.

c. Designated as an historic structure by the common council pursuant to the provisions of s 320-21.

79. INCREASE IN REGIONAL FLOOD HEIGHT means a calculated upward rise in the regional flood elevation greater than 0.00 foot, based on a comparison of existing conditions and proposed conditions, which is directly attributable to development in the floodplain but not attributable to manipulation of mathematical variables such as roughness factors, expansion and contraction coefficients and discharge.

81. LAND USE means any nonstructural use made of unimproved or improved real estate. See also DEVELOPMENT.

83. LOWEST ADJACENT GRADE means the elevation of the lowest ground surface that touches any of the exterior walls of a building.

85. LOWEST FLOOR means the lowest floor of the lowest enclosed area, including basement. An enclosed space as described in s. 295-1128-2-i is not a building's lowest floor.

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87. MAINTENANCE means the act or process of restoring to original soundness, including redecorating, refinishing, non-structural repairs or the replacement of existing fixtures, systems or equipment with equivalent fixtures, systems or equipment.

89. MANUFACTURED HOME means a structure transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities. This term includes a mobile home but does not include a mobile recreational vehicle.

91. MANUFACTURED HOME PARK OR SUBDIVISION means a parcel, or contiguous parcels, of land divided into 2 or more manufactured home lots for rent or sale.

93. MANUFACTURED HOME PARK OR SUBDIVISION, EXISTING means a parcel of land, divided into 2 or more manufactured home lots for rent or sale, on which the construction of facilities for servicing the lots is completed before the effective date of this ordinance [city clerk to insert date]. At a minimum, this would include the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads.

95. MANUFACTURED HOME PARK, EXPANSION TO EXISTING means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed. This includes installation of utilities, construction of streets, and either final site grading or the pouring of concrete pads.

97. MOBILE RECREATIONAL VEHICLE means a vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled, carried or permanently towable by a licensed, light-duty vehicle, is licensed for highway use if registration is required and designed primarily for use not as a permanent dwelling, but as temporary living quarters for recreational, camping, travel or seasonal use. This term does not include a manufactured home that was towed or carried onto a parcel of land but does not remain capable of being towed or carried, including parked model homes.

99. MODEL, CORRECTED EFFECTIVE means a hydraulic engineering model that corrects any errors that occur in the duplicate effective model, adds any additional cross sections to the duplicate effective model or incorporates more detailed topographic information than that used in the current effective model.

101. MODEL, DUPLICATE EFFECTIVE means a copy of the hydraulic analysis used in the effective flood insurance study and referred to as the effective model.

103. MODEL, EFFECTIVE means the hydraulic engineering model that was used to produce the current effective flood insurance study.

105. MODEL, EXISTING (PRE-PROJECT) means a modification of the duplicate effective model or corrected effective model to reflect any man-made modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the corrected effective model or duplicate effective model.

107. MODEL, REVISED (POST-PROJECT) means a modification of the existing or pre-project conditions model, duplicate effective model or corrected effective model to reflect revised or post-project conditions.

108. MODERATE WAVE ACTION AREA or MoWA means a special flood hazard area subject to the potential for breaking wave heights of greater than or equal to 1.5 feet, but less than 3 feet, where the primary source of flooding is astronomical tides, storm surges, seiches or tsunamis. A MoWA is an area within zone AE on a flood insurance rate map that is between the inland limit of zone VE and a limit of moderate wave action, where identified.

109. NORTH AMERICAN VERTICAL DATUM or NAVD means elevations referenced to mean sea level datum, 1988 adjustment.

111. NATIONAL GEODETIC VERTICAL DATUM or NGVD means elevations referenced to mean sea level datum, 1929 adjustment.

113. NEW CONSTRUCTION means, for floodplain management purposes, structures for which the start of construction commenced on or after the effective date of floodplain zoning regulations adopted by the city and includes any subsequent improvements to such structures. For the purpose of determining flood insurance rates, it includes any structures for which the "start of construction" commenced on or after the effective date of an initial flood insurance rate map or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures.

114. NON-FLOOD DISASTER means a fire, ice storm, tornado, wind storm, mudslide or other destructive act of nature, but excludes a flood.

115. NONCONFORMING STRUCTURE means an existing lawful structure or building which is not in conformity with the dimensional or structural requirements of this subchapter for the area of the floodplain which it occupies.

117. NONCONFORMING USE means an existing lawful use or accessory use of a structure or building which is not in conformity with the provisions of this subchapter for the area of the floodplain which it occupies.

119. OBSTRUCTION TO FLOW means any development which blocks the conveyance of floodwaters such that this development alone or together with any future development will cause an increase in regional flood height.

121. OFFICIAL FLOODPLAIN ZONING MAP means that map, adopted and made part of this code, as described in s. 295-1117-5, which has been approved by the Wisconsin department of natural resources and the federal emergency management agency.

123. OPEN SPACE USE means a use having a relatively low flood damage potential and not involving structures.

125. ORDINARY HIGHWATER MARK means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.

127. PERSON means an individual, or group of individuals, corporation, partnership, association, municipality or state agency.

128. PRIMARY FRONTAL DUNE means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

129. PRIVATE SEWAGE SYSTEM means a sewage treatment and disposal system serving one structure with a septic tank and soil absorption field located on the same parcel as the structure. It also means an alternative sewage system approved by the Wisconsin department of safety and professional services, including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel from the structure.

131. PUBLIC UTILITIES means those utilities using underground or overhead transmission, distribution or collection lines or systems, including but not limited to electric, telephone, water, sanitary sewer and storm sewer utilities.

133. REASONABLY SAFE FROM FLOODING means base flood waters will not inundate the land or damage structures to be removed from the floodplain, and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

135. REGIONAL FLOOD means a flood determined to be representative of large floods known to have occurred in Wisconsin. A regional flood is a flood with a one percent chance of being equaled or exceeded in any given year, and if depicted on the flood insurance rate map, the regional flood elevation is equivalent to the base flood elevation.

137. SHORELANDS means lands within the following distances from the ordinary high-water mark of navigable waters: 1,500 feet from a lake, pond, estuary or flowage; and 500 feet from a river or stream or to the landward side of the floodplain, whichever distance is greater.

139. START OF CONSTRUCTION means the date a building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction on a site, such as the pouring of a slab or footings, the installation of piles, the construction of columns, or any work beyond initial excavation, and includes the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling. Nor does it include the installation of streets or walkways, excavation for a basement, footings, piers or foundations, the erection of temporary forms, or the installation of accessory buildings on the property. For an alteration, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

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141. STRUCTURE means any man-made object with form, shape and utility, either permanently or temporarily attached to, placed upon or set into the ground, stream bed or lake bed, including, but not limited to, roofed and walled buildings, gas or liquid storage tanks, bridges, dams and culverts.

143. SUBDIVISION has the meaning given in s. 236.02(12), Wis. Stats.

145. SUBSTANTIAL DAMAGE means damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the equalized assessed value of the structure before the damage occurred.

147. SUBSTANTIAL IMPROVEMENT means any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the equalized assessed value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the work performed. The term does not, however, include any project for the improvement of a building required to correct existing health, sanitary or safety code violations identified by the commissioner of neighborhood services and that are the minimum necessary to assure safe living conditions. Nor does it include any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

148. VARIANCE, FLOODPLAIN means an authorization by the board of zoning appeals for the construction or maintenance of a building or structure in a manner which is inconsistent with the dimensional standards, but not the use regulations, contained in this subchapter.

149. VIOLATION means the failure of a structure or other development to be fully compliant with the provisions of this subchapter. A structure or other development without required permits, lowest floor elevation documentation, floodproofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.

151. WATERSHED means the entire region contributing runoff or surface water to a watercourse or body of water.

153. WATER SURFACE PROFILE means a graphical representation showing the elevation of the water surface of a watercourse for each position along a reach of river or stream at a certain flood flow. A water surface profile of the regional flood is used in regulating floodplain areas.

155. WELL means an excavation opening in the ground, made by digging, boring, drilling, driving or other methods, to obtain groundwater, regardless of its intended use.

157. WETLANDS means those areas where water is at, near or above the land surface long enough to support aquatic or hydrophytic vegetation and which have soils indicative of wet conditions.

159. WETLAND ALTERATION means any filling, flooding, draining, dredging, ditching, tiling, excavating, temporary water level stabilization measures or dike and dam construction in a wetland area.

295-1109. Areas to Be Regulated. This subchapter regulates all areas of special flood hazard identified as zones, A, AO, AH, A1-30, AE, VE, V1-30 or V on the flood insurance rate map. Additional areas identified on maps approved by the Wisconsin department of natural resources and the city may also be regulated under the provisions of this subchapter, where applicable.

295-1111. Annexed Areas. The floodplain zoning provisions assigned to land being annexed to the city of Milwaukee in effect on the date of annexation shall remain in effect and shall be enforced by the city for all annexed areas until the city adopts and enforces an ordinance which meets the requirements of ch. NR 116, Wis. Adm. Code, as amended, and 44 CFR 59-72, national flood insurance program. These annexed lands are described on the city's official zoning map. County floodplain zoning provisions are incorporated by reference for the purpose of administering this section and are on file in the offices of the department of neighborhood services. All plats or maps of annexation shall show the regional flood elevation and the location of the floodway.

295-1113. Abrogation And Greater Restrictions. a. This subchapter supersedes all provisions of any city zoning ordinance enacted under s. 62.23 or s. 87.30, Wis. Stats. A more restrictive ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.

b. The provisions of this subchapter are not intended to repeal, abrogate or impair any existing deed restrictions, covenants or easements. If this subchapter imposes greater restrictions, the provisions of this subchapter shall prevail.

295-1115. Interpretation. In their interpretation and application, the provisions of this subchapter are the minimum requirements liberally construed in favor of the city and are not a limitation or repeal of any other powers granted by the Wisconsin statutes. If a provision of this subchapter, required by ch. NR 116, Wis. Adm. Code, as amended, is unclear, the provision shall be interpreted in light of the standards in effect on December 30, 2005, or in effect on the date of the most recent amendment to this subchapter.

295-1117. Procedures. 1. CREATION OR REVISION. Creation of, or revisions to, floodplain overlay zone boundaries or regulations shall be by amendment to the zoning map or zoning code text, pursuant to s. 295-307. The amendment and notice of public hearing shall be submitted to the regional office of the Wisconsin department of natural resources for review prior to the hearing. A request for an amendment shall include all data required by s. 295-1127-4 and s. 295-1129. Such an amendment shall not be final until approved by the Wisconsin department of natural resources. In the case of a floodplain overlay zone boundary change, the federal emergency management agency will determine if an official letter of map amendment or a letter of map amendment based on fill will be required. These letters are waivers of federal insurance requirements and do not fulfill minimum requirements for removing land from the floodplain. To remove land from a floodplain, the requirements of s. 295-1141 shall be met.

2. AMENDMENT. Actions which require an amendment of a floodplain overlay zone boundary or submittal of a letter of map change include, but are not limited to, the following:

- a. Any fill or floodway encroachment that obstructs flow, causing any increase in the regional flood height.
- b. Any change to the floodplain boundaries or watercourse alterations on the flood insurance rate map.
- c. Any change to any other officially-adopted floodplain maps provided in sub. 5.
- d. Any floodplain fill which raises the elevation of the filled area to a height at or above the flood protection elevation and is contiguous to land lying outside the floodplain.
- e. Correction of discrepancies between the water surface profiles and floodplain maps.
- f. Any upgrade to the text of this section required by s. NR 116.05, Wis. Adm. Code, as amended, otherwise required by law or for changes by the city.
- g. All channel relocations and changes to the maps to alter floodway lines or to remove an area from the floodway or the flood fringe based on a base flood elevation from a flood insurance rate map. Prior approval of the federal emergency management agency shall be required for such relocations or changes.

3. OTHER APPROVALS. a. No amendment shall become effective until it is reviewed and approved by the Wisconsin department of natural resources.

b. Any person petitioning for a map amendment that obstructs flow, causing any increase in the regional flood height, shall obtain flooding easements or other appropriate legal arrangements from all adversely affected property owners and notify local units of government before the amendment can be approved by the common council.

5. OFFICIAL MAPS AND REVISIONS. a. Official Maps Adopted. The boundaries of all floodplain overlay zones are designated as A, AE, AH, AO, A1-30, VE, V1-30 or V on the following maps based on the flood insurance study:

a-1. Milwaukee County flood insurance rate map panel numbers 55079C0008E, 55079C0012E, 55079C0014E, 55079C0016E, 55079C0017E, 55079C0018E, 55079C0019E, 55079C0036E, 55079C0037E, 55079C0038E, 55079C0052E, 55079C0056E, 55079C0058E, 55079C0066E, 55079C0067E, 55079C0068E, 55079C0069E, 55079C0076E, 55079C0077E, 55079C0081E, 55079C0082E, 55079C0084E, 55079C0086E, 55079C0087E, 55079C0089E, 55079C0091E, 55079C0092E, 55079C0093E, 55079C0094E, 55079C0103E, 55079C0111E, 55079C0131E, 55079C0132E, 55079C0151E, 55079C0152E, 55079C0153E, 55079C0154E, 55079C0156E, 55079C0157E, 55079C0158E, 55079C0159E, 55079C0162E, 55079C0166E, 55079C0167E and 55079C0176E, dated September 26, 2008, with corresponding profiles that are based on the flood insurance study.

a-2. Flood insurance study volumes 55079CV001A, 55079CV002A, 55079CV003A, 55079CV004A and 55079CV005A for Milwaukee county, dated September 25, 2008.

a-3. Flood insurance rate map panel numbers 55133C0114H and 55133C0227H, dated October 19, 2023.

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a-4. Flood insurance study volumes 55133001D, 55133CV002D, 55133CV003D, 55133CV004D and 55133CV005D for Waukesha county, dated October 19, 2023.

a-5. Flood insurance rate map panel number 55131C0379D, dated November 20, 2013.

a-6. Flood insurance study volumes 55131CV001C, 55131CV002C, 55131CV003C, 55131CV004C, 55131CV005C and 55131CV006C for Washington county, dated February 25, 2022.

a-7. Letter of map revision 14-05-0354P, dated September 5, 2014.

a-8. Letter of map revision 16-05-0269P, dated September 23, 2016.

a-9. Letter of map revision 16-05-7247P, dated June 23, 2017.

a-10. Letter of map revision 18-05-6243P, dated August 2, 2019.

a-11. Letter of map revision 21-05-3522P, dated April 6, 2023.

a-12. Conditional letter of map revision 21-05-3305R, dated April 11, 2022.

b. Revision of Maps. Any change to the base flood elevations or any change to the boundaries of the floodplain or floodway in the flood insurance study or on the flood insurance rate map shall be reviewed and approved by the Wisconsin department of natural resources and the federal emergency management agency through the letter-of-map-revision process in s. 295-1143 before it is effective. No changes to regional flood elevations on non-federal emergency management agency maps shall be effective until approved by the department of natural resources.

c. Official Maps Based on Other Studies. Any map referenced in this paragraph shall be approved by the Wisconsin department of natural resources and be more restrictive than the map based on the flood insurance study at the site of the proposed development. The city adopts the following:

c-1. The Northridge Lakes dam floodplains map (dam failure floodplain boundary) dated October 28, 2010, prepared by R. A. Smith National.

c-2. The Northridge Lakes dam failure analysis approved by the Wisconsin department of natural resources on October 29, 2010, including:

c-2-a. Map dated October 28, 2010 and titled "Exhibit G - Northridge Lakes Dam Floodplains".

c-2-b. Floodway data table title "Northridge Lakes Dam Failure Floodway Data Table".

c-2-c. Flood profile dated June 16, 2010 titled "Dam Failure Profile".

c-3. The city of Milwaukee flood storage district, Interstate 94 and College Avenue Interchange, on the map accompanying letter of map revision 16-05-0269P, dated August, 2014.

c-4. Menomonee River conditional letter of map revision letter of map revision flood storage zone map, flood insurance rate map panel number 0067E, associated with conditional letter of map revision 21-05-3305R issued April 11, 2022.

c-5. Menomonee River conditional letter of map revision letter of map revision flood storage zone map, flood insurance rate map panel number 0086E, associated with conditional letter of map revision 21-05-3305R issued April 11, 2022.

c-6. Menomonee River conditional letter of map revision letter of map revision flood storage zone map, flood insurance rate map panel number 0087E, associated with conditional letter of map revision 21-05-3305R issued April 11, 2022.

c-7. Menomonee River conditional letter of map revision letter of map revision flood storage zone map, flood insurance rate map panel number 0089E, associated with conditional letter of map revision 21-05-3305R issued April 11, 2022.

5.5. ESTABLISHMENT OF FLOODPLAIN OVERLAY ZONES. The flood hazard areas regulated by this subchapter are divided into overlay zones as follows:

a. The floodway overlay zone (FW) is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters, within AE zones as shown on the flood insurance rate map or within A zones as shown on the flood insurance rate map when determined according to s. 295-1127-5.

b. The flood fringe overlay zone (FF) is that portion of a riverine special flood hazard area outside the floodway within AE zones on the flood insurance rate map or, when floodway limits have been determined according to s. 295-1127-5, within A zones, as shown on the flood insurance rate map.

c. The general floodplain overlay zone (GFP) consists of those riverine areas that may be covered by floodwater during the regional flood in which a floodway boundary has not been delineated on the flood insurance rate map and also includes shallow flooding areas identified as AH and AO zones on the flood insurance rate map.

d. The flood storage overlay zone (FS) is that area of the floodplain where storage of floodwaters is calculated to reduce the regional flood discharge.

e. The coastal floodplain overlay zone (CFP) is an area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast, and any other area subject to high velocity wave action from storms, including areas identified as zone V, V1-30 or VE on the flood insurance rate map. Where a riverine AE floodway extends into the CFP overlay zone, development within the floodway shall comply with the regulations of both the FW and CFP overlay zones. Where a riverine A zone or AE zone with no floodway determination abuts the CFP overlay zone, the riverine study's floodway limit shall be determined based on standard floodway expansion principles within the CFP overlay zone and development within the floodway shall comply with the standards for both the FW and CFP overlay zones.

6. LOCATING FLOODPLAIN BOUNDARIES. Discrepancies between boundaries on the official floodplain zoning map and actual field conditions shall be resolved using the criteria in pars. a and b. If a significant difference exists, the map shall be amended according to s. 295-307. The commissioner may rely on a boundary derived from a profile elevation to grant or deny a land use permit, whether or not a map amendment is required. The commissioner shall document actual pre-development field conditions and the basis upon which the district boundary was determined, and initiate any map amendments required under this subsection. Disputes between the commissioner and an applicant over a district boundary line shall be settled according to s. 295-1149-4 and the following criteria:

a. If flood profiles exist, the map scale and the profile elevations shall determine the district boundary. The regional or base flood elevations shall govern if there are any discrepancies. Where the flood profiles are based on established base flood elevations from a flood insurance rate map, the approval of the federal emergency management agency pursuant to sub. 2-g shall be required for any map amendment.

b. Where flood profiles do not exist, the location of the boundary shall be determined by the map scale, visual on-site inspection and any information provided by the Wisconsin department of natural resources.

7. FLOODPLAIN VARIANCES. Pursuant to s. 295-1149-2-c-1, the board of zoning appeals shall take no action on any application for a floodplain variance in a floodplain overlay zone for 30 days following the date of receipt of the application or until the Wisconsin department of natural resources has made its recommendation, whichever is sooner.

295-1119. Standards Applicable to All Floodplain Overlay Zones.

1. The commissioner of neighborhood services shall review all permit applications to determine whether proposed building sites will be reasonably safe from flooding and sure that all necessary permits have been received from those governmental agencies whose approval is required by federal or state law.

2. If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall be:

- a. Designed and anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- b. Constructed with flood-resistant materials;
- c. Constructed by methods and practices that minimize flood damage; and
- d. In the case of mechanical and utility equipment, elevated to or above the flood protection elevation.

3. If a subdivision or other proposed new development is in a flood-prone area, the commissioner of neighborhood services shall assure that:

- a. The proposed subdivision or other new development is consistent with the need to minimize flood damage within the flood-prone area;
- b. Public utilities and facilities such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage; and
- c. Adequate drainage is provided to reduce exposure to flood hazards.

4. All subdivision proposals, including manufactured home parks, shall include regional flood elevation and floodway data for any development that meets the definition of a subdivision and all other requirements of s. 295-1129.

5. No floodplain development shall result in either of the following:

- a. Obstruct flow, defined as development which blocks the conveyance of floodwaters by itself or with other development, causing any increase in the regional flood height.
- b. Cause any increase in the regional flood height due to floodplain storage area lost.

6. The commissioner shall deny permits if it is determined the proposed development will obstruct flow or cause any increase in the regional flood height, based on the officially adopted flood insurance rate map or other adopted map, unless the provisions of sub. 3 are met.

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7. Obstructions, or any increases to base flood elevations shown on the officially adopted flood insurance rate map or other adopted map, may only be permitted if amendments are made to this subchapter, the official floodplain zoning map, floodway lines and water surface profiles, in accordance with s. 295-1117. Any such alterations shall be reviewed and approved by the federal emergency management agency and the Wisconsin department of natural resources.

8. Development shall not adversely affect channels, floodways or banks of any tributaries of the city's watercourses, or land outside of the floodplain.

9. No river or stream shall be altered or relocated until a floodplain overlay zone zoning map amendment is approved by the common council in accord with s. 295-307.

10. No permit to alter or relocate a watercourse in a mapped floodplain shall be issued until the commissioner has notified, in writing, all adjacent municipalities and the regional offices of the Wisconsin department of natural resources and the federal emergency management agency, and has required the applicant to secure all necessary state and federal permits. The standards of sub. 1 shall be met, and the flood-carrying capacity of any altered or relocated watercourse shall be maintained. As soon as is practicable, but not later than 6 months after the date of the watercourse alteration or relocation, and pursuant to s. 295-1143, the commissioner shall, on behalf of the city, apply for a letter of map revision from the federal emergency management agency. Any such alterations shall be reviewed and approved by the federal insurance management agency and the Wisconsin department of natural resources through the letter-of-map-revision process.

295-1121. Standards For Development In The Floodway Overlay Zone (FW).

1. **APPLICABILITY.** This section applies to all floodway areas on the floodplain zoning maps and those identified pursuant to s. 295-1127-4.

2. **PERMITTED USES.** The following open space uses are permitted uses in the floodway overlay zone and the floodway areas of the other floodplain overlay zones if they are not prohibited by any other provision of this code, meet the standards of subs. 2 to 6, and all permits or certificates have been issued according to ss. 295-1129 and 295-1131:

a. Agricultural uses, such as farming, outdoor plant nurseries, horticulture, viticulture and wild crop harvesting.

b. Nonstructural industrial and commercial uses, such as loading areas, parking areas and airport landing strips.

c. Nonstructural recreational uses, such as golf courses, tennis courts, archery ranges, picnic grounds, boat ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting, trap and skeet activities, hunting and fishing areas, and hiking and horseback riding trails, subject to the fill limitations of sub. 5.

d. Uses or structures accessory to open space uses or classified as historic structures, that comply with subs. 2 to 6.

e. Extraction of sand, gravel or other materials, subject to sub. 5.

f. Functionally water-dependent uses, such as docks, piers or wharves, dams, flowage areas, culverts, navigational aids, river crossings of transmission lines and pipelines that are in compliance with chs. 30 and 31, Wis. Stats., as amended.

g. Public utilities, streets and bridges that are in compliance with sub. 5.

h. Portable latrines that are removed prior to flooding and systems associated with recreational areas and Wisconsin department of natural resources-approved campgrounds that meet the applicable provisions of this code and ch. SPS 383, Wis. Adm. Code.

i. Public or private wells used to obtain potable water for recreational areas that meet the requirements of this code and chs. NR 811 and NR 812, Wis. Adm. Code.

j. Wastewater treatment ponds or facilities permitted under s. NR 110.15(3)(b), Wis. Adm. Code.

k. Sanitary sewer or water supply lines to service existing or proposed development located outside the floodway that complies with the regulations for the floodplain area occupied.

3. **GENERAL DEVELOPMENT STANDARDS.** a. Any development in the floodway shall comply with s. 295-1119 and have a low flood damage potential.

b. The applicant shall provide an analysis calculating the effects of the proposal on regional flood height to determine the effects of the proposal according to s. 295-1119 and 295-1129. The analysis shall be completed by a registered professional engineer in the state of Wisconsin.

c. The commissioner shall deny the permit application if the project will cause any increase in the flood elevations upstream or downstream based on the data submitted pursuant to par. b. Any encroachment in the regulatory floodway is prohibited unless the data submitted for par. b demonstrates that the encroachment will cause no increase in flood elevations in flood events up to the base flood at any location or removes the encroached area from the regulatory floodway as provided in s. 295-1141.

d. Parking and loading areas may be at elevations lower than the flood protection elevation. However, no such areas in general use by the public may be inundated to a depth greater than 2 feet or subject to flood velocities greater than 2 feet per second. Such areas may be located at lower elevations if an adequate warning system exists to protect life and property.

4. STRUCTURES. A structure accessory to a permanent open space use, including utility or sanitary facilities, or functionally dependent on a waterfront location may be allowed by permit if the commissioner finds that the structure will comply with all of the following criteria:

a. The structure will not be designed for human habitation, will not have a high flood damage potential and will be constructed to minimize flood damage.

b. The structure will be anchored to resist flotation, collapse and lateral movement.

c. Mechanical and utility equipment will be elevated to or above the flood protection elevation.

d. The structure will not obstruct the flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.

e. The structure shall either have the lowest floor elevated to or above the flood protection elevation or meet all of the following standards:

e-1. Have the lowest floor elevated to or above the regional flood elevation and be dry-floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and completely dry to the flood protection elevation without human intervention during flooding.

e-2. Have structural components capable of meeting all provisions of par. g.

e-3. Be certified by a registered professional engineer or architect, through the use of a federal emergency management agency floodproofing certificate, that the design and methods of construction are in accordance with par. g.

f. For a structure designed to allow the automatic entry of floodwaters below the regional flood elevation, the applicant shall submit a plan that meets pars. a through e and meets or exceeds all of the following standards:

f-1. The lowest floor shall be elevated to or above the regional flood elevation.

f-2. The structure shall have a minimum of 2 openings having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding.

f-3. The bottom of all openings shall be no higher than one foot above the lowest adjacent grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices, provided that they permit the automatic entry and exit of flood waters. If these coverings or devices do not permit automatic entry and exit of flood waters, they shall remain open.

f-4. The use shall be limited to parking, building access or limited storage.

g. Whenever floodproofing measures are required, a registered professional engineer or architect shall certify that the following floodproofing measures will be utilized, where appropriate, and are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the regional flood:

g-1. Reinforcement of floors and walls to resist rupture, collapse or lateral movement caused by water pressures or debris buildup.

g-2. Construction of wells, water supply systems and waste treatment systems to prevent the entrance of flood waters in such systems and in accordance with the provisions of sub. 6-b and c.

g-3. Subsurface drainage systems to relieve external pressures on foundation walls and basement floors.

g-4. Cutoff valves on sewer lines or the elimination of gravity flow basement drains.

g-5. Placement of utilities to or above the flood protection elevation.

5. PUBLIC UTILITIES, STREETS AND BRIDGES. Public utilities, streets and bridges may be allowed by permit if the commissioner finds that both of the following conditions will be met:

a. Adequate floodproofing measures will be provided to the flood protection elevation.

b. The facilities will be constructed in compliance with the development standards of s. 295-1119.

6. FILLS OR DEPOSITION OF MATERIALS. Fills or deposition of materials may be allowed by permit if the commissioner finds that the work to be performed will meet all of the following conditions.

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- a. The work will be in compliance with the provisions of s. 295-1119.
 - b. No material will be deposited in navigable waters unless a permit has been issued by the Wisconsin department of natural resources pursuant to ch. 30, Wis. Stats., as amended, a permit has been issued pursuant to s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344, if applicable, and all other requirements have been met.
 - c. The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading.
 - d. The fill is not classified as a solid or hazardous material.
- 7. PROHIBITED USES.** All uses not listed in sub. 1 are prohibited uses in the floodway overlay zone, including but not limited to:
- a. Storage of materials that are buoyant, flammable, explosive or injurious to property, water quality or human, animal, plant, fish or other aquatic life.
 - b. Any private or public sewage systems, except portable latrines that are removed prior to flooding and systems associated with recreational areas and Wisconsin department of natural resources-approved campgrounds that meet applicable city code provisions and ch. SPS 383, Wis. Adm. Code, as amended.
 - c. Any public or private wells which are used to obtain potable water, except those for recreational areas that meet applicable city code provisions and the requirements of chs. NR 811 and NR 812, Wis. Adm. Code, as amended.
 - d. Any solid or hazardous waste disposal sites.
 - e. Any wastewater treatment ponds or facilities, except those permitted under s. NR 110.15(3)(b), Wis. Adm. Code, as amended.
 - f. Any sanitary sewer or water supply lines, except those to service existing or proposed development located outside the floodway which complies with the regulations for the floodplain area occupied.
 - g. Campgrounds.
 - h. Habitable structures, structures with high flood damage potential, those not associated with permanent open-space uses, and uses not in harmony with or detrimental to uses permitted in the adjoining districts.

295-1123. Standards for Development in the Flood Fringe Overlay Zone (FF). 1. PERMITTED USES. Any structure, land use or development is permitted in the flood fringe overlay zone if it meets the standards of s. 295-1119 and this section, is not prohibited elsewhere in this code, and all permits or certificates specified in ss. 295-1129 and 295-1131 have been issued.

2. RESIDENTIAL USE REGULATIONS. Any structure, including a manufactured home, which is to be newly constructed or moved into a flood fringe overlay zone shall meet or exceed the following standards. Any existing structure in the flood fringe shall meet the requirements of s. 295-1135.

a. All new construction, including placement of manufactured homes, and substantial improvement of residential structures shall have the lowest floor elevated to or above the flood protection elevation on fill. The fill around the structure shall be one foot or more above the regional flood elevation extending at least 15 feet beyond the limits of the structure. No area may be removed from the flood fringe overlay zone unless it can be shown to meet s. 295-1141.

b. Notwithstanding par. a, a basement or crawlspace floor may be placed at the regional flood elevation if the basement or crawlspace is designed to make all portions of the structure below the flood protection elevation watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. No floor of any kind shall be permitted below the regional flood elevation.

c. Contiguous dry-land access shall be provided from the structure to land outside of the floodplain, except as provided in par. d.

d. In a development where existing street or sewer line elevations make compliance with par. c impractical, the commissioner may permit new development and substantial improvements where roads are below the regional flood elevation if the commissioner finds either of the following to be true:

d-1. The commissioner has received written assurance from the police and fire departments that rescue and relief will be provided to the structure by wheeled vehicles during a regional flood event.

d-2. The city has an emergency evacuation plan approved by the Wisconsin department of natural resources.

e. The floodplain overlay zone boundary shall be amended pursuant to s. 295-1117-2 to provide for removal of the land on which the habitable structure is located in accordance with s. 295-1141.

3. ACCESSORY STRUCTURES. In addition to s. 295-1119, new construction or substantial improvement of an accessory structure shall be constructed on fill with its lowest floor at or above the regional flood elevation.

4. COMMERCIAL AND INSTITUTIONAL USES. In addition to s. 295-1119, any commercial or institutional structure which is erected, altered or moved into a flood fringe overlay zone shall meet the requirements of sub. 2. Subject to the requirements of subs. 6 and 15, storage yards, surface parking lots and similar uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

5. MANUFACTURING AND INDUSTRIAL USES. In addition to s. 295-1119, any manufacturing or industrial structure which is erected, altered or moved into a flood fringe overlay zone shall have the lowest floor elevated to or above the flood protection elevation or meet the floodproofing measures in s. 295-1133. Subject to the requirements of subs. 6 and 15, storage yards, surface parking lots and similar uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

6. STORAGE OF MATERIALS. Materials that are buoyant, flammable, explosive or injurious to property, water quality or human, animal, plant, fish or aquatic life shall be stored at or above the flood protection elevation or floodproofed in compliance with s. 295-1133. Adequate measures shall be taken to ensure that such materials will not enter the water body during flooding.

7. PUBLIC UTILITIES, STREETS AND BRIDGES. All utilities, streets and bridges shall be designed to be compatible with comprehensive floodplain development plans. When failure of public utilities, streets and bridges would endanger public health or safety, or where such facilities are deemed essential, construction or repair of such facilities shall only be permitted if they are designed to comply with s. 295-1133. Minor roads or nonessential utilities may be constructed at lower elevations if they are designed to withstand flood forces to the regional flood elevation.

8. SEWAGE SYSTEMS. All sewage disposal systems shall be designed to minimize or eliminate infiltration of flood water into the system, in accordance with s. 295-1133, to the flood protection elevation and comply with all applicable city code provisions and the provisions of ch. SPS 383, Wis. Adm. Code, as amended.

9. WELLS. All wells shall be designed to minimize or eliminate infiltration of flood waters into the system, in accordance with s. 295-1133, to the flood protection elevation and shall comply with the provisions of chs. NR 811 and NR 812, Wis. Adm. Code, as amended.

10. SOLID WASTE DISPOSAL SITES. Disposal of solid or hazardous waste is prohibited in flood fringe overlay zones.

11. DEPOSITION OF MATERIALS. Any deposited material shall meet all applicable provisions of this subchapter.

12. MANUFACTURED HOMES. a. Emergency Preparedness. The owner or operator of any manufactured home park or subdivision in a flood fringe overlay zone shall provide adequate surface drainage to minimize flood damage, and shall prepare and submit to the fire chief an evacuation plan indicating vehicular access and escape routes.

b. Existing Manufactured Home Parks. In an existing manufactured home park, all new homes, replacement homes on existing pads and substantially improved homes shall meet both of the following requirements:

b-1. The home shall have the lowest floor level elevated to the flood protection elevation.

b-2. The home shall be anchored so it does not float, collapse or move laterally during a flood.

c. Homes Outside Existing Parks. Outside of existing manufactured home parks, including new manufactured home parks and all single units outside of existing parks, all new, replacement or substantially improved manufactured homes shall meet the residential development standards of sub. 2.

13. MOBILE RECREATIONAL VEHICLES. Any mobile recreational vehicle that is on-site in a flood fringe overlay zone for 180 or more consecutive days and is not fully licensed and ready for highway use shall meet the elevation and anchoring requirements in sub. 12-b. A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices, and has no permanently attached additions.

14. GRADING ACTIVITIES. Normal earth-grading activities to permit utilization of the lands for open space, outdoor recreation, yards, parking and similar uses shall be permitted in the flood fringe overlay zone, provided the applicant can demonstrate that the water-carrying and storage capacity of the floodplain will not decrease as a result of the earth-grading activities.

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15. PARKING AND LOADING AREAS. a. Parking and loading areas may be at elevations lower than the flood protection elevation. However, no such areas in general use by the public may be inundated to a depth greater than 2 feet or subject to flood velocities greater than 2 feet per second. Such areas may be located at lower elevations if an adequate warning system exists to protect life and property.

b. Parking areas for new or used motor vehicle sales or storage shall be prohibited.

16. EXISTING STRUCTURES. Any existing structure in the flood fringe overlay zone shall comply with the applicable requirements of s. 295-1135.

17. CAMPGROUNDS. Campgrounds are a prohibited use.

295-1125. Standards for Development in the Flood Storage Overlay Zone (FSD). **1. DESCRIPTION.** The flood storage overlay zone delineates that portion of the floodplain where storage of floodwaters has been taken into account and is relied upon to reduce the regional flood discharge. The overlay zone protects the flood storage areas and assures that any development in the storage areas will not decrease the effective flood storage capacity which would cause higher flood elevations.

2. APPLICABILITY. The provisions of this subsection apply to all areas within the flood storage overlay zone, as shown on the official zoning map.

3. PERMITTED USES. Any use or development which occurs in a flood storage overlay zone shall meet the applicable requirements of s. 295-1123.

4. STANDARDS. a. Development in a flood storage overlay zone shall not cause an increase equal of greater than 0.00 of a foot in the height of the regional flood.

b. No development shall be allowed which removes flood storage volume unless an equal volume of storage as defined by the pre-development ground surface and the regional flood elevation will be provided in the immediate area of the proposed development to compensate for the volume of storage which is lost. Excavation below the groundwater table is not considered to provide an equal volume of storage. If compensatory storage cannot be provided, the area may not be developed unless the entire area zoned as flood storage overlay zone on this waterway is rezoned to the flood fringe overlay zone. This shall include a revision to the floodplain study and map done for the waterway to revert to the higher regional flood discharge calculated without floodplain storage, in accordance with the provisions of s. 295-1143.

5. REMOVAL FROM OVERLAY ZONE. No area may be removed from the flood storage overlay zone unless it can be shown that the area has been filled to the flood protection elevation and is contiguous to other lands lying outside of the floodplain.

295-1127. Standards for Development in the General Floodplain Overlay Zone (GF).

1. APPLICABILITY. The provisions of this section shall apply to all floodplains mapped as A, AO, AE or AH zones within which a floodway is not delineated on the flood insurance rate maps identified in s. 295-1117-5

2. PERMITTED USES. Pursuant to sub. 4, it shall be determined whether the proposed use is located within the floodway or the flood fringe. Those uses permitted in the floodway and flood fringe overlay zones shall be permitted within the general floodplain overlay zone subject to the standards of sub. 3 and provided that all permits or certificates required under ss. 295-1129 and 295-1131 have been issued.

3. STANDARDS. a. The standards of s. 295-1121 shall apply to development in floodway areas. The standards of s. 295-1123 shall apply to development in flood fringe areas.

b. In the AO zone, new construction and substantial improvement of structures shall have the lowest floor, including the basement floor, elevated to or above one of the following:

b-1. The depth, in feet, as shown on the flood insurance rate map above the highest adjacent natural grade.

b-2. If the depth is not specified on the flood insurance rate map, 2 feet above the highest adjacent natural grade.

c. In the AH zone, new construction and substantial improvement of structures shall have the lowest floor, including the basement floor, elevated to or above the flood protection elevation.

d. In AO and AH Zones, the applicant shall provide plans showing adequate drainage paths to guide floodwaters around structures.

e. All development in zones AO and AH shall meet the requirements of s. 295-1123 applicable to flood fringe areas.

4. BOUNDARIES. For proposed development in zone A, or in zone AE within which a floodway is not delineated on the flood insurance rate map identified in s. 295-1117, the boundaries of the regulatory

floodway shall be determined pursuant to sub. 5. If the development is proposed to encroach upon the regulatory floodway, the development shall be subject to the standards of s.295-1121. If the development is proposed to be located entirely within the flood fringe, the development is subject to the standards of s. 295-1123.

5. DETERMINING FLOODWAY AND FLOOD FRINGE LIMITS. Upon receiving an application for development within the general floodplain overlay zone, the commissioner shall:

a. Require the applicant to submit 2 copies of an aerial photograph or a plan which shows the proposed development with respect to the general floodplain overlay zone limits, stream channel and existing floodplain developments, along with a legal description of the property, fill limits and elevations, building floor elevations and floodproofing measures, and the flood zone as shown on the flood insurance rate map.

b. Require the applicant to furnish any of the following information deemed necessary by the Wisconsin department of natural resources to evaluate the effects of the proposal upon flood height, flood flows and regional flood elevation, and to determine floodway boundaries:

b-1. A surface-view plan showing elevations or contours of the ground, pertinent structure, fill or storage elevations, the size, location and layout of all proposed and existing structures on the site, the location and elevations of streets, water supply and sanitary facilities, soil types, and other pertinent information.

b-2. Specifications for building construction and materials, floodproofing, filling, dredging, channel improvement, storage, water supply and sanitary facilities.

b-3. A hydrologic and hydraulic study as specified in s. 295-1129-4.

295-1128. Standards for Development in the Coastal Floodplain Overlay Zone (CFP).

1. APPLICABILITY. The provisions of this section apply to all coastal floodplain overlay zones shown on the floodplain zoning maps, including zones V, V1-30 and VE. Where a floodway shown on the floodplain zoning maps, a floodway determined as described in s. 295-1117-5.5-3, or a regulatory floodway identified pursuant to s. 295-1127-5 extends into a coastal floodplain district, development shall comply with the standards of ss. 295-1121 and 295-1128.

2. STANDARDS. Development in the coastal floodplain overlay zone shall meet the requirements of s. 295-1119, as well as the following:

a. New construction shall be located landward of the ordinary high water mark.

b. Bulkheads, seawalls, revetments and other erosion control measures shall not be connected to the foundation or superstructure of a building, but shall be designed to not direct floodwaters or increase flood forces or erosion impacts on the foundation or superstructure of any building.

c. Man-made alterations of sand dunes shall be prohibited unless an engineering report demonstrates that the alterations will not increase potential flood damage by reducing the wave and flow dissipation characteristics of the sand dunes.

d. The use of fill for structural support of buildings shall be prohibited.

e. Non-structural fill shall be permitted only if an engineering report demonstrates that the fill will not cause runup, ramping, or deflection of floodwaters that cause damage to buildings.

f. New construction and substantial improvement of buildings shall be elevated, consistent with s. SPS 321.34, Wis. Adm. Code, on pilings or columns so that the bottom of the lowest horizontal structural member of the lowest floor, excluding the pilings or columns, is elevated to or above the flood protection elevation, provided:

f-1. The pile or column foundation and structure attached thereto shall be anchored to resist flotation, collapse or lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values shall be those associated with the base flood. Wind loading values shall be those defined according to the American society of civil engineers 7-16, "minimum design loads and associated criteria for buildings and other structures," or other equivalent standard.

f-2. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of par. f.

g. New construction and substantial improvement of buildings shall have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system.

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h. For the purpose of par. g, a breakaway wall shall have a design safe loading resistance of not less than 10 and not more than 20 pounds per square foot.

i. Use of breakaway walls which exceed a design safe loading resistance of 20 pounds per square foot, either by design or by local or state codes, may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet all of the following conditions:

i-1. Breakaway wall collapse shall result from a water load less than that which would occur during the base flood.

i-2. The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water loads acting simultaneously on all building components, both structural and non-structural. Water loading values shall be those associated with the base flood. Wind loading values shall be those defined according to American society of civil engineers 7-16, "minimum design loads and associated criteria for buildings and other structures," or equivalent standard.

j. All space enclosed by breakaway walls, open wood lattice-work, or insect screening below the lowest floor shall be used solely for parking, building access, or storage.

k. Within flood-prone areas, new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

L. Within flood-prone areas, new and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems, and discharges from the systems into flood waters and onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

m. All mobile recreational vehicles shall be on-site for less than 180 consecutive days and shall be either fully licensed and ready for highway use or meet the standards of pars. a through L. A mobile recreational vehicle shall be considered ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect-type utilities and security devices, and has no permanently attached additions.

n. Manufactured homes placed or substantially improved within the coastal floodplain district shall meet the standards of pars. a through L.

295-1129. Permits Required. 1. GENERAL REQUIREMENTS. It shall be unlawful to use any structure or land, or to erect, alter, relocate, extend, repair or substantially improve any structure or sewer or water facilities, prior to the issuance of a permit. If an amendment to the official zoning map is required, no permit shall be issued by any city official until a letter of map revision is issued by the federal emergency management agency for the proposed change. Furthermore, it shall be the responsibility of the permit applicant to secure all necessary permits required by local, state or federal agencies, including but not limited to:

a. Any permit, certificate or license, including any floodplain fill permit, in accordance with ch. 200.

b. Development which requires a permit from the Wisconsin department of natural resources under chs. 30 and 31, Wis. Stats., as amended, such as docks, piers, wharves, bridges, culverts, dams and navigational aids. Such development may be allowed if the necessary permits are obtained and amendments to this subchapter are made according to s. 295-1117.

c. Wetland fill permits, in accordance with s. 404 of the federal water pollution control act.

2. PERMIT APPLICATION; GENERAL INFORMATION. Information on the application for a permit required under this subchapter shall include:

a. The name and address of the applicant, property owner and contractor.

b. A legal description of the property, along with a description of the proposed use and whether the project will involve new construction, alteration, relocation, extension or substantial improvement of a structure.

3. SITE DEVELOPMENT PLAN. A site plan drawn to scale shall be submitted along with the permit application. The site plan shall contain:

a. The location, dimensions, area and elevation of the lot.

b. The location of the ordinary highwater mark of any abutting navigable waterways.

c. The location of any structures, with distances measured from the lot lines and street center lines.

d. The location of any existing or proposed on-site sewage system or private water supply system.

- e. The location and elevation of existing and future access roads.
- f. The location of floodplain and floodway limits as determined from the official floodplain zoning maps.
- g. The elevation of the lowest floor of any proposed building and any fill, using national geodetic vertical datum.
- h. Data sufficient to determine the regional flood elevation, in national geodetic vertical datum, or North American vertical datum, at the location of the development and to determine whether the requirements of s. 295-1121 or 295-1123, as applicable, are met.
- i. Data sufficient to determine whether the proposed development will cause an obstruction to flow or an increase in regional flood height or discharge in violation of s. 295-1119. This may include any of the information described in s. 295-1121-2-b.

4. HYDRAULIC AND HYDROLOGIC STUDIES TO ANALYZE DEVELOPMENT. a. Supervision and Review. All hydraulic and hydrologic studies shall be completed under the direct supervision of a professional engineer registered in the state of Wisconsin. The study contractor shall be responsible for the technical adequacy of the study. All studies shall be reviewed and approved by the Wisconsin department of natural resources.

b. Zone A Floodplains and AE Zones Within Which a Floodway is not Delineated; Hydrology. The appropriate method shall be based on the standards in ch. NR 116.07(3), Wis. Adm. Code.

c. Zone A Floodplains and AE Zones Within Which a Floodway is not Delineated; Hydraulic Modeling. The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Adm. Code, and the following:

c-1. Determination of the required limits of the hydraulic model shall be based on detailed study information for downstream structures (e.g., dams, bridges and culverts) to determine adequate starting WSEL for the study.

c-2. Channel sections shall be surveyed.

c-3. A minimum 4-foot contour data in the overbanks shall be used for the development of cross section overbank and floodplain mapping.

c-4. A maximum distance of 500 feet between cross sections is allowed in developed areas with additional intermediate cross sections required at transitions in channel bottom slope, including a survey of the channel at each location.

c-5. The most current version of HEC-RAS shall be used.

c-6. A survey of bridge and culvert openings and the top of road is required at each structure.

c-7. Additional cross-sections are required at the downstream and upstream limits of the proposed development and any necessary intermediate locations based on the length of the reach if greater than 500 feet.

c-8. Standard accepted engineering practices shall be used when assigning parameters for the base model such as flow, Manning's N values, expansion and contraction coefficients or effective flow limits. The base model shall be calibrated to past flooding data such as high water marks to determine the reasonableness of the model results. If no historical data is available, adequate justification shall be provided for any parameters outside standard accepted engineering practices.

c-9. The model shall extend past the upstream limit of the difference in the existing and proposed flood profiles to provide a tie-in to existing studies. The height difference between the proposed flood profile and the existing study profiles shall be no more than 0.00 foot.

d. Zone A Floodplains and AE Zones Within Which a Floodway is not Delineated; Mapping. A work map of the reach studied shall be provided, showing all cross section locations, floodway/floodplain limits based on best available topographic data, geographic limits of the proposed development and whether the proposed development is located in the floodway. If the proposed development is located outside of the floodway, then it is determined to have no impact on the regional flood elevation. If any part of the proposed development is in the floodway, it shall be added to the base model to show the difference between existing and proposed conditions. The study shall ensure that all coefficients remain the same as in the existing model, unless adequate justification based on standard accepted engineering practices is provided.

e. Zone AE Floodplains; Hydrology. If the proposed hydrology will change the existing study, the appropriate method to be used shall be based on ch. NR 116.07(3), Wis. Adm. Code.

f. Zone AE Floodplains; Hydraulic Modeling. The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Adm. Code, and the following:

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f-1. Duplicate Effective Model. The effective model shall be reproduced to ensure correct transference of the model data and to allow integration of the revised data to provide a continuous flood insurance study model upstream and downstream of the revised reach. If data from the effective model are available, models shall be generated that duplicate the flood insurance study profiles and the elevations shown in the floodway data table in the flood insurance study report to within 0.1 foot.

f-2. Corrected Effective Model. The corrected effective model shall not include any man-made physical changes since the effective model date, but shall import the model into the most current version of HEC-RAS for department of natural resources review.

f-3. Existing (Pre-Project Conditions) Model. The existing (pre-project conditions) model shall be required to support conclusions about the actual impacts of the project associated with the revised (post-project conditions) model or to establish more up-to-date models on which to base the revised (post-project conditions) model.

f-4. Revised (Post-Project Conditions) Model. The revised (post-project conditions) model shall incorporate the existing model and any proposed changes to the topography caused by the proposed development. This model shall reflect proposed conditions.

f-5. Supporting Information. All changes to the duplicate effective model and subsequent models shall be supported by certified topographic information, bridge plans, construction plans and survey notes.

f-6. Changes to Models. Changes to the hydraulic models shall be limited to the stream reach for which the revision is being requested. Cross-sections upstream and downstream of the revised reach shall be identical to those in the effective model and result in water surface elevations and topwidths computed by the revised models matching those in the effective models upstream and downstream of the revised reach as required. The effective model shall not be truncated.

g. Zone AE Floodplains; Mapping. Maps and associated engineering data that meet the following conditions or include the following items shall be submitted to the department of natural resources for review:

g-1. Consistency between the revised hydraulic models, the revised floodplain and floodway delineations, the revised flood profiles, topographic work map, annotated flood insurance rate maps or flood boundary floodway maps, construction plans and bridge plans.

g-2. Certified topographic map of suitable scale and contour interval, as well as a planimetric map showing the applicable items. If a digital version of the map is available, it may be submitted in order that the flood insurance rate map may be more easily revised.

g-3. An annotated flood insurance rate map panel showing the revised 1% and 0.2% annual chance floodplains and floodway boundaries.

g-4. If an annotated flood insurance rate map or flood boundary floodway map and digital mapping data are used, all supporting documentation or metadata shall be included with the data submission along with the universal transverse Mercator projection and state plane coordinate system in accordance with federal emergency management agency mapping specifications.

g-5. The revised floodplain boundaries shall tie into the effective floodplain boundaries.

g-6. All cross-sections from the effective model shall be labeled in accordance with the effective map. A cross-section lookup table shall be included to relate to the model input numbering scheme.

g-7. Both the current and proposed floodways shall be shown on the map.

g-8. The stream centerline or profile baseline used to measure stream distances in the model shall be visible on the map.

5. EXPIRATION; RENEWAL; LAPSE OF PERMITS. All permits issued under the authority of this subchapter shall expire not more than 180 days after issuance and may be renewed for up to 180 additional days for good and sufficient cause in accordance with the provisions of s. 200-30.2. Permits shall lapse and be void in accordance with the provisions of s. 200-30.

295-1131. Certificate of Compliance. No land shall be occupied or used, and no building which is hereafter constructed, altered, added to, modified, repaired, rebuilt or replaced shall be occupied, until a certificate of compliance is issued by the commissioner, except where no permit is required, subject to the following provisions:

1. The certificate of compliance shall show that the building or premises or part thereof, and the proposed use, conform to the provisions of this subchapter.

2. Application for such certificate shall be concurrent with the application for a permit.

3. If applicable code provisions are met, the certificate of compliance shall be issued within 10 days after written notification that the permitted work is completed.

4. The applicant shall submit a certification signed by a registered professional engineer, registered architect or registered land surveyor that the fill, lowest floor and floodproofing elevations are in compliance with the permit issued. Floodproofing measures also require certification by a registered professional engineer, registered architect or registered architect that the requirements of s. 295-1133 are met.

5. Where applicable pursuant to s. 295-1127-3, the applicant shall submit a certification by a registered professional engineer or surveyor of the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor, excluding pilings or columns, and an indication of whether the structure contains a basement.

6. Where applicable pursuant to s. 295-1127-3, the applicant shall submit a certification by a registered professional engineer or architect that the structural design and methods of construction meet accepted standards of practice.

295-1133. Floodproofing. 1. No permit or floodplain variance shall be issued for a non-residential structure designed to be watertight below the regional flood elevation until the applicant submits:

a. A plan certified by a registered professional engineer or architect that the floodproofing measures taken will protect the structure or development to the flood protection elevation.

b. A federal emergency management agency floodproofing certificate.

2. For a structure designed to allow the entry of floodwaters, no permit or floodplain variance shall be issued until the applicant submits a plan that meets either of the following:

a. The plan is certified by a registered professional engineer or architect.

b. The plan meets or exceeds the following standards:

b-1. A minimum of 2 openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding have been provided.

b-2. The bottom of all openings shall be no higher than one foot above grade.

b-3. Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.

3. Floodproofing measures shall be designed, as appropriate, to:

a. Withstand flood pressures, depths, velocities, uplift and impact forces, and other regional flood factors.

b. Protect structures to the flood protection elevation.

c. Anchor structures to foundations to resist flotation and lateral movement.

d. Minimize or eliminate infiltration of floodwaters.

e. Minimize or eliminate discharges into floodwaters.

f. Placement of essential utilities to or above the flood protection elevation.

g. If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:

g-1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of 2 openings shall be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening shall not be more than 12 inches above the adjacent grade.

g-2. The parts of the foundation located below the flood protection elevation shall be constructed of flood-resistant materials.

g-3. Mechanical and utility equipment shall be elevated to or above the flood protection elevation.

g-4. The use shall be limited to parking, building access or limited storage.

295-1135. Nonconformities.

1. APPLICABILITY. a. The standards in this section shall apply to all uses and buildings that do not conform to the provisions of this chapter or with s. 87.30, Wis. Stats., ss. NR 116.12 to 14, Wis. Adm. Code, or 44 CFR 59-72, national flood insurance program. These standards shall apply to all modifications or additions to any nonconforming use or structure and to the use of any structure or premises which was lawful before the effective date of this subchapter or any amendment thereto. A party asserting existence of a lawfully established nonconforming use or structure has the burden of proving that the use or structure was compliant with the floodplain zoning regulations in effect at the time the use or structure was created.

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b. As permit applications are received for additions, modifications or substantial improvements to nonconforming buildings in the floodplain, the department of neighborhood services shall develop a list of those nonconforming buildings, their present equalized assessed values, and the costs associated with changes to those buildings.

2. GENERAL. The existing lawful use of a structure or its accessory use which is not in conformity with the provisions of this subchapter may continue subject to the following conditions:

a. No modifications or additions to a nonconforming use or structure shall be permitted unless they comply with this section and all other relevant provisions of this subchapter. The words "modification" and "addition" include, but are not limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Maintenance is not considered modification; this includes painting, decorating, paneling and other nonstructural components and the maintenance, repair or replacement of existing private sewage or water supply systems or connections to public utilities. Any costs associated with the repair of a damaged structure are not considered maintenance.

b. The construction of a deck that does not exceed 200 square feet and that is adjacent to the exterior wall of a principal structure does not constitute an extension, modification or addition. The roof of the structure may extend over a portion of the deck to provide safe ingress and egress to the principal structure.

c. If a nonconforming use or the use of a nonconforming structure is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall conform to the applicable requirements of this subchapter.

d. The commissioner shall keep a record which lists all nonconforming uses and nonconforming structures, their present equalized assessed value, the cost of all modifications or additions which have been permitted, and the percentage of the structure's total current value those modifications represent.

e. No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this section. Contiguous dry-land access shall be provided for residential and commercial uses in compliance with s. 295-1123-2. The costs of elevating the lowest floor of a nonconforming building or a building with a nonconforming use to the flood protection elevation are excluded from the 50% provisions of this subsection.

f. Except as provided in par. g, if any nonconforming structure or any structure with a nonconforming use is destroyed or is substantially damaged, it shall not be replaced, reconstructed or rebuilt unless the use and the structure meet the current code requirements. A structure is considered substantially damaged if the total cost to restore the structure to its pre-damaged condition equals or exceeds 50% of the structure's present equalized assessed value.

g. For nonconforming buildings that are substantially damaged or destroyed by a nonflood disaster, the repair or reconstruction of any such nonconforming building shall be permitted to restore it to the size and use in effect prior to the damage event, provided that the minimum federal code requirements are met in pars. k and L and all required permits have been granted prior to the start of construction.

h. A nonconforming historic structure may be altered if the alteration will not preclude the structure's continued designation as an historic structure, the alteration will comply with s. 295-1121-2, flood-resistant materials are used, and construction practices and floodproofing methods that comply with s. 295-1133 are used. Repair or rehabilitation of a historic structure shall be exempt from the standards of par. k if it is determined that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure.

i. No maintenance on a per-event basis to any nonconforming structure or any structure with a nonconforming use, the cost of which would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this code. Contiguous dry-land access shall be provided for residential and commercial uses in compliance with s. 295-1123-2. Maintenance to any nonconforming structure which does not exceed 50% of the structure's present equalized assessed value on a per-event basis does not count against the cumulative calculations over the life of the structure for substantial improvement calculations.

j. If on a per-event basis the total value of the work being done under pars. e and i equals or exceeds 50% of the present equalized assessed value, the work shall not be permitted unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this code. Contiguous dry-land access shall be provided for residential and commercial uses in compliance with s. 295-1123-2.

k. Residential structures shall:

k-1. Have the lowest floor, including basement, elevated to or above the base flood elevation using fill, pilings, columns, posts or perimeter walls. Perimeter walls shall meet the requirements of s. 295-1133-3.

k-2. Be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, and shall be constructed with methods and materials resistant to flood damage.

k-3. Be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.

k-4. In A Zones, obtain, review and use any flood data available from a federal, state or other source.

k-5. In AO Zones with no elevations specified, have the lowest floor, including basement, meet the standards in s. 295-1127-3-b.

k-6. In AO Zones, have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

L. Non-residential structures shall:

L-1. Meet the requirements of subs. k-1, 2, 5 and 6.

L-2. Have the lowest floor, including basement, elevated to or above the regional flood elevation; or, together with attendant utility and sanitary facilities, meet the standards in s. 295-1133.

L-3. In AO Zones with no elevations specified, have the lowest floor, including basement, meet the standards in s. 295-1127-3-b.

3. FLOODWAY OVERLAY ZONE. a. No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in a floodway overlay zone, unless such modification or addition meets all of the following criteria:

a-1. The modification or addition has been granted a permit or floodplain variance which meets all code requirements.

a-2. The modification or addition meets the requirements of sub. 1.

a-3. The modification or addition will not increase the obstruction to flood flows or regional flood height.

a-4. The modification or addition will be floodproofed, pursuant to s. 295-1133, by means other than the use of fill, to the flood protection elevation.

b. No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in a floodway overlay zone. Any replacement, repair or maintenance of an existing on-site sewage disposal system in a floodway overlay zone shall meet the applicable requirements of this code, including s. 295-1133, and ch. SPS 383, Wis. Adm. Code, as amended.

c. No new well or modification to an existing well used to obtain potable water shall be allowed in a floodway overlay zone. Any replacement, repair or maintenance of an existing well in a floodway overlay zone shall meet the applicable requirements of this code, including s. 295-1133, and chs. NR 811 and NR 812, Wis. Adm. Code, as amended.

d. If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:

d-1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of 2 openings shall be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening shall not be more than 12 inches above the adjacent grade.

d-2. The parts of the foundation located below the flood protection elevation shall be constructed of flood-resistant materials.

d-3. Mechanical and utility equipment shall be elevated or floodproofed to or above the flood protection elevation.

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d-4. The use shall be limited to parking, building access or limited storage.

4. FLOOD FRINGE OVERLAY ZONE. a. No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use unless such modification or addition has been granted a permit or floodplain variance by the city and meets the requirements of s. 295-1123, except where par. b is applicable.

b. Where compliance with the provisions of par. a would result in unnecessary hardship, and only where the structure will not be used for human habitation or be associated with a high flood damage potential, the board, using the procedures established in s. 295-1149-1, may grant a floodplain variance from the provisions of par. a for modifications or additions, using the criteria listed in this paragraph. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if all of the following conditions are met:

b-1. No floor is located below the regional flood elevation for residential or commercial structures.

b-2. Human lives are not endangered.

b-3. Public facilities, such as water or sewer, will not be installed.

b-4. Flood depths will not exceed 2 feet.

b-5. Flood velocities will not exceed 2 feet per second.

b-6. The structure will not be used for storage of materials as described in s. 295-1123-6.

c. Any new private sewage disposal system, or addition to, replacement, repair or maintenance of a private sewage disposal system, shall meet all the applicable provisions of this code, including s. 295-1133, and ch. SPS 383, Wis. Adm. Code, as amended.

d. Any new well, or addition to, replacement, repair or maintenance of a well, shall meet the applicable provisions of this code, including s. 295-1133, and ch. NR 811 and NR 812, Wis. Adm. Code, as amended.

5. FLOOD STORAGE OVERLAY ZONE. No modifications or additions shall be allowed to any nonconforming structure in a flood storage overlay zone unless the standards in s. 295-1125-4 are met.

6. COASTAL FLOODPLAIN OVERLAY ZONE. a. New construction and substantial improvement shall meet the standards of s. 295-1128.

b. No structural repairs, modifications or additions to an existing building, the cost of which exceeds, over the life of the building, 50% of the building's present equalized assessed value, shall be allowed in a coastal floodplain overlay zone unless the entire building is permanently altered to conform with the standards of s. 295-1128.

295-1137. Administration. The commissioner is authorized to administer the provisions of this subchapter and shall have the following duties and powers:

1. Advise applicants of the provisions of this subchapter, assist in preparing permit applications and appeals, and assure that the regional flood elevation for the proposed development is shown on all permit applications.

2. Issue permits, inspect properties for compliance with provisions of this subchapter and issue certificates of compliance where appropriate.

3. Inspect and assess all damaged floodplain structures to determine if substantial damage to the structures has occurred.

4. Keep records of all official actions, such as:

a. All permits issued, inspections made, and work approved.

b. Documentation of certified lowest floor and regional flood elevations.

c. Records of water surface profiles, floodplain zoning maps and ordinances, and nonconforming uses and structures, including changes, appeals, floodplain variances and amendments.

d. All substantial damage assessment reports for floodplain structures

e. Floodproofing certificates.

f. A list of all nonconforming structures and uses.

g. In the coastal floodplain overlay zone, documentation of the certified elevation of the bottom of the lowest horizontal structural member of new construction or substantial improvements.

h. In the coastal floodplain overlay zone, certification by a licensed professional engineer or architect where required for new construction or substantial improvement under s. 295-1128.

5. Submit the following items to the Wisconsin department of natural resources regional office:

a. Within 10 days of the decision, a copy of any board decision on a floodplain variance request or an appeal for a map or text interpretation.

b. Within 10 days of passage and publication of any ordinance amending the text of this subchapter or amending the zoning map in a manner adding, deleting or modifying a floodplain overlay zone, a copy of the ordinance amending the text or map.

c. Copies of case-by-case analyses and other required information, including an annual summary of floodplain zoning actions taken.

d. Copies of substantial damage assessments performed and all related correspondence concerning the assessments.

6. Investigate, prepare reports, and report violations of this section, and to remedy the violations in accordance with the provisions of s. 295-309. Copies of the reports and documentation of the enforcement actions shall be sent to the commissioner of city development and the Wisconsin department of natural resources regional office.

7. Submit copies of amendments to the federal emergency management agency regional office.

8. Provide information to the public as follows:

a. The commissioner shall place marks on structures to show the depth of inundation during the regional flood.

b. The commissioner shall ensure that all floodplain maps, engineering data and regulations shall be available to the public and widely distributed.

c. The commissioner shall, upon request, provide floodplain zoning district information to persons preparing real estate transfer documents.

295-1139. Government Agencies Regulated. Unless specifically exempted by law, the city of Milwaukee, the county of Milwaukee, the Milwaukee board of school directors, the housing authority and the redevelopment authority shall comply with all applicable provisions of this subchapter and obtain all necessary permits. State agencies shall be required to comply if s. 13.48(13), Wis. Stats., applies. The construction, reconstruction, maintenance and repair of state highways and bridges by the Wisconsin department of transportation shall be exempt when s. 30.2022, Wis. Stats., applies. Although exempt from city zoning permit and permit fee requirements, the Wisconsin department of transportation shall provide sufficient project documentation and analysis to ensure that the city is in compliance with federal, state and city floodplain standards.

295-1141. Removal of Lands from Floodplain. 1. Compliance with the provisions of this subchapter shall not be grounds for removing land from the floodplain unless:

a. Such land is filled at least 2 feet above the regional or base flood elevation.

b. The fill is contiguous to land outside the floodplain.

c. The map is amended pursuant to s. 295-1117-2.

2. Satisfaction of the requirements of sub. 1 does not eliminate the requirement for mandatory purchase of flood insurance. The property owner shall contact the federal emergency management agency to request a letter of map change.

3. The delineation of any of the floodplain districts may be revised by the city where natural or man-made changes have occurred or where more detailed studies have been conducted. However, prior to any such change, approval shall be obtained from the Wisconsin department of natural resources and the federal emergency management agency. A completed letter of map revision is a record of this approval. The commissioner shall not sign a community acknowledgement form unless both of the following criteria are met:

a. The land or the land around the structure shall be filled at least 2 feet above the regional or base flood elevation.

b. The fill shall be contiguous to land outside the floodplain. The applicant shall obtain a floodplain development permit before applying for a letter of map revision or a letter of map revision based on fill.

4. Removal of lands from the floodplain may also occur by operation of s. 87.30(1)(e), Wis. Stats., if a property owner has obtained a letter of map amendment from the federal emergency management agency under 44 CFR 70.

295-1143. Amendments. 1. GENERAL. Obstructions or increases may only be permitted if amendments are made to this subchapter, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 295-1117.

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2. AE ZONES. In an AE Zone with a mapped floodway, no obstruction or increase shall be permitted unless the applicant receives a conditional letter of map revision from the federal emergency management agency and amendments are made to this subchapter, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 295-1117. Any such alterations shall be reviewed and approved by the federal emergency management agency and the department of natural resources.

3. A ZONES. In an A Zone, an increase equal to or greater than one foot may only be permitted if the applicant receives a conditional letter of map revision from the federal emergency management agency and amendments are made to this subchapter, the official floodplain maps, floodway lines, and water surface profiles, in accordance with s. 295-1117.

295-1145. Warning and Disclaimer of Liability. The flood protection standards in this subchapter are based on engineering experience and research. Larger floods may occur or the flood height may be increased by man-made or natural causes. The provisions of this subsection do not imply or guarantee that nonfloodplain areas or permitted floodplain uses will be free from flooding and flood damages. Nor do the provisions of this subchapter create liability on the part of, or a cause of action against, the city or any officer or employee thereof for any flood damage that may result from reliance on those provisions.

295-1147. Shoreland-Wetland Overlay Zone (WL). **1. PURPOSES.** The shoreland-wetland overlay zone, which includes all wetlands in the city that are 2 acres or more in area, as defined by the "FINAL" Wisconsin Wetland Inventory Maps dated March 29, 1989, is intended to:

- a. Maintain the storm and flood water storage capacity of wetlands.
- b. Prevent and control water pollution by preserving wetlands which filter or store sediments, nutrients, heavy metals or organic compounds that would otherwise drain into navigable waters.
- c. Protect fish, their spawning grounds, other aquatic life and wildlife by preserving wetlands and other aquatic habitat.
- d. Prohibit certain uses detrimental to shoreland-wetland areas.
- e. Preserve shore cover and natural beauty by restricting the removal of natural shoreland cover and controlling shoreland-wetland excavation, filling and other earth-moving activities.

2. PROCEDURES. a. Creation. Creation of a shoreland-wetland overlay zone shall be by amendment to the zoning map, pursuant to s. 295-307.

b. Zoning Map Designator. Each shoreland-wetland overlay zone shall be shown on the zoning map by a "WL" designator and an appropriate number.

3. STANDARDS. a. Permitted Uses. In a shoreland-wetland overlay zone, the following are permitted uses, provided that no wetland alteration occurs:

- a-1. Hiking.
- a-2. Fishing.
- a-3. Swimming.
- a-4. Boating.
- b. Special Uses. The following are special uses in the shoreland-wetland overlay zone:
 - b-1. Harvesting of wild crops, such as marsh hay, ferns, moss, wild rice, berries, tree fruits and tree seeds, in a manner that is not injurious to the natural reproduction of such crops.
 - b-2. Silviculture, including the planting, thinning and harvesting of timber, and limited temporary water level stabilization measures as necessary to alleviate abnormally wet or dry conditions that would have an adverse impact on the conduct of silvicultural activities if not corrected.
 - b-3. Raising of minnows or other wetland or aquatic animals.
 - b-4. Maintenance and repair of existing drainage systems to restore pre-existing levels of drainage, including the minimum amount of filling necessary to dispose of dredged spoil, provided that the filling is otherwise permissible and that dredged spoil is placed on existing spoil banks where possible.
 - b-5. Construction and maintenance of piers, docks, walkways, observation decks and trail bridges built on pilings, including limited excavating and filling necessary for such construction or maintenance.
 - b-6. Installation and maintenance of sealed tiles for the purpose of draining lands outside the shoreland-wetland zone provided that such installation or maintenance is done in a manner designed to minimize adverse impacts upon the natural functions of the shoreland-wetland specified in sub. 1.
 - b-7. Maintenance, repair, replacement and reconstruction of existing highways and bridges, including limited excavating and filling necessary for such maintenance, repair, replacement or reconstruction.

b-8. Construction and maintenance of roads as necessary to provide continuity in the city's street system, essential utility and emergency services, or access to uses listed under this subsection, provided that:

b-8-a. The road cannot, as a practical matter, be located outside the wetland.

b-8-b. The road is designed and constructed to minimize adverse impacts upon the natural functions of the shoreland-wetland listed in sub. 1.

b-8-c. The road is designed and constructed with the minimum cross-sectional area practical to serve the intended use.

b-8-d. Road construction activities are carried out only in the immediate area of the roadbed.

b-8-e. Any wetland alteration shall be only that necessary to accommodate construction or maintenance of the road.

b-9. Construction and maintenance of a nonresidential building provided that:

b-9-a. The building cannot, as a practical matter, be located outside the wetland.

b-9-b. The building does not exceed 500 square feet in floor area.

b-9-c. Only limited filling and excavating necessary to provide structural support for the building shall be allowed.

b-10. Establishment and development of public and private parks and recreation areas, outdoor education areas, historic, natural and scientific areas, game refuges and closed areas, fish and wildlife habitat improvement projects, game bird and animal farms, wildlife preserves and public boat launching ramps, provided that:

b-10-a. Only limited filling and excavating necessary for the development of public boat launching ramps, swimming beaches or the construction of park shelters or similar structures shall be allowed.

b-10-b. Wetland alterations in game refuges and closed areas, fish and wildlife habitat improvement projects, game bird and animal farms and wildlife preserves shall be for the purpose of improving wildlife habitat or to otherwise enhance wetland values.

b-11. Construction and maintenance of electric and telephone transmission lines, water and gas distribution lines and sewage collection lines and related facilities and the construction and maintenance of railroad lines, provided that:

b-11-a. These utility facilities and lines cannot, as a practical matter, be located outside the wetland.

b-11-b. Only limited filling or excavating necessary for construction or maintenance shall be allowed.

b-11-c. Construction or maintenance shall be performed in a manner designed to minimize adverse impacts upon the natural functions of the shoreland-wetland specified in sub. 1.

c. Use of Boathouses and Houseboats. The use of a boathouse for human habitation and the construction or placement of a boathouse or fixed houseboat below the ordinary high-water mark of any navigable waters is prohibited.

d. Exemptions. d-1. Filled Wetlands Exempted. Wetlands filled prior to June 16, 1992, in a manner that affects their wetland characteristics to the extent that the area can no longer be defined as wetlands shall not be subject to the provisions of this section.

d-2. Wetlands Landward Of A Bulkhead Line Exempted. Wetlands located between the original ordinary high water mark and a bulkhead line established prior to May 7, 1982, under s. 30.11, Wis. Stats., and the Milwaukee harbor as defined in s. 118-80, shall not be subject to the provisions of this section.

295-1149. Board of Zoning Appeals Procedures. 1. ADDITIONAL STANDARDS FOR FLOODPLAIN OVERLAY ZONES. a. In addition to the criteria in s. 295-311-3-d, no floodplain variance for development or use of property in a floodplain overlay zone shall be granted by the board of zoning appeals unless the board finds that:

a-1. The floodplain variance will not cause any increase in the regional flood elevation.

a-2. The applicant has demonstrated good and sufficient cause for granting the floodplain variance.

a-3. The floodplain variance is the minimum relief necessary to allow the proposed development or use.

a-4. The floodplain variance will not result in additional threats to public safety or extraordinary expense, create a nuisance, cause fraud on or victimize the public, or conflict with existing local laws or ordinances.

a-5. The floodplain variance will not increase costs for rescue and relief efforts.

a-6. The floodplain variance shall not allow actions without the amendments to this subchapter or map or maps required in s. 295-1143.

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a-7. The floodplain variance shall not allow any alteration of an historic structure, including its use, which would preclude its continued designation as an historic structure.

b. Whenever the board grants a floodplain variance for development or use of property in a floodplain overlay zone, the board shall notify the applicant in writing that the floodplain variance may increase risks to life and property and that flood insurance premiums may increase up to \$25 per \$100 of coverage. A copy of this notice shall be maintained with the floodplain variance record.

2. ADDITIONAL PROCEDURES RELATING TO FLOODPLAIN AND SHORELAND-WETLAND OVERLAY ZONES. a. Certified Floodproofing Measures. No permit or floodplain variance for development in a floodplain overlay zone shall be issued until the applicant submits a plan certified by a registered professional engineer or architect that the proposed floodproofing measures will protect the structure or development to the flood protection elevation.

b. Hearing Notifications. Notice of a hearing relating to a request for a floodplain variance or a special use permit in a floodplain or shoreland-wetland overlay zone in accordance with s. 19.84, Wis. Stats. shall be mailed to the parties of interest and to the regional office of the Wisconsin department of natural resources at least 10 days in advance of the hearing. The notice shall specify the date, time, place and subject of the hearing.

c. Board Decisions. Every decision rendered by the board shall:

c-1. Be transmitted to the regional office of the Wisconsin department of natural resources within 10 days of the effective date of the decision.

c-2. State the specific facts which are the basis for the board's decision.

c-3. Either affirm, reverse, vary or modify the order, requirement, decision or determination appealed, in whole or in part, dismiss the appeal for lack of jurisdiction, or grant or deny the floodplain variance application.

c-4. Include the reasons for granting an appeal, describing the hardship demonstrated by the applicant in the case of a floodplain variance, clearly stated in the recorded minutes of the board proceedings.

d. Conditions of Approval. The board may attach such conditions as deemed necessary to further the intent and purposes of such districts. The conditions may include specifications for: type of shore cover; erosion controls; increased setbacks; specific sewage disposal and water supply facilities; landscaping and planting screens; period of operation; operational control; sureties; deed restrictions; location of piers, docks, parking areas and signs; and type of construction. To secure information upon which to base its determination, the board may require the applicant to furnish other pertinent information which is necessary to determine if the proposed use is consistent with the intent and purposes of such districts.

3. REVIEW APPEALS OF PERMIT DENIALS. The board shall review all data related to the appeal. This may include, but is not limited to, all of the following:

a. Permit application data listed in s. 295-1129.

b. Floodway or flood fringe determination data per s. 295-1127-4.

c. Data listed in s. 295-1121-2 where the applicant has not submitted this information to the commissioner.

d. Other data submitted to the board.

4. APPEAL RELATING TO INCREASE IN REGIONAL FLOOD ELEVATION. For an appeal of an administrative decision relating to an increase in the regional flood elevation, the board shall uphold the commissioner's decision if the board agrees with the data showing an increase in flood elevation. An increase may only be allowed after the flood profile and map have been amended and all appropriate legal arrangements with adversely affected property owners have been made, in accordance with s. 295-1143. The board may grant the appeal if it agrees that the data properly demonstrate that the project does not cause an increase in flood elevation, provided no other reasons for denial exist.

5. FLOODPLAIN BOUNDARY DISPUTES. The following procedures shall be used by the board in hearing and deciding disputes concerning floodplain district boundaries:

a. If a floodplain district boundary is established by approximate or detailed floodplain studies, the flood elevations or profiles shall prevail in locating the boundary.

b. In all cases, the person contesting the boundary location shall be given reasonable opportunity to present arguments and technical evidence to the board.

c. If the boundary is incorrectly mapped, the board shall direct the commissioner to initiate a map amendment in accordance with the procedures of s. 295-307.

295-1150. Compliance. 1. No structure or use within areas regulated by this subchapter shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged or altered without full compliance with the terms of these regulations and all other applicable regulations that apply to uses within the jurisdiction of these regulations.

2. Failure to obtain a floodplain development permit shall be a violation of these regulations and shall be punishable in accordance with s. 295-1151.

3. Floodplain development permits issued on the basis of plans and applications approved by the commissioner authorize only the use, and arrangement, set forth in the approved plans and applications, or amendments thereto if approved by the commissioner. Use, arrangement or construction contrary to that authorized shall be deemed a violation of this subchapter and punishable in accordance with s. 295-1151.

295-1151. Enforcement and Penalties. Any violation of the provisions of this subchapter by any person shall be unlawful and shall be referred to the city attorney, who shall expeditiously prosecute all such violators. A violator shall, upon conviction, forfeit to the city a penalty of not more than \$50, together with a taxable cost of such action. Each day of continued violations shall constitute a separate offense. Every violation of this subchapter is a public nuisance, and the creation of such nuisance may be enjoined, and the maintenance of such nuisance may be abated by action at suit of the city, the state, or any citizen thereof pursuant to s. 87.30, Wis. Stats.

295-1153. Severability. Should any portion of this subchapter be declared unconstitutional or invalid by a court of competent jurisdiction, the remainder of the subchapter shall not be affected.

For legislative history of this chapter, contact the Municipal Research Library.

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