
CHAPTER 100. FLOOD DAMAGE PREVENTION**ARTICLE 1. FINDINGS OF FACT, PURPOSE AND OBJECTIVES****8.61. Findings of Fact.**

(1) The flood hazard areas of the City of Frankenmuth are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(2) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated, or otherwise protected from flood damage also contribute to the flood loss.

(Ordinance No. 1982-5, 08-03-1982)

8.62. Statement of Purpose. It is the purpose of this Chapter to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- (1) To protect human life and health;
 - (2) To minimize expenditure of public money for costly flood control projects;
 - (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 - (4) To minimize prolonged business interruptions;
 - (5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines; streets and bridges located in areas of special flood hazard;
 - (6) To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;
 - (7) To insure that potential buyers are notified that property is in an area of special flood hazard; and
 - (8) To insure that those who occupy the areas of special flood hazard assume responsibility for their actions.
- (Ordinance No. 1982-5, 08-03-1982)

8.63. Methods of Reducing Flood Losses. In order to accomplish its purposes, this Chapter includes methods and provisions for:

- (1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

- (3) Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- (4) Controlling filling, grading, dredging, and other development which may increase flood damage; and,
- (5) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

(Ordinance No. 1982-5, 08-03-1982)

ARTICLE 2. DEFINITIONS

8.67. Definitions. Unless specifically defined below, words or phrases used in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable application.

- (1) Appeal means a request for a review of the Building Inspector's interpretation of any provision of this Chapter or a request for a variance.
- (2) Area of Shallow Flooding means a designated AO Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one (1) to three (3) feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and, velocity flow may be evident.
- (3) Area of Special Flood Hazard means the land in the flood plain within a community subject to a one percent (1%) or greater chance of flooding in any given year.
- (4) Base Flood means the flood having a one percent (1%) chance of being equaled or exceeded in any given year.
- (5) Development means any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations located within the area of special flood hazard.
- (6) Flood or Flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:
 - (a) The overflow of inland waters;
 - (b) The unusual and rapid accumulation or runoff of surface waters from any source.
- (7) Flood Insurance Rate Map (FIRM) means the official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
- (8) Flood Insurance Study means the official report provided in which the Federal Emergency Management Agency has provided flood profiles, as well as the Flood Boundary-Floodway Map and the water surface elevation of the base flood.

(9) Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

(10) Manufactured home means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For flood plain management purposes the term "manufactured home" also includes park trailers, travel trailers, and other similar vehicles placed on a site for greater than one hundred eighty (180) consecutive days. For insurance purposes the term "manufactured home" does not include park trailers, travel trailers, or other similar vehicles.

(11) New construction means structures for which the "start of construction" commenced on or after the effective date of this Chapter.

(12) Start of construction includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within one hundred eighty (180) days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

(13) Structure means a walled or roofed building, a mobile home, or a gas or liquid storage tank, that is principally above ground.

(14) Substantial improvement means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

- (a) Before the improvement or repair is started, or
- (b) If the structure has been damaged and is being restored, before the damage occurred.

For purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

The term does not, however, include either:

- (c) Any project for improvement of a structure to comply with existing State or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or
- (d) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

(16) Variance means a grant of relief from the requirements of this Chapter which permits construction in a manner that would otherwise be prohibited by this Chapter.

(Ordinance No. 1982-5, 08-03-1982; Ordinance No. 1987-2, Sec. 1 & 2, 03-03-1987; Ordinance No. 1997-08, 11-05-1997)

ARTICLE 3. GENERAL PROVISIONS

8.71. Lands to Which this Chapter Applies. This Chapter shall apply to all areas of special flood hazards within the jurisdiction of the City of Frankenmuth, Michigan.

(Ordinance No. 1982-5, 08-03-1982)

8.72. Basis for Establishing the Areas of Special Flood Hazard. The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled "The Flood Insurance Study for the City of Frankenmuth, Michigan" dated October 16, 1997, with accompanying Flood Insurance Rate Maps and Flood Boundary-Floodway Maps is hereby adopted by reference and declared to be a part of this Chapter.

(Ordinance No. 1982-5, 08-03-1982; Ordinance No. 1997-08, 11-05-1997)

8.73. Penalties for Noncompliance. No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this Chapter and other applicable regulations. Violation of the provisions of this Chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall upon conviction thereof be fined not more than five hundred dollars (\$500.00) or imprisoned for not more than ninety (90) days or both, for each violation, and in addition shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the City of Frankenmuth from taking such other lawful action as is necessary to prevent or remedy any violation.

(Ordinance No. 1982-5, 08-03-1982)

8.74. Abrogation and Greater Restrictions. This Chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter and other ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(Ordinance No. 1982-5, 08-03-1982)

8.75. Interpretation. In the interpretation and application of this Chapter, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the governing body; and
- (3) Deemed neither to limit nor repeal any other powers granted under State statutes.

(Ordinance No. 1982-5, 08-03-1982)

8.76. Warning and Disclaimer of Liability. The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Chapter does not imply that land outside the area of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City of Frankenmuth, any

officer or employee thereof, or the Federal Emergency Management Agency for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.
(Ordinance No. 1982-5, 08-03-1982)

ARTICLE 4. ADMINISTRATION

8.80. Establishment of Development Permit. A Development Permit shall be obtained before construction or development begins within any area of special flood hazard established in section 8.72. Application for a Development Permit shall be made on forms furnished by the Building Inspector and may include, but not be limited to: Plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing.

Specifically, the following information is required:

- (1) Elevation in relation to mean sea level, of the lowest floor (including basement) of all structures;
- (2) Elevation in relation to mean sea level to which any structure has been floodproofed;
- (3) Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in section 8.88(2); and,
- (4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

(Ordinance No. 1982-5, 08-03-1982)

8.81. Designation of the Building Inspector. The Building Inspector is hereby appointed to administer and implement this Chapter by granting or denying Development Permit applications in accordance with the provisions.

(Ordinance No. 1982-5, 08-03-1982)

8.82. Duties and Responsibilities of the Building Inspector. Duties of the Building Inspector shall include, but not be limited to:

- (1) Permit review.
 - (a) Review all Development Permits to determine that the permit requirements of this Chapter have been satisfied.
 - (b) Review all Development Permits to determine that all necessary permits have been obtained from those Federal, State or local governmental agencies from which prior approval is required.
 - (c) Review all Development Permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions of section 8.89(1) are met.
- (2) Use of Other Base Flood Data. When base flood elevation data has not been provided in accordance with section 8.72, Basis for Establishing the Areas of Special Flood Hazard, the Building Inspector shall obtain, review and reasonably utilize any base flood elevation and floodway data available from a Federal, State, or other source,

as criteria for requiring that new construction, substantial improvements, or other development in Zone A will comply with section 8.88(1) Specific Standards, Residential Construction, and section 8.88(2), Specific Standards, Nonresidential Construction.

(3) Information to be Obtained and Maintained.

(a) Obtain and record the actual elevation (in relation to mean sea level) of the lowest habitable floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

(b) For all new substantially improved floodproofed structures:

(i) Verify and record the actual elevation (in relation to mean sea level); and

(ii) Maintain the floodproofing certifications required in section 8.80(3).

(c) Maintain for public inspection all records pertaining to the provisions of this Chapter.

(4) Alteration of Watercourses.

(a) Notify adjacent communities and the State Department of Natural Resources prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

(b) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.

(5) Interpretation of FIRM Boundaries. Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in section 8.83.

(Ordinance No. 1982-5, 08-03-1982; Ordinance No. 1987-2, Section 3, 03-03-1987)

8.83. Variance Procedure.

(1) Appeal Board.

(a) The Zoning Board of Appeals as established by the City of Frankenmuth shall hear and decide appeals and requests for variances from the requirements of this Chapter.

(b) The Zoning Board of Appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the Building Inspector in the enforcement or administration of this Chapter.

(c) Those aggrieved by the decision of the Zoning Board of Appeals, or any taxpayer, may appeal such decision to the Circuit Court or court of like jurisdiction, as provided by the State of Michigan public law.

(d) In passing upon such applications, the Zoning Board of Appeals shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Chapter, and;

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- (i) The danger that materials may be swept onto other lands to the injury of others;
 - (ii) The danger to life and property due to flooding or erosion damage;
 - (iii) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (iv) The importance of the services provided by the proposed facility to the community;
 - (v) The necessity to the facility of a waterfront location, where applicable;
 - (vi) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - (vii) The compatibility of the proposed use with existing and anticipated development;
 - (viii) The relationship of the proposed use to the comprehensive plan and flood plain management program of that area;
 - (ix) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (x) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
 - (xi) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.
- (e) Upon consideration of the factors of section 8.83(1)(d) and the purposes of this Chapter, the Zoning Board of Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Chapter.
- (f) The Building Inspector shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Emergency Management Agency upon request.

(2) Conditions for Variances.

- (a) Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of one-half (½) acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing items (i)-(xi) in section 8.83(1)(d) have been fully considered. As the lot size increases beyond the one-half (½) acre, the technical justification required for issuing the variance increases.
- (b) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.
- (c) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(d) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(e) Variances shall only be issued upon:

(i) A showing of good and sufficient cause;

(ii) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

(iii) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause victimization of the public as identified in section 8.83(1)(d), or conflict with existing local laws or ordinances.

(f) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increase risk resulting from the reduced lowest floor elevation.

(Ordinance No. 1982-5, 08-03-1982)

ARTICLE 5. PROVISIONS FOR FLOOD HAZARD REDUCTION

8.87. General Standards. In all areas of special flood hazards the following standards are required:

(1) Anchoring. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

(2) Construction Materials and Methods.

(a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

(c) For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria: A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one (1) foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(3) Utilities.

(a) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

(b) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters; and

(c) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(d) Electrical heating, ventilation, plumbing, and air-conditioning equipment and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(4) Subdivision Proposals.

(a) All subdivision proposals shall be consistent with the need to minimize flood damage;

(b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage;

(c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage; and

(d) Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least fifty (50) lots or five (5) acres (whichever is less).

(Ordinance No. 1982-5, 08-03-1982; Ordinance No. 1987-2, Section 4, 5, 03-03-1987)

8.88. Specific Standards. In all areas of special flood hazards where base flood elevation data have been provided as set forth in section 8.72, Basis for Establishing the Areas of Special Flood Hazard, or in section 8.82(2), Use of Other Base Flood Data, the following standards are required:

(1) Residential Construction. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to or above base flood elevation.

(2) Nonresidential Construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including basement, elevated to the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

(a) Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

(b) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(c) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the official as set forth in section 8.82(3)(b).

(3) Manufactured Homes. Manufactured homes shall be prohibited from being located in all special flood hazard areas.

(Ordinance No. 1982-5, 08-03-1982; Ordinance No. 87-2, Section 6, 03-03-1987)

8.89. Floodways. Located within areas of special flood hazard established in section 8.72 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

- (1) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless a technical evaluation demonstrates that encroachments shall not result in any increase flood levels during the occurrence of the base flood discharge.
- (2) If section 8.89(1) is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article 5, Provisions for Flood Hazard Reduction.
- (3) Prohibit the placement of any manufactured homes.

(Ordinance No. 1982-5, 08-03-1982; Ordinance No. 1987-2, Section 7, 03-03-1987)

ARTICLE 6. VIOLATIONS; MUNICIPAL CIVIL INFRACTIONS

8.90. Violation; Municipal Civil Infraction. A person who violates any provision of this Chapter is responsible for a municipal civil infraction, subject to payment of a civil fine of not less than \$100.00 nor more than \$500.00, plus costs and other sanctions, for each violation. Repeat offenses shall be subject to increased fines as provided by Section 1.12(3)(b) of this Code. The Building Inspector or Superintendent of Public Works is hereby designated as the authorized City official to issue municipal civil infraction citations (directing alleged violators to appear in court) or municipal civil infraction violation notices (directing alleged violators to appear at the City of Frankenmuth Municipal Ordinance Violations Bureau) for violations under this Chapter as provided by this Code.

(Ordinance No. 2002-05, 08-07-2002)