

Chapter 42- Flood Plain Management

1. Purpose

- (1) It is the purpose of this Ordinance to protect human life, health, and property from flood conditions, to preserve the ability of floodplains to carry and discharge a base flood, and to significantly reduce potential hazards as a result of flood conditions within the City of Troy. Further, it is the purpose of this Ordinance to comply with the provisions and requirements of the National Flood Insurance Program, as constituted in accord with the National Flood Insurance Act, and subsequent enactments and rules and regulations.
- (2) Additional objectives of this Article include:
 - (a) Reducing public/private economic loss and social disruption as a result of flood conditions.
 - (b) Minimizing public expenditures for:
 - (i) flood control projects,
 - (ii) rescue and relief efforts in the aftermath of flooding,
 - (iii) repair of flood damaged public facilities and utilities, and
 - (iv) the redevelopment of flood damaged homes, neighborhoods, commercial and industrial areas;
 - (a) providing the Public with the most current floodplain information;

and

- (b) promote development patterns not subject to flood damage.

2. Definitions

- (1) Area of Special Flood Hazard is the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. This area is designated as Zone A or AE, AH, AO, AR, A99, V, OR VE on the Flood Insurance Rate Map.

(Rev. 10/06/2008; Eff. 01/16/2009)
- (2) Base Flood means the flood having a one percent chance of being equaled or exceeded in any given year; also known as the 100-year flood.
- (3) Development means any man-made modification to unimproved or improved real estate, including but not limited to: buildings, pools, decks or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations or storage of equipment or materials.
- (4) Encroachment means development or a structure which is located within the area of special flood hazard.

(02-01-1999)

Chapter 42- Flood Plain Management

- (5) 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 or tidal waters,
 - (b) the unusual and rapid accumulation or runoff of surface waters from any source.
- (6) Flood Damage means any damage to persons, materials, supplies, property or real estate caused by and as a direct result of flooding and /or the influence of flood conditions.
- (7) Boundary and Floodway Map means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazards have been designated as Zone A.
- (8) Flood Insurance Rate Map (FIRM) means an official map of a community, 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.
- (9) Flood Insurance Study (Flood Elevation Study) is an examination, evaluation and determination of flood hazards and corresponding water surface elevations.
- (10) Floodplain means that land area possessing the potential to be inundated by water from a flood or flooding.
- (11) Floodway or Regulatory Floodway means the designated area of a river or other watercourse and the adjacent land areas that must be reserved from development or construction activity in order to discharge the base flood without cumulatively increasing the water surface elevation beyond these areas.
- (12) New Construction means structures and/or development for which the “start of construction” commenced on or after the effective date of this ordinance, and includes any subsequent improvements to structures.
- (13) Structure means a walled and roofed building that is principally above ground.
- (14) Substantial Improvement means any repair, reconstruction, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent 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 the 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:

(02-01-1999)

Chapter 42- Flood Plain Management

- (a) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are the minimum necessary to assure safe living conditions, or
 - (b) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.
- (15) Watercourse means any natural or artificial drainage way wherein waters flow either continuously or intermittently, including any adjacent areas subject to flooding. Watercourses include both natural and man-made open ditches, streams, enclosed storm drains, lakes, and ponds.

3. Delineation of the Area of Special Flood Hazard

The area of special flood hazard shall overlay existing zoning districts delineated on the official City of Troy Zoning Map. The boundaries of the area of special flood hazard shall coincide with the boundaries of the areas indicated as within the limits of the 100-year flood in the most current report entitled "The Flood Insurance Study, City of Troy", as specified by the City Engineer, with accompanying Flood Insurance Rate Maps and Flood Hazard Boundary Maps and Floodway Maps. Within the area of special flood hazard a floodway may be designated. The boundaries of the floodway shall coincide with the floodway boundaries indicated on the Flood Hazard Boundary Maps and Floodway Maps. The Flood Insurance Study and accompanying maps are adopted by reference, appended, and declared to be a part of this ordinance.

4. Development Requirements

- (1) The owner shall not perform any development nor shall the owner allow others to perform any development of any property within an area of special flood hazard without first having secured a development permit(s). Necessary development permits shall have been issued by appropriate local, state and federal authorities, including but not limited to: a floodplain permit, approval, or letter of no authority from the Michigan Department of Environmental Quality.
- (2) Approval of any development is also subject to the provisions of this ordinance and all other requirements of the Troy City Code.

5. General Standards for Flood Hazard Reduction

- (1) All new construction and substantial improvements within an area of special flood hazard, shall be constructed by methods and practices that minimize flood damage including, but not limited to:
 - (a) be designed and anchored to prevent flotation, collapse, or lateral movement of the structure;
 - (b) be constructed with materials and utility equipment resistant to flood damage;
 - (c) all new and replacement water supply systems shall not allow infiltration of flood waters into the systems;

(02-01-1999)

Chapter 42- Flood Plain Management

- (d) all public utilities and facilities shall be designed, constructed and located to minimize or eliminate flood damage.
 - (e) drainage shall be provided to reduce damage to structures created by flood hazards.
- (2) The City Engineer or his/her representative shall review development proposals to determine compliance with the standards in this section.

6. Specific Base Flood Elevation Standards

- (1) On the basis of the most recent available base flood elevation data the following standards shall apply in the area of special flood hazard:

- (a) all new construction and substantial improvements of residential structures shall have the lowest floor, including basement, elevated to a minimum of one (1) foot above the base flood level.

(Rev. 10/06/2008; Eff. 01/16/2009)

- (b) all new construction and substantial improvements of nonresidential structures shall have either:

- (i) the lowest floor, including basement, elevated to a minimum of one (1) foot above the base flood elevation; or

(Rev. 10/06/2008; Eff. 01/16/2009)

- (ii) be constructed such that below base flood elevation, together with attendant utility and sanitary facilities:

- (a) the structure is watertight, with walls impermeable to the passage of water; and

- (b) is constructed with structural components having the ability to neutralize hydrostatic and hydrodynamic loads; and

- (c) the effects of buoyancy must be resisted.

A registered professional engineer or architect shall certify that the standards of this subparagraph are satisfied, and that the flood proofing methods employed are adequate to withstand the flood depth, pressures, velocities, impact and uplift forces and other factors associated with a base flood in the location of the structure. Such certification shall be submitted to the City Engineer, and shall indicate the elevation to which the structure is flood proofed.

- (2) The most recent base flood elevation data received from the Federal Emergency Management Agency shall take precedence over data from other sources.

(02-01-1999)

Chapter 42- Flood Plain Management

7. Flood Zone Development Standards

- (1) New construction, substantial improvements and all other development, shall be prohibited within areas of special flood hazard except where the owner demonstrates that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation and/or decrease the flood carrying capacity of a base flood. In addition, the provisions of subsection 2) shall be applied to land situated within the floodway.
- (2) Encroachments, new construction, substantial improvements and development shall be prohibited within the floodway. Exception to this prohibition shall only be made upon certification by a registered professional engineer or the Michigan Department of Environmental Quality that the proposed development will not result in any increases in base flood elevation during a base flood discharge.

8. Disputes and Conflict

- (1) Where there are disputes as to the location of an area of special flood hazard boundary, the property owner or permit applicant shall provide field measurements, topographic data, and any other specified data to assist the designated state and/or federal agencies in the resolution of the dispute. The property owner or permit applicant shall be responsible for the application fees, engineering, surveying, or other costs associated with the preparation of materials required to assist with the area of special flood hazard boundary dispute.
- (2) The requirements of the Floodplain Management ordinance apply to all development within the area of special flood hazard. If there is a conflict between the Flood Plain Management ordinances and other provisions of the City of Troy Ordinances, the most stringent requirements shall be applied, to accomplish the intent of this ordinance.

9. Disclaimer of Liability

The degree of flood protection required by this Ordinance is considered reasonable for regulatory purposes and is based upon National and State regulations and standards. Larger floods and increased flood elevations may occur on occasions. Approval of the use of land, construction and/or development under this Ordinance shall not be considered a guarantee or warranty of safety or damage from flood events. This Ordinance does not imply that areas outside the area of special flood hazard will be free from flood damage, nor does this Ordinance create liability on the part of the City of Troy or any officer or employees thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made thereunder.

(02-01-1999)

10. Agency Designated

Pursuant to the provisions of the state construction code, in accordance with Section 8b(6) of Act 230, of the Public Acts of 1972, as amended, the Building Department of the City of Troy is hereby designated as the enforcing agency to discharge the responsibility of the City of Troy under Act 230, of the Public Acts of 1972, as amended, State of Michigan. The City of Troy assumes responsibility for the administration and enforcement of said Act through out its corporate limits.

Chapter 42- Flood Plain Management

(09-18-2006)

11. Code Appendix Enforced

Pursuant to the provisions of the state construction code, in accordance with Section 8(b) of Act 230, of the Public Acts of 1972, as amended, Appendix G of the Michigan Building Code shall be enforced by the enforcing agency within the City of Troy.

(09-18-2006)

12. Designation of Regulated Flood Prone Hazard Areas

The Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) entitled Oakland County Michigan and Incorporated Areas and dated January 16th, 2009 and the Flood Insurance Rate Maps(s) (FIRMS) panel numbers of 26125C0527F, 0529F, 0531F, 0532F, 0533F, 0534F, 0537F, 0541F, 0551F, 0552F dated September 29, 2006 and 0542G, 0553G, 0554G, 0561G, 0562G dated January 16th, 2009 are adopted by reference and declared to be a part of Section 1612.3 of the Michigan Building Code.

(Rev. 10/06/2008; Eff. 01/16/2009)

13. (1) Except as otherwise provided in specific sections of this Chapter, a violation of any section of Chapter 42 is a Municipal Civil Infraction subject to the provisions of Chapter 100 of the Code of the City of Troy. Sanctions for each violation of Chapter 42 shall include a fine of not more than \$500.00, costs, damages and injunctive orders as authorized by Chapter 100.
- (2) A default in the payment of a civil fine or costs ordered under this ordinance or an installment of the fine or cost may be remedied by any means authorized under the Revised Judicature Act of 1961, being Section 600.10 to 600.9947 of the Michigan Compiled Laws, as amended.
- (3) The owner of any land, premises or part thereof, where any condition in violation of this Chapter shall exist or shall be created, and who has assisted knowingly in the commission of such violation shall be responsible for a separate offense and upon a finding or admission of responsibility for such offense thereof shall be responsible for payment of fines, costs and damages and subject to each applicable injunctive order.
- (4) A separate offense shall be deemed committed upon each day during or when a violation occurs or continues.
- (5) The rights and remedies provided herein are cumulative and in addition to any other remedies provided by law.

(Rev. 10/06/2008; Eff. 01/16/2009)