



CITY COUNCIL ACTION REPORT

October 9, 2006

TO: Phillip L. Nelson, City Manager

FROM: Brian Murphy, Assistant City Manager/Services
Steven J. Vandette, City Engineer

SUBJECT: Second Amendment to Chapter 42 – Flood Plain Management
As Required by FEMA for Participation in National Flood Insurance Program

Background:

- On September 18, 2006 City Council approved Resolution #2006-09-372 that amended Chapter 42, Flood Plain Management, for the purpose of adopting the new Digital Flood Insurance Rate Maps (DFIRMS).
- Although Chapter 42 refers to the 100-year flood boundaries as those in “the most current report” the Michigan Department of Environmental Quality (MDEQ) has advised us that they would prefer that the specific map panel numbers be identified in the ordinance. A revision to Section 12 of Chapter 42, adding map panel numbers 26125C0527F, 0529F, 0531F, 0532F, 0533F, 0534F, 0537F, 0541F, 0542F, 0551F, 0552F, 0553F, 0554F, 0561F, and 0562F will satisfy this requirement.
- In addition, MDEQ has requested a resolution be adopted to affirm the city’s responsibility to Manage Floodplain Development for the National Flood Insurance Program under various state laws and City Ordinance Chapter 42, as amended.

Financial Considerations:

- There are no financial considerations associated with this item.

Legal Considerations:

- Adoption of amendments to Chapter 42 and the resolution to Manage Floodplain Development for the National Flood Insurance Program are required for participation in the program.
- Maintain property owner eligibility for new and renewal of flood insurance policies.

Policy Considerations:

- Maintain the city’s participation in the program, which began in 1983 (Goal VI).

- Reduce flood hazards to persons and property, reduce public expenditures precipitated by flood damage and provide for the availability of flood insurance and federal funds or loans within the community (Goal VI).

Options:

- It is recommended that Council approve the proposed resolution and amendments to Chapter 42 of the City Ordinance Code.

Approved for Submittal:

Phillip L. Nelson, City Manager

Approved as to Form and Legality:

Lori Grigg Bluhm, City Attorney

CITY OF TROY
AN ORDINANCE TO AMEND
CHAPTER 42 OF THE CODE
OF THE CITY OF TROY

The City of Troy ordains:

Section 1. Short Title

This Ordinance shall be known and may be cited as a second amendment to Chapter 42 of the Code of the City of Troy.

Section 12. Amendment

Chapter 42, Floodplain Management Ordinance designating flood prone hazard areas, is hereby amended to read as follows: (Underlining denotes additions)

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 September 29 2006. and the Flood Insurance Rate Maps(s) (FIRMS) panel numbers of 26125C0527F, 0529F, 0531F, 0532F, 0533F, 0534F, 0537F, 0541F, 0542F, 0551F, 0552F, 0553F, 0554F, 0561F, 0562F, dated September 29 2006 are adopted by reference and declared to be a part of Section 1612.3 of the Michigan Building Code.

Section 3. Repeals.

All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

Section 4. Savings

All proceedings pending, and all rights and liabilities existing, acquired or incurred, at the time this Ordinance takes effect, are hereby saved. Such proceedings may be consummated under and according to the ordinance in force at the time such proceedings were commenced. This ordinance shall not be construed to alter, affect, or abate any pending prosecution, or prevent prosecution hereafter instituted under any ordinance specifically or impliedly repealed or amended by this ordinance adopting this penal regulation, for offenses committed prior to the effective date of this ordinance; and new prosecutions may be instituted and all prosecutions pending at the effective date of this ordinance may be continued, for offenses committed prior to the effective date of this ordinance, under and in accordance with the provisions of any ordinance in force at the time of the commission of such offense.

Section 5. Severability Clause

Should any word, phrase, sentence, paragraph or section of this Ordinance be held invalid or unconstitutional, the remaining provision of this ordinance shall remain in full force and effect.

Section 6. Effective Date

This Ordinance shall become effective ten (10) days from the date hereof or upon publication, whichever shall later occur.

This Ordinance is enacted by the Council of the City of Troy, Oakland County, Michigan, at a regular meeting of the City Council held at City Hall, 500 W. Big Beaver, Troy, MI, on the _____ day of _____, 2006.

Louise E. Schilling, Mayor

Tonni L. Bartholomew, MMC
City Clerk

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;
- and
- (a) providing the Public with the most current floodplain information;
 - (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 Zones A1-A30 on the Flood Insurance Rate Map.
- (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.

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- (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:

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- (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;

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- (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 or above the base flood level. This requirement shall apply for residential properties removed from the area of special flood hazard by the placement of fill, regardless of FEMA Letter of Map Revision determinations.
 - (b) all new construction and substantial improvements of nonresidential structures shall have either:
 - (i) the lowest floor, including basement, elevated to or above the base flood elevation; or
 - (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 floodproofing 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 floodproofed.

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

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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.

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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.

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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.

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 September 29 2006. and the Flood Insurance Rate Maps(s) (FIRMS) panel numbers of 26125C0527F, 0529F, 0531F, 0532F, 0533F, 0534F, 0537F, 0541F, 0542F, 0551F, 0552F, 0553F, 0554F, 0561F, 0562F, dated September 29 2006 are adopted by reference and declared to be a part of Section 1612.3 of the Michigan Building Code.

COMMUNITY RESOLUTION TO
MANAGE FLOODPLAIN DEVELOPMENT
FOR THE NATIONAL FLOOD INSURANCE PROGRAM

WHEREAS, the Community of the City of Troy currently participates in the Federal Emergency Management Agency's (FEMAs) National Flood Insurance Program (NFIP) by complying with the program's applicable statutory and regulatory requirements for the purposes of significantly reducing flood hazards to persons, reducing property damage, and reducing public expenditures, and providing for the availability of flood insurance and federal funds or loans within its community, and

WHEREAS, the NFIP requires that floodplain management regulations must be present and enforced in participating communities, and utilize the following definitions which also apply for the purposes of this resolution:

1. Flood or Flooding means:
 - a. A general and temporary condition of partial or complete inundation of normally dry land areas from: 1) the overflow of inland or tidal waters, 2) the unusual and rapid accumulation or runoff of surface waters from any source, 3) mudflows, and
 - b. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly 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 flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding, as defined in paragraph (a)(1) of this definition.
2. Flood Hazard Boundary Map (FHBM) means an official map of a community, issued by the FEMA, where the boundaries of the flood, mudslide (i.e., mudflow) related erosion areas having special hazards have been designated as Zone A, M, and/or E. (This is to be included only if the FEMA has issued a FHBM for the community).
3. Floodplain means any land area susceptible to being inundated by water from any source (see definition of flooding).
4. Floodplain management means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works, and floodplain management regulations.
5. Floodplain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance), and other applications of police power that provide standards for the purpose of flood damage prevention and reduction.
6. Structure means a walled and roofed building that is principally above ground, gas or liquid storage facility, as well as a mobile home or manufactured unit.

WHEREAS, the Stille-Derossett-Hale Single State Construction Code Act”, Act No. 230 of the Public Acts of 1972, as amended (construction code act), along with its authorization of the state construction code composed of the Michigan Residential Code and the Michigan Building Code [and its Appendices (specifically Appendix G if adopted by the community)] contains floodplain development and management regulations that comply with the FEMA NFIP minimum floodplain management criteria for flood prone areas, as detailed in Title 44 of the Code of Federal Regulations (44 CFR), Section 60.3, and

WHEREAS, by an ordinance adoption action dated Sept. 18 2006, the community accepted the responsibility to administer, apply, and enforce the provisions of the construction code act and the state construction code, specifically the Michigan Residential Code and the Michigan Building Code, to all construction within its community boundaries, and [Community B has agreed to enforce those codes on behalf of Community A (if appropriate)]

NOW THEREFORE, to maintain eligibility and continued participation in the NFIP,

1. The community directs its designated enforcing agent for the construction code act, the Building Department, to administer, apply, and enforce the floodplain management regulations as contained in the state construction code (including Appendix G, if adopted) and to be consistent with those regulations by:
 - a. Obtaining, reviewing, and reasonably utilizing flood elevation data available from federal, state, or other sources pending receipt of data from the FEMA to identify the flood hazard area and areas with potential flooding.
 - b. Ensuring that all permits necessary for development in floodplain areas have been issued, including a floodplain permit, approval, or letter of no authority from the Michigan Department of Environmental Quality under the floodplain regulatory provisions of Part 31, "Water Resources Protection," of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.
 - c. Reviewing all permit applications to determine whether the proposed building sites will be reasonably safe from flooding. Where it is determined that a proposed building will be located in a flood hazard area or special flood hazard area, the construction code act enforcing agent shall implement the following applicable codes according to their terms:
 1. Floodplain management regulation portions and referenced codes and standards of the current Michigan Residential Code.
 2. Floodplain management regulation portions and referenced codes and standards of the current Michigan Building Code.
 3. Appendix G of the current Michigan Building Code, if adopted.
 - d. Reviewing all proposed subdivisions to determine whether such proposals are reasonably safe from flooding and to ensure compliance with all applicable floodplain management regulations.

- e. Assisting in the delineation of flood hazard areas; providing information concerning uses and occupancy of the floodplain or flood-related erosion areas, maintaining floodproofing and lowest floor construction records, cooperating with other officials, agencies, and persons for floodplain management.
 - f. Advising FEMA of any changes in community boundaries, including appropriate maps.
 - g. Maintaining records of new structures and substantially improved structures concerning any certificates of floodproofing, lowest floor elevation, basements, floodproofing, and elevations to which structures have been floodproofed.
2. The community assures the Federal Insurance Administrator (Administrator) that it intends to review, on an ongoing basis, all amended and revised FHBMs and Flood Insurance Rate Maps (FIRMs) and related supporting data and revisions thereof and revisions of 44 CFR, Part 60, Criteria for Land Management and Use, and to make such revisions in its floodplain management regulations as may be necessary to continue to participate in the program.
 3. The community further assures the Administrator that it will adopt the current effective FEMA Flood Insurance Study (FIS), FHBMs, and/or the FIRMs by reference within its Floodplain Management Map Adoption Ordinance or similarly binding ordinance documentation.

Community: _____ Date Passed: _____

Officer Name: _____ Title: _____

Signature: _____ Date: _____

Witness Name: _____ Title: _____

Signature: _____ Date: _____