

Title 18

FLOOD HAZARD AREAS

**CHAPTER 18.04
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**CHAPTER 18.08
PURPOSE**

Sections:

18.08.010

18.08.010

This Ordinance is enacted pursuant to the police powers granted to this City by Illinois Revised Statutes, Chapter 24, Sections 1-2-1, 11-12-12, 11-30-8, and 11-31-2. The purpose of this Ordinance is to maintain this City's eligibility in the National Flood Insurance Program; to minimize potential losses due to periodic flooding including loss of life, loss of 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; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources. This Ordinance is adopted in order to accomplish the following specific purposes:

- A. To meet the requirements of Chapter 19, paragraph 65(g), of the Illinois Revised Statutes, An Act in Relation to the Regulation of the Rivers, Lakes and Streams of the State of Illinois, approved June 10, 1911, as amended.
- B. To assure that new development does not increase the flood or drainage hazards to others, or create unstable conditions susceptible to erosion.
- C. To protect new buildings and major improvements to building from flood damage.
- D. To protect human life and health from the hazards of flooding.
- E. To lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged public facilities and utilities, and flood rescue and relief operations.
- F. To make federally subsidized flood insurance available for property in the City by fulfilling the requirements of the National Flood Insurance Program.
- G. To comply with the rules and regulations of the National Flood Insurance Program codified as 44CFR 59-79, as amended.
- H. To protect, conserve, and promote the orderly development of land and water resources.
- I. To preserve the natural hydrologic and hydraulic functions of watercourses and flood plains and to protect water quality and aquatic habitats.
- J. To preserve the natural characteristics of stream corridors in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.

**CHAPTER 18.12
DEFINITIONS**

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18.12.010 Generally

For the purpose of this Ordinance, the following definitions are adopted:

18.12.020 Act

"Act" AN ACT in relation to regulation of the rivers, lakes and streams of the State of Illinois", Il. Rev. Stat. 1987, Ch. 19, par. 52 et seq.

18.12.030 Applicant

"Applicant" Any person, firm, corporation or agency which submits an application.

18.12.040 Appropriate Use

"Appropriate Use" Only uses of the regulatory floodway that are permissible and will be considered for permit issuance. The only uses that will be allowed are as specified in Section 18.32.030.

18.12.050 Base Flood

"Base Flood" The flood having a one-percent probability of being equaled or exceeded in any given year. The base flood is also known as the 100-year frequency flood event. Application of the base flood elevation at any location as defined in Section 18.24.

18.12.060 Building

"Building" A structure that is principally above ground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, mobile home or a prefabricated building. This term also includes recreational vehicles and travel trailers to be installed on a site for more than 180 days, unless they are fully licensed and ready for highway use.

18.12.070 Channel

"Channel" Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or man-made drainageway, which has a definite bed and banks or shoreline, in or into which surface or groundwater flows, either perennially or intermittently.

18.12.080 Channel Modification

"Channel Modification" Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, rip-rapping or other armoring, widening, deepening, straightening, relocating, lining and significant removal of bottom or woody vegetation. Channel

modification does not include the clearing of dead or dying vegetation, debris, or trash from the channel. Channelization is a severe form of channel modification typically involving relocation of the existing channel (e.g. straightening).

18.12.090 Compensatory Storage

"Compensatory Storage" An artificially excavated, hydraulically equivalent volume of storage within the SFHA used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the flood plain. The uncompensated loss of natural flood plain storage can increase off-site floodwater elevations and flows.

18.12.100 Conditional Approval of a Regulatory Floodway Map Change

"Conditional Approval of a Regulatory Floodway Map Change" Preconstruction approval by DWR and the Federal Emergency Management Agency of a proposed change to the floodway map. This preconstruction approval, pursuant to this Part, gives assurance to the property owner that once an Appropriate Use is constructed according to permitted plans, the floodway map can be changed, as previously agreed, upon review and acceptance of as-built plans.

18.12.110 Conditional Letter of Map Revision (CLOMR)

"Conditional Letter of Map Revision" A letter which indicates that the Federal Emergency Management Agency will revise base flood elevations, flood insurance rate zones, flood boundaries or floodway as shown on an effective Flood Hazard Boundary Map or Flood Insurance Rate map, once the as-built plans are submitted and approved.

18.12.120 Dam

"Dam" All obstructions, wall embankments or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of storing or diverting water or creating a pool. Underground water storage tanks are not included.

18.12.130 Development

"Development" Any man-made change to real estate including:

- A. Construction, reconstruction, repair, or placement of a building or any addition to a building.
- B. Installing a manufactured home on a site, preparing a site for a manufactured home, or installing a travel trailer on a site for more than 180 days. If the travel trailer or recreational vehicle is on the site for less than 180 days, it must be fully licensed and ready for highway use.

- C. Drilling, mining, installing utilities, construction of roads, bridges, or similar projects.
- D. Demolition of a structure or redevelopment of a site.
- E. Construction or erection of levees, walls, fences, dams, culverts; channel modification; filling, dredging, grading excavating, paving, or other non-agricultural alterations of the ground surface; storage of materials; deposit of solid or liquid waste;
- F. Any other activity of man that might change the direction, height, or velocity of flood or surface water, including extensive vegetation removal;

Development does not include maintenance of existing buildings and facilities such as re-roofing or re-surfacing or roads when there is no increase in elevation, or gardening, plowing, and similar agricultural practices that do not involve filling, grading, or construction of levees.

18.12.140 DWR

"DWR" Illinois Department of Transportation, Division of Water Resources.

18.12.150 Elevation Certificates

"Elevation Certificates" A form published by the Federal Emergency Management Agency that is used to certify the elevation to which a building has been elevated.

18.12.160 Exempt Organizations

"Exempt Organizations" Organizations which are exempt from this ordinance per the Ill. Rev. Stat. including state, federal or local units of government.

18.12.170 FEMA

"FEMA" Federal Emergency Management Agency and its regulations at 44 CFR 59-79 effective as of October 1, 1986. This incorporation does not include any later editions or amendments.

18.12.180 Flood

"Flood" A general and temporary condition of partial or complete inundation or normally dry land areas from overflow of inland or tidal waves, or the unusual and rapid accumulation or runoff of surface waters from any source.

18.12.190 Flood Frequency

"Flood Frequency" A period of years, based on a statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded.

18.12.200 Flood Fringe

"Flood Fringe" That portion of the flood plain outside of the regulatory floodway.

18.12.210 Flood Insurance Rate Maps (FIRM)

"Flood Insurance Rate Maps (FIRM)" A map prepared by the Federal Emergency Management Agency that depicts the special flood hazard area (SFHA) within a community. This map includes insurance rate zones and flood plains and may or may not depict floodways.

18.12.220 Flood Plain

"Flood Plain" That land typically adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation. Flood plains may also include detached Special Flood Hazard Areas, ponding areas, etc. The flood plain is also known as the Special Flood Hazard Area (SFHA). The flood plains are those lands within the jurisdiction of the City that are subject to the inundation by the base flood or 100-year frequency flood. The SFHA's of the City are generally identified as such on the Flood Insurance Rate Map of the City prepared by the U.S. Department of Housing and Urban Development and dated November 15, 1979. The SFHA's of those parts of unincorporated McHenry County that are within the extraterritorial jurisdiction of the City or that may be annexed into the City are generally identified as such on the Flood Insurance Rate map prepared for McHenry County by the Federal Emergency Management Agency and dated September 30, 1981.

18.12.230 Floodproofing

"Floodproofing" Any combination of structural and non-structural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

18.12.240 Floodproofing Certificate

"Floodproofing Certificate" A form published by the Federal Emergency Management Agency that is used to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

18.12.250 Flood Protection Elevation (FPE)

"Flood Protection Elevation (FPE)" The elevation of the base flood or 100-year frequency flood plus one foot of freeboard at any given location in the SFHA.

18.12.260 Freeboard

"Freeboard" An increment of elevation added to the base flood elevation to provide a factor of safety for uncertainties in calculations, unknown localized conditions, wave actions and unpredictable effects such as those caused by ice or debris jams.

18.12.270 Historic Structure

"Historic Structure" Any structure that is:

- 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 historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- C. Individually listed on the State inventory of historic places by the Illinois Historic Preservation Agency.
- D. Individually listed on a local inventory of historic places that has been certified by the Illinois Historic Preservation Agency. (Rev. 11-89)

18.12.280 Hydrologic and Hydraulic Calculations

"Hydrologic and Hydraulic Calculations" Engineering analysis which determine expected flood flows and flood elevations based on land characteristics and rainfall events.

18.12.290 Letter of Map Amendment (LOMA)

"Letter of Map Amendment (LOMA)" Official determination by FEMA that a specific structure is not in a 100-year flood zone; amend the effective Flood Hazard Boundary Map or FIRM.

18.12.300 Letter of Map Revision (LOMR)

"Letter of Map Revision (LOMR)" Letter that revises base flood or 100-year frequency flood elevations, flood Insurance rate zones, flood boundaries or floodways as shown on an effective FHBM or FIRM.

18.12.310 Manufactured Home

"Manufactured Home" A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle". (Rev. 11-89)

18.12.320 Manufactured Home Park or Subdivision

"Manufactured Home Park or Subdivision" A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

18.12.330 Mitigation

"Mitigation" Mitigation includes those measures necessary to minimize the negative effects which flood plain development activities might have on the public health, safety and welfare. Examples of mitigation include compensatory storage, soil erosion and sedimentation control, and channel restoration.

18.12.340 NGVD

"NGVD" National Geodetic Vertical Datum of 1929. Reference surface set by the National Geodetic Survey deduced from a continental adjustment of all existing adjustments in 1929.

18.12.350 Public Flood Control Project

"Public Flood Control Project" A flood control project which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures which includes a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing, in whole or in part, of a flood control project by persons or parties who are not public agencies.

18.12.360 Publicly Navigable Waters

"Publicly Navigable Waters" All streams and lakes capable of being navigated by watercraft.

18.12.370 Recreational Vehicle or Travel Trailer

"Recreational Vehicle or Travel Trailer" A vehicle which is:

- A. Built on a single chassis;
- B. 400 square feet or less when measured at the largest horizontal projection;
- C. Designed to be self propelled or permanently towable by a light duty truck; and,

- D. Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

18.12.380 Registered Land Surveyor

"Registered Land Surveyor" A land surveyor registered in the State of Illinois, under the Illinois Land Surveyors Act (Ill. Rev. Stat. 1987, ch. 111, pars. 3201-3234)

18.12.390 Registered Professional Engineer

"Registered Professional Engineer" An engineer registered in the State of Illinois, under the Illinois Professional Engineering Act (Ill. Rev. Stat. 1987, ch. 111, pars. 5101-5137).

18.12.400 Regulatory Floodway

"Regulatory Floodway" The channel, including onstream lakes, and that portion of the flood plain adjacent to a stream or watercourse as designated by DWR,, which is needed to store and convey the existing and anticipated future 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to the loss of flood conveyance or storage, and no more that a 10% increase in velocities. The regulatory floodways are designated for Mokeler Creek on the Flood Boundary and Floodway Map prepared by the U.S. Department of Housing and Urban Development and dated November 15, 1979. To locate the regulatory floodway boundary on any site, the regulatory floodway boundary should be scaled off the regulatory floodway map and located on a site plan, using reference marks common to both maps. Where interpretation is needed to determine the exact location of the regulatory floodway boundary, the Division should be contacted for the interpretation.

18.12.410 Repair, Remodeling or Maintenance

"Repair, Remodeling or Maintenance" Development activities which do not result in any increase in the outside dimensions of a building or any changes to the dimensions of a structure.

18.12.420 Retention/Detention Facility

"Retention/Detention Facility" A retention facility stores stormwater runoff without a gravity release. A detention facility provides for storage of stormwater runoff and controlled release of this runoff during and after a flood or storm.

18.12.430 Riverine SFHA

"Riverine SFHA" Any SFHA subject to flooding from a river, creek, intermittent stream, ditch, on stream lake system or any other identified channel. This term does not include areas subject to flooding from lakes, ponding areas, areas of sheet flow, or other areas not subject to overbank flooding.

18.12.440 Runoff

"Runoff" The water derived from melting snow or rain falling on the land surface, flowing over the surface of the ground or collected in channels or conduits.

18.12.450 Special Flood Hazard Area (SFHA)

"Special Flood Hazard Area (SFHA)" Any base flood area subject to flooding from a river, creek, intermittent stream, ditch, or any other identified channel or ponding and shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map as Zone A, AO, A1-30, AE, A99, AH, VO, V30, VE, V, M, or E.

18.12.460 Structure

"Structure" The results of a man made change to the land constructed on or below the ground, including the construction, reconstruction or placement of a building or any addition to a building; installing a manufactured home on a site; preparing a site for a manufactured home or installing a travel trailer on a site for more than 180 days, unless they are fully licensed and ready for highway use.

18.12.470 Substantial Improvement

"Substantial Improvement" Any repair, reconstruction or 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 (1) 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 of (2) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

18.12.480 Transition Section

"Transition Section" Reaches of the stream or floodway where water flows from a narrow cross-section to a wide cross-section or vice versa.

CHAPTER 18.16
HOW TO USE THIS ORDINANCE

Sections:

18.16.010 Generally

18.16.010 Generally

The Professional Engineer shall be responsible for fulfilling all of the duties listed in Chapter 18.20.

- A. To fulfill those duties, the Professional Engineer should first use the criteria listed in Chapter 18.24, Base Flood Elevations, to determine whether the development site is located within a floodplain. Once it has been determined that a site is located within a floodplain, the Professional Engineer must determine whether the development site is within a flood fringe, a regulatory floodway, or within a SFHA or flood plain on which no floodway has been identified. If the site is within a flood fringe, the Professional Engineer shall require that the minimum requirements of Chapter 18.28 be met. If the site is located within a SFHA or flood plain for which no detailed study has been completed and approved, the Professional Engineer shall require that the minimum requirements of Chapter 18.36 be met. If the site is located in a floodway, the Professional Engineer shall require that the minimum requirements of Chapter 18.32 be met.
- B. In addition, the general requirements of Chapter 18.40 be met for all developments meeting the requirements of Chapter 18.28, 18.32 or 18.36. The Professional Engineer shall assure that all subdivision proposals shall meet the requirements of Chapter 18.44.
- C. If a variance is to be granted for a proposal, the Professional Engineer shall review the requirements of Chapter 18.48 to make sure they are met. In addition, the Professional Engineer shall complete all notification requirements.
- D. In order to assure that property owners obtain permits as required in this Ordinance, the Professional Engineer may take any and all actions as outlined in Chapter 18.56.

**CHAPTER 18.20
DUTIES OF THE ENFORCEMENT OFFICIAL(S)**

Sections:

- 18.20.010 Generally
- 18.20.020 Determining the Flood Plain Designation
- 18.20.030 Professional Engineer Review
- 18.20.040 Dam Safety Requirements
- 18.20.050 Other Permit Requirements
- 18.20.060 Plan Review and Permit Issuance
- 18.20.070 Inspection Review
- 18.20.080 Elevation and Floodproofing Certificates
- 18.20.090 Records for Public Inspection
- 18.20.100 State Permits
- 18.20.110 Cooperation with Other Agencies
- 18.20.120 Promulgate Regulations

18.20.010 Generally

The Building Commissioner shall be responsible for the general administration and enforcement of this Ordinance which shall include the following:

18.20.020 Determining the Flood Plain Designation

Check all new development sites to determine whether they are in a Special Flood Hazard Area (SFHA). If they are in a SFHA, determine whether they are in a floodway, flood fringe or a flood plain on which a detailed study has not been conducted which drains more than one (1) square mile.

18.20.030 Professional Engineer Review

If the development site is within a floodway or in a flood plain on which a detailed study has not been conducted which drains more than one (1) square mile then the permit shall be referred to a registered professional engineer (P.E.) under the employ or contract of the City for review to ensure that the development meets the requirements of Chapter 18.32. In the case of an Appropriate Use, the P.E. shall state in writing that the development meets the requirements of Chapter 18.32.

18.20.040 Dam Safety Requirements

Ensure that an DWR Dam Safety permit has been issued or a letter indicating no Dam Safety permit is required, if the proposed development activity includes construction of a dam as defined in Section 18.12.120. Regulated dams may include weirs, restrictive culverts or impoundment structures.

18.20.050 Other Permit Requirements

Ensure that any and all required federal, state and local permits are received prior to the issuance of a flood plain development permit.

18.20.060 Plan Review and Permit Issuance

Ensure that all development activities within the SFHAs of the jurisdiction of the City meet the requirements of this Ordinance and issue a flood plain development permit in accordance with the provisions of this Ordinance and other regulations of this community when the development meets the conditions of this Ordinance.

18.20.070 Inspection Review

Inspect all development projects before, during and after construction to assure proper elevation of the structure and to ensure they comply with the provisions of this Ordinance.

18.20.080 Elevation and Floodproofing Certificates

Maintain in the permit files an Elevation Certificate certifying the elevation of the lowest floor (including basement) of a residential or non-residential building has been floodproofed, using a Floodproofing Certificate, for all buildings subject to Chapter 18.40 of this Ordinance for public inspection and provide copies of same;

18.20.090 Records for Public Inspection

Maintain for public inspection and furnish upon request base flood data, SFHA and regulatory floodway maps, copies of federal or state permit documents, variance documentation, Conditional Letter of Map Revision, Letter of Map Amendment and "as built" elevation and floodproofing or elevation and floodproofing certificates for all buildings constructed subject to this Ordinance.

18.20.100 State Permits

Ensure that construction authorization has been granted by the Illinois Division of Water Resources, for all development projects subject to Chapters 18.32 and 18.36 of this Ordinance, unless enforcement responsibility has been delegated to the City. Upon acceptance of this Ordinance by DWR and FEMA, responsibility is hereby delegated to the City as per 92 Ill. Adm. Code 708 for construction in the regulatory floodway and flood plain when floodways have not been defined in Chapters 18.32 and 18.36 of this Ordinance. However, the following review approvals are not delegated to the City and shall require review or permits from DWR:

- A. Organizations which are exempt from this Ordinance, as per the Illinois Revised Statutes;
- B. Department of Transportation projects, dams or impoundment structures as defined in Chapter 18.12.110 and all other state, federal or local unit of government projects, including projects of the City and County, except for those projects meeting the requirements of Section 18.32.080.
- C. An engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, per Section 18.32.040 E.
- D. An engineer's analysis of the flood profile due to Section 18.32.040 D.
- E. Alternative transition sections and hydraulically equivalent compensatory storage as indicated in Section 18.32.040 a,b,h.
- F. Permit issuance of structures within or over publicly navigable rivers, lakes and streams;
- G. Any changes in the Base Flood Elevation or floodway locations; and,
- H. Base Flood Elevation determinations where none now exist.

18.20.110 Cooperation with Other Agencies

Cooperate with state and federal flood plain management agencies to improve base flood or 100-year frequency flood and floodway data and to improve the administration of this Ordinance. Submit data to DWR and Federal Emergency Management Agency for proposed revisions of a regulatory map. Submit reports as required for the National Flood Insurance Program. Notify the Federal Emergency Management Agency of any proposed amendments to this Ordinance.

18.20.120 Promulgate Regulations

Promulgate rules and regulations as necessary to administer and enforce the provisions of this Ordinance, subject however to the review and approval of DWR and FEMA for any Ordinance changes.

CHAPTER 18.24
BASE FLOOD ELEVATION

Sections:

18.24.010 Generally

18.24.010 Generally

This Ordinance's protection standard is based on the Flood Insurance Study for the City. If a base flood elevation or 100-year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the best existing data available in the Illinois State Water Survey's Flood Plain Information Repository. When a party disagrees with the best available data, he/she may finance the detailed engineering study needed to replace existing data with better data and submit it to DWR and FEMA.

- A. The base flood or 100-year frequency flood elevation for the SFHAs of Mokeler Creek shall be as delineated on the 100-year flood profiles in the Flood Insurance Study of City prepared by the Department of Housing and Urban Development and dated May, 1979, and such amendments to such study and maps as may be prepared from time to time.
- B. The base flood or 100-year frequency flood elevation for the SFHA's of those parts of unincorporated McHenry County that are within the extraterritorial jurisdiction of the City or that may be annexed into the City shall be as delineated on the 100-year flood profiles in the Flood Insurance Study of McHenry County and such amendments or revisions to such study and maps as may be prepared from time to time.
- C. The base flood or 100-year frequency flood elevation for each SFHA delineated as an "AH Zone" or "AO Zone" shall be that elevation (or depth) delineated on the Flood Insurance Rate Map of the City.
- D. The base flood or 100-year frequency flood elevation for each of the remaining SFHAs delineated as an "A Zone" on the Flood Insurance Rate Map of the City shall be according to the best existing data available in the Illinois State Water Survey Flood Plain Information Repository. When no base flood or 100-year frequency flood elevation exists, the base flood or 100-year frequency flood elevation for a riverine SFHA shall be determined from a backwater model, such as HEC-2, WSP-2, or a dynamic model such as HIP. The flood flows used in the hydraulic models shall be obtained from a hydrologic model, such as HEC-1, TR-20, or HIP or by techniques presented in various publications prepared

by the United States Geological Survey for estimating peak flood discharges. Flood flows should be based on anticipated future land use conditions in the watershed as determined from adopted local and regional land use plans. Along any watercourses draining more than one (1) square mile, the above analyses shall be submitted to DWR for approval. Once approved, it must be submitted to the Illinois State Water Survey Floodplain Information Repository for filing. For a non-riverine SFHA, the Base Flood Elevation shall be the historic Flood of Record plus three feet, unless calculated by a detailed engineering study and approved by the Illinois Water Survey.

**CHAPTER 18.28
OCCUPATION AND USE OF FLOOD FRINGE AREAS**

Sections:

- 18.28.010 Generally
- 18.28.020 Development Permit
- 18.28.030 Preventing Increased Damages

18.28.010 Generally

Development in and/or filling of the Flood fringe will be permitted if protection is provided against the base flood or 100-year frequency flood by proper elevation, and compensatory storage and other provisions of this Ordinance are met. No use will be permitted which adversely affects the capacity of drainage facilities or systems. Developments located within the flood fringe shall meet the requirements of this section, along with the requirements of Chapter 18.40.

18.28.020 Development Permit

No person, firm, corporation, or governmental body not exempted by state law shall commence any development in the SFHA without first obtaining a development permit from the Building Commissioner.

- A. Application for a development permit shall be made on a form provided by the Building Commissioner. The application shall be accompanied by drawings of the site, drawn to scale, showing property line dimensions and legal description for the property and sealed by a licensed engineer, architect or land surveyor; existing grade elevations in M.S.L., 1929 adj. datum or N.G.V.D. and all changes in grade resulting from excavation or filling; the location and dimensions of all buildings and additions to buildings. For all proposed buildings,

the elevation of the lowest floor (including basement) and lowest adjacent grade shall be shown on the submitted plans and the development will be subject to the requirements of Chapter 18.40 of this Ordinance.

- B. Upon receipt of a development permit application, the Building Commissioner shall compare the Elevation of the site to the base flood or 100-year frequency that can be shown to have been higher than the base flood elevation as of the sites first Flood Insurance Rate Map identification is not in the SFHA and, therefore, not subject to the requirements of this Ordinance. The Building Official shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first Flood Insurance Rate Map Identification.
- C. The Building Commissioner shall be responsible for Obtaining from the applicant, copies of all other local, state and federal permits, approvals or permit-not-required letters that may be required for this type of activity. The Building Commissioner shall not issue a permit unless all other local, state and federal permits have been obtained.

18.28.030 Preventing Increased Damages

No development in the flood fringe shall create a threat to public health and safety.

- A. If fill is being used to elevate the site above the base flood or 100-year frequency flood elevation, the applicant shall submit sufficient data and obtain a letter of map revision (LOMR) from FEMA for the purpose of removing the site from the flood plain.
- B. Compensatory Storage. Whenever any portion of a flood plain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to 1.5 times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All flood plain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

**CHAPTER 18.32
OCCUPATION AND USE OF IDENTIFIED FLOODWAYS**

Sections:

- 18.32.010 Generally
- 18.32.020 Development Permit
- 18.32.030 Preventing Increased Damages and a List of
Appropriate Uses
- 18.32.040 Engineering and Mitigation Criteria
- 18.32.050 State Review
- 18.32.060 Other Permits
- 18.32.070 Dam Safety Permits
- 18.32.080 Activities That Do Not Require A Registered
Professional Engineers Review

18.32.010 Generally

This section applies to proposed development, redevelopment, site modification or building modification within a regulatory floodway. The regulatory floodway for Mokeler Creek shall be as delineated on the regulatory floodway maps designated by DWR and referenced in Section 18.12.400. Only those uses and structures will be permitted which meet the criteria in this section. All floodway modifications shall be the minimum necessary to accomplish the purpose of the project. The development shall also meet the requirements of Section 18.40.

18.32.020 Development Permit

No person, firm, corporation or governmental body not exempted by state law shall commence any development in a floodway without first obtaining a development permit from the Building Commissioner.

- A. Application for a development permit shall be made on a form provided by the Building Commissioner. The application shall include the following information:
 1. Name and address of applicant;
 2. Site location (including legal description) of the property, drawn to scale, on the regulatory floodway map, indicating whether it is proposed to be in an incorporated or unincorporated area;
 3. Name and stream or body of water affected;
 4. Description of proposed activity;
 5. Statement of purpose of proposed activity;
 6. Anticipated dates of initiation and completion of activity;

7. Name and mailing address of the owner of the subject property of different from the applicant;
8. Signature of applicant or the applicant's agent;
9. If the applicant is a corporation, the president or other authorized officer shall sign the application form;
10. If the applicant is a partnership, each partner shall sign the application form; and
11. If the applicant is a land trust, the trust officer shall sign the name of the trustee by him (her) as trust officer. A disclosure affidavit shall be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interests therein.
12. Plans of the proposed activity shall be provided which include as a minimum:
 - a. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow;
 - b. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions on the structure or work, elevations in mean sea level (1929 adjustment) datum or N.G.V.D., adjacent property lines and ownership, drainage and flood control easements, location of any channels and any existing or future access roads, distance between proposed activity and navigation channel (when the proposed activity is near a commercially navigable body of water) regulatory floodway limit, flood plain limit, specifications and dimensions of any proposed channel modifications, location and orientation of cross-sections, north arrow, and a graphic or numerical scale;
 - c. Cross-section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphic or numerical scales (horizontal and vertical);

- d. A copy of the regulatory floodway map, marked to reflect any proposed change in the regulatory floodway location.
13. Any and all other local, state and federal permits or approval letters that may be required for this type of development.
 14. Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the permit criteria of Section 18.32.030.
 15. If the regulatory floodway delineation, base flood or 100-year frequency flood elevation will change due to the proposed project, the application will not be considered complete until DWR has indicated conditional approval of the regulatory floodway map change. No structures may be built until a Letter of Map Revision (LOMR) has been approved by FEMA.
 16. The application for a structure shall be accompanied by drawings of the site, drawn to scale showing property line dimensions and existing ground elevations and all changes in grade resulting from any proposed excavation or filling, and flood plain and floodway limits; sealed by a registered professional engineer, licensed architect or registered professional engineer, licensed architect or registered land surveyor; the location and of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of Section 18.40 of this Ordinance.
 17. If the proposed project involves a channel modification, the applicant shall submit the following information:
 - a. A discussion of the purpose of and need for the proposed work;
 - b. A discussion of the feasibility of using alternative locations or methods to accomplish the purpose of the proposed work;
 - c. An analysis of the extent and permanence of the impacts the project would have on the physical and biological conditions of the body of water affected;
 - d. An analysis of the extent and permanence of the the impacts each feasible alternative identified

in 18.32.040 (D,J) of this Chapter would have on the physical and biological conditions of the body of water affected; and

- e. An analysis of the impacts of the proposed on the physical and biological conditions of the body of water affected.
- B. The Building Commissioner shall be responsible for obtaining from the applicant copies of all other local, state, and federal permits and approvals that may be required for this type of activity. The Building Commissioner shall not issue the development permit unless all required federal and state permits have been obtained. A Registered professional Engineer, under the employ or contract of the City shall review and approve applications reviewed under this Chapter.

18.32.030 Preventing Increased Damages and a List of Appropriate Uses

The only development in a floodway which will be allowed are Appropriate Uses, which will not cause a rise in Base Flood elevation, and which will not create a damaging or potentially damaging increase in flood heights or velocity or be a threat to public health and safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or permanently impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this Ordinance. Only those Appropriate Uses listed in 92 Ill. Adm. Code 708 will be allowed. Appropriate Uses do not include the construction or placement of any new structures, fill, building additions, buildings on stilts, excavation or channel modifications done to accommodate otherwise non-appropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined above as an Appropriate Use. The approved Appropriate Uses are as follows:

- A. Flood control structures, dikes, dams and other public works or private improvements relating to the control of drainage, flooding, erosion, or water quality or habitat for fish and wildlife.
- B. Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and improvements related to recreational boating, commercial shipping and other functionally water dependent uses;
- C. Storm and sanitary sewer outfalls;

- D. Underground and overhead utilities;
- E. Recreational facilities such as playing fields and trail systems including any related fencing (at least 50% open when viewed from any one direction) built parallel to the direction of flood flows, and including open air pavilions;
- F. Detached garages, storage sheds, or other non-habitable accessory structures without toilet facilities to existing buildings that will not block flood flows, nor reduce floodway storage;
- G. Bridges, culverts, roadways, sidewalks, railways, runways and taxiways and any modification hereto;
- H. Parking lots and any modifications thereto (where depth of flooding at the 100-year frequency flood event will not exceed 1.0') and aircraft parking aprons built at or below ground elevation;
- I. Regulatory floodway regrading, without fill, to create a positive non-erosive slope toward a watercourse.
- J. Flood proofing activities to protect previously existing lawful structures including the construction of water tight window wells, elevating structures, or construction of floodwalls around residential, commercial or industrial principal structures where the outside toe of the floodwall shall be no more than ten (10) feet away from the exterior wall of the existing structure, and, which are not considered substantial improvements to the structure.
- K. In the case of damaged or replacement buildings, reconstruction or repairs made to the building that are valued at less than 50% of the market value of the building before it was damaged or replaced, and which do not increase the outside dimensions of the building.
- L. Additions to existing buildings above the BFE that do not increase the building's foot print and are valued at less than 50% of the market value of the building.

18.32.040 Engineering and Mitigation Criteria

Within the regulatory floodway as identified on the regulatory floodway maps designated by DWR, the construction of an Appropriate Use, will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data by a registered professional engineer and provided that any structure meets the protection requirements of Chapter 18.40 of this Ordinance.

18.32.040--

A. Preservation of Flood Conveyance, so as Not to Increase Flood States Upstream. For appropriate uses other than bridge or culvert crossings, on-stream structures or dams, all effective regulatory floodway conveyance lost due to project will be replaced for all flood events up to and including the 100-year frequency flood. In calculating effective regulatory floodway conveyance, the following factors shall be taken into consideration:

1. Regulatory floodway conveyance,

$$'K' = \frac{1.486}{n} A R$$

where "n" is Manning's roughness factor, "A" is the effective area of the cross-section, and "R" is the ratio of the area to the wetted perimeter. (See Open Channel Hydraulics, Ven Te Chow, 1959, McGraw Hill Book Company, New York).

2. The same Manning's "n" value shall be used for both existing and proposed conditions unless a recorded maintenance agreement with a federal, state, or local unit of government can assure the proposed conditions will be maintained or the land cover is changing from a vegetable to a non-vegetative land cover.
3. Transition sections shall be provided and used in calculations of effective regulatory floodway conveyance. The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to DWR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:
- a. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot horizontal for every one foot of the flooded stream's length.
 - b. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot of the flooded stream's length.
 - c. When expanding or contracting flows in a vertical direction, a minimum of one foot vertical transition for every ten feet of stream length shall be used.

- d. Transition sections shall be provided between cross-sections with rapid expansions and contractions and when meeting the regulatory floodway delineation on adjacent properties.
 - e. All cross-sections used in the calculations shall be located perpendicular to flood flows.
- B. Preservation of Floodway Storage so as Not to Increase Downstream Flooding. Compensatory storage shall be provided for any regulatory floodway storage lost due to the proposed work from the volume of fill or structures placed and the impact of any related flood control projects. Compensatory storage for fill or structures shall be equal to at least 1.5 times the volume of flood plain storage lost. Artificially created storage lost due to a reduction in head loss behind a bridge shall not be required to be replaced. The compensatory regulatory floodway storage shall be placed between the proposed normal water elevation and the proposed 100-year flood elevation. All regulatory floodway storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All regulatory floodway storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. If the compensatory storage will not be placed at the location of the proposed construction, the applicant's engineer shall demonstrate to DWR through a determination of flood discharges and water surface elevations that the compensatory storage is hydraulically equivalent. Finally, there shall be no reduction in floodway surface area as a result of a floodway modification, unless such modification is necessary to reduce flooding at existing structure.
- C. Preservation of Floodway Velocities so as Not to Increase Stream Erosion or Flood Heights. For all Appropriate Uses, except bridges or culverts or on stream structures, the proposed work will not result in an increase in the average channel or regulatory floodway velocities or stage, for all flood events up to and including the 100-year frequency event. However in the case of bridges or culverts on stream structures built for the purpose of backing up water in the stream during normal or flood flows, velocities may be increased at the structure site if scour, erosion and sedimentation will be avoided by the use of rip-rap or other design measures.
- D. Construction of New Bridges or Culvert Crossings and Roadway Approaches. The proposed structure shall not

result in an increase of upstream flood stages greater than 0.1 foot when compared to the existing conditions for all flood events up to and including the 100-year frequency event; or the upstream flood stage increases will be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. If the proposed construction will increase upstream flood stages greater than 0.1 feet, the developer must contact DWR, Dam Safety Section for a Dam Safety permit or waiver.

1. The engineering analysis of upstream flood stages must be calculated using the flood study flows, and corresponding flood elevations for tailwater conditions for the flood study specified in Chapter 18.24 of this Ordinance. Culverts must be analyzed using the U.S. DOT, FHWA Hydraulic Chart for the Selection of Highway Culverts. Bridges must be analyzed using the U.S. DOT/Federal Highway Administration Hydraulics of Bridge Waterways calculation procedures.
 2. Lost floodway storage must be compensated for per Chapter 18.32.040 (B).
 3. Velocity increases must be mitigated per Chapter 18.32.040 (C).
 4. If the crossing is proposed over a public water that is used for recreational or commercial navigation, a Department of Transportation permit must be received.
 5. The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed regulatory profile must be submitted to DWR for concurrence that a CLOMR is not required by Chapter 18.32.040 (M).
 6. All excavations for the construction of the crossing shall be designed per Chapter 18.32.040 (H).
- E. Reconstruction or Modification of Existing Bridges, Culverts, and Approach Roads.
1. The bridge or culvert and roadway approach reconstruction or modification shall be constructed with no more than 0.1 foot increase in backwater over the existing flood profile for all flood frequencies up to and including the 100-year event, if the existing structure is not a source of flood damage.

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2. If the existing bridge or culvert and roadway approach is a source of flood damage to buildings or structures in the upstream flood plain, the applicant's engineer shall evaluate the feasibility or redesigning the structure to reduce the existing backwater, taking into consideration the effects on flood stages on upstream and downstream properties.
 3. The determination as to whether or not the existing crossing is a source of flood damage and should be redesigned must be prepared in accordance with the Department of Transportation Rules 92 Ill. Adm. Code 708 (Floodway Construction in Northeastern Illinois) and submitted to the Division for review and concurrence before a permit is issued.
- F. On-Stream for the Purpose of Backing Up Water. Any increase in upstream flood stages greater than 0.0 foot when compared to the existing conditions, for all flood events up to and including the 100-year frequency event shall be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. A permit or letter indicating a permit is not required must be obtained from DWR, Dam Safety Section for a Dam Safety Permit or waiver for any structure built for the purpose of backing up water in the stream during normal or flood flow. All dams and impoundment structures as defined in Chapter 18.12.120 shall meet the permitting requirements of 92 Ill. Adm. Code 702 (Construction and Maintenance of Dams). If the proposed activity involves a modification of the channel or floodway to accommodate an impoundment, it shall be demonstrated that:
1. The impoundment is determined to be in the public interest by providing flood control, public recreation, or regional stormwater detention;
 2. The impoundment will not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning;
 3. The impoundment will not cause or contribute to degraded water quality or habitat conditions. Impoundment design should include gradual bank slopes, appropriate bank stabilization measures, and a pre-sedimentation basin.
 - 4.A non-point source control plan has been implemented in the upstream watershed to control the effects of

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sediment runoff as well as minimize the input of nutrients, oil and grease, metals, and other pollutants. If there is more than one municipality in the upstream watershed, the municipality in which the impoundment is constructed should coordinate with upstream municipalities to ensure comprehensive watershed control;

5. The project otherwise complies with the requirements of Chapter 18.32.
- G. Flood Proofing of Existing Habitable, Residential and Commercial Structures. If construction is required beyond the outside dimensions of the existing building, the outside perimeter of the floodproofing construction shall be placed no further than 10 feet from the outside of the building. Compensation of lost storage and conveyance will not be required for floodproofing activities.
- H. Excavation in the Floodway. When excavation is proposed in the design of bridges and culvert openings, including the modifications to and replacement of existing bridge and culvert structures, or to compensate for lost conveyance for other Appropriate Uses, transition sections shall be provided for the excavation. The following expansion and contraction ratios shall be used through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:
 1. When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot horizontal for every four feet of the flooded stream's length;
 2. When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot of flooded stream's length; and
 3. When expanding or contracting flows in a vertical direction, a minimum of one foot vertical transition for every ten feet of stream length shall be used.
 4. Erosion/scour protection shall be provided inland upstream and downstream of the transition sections.
- I. If the proposed activity involves a channel modification, it shall be demonstrated that:
 1. There are no practicable alternatives to the activity which would accomplish its purpose with
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less impact to the natural conditions of the body of water affected. Possible alternatives include levees, bank stabilization, flood proofing of existing structures, removal of structures from the flood plain, clearing the channel, high flow channel, or the establishment of a stream side buffer strip or green belt. Channel modification is acceptable if the purpose is to restore natural conditions and improve water quality and fish and wildlife habitat;

2. Water quality, habitat, and other natural functions would be significantly improved by the modification and no significant habitat area may be destroyed, or the impacts are offset by the replacement of an equivalent degree of natural resource values;
3. The activity has been planned and designed and will be constructed in a way which will minimize its adverse impacts on the natural conditions of the body of water affected, consistent with the following criteria:
 - a. The physical characteristics of the modified channel shall match as closely as possible those of the existing channel in length, cross-section, slope and sinuosity. If the existing channel has been previously modified, restoration of more natural physical conditions should be incorporated into channel modification design, where practical.
 - b. Hydraulically effective transitions shall be provided at both the upstream and downstream ends of the project, designed such that they will prevent erosion.
 - c. One-sided construction of a channel shall be used when feasible. Removal of stream-side (riparian) vegetation should be limited to one side of the channel, where possible, to preserve the shading and stabilization effects of the vegetation.
 - d. Clearing of vegetation shall be limited to that which is essential for construction of the channel.
 - e. Channel banks shall be constructed with a side slope no steeper than 3:1 horizontal to vertical, wherever practicable. Natural vegetation and gradual side slopes are the preferred methods for bank stabilization. Where high velocities or sharp bends necessitate the

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use of alternative stabilization measures, natural rock or rip-rap are preferred materials. Artificial materials such as concrete, gabions, or construction rubble should be avoided unless there are no practicable alternatives.

- f. All disturbed areas associated with the modification shall be seeded or otherwise stabilized as soon as possible upon completion of construction. Erosion blanket or an equivalent material shall be required to stabilize disturbed channel banks prior to establishment of the vegetative cover.
 - g. If the existing channel contains considerable bottom diversity such as deep pools, riffles, and other similar features, such features shall be provided in the new channel. Spawning and nesting areas and flow characteristics compatible with fish habitat shall also be established, where appropriate.
 - h. A sediment basin shall be installed at the downstream end of the modification to reduce sedimentation and degradation of downstream water quality.
 - i. New or relocated channels should be built in the dry and all items of construction, including vegetation, should be completed prior to diversion of water into the new channel.
 - j. There shall be no increase in stages or velocity as the channel enters or leaves the project site for any frequency flood unless necessitated by a public flood control project or unless such an increase is justified as part of a habitat improvement or erosion control project.
 - k. Unless the modification is for a public flood control project, there shall be no reduction in the volume of floodwater storage outside the floodway as a result of the modification; and
4. The project otherwise complies with the requirements of Chapter 18.32.
- J. Seeding and Stabilization Plan. For all activities located in a floodway, a seeding and stabilization plan shall be submitted by the applicant.
 - K. Public Flood Control Projects. For public flood control projects, the permitting requirements of this section

18.32.040

will be considered met if the applicant can demonstrate to DWR through hydraulic and hydrologic calculations that the proposed project will not singularly or cumulatively result in increased flood heights outside the project right-of-way or easements for all flood events up to and including the 100-year frequency event.

L. General Criteria for Analysis of Flood Elevations:

1. The flood profiles, flows and floodway data in the regulatory floodway study, referenced in Chapter 18.24 must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, DWR shall be contacted for approval and concurrence on the appropriate base conditions data to use.
2. If the 100-year regulatory floodway elevation at the site of the proposed construction is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed construction shall be shown to meet the requirements of this section for the 100-year frequency flood elevations of the regulatory floodway conditions and conditions with the receiving stream at normal water elevation.
3. If the applicant learns from DWR, local governments, or a private owner that a downstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified, or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five years, the proposed construction shall be analyzed and shown to meet the requirements of this Chapter for both the existing conditions and the expected flood profile conditions when the bridge, culvert, or flood control project is built.

- M. Conditional Letter of Map Revision. If the Appropriate Use would result in a change in the regulatory floodway location or the 100-year frequency flood elevation, the applicant shall submit to DWR and to FEMA all the information, calculations and documents necessary to be issued a conditional regulatory floodway map revision and receive from DWR a conditional approval of the regulatory floodway change before a permit is issued. However, the final regulatory floodway map will not be changed by DWR until as-built plans or record drawings are submitted and accepted by FEMA and DWR. In the case of non-government projects, the municipality in incorporated areas and the county in unincorporated areas shall concur with the proposed conditional regulatory floodway map revision before DWR approval can be given.

18.32.040--18.32.060

No filling, grading, dredging or excavating shall take place until a conditional approval is issued. No further development activities shall take place until a final Letter of Map Revision (LOMR) is issued by FEMA and DWR.

- N. Professional Engineer's Supervision. All engineering analyses shall be performed by or under the supervision of a registered professional engineer.
- O. After receipt of conditional approval of the regulatory floodway change and issuance of a permit and a Conditional Letter of Map Revision, construction as necessary to change the regulatory floodway designation may proceed but no buildings or structures or other construction that is not an Appropriate Use may be placed in that area until the regulatory floodway map is changed and a final Letter of Map Revision is received. The regulatory floodway map will be revised upon acceptance and concurrence by DWR and FEMA of the "as built" plans.

18.32.050 State Review

For those projects listed below located in a regulatory floodway, the following criteria shall be submitted to DWR for their review and concurrence prior to the issuance of a permit:

- A. DWR will review an engineer's analysis of the flood profile due to a proposed bridge pursuant to Chapter 18.32.040 (D).
- B. DWR will review an engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, pursuant to Chapter 18.32.040 (E).
- C. The DWR will review alternative transition sections and hydraulically equivalent storage pursuant to Chapter 18.32.040 (A,B & H).
- D. The DWR will review and approve prior to the start of construction any Department projects, dams (as defined in Chapter 18.32.120) and all other state, federal or local units of government projects, including projects of the municipality or county.

18.32.060 Other Permits

In addition to the other requirements of this Ordinance, a development permit for a site located in a floodway shall not be issued unless the applicant first obtains a permit or written documentation that a permit is not required from DWR, issued pursuant to Illinois Revised Statutes, Chapter 19, Section 52 et seq. No permit from DWR shall be required if the Division has delegated this responsibility to the City.

18.32.070--18.32.080

18.32.070 Dam Safety Permits

Any work involving the construction, modification or removal of a dam as defined in Chapter 18.12.120 per 92 Ill. Adm. Code 702 (Rules for Construction of Dams) shall obtain an Illinois Division of Water Resources Dam Safety permit prior to the start of construction of a dam. If the Professional Engineer finds a dam that does not have a DWR permit, the Professional Engineer shall immediately notify the Dam Safety Section of the Division of Water Resources. If the Professional Engineer finds a dam which is believed to be in unsafe condition, the Professional Engineer shall immediately notify the owner of the dam, DWR, Dam Safety Section in Springfield and the Illinois Emergency Services and Disaster Agency (ESDA).

18.32.080 Activities That Do Not Require a Registered Professional Engineer's Review

The following activities may be permitted without a registered professional engineers review. Such activities shall still meet the other requirements of this Ordinance, including the mitigation requirements.

- A. Underground and overhead utilities that:
 - 1. Do not result in any increase in existing ground elevations, or
 - 2. Do not require the placement of above ground structures in the floodway, or
 - 3. In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of 3' below the existing stream bed, and
 - 4. In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris.

- B. Storm and Sanitary sewer outfalls that:
 - 1. Do not extend riverward or lakeward of the existing adjacent natural bank slope, and
 - 2. Do not result in an increase in ground elevation, and
 - 3. Are designed so as not to cause stream erosion at the outfall location.

- C. Construction of sidewalks, athletic fields (excluding fences), properly anchored playground equipment and patios at grade.

- D. Construction of shoreline and streambank protection that:
 - 1. Does not exceed 1000 feet in length.
 - 2. Materials are not placed higher than the existing top of bank.
 - 3. Materials are placed so as not to reduce the cross-sectional area of the stream channel or bank of the lake.

- E. Temporary stream crossings in which:
 - 1. The approach roads will be 0.5 (1/2 foot) or less above natural grade.
 - 2. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert.
 - 3. The top of the roadway fill in the channel will be at least 2' below the top of the lowest bank. Any fill in the channel shall be non-erosive material, such as rip-rap or gravel.
 - 4. All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction.
 - 5. The access road and temporary crossings will be removed within one year after authorization.

**CHAPTER 18.36
OCCUPATION AND USE OF SFHA AREAS
WHERE FLOODWAYS ARE NOT IDENTIFIED**

Sections:

- 18.36.010 Generally
- 18.36.020 Development Permit
- 18.36.030 Elevation Requirements
- 18.36.040 NFIP Requirements
- 18.36.050 Preventing Increased Damages
- 18.36.060 Riverine - Where Floodway Has Not Been Determined
- 18.36.070 Compensatory Storage

18.36.010 Generally

In SFHA or flood Plains, (including AO Zones, AH Zones or Unnumbered A Zones) where no floodways have been identified and no base flood or 100-year frequency flood elevations have been

18.36.010--18.36.020

established by FEMA, and draining more than a square mile, no development shall be permitted unless the cumulative effect of the proposals, when combined with all other existing and anticipated uses and structures, shall not significantly impede or increase the flow and passage of the floodwaters nor significantly increase the base flood or 100-year frequency flood elevation.

18.36.020 Development Permit

No person, firm, corporation, or governmental body, not exempted by state law, shall commence any development in a SFHA or flood plain without first obtaining a development permit from the Professional Engineer. Application for a development permit shall be made on a form provided by the Professional Engineer. The application shall be accompanied by drawings of the site, drawn to scale showing property line dimensions; and existing grade elevations and all changes in grade resulting from excavation or filling, sealed by a licensed engineer, architect or surveyor; the location and dimensions of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of Chapter 18.40 of this Ordinance. The application for a development permit shall also include the following information:

- A. A detailed description of the proposed activity, its purpose, and intended use;
- B. Site location (including legal description) of the property, drawn to scale, on the regulatory floodway maps, indicating whether it is proposed to be in an incorporated or unincorporated area;
- C. Anticipated dates of initiation and completion of activity;
- D. Plans of the proposed activity shall be provided which include as a minimum:
 1. A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow;
 2. A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations in mean sea level (1929 adjustment) datum or N.G.V.D., adjacent property lines and ownership, drainage and flood control easements, distance between proposed activity and navigation channel (when the proposed construction is near a commercially navigable body of water),

18.36.020--18.36.050

flood plain limit, location and orientation of cross-sections, north arrow, and a graphical or numerical scale;

3. Cross-section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphical or numerical scales (horizontal and vertical).

E. Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the criteria of Chapter 18.36.040.

F. Any and all other local, state and federal permits or approvals that may be required for this type of development.

18.36.030 ELEVATION REQUIREMENTS

Based on the best available existing data according to the Illinois State Water Survey's Flood Plain Information Repository, The Professional Engineer shall compare the elevation of the site to the base flood or 100-year frequency flood elevation. Should no elevation information exist for the site, the developer's engineer shall calculate the elevation according to Chapter 18.24.010 (D). Any development located on land that can be shown to have been higher than the base flood elevation as of the sites first Flood Insurance Rate Map Identification is not in the SFHA and, therefore, not subject to the requirements of this Ordinance. The Building Official shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first Flood Insurance Rate Map Identification.

18.36.040 NFIP Requirements

The Building Commissioner shall be responsible for obtaining from the applicant copies of all other local, state, and federal permits, approvals or permit-not-required letters that may be required for this type of activity. The Building Commissioner shall not issue the development permit unless all required local, state and federal permits have been obtained.

18.36.050 Preventing Increased Damages

No development in the SFHA, where a floodway has not been determined shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health, safety and welfare or impair the natural hydrologic and hydraulic

18.36.050--18.36.060

functions of the floodway or channel, or impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this Ordinance.

18.36.060 RIVERINE - WHERE FLOODWAY HAS NOT BEEN DETERMINED

Within all riverine SFHA's where the floodway has not been determined, the following standards shall apply:

- A. The developer shall have a Registered Professional Engineer state in writing and show through supporting plans, calculations, and data that the project meets the engineering requirements of Chapter 18.32.040 (A through L) for the entire flood plain as calculated under the provisions of Chapter 18.24.010 (D) of this Ordinance. As an alternative, the developer should have an engineering study performed to determine a floodway and submit that engineering study to determine a floodway and submit that engineering study to DWR for acceptance of their floodway by the Department, the developer shall then demonstrate that the project meets the requirements of Chapter 18.32 for the regulatory floodway. The floodway shall be defined according to the definition in Chapter 18.12.400 of this Ordinance.
- B. A development permit shall not be issued unless the applicant first obtains a permit from DWR or written documentation that a permit is not required from DWR.
- C. No permit from DWR shall be required if the Division has delegated permit responsibility to the City per 92 Ill. Adm. Code, Part 708 for regulatory floodways, per DWR' Statewide Permit entitled "Construction in Flood Plains with No Designated Floodways in Northeastern Illinois".
- D. Dam Safety Permits. Any work involving the construction, modification or removal of a dam or an on-stream structure to impound water as defined in Chapter 18.12.120 shall obtain an Illinois Division of Water Resources Dam Safety Permit or letter indicating a permit is not required prior to the start of construction of a dam. If the Building Commissioner finds a dam that does not have a DWR permit, the Building Commissioner shall immediately notify the Dam Safety Section of the Division of Water Resources. If the Building Commissioner finds a dam which is believed to be in unsafe condition, the Building Commissioner shall immediately notify the owner of the dam and the Illinois Emergency Services and Disaster Agency (ESDA), and the DWR, Dam Safety Section in Springfield.
- E. The following activities may be permitted without a

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Registered Professional Engineer's review or calculation of a base flood elevation and regulatory floodway. Such activities shall still meet the other requirements of this Ordinance:

1. Underground and overhead utilities that:
 - a. Do not result in any increase in existing ground elevations, or
 - b. Do not require the placement of above ground structures in the floodway, or
 - c. In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of 3' below the existing streambed, and
 - d. In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris.

2. Storm and sanitary sewer outfalls that:
 - a. Do not extend riverward or lakeward of the existing adjacent natural bank slope, and
 - b. Do not result in an increase in ground elevation and
 - c. Are designed so as not to cause stream bank erosion at the outfall location.

3. Construction of shoreline and streambed protection that:
 - a. Does not exceed 1000 feet in length or 2 cubic yards per lineal foot of streambed.
 - b. Materials are not placed higher than the existing top of bank.
 - c. Materials are placed so as not to reduce the cross-sectional area of the stream channel by more than 10%.
 - d. Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or rip-rap are preferred materials. Artificial materials such as

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concrete, construction rubble, and gabions should be avoided unless there are no practicable alternatives.

4. Temporary stream crossings in which:
 - a. The approach roads will be 0.5' (1/2 foot) or less above natural grade.
 - b. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage title or outfall invert.
 - c. The top of the roadway fill in the channel will be at least 2' below the top of the lowest bank. Any fill in the channel shall be non-erosive material, such as rip-rap or gravel.
 - d. All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal or construction.
 - e. The access road and temporary crossings will be removed within one year after authorization.
5. The construction of light poles, sign posts and similar structures;
6. The construction of sidewalks, driveways, athletic fields (excluding fences), patios and similar surfaces which are built at grade;
7. The construction of properly anchored, unwallled, open structures such as playground equipment, pavilions, and carports built at or below existing grade that would not obstruct the flow of flood waters.
8. The placement of properly anchored buildings not exceeding seventy (70) square feet in size, nor ten (10) feet in any one dimension (e.g. animal shelters and tool sheds);
9. The construction of additions to existing buildings which do not increase the first floor area by more than twenty (20) percent, which are located on the upstream or downstream side of the existing building, and which do not extend beyond the sides of the existing building that are parallel to the flow of flood waters;

18.36.060--18.40.010

10. Minor maintenance dredging of a stream channel where:
 - a. The affected length of stream is less than 1000 feet.
 - b. The work is confined to reestablishing flows in the natural stream channels, or
 - c. The cross-sectional area of the dredged channel conforms to that of the natural channel upstream and downstream of the site.

- F. The flood carrying capacity within an altered or relocated watercourse shall be maintained.

18.36.070 Compensatory Storage

Whenever any portion of a flood plain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to 1.5 times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All flood plain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse.

**CHAPTER 18.40
PERMITTING REQUIREMENTS APPLICABLE
TO ALL FLOOD PLAIN AREAS**

Sections:

- 18.40.010 Generally
- 18.40.020 Carrying Capacity and Notification
- 18.40.030 Protecting Buildings
- 18.40.040 Criteria for Building Requirements

18.40.010 Generally

In addition to the requirements found in Chapters 18.28, 18.32 and 18.36 for development in flood fringes, regulatory floodways, and SFHA or flood plains where no floodways have been identified (Zones A, AO, AH, AE, A1-A30, A99, VO, V1-30, VE, V, M or E), the following requirements shall be met.

18.40.010--18.40.040

- A. Public Health Standards.
- B. No developments in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants, or other hazardous or toxic materials below the FPE.
- C. New and replacement water supply systems, wells, sanitary sewer lines and on-site waste disposal systems may be permitted providing all manholes or other above ground openings located below the FPE are watertight.

18.40.020 Carrying Capacity and Notification

For all projects involving channel modification, fill, or stream maintenance (including levees), the flood carrying capacity of the watercourse shall be maintained. In addition, the City shall notify adjacent communities in writing 30 days prior to the issuance of a permit for the alteration or relocation of the watercourse.

18.40.030 Protecting Buildings

All buildings located within a 100-year flood plain also known as a SFHA, shall be protected from flood damage below the flood protection elevation. However, existing buildings located within a regulatory floodway shall also meet the more restrictive Appropriate Use standards included in Chapter 18.32.

This building protection criteria applies to the following situations:

- A. Construction or placement of a new building.
- B. A structural alteration to an existing building that either increases the first floor area by more than 20% or the building's market value by more than 50%. This alteration shall be figured cumulatively, beginning with any alterations which has taken place subsequent to April 1, 1990;
- C. Installing a manufactured home on a new site or a new manufactured home on an existing site. This building protection requirements does not apply to returning a mobile home to the same site it lawfully occupied before it was removed to avoid flood damage; and
- D. Installing a travel trailer on a site for more than 180 days.

18.40.040 Criteria for Building Protection Requirements

This building protection requirement may be met by one of the following methods.

- A. A residential or non-residential building, when allowed, may be constructed on permanent land fill in accordance with the following:

18.40.040--

1. The lowest floor, (including basement) shall be at or above the flood protection elevation.
 2. The fill shall be placed in layers no greater than one (1) foot deep before compaction and should extend at least ten (10) feet beyond the foundation of the building before sloping below the flood protection elevation. The top of the fill shall be above the flood protection elevation. However, the ten (10) foot minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures. The fill shall be protected against erosion and scour. The fill shall not adversely effect the flow or surface drainage from or onto neighboring properties.
- B. A residential or non-residential building may be elevated in accordance with the following:
1. The building or improvements shall be elevated on crawl space, stilts, piles, walls, or other foundation that is permanently open to flood waters and not subject to damage by hydrostatic pressures of the base flood or 100-year frequency flood. The permanent openings shall be no more than one foot above grade, and consists of a minimum of two openings. The openings must have a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding below the Base Flood Elevation.
 2. The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris.
 3. All areas below the flood protection elevation shall be constructed of materials resistant to flood damage. The lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the flood protection elevation. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the flood protection elevation.
 4. The areas below the flood protection elevation may only be used for the parking of vehicles, building access or storage in an area other than a basement, for items not covered in the flood insurance policy standard.

18.40.040

5. Manufactured homes and travel trailers to be installed on a site for more than 180 days, substantially improved, or incurred substantial flood damage, shall be elevated to or above the flood protection elevation; and shall be anchored to resist flotation, collapse, or lateral movement by being tied down in accordance with the Rules and Regulations for the Illinois Mobile Home Tie-Down Act issued pursuant to 77 Ill. Adm. Code 870.
6. Recreational vehicles or travel trailers shall be required to meet the elevation and anchoring requirements of Section 18.40.040 (B,5) above unless:
 - a. They are on site for less than 180 consecutive days; and,
 - b. They are fully licensed and ready for highway use.

A 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 type utility and service devices, and has no permanently attached additions.

- C. Only a non-residential building may be structurally dry floodproofed (in lieu of elevation) provided that a registered professional engineer shall certify that the building has been structurally dry floodproofed below the flood protection elevation, the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood or 100-year frequency flood. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and impacts from debris or ice. Floodproofing measures shall be operable without human intervention and without an outside source of electricity (Levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this subsection).
- D. Non-conforming structures located in a regulatory floodway may remain in use, but may not be enlarged, replaced or structurally altered. A non-conforming structure damaged by flood, fire, wind or other natural or man-made disaster may be restored unless the damage exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to this Ordinance.

**CHAPTER 18.44
OTHER DEVELOPMENT REQUIREMENTS**

Sections:

18.44.010

18.44.010 Generally

The City Council shall take into account flood hazards, to the extent that they are known in all official actions related to land management, use and development.

- A. New subdivisions, manufactured home parks, annexation agreements, and Planned Unit Developments (PUDs) within the SFHA shall be reviewed to assure that the proposed developments are consistent with Chapters 18.28, 18.32, 18.36 and 18.40 of this Ordinance and the need to minimize flood damage. Plats or plans for new subdivisions, manufactured home parks and Planned Unit Developments (PUDs) shall include a signed statement by a Registered Professional Engineer that the plat or plans account for changes in the drainage of surface waters in accordance with the Plat Act (Ill. Rev. Stat. Ch. 109, Sec. 2).
- B. Proposals for new subdivisions, manufactured home parks, travel trailer parks, planned unit developments (PUDs) and additions to manufactured home parks and additions to manufactured home parks and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations. Where this information is not available from an existing study filed with the Illinois State Water Survey, the applicant's engineer shall be responsible for calculating the base flood or 100-year frequency flood elevation per Chapter 18.24.010 (d) and the floodway delineation per the definition in Chapter 18.12.400 and submitting it to the State Water Survey and DWR for review and approval as best available regulatory data.
- C. Streets, blocks, lot parks and other public grounds shall be located and laid out in such a manner as to preserve and utilize natural streams and channels. Wherever possible, the flood plains shall be included within parks or other public grounds.
- D. The City Council shall not approve any Planned Unit Development (PUD) or plat of subdivision located outside the corporate limits unless such agreement or plat is in accordance with the provisions of this Ordinance.

18.48.010--18.48.020

**CHAPTER 18.48
VARIANCES**

SECTIONS:

- 18.48.010 Generally
- 18.48.020 Criteria for Granting a Variance
- 18.48.030 Criteria for Decision of Variance
- 18.48.040 Variance of Historic Structure

18.48.010 Generally

No variances shall be granted to any development located in a regulatory floodway, as defined in Chapter 18.12.130. However, when a development proposal is located outside of a regulatory floodway, and whenever the standards of this Ordinance place undue hardship on a specific development proposal, the applicant may apply to the City of Harvard for a variance. The Building Commissioner shall review the applicant's request for a variance and shall submit its recommendation to the City Council.

18.48.020 Criteria for Granting a Variance

No variance shall be granted unless the applicant demonstrates that:

- A. The development activity cannot be located outside the SFHA;
- B. An exceptional hardship would result if the variance were not granted;
- C. The relief requested is the minimum necessary;
- D. There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat, or creation of a nuisance;
- E. There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to stream beds and banks, roads, utilities, or other public facilities;
- F. The provisions of Chapter 18.28.030 and 18.36.050 of this Ordinance shall still be met;
- G. The activity is not in a regulatory floodway;
- H. The applicant's circumstances are unique and do not represent a general problem,
- I. The granting of the variance will not alter the essential character of the area involved including the existing stream uses.

18.48.030--18.52.010

18.48.030 Criteria for Decision of Variance

The Building Inspector shall notify an applicant in writing that a variance from the requirements of Chapter 18.40 that would lessen the degree of protection to a building will:

- A. Result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage;
- B. Increase the risks to life and property, and
- C. Require that the applicant proceed with knowledge of these risks and that he will acknowledge in writing that he assumes the risk and liability.

18.48.040 Variance of Historic Structure

Variations requested in connection with restoration of a historic site or historic structure as defined in Chapter 18.12.270, Historic Structures, may be granted using criteria more permissive than the requirements of Chapter 18.48.010 and 18.48.020, subject to the conditions that:

- A. The repair or rehabilitation is the minimum necessary to preserve the historic character and design of the structure; and,
- B. The repair or rehabilitation will not result in the structure being removed as a certified historic structure.

CHAPTER 18.52 DISCLAIMER OF LIABILITY

Sections:

18.52.010 Generally

18.52.010 Generally

The degree of flood protection required by this Ordinance is considered reasonable for the regulatory purposes and is based on available information derived from engineering and scientific methods of study. Larger floods may occur and flood heights may be increased by man-made or natural causes. This Ordinance does not imply that development, either inside or outside of the SFHA, will be free from flooding or damage. This Ordinance does not create liability on the part of the City or any officer or employee thereof for any flood damage that results from reliance on this Ordinance or any administrative decision made lawfully thereunder.

18.56.010

CHAPTER 18.56
PENALTY

Sections:

18.56.010 Generally

18.56.010 Generally

Failure to comply with the requirements of a permit or conditions of a variance resolution shall be deemed to be a violation of this Ordinance. Upon due investigation, the Building Inspector may determine that a violation of the minimum standards of this Ordinance exist. The Building Inspector shall notify the owner in writing of such violation.

- A. If such owner fails after ten days notice to correct the violation:
 - 1. The City may make application to the Circuit Court for an injunction requiring conformance with this Ordinance or make such other order as the Court deems necessary to secure compliance with the Ordinance.
 - 2. Any person who violates this Ordinance shall, upon conviction thereof, be fined not less than fifty dollars (\$50.00) or more than one-thousand dollars (\$1,000) for each offense.
 - 3. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.
 - 4. The City may record a notice of violation on the title to the property.
- B. The Building Inspector shall inform the owner that any such violation is considered a willful act to increase flood damages and, therefore, may cause coverage by a Standard Flood Insurance Policy to be suspended.
- C. Nothing herein shall prevent the City from taking such lawful action to prevent or remedy any violations. All costs connected therewith shall accrue to the person or persons responsible.

18.60.010-18.64.010

**CHAPTER 18.60
ABROGATION AND GREATER RESTRICTIONS**

Sections:

18.60.010 Generally

18.60.010 Generally

This Ordinance is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. Where this Ordinance and other ordinances, easements, covenants, or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail. This Ordinance is intended to repeal the original ordinance or resolution which was adopted to meet the National Flood Insurance Program which the City passed in order to establish initial eligibility for the program.

**CHAPTER 18.64
SEPARABILITY**

Sections:

18.64.010 Generally

18.64.010 Generally

The provisions and sections of this Ordinance shall be deemed separable and the invalidity of any portion of this Ordinance shall not affect the validity of the remainder.

**CHAPTER 18.68
EFFECTIVE DATE**

Sections:

18.68.010 Generally

18.68.010 Generally

This Ordinance shall be in full force and effect from and after its passage and approval and publication, as required by law.

PASSED by the City Council of the City of Harvard, Illinois
this _____ day of _____ 19____.

CHRISTINE F. FERGUSON, CITY CLERK

APPROVED by me this _____ day of _____ 19____.

ROBERT C. IFTNER, MAYOR

ATTESTED and **FILED** in my office this _____ day of
19____.

CHRISTINE F. FERGUSON, CITY CLERK