

ARTICLE XVIII. STORMWATER MANAGEMENT, WETLANDS PROTECTION,
AND FLOOD PLAIN REGULATION

SECTION

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Sec. 150.1801 Purpose.

This Article is enacted pursuant to the police powers granted to the City of Highland Park by the Illinois Constitution. The purpose of this Article is to establish reasonable rules and regulations for development in order to:

- (A) Meet the requirements of The Rivers, Lakes and Streams Act, 615 ILCS 5/18g effective November 18, 1987.
- (B) Prevent additional harm due to periodic flooding including loss of life and property and threats and inconveniences to public health, safety and welfare;
- (C) Assure that development does not increase flood and drainage hazards to others, or create unstable conditions susceptible to erosion;
- (D) Create no new financial burden on the taxpayer for flood control projects, repairs to flood damaged public facilities and utilities, and for flood rescue and relief operations;
- (E) Protect, conserve and promote the orderly development of land and water resources;
- (F) Protect buildings and improvements to buildings from flood damage to the greatest extent possible;
- (G) Conserve the natural hydrologic, hydraulic, water quality and other beneficial functions of flood-prone areas and Regulatory Floodplains; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**
- (H) Prevent additional disruption of the economy and governmental services due to stormwater and flood drainage;
- (I) Maintain eligibility for the City of Highland Park in the National Flood Insurance Program by equaling or exceeding its requirements and thus make federally

subsidized flood insurance available at reduced rates and complying with the rules and regulations of the National Flood Insurance Program codified as 44 CFR 59-79, as amended; and **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(J) Conserve the natural hydrologic, hydraulic, water quality and other beneficial functions of wetlands by having, at a minimum, no net loss of wetlands in Lake County, and further these beneficial functions of wetlands by having an objective of 'net gain' of wetland function as specified in the Wetland Preservation and Restoration Plan component of the Lake County Comprehensive Stormwater Management Plan. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

Sec. 150.1802 Administration.

The Enforcement Officer shall be responsible for fulfilling all of the duties listed in Section 150.1803.

(A) To fulfill those duties, the Enforcement Officer should first use the criteria listed in Section 150.1804 of this Article to determine whether the development site is located within a floodplain.

(B) In addition, the general requirements of Section 150.1804 shall be met for all developments meeting the requirements of this Article. The Enforcement Officer shall assure that all subdivision proposals meet the general requirements of this Article.

(C) If a waiver is to be granted for a proposal, the Enforcement Officer shall review the requirements of this Article to make sure they are met. In addition, the Enforcement Officer shall complete all notification requirements.

(D) In order to assure that property owners obtain permits as required in this Article, the Enforcement Officer may take any and all actions as outlined in Section 150.1807.

Sec. 150.1803 Enforcement.

The Enforcement Officer shall be responsible for the general administration and enforcement of this Article, which shall include but not be limited to the following:

(A) Review all Watershed Development Applications and issue permits for those projects that are in compliance with the provisions of this Article.

(B) Professional Engineer Review. The application for development or building permit shall be referred to a registered professional engineer under the employ of the City of Highland Park for review to ensure the development meets the requirements of this Article whenever the development site:

- (1) Is located in a Regulatory Floodplain; or
- (2) Is located in a flood-prone area with 100 acres of tributary drainage area or more; or

(3) Is located in a depressional storage area with a storage volume of 0.75 acre-feet or more for the base flood; or

(4) Creates an impact within an area defined as Waters of the United States and having a cumulative total of one-fourth (1/4) or more acres of wetlands, including lakes, ponds and wetlands, and then the applicant must obtain a permit from the U.S. Corps of Engineers or a letter stating that no permit is required ; or

(5) Modifies the flood-prone area of a channel where the tributary drainage area is twenty (20) or more acres; or

(6) Includes the total land area of an ownership parcel that consists of the following:

(a) More than one acre of impervious surface area; or

(b) More than three (3) acres or hydrologically disturbed area, unless the total new impervious surface area is less than 0.5 acres; or

(c) An impervious surface area ratio of 50 percent or greater, unless the total new impervious surface is less than 16,000 square feet; or

Redevelopment of previously developed sites shall maintain existing storage volume and shall not increase the rate of runoff from the site. The applicant shall provide supporting data and calculations to the satisfaction of the Enforcement Officer to ensure the site design either provides a watershed benefit or meets the requirements of Subsection (B)(1)(c)3 of Section 150.1804. New development on partially developed sites shall meet the release rate criteria in Subsection (B)(1)(c)1 of Section 150.1804 for the new development, if the new development exceeds the thresholds in Subsections (f) 1, 2, or 3 hereinabove; or

(7) Any public road development resulting in more than one and one-half (1.5) acres of additional impervious surface per mile for linear or nonlinear projects; or

(8) Any development which hydrologically disturbs 5,000 square feet or more. This development activity shall at a minimum meet the erosion and sediment control performance standards of this Article with associated application requirements. Public road developments are required to meet the erosion and sediment control standards only for those projects which require permits hereunder.

(C) Determine for each development if it is in a Special Flood Hazard Area (“SFHA”), using the criteria specified in Subsection (C)(1) of Section 150.1804, and, if a site is in a SFHA, determine whether it is in a Regulatory Floodway, or a Regulatory Floodplain on which a detailed study has not been conducted, or a flood-prone area with a tributary drainage area equal to or greater than 640 acres, greater than 100 acres, or greater than 20 acres.

(D) If the development includes a dam, ensure that an IDNR/OWR Dam Safety permit, or a letter stating that no Dam Safety permit is required, is obtained before the issuance of a Watershed Development Permit. For IDNR/OWR Dam Safety permitting

guidelines, reference Appendix G of the Lake County Watershed Development Ordinance, "IDNR/OWR Dam Safety Permitted Guidelines," last amended January 10, 2006. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(E) Adopted Basin Plans and Floodplain Studies may be the basis for more specific regulations. These additional or more specific regulations will apply only in the specific study area of the Basin Plan or Floodplain Study and supersede those of this Article only upon amendment to the Watershed Development Ordinance and formal adoption of the basin plan or floodplain study by SMC, or upon amendment to this Article and formal adoption of the basin or floodplain study by the City.

(F) The Enforcement Officer may require deed restrictions, performance bonds or sureties, as-built certification or maintenance guarantees as stipulated in this Article to assure projects are built according to permitted plans. If such performance bond or sureties or other such adequate security as the Enforcement Officer may approve is required, the amount shall be equal to 115% of the estimated cost to complete construction of the stormwater management system required by the Watershed Development Permit, which estimated probable cost shall be approved by the Enforcement Officer. If a performance bond or surety is required by another community, that includes the cost of the stormwater management system of the development, additional performance bonding or surety shall not be required.

(G) Prior to the issuance of a Watershed Development Permit, and based on the reliance that the application requirements of Subsection (B)(2) of this Section have been met, ensure that the applicant has obtained and provided copies of any and all required federal, state and local permits for all development in the Regulatory Floodplain. Reference Appendix H of the Lake County Watershed Development Ordinance, "Partial List of Permits Required (When Applicable) for Development in Lake County," last amended January 10, 2006, for a partial list of permits that may be applicable. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(H) Inspect all development projects before, during, and upon completion of construction to assure proper elevation of the structure and to ensure they comply with the provisions of this Article. The Enforcement Officer may require a pre-construction meeting as a condition of issuing a permit.

(J) Submit the data required to SMC, IDNR/OWR, and FEMA for proposed revisions to the Base Flood Elevation of a Regulatory Floodplain study or the relocation of a Regulatory Floodway boundary; and submit reports as required for the National Flood Insurance Program.

(K) Maintain for public inspection and furnish copies upon request of base flood data and maps, waiver documentation, Conditional Letter of Map Revision, Letters of Map Revision, Letters of Map Amendment, elevation and floodproofing certificates, other Watershed Development permit-related materials, elevation and flood-proofing record drawings for all buildings requiring flood-proofing or constructed subject to this elevation criteria provisions of this Article, and record drawings of the stormwater management system required by this Article for each development.

(L) Maintain records of every Watershed Development Permit application, permit, waiver, hydrologic and hydraulic data, and enforcement action and shall allow periodic inspections of the records by SMC, FEMA, or IDNR/OWR personnel.

(M) Maintain elevation and flood-proofing certificate file to certify the elevation of the lowest floor (including basement) of a residential or non-residential building or the elevation to which a non-residential building has been flood-proofed, for all buildings in the regulatory floodplain.

(N) Copy to SMC, at agreed upon intervals, but no later than a five (5) year period, copies of the Watershed Development Permit records.

(O) Notify adjacent upstream and downstream communities, the SMC, and IDNR/OWR in writing 30 days prior to the issuance of a permit for the alteration or relocation of a channel in a Regulatory Floodplain.

(P) IDNR/OWR shall retain permit review and approval authority over the following: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(1) Illinois Department of Natural Resources projects, dams or impoundment structures as defined in Article II of this Chapter and that meet the 'permit required criteria for dams in Appendix G of the Lake County Watershed Development Ordinance, "IDNR/OWR Dam Safety Permitting Guidelines," last amended January 10, 2006; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(2) All other state, federal, and SMC development located in the Regulatory Floodplain; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(3) An analysis of flood profile as indicated in Subsection (C)(4) of Section 150.1804;

(4) Determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, per Subsection (C)(4) of Section 150.1804;

(5) Alternative transition sections and hydraulically equivalent compensatory storage as indicated in Subsection (C)(3)(d) of Section 150.1804;

(6) Permit issuance for development within or over Public Bodies of Water; and

(7) Changes to the Regulatory Floodway boundaries; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**

(Q) For the following types of regulatory approvals or permit authority, SMC has jurisdiction within depressional flood-prone areas with greater than 20 acres of tributary area and riverine flood-prone areas with greater than 100 acres of tributary area, IDNR/OWR has jurisdiction within all Regulatory Floodways or floodplains with greater

than 640 acres (one square mile) of tributary area. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(1) Base Flood Elevation determinations where none now exist;

(2) Any changes in the base Flood Elevations; and **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(3) Determination that the development is a public flood control project.

(R) SMC has regulatory approval or permit authority for the following types of development;

(1) Non-certified community development;

(2) Public Road Development;

(3) Determination that an existing bridge or culvert crossing proposed to be modified is not a source of flood damage and the analysis indicating the proposed flood profile, per Subsection (C)(4) of this Section.

(4) Alternative transition sections and hydraulically equivalent compensatory storage as indicated in Subsection (C)(3)(d) of this Section;

(5) Lake County Forest Preserve District Development;

(6) Community and local unit of government development in the regulatory floodplain;

(7) Other development as specified within intergovernmental agreements with the SMC; and

(8) Wetland services and issuance of watershed development permits for regulated development in wetlands, isolated wetlands and wetland buffers. **(Subsection R added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(S) The Enforcement Officer has the authority and responsibility to suspend a Designated Erosion Control Inspector's listing status for repeated or recurring non-compliance with Subsection (B)(1)(k) of Section 150.1804 and Section 150.1806 of this Article. A notification of suspension from listing shall be issued to the Designated Erosion Control Inspector and copied to the applicant and SMC a minimum of 30 days prior to suspension from listing. Revocation of listing status shall be the responsibility of the SMC per SMC-adopted procedure. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

Sec. 150.1804 Watershed Development Permits.

(A) General.

(1) Regulated Development. No person, firm, corporation or governmental agency shall commence any development regulated by this Article on any lot

or parcel of land without first obtaining a Watershed Development Permit from the City. A permit shall be issued if the proposed development meets the requirements of this Article. A Watershed Development Permit is required for any development, including finalization of a plat, re-plat, or Planned Unit Development (PUD) site plan: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

- (a) Is located in a Regulatory Floodplain; or
- (b) Is located in a flood-prone area with 100 acres of tributary drainage area or more; or
- (c) Is located in a depressional storage area with a storage volume of 0.75 acre-feet or more for the base flood; or
- (d) Creates an impact within an area defined as Waters of the United States having a cumulative total of one-fourth (1/4) or more acres of wetlands, including isolated lakes, ponds and wetlands, and then the applicant must obtain a permit from the U.S. Corps of Engineers or a letter stating that no permit is required; or
- (e) Modifies the flood-prone area of a channel where the tributary drainage area is twenty (20) or more acres; or
- (f) Includes the total land area of an ownership parcel that consists of the following:
 - 1. More than one acre of impervious surface area; or
 - 2. More than three (3) acres of hydrologically disturbed area, unless the total impervious surface area is less than 0.5 acre; or
 - 3. An impervious surface area ratio of 50 percent or greater, unless the total impervious surface is less than 16,000 square feet;

Redevelopment of previously developed sites shall maintain existing storage volume and shall not increase the rate of runoff from the site. The applicant shall provide supporting data and calculations to the satisfaction of the Enforcement Officer to ensure the site design either provides a watershed benefit or meets the requirements of Subsection (B)(1)(c)3 of this Section. New development on partially developed sites shall meet the release rate criteria in Subsection (B)(1)(c)1 of this Section for the new development, if the new development exceeds the thresholds in Subsections (f) 1, 2, or 3 hereinabove; or

- (g) Any public road development resulting in one and one-half (1.5) acres or more of additional impervious surface per mile for linear or nonlinear projects; or
- (h) Any development which hydrologically disturbs 5,000 square feet or more. This development activity shall at a minimum meet the erosion and sediment control performance standards of Subsection (B)(1)(k) of this Section with associated application requirements. Public road developments are required to meet the erosion and sediment control standards only for those projects which require permits hereunder.

(2) Development Classification. All activities requiring a Watershed Development Permit shall be classified as a minor, major, or public road development. The definition for each classification follows:

(a) Minor Development. A minor development is defined as any development that:

1. Is not located in a depressional storage area larger than 0.75 acre-feet or is not located in any other portion of a Regulatory Floodplain; and

2. Does not create a wetland impact of one-quarter (1/4) or more acre of Waters of the United States or Isolated Waters of Lake County, and (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

3. Modifies a channel where the tributary drainage area is less than one hundred (100) acres; or

4. Consists of:

a. Single family detached residential development of less than ten (10) acres; or

b. Single family detached residential development of ten (10) acres or more with a gross density of less than 0.5 unit per acre, and an impervious cover area of less than fifteen (15) percent; or

c. Multi family, non-residential and other developments of less than three (3) acres requiring a Watershed Development Permit.

(b) Public Road Development. Any development activity which takes place in a public right-of-way or part thereof that is administered and funded, in whole or in part, by a public agency under its respective roadway jurisdiction. Rehabilitative maintenance and in-kind replacement are considered to be a public road development if located in a Regulatory Floodplain. A public road development located within a Regulatory Floodway and which has been approved by the Illinois Department of Public Transportation Division of Highways (IDOT/DOH), Bureau of Local Roads and Streets is exempt from the hydraulic analysis requirements of this Article. Individual recreation trail systems being constructed that are not part of another development project and linear railroad development projects shall be considered public road developments with respect to the requirements of this Article, **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(c) Major Development. A major development is defined as all developments other than minor developments and public road developments.

(3) Approvals Prior to Permitting. Prior to the issuance of a Watershed Development Permit, the applicant may request a Conditional Approval or an Earth Change Approval.

(a) Conditional Approval. Conditional approval for a development may be granted by the Enforcement Officer. The Conditional Approval will be based on conformance with applicable performance standards and submittal requirements of this Article. A letter will be sent to the applicant stating the results of the review and the conditions placed on any approvals. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(b) Earth Change Approval. If all the performance standards and application requirements in Subsections (B), (C), (D), (E), and (F) of this Section have been met, except for obtaining all the required local, state and federal approvals, a request for the commencement of grading activities may be made on a site prior to the issuance of a Watershed Development Permit. The proposed grading activity may commence with written approval from the Enforcement Officer of the earth change approval plan that delineates the activities specifically allowed. The written approval will state the conditions and limitations of the proposed grading activities. No development activity may occur in those portions of the site for which state and federal permits are required, except for IEPA sewer and water extension permits. No earth moving permit shall be issued for any development within a Regulatory Floodplain.

(4) Permit Fees and Application Review Times. A separate City of Highland Park fee schedule has been established by resolution and which may be amended hereafter from time to time by the City Council. Permit applications shall be reviewed within thirty (30) days of receipt. Amended permit applications will be reviewed within sixty (60) days of receipt. The Enforcement Officer shall approve, deny or provide remedial recommendations within sixty (60) days. If no action has been taken by the Enforcement Officer within ninety (90) days after receipt of an application, or within a longer time period if requested in writing by the applicant, the application shall be deemed denied.

(5) Contiguous Property. In order to preclude inappropriate phasing of developments to circumvent the intent of this Article, when a proposed development activity will occur on a lot or parcel of land that has contiguous lots or parcels of lands owned in whole or in part by the same property owner, then the criteria as defined in this Section will be applied to the total land area compiled from aggregate ownership parcels. If this aggregate ownership land area is greater than the minimum area requirements defined in Subsection (A) of this Section, then a Watershed Development Permit will be required. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(6) Permit Extensions and Terminations. Causes for terminating a permit during its term or for denying a permit extension include, but are not limited to the following:

(a) Noncompliance with any condition of the permit; or

(b) The permittee's failure to disclose fully all relevant facts in the application process or the permittee's misrepresentation of any relevant facts at any time; or

(c) If the authorized work is not commenced within three (3) years after issuance of the permit, or if the authorized work is suspended or abandoned for a period of twelve (12) months after the time of commencing the work, unless an extension

has been granted in writing by the Enforcement Officer. The extension should be requested of the Enforcement Officer in writing no sooner than ninety (90) days prior to the termination of the permit.

(7) Countywide and General Permits. Under its authority and jurisdiction, the SMC Chief Engineer may, by issuance of a countywide or general permit, grant approval for specific types of development, which comply with all applicable standards and purpose stated in Sec. 150.1801. The specific types of development eligible for a Countywide ordinance or general permit (e.g. Countywide Permit #1 and General Permit #2) may be authorized only after discussion at the Technical Advisory Committee, a minimum thirty (30) day public notice and approval by the SMC in conjunction with a regularly scheduled SMC meeting. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(8) Exempted Development. All development shall meet the minimum state, federal and local regulations. No development is exempt from the floodplain, floodway, wetland and soil erosion and sediment control provisions of this Ordinance. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

(B) All Development. The following performance standards, application requirements and other provisions apply to all development requiring a permit. Subsequent Sections include additional provisions for development in a Regulatory Floodplain, wetlands and public roads.

(1) Performance Standards.

(a) Plats and Site Plans.

1. The performance standards for all development (Section 150.1804) shall be considered in site planning and appropriately addressed in the drainage plan component of subdivisions, annexation agreements, preliminary plats, final plats, re-plats and Planned Unit Developments. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. In addressing Subsection (B)(1)(d) "Runoff Volume Reduction Hierarchy" of this Section, streets, blocks, lots, deed or plat-restricted areas, parks and other public grounds shall be located and lined out in such a manner as to preserve and utilize natural streams, wetlands, and flood-prone areas whenever possible. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

3. Subdivisions, annexation agreements, plats, re-plats, and Planned Unit Developments shall show the Base Flood Elevation (BFE) and Regulatory Floodway limits. The plats, re-plats, Planned Unit Developments, or engineering plans and studies shall include a signed statement by a Registered Professional Engineer that accounts for changes in the drainage of surface waters in accordance with the Plat Act (765 ILCS 205/2). **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. All plats and subdivisions which border on or include public bodies of water as defined by IDNR/OWR shall be submitted to IDNR/OWR for review and approval.

5. Stormwater management systems shall be functional before building permits are issued for residential and non-residential developments.

6. Soil erosion and sediment control measures and stormwater management facilities shall be functional before general construction begins. Where development of a site is to proceed in phases, the soil erosion and sediment control measures and the stormwater management facilities needed for each phase shall be functional before the construction of that phase begins.

7. The City of Highland Park shall not approve any preliminary or final Planned Unit Development or plat of subdivision located inside or outside its corporate limits unless such Planned Unit Development or plat meets the minimum performance standards of this Article. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

8. Pursuant to State law, the property owner of a parcel being subdivided adjacent to a state or county road right-of-way shall notify the proper highway authority in writing of the proposed subdivision, and request that the proper highway authority provide, at the cost of the highway authority or otherwise provided by law, the amount of additional capacity in any stormwater detention facility to be constructed in the subdivision for the future availability of the highway authority for meeting stormwater detention requirements of any future public construction on the highway.

9. All stormwater management systems shall be located and described within a deed or plat restriction. Stormwater management systems that service a single parcel (or two parcels) of property may be excused from this requirement upon approval of the Enforcement Officer.

10. No modification may be made to a deed or plat without the prior written approval of the Enforcement Officer.

(b) Runoff Calculations.

1. For tributary drainage areas one hundred (100) acres or greater, and for the determination of detention and depressional storage requirements, an SMC-approved hydrograph-producing runoff calculation method shall be used. When appropriate and with the prior written approval of the Enforcement Officer, Appendix K of the Lake County Watershed Development Ordinance, "Detention Volume Versus Percent Impervious," last amended January 10, 2006, may also be used for determination of detention storage volumes. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. The Rational Method may be used to calculate discharges for areas of less than one hundred (100) acres. The Rational Method shall not be used to determine detention or depressional storage requirements.

3. Rainfall data as presented in Appendix I of the Lake County Watershed Development Ordinance, "Rainfall Depth Duration Frequency Tables for

Lake County,” last amended January 10, 2006, shall be used for rainfall volume, storm distribution, return frequency, and event duration. (Ord. 68-2000, adopted 10/23/00; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

4. Runoff calculations for all off-site drainage areas may be based on anticipated future land use conditions or existing land use conditions. Anticipated future land use conditions will be based on future land use and existing storage facilities. Future detention facilities may be used for anticipated future land use conditions if approved by the SMC Chief Engineer or for tributary drainage areas less than one hundred (100) acres if approved by the Enforcement Officer. Existing land use conditions will be based on existing land use and existing storage facilities. For each frequency storm event, runoff calculations will be based on the critical duration, for all durations presented in Appendix I of the Lake County Watershed Development Ordinance, “Rainfall Depth Duration Frequency Tables for Lake County,” last amended January 10, 2006. (Ord. 68-2000, adopted 10/23/00; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

5. Existing depressional storage volume will be maintained, and the volume of detention storage provided to meet the requirements of this Article shall be in addition to the existing storage.

6. For determination of soil runoff characteristics, areas of the development that are hydrologically disturbed and compacted shall be changed to that soil types’ highest runoff potential/soil group classification. Conversely, soil groups that are not hydrologically disturbed will retain their current runoff characteristics, and areas that are deed or plat restricted for native planting areas may be determined to have lower runoff characteristics. (**Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(c) Release Rates and Discharges.

1. Unless otherwise specified in (a) Appendix J of the Lake County Watershed Development Ordinance, “Watershed Specific Release Rates,” last amended January 10, 2006, (b) an SMC-adopted Basin Plan, or (c) an SMC-adopted floodplain study, the detention volume required shall be calculated using a rating curve based on maximum release rates of 0.04 cubic feet per second per acre for the 2-year, 24-hour storm event and 0.15 cubic feet per second per acre for the 100-year, 24-hour storm event. The release rate requirement shall apply to the hydrologically disturbed area of the ownership parcel unless the Enforcement Officer determines that specific locations of the development site have unique circumstances such that the release rate shall apply to a broader or smaller area. The release rate requirements shall only apply to developments listed in Subsections (A)(1)(f) and (g) of this Section. (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

2. Watershed specific release rates are tabulated in Appendix J of the Lake County Watershed Development Ordinance, “Watershed Specific Release Rates,” last amended January 10, 2006. (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

3. All concentrated stormwater discharges must be conveyed into an existing channel, storm sewer, or overland flow path with adequate

downstream stormwater capacity (as defined in this Article) and will not result in increased flood and drainage hazard. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. The design of stormwater management systems shall not result in the inter-basin transfer of drainage, unless no reasonable alternative exists. The Enforcement Officer may also allow inter-basin transfer if the transfer relieves a known drainage hazard and there is adequate downstream stormwater capacity. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

5. The combined release from the detention facility outlet and the outlet designed to meet wetland hydrology requirements of Subsection (E)(7) of this Section shall not exceed either the 2 or 100 year allowable release rates, respectively. The wetland hydrology requirements or minimum outlet restrictor size may take precedence over the allowable release rate, provided there is adequate downstream capacity as determined by the Enforcement Officer. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

6. The applicant shall prohibit illicit discharges generated during the development process from entering into the stormwater management system. Discharges of stormwater from a development site shall be in conformance with the Soil Erosion and Sediment Control practices contained in Subsection (B)(1)(k) of this Section. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) **Runoff Volume Reduction Hierarchy.** An applicant shall choose a strategy to meet the release rate requirements that minimizes the increase in runoff volumes and rates from the development and addresses the water quality treatment requirements in Subsection (B)(1)(h) of this Section. The applicant shall use appropriate best management practices as presented in the Technical Reference Manual and the following hierarchy in preparing a drainage plan:

1. Preservation of natural resource features of the development site (e.g. floodplains, wetlands, Isolated Waters of Lake County, prairies and woodlands); (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

2. Preservation of the existing natural streams, channels and drainageways;

3. Minimization of impervious surfaces created at the site (e.g. narrowing road width, minimizing driveway length and width, clustering homes and shared driveways);

4. Use of open vegetated channels to convey stormwater runoff;

5. Preservation of the natural infiltration and storage characteristics of the site (e.g. disconnection on impervious cover and on-lot bioretention facilities);

- and quality control; and
6. Use of structural measures that provide water quality
 7. Use of structural measures that provide only quantity control and conveyance.

(e) Detention Facilities.

1. All stormwater facilities, when determined applicable by the Enforcement Officer, shall be provided with: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

a. An emergency overflow structure capable of passing the base flood inflow rate without damages to downstream structures or property; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

b. the top of the impounding structure shall be a minimum of one (1.0) foot above the design high water level within the emergency overflow structure based on a. above; **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

c. a minimum 8-foot wide safety shelf with a maximum depth of three (3.0) feet below normal water level sloped back towards the shoreline; and **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

d. features for maintenance of emergency ingress and egress capability. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. Single pipe outlets shall have a minimum inside diameter of twelve (12) inches. If design release rates call for smaller outlet, a design that minimizes the possibility of clogging shall be used. Minimum outlet restrictor size shall be four (4) inches in diameter provided there is adequate downstream capacity. Detention volume and corresponding high water level required for a development shall be determined by using the appropriate release rates specified in Subsection (B)(1)(c) of this Section, regardless of minimum outlet restrictor size. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

3. Stormwater infiltration, retention and detention facilities required to meet a development's discharge requirements shall be designed to bypass offsite tributary flow from streams and channels unless approved by the Enforcement Officer.

4. Any development involving the construction, modification or removal of a dam as defined in Article II of this Chapter per 17 III. Adm. Code 3702 (Rules for Construction of Dams) shall obtain an Illinois Division of Water Resources Dam Safety permit or a letter stating no permit is required prior to the start of such activity. Reference Appendix G of the Lake County Watershed Development Ordinance, "IDNR/OWR Dam Safety Permitting Guidelines," last amended January 10, 2006, for IDNR/OWR Dam Safety permitting guidelines. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

5. Stormwater retention and detention facilities shall not be constructed in a Regulatory Floodplain unless approved by the Enforcement Officer. If a retention or detention facility is constructed in a Regulatory Floodplain, the development must meet the requirements of this Subsection (C) of this Section.

6. On-Stream Detention.

a. All on-stream detention shall provide a Detention Volume Safety Factor as follows:

(i) The Detention Volume Safety Factor applied to the volume of on-stream detention necessary to meet this Article's site requirements.

(ii) The Detention Volume Safety Factor is equal to one (1) plus 0.05 times the ratio of offsite tributary drainage area to on-site tributary drainage area.

(iii) The maximum Detention Volume Safety Factor shall be 1.5.

b. No on-stream detention shall be allowed with an off-site to on-site tributary drainage area ratio greater than 10:1 except for development providing a watershed benefit.

c. On-stream detention shall not be permissible if the tributary drainage area is greater than 640 acres, except for detention that provides a watershed benefit.

d. The release rate shall be 0.04 cubic feet per second per acre of the total tributary drainage area (on-site and off-site) at the elevation created by impoundment of the on-site two-year storm volume plus the Detention Volume Safety Factor, and 0.15 cubic feet per second per acre of the total tributary drainage area (on-site and off-site) at the elevation created by impoundment of the on-site 100-year storm volume plus the Detention Volume Safety Factor and the required compensatory storage. The release rate and on-site detention volume shall be calculated using the 24-hour storm event. This release rate calculation shall be used unless other site conditions warrant further analysis and modification from this standard or unless watershed specific release rates have been adopted.

e. On-stream detention shall provide water quality treatment. One of the following two methods shall be used:

(i) A wet detention facility with a minimum permanent pool volume equal to the calculated sediment volume accumulated over a one-year period for the entire upstream watershed and an average normal water depth of at least four feet. The facility shall also have a live storage volume that, at a minimum,

equals the Water Quality treatment standards of Subsection (B)(1)(h) of this Section for the development site.

(ii) A separate off-line sediment basin with a volume meeting the Water Quality treatment standards of Subsection (B)(1)(h) of this Section for the tributary drainage area to the sediment basin.

f. Impoundment of the stream as part of on-stream detention shall be designed to allow the migration and movement of present or potentially present indigenous species, which require access to upstream areas as part of their life cycle. The impoundment shall not cause or contribute to the degradation of water quality or stream aquatic habitat. (Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)

g. Compensatory storage requirements shall be satisfied and shall be in addition to detention volume requirements.

h. No on-stream detention shall be allowed in areas designated as an exceptional functional value wetland.

i. Intentionally omitted. (Ord. 68-2000, adopted 10/23/00)

j. Impounding berms or walls for stormwater retention and detention facilities shall be designed and constructed to withstand all expected forces, including but not limited to, erosion, pressure and uplift. The applicant shall submit material and compaction design specifications for earthen impoundments and provide as-built information verifying that the constructed condition meets the design requirements. Impounding berms or walls shall be represented on the design plans and signed and sealed by a Registered Professional or Structural Engineer. (Ord. 68-2000, adopted 10/23/00; Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)

7. The design of detention facilities shall , at a minimum, include side slopes no steeper than three horizontal units to one vertical unit, and having safety ledges at a depth of three feet below the normal and high water levels.

8. The placement of a detention basin in a floodplain area shall require compensatory storage per Subsection (C)(2)(d) of this Section. The volume of detention storage required to meet the standards of this Article shall be in addition to the floodplain compensatory storage required for the development.

(f) Intentionally Omitted.

(g) Stormwater Conveyance System

1. Storm Sewer and Swales

a. The 10-year design storm shall be used as a minimum for the design of storm sewers, swales, and appurtenances. Stormsewers shall have a minimum diameter of 12 inches with the exception that stormsewers servicing a

single parcel may be excused from this requirement upon approval of the Enforcement Officer. Storm sewer design analysis shall be calculated under full flow conditions, unless prior approval from the Enforcement Officer is received for an alternate flow condition (e.g. pressure flow). (Ord. 68-2000, adopted 10/23/00; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

b. Connections to sanitary sewers as an outflow for the stormwater management system will not be permitted for developments. (Ord. 68-2000, adopted 10/23/00; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

c. For agricultural drain tiles, the following provisions shall apply:

(i) Field tile systems disturbed during the process of development shall be reconnected by those responsible for their disturbance unless the approved drainage plan includes provisions for these. (**Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(ii) Where the tiles are being connected at points of ingress or egress from the development site, observation structures or similar maintenance and inspection access structures shall be installed and parties responsible for those tasks shall be identified in the maintenance plan. (**Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(iii) The applicant shall notify adjoining downstream property owners in writing of any proposed stormwater facility outlet location and design. The development design shall utilize where practical and approved by the Enforcement Officer, outflow locations that have an existing tile leaving the development site. A subsurface connection to the tile shall be constructed as a low flow outlet. A surface outlet shall be designed for the development site outflows based on the assumption the downstream tile will cease to function. (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

d. All storm sewers shall be located in a public road right-of-way or maintenance easement of sufficient size to maintain or reconstruct the sewer.

e. All on-site stormwater conveyance systems shall be designed and constructed to withstand the expected velocity of flow from all events up to the base flood without erosion. Stabilization adequate to prevent erosion shall be provided at the inlets and outlets for all pipes, transitions, and paved channels.

f. Swales being used as part of the stormwater management system for a development shall be located within a deed or plat-restricted area of sufficient size to maintain or reconstruct the swale.

g. Surface outflows onto adjoining properties shall be designed to release as sheet flow using level spreader trenches unless alternative designs are approved by the Enforcement Officer. (**Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

2. Streams and Channels. The following items are general performance standards for streams and channels and do not excuse development from meeting all other requirements of this Article.

a. Natural streams and channels are to be conserved.

b. Removal of streamside (riparian) vegetation shall be limited to one side of the channel

c. .Clearing of channel vegetation shall be limited to that which is essential for construction of the channel.

d. If a stream or channel meeting the definition of Waters of the United States or Isolated Waters of Lake County is modified, a stream or channel mitigation plan shall be submitted for review and approval to the Enforcement Officer. The plan shall show how the physical characteristics of the modified channel shall meet the existing channel length, cross-section, slope, sinuosity, and carrying the capacity of the original channel. The plan shall also re-establish vegetation within the channel modification using the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, NRCS, et al., (as amended) as a minimum standard for the re-vegetation plan. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

e. All disturbed areas associated with a channel modification shall be immediately seeded or otherwise stabilized according to this Article

f. . If channels are modified, an approved and effective means to reduce sedimentation and degradation of downstream water quality must be installed before excavation begins and must be maintained throughout the construction period.

g. New or relocated channels shall be built in the dry and all items of construction, including vegetation, shall be completed prior to diversion of water into the new channel.

h. Streams and channels shall be expected to withstand all events up to the base flood without increased erosion. The use of armoring of banks using bulkheads, rip-rap and other materials shall be avoided. Armoring shall only be used where erosion cannot be prevented in any other way such as use of vegetation or gradual slopes. Such armoring shall have minimal impact on other properties, watercourses, and the existing land configuration.

j. A minimum maintenance easement of twelve (12) feet from top of bank is required along one side of all channels draining twenty (20) or more acres. All drainage easements shall be accessible to vehicular equipment; however, linear accessibility for vehicular equipment is not required.

k. Construction vehicles shall cross streams by the means of existing bridges or culverts. Where an existing crossing is not available, a temporary crossing shall be constructed in which:

(i) The approach roads will be 0.5 feet or less above natural grade;

(ii) 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;

(iii) The top of the roadway fill in the channel will be at least two (2) feet below the top of the lowest bank. Any fill in the channel shall be non-erosive material, such as rip-rap or gravel;

(iv) All disturbed stream banks will be seeded or otherwise stabilized as soon as possible in accordance with Subsection (B)(1)(k)1.d. of this Section upon installation and again upon removal of construction crossings; and

(v) The access road and temporary crossings will be removed within one (1) year after installation, unless an extension of time is granted by the Enforcement Officer.

3. Overland Flow Paths. The following items are general performance standards for overland flow paths and do not excuse development from meeting all other requirements of this Article.

a. All areas of development must be provided an overland flow path that will pass the base flood flow without damage to structures or property. If the upstream drainage area is less than twenty (20) acres, the storm sewer pipe and inlet systems sized for the base flood can be constructed in lieu of providing an overland flow path.

b. The flow rate for a base flood shall be used to establish overland flow path limits, and it shall include all on-site and off-site tributary areas in accordance with this Subsection (B)(1)(b) of this Section.

c. The overland flow path shall be protected from any activity, such as fencing, landscaping, or storage shed placement, which could impair its function. This protection shall be established through a deed or plat restriction.

d. For overland flow paths with less than 20 acres tributary drainage area, all structure in parcels containing or adjoining an overland flow path or other high water level designation shall have a lowest adjacent grade a minimum of one-half (0.5) foot above the design high water elevation.

e. For overland flow paths with greater than or equal to 20 acres tributary drainage area but less than 100 acres, all structures in parcels

containing or adjoining an overland flow path shall have a lowest adjacent grade a minimum of one (1.0) foot above the design high water elevation.

(h) Water Quality Treatment.

1. The water treatment requirement of this Article shall apply to the total land area of the ownership parcel that results in creating more than 0.5 acres of new impervious surface.

2. Prior to discharging the Waters of the United States, Isolated Waters of Lake County or adjoining property, all development shall divert and detain at least the first 0.01 inches of runoff for every 1% of impervious surface for the development with a minimum volume equal to 0.2 inches of runoff (e.g. 20% or less impervious = 0.2, 50% impervious = 0.5, 90% impervious = 0.9); or provide a similar level of treatment of runoff as approved by the Enforcement Officer and consistent with the Best Management Practices guidance contained in the Technical Reference Manual. (Ord. 68-2000, adopted 10/23/00; Ord. 12-02, J. 28, p. 28-43, 2/25/02)

3. A buffer shall be established between design normal and high water levels around stormwater management facilities constructed for water quality treatment to enhance treatment effectiveness. The buffer area planting plan shall use the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, NRCS, et. al., (as amended) as a minimum standard. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. In addition to the requirements above, hydrocarbon (e.g. oil and grease) removal technology shall be required using a volume of 0.5 inches of runoff for the impervious surface tributary area to each treatment device and meeting a minimum 70% removal rate for all development classified as follows: **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(i) vehicle fueling and service facilities; **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(ii) parking lots with more than 25 stalls. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(i) Intentionally omitted.

(j) Buffer Areas.

1. Buffer areas shall be required for all areas defined as either Waters of the United States or Isolated Waters of Lake County. Buffer areas are divided into two types, linear buffers and water body buffers.

Waters of the United States is a defined term in Section 150.202 of this Code and refers to areas that are under the jurisdictional authority and regulated by the United States Army Corps of Engineers. Isolated Waters of Lake County are defined in Section 150.202 of this Code and are within the jurisdictional authority of this Article.

a. Linear buffers shall be designated along both sides of all channels meeting the definition of Waters of the United States or Isolated Waters of Lake County. The buffer width shall be determined as follows:

(i) When the channel has a watershed greater than 20 acres but less than one square mile, the minimum buffer shall be 50 feet on each side of the channel.

(ii) When the channel has a watershed greater than one square mile, the minimum buffer shall be 30 feet on each side of the channel.

(iii) Linear exceptional functional value wetlands and streams with an Index of Biotic Integrity (IBI) greater than 40 shall have a minimum buffer width of 100 feet on each side of the channel. (Initial IBI based on IEPA Illinois Water Quality Report, biannual. A site-specific IBI assessment may override this report.)

b. Water body buffers shall encompass all non-linear bodies of water meeting the definition of either Waters of the United States or Isolated Waters of Lake County. The buffer width shall be determined as follows:

(i) For all water bodies or wetlands with a total surface area greater than or equal to one quarter (1/3) acre but less than one (1) acre, a minimum buffer width of thirty (30) feet shall be established. (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(ii) For all water bodies or wetlands with a total surface area greater than or equal to one (1) acre but less than two and one-half (2 ½) acres, a minimum buffer width of forty (40) feet shall be established. (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(iii) For all water bodies or wetlands with a total surface area greater than two and one half (2 ½) acres, a minimum buffer width of fifty (50) feet shall be established.

2. Non-linear high quality aquatic resources shall have a minimum buffer width of one hundred (100) feet.

3. In areas where state or federal threatened and endangered species are present or for Illinois Natural Area Inventory Sites, buffer widths may be modified upon approval of the Enforcement Officer following consultation with the Illinois Department of Natural Resources or United States Fish and Wildlife Service.

4. Buffer area for water bodies meeting the definition of Water of the United States or Isolated Waters of Lake County shall extend from the ordinary high water mark. Buffer areas for wetland shall extend from the edge of the

delineated wetland. A property may contain a buffer area that originates from Waters of the United States or Isolated Waters of Lake County on another property.

5. Features of the stormwater management system approved by SMC or certified community may be within the buffer area of a development.

6. Access through buffer areas shall be provided, when necessary, for maintenance purposes.

7. All roadside drainage ditches, existing excavated detention facilities (as of the amended date of this Ordinance, August 10, 1999), borrow pits, quarries and improvements to existing public road developments or alignments are exempt from buffer requirements.

8. Stormwater discharges that enter the buffer shall have appropriate energy dissipation measures to prevent erosion and scour.

9. All buffer areas shall be maintained free from development including disturbance of the soil, dumping or filling, erection of structures and placement of impervious surfaces except as follows:

a. A buffer area may be used for passive recreation (e.g., birdwatching, walking, jogging, bicycling, horseback riding and picnicking) and it may contain pedestrian, bicycle or equestrian trails.

b. Structures and impervious surfaces (including trails, paths) may occupy a maximum of twenty (20) percent of the buffer surface provided the runoff from such facilities is diverted away from the Waters of the United States or Isolated Wetlands of Lake County or such runoff is directed to enter the buffer area as unconcentrated flow.

c. Utility maintenance, construction of stormwater facilities and maintenance of stormwater facilities shall be allowed.

d. Boat docks, boathouses and piers shall be allowed and the provisions of (9)(b) above shall apply.

e. Buffer areas hydrologically disturbed by allowing construction or as part of a re-vegetation plan shall be re-vegetated using the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, NRCS, et al., (as amended) as a minimum standard.

10. A minimum of one-foot temporary construction buffer from the limits of the WOUS or IWLC shall be required unless the adjacent wetland is considered impacted or enhanced. The one-foot temporary construction buffer shall be marked by the construction fencing (IDOT Standard) and installed prior to the start of all other construction activities. All other construction activities, including soil erosion and sediment control features, shall take place on the on-wetland side of the construction fencing. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

11. Buffer Averaging: The buffer width for a development site may be varied to a minimum of ½ of the buffer width required, upon approval of the Enforcement Officer, provided that the total buffer area required is achieved adjacent to the Waters of the United States or Isolated Waters of Lake County being buffered. The consultation process of the IDNR of U.S. Fish & Wildlife Service may override the ability to average buffer areas upon approval of the Enforcement Officer.

12. Preservation of buffer areas shall be provided by deed or plat restrictions.

13. The buffer area of a development site may be subtracted from the water quality volume required. (Ord. 12-02, J. 28, p. 28-43, 2/25/02; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(k) Soil Erosion and Sediment Control.

1. Soil erosion and sediment control related measures are required to be constructed and maintained for any land disturbance activity permitted under Section 150.1804. The following requirements shall be met: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

a. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be graded shall be protected from construction traffic or other disturbance until final seeding is performed. Soil stabilization measures shall consider the time of year, site conditions and the use of temporary or permanent measures.

b. Properties and channels adjoining development sites shall be protected from erosion and sedimentation. At points where concentrated flow leaves a development site energy dissipation devices shall be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity of flow from the structure to the watercourse so that the natural physical and biological characteristics and functions are maintained and protected.

c. Soil erosion and sediment control features shall be constructed prior to the commencement of hydrological disturbance of upland areas.

d. Temporary or permanent soil stabilization shall be applied to disturbed areas within fourteen (14) calendar days following the end of active hydrologic disturbance or redisturbance consistent with the following criteria or using an appropriate measure as approved by the Enforcement Officer.

(i) Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non-vegetative measures.

“ (ii) Areas or embankments having slopes greater than or equal to 3H:1V shall be stabilized with staked in place sod, mat or blanket in combination with seeding. (Ord. 68-2000, adopted 10/23/00)

(iii) Erosion control blanket shall be required on all interior detention basin side slopes between normal water level and high water level.

(iv) The fourteen (14) day stabilization requirement may be precluded by snow cover or where construction activity will resume within 21 days from when the active hydrologic disturbance ceased, then stabilization measures do not have to be initiated on that portion of the site by the 14th day after construction activity temporarily ceased given that portion of the site has appropriate soil erosion and sediment controls.

e. Land disturbance activities in streams shall be avoided, where possible. If disturbance activities are unavoidable, the following requirements shall be met:

(i) Where stream construction crossings are necessary, temporary crossings shall be constructed of non-erosive material.

(ii) The time and area of disturbance of a stream shall be kept to a minimum. The stream, including bed and banks, shall be restabilized within 48 hours after channel disturbance is completed or interrupted.

f. Soil erosion and sediment control measures shall be appropriate with regard to the amount of tributary drainage area as follows:

(i) Disturbed areas draining greater than 5,000 sq. ft. but less than one (1) acre shall, at minimum, be protected by a filter barrier (including filter fences, which at a minimum, meet the applicable sections of the ASSHTO Standard Specification 288-00 or equivalent control measures) to control all off-site runoff. Vegetated filter strips, with a minimum width of twenty-five (25) feet, in the direction of flow, may be used as an alternative only where runoff in sheet flow is expected. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(ii) Disturbed areas draining more than one (1) but fewer than five (5) acres shall, at a minimum, be protected by a sediment trap or equivalent control measure at a point downslope of the disturbed area.

(iii) Disturbed areas draining more than five (5) acres shall, at a minimum, be protected by a sediment basin or equivalent control measure at a point downslope of the disturbed area.

(iv) Sediment basins shall have both a permanent pool (dead storage) and additional volume (live storage) with each volume equal to the runoff amount of a 2-year, 24-hour event over the on-site hydrologically disturbed tributary drainage area to the sediment basin. 2-year storm runoff volumes versus site runoff curve numbers are shown in Appendix K of the Lake County Watershed Development Ordinance, "Detention Volume Versus Percent Impervious," last amended January 10, 2006. The available sediment volume below normal water level, in addition to the dead storage volume shall be sized to store the estimated sediment load generated from the site over the duration of the construction period. For construction periods exceeding 1-year, the 1-year sediment load and a sediment removal schedule may be submitted. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

If the detention basin for the proposed development condition of the site is used for sediment basin, the above volume requirements will be explicitly met. Until the site is finally stabilized, the basin permanent pool of water shall meet the above volume requirements and have a filtered perforated riser protecting the outflow pipe.

g. All storm sewer facilities that are or will be functioning during construction shall be protected by an appropriate sediment control measure.

h. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (e.g., sediment trap, sediment basin or other appropriate measure).

i. All temporary erosion and sediment control measures shall be removed within thirty (30) days after final site stabilization is achieved or after the temporary measures are no longer needed. Trapped sediment and other disturbed soil areas shall be permanently stabilized.

j. A stabilized mat of aggregate underlain with filter cloth (or other appropriate measure) shall be located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley or parking area. Any sediment or soil reaching an improved public right-of-way, street, alley or parking area shall be removed by scraping or street cleaning as accumulations warrant and transported to a controlled sediment disposal area. Additional stabilized construction entrance methods may be required by the Enforcement Officer.

k. Earthen embankments shall be constructed with side slopes no steeper than 3H:1V. Steeper slopes may be constructed with appropriate stabilization as approved by the Enforcement Officer.

l. Stormwater conveyance channels, including ditches, swales, and diversions, and the outlet of all channels and pipes shall be designed and constructed to withstand the expected flow velocity from the 10-year frequency storm without erosion. All constructed or modified channels shall be stabilized within 48-hours.

m. Temporary diversions shall be constructed as necessary to direct all runoff from hydrologically disturbed areas to the appropriate sediment trap or basin.

n. Soil stockpiles shall not be located in a flood-prone area or a designated buffer protecting Waters of the United States or Isolated Waters of Lake County. Soil stockpiles are defined as having greater than 100 yards of soil and will remain in place for more than seven days. Soil stockpile locations shall be shown on the soil erosion and sediment control plan and shall have the appropriate measures to prevent erosion of the stockpile. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

o. Handbooks: Standards and specifications contained in The Illinois Urban Manual, as amended, and the planning procedures sections of the Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control, as amended, are referenced in this Article as guidelines for presenting soil erosion and sediment control plan specifications and delineating procedures and methods of operation under site development for soil erosion and sediment control. In the event of conflict between provisions of said manuals and this Article, this Article shall govern.

p. Construction Site Maintenance: The applicant shall provide adequate receptacles for the deposition of all construction material debris generated during the development process. The applicant shall not cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of construction material

debris upon or into any development site, channel, Waters of the U.S. or Isolated Waters of Lake County. The applicant shall maintain the development site free of construction material debris. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. Designated Erosion Control Program Standards.

a. Formal adoption of the Designated Erosion Control Inspector Exam shall include the determination of a stating date for the Designated Erosion Control Inspection Program requirements of this Article. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

b. A Designated Erosion Control Inspector, hired or employed by the applicant, is required for all development that exceeds ten (10) acres of hydrologic disturbance or exceeds one (1) acre of hydrologic disturbance and has a regulatory floodplain, Isolated Waters of Lake County or Waters of the United States on-site or on adjoining property, **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

c. This Article contains inspection requirements for development meeting the above threshold for program inclusion and Designated Erosion Control Inspector requirements. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

d. The applicant shall submit the name of the Designated Erosion Control Inspector to the Enforcement Officer at or before the pre-construction meeting or commencement of hydrologic disturbance for the development. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(2) Application Requirements. All the following application requirements shall be submitted when applicable to the development as determined by the Enforcement Officer.

(a) Application Requirements for Minor Developments.

1. A completed Watershed Development Permit application signed by the applicant or applicant's agent and when required a Professional Engineer and Certified Wetland Specialist. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. A general description of the existing and proposed stormwater management system including all discharge points, collection, conveyance, and storage facilities.

3. A grading plan showing proposed and existing contours.

4. A site drainage plan which depicts drainage features, overland flow paths, stormwater management system components, Regulatory Floodplains, wetlands boundaries, buffer areas, existing or proposed septic systems and wells. A capacity analysis of the above stormwater system components may be required by the

Enforcement Officer. (Ord. 68-2000, adopted 10/23/00; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

5. An area drainage plan locating the proposed development in the watershed.
6. A description and depiction of measures to be taken to control erosion (soil erosion and sediment control plan).
7. A description of the anticipated dates of initiation and completion of activity.
8. An exhibit(s) for review which displays all deed or plat restrictions of record or to be recorded for the stormwater management system.
9. The federal, state and local permit requirements of Subsections 150.1804(B)(2)(b)13 and 14 are required when applicable to the development site and Subsections 150.1804(B)(2)(b)9 and 10 when requested by the Enforcement Officer. (Ord. 68-2000, adopted 10/23/00)
10. A wetland submittal if required under paragraph (E)(1) of this Section. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

(b) Application Requirements for Major Developments. In addition to the requirements for minor developments, major development applications require the following information:

1. Name and legal address of the applicant, and common address of the location where the development will take place, mailing address of the property owner and the signature of the applicant or applicant's agent.
2. A topographic map of the existing conditions of the development site showing the location of all roads, all drainageways, the boundaries of the predominant soil types, the boundaries of predominant vegetation, and the location of any drainage easements, detention or retention basins, including their inflow and outflow structures, if any. The map shall also include the location, size and flowline elevations of all existing storm or combined sewers and other utility lines within the site. The map shall be prepared using a minimum two (2) foot contour interval and shall be prepared at an appropriate scale for the type of project and shall include specifications and dimensions of any proposed channel modifications, location and orientation of cross-sections, if any, north arrow, and a graphic or numerical scale. All elevations shall be referenced to National Geodetic Vertical Datum ("NGVD") (1929 adjusted).
3. Include cross-section views for the stormwater management system showing existing and proposed conditions including principal dimensions of the work, and existing and proposed elevations, normal water and calculated base flood elevations, and overland flow depth and path. The elevations of lowest floor or lowest adjacent grade for structures shall be included on the development plan as

applicable. Refer to Subsections (B)(1)(g)3, (C)(2)(f), and (G) of this Section for elevation requirements of structures within or adjacent to floodprone areas. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. A vicinity map shall be included along with the parcel identification numbers of all parcels comprising the proposed development.

5. A report describing the hydrologic and hydraulic analyses performed for the project. The report shall include the name of stream or body of water affected, a statement of purpose of proposed activity, and a detailed determination of the runoff for the project site under existing and developed conditions. This includes documentation of the design volumes and rates of the proposed runoff for each portion of the watershed tributary to the stormwater management system and the effects the improvements will have upon the receiving channel and high water elevations. Runoff calculations shall include all discharges entering the site from upstream areas.

6. A section in the hydrologic and hydraulic analysis report describing how the Runoff Volume Reduction Hierarchy [as described in Subsection (B)(1)(d) of this Section] was used in evaluating the stormwater management needs of the site.

7. For detention facilities, a section in the hydrologic and hydraulic analysis report that includes a plot or tabulation of storage volumes and water surface areas with corresponding water surface elevations, stage-discharge or outlet rating curves, and design hydrographs of inflow and outflow for the 2-year, 24-hour and the 100-year, 24-hour storm events under existing and developed conditions.

8. A soil erosion and sediment control plan showing all measures appropriate for the development as approved by the Enforcement Officer, to meet the objectives of this Article throughout all phases of construction and permanently after completion of development of the site, including::

a. Location and description, including standard details, of all sediment control measures and design specifics of sediment basins and traps, including outlet details. The drainage area tributary to each sediment control measure shall be delineated on the soil erosion and sediment control plan.

b. Location and description of all soil stabilization and erosion control measures, including seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, kind and quantity of mulching for both temporary and permanent vegetative control measures, and types of non-vegetative stabilization measures.

c. Location and description of all runoff control measures, including diversions, waterways, and outlets.

d. Location and description of methods to prevent tracking of sediment off-site, including construction entrance details, as appropriate.

e. Description of dust and traffic control measures.

f. Locations of stockpiles and description of stabilization methods.

g. Description of off-site fill or borrow volumes, locations, and methods of stabilization.

h. Provisions for maintenance of control measures, including type and frequency of maintenance, easements, and estimates of the cost of maintenance.

i. Identification (name, address, and telephone) of the person(s) or entity which will have legal responsibility for maintenance of erosion control structures and measures during development and after development is completed.

j. A written narrative description of the proposed phasing (construction sequencing) of development of the site, including stripping and clearing, rough grading and construction, and final grading and landscaping. Phasing should identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of installation of temporary sediment control measures (including perimeter controls), clearing and grading, installation of temporary soil stabilization measures, installation of storm drainage, paving streets and parking areas, final grading and the establishment of permanent vegetative cover, and the removal of temporary measures. It shall be the responsibility of the applicant to notify the Enforcement Officer of any significant changes which occur in the site development schedule after the initial soil erosion and sediment control plan has been approved.

k. Bonds: The applicant may be required to file with the Enforcement Officer a faithful performance bond or bonds, letter of credit, or other improvement security satisfactory to the Enforcement Officer in an amount deemed sufficient by the Enforcement Officer to cover all costs of improvement, landscaping, maintenance of improvements and landscaping, and soil erosion and sediment control measures for such period as specified by the Enforcement Officer, and engineering and inspection costs to cover the cost of failure or repair of improvements installed on the site.

9. A maintenance plan for the ongoing maintenance of all stormwater management system components including wetlands is required prior to plan approval. The plan shall include:

- a. Maintenance tasks.
- b. The party responsible for performing the maintenance tasks.
- c. A description of all permanent public or private access deed or plat restricted areas for all stormwater management system components for the development. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**
- d. A description of dedicated sources of funding for the required maintenance.
- e. Measures to prohibit dumping, depositing, dropping, throwing, discarding or leaving of construction material debris and all other illicit discharges into the stormwater management system and measures to be in continued compliance with IEPA NPDES Permit No. ILR40. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

10. The application form, development plans, and stormwater reports shall meet the requirements of this Article and shall be signed and sealed by a Registered Professional Engineer. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

11. Public trail and park facility projects which do not involve the placement of structures or fill can be submitted without the certification of seal of a Registered Professional Engineer.

12. A description of the anticipated dates of initiation and completion of activity.

13. A copy of the Natural Resources Inventory (“NRI”) shall be submitted by the applicant to the Enforcement Officer, for development that is required to obtain a NRI performed by the Lake County Soil and Water Conservation District pursuant to 70 ILCS 405/22/02a.

14. For all development sites requiring a National Pollutant Discharge Elimination System (“NPDES”) Permit, the applicant shall submit a Notice of Intent to the IEPA to comply with the NPDES Permit. The approved soil erosion and sediment control plan created pursuant to the requirements of this Article shall fulfill the plan requirements in the NPDES permit.

15. If the soil mapping submitted for the development indicates the presence of the soils listed below, then the applicant shall provide site specific soil mapping performed by a certified soil classifier for the development. No buildings shall be constructed on these soils unless appropriate building methods, such as pilings, caissons or removal and replacement of unsuitable soils, as approved by the Enforcement Officer, are used to provide and protect a suitable building foundation.

a. Soils classified as a hydric soil (USDA/NRCS Soil Classification) in its very poorly drained condition or the following three soil classification in any condition;

- (i) Houghton Muck (W103)
- (ii) Houghton Peat (W97)
- (iii) Peotone Silty Clay Loam (W330)

Development that is exempted from this requirement is any development activity not resulting in the construction of a building.

16. A copy of the consultation application to the Illinois Department of Natural Resources shall be submitted by the applicant to the Enforcement Officer for development that is required to comply with the consultation process of the Illinois Endangered Species Protection Act [520 ILCS 10/11] and the Illinois Natural Areas Preservation Act [525 ILCS 30/17]. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

17. Subsurface Drainage (Drain Tiles): The applicant shall submit a subsurface drainage inventory. The inventory shall include locations of existing farm and storm drainage tiles by means of slit trenching and other appropriate methods performed by a qualified subsurface drainage consultant. All existing drain tile lines damaged during the investigation shall be repaired to its previous working status. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07).**

a. The applicant shall provide a topographical map of the development site showing: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07))**

(i) Location and depth of each slit trench and identified to correspond with the tile investigation report and surveyed points where the tile was field staked at approximately 50 foot intervals; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(ii) Location of each drain tile with a flow direction arrow, tile size and any connection to adjoining properties;

(iii) A summary of the tile investigation report showing trench identification number, tile size, material and quality, percentage of the tile filled with water, percentage of restrictions caused by silting, depth of ground cover, and working status; and **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(iv) Name, address and phone number of person or firm conducting tile location investigation.

b. Information collected during the drainage investigation shall be used to design and construct a stormwater management system that meets the requirements of this Article, including the connecting tile lines on adjoining properties. Tiles discovered during construction that were not identified during the investigation shall be incorporated into the development stormwater system design and

recorded on the development as-built documents. (Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)

18. A wetland submittal if required under paragraph (E)(1) of this Section. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

(c) The applicant shall obtain and provide a copy of an IDNR/OWR Dam Safety Permit or a letter stating that a Dam Safety Permit is not required if the development includes a dam before the applicant requests or obtains a watershed development permit. Reference Appendix G of the Lake County Watershed Development Ordinance, "IDNR/OWR Dam Safety permitting Guidelines," last amended January 10, 2006, for IDNR/OWR Dam Safety permitting guidelines. (Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)

(d) The applicant shall obtain and provide copies of any and all required federal, state and local permits for development in the Regulatory Floodplain before the applicant requests or obtains a Watershed Development Permit. Reference Appendix E of the Lake County Watershed Development Ordinance, "Partial List of Permits Required (When Applicable) for Development in Lake County," last amended January 10, 2006, for a partial list of permits that may be applicable. (Ord. 19-07, J. 33, p. 073-151, passed 2/12/07).

(e) The applicant shall submit the data required to SMC, IDNR/OWR, and FEMA for proposed revisions to the base flood elevation of a Regulatory Floodplain study or relocation of a Regulatory Floodplain boundary.

(f) The applicant shall provide, when applicable to the development: an affidavit or documentation to prove where the development was above the BFE prior to the effective date of the first Regulatory Floodplain map; certification that the ground elevation existed prior to the effective date of the first Regulatory Floodplain map.

(C) Regulatory Floodplains and Floodways.

(1) Location of Regulatory Floodplain, Base Flood Elevation ("BFE") and Regulatory Floodway.

(a) The Regulatory Floodplain is delineated within a development by projecting the BFE onto the existing site topography.

(b) The BFE shall be as delineated on the 100-year flood profiles, as indicated on the floodplain studies noted below:

1. City Regulatory Floodplain profiles, approved by the City for regulatory use are established by: (Ord. 19-07, J. 33, p. 073-151, passed 2/12/07);

a. The Skokie River 100-year Flood Elevation, as established by Epstein Engineer Inc. and adopted by Ordinance 57-90 on December 10, 1990, and: (Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)

b. The Middle Fork North Branch Chicago River 100-year Floodplain Report from Hydrocomp International, titled "Simulation of Discharge and Stage Frequency for Floodplain Mapping in the North Branch of the Chicago River," dated February 1971 and approved by P. Dittmar on December 7, 1973. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. Should no City-approved Regulatory Floodplain profile exist for the site, SMC Regulatory Floodplain profiles, approved by the SMC for regulatory use after a sixty (60) day public review and comment period and accepted by IDNR/OWR and FEMA for SMC regulatory use, as listed on the SMC website; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

3. Should no SMC-approved Regulatory Floodplain profile exist for the site, the FEMA Flood Insurance Study and profiles, as listed in Appendix C of the Lake County Watershed Development Ordinance, "FEMA Flood Insurance Study Maps and Profiles," last amended January 10, 2006 and thereafter; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. In the case of FEMA delineated "AH Zones" the elevation noted on the map shall be the BFE. In the case of FEMA delineated "AO Zones" the BFE shall be the depth number shown on the map added to the highest adjacent grade, or at least two (2) feet above the highest adjacent grade if no depth number is provided; or

5. When no base flood elevation information exists, the BFE shall be determined by a Registered Professional Engineer using an appropriate model or technique as approved by the SMC or IDNR/OWR. For riverine flood-prone areas with greater than one hundred (100) acres of tributary drainage area, non-riverine flood-prone areas with greater than twenty (20) acres tributary drainage area, and all mapped Special Flood Hazard Areas regardless of drainage area, the BFE determination shall be submitted to SMC for approval prior to issuance of a Watershed Development Permit. The BFE determination for non-riverine depressional floodplains with less than twenty (20) acres of tributary drainage area shall be reviewed and approved by the Enforcement Officer. BFE determinations shall be based on the critical duration event.

a. Where a channel has a tributary drainage area of 640 acres or more, the above analyses shall be submitted to SMC for approval by IDNR/OWR.

b. For a non-riverine Regulatory Floodplain, the historic flood of record (as determined by the Enforcement Officer according to Subsection (C)(1)b.4. of this Section) plus three feet may be used for the BFE instead of performing a detailed hydrologic and hydraulic study.

(c) The location of the Regulatory Floodway shall be as delineated on the maps referenced in Appendix B of the Lake County Watershed Development Ordinance, "SMC Regulatory Floodplain Maps and Profiles," last amended January 10, 2006. Where interpretation is needed to determine the exact location of the Regulatory Floodway boundary, IDNR/OWR should be contacted. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) Nothing contained herein shall prohibit the application of these regulations to land that can be demonstrated by engineering survey to lie within any Regulatory Floodplain. Conversely, any lands (except for those located in a Regulatory Floodway) that can be demonstrated by a topographic survey certified by a Registered Professional Engineer or Registered Professional Land Surveyor to lie beyond the Regulatory Floodplain, and show, to the satisfaction of the Enforcement Officer, to have been higher than the BFE as of the effective date of the first floodplain mapping denoting the site to be in a Special Flood Hazard Area, shall not be subject to the regulations of this Section.

In the case of a site located in the Regulatory Floodway that is higher than the BFE, it is subject to the regulations of this Section until such time as a letter of map revision is received from the IDNR/OWR and FEMA.

(2) Performance Standards Applicable to all Regulatory Floodplain Development. The standards of this Subsection apply to all Regulatory Floodplain development except when superseded by more stringent requirements in the subsequent Sections.

(a) Modification and disturbance of natural riverine Regulatory Floodplains shall be avoided to protect existing hydrologic and environmental functions. Such disturbances shall be minimized and all negative impacts mitigated as described in a mitigation plan.

(b) No development shall be allowed in the Regulatory Floodplain that shall singularly or cumulatively 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 functions of the Regulatory Floodplain or channel.

(c) For all projects involving channel modification, fill, stream maintenance, or levees, the flood carrying capacity of the Regulatory Floodplain shall be maintained.

(d) Compensatory storage is required for all storage lost or displaced in a Regulatory Floodplain due to development.

1. Hydraulically equivalent compensatory storage requirements for fill or structures in a riverine Regulatory Floodplain shall be at least equal to 1.2 times the volume of Regulatory Floodplain storage lost or displaced. Such compensation areas shall be designed to drain freely and openly to the channel and located opposite or adjacent to fill areas. A deed or plat restriction is required to prohibit any modification to the compensation area. The Regulatory Floodplain volume lost below the existing 10-year frequency flood elevation must be replaced below the proposed 10-year frequency flood elevation. The Regulatory Floodplain volume lost above the 10-year existing frequency flood elevation must be replaced above the proposed 10-year frequency elevation. (Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)

2. Hydraulically equivalent compensatory storage requirements for fill or structures in a non-riverine floodplain shall be at least equal to 1.2 times the volume of Regulatory Floodplain storage lost or displaced. Non-riverine floodplain storage may be replaced at or below the existing elevation but not below the Normal Water Level.

3. Upon approval of the Enforcement Officer, shorelines or streambanks that have experienced erosion may be restored to their condition as of the effective date of the first FIRM Map in that community without the need to provide compensatory storage for the fill used to restore the eroded area according to the following criteria:

a. The restoration fill shall meet existing grades and within riverine areas the current effective Regulatory Floodplain and Regulatory Floodway conveyances shall be maintained; and

b. The amount of erosion being restored shall be documented and submitted by the applicant as part of the permit process. Proper documentation shall be either field survey information or photo documentation of the erosion that has occurred for the property being restored. (Ord. 68-2000, adopted 10/23/00)

c. For rivers, lakes and streams where no floodway has been designated, no documentation of past shoreline erosion is required if the applicant does not exceed 1 cubic yard of fill per lineal foot for a maximum of 200 feet. In this case, the placing of the fill shall not significantly alter the alignment of the shoreline with adjoining properties as determined by the Enforcement Officer. Non-documentable fills are a one-time allowance on a per property basis and all fills exceeding 200 cubic yards shall be regulated as specified in Subsection (C)(2)(d) of this Section. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. Top dressing is the placement of not more than four (4) inches of topsoil within the regulatory floodplain for the purposes of stabilizing an existing erosion control problem or establishing vegetative cover. Top dressing shall be allowed by permit on a per-parcel, one-time only allowance, and not impact adjoining property drainage patterns. Upon approval of the Enforcement Officer, floodplain compensatory storage shall not be required. Top dressing fill shall comply with the Soil Erosion and Sediment Control standards and Wetland Provisions of this Article (Subsections (B)(1)(k) and (E) of this Section). This provision shall not be applicable to the design process for new development. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(e) Public Health Protection Standards.

1. For property within the Regulatory Floodplain, no chemicals, explosives, buoyant materials, animal waste, fertilizers, flammable liquids, pollutants, or other hazardous or toxic materials shall be placed or stored below the Flood Protection Elevation. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. New and replacement water supply systems, wells, and sanitary sewer lines may be permitted providing all manholes or other above-ground openings located below the FPE are watertight.

3. On-site waste disposal systems shall be designed to avoid inundation by the base flood.

(f) Building Protection Requirements.

1. The lowest floor, including basements of all new and existing residential structures with a substantial improvement shall be elevated up to at least the Flood Protection Elevation (FPE). An attached garage for a new structure must be elevated up to at least 1/2 of one foot above the base flood elevation (BFE). The lowest floor, including the basements of all substantially improved non-residential buildings shall be elevated or structurally dry flood-proofed, per Subsection (C)(2)(f)3 of this Section, to a minimum of one foot above the BFE. The structural design requirements in Subsection (C)(2)(f)1.a. and b. of this Section shall also apply. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

a. If placed on fill, the top of the fill for the residential structure shall be above the Flood Protection Elevation (FPE). The top of the fill for an attached garage shall be 1/2 of one foot above the BFE. The fill pad shall be placed at the appropriate elevation and designed to extend ten (10) feet out from the building's designed footprint unless the building design is certified by a Registered Structural Engineer to be protected from damages due to hydrostatic pressures. Additionally, the fill pad shall meet 95% of Standard Proctor Density in order to be demonstrated not to settle below the FPE for the residential structure and not below 1/2 of one foot above the BFE for an attached garage, and to be adequately protected against erosion, scour and differential settlement. Foundation excavations shall not exceed more than five (5) feet beyond the foundation footprint. Backfill for the over excavated area does not need to meet the compaction requirements.

b. If elevated by means of walls, pilings, or other foundation, the building's supporting structure must be permanently open to flood waters and not subject to damage by hydrostatic pressures of the base flood. The permanent openings shall be no more than one (1) foot above lowest adjacent grade, and below the BFE, and consist of a minimum of two (2) openings. The openings must have a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding below the BFE. 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. All areas below the FPE shall be constructed of materials resistant to flood damage. The lowest floor (including basement) for the residential structure and all electrical, heating, ventilating, plumbing, and air conditioning equipment and utility meters shall be located at or above the FPE. An attached garage must be elevated to at least 1/2 of one foot above the BFE. Water and sewer pipes, electrical and telephone lines, submersible pumps and other waterproofed service facilities may be located below the FPE. No area less than one foot above the BFE shall be used for storage of items or materials.

2. The lowest floor, including basements, of an existing structure with a substantial improvement shall be elevated in order to be not less than one (1) foot above the BFE. The requirements of Subsection (C)(2)(f)1.a. and b. shall also apply.

3. The lowest floor including the basement of all new non-residential buildings shall be elevated at least to the Flood Protection Elevation in accordance with Subsection (C)(2)(f)1.a. and b. of this Section, or be structurally dry flood-proofed to at least the FPE. A non-residential building may be structurally dry flood-proofed (in lieu of elevation) provided that a Registered Professional Engineer or Registered Structural Engineer shall certify that the building has been structurally dry flood-proofed below the FPE and the structure and attendant utility facilities are watertight and capable of resisting the effects of the base 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. Flood-proofing measures shall be operable without human intervention and without an outside source of electricity. (Levees, berms, floodwalls and similar works are not considered flood-proofing for the purpose of this Subsection). **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. Recreational vehicles to be installed on a site for more than one hundred eighty (180) days, shall be elevated to or above the FPE 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. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

5. Tool sheds, detached garages, and attached garages which are not substantial improvements on an existing single-family platted lot, may be constructed with the lowest floor below the FPE in accordance with the following:

a. The building shall not be used for human habitation.

b. All areas below the BFE shall be constructed with waterproof material. Structures located in a Regulatory Floodway shall be constructed and placed on a building site so as not to block the flow of flood waters and shall also meet the Appropriate Use Criteria of Subsection (C)(3) of this Article. In addition, all other requirements of this Article must be met.

c. The structure shall be anchored to prevent flotation.

d. Service facilities such as electrical and heating equipment shall be elevated or flood-proofed to the FPE.

e. The building shall be valued at less than Twelve Thousand Five Hundred Dollars (\$12,500) (1998 costs) or be no greater than five hundred seventy-six (576) square feet in floor size.

f. The building shall be used only for the storage of vehicles or tools and may not contain other rooms, workshops, greenhouses or similar uses.

6. A non-conforming structure damaged by flood, fire, wind or other natural or man-made disaster may be restored unless the damage meets or exceeds fifty (50) percent of its market value before it was damaged, in which case it shall conform to the above provisions of Subsection (C)(2)(f)2 of this Article.

7. No structure other than a fence shall be built within one hundred twenty-five (125) feet of the center line of the channel of the East Fork (Skokie River) and/or the Middle Fork of the North Branch of the Chicago River, or the Regulatory Floodway, whichever is greater. Said fence shall not be located in the floodway nor be constructed to restrict the passage of water.

(g) If the proposed development would result in a change in the mapped Regulatory Floodplain or BFE on a site, the applicant shall submit sufficient data to FEMA and SMC obtain a Letter of Map Revision (LOMR) from FEMA. Proposed changes to Regulatory Floodplain and Regulatory Floodway delineation and BFE should be submitted to SMC. IDNR/OWR concurrence is required for changes to the BFE and floodway delineation.

(h) If the development is located in a public body of water, as defined by IDNR/OWR, a permit must also be received from IDNR/OWR.

(j) Any work involving construction or modification or removal of a dam or an on-stream structure to impound water shall obtain an Illinois Division of Water Resources Dam Safety Permit or letter indicating a permit is not required prior to the start of development activity. Reference Appendix G of the Lake County Watershed Development Ordinance, "IDNR/OWR Dam Safety Permitting Guidelines," last amended January 10, 2006, for IDNR/OWR Dam Safety Permitting guidelines. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(k) If flood-proofing construction is required beyond the outside dimensions of an existing habitable, residential or commercial building, the outside perimeter of the flood-proofing 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 flood-proofing activities. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

(l) For public flood control projects, the permitting requirements of Subsection (C) of this Section will be considered met if the applicant can demonstrate to IDNR/OWR through hydraulic and hydrologic calculation 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 base flood event. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

(3) Additional Performance Standards for the Regulatory Floodway (IDNR/OWR Regulations). The only development in a Regulatory Floodway which will be allowed are Appropriate Uses which will not cause an increase in flood heights for all flood events up to and including the base flood. Only those Appropriate Uses listed below and in 17 Ill. Adm. Code Part 3708 will be allowed in the Regulatory Floodway. Appropriate Uses do not include the construction or placement of any new structures, fill, building additions,

buildings on stilts, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined below as an Appropriate Use. If the development is proposed for the Regulatory Floodway portion of the Regulatory Floodplain the following standards apply in addition to the previously stated standards for the Regulatory Floodplain:

(a) Only the construction, modification, repair or replacement of the following Appropriate Uses will be allowed in the Regulatory Floodway:

1. Public flood control projects and private improvements relating to the control of drainage, flooding of existing buildings, erosion, water quality or habitat for fish and wildlife; (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)
2. Structures or facilities relating to functionally water dependent uses such as facilities and improvements relating to recreational boating;
3. Storm sewer outfalls;
4. Underground and overhead utilities if sufficiently flood-proofed;
5. 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;
6. Bridges, culverts and associated roadways, sidewalks and railways, necessary for crossing over the Regulatory Floodway or for providing access to other Appropriate Uses in the Regulatory Floodway and any modification thereto;
7. Regulatory Floodway regrading, without fill, to create a positive non-erosive slope toward a channel;
8. Flood-proofing activities to protect previously existing lawful structures including the construction of watertight window wells, elevating structures, or the construction of flood walls 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 to be substantial improvements to the structure;
9. The replacement, reconstruction or repair of a damaged building, provided that the outside dimensions of the building are not increased, and provided that, the building is not damaged to fifty (50) percent or more of the building's market value before it was damaged. When damage is 50% or more, the activity shall conform to Subsection (C)(2)(f) of this Section.
10. Modifications to an existing building, which are not substantial improvements, that would not increase the enclosed floor area of the building below the BFE, and which will not block flood flows including but not limited to, fireplaces,

bay windows, decks, patios, and second story additions. No enclosed floor areas may be built on stilts.

(b) Additions to the above list of Appropriate Uses are not allowed.

(c) All Appropriate Uses shall require a permit from the City and must be in accordance with all provisions of this Article.

(d) Construction of an Appropriate Use will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and that of Subsections (C)(1) and (C)(2) of this Section and is so stated in writing with supporting plans, calculations and data prepared by a Registered Professional Engineer.

1. All effective Regulatory Floodway conveyance lost due to the development of Appropriate Uses, other than bridge or culvert crossings or on-stream structures or dams, shall be replaced for all flood events up to and including the base flood. In calculating effective Regulatory Floodway conveyance, the following factors shall be taken into consideration:

a. Regulatory Floodway conveyance,

$$K = \frac{1.486}{n} A(R)^{2/3}$$

where "n" is Manning's roughness coefficient, "A" is the effective area of the cross-section, and "R" is the ratio of the area to the wetted perimeter.

b. 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 ensure the proposed conditions will be maintained or the land cover is changing from a vegetative to a non-vegetative land cover.

2. Transition sections shall be provided and used in calculations of effective Regulatory Floodway conveyance, in the design of excavations in the Regulatory Floodway, between cross-sections with rapid expansions and contractions, and when meeting the Regulatory Floodway delineation on adjoining properties. The following expansion and contraction ratios shall be used: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

a. Water will expand no faster than at a rate of one (1) foot horizontal for every four (4) feet of the flooded stream's length.

b. Water will contract no faster than at a rate of one (1) foot horizontal for every one (1) foot of the flooded stream's length.

c. Water will not expand or contract faster than one (1) foot vertical for every ten (10) feet of flooded stream length.

d. All cross-sections used in the calculations shall be located perpendicular to flood flows.

e. In the design of excavations in the Regulatory Floodway, erosion/scour protection shall be provided on land upstream and downstream of proposed transition sections.

3. The development of all Appropriate Uses shall not result in an increase in the average channel or Regulatory Floodway velocities or stage, for all flood events up to and including the BFE. However, in the case of bridges or culverts or 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.

4. In the case of on-stream structures built for the purpose of backing up water, an increase in upstream stage when compared to existing conditions for all flood events up to and including the base flood event shall be contained within recorded easements. A permit or letter indicating a permit is not required must be obtained from IDNR/OWR, 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.

5. If flood proofing construction is required beyond the outside dimensions of an existing habitable, residential or commercial building, the outside perimeter of the flood-proofing construction shall be placed no further than ten (10) feet from the outside of the building. Compensation of lost storage and conveyance will not be required for flood-proofing activities.

6. For public flood control projects, the permitting requirements of this Subsection (C) of this Section will be considered met if the applicant can demonstrate to IDNR/OWR through hydraulic and hydrologic calculation 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 BFE.

7. General criteria for analysis of flood elevations.

a. The flood profiles, flows and Regulatory Floodway data in the Regulatory Floodway study, referenced in Subsection (C)(1) of this Section, must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, IDNR/OWR shall be contacted for approval and concurrence on the appropriate base conditions data to use.

b. If the BFE at the site of the proposed development is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed development shall be shown to meet the requirements of this Section for the base flood elevations of the Regulatory Floodway conditions and conditions with the receiving stream at normal water elevations.

c. If the applicant is informed by IDNR/OWR, units of local government, or a private owner that a downstream or upstream 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 (5) years, the proposed development shall be analyzed and shown to meet the requirements of this Section for both the existing conditions and the expected flood profile conditions when the bridge, culvert, or flood control project is built.

8. If the appropriate use will result in a change in the Regulatory Floodway location or a change in the BFE, the applicant shall submit to SMC the information required to be issued a Conditional Letter of Map Revision (“CLOMR”) from IDNR/OWR and FEMA. A public notice inviting public comment on the proposed change in the BFE or location in the Regulatory Floodway will be issued by IDNR/OWR or its designee before a CLOMR is issued. The application will not be considered complete until the CLOMR is received. No filling, grading, dredging or excavating shall take place until a conditional approval is issued by the Enforcement Officer. The construction or placement of structures within the currently effective floodway boundary shall not take place until a final Letter of Map Revision (“LOMR”) is issued by IDNR/OWR and FEMA, which revises the floodway boundary. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(e) For those circumstances listed below and located in a Regulatory Floodway, the following information shall be submitted to IDNR/OWR or SMC.

1. Analysis of the flood profile due to a proposed bridge, culvert crossings and roadway approaches.

2. An engineer's determination that an existing bridge or culvert crossing or approach road is not a source of flood damage and the analysis indicating the proposed flood profile.

3. Alternative transition sections and hydraulically equivalent storage.

4. IDNR/OWR will retain permit authority for any IDNR/OWR projects, dams, etc., all other state, federal or SMC projects.

5. SMC will issue permits to units of local government for Regulatory Floodway development.

(4) Special Considerations for the Construction of New Bridges or Culvert Crossings and Roadway Approaches or the Reconstruction or Modification of Existing Bridges, Culvert Crossings or Roadway Approaches.

(a) A proposed new structure shall not result in an increase of upstream flood stages greater than 0.1 feet when compared to the existing conditions for all flood events up to and including the BFE unless contained within the channel banks, or recorded easements. The evaluation must be submitted to the SMC for review and concurrence before a permit is issued.

(b) If the proposed development will increase upstream flood stages greater than 0.1feet, the applicant must contact IDNR/OWR, Dam Safety Section for a Dam Safety permit or waiver.

(c) Lost Regulatory Floodway storage must be compensated for per the Regulatory Floodplain performance standards of this Article except that artificially created storage that is lost or displaced due to a reduction in upstream head loss caused by a bridge, culvert, storm sewer or constructed embankment shall not be required to be replaced, provided no damage will be incurred downstream. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) Velocity increases must be mitigated per the Regulatory Floodway performance section of this Article except that in the case of bridges or culverts or 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 appropriate measures.

(e) For modification or replacement of existing structures, the existing structure must first be evaluated in accordance with Department of Transportation Rules 92 Ill. Adm. Code Part 708 to determine if the existing structure is a source of flood damage. If the structure is a source of flood damage, the applicant's engineer shall submit justification to allow the damage to continue and evaluate the feasibility of relieving the structure's impact. Modifications or replacement structures shall not increase flood stages compared to the existing condition for all flood events up to and including the base flood event. The evaluation must be submitted to IDNR/OWR or its designee for review and concurrence before a permit is issued.

(f) If the crossing is proposed over a public body of water, an IDNR/OWR permit must be obtained.

(g) The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed regulatory profile must be submitted to IDNR/OWR for concurrence that a CLOMR is not required.

(5) Regulatory Floodplains Without Regulatory Floodways. The Applicant, through SMC, shall obtain approval from IDNR/OWR for all development with a tributary drainage area of 640 acres or more located within the Regulatory Floodplain without a delineated Regulatory Floodway. The development shall not singularly or cumulatively result in an obstruction of flood flows or potential flood damages outside the development due to increased flood heights, velocities, or loss of floodplain storage. The applicant shall meet the requirements of Subsection (C) of this Article according to the following criteria:

(a) Submit to SMC an engineering study performed by a Registered Professional Engineer which will determine a floodway which meets the definition of a Regulatory Floodway and show that the proposed development will meet the requirements of Subsection (C) of this Article; or

(b) Submit to SMC an engineering study performed by a Registered Professional Engineer which will determine a BFE and demonstrate that the proposed development will maintain the existing conditions conveyance, will not increase flood velocities, will not increase flood profiles, and will compensate for all lost flood storage at a ratio of 1:2:1 in a manner that is hydraulically equivalent; or

(c) Submit to SMC an engineering study performed by a Registered Professional Engineer which will demonstrate that for a range of flood elevations (which would conservatively exceed the expected 100-year flood elevation) that the proposed development will maintain the existing conditions conveyance, will not increase flood velocities, will not increase flood profiles, and will compensate for all lost flood storage at a ratio of 1.2:1 in a manner that is hydraulically equivalent.

(6) Application for Development in the Regulatory Floodplain. If the development is located in a Regulatory Floodplain, the applicant shall provide the following additional information:

(a) Site location of the property, drawn to scale on the Regulatory Floodway map;

(b) A plan view of the project showing:

1. The Regulatory Floodway limit, Regulatory Floodplain limit and, for work in public bodies of water as defined by IDNR/OWR, the navigation channels.

2. Cross-section views of the project for the impacted 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).

3. A copy of the Regulatory Floodway map with the project site delineated and marked to reflect any proposed change in the Regulatory Floodway location.

(c) A listing of all local, state and federal permits or approval letters that may be required for this type of development. The applicant shall obtain and provide copies of any and all required local, state and federal permits for development in the Regulatory Floodplain before the applicant requests or obtains a Watershed Development Permit. Reference Appendix H of the Lake County Watershed Development Ordinance, "Partial List of Permits Required (When Applicable) for Development in Lake County," last amended January 10, 2006, for a partial list of permits that may be applicable. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the performance standards of this Article.

(e) All changes in grade resulting from any proposed excavation or filling; existing and proposed Regulatory Floodplain and Regulatory Floodway limits; the location and dimension 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 this Article.

(f) Elevation certificates of the lowest floor elevation (including basements and attached garages) or the elevation to which a non-residential building has been flood-proofed using a flood-proofing certificate for all buildings in the Regulatory Floodplain.

(D) Flood-Prone Areas. The standards of this Section apply to development located in flood-prone areas with drainage areas less than 640 acres or in depressional storage areas, as specified.

(1) Flood-carrying Capacity. The flood-carrying capacity shall be maintained for channels with flood-prone areas draining a tributary area of 20 acres or more. (Subsection (B)(1)(g) of this Section.)

(2) Flood-prone Area Conveyance, Velocities, Flood Profiles, and Flood Storage. For all development within a flood-prone area where the tributary drainage area is 100 acres or more, the applicant shall meet the requirements of Subsections (C)(2)(e) and (C)(2)(e) of this Article according to the following criteria:

(a) Submit to SMC an engineering study performed by a Registered Professional Engineer which will determine a floodway which meets the definition of a Regulatory Floodway and show that the proposed development will meet the requirements of Subsection (C) of this Article; or

(b) Submit to SMC an engineering study performed by a Registered Professional Engineer which will determine a BFE and demonstrate that the proposed development will maintain the existing conditions conveyance, will not increase flood velocities, will not increase flood profiles, and will compensate for all lost flood storage at a ratio of 1.2:1 in a manner that is hydraulically equivalent; or

(c) Submit to SMC an engineering study performed by a Registered Professional Engineer which will demonstrate that for a range of flood elevations (which would conservatively exceed the expected 100-year flood elevation) that the proposed development will maintain the existing conditions conveyance, will not increase flood velocities, will not increase flood profiles, and will compensate for all lost flood storage at a ratio of 1.2:1 in a manner that is hydraulically equivalent.

(E) Wetland Provisions.

(1) Applicability. A Watershed Development Permit is required for any regulated development as defined in paragraph (A)(1) of this Section, that:

(a) Creates a wetland impact within an area defined as a Water of the U.S.; or

(b) Creates a wetland impact within an area defined as Isolated Waters of Lake County; or

(c) Occurs in buffer areas adjoining to Waters of the U.S. or Isolated Waters of Lake County.

(2) Wetland Submittal Requirements. In addition to all other WDO provisions, wetland submittal requirements depend upon whether the development is within Water of the U.S. or Isolated Waters of Lake County as provided below. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(a) The applicant shall obtain a written jurisdictional determination as to which wetlands of the development site are Isolated Waters of Lake County or Waters of the U.S. A copy of the jurisdictional determination shall be included with the wetland submittal. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(b) If the permit would impact Waters of the U.S., the following information is required:

1. Wetland delineation and wetland determination report as specified in paragraph (E)(3) of this Section.

2. A U.S. Army Corps permit for the proposed development or a letter from the Corps stating that the proposed development does not require Corps authorization.

3. Buffer Area requirements as specified in subparagraph (B)(1)(j) of this Section.

4. All wetland impacts occurring in Lake County that exceed the mitigation threshold of the Corps regulatory program shall be mitigated for in Lake County at the mitigation ratio specified by the Corps for that development impact.

(c) If the permit would impact Isolated Waters of Lake County, the following information is required:

1. A cover letter signed by a Certified Wetland Specialist that provides a clear project purpose and need statement, a description of the proposed activity, area (in acres) of wetland impact and a statement on the category to be used as follows: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

a. Category-I: Wetland impacts less than or equal to 1 acre and does not impact high quality aquatic resources;

b. Category-II: Wetland impacts greater than 1 acre and less than 2 acres and does not impact high quality aquatic resources;

c. Category-III: Wetland impacts greater than or equal to 2 acres or impacts high quality aquatic resources; and

d. Category-IV: Wetland impacts for the restoration, creation and enhancement of wetland provided that there are net gains in aquatic resource function. Category-IV activities include shoreline and streambank erosion restoration in subparagraph (C)(2)(d)(3) of this Section.

2. A completed Watershed Development Permit Application form signed by a Certified Wetland Specialist: (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

3. A delineation of the wetlands consistent with the requirements provided in paragraph (E)(3) of this Section;

4. A statement on the occurrence of any high quality aquatic resource on or adjoining the development;

5. Documentation that the development is in compliance with the Illinois Department of Natural Resource's Endangered Species Consultation Program and the Illinois Natural Areas Preservation Act [520 ILCS 10/11 and 525 ILCS 30/17];

6. For developments involving State of Illinois funding or pass-through funding, documentation that the development is in compliance with the Interagency Wetland Policy Act of 1989 [20 ILCS 830] as administered by the Illinois Department of Natural Resources; (**Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

7. Documentation that the development is in compliance with the U.S. Fish and Wildlife Service's consultation program under the Endangered Species Act;

8. A mitigation plan meeting the requirements of paragraph (E)(4) of this Section;

9. A copy of the Natural Resources Information Report (NRI) for development that is required to obtain a NRI performed by the Lake County Soil and Water Conservation District pursuant to state statute 70 ILCS 405/22.02a;

10. A narrative of the alternative measures taken to avoid, minimize, or mitigate for wetland impact to Isolated Waters of Lake County (Category-II requirement only);

11. Category-III Wetland Impacts:

a. A narrative of the measures taken, in sequence, to avoid and minimize wetland impacts to Isolated Waters of Lake County before mitigation is considered.

b. Upon concurrence of the Enforcement Officer and the Certified Wetland Specialist that a watershed development permit application meets the wetland submittal requirements of this ordinance, the Enforcement Officer shall issue a Technical Notification to USACE, IDNR, IEPA, USFWS and the SMC requesting comments with respect to the proposed wetland impacts and request comments with 15 working days. The Enforcement Officer shall receive the comments and copies of the comments shall be forwarded to the applicant for response. Full consideration of the comments and applicant's response shall be evaluated by the Enforcement Officer prior to permit issuance. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

c. The SMC shall review and issue Category III wetland authorizations for development sites occurring in more than one local unit of government jurisdiction. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

12. Category-IV Wetland Impacts:

a. A narrative on the benefits to the aquatic environment of the proposed development.

b. Shoreline and streambank erosion restoration that meet the requirements contained in subparagraph (C)(2)(d)(3) of this Section are exempt from the submittal requirements contained in this Section.

c. Isolated Waters of Lake County that are used for detention and not for mitigation credit per Subsection (E)(6) of this Section shall be exempt from the submittal requirements of Subsection (E)(2)(c)7 of this Section. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(3) Requirements for Wetland Delineation.

(a) Applicant shall identify the boundaries, extent, function, and quality of all wetland areas on the development site and prepare a Wetland Determination Report. The presence and extent of wetland areas shall be determined by, or under supervision of, a Certified Wetland Specialist using an on-site wetland procedure within 3 years of the initial permit application date in accordance with the methodology contained in the 1987 Corps of Engineers wetland delineation manual or as otherwise noted below. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(b) Wetland Determination Report. The following are minimum requirements for the Wetland Determination Report:

1. A plan showing the location of wetlands within the development site and the approximate boundaries of offsite wetlands per Subsection (b)6 below. The wetland boundary within the development site shall be flagged in the field and surveyed; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. An aerial photograph delineating the wetland and the development boundary;

3. A copy of the following maps (most recent) delineating the development boundary:

- a. U.S.G.S. quadrangle map;
- b. Lake County Wetland Inventory map;
- c. FEMA floodplain map;
- d. Lake County soil survey; and
- e. Hydrologic Atlas.

4. U.S. Army Corps of Engineers data sheets (March 1992 or most recent version) with color photographs provided for representative upland and wetland data points; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

5. A written description of the wetland(s) that includes a Floristic Quality Assessment as determined by methodology contained in Swink, F. and G. Wilhelm's Plants of the Chicago Region (1994, 4th Edition, The Morton Arboretum, Lisle, Illinois). Floristic quality assessments shall generally be conducted between May 15 and October 1, which approximates the growing season. Non-growing season assessments may require additional sampling during the growing season to satisfy this requirement; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

6. The approximate location, extent, and relative quality of off-site wetlands on properties within the maximum buffer requirements adjoining the development shall be identified by using the first of the following documents or procedures pertaining at the time of development: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

a. Site-specific delineation according to the 1987 Federal wetland delineation manual. If such delineation is not available, use subparagraph (ii) below.

b. Wetlands identified in Lake County Wetland Inventory maps (most current LCWI map).

7. A farmed wetland determination for development sites in accordance with the current U.S. Natural Resources Conservation Service methodology. The farmed wetland boundaries shall be shown on the plan and aerial photograph in Subsections (b)1 and (b)2 above. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(4) Isolated Waters of Lake County Mitigation Requirements. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(a) Mitigation is required within Lake County for: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

1. Wetland impacts greater than or equal to one-tenth (0.1) acre of Isolated Waters of Lake County that are high quality aquatic resources (HQAR). **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. Wetland impacts greater than or equal to $\frac{1}{4}$ (0.25) acres of Isolated Waters of Lake County that are not high quality aquatic resources. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(b) Mitigation shall provide for the replacement of the wetland environment lost to development at the following proportional rates (i.e., creations acreage to wetland impact acreage):

1. For wetland impacts to areas that are not high quality aquatic resources under Categories I, II and III, a minimum of 1.5:1 mitigation ratio shall be required or a minimum 1:1 mitigation ratio for fully certified wetland mitigation bank credits. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. A minimum of 3:1 for wetland impacts that are high quality aquatic resources;

3. A minimum of 6:1 for wetland impacts that are high quality forested wetlands as defined in Appendix L of the Lake County Watershed Development Ordinance, "High Quality Aquatic Resources," last amended January 10, 2006. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. For wetland impacts to open waters that are not high quality aquatic resources under Categories I, II and III, a minimum of 1:1 mitigation ratio shall be required. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(c) Mitigated Isolated Waters of Lake County shall be designed to duplicate or improve the hydrologic and biologic features of the original wetland impact area. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) A Project Mitigation Document (PMD) shall be submitted for all mitigation projects in conformance with Appendix N of the Lake County Watershed Development Ordinance, "WDO Mitigation Requirements and Guidelines for Isolated Waters of Lake County Impacts," last amended January 10, 2006. Appendix N contains requirements for performance standards, monitoring, and completion standards. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(e) Creation of wetlands for the mitigation of wetland impacts shall not take place within detention facilities. Enhancement of farmed wetlands meeting the size criterion in subparagraph (5)(a) of this Subsection may be used for up to 80% of the mitigation requirement. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(f) Enhancement of existing non-farmed wetlands may be credited at up to 25% of the enhanced wetland acreage completed, provided that the wetland impact acreage created is at a minimum 1:1 ratio and the mitigation hierarchy in Subsection (E)(5) of this Section is followed. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(g) A five-year wetland mitigation surety for 110% of mitigation cost shall be submitted prior to obtaining a permit. The mitigation surety shall include the

costs for construction, monitoring and management activities during the 5-year performance period. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(h) A wetland mitigation management and monitoring plan indicating the legally responsible parties for long-term operation and maintenance and dedicated funding sources.

(i) The developer shall provide annual monitoring reports on the status of the constructed mitigation measures. The developer shall undertake all necessary remedial action to bring the area into compliance with the wetland mitigation plan.

(j) Wetland impacts occurring prior to the issuance of a WDO permit shall presume the wetland disturbed was a high quality aquatic resource requiring mitigation at a minimum rate of 3:1, except 6:1 for wetland impacts that are forested wetlands as defined in Appendix L of the Lake County Watershed Development Ordinance, "High Quality Aquatic Resources," last amended January 10, 2006. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(k) Mitigation areas shall be protected by a deed or plat restriction for that purpose. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(5) Mitigation Hierarchy.

(a) Size Requirements.

1. If the required mitigation acreage is less than 1.5 acres, mitigation requirements shall follow the mitigation hierarchy 2 through 4 below. If on-site mitigation increases an existing on-site wetland size greater than or equal to 1.5 acres, the applicant may use mitigation hierarchy 1.

2. If the required mitigation acreage is 1.5 acres or greater, mitigation requirements shall follow mitigation hierarchy 1 through 4.

(b) Hierarchy – All mitigation shall occur in Lake County. Mitigation shall use the following hierarchy. Allowance to the next lower step is permitted only when justified through sequencing specified in subparagraph (2)(c)(9) or (10) of this Subsection or when the higher step is not available, or as specified in (4) below: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

1. On-site wetland mitigation meeting the requirements of the project mitigation document.

2. In the same watershed as wetland impact: a U.S. Army Corps Approved Wetland Mitigation Bank; or a SMC Approved Wetland Mitigation Bank; or Off-site wetland mitigation meeting the requirements of the project mitigation document.

3. Outside of the watershed (at double the required mitigation acreage): A U.S. Army Corps Approved Wetland Mitigation Bank; or a SMC

Approved Wetland Mitigation Bank; or Off-site wetland mitigation meeting the requirements of the project mitigation document.

4. SMC Wetland Restoration Fund. This mitigation option may only be used for wetland impacts where there are no available mitigation credits within the watershed and the corresponding fees and mitigation rations shall be charged at the 'in-watershed' rate. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(6) Detention in Isolated Waters of Lake County.

(a) Detention shall only be allowed in the following Isolated Waters of Lake County and are not considered a wetland impact: **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

1. Farmed Wetlands; **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. Non-farmed wetlands when the existing vegetated wetland acreage (not including open water area) are covered by a minimum of 85% of one or more of the following species: **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

- (i) reed canary grass (*Phalaris arundinacea*)
- (ii) purple loosestrife (*Lythrum salicaria*)
- (iii) common reed (*Phragmites australis*) or
- (iv) buckthorn (*Rhamnus* spp.)

3. An IWLC comprised of open water that is not an HQAR. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(b) When using a IWLC for detention and not for wetland mitigation enhancement credit, the applicant shall use a 'wetland' detention design as provided in the TRM, and shall re-establish vegetation within the detention basin using the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, NRCS, et al., (as amended) as a minimum standard for the re-vegetation plan. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(c) If the wetland detention basin is also used as wetland mitigation enhancement credit, then the mitigation requirements of Subsection (E)(6) of this Section and the wetland hydrology thresholds of Subsection (E)(7) of this Section shall apply. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) Enhancement of existing wetland areas within the proposed detention basin will be permitted as a Category IV impact. Fill or loss of existing wetland area will be permitted under the appropriate impact Category I, II or III. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(e) For all wetlands used for detention, the requirements for water quality treatment of Subsection (B)(1)(h) of this Section shall apply upstream of the detention facility. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(f) The wetland hydrology thresholds of Subsection (E)(7) of this Section shall apply for the IWLC used for detention meeting the criteria of (a)1. above. The wetland hydrology thresholds of Subsection (E)(7) shall not apply for IWLC used for detention meeting the criteria of (a)2 and (a)3 above. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(7) Wetland Hydrology Requirement. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(a) The following hydrology requirement applies to Isolated Waters of Lake County located wholly or partially within the development site: **9 Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

1. The development design shall maintain between 80% and 150% of the existing condition storm event runoff volume to the wetland up through the 2 year-24 hour storm event runoff volumes from the onsite tributary drainage area to the preserved Isolated Waters of Lake County. The following minimum information shall be submitted to address this provision: (Ord. 68-2000, adopted 10/23/00; Ord. 12-02, J. 28, p. 28-43, 2/25/02; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**)

(i) An exhibit illustrating the existing condition and with-project drainage areas; and **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(ii) Existing condition and with-project runoff volume calculations (including land use and soil type documentation); and **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(iii) Existing condition and with-project runoff volume determination. For proposed development that will change the size of an Isolated Waters of Lake County: the proposed to existing conditions runoff volume ration shall be adjusted according to the change in wetland size, to determine if the hydrology threshold has been met; and **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(iv) The development shall include a design for the stormwater management system that maintains or replicates the existing hydrologic condition of the wetland, unless changes are proposed to enhance the wetland function. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. A wetland impact to Isolated Waters of Lake County shall be assumed and the mitigation requirements of Subsection (E)(4) of this Section shall apply if the development does not meet provisions of (a)1. above. The hydrologic wetland impact shall be in addition to other wetland impacts to Isolated Waters of Lake County (e.g., filling, excavation, drainage, etc.). The amount of wetland impact shall be determined as follows: **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(i) For Isolated Waters of Lake County wholly onsite: the total area of the impacted Isolated Waters of Lake County not meeting the above provisions; and **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(ii) For Isolated Waters of Lake County located partially on-site: the ratio of onsite tributary drainage area to total tributary drainage area multiplied by the with-project area of the impacted Isolated Waters of Lake County. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(F) Public Roadway Development Permit.

(1) Authority and Enforcement.

(a) The SMC shall be responsible for the review and enforcement of all Public Road Developments Permits.

(b) The performance standards of this Article shall apply to all Public Road Developments. The release rate performance standard of Subsection (B)(1)(c) of this Section shall apply only to additional impervious surface areas or, in the case of new road construction, the hydrologically disturbed areas. This release rate requirement shall be used unless watershed specific rates have been adopted, or it is determined by the Enforcement Officer that other site conditions, including analysis of downstream capacity, warrant further analysis and modification from this standard. Detention requirements

shall be applied only to those projects described in Subsection (A)(1)(d)3 of this Section. (Ord. 68-2000, adopted 10/23/00)

(c) The fee-in-lieu of on-site detention option shall be authorized for all public road developments on existing alignments provided the downstream drainage system has adequate stormwater capacity and that it will not result in negative impacts to the drainage system.

(2) Application Requirements.

(a) A copy of any applicable Illinois Department of Transportation/Division of Water Resources IDNR/OWR permit application.

(b) A copy of any applicable U.S. Army Corps of Engineers permit application.

(c) A copy of the proposed Stormwater Management System, including the location and size of all existing and proposed drainage improvements including plan, section, and profile views of storm sewers, field tiles, culverts, channels, and detention areas.

(d) A copy of all calculations supporting the stormwater management system. Material should be consistent with the requirements of Subsection (B)(2)(b)5 of this Section and the engineering requirements of Subsection (B)(1) of this Section.

(e) A Soil Erosion and Sediment Control Plan consistent with Subsection (B)(1)(k) of this Section.

(f) A Wetland Determination Report and Mitigation Plan consistent with Subsection (E) of this Section, if applicable.

(G) Performance Standards for Flood Table Land Development. For all development within the flood table lands, the applicant shall meet the requirements of Subsections (C)(2)(e) and (f)1, (f)3, (f)4, and (f)5 of this Section.

Sec. 150.1805 Waivers.

(A) The Enforcement Officer, upon application, after hearing, and subject to the process and standards that follow, may waive provisions of this Article as will not cause detriment to the public good, safety or welfare nor be contrary to the spirit, purpose, and intent of this Article where, by reason of unique and exceptional physical circumstances or condition of a particular property, the literal enforcement of the provisions of this Article would result in an unreasonable hardship.

(1) The Enforcement Officer shall administer the waiver provisions.

(2) For development requiring a Watershed Development Permit from the SMC, the SMC Chief Engineer shall administer the waiver provisions. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(3) A public notice will be issued inviting public comment on all proposed waivers for major developments. A copy of the public notice will be sent a minimum of thirty (30) days before the ruling to the SMC Chief Engineer to allow for SMC comment on the waiver being applied for. For variances under the administration of the SMC, the SMC shall send a copy of the public notice to the community a minimum of thirty (30) days before the ruling to allow for community comment. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(4) Waivers shall be granted only upon:

(a) Showing of good and sufficient cause; and

(b) A determination that the waiver is the minimum necessary to afford relief, considering the flood hazard and water quality; and

(c) A finding that failure to grant the waiver would result in exceptional hardship to the applicant; and

(d) A finding that the granting of a waiver would not result in increased flood heights, additional threats to public safety, or extraordinary public expense, nor create nuisances, cause fraud or victimization of the public, nor conflict with existing local laws or ordinances and that all buildings will be protected by methods that minimize flood damage during the BFE; and

(e) A finding that the development activity cannot be located outside the floodplain; and

(f) A determination that the activity is not in a Regulatory Floodway. No waiver shall be granted pertaining to Subsections (C)(3), (C)(4), or (C)(5) of Section 150.1804; and

(g) The applicant's circumstances are unique and do not represent a general problem; and

(h) The granting of the waiver will not alter the essential character of the area involved including existing stream uses.

(5) Upon consideration of the factors noted above and the intent of this Article, the Enforcement Officer may attach such conditions to the granting of a waiver deemed necessary to further the purposes and objectives herein.

(6) Waivers requested in connection with restoration of a historic site or historic structure or building listed on the National Register of Historic Places or documented as worthy of preservation by the Illinois Historic Preservation Agency, may be granted using criteria more permissive than the requirements contained in this Section.

(7) The Enforcement Officer shall notify an applicant in writing that a waiver from the requirements of Subsection (C)(2)(f) of Section 150.1804 that would lessen

the degree of protection to a building will result in increased premium rates for flood insurance up to amounts as high as Twenty-five Dollars (\$25) for One Hundred Dollars (\$100) of insurance coverage, increase the risks to life and property, and require that the applicant will acknowledge in a signed exception to title the assumption of the risks and liability and will pay upon approval of the waiver a recording fee above and beyond the usual permit review fee.

(8) In a Regulatory Floodplain without a Regulatory Floodway where the tributary drainage area is greater than 640 acres or more, a waiver may not be granted that will result in a loss of the Regulatory Floodplain storage of greater than ten (10) percent of the existing Regulatory Floodplain storage on the site.

(9) Waivers requested in connection with the redevelopment of previously developed sites, that will further the public policy goals of downtown redevelopment and neighborhood revitalization, may be granted provided the waiver would not result in an increase in the pre-redevelopment runoff rate or volume and there will exist adequate downstream stormwater capacity. No waiver shall be granted pertaining to Subsection (C) of Section 150.1804

(10) Due to the unique nature of Public Road Developments occurring in narrow rights-of-way instead of an expansive tract of land, waivers requested in connection with Public Road Developments that will further the public policy of minimizing the condemnation of private or public property may be granted using criteria more permissive than the requirements of Subsection (A)(4) of Section 150.1804 to the minimum extent necessary to achieve the minimal amount of condemnation. No waivers shall be granted pertaining to Subsections (C)(3), (C)(4), and (C)(5) of Section 150.1804.

(B) The above and foregoing notwithstanding, in the event the request for waiver is limited to a reduction of the FPE to a lesser elevation and provided the conditions set forth in Subsection (A)(3) hereinabove are met, then, upon recommendation of the Enforcement Officer, the City Manager may grant such waiver without a hearing being held before the City Council.

(C) Appeals.

(1) Any permit applicant aggrieved by the denial or conditions of a Watershed Development Permit, Earth Change Removal, Conditional Approval or Variance by the Enforcement Officer may request review thereof by the City Council within thirty (30) days of the disputed act or actions. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(2) Any permit applicant aggrieved by the denial or conditions of a Watershed Development Permit, Earth Change Approval, Conditional Approval or Variance by the SMC Chief Engineer may request review thereof by the SMC Director within thirty (30) days of the disputed act or actions. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(3) Any permit applicant aggrieved by the denial or conditions of a Watershed Development Permit, Earth Change Approval, Conditional Approval or Variance by the SMC Director may appeal it to the SMC by written notice filed with the

SMC Director within thirty (30) days of the disputed act or actions. (Ord. 68-2000, adopted 10/23/00; **Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

Sec. 150.1806 Inspections and Access.

Representatives of the SMC and of any federal, state and the City of Highland Park are authorized to enter upon any land or water to inspect development activity and to verify the existing conditions of a development site that is currently under permit review. The City of Highland Park shall maintain a listing of all detention facilities and shall periodically, at least every five (5) years, inspect all such facilities, and shall cause notice to be served to restore, repair or maintain detention facilities whenever necessary. This Section shall apply to existing as well as future detention facilities.

(A) Inspection: The Enforcement Officer may inspect site development at any stage in the construction process. Recommended inspection intervals are listed below. For major developments, the Enforcement Officer shall conduct site inspections, at a minimum, at the end of the construction stages (1) and (7) listed below. Construction plans approved by the Enforcement Officer shall be maintained at the site during progress of the work. The Designated Erosion Control Inspector shall conduct inspections and document as described below, at a minimum, at the Intervals in (1) and (6) listed below, for those developments that require a Designated Erosion Control Inspector. (**Ord. 19-07, J. 33, p. 073-151, passed 2/12/07**)

(1) Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading,

(2) After stripping and clearing,

(3) After rough grading,

(4) After final grading,

(5) After seeding and landscaping deadlines,

(6) After every seven (7) calendar days or storm event with greater than 0.5-inches of rainfall,

(7) After final stabilization and landscaping, prior to removal of sediment controls.

If a wetland mitigation area is constructed as part of the watershed development permit, it is recommended that a Certified Wetland Specialist or Provisional Wetland Specialist at a minimum perform the following inspections:

(8) Inspection by a Certified Wetland Specialist or Provisional Wetland Specialist after mitigation areas have been final graded and before seeding or plant installation.

(9) Inspection by a Certified Wetland Specialist or Provisional Wetland Specialist after plant installation.

(10) At a minimum, annual inspections by a Certified Wetland Specialist or a Provisional Wetland Specialist during the 5-year monitoring period for wetland mitigation areas.

If stripping, clearing, grading and/or landscaping are to be done in phases or areas, the permittee shall plan for appropriate erosion control measures to be in place after each stage listed above and for each phase of construction. (Ord. 12-02, J. 28, p. 28-43, 2/25/02)

(B) Special Precautions

(1) If at any stage of the grading of any development site the Enforcement Officer determines that the nature of the site is such that further work authorized by an existing permit is likely to imperil any property, public way, stream, lake, wetland, or drainage structure, the Enforcement Officer may require, as a condition of allowing the work to be done, that such reasonable special precautions to be taken as is considered advisable to avoid the likelihood of such peril. Special Precautions may include, but shall not be limited to, a more level exposed slope, construction of additional drainage facilities, berms, terracing, compaction, or cribbing, installation of plant materials for erosion control, and recommendations of a licensed soils engineer and/or engineering geologist which may be made requirements for further work.

(2) Where the Enforcement Officer determines that storm damage may result or has resulted because the grading on any development site is not complete, work may be stopped and the permittee required to install temporary structures or take such other measures as may be required to protect adjoining property or the public safety. On large developments or where unusual site conditions prevail, the Enforcement Officer may require that the operations be conducted in specific stages so as to insure completion of protective measures or devices prior to the advent of seasonal rains.

(3) The Enforcement Officer may set turbidity or total suspended solids limits for development sites that discharge to Waters of the United States, Isolated Waters of Lake County or their buffers or that are in close proximity to the above, as determined by the Enforcement Officer. These standards shall apply to development site construction up to the point of permanent site stabilization as determined by the Enforcement Officer. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(a) Turbidity or total suspended solids limits shall apply only to development requiring both a Stormwater Pollution Prevention Plan as part of their General NPDES Permit No. ILR10 and a detention pond or similar stormwater storage system in order to use that stormwater facility for additional treatment measures needed to meet the standards in this Section. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(b) If a singular storm even exceeds the 100-year design-storm storage volume of the development site stormwater management system, water quality

readings taken during that event will not be considered a violation of this ordinance. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(c) As applicable to the development site described in (a) above, one of the following limits shall apply to each discharge location: **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

1. For all development sites adjacent to lakes with total suspended solids background levels established in Appendix D, "Total Suspended Solids Background Levels for Lake County Water Bodies" of the Lake County Watershed Development Ordinance, last amended January 10, 2006, the discharge limit standard shall be no more than 120% of the maximum values. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

2. A maximum Nephelometric Turbidity Unit reading of fifty (50) NTU may be used. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

3. The Enforcement Officer may determine an individual NTU limit for discharge from the development based on site-specific discharge sampling. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

4. Upon approval of the Enforcement Officer, the applicant may determine an individual site limit based on site-specific discharge sampling. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(d) The developer should conduct site runoff sampling during storm events exceeding ½ inch of rainfall and include the results in the weekly inspection reports required by the Stormwater Pollution Prevention Plan described in (a) above. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(e) Exceptions to these limits shall be allowed for dredging or development activities with a Waters of the United States or Isolated Waters of Lake County. In these cases, specific permit conditions may be set with regard to time allowed for the activity to be completed and additional erosion control measures to be implemented. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(C) Designated Erosion Control Inspector: The Designated Erosion Control Inspector shall inspect the development site as specified above and, at a minimum, perform the following: **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(1) Keep a copy of the Enforcement Officer-approved soil erosion and sediment control plans at the development site at all times. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(2) Keep a written log of all inspections that shall contain, at a minimum, conditions of the soil erosion and sediment control measures and any corrective actions that need to be taken. The Designated Erosion Control Inspector log shall be kept at the development site at all times and shall be made available for inspection upon request of the Enforcement Officer. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(3) Notify the Enforcement Officer within 24-hours when the development site is determined to be not in compliance with this ordinance or the approved soil erosion and sediment control plans and the proposed corrective measures to be taken. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(4) Recommend to the applicant additional soil erosion and sediment control prevention measures, if necessary, to reduce sediment leaving a development. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(5) For development requiring conformance with (B)(3) above, the Designated Erosion Control Inspector is responsible for site runoff sampling and reporting requirements. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

Sec. 150.1807 Penalties and Legal Action.

(A) Whenever the Enforcement Officer finds a violation of this Article, or of any permit or order issued pursuant thereto, within his jurisdiction, the Enforcement Officer may issue a stop work order on all development activity on the subject property or on the portion of the activity in direct violation of this Article. In every case, the Enforcement Officer shall issue an order that (1) describes the violation; (2) specifies the time period for remediation; and (3) requires compliance with this Article prior to the completion of the activity in violation.

(B) Failure to comply with any of the requirements of this Article shall constitute a violation of this Article. Any violation thereof shall be subject to a fine of not more than one thousand dollars (\$1000) for each violation. Each day the violation continues shall be considered a separate offense. **(Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

(C) The SMC or the City of Highland Park may also take any other legal action necessary to prevent or remedy any violation including appropriate equitable or injunctive relief and, if applicable, an assessment to the violator for the removal, correction, or termination of any adverse effects upon any property resulting from any unauthorized activity for which legal action under this Section may have been brought.

(D) The SMC or the City of Highland Park may record a notice of violation on the title to the property.

(E) The Enforcement Officer 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.

Sec. 150.1808 Disclaimer of Liability.

It is recognized that although the degree of flood protection required by this Article is considered reasonable for regulatory purposes and is based on scientific and engineering considerations, on occasions greater floods can and will occur, and flood heights may be increased by man-made or natural causes. These provisions do not imply that land outside the floodplain areas or that uses permitted within such areas will be free from flooding or flood damages. These provisions shall not create liability on the part of the Stormwater Management Commission nor the City of Highland Park nor any officer or employee or

independent contractor thereof for any flood damages that result from reliance on this Article or any administrative decision lawfully made thereunder.

Sec. 150.1809 Amendments to Article XVIII.

Notwithstanding any other provision of this Code, including specifically, but without limitation, the provisions governing amendments to the Zoning Code set forth in Article XV of this Chapter, the City Council may consider and approve the amendment of any provision of Article XVIII without a prior public hearing, consideration, or recommendation by the Plan Commission. Before exercising its powers under this Section, the City Council shall set, notice, and conduct a public hearing. No other procedure shall be required. Any amendment to this Article XVIII shall be evidenced by an ordinance duly adopted. The concurrence of four members of the City Council shall be sufficient to approve any ordinance adopted pursuant to the authority and power granted by this Section. **(Added by Ord. 19-07, J. 33, p. 073-151, passed 2/12/07)**

Sec. 150.1810 Severability.

The provisions of this Article shall be deemed separable and the invalidity of any portion of this Article shall not affect the validity of the remainder. Furthermore, the text of this Article, as amended, shall not act to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. Where this Article and any other ordinance, easement, covenant, or deed restriction conflict or overlap, the more stringent restrictions shall control. This Article shall not affect the resolution heretofore adopted by the City of Highland Park in order to establish initial eligibility for the National Flood Insurance Program.