

# **WATER RESOURCE ORDINANCE FOR UNINCORPORATED WILL COUNTY**

Effective (6/17/2010)



**WATER RESOURCE ORDINANCE FOR UNINCORPORATED WILL COUNTY**

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ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Sec. 100 Statutory Authority**

- 100.1 This Ordinance shall be known, and may be cited, as the Water Resource Ordinance for Unincorporated Will County.
- 100.2 The Will County Board adopts this Ordinance pursuant to its authority to regulate Stormwater Management and governing the location, width, course, and release rate of all stormwater runoff channels, streams, and basins in the County, in accordance with the Will County Comprehensive Countywide Stormwater Management Plan. The statutory authority for this Ordinance is contained in 55 ILCS 5/ 5-1041, 5-1049, 5-1063, 5-1104, 5-12001 & 5-15001 et seq., 5-40001 and other applicable authority, all as amended from time to time.
- 100.3 RESERVED.
- 100.4 This Ordinance shall regulate all development in the unincorporated areas of Will County. However, all development in the unincorporated areas of Will County shall also meet the requirements of the Will County Stormwater Management Ordinance (Countywide), effective January 1, 2004, and all amendments to that ordinance. If provisions of the Countywide Ordinance appear different than the provisions of this Ordinance, than the most restrictive provision of either Ordinance shall apply.

**Sec. 101 RESERVED**

**Sec. 102 Purposes of this Ordinance**

- 102.1 The principal purpose of this Ordinance is to promote effective, equitable, acceptable, and legal water resource management measures by establishing reasonable rules and regulations for development. Other purposes of this Ordinance include:
- a. Managing and mitigating the effects of urbanization on stormwater drainage throughout Will County through planning, appropriate engineering practices and proper maintenance;
  - b. Protecting from, and reducing the existing potential for, loss of human life, health, safety and property from the hazards of flooding damages on a watershed basis;
  - c. Preserving and enhancing the natural hydrologic and hydraulic functions and natural characteristics of watercourses and floodplains to protect water quality, protect aquatic habitats, reduce flood damages, reduce soil erosion, provide recreational and aesthetic benefits and enhance community and economic development;
  - d. Controlling sediment and erosion in and from stormwater facilities, developments, agricultural fields, and construction sites and reducing and repairing stream bank erosion;
  - e. Requiring that planning for development provide for water resource management, taking into account natural features such as vegetation, wildlife, waterways, wetlands, and topography in order to reduce the probability that new development will create unstable conditions susceptible to erosion;
  - f. Protecting environmentally sensitive areas from deterioration or destruction by private or public actions;
  - g. Requiring appropriate and adequate provision for site runoff control, especially when the land is developed with a large amount of impervious surface;
  - h. Requiring the design and evaluation of each site Site Development plan consistent with watershed capacities;

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

- i. Encouraging the use of stormwater storage and infiltration of stormwater in preference to stormwater conveyance;
  - j. Lessening the taxpayers' burden for flood-related disasters, repairs to flood-damaged public facilities and utilities, and flood rescue and relief operations;
  - k. Meeting the Illinois Department of Natural Resources-Office of Water Resources floodway permitting requirements delineated in 615 ILCS 5/18g (1992) ("An Act in Relation to the Regulation of the Rivers, Lakes, and Streams of the State of Illinois"), as amended from time to time;
  - l. Making federally subsidized flood insurance available to property throughout the unincorporated County by fulfilling the requirements of the National Flood Insurance Program;
  - m. Complying with the rules and regulations of the National Flood Insurance Program codified in Title 44 of the Code of Federal Regulations;
  - n. Minimizing conflicts and incompatibilities between agricultural and urban drainage systems and maintaining agriculture as a viable and productive land use;
  - o. Encouraging cooperation and consistency in Stormwater Management activities within and between the units of government having floodplain and Stormwater Management jurisdiction;
  - p. Restricting future development in the floodplain to facilities that will not adversely affect the potential for flood damage;
  - q. Requiring regular, planned maintenance of Stormwater Management facilities;
  - r. Allowing the use of simple technologies whenever appropriate and realistic, but requiring the use of more sophisticated techniques when necessary to ensure the adequacy of stormwater controls;
  - s. Requiring strict compliance with and enforcement of this Ordinance.
- 102.2 The purposes of this Ordinance are consistent with and supercede the Plan.

### **Sec. 103 Reference to Watershed Plans**

- 103.1 This Ordinance recognizes the integrated nature of the watershed system and the need to study certain flood control alternatives and other Stormwater Management functions on a watershed-wide basis.
- 103.2 Individual watershed plans or interim watershed plans which recognize the unique attributes of each watershed may be prepared and periodically updated for the major watersheds, to identify management projects and establish criteria for development. These plans may also recommend changes to this Ordinance effective within the study boundary.

Watershed Plans or Interim Watershed Plans may be adopted which recommend more or less stringent criteria than the criteria in this Ordinance. When adopted by the County Board, these watershed-specific criteria established in such Watershed Plans or Interim Watershed Plans shall be set forth as Sections 105 through 117 of this Ordinance.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

### Sec. 104 Definitions

Within the context of this Ordinance the following words and terms shall have the meanings set forth except where otherwise specifically indicated. Words and terms not defined shall have the meanings indicated by common dictionary definition.

**Administrator.** The person designated by the Will County Executive to administer and enforce this Ordinance.

**Accessory Structure.** An “accessory building or use” is one which: 1) Is subordinate to and serves a principal building or principal use, 2) Is subordinate in area, extent, or purpose to the principal building or principal use served, 3) Contributes to the comfort, convenience, or necessity of occupants of the principal building or principal use served, 4) Is located on the same zoning lot as the principal building or potential use served with the single exception of such accessory off-street parking facilities as are permitted to locate elsewhere than on the same zoning lot with the building or use served.

**Administrative Violation.** An administrative violation of the ordinance occurs when rules and procedures regarding permit applications and Site Development permits are not followed.

**Agricultural Practices.** The use of land for agricultural purposes, including farming, dairying, pasturage, apiculture, horticulture, floriculture, viticulture, and animal and poultry husbandry, and the necessary accessory uses for packing, treating, or storing the produce; provided, however, that the operation of any such accessory uses shall be secondary to that of the normal agricultural activities. Agricultural practices include truck farming, poultry farming, bee keeping, raising of fruit and berries, and the selling of agricultural products. Agriculture practices shall not include the commercial feeding of garbage to swine or other animals. The minimum land area necessary to constitute an agricultural use is ten (10) acres.

**Agricultural Subsurface Drainage.** A water management technique driven by economic and safety concerns, where the rate at which surplus groundwater should be removed is determined primarily by the moisture/air requirements of the vegetation (commonly called “Tiles, “Field Tiles”, etc.)

**Applicable Engineering Practice.** Procedures, methods, or materials recommended in standard engineering textbooks or references as suitable for the intended purpose.

**Applicant.** Any Person, Firm or Governmental Agency who executes the necessary forms to procure official approval of a development or permit to carry out construction of a development from the County

**Appropriate Use.** Only uses of the designated floodway that are permissible and will be considered for permit issuance. The list of permissible uses is contained in Article 4.

**Armoring.** A form of channel modification which involves the placement of materials (e.g., concrete, riprap, bulkheads, etc.) within a stream channel or along a shoreline to protect property above streams, lakes and ponds from erosion and wave damage caused by wave action and stream flow.

**ACOE.** The United States Army Corps of Engineers.

**Base Flood.** The flood having a one percent probability of being equaled or exceeded in a given year. The base flood is also known as the 100-year frequency flood event.

**(BFE) Base Flood Elevation.** The highest water surface elevation that can be expected during the base flood.

**Benchmark.** A permanent, stable object containing a marked point of known elevation (with respect to NAVD 88) which is used as a vertical reference point for topographic surveys.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**(BMP) Best Management Practices.** A measure used to control the adverse stormwater-related effects of development. BMPs include structural devices (e.g., swales, filter strips, infiltration trenches, and detention basins) designed to remove pollutants, reduce runoff rates and volumes, and protect aquatic habitats. BMPs also include nonstructural approaches, such as public education efforts to prevent the dumping of household chemicals into storm drains.

**Blocked Restrictor Elevation.** The elevation to which stormwater would rise in a basin in a 100 year storm if the restrictor is blocked (see Section 203.6).

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

**Buffer.** An area of predominantly vegetated land located adjacent to channels, wetlands, lakes or ponds for the purpose of reducing contaminants in stormwater that flows to such areas.

**Bulletin 70.** "Frequency Distributions and Hydroclimatic Characteristics of Heavy Rainstorms in Illinois" by Floyd Huff and James Angel of the Illinois State Water Survey (1989).

**Bypass Flows.** Stormwater runoff or groundwater from upstream properties tributary to a property's drainage system but not under its control.

**Calculated High Water Elevation.** The elevation to which stormwater would rise along an overland flow route, or similar conveyance system, in a 100 year storm.

**Channel.** Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainage way, which has a definite bed and bank or shoreline, in or into which surface, groundwater, effluent, or industrial discharges flow either perennially or intermittently.

**Channel Modification.** Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, rip rapping (or other armoring), widening, deepening, straightening, relocating, lining, and significant removal of bottom or woody rooted vegetation but does not include the clearing of debris or removal of trash or dredging to previously documented thalweg elevations and side slopes.

**Channelization.** A severe form of channel modification involving a significant change in the channel cross-section and typically involving relocation of the existing channel (e.g. straightening).

**Chief Subdivision Engineer.** Stormwater Administrator for unincorporated Will County as outlined in Section 1002.

**Commercial.** Sale of goods to the public at large where the traffic generated warrants construction of site improvements.

**Committee.** The Land Use & Development Committee of the Will County Board.

**Community.** The County or any city or village within the County.

**Compensatory Storage.** An excavated, hydrologically and hydraulically equivalent volume of storage created to offset the loss of existing flood storage.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**(CLOMA) Conditional Letter of Map Amendment.** A FEMA comment letter on a development proposed to be located in, and affecting only that portion of, the area of floodplain outside the regulatory floodway and having no impact on the existing regulatory floodway or base flood elevations.

**(CLOMR) Conditional Letter of Map Revision.** A letter that indicates that FEMA will revise base flood elevations, flood insurance rate zones, flood boundaries, or floodways as shown on an effective FIRM after the “as-built” record drawings are submitted and approved.

**COE.** The United States Army Corps of Engineers.

**Conservation Design.** A site design which incorporates the natural landscape, ecology, and/or historical significance of a site being developed, and which maintains the most valuable natural features and functions of the site. These natural and valuable features can be used for either passive or active recreational activity or preserved as naturally vegetated land.

**Conservation Planning.** The practices and procedures associated with the management of soil, water, plants, plant nutrients and other elements of agricultural production. Documentation of the management system shall only be as required by the NRCS or in cases of a complaint, as requested by the Chief Subdivision Engineer in response to a notification of a complaint.

**Conservation Practices.** A listing of practices such as those identified in the USDA-NRCS Technical Guide Section 4 that detail the standards and specifications for each practice listed. The electronic guide can be accessed at <http://www.nrcs.usda.gov/technical/efotg/>

**Control Structure.** A structure designed to control the rate of flow that passes through the structure, given a specific upstream and downstream water surface elevation.

**County.** Will County, Illinois.

**Critical Duration.** The duration of a storm event that results in the greatest peak runoff.

**Critical Facility.** Any facility that is critical to the health and welfare of the population, and, if flooded, would create an added dimension to the disaster. Damage to these critical facilities can impact the delivery of vital services, can cause greater damage to other sectors of the community, or can put special populations at risk. Examples of critical facilities are: emergency services facilities (such as fire and police stations), schools, hospitals, retirement homes and senior care facilities, critical utility sites (telephone switching stations or electrical transformers), and hazardous material storage facilities (chemicals, petrochemicals, hazardous or toxic substances).

**Culvert.** A structure designed to carry drainage water or small streams below barriers, such as roads, driveways, or railroad embankments

**D-FIRM.** Digital Flood Insurance Rate Map published by FEMA showing special flood hazard areas in a digital format overlaid on an aerial photograph.

**Dam.** Any obstruction, wall embankment, or barrier, together with any abutments and appurtenant works, constructed to store or divert water or to create a pool. Dams may also include weirs, restrictive culverts, or impoundment structures. Underground water storage tanks are not included.

**Department.** Will County Land Use Department.

**Depressional Storage.** The volume contained below a closed contour on a 1-foot contour interval topographic map, the upper elevation which is determined by the invert of a surface gravity outlet.

**Designated Floodway.** See definition of Floodway.

**Detention Basin.** (Site Runoff Storage Facility) A constructed structure for the temporary storage of stormwater runoff with a controlled release rate.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Developer.** A person who creates or causes a development.

**Development.** Any constructed change to real estate including:

- a) construction, reconstruction, repair, or replacement of a building or an addition to a building;
- b) installing a manufactured home on a site, preparing a site for a Manufactured Home, or installing a travel trailer or recreational vehicle on a site for more than 180 days. If the travel trailer or recreational vehicle is on-site for less than 180 days, it must be fully licensed and ready for highway use;
- c) drilling, mining, installing utilities, construction of roads, bridges or similar projects;
- d) construction or erection of levees, walls, fences, dams, or culverts, channel modifications, filling, dredging, grading, excavating, paving, or other non-agricultural alterations of the ground surface, storage materials, deposit of solids or liquid waste;
- e) any other activity of man that might change the direction, height, or velocity of flood or surface water, including extensive vegetation removal;
- f) plowing and cultivation and other similar agricultural practices that do not involve filling, grading or construction of levees as regulated in Section 204.
- g) demolition of a structure or redevelopment of a site;
- h) clearing of land as an adjunct of construction;
- i) substantial improvement of an existing building.

The following are not considered development: maintenance of existing buildings and facilities such as reroofing or resurfacing of roads with an impervious surface when there is no increase in elevation.

**Direct Discharge Sites.** Parcels of land, or portions thereof, which are immediately adjacent and naturally drain directly to the banks of the Des Plaines River, Chicago Sanitary and Ship Canal, DuPage River, and Kankakee River without crossing over other private or public property.

**Director.** The Will County Executive or his or her designee charged with performing the duties specified in the Will County Storm Water Management Ordinance.

**Drainage Area.** The land area above a given point that may contribute runoff flow at that point from rainfall.

**Dry Basin:** A detention basin designed to drain completely after temporary storage of stormwater flows and to normally be dry over the majority of its bottom area.

**Effective Date.** The date to be determined by the County Board.

**Elevation Certificates.** A form published by FEMA that is used to certify the base flood elevation and the lowest elevation of usable space to which a building has been constructed.

**Ephemeral Stream.** A stream whose bed elevation does not intersect the groundwater table, it carries flow only during and immediately after a runoff producing rainfall event.

**Erosion.** The process whereby soil is detached by the action of water or wind.

**Existing Manufactured Home Park or Subdivision.** A Manufactured Home Park or subdivision for which the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including at a minimum the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) has been completed before the effective date of this ordinance.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Expansion to an Existing Manufactured Home Park or Subdivision.** The preparation of additional sites by the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

**Extended Detention.** A volume of runoff temporarily detained and released over a long period of time as specified in Section 203.5.

**Farmed Wetland.** As determined following the procedures outlined by the Food Security Act and Chicago District of the Corps of Engineers.

**(FEMA) Federal Emergency Management Agency.** The Federal Agency and its regulations, at 44 CFR 59-79, effective as of September 29, 1989 or as amended.

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

**Flood Frequency.** Normally expressed as a period of years, based on a percent chance of occurrence in any given year from statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded. For example, the 2-year flood frequency has a fifty percent (50%) chance of occurrence in any given year. Similarly, the 100-year flood frequency has a one percent (1%) chance of occurrence in any given year.

**Flood Fringe.** That portion of the floodplain outside of the designated floodway.

**(FIRM) Flood Insurance Rate Map.** A map issued by FEMA that is an official Community map, on which map FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the Community. This map may or may not depict floodways.

**(FIS) Flood Insurance Study.** A study of flood discharges and flood profiles for a Community, adopted and published by FEMA.

**Floodplain.** That land typically adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation including detached special flood hazard areas, ponding areas, etc. The floodplain is also known as the special flood hazard areas (SFHA).

**Floodplain Administrator.** That person designated by the Will County Executive to administer and enforce this Ordinance (Chief Subdivision Engineer).

**(FPE) Flood Protection Elevation.** The elevation of the BFE plus 2 feet of freeboard for structures within the plan limits of the base flood elevation. Outside the floodplain limits, the blocked restrictor elevation of any adjacent stormwater facility plus 1 foot of freeboard.

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

**Floodproofing Certificate.** A form published by FEMA that is used to certify that a building has been designed and constructed to be structurally dry flood proofed to the FPE.

**Floodway.** The floodway includes the channel, on stream lakes, and that portion of the floodplain adjacent to a stream or channel which is needed to store and convey the critical duration 100-year frequency flood discharge with no more than a 0.1 foot increase in flood stage due to the loss of flood conveyance or storage, and no more than a 10% increase in velocities.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Floodway Conveyance.** The measure of the flow carrying capacity of the floodway section and is defined using Manning's equation as,  $K = \frac{1.4863 AR^{2/3}}{n}$

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

**Forested Wetland.** As defined by the Chicago District Corps of Engineers.

**Freeboard.** An increment of height added to the BFE or 100-year design water surface elevation to provide a factor of safety for uncertainties in calculations, unknown local conditions, wave actions and unpredictable effects such as those caused by ice or debris jams.

**Functional.** In the context of the usage in this Ordinance, functional refers to stormwater facilities, which serve their primary purpose of meeting developed release rate requirements but do not meet all of the final design conditions. For example, a detention basin, which has been excavated but has not had the side slopes graded nor the final landscaping placed, may be considered "functional" as a site runoff storage facility.

**Good Husbandry.** The application of agricultural or conservation practices that minimize impacts to natural resources and neighboring landowners.

**Groundwater.** Water that is located within soil or rock below the surface of the earth (same as subsurface water).

**Groundwater Control System.** A designed system which may consist of tiles, under drains, French drains, or other appropriate stormwater facilities whose purpose is to lower the groundwater table to a predictable elevation throughout the year.

**Historic Structure.** Any structure that is a) listed individually in the National Register of Historic Places, or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register; b) certified or preliminarily determined by the Secretary of the Interior as contributing to the historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; c) individually listed on the State Inventory of Historic Places by the Illinois Historic Preservation Agency; d) individually listed on a local inventory of historic places that has been certified by the Illinois Historic Preservation Agency.

**HQAR.** High Quality Aquatic Resource as defined by the Chicago District Corps of Engineers. These include Waters of the United States or Isolated Waters of Will County that are determined to be critical due to their uniqueness, scarcity, function and/or value. Appendix E provides further descriptions of HQARs.

**Hydraulics.** The science and study of the mechanical behavior of water in physical systems and processes.

**Hydraulically Connected Impervious Area.** Hydraulically connected impervious area shall consist of those areas of concrete, asphalt and gravel surfaces along with roof tops which convey flows directly to an improved drainage system consisting of storm sewers or paved channels. Rooftops whose downspouts discharge to unpaved surfaces which are designed for the absorption and filtration of stormwater runoff shall not be considered as hydraulically connected impervious surfaces. Roadways whose primary conveyance is through open ditches and swales shall not be considered as hydraulically connected impervious surface. Roadways drained by curb and gutter and storm sewer, and driveways hydraulically connected to those roadways shall be considered as directly connected impervious surface.

**Hydraulically Equivalent Compensatory Storage.** Compensatory storage either adjacent to the floodplain fill or not located adjacent to the development but can be shown by hydrologic and hydraulic analysis to be equivalent to compensatory storage located adjacent to the development.

**Hydric soil.** a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions.

**Hydrologically Disturbed/Hydrologic Disturbance.** An area where the land surface has been cleared, grubbed, compacted, or otherwise modified that changes runoff, volumes, rates, or direction.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Hydrology.** The science of the behavior of water, including its dynamics, composition, and distribution in the atmosphere, on the surface of the earth, and underground.

**Hydrophytic vegetation.** Plant life growing in water, soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

**IDNR-OWR.** The Illinois Department of Natural Resources, Office of Water Resources.

**Impervious.** Surfaces that cause the majority of rainfall to be converted to direct runoff. Asphalt, concrete, roofing systems, and gravel areas will be considered impervious.

**Interim Watershed Plan.** A regional study of a watershed which does not address the entire range of purposes, goals and objectives outlined in the Countywide Stormwater Management Plan approved by the Committee and adopted by the County.

**Intermittent Stream.** A stream whose bed intersects the groundwater table for only a portion of the year on the average or any stream which flows continuously for at least one month out of the year but not the entire year.

**Isolated Waters of Will County.** All waters such as lakes, ponds, streams, (including intermittent streams), farmed wetlands, and wetlands that are located within unincorporated Will County but not necessarily under the U.S. Army Corps of Engineers jurisdiction. The limits of the Isolated Waters of Will County extend to the ordinary high water mark or delineated wetland boundary. Isolated Waters of Will County exclude permitted excavations created for such purposes as stormwater conveyance, detention/recreation areas as constructed as part of a stormwater management system, recreation, stock watering, irrigation, settling basins or wastewater treatment systems and roadside ditches. Compensatory wetland mitigation created to meet the requirements of this ordinance or section 404 of the Clean Water Act is not excluded.

**Jurisdictional Wetland.** A wetland that is under the jurisdiction of the Army Corps of Engineers.

**(LOMA) Letter of Map Amendment.** The official determination by FEMA that a specific structure is not in a regulatory floodplain. A LOMA amends the effective FIRM.

**(LOMC) Letter of Map Change.** A letter from FEMA that revised base flood elevations, flood insurance rate zones, flood boundaries, or floodway as shown on an effective FIRM.

**(LOMR) Letter of Map Revision.** A letter from FEMA that revises base flood elevations, flood insurance rate zones, flood boundaries, or floodway as shown on an effective FIRM.

**Lake.** A natural or artificial body of water encompassing an area of two or more acres, which retains water throughout the year.

**Lowest Floor.** The lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure usable solely for parking of vehicles, building access or storage, in an area other than a basement area is not considered a building's lowest floor provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Maintenance Special Service Area.** A backup funding mechanism which may be enacted by the Will County Board in the event that the person or entity charged with maintenance of the special service area fails to adequately carry out and/or provide maintenance and upkeep of the area as it relates to Section 605 of this ordinance.

**Major Stormwater System.** That portion of a stormwater facility needed to store and convey flows beyond the capacity of the minor stormwater system.

**Manufactured Home.** A structure transportable in one or more sections, which is built on a permanent chassis and is designated for use with or without a permanent foundation when attached to the required utilities. The term Manufactured Home also includes park trailers, travel trailers, and other similar vehicles placed on site for more than 180 consecutive days. The term Manufactured Home does not include a recreational vehicle.

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

**Mass Grading.** Development in which the primary activity is a change in topography affected by the movement of earth materials.

**Minor Stormwater System.** Shall consist of all infrastructure including curb, gutter, culverts, roadside ditches and swales, storm sewers, and sub-surface drainage systems intended to convey stormwater runoff at less than a 100-year flood frequency. The minor stormwater systems shall be designed to carry a 10 year storm event, or as required by the affected Highway Department jurisdiction.

**Minor Subdivision.** Any subdivision containing not more than five (5) lots and not involving any new streets, roads, or extension of municipal facilities, and not in conflict with any provision or portion of the Zoning Ordinance, Subdivision Ordinance, or official plan or map relating thereto.

**Mitigation.** Measures taken to offset negative impacts from development in wetlands or the floodplain. Mitigation includes those measures taken to eliminate or minimize damage from development activities by replacement of the resource, such as compensatory storage, soil erosion and sedimentation control, wetland replacement, and channel restoration. Mitigation may also include those activities taken to reduce a structure's susceptibility to flooding.

**Natural.** In reference to watercourses, those stream channels, grassed waterways, and swales means those stream channels, grassed waterways, and swales formed by the existing surface topography of the earth prior to changes made by man. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed, or cultivated; the stream flows over soil and geologic materials typical of the area with no substantial alteration of the course or cross-section of the stream caused by filling or excavating. A modified stream channel, grassed waterway, or swale which has regained natural characteristics over time as it meanders and re-establishes vegetation may be considered natural.

**Naturalized Detention Basin.** A constructed basin for the temporary storage of stormwater runoff with a controlled release rate which creates growing conditions suitable for emergent and riparian wetland plants, and which is explicitly designed to lessen the impacts of stormwater quality and quantity in urban and urbanizing areas.

**NAVD 88 (North American Vertical Datum of 1988).** The accepted standard orthometric data, referenced to the single control point at Father Point, Quebec, Canada. NAVD 88 supersedes the National Geodetic Vertical Datum of 1929 (NGVD).

**(NFIP) National Flood Insurance Program.** A Federal program whose requirements are codified in Title 44 of the Code of Federal Regulations.

**Net Benefit in Water Quality.** The institution of best management practices as part of a development that when compared to the pre-development condition can be judged to reduce downstream sediment loading or pollutant loadings.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Net Watershed Benefit.** A finding that, when compared to the existing condition, the developed project will do one of the following: substantially reduce (more than 10%) downstream peak discharges; reduce downstream flood stages (more than 0.1 ft.); or reduce downstream damages to structures occurring in the pre-development condition. The demonstration of one of these conditions must be through detailed hydrologic and hydraulic analysis of watersheds on a regional scale as approved by the Stormwater Administrator.

**New Manufactured Home Park or Subdivision.** Manufactured Home Park or Subdivision for which the construction of facilities for servicing the lots on which the Manufactured Homes are to be affixed (including at a minimum the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) has been completed after the effective date of this ordinance.

**Non-riverine.** Areas not associated with a stream or river such as isolated depressional storage areas, ponds and lakes.

**NPDES.** National Pollutant Discharge Elimination System.

**NPDES Permit.** A permit from the Illinois Environmental Protection Agency for discharge of storm water associated with construction activities disturbing one acre or more.

**NRCS.** The United States Department of Agriculture, Natural Resources Conservation Service.

**Observation Structures.** Structures built on a field tile where the pipe inflow and outflow is visible upon removal of a lid.

**One-Hundred Year Event.** A rainfall, runoff, or flood event having a one percent (1%) chance of occurring in any given year.

**Open Channel.** A conveyance system with a definable bed and banks carrying the discharge from field tiles and surface drainage. Open channels do not include grassed swales within farm fields under agricultural production, which are ephemeral in nature.

**Ordinary High Water Mark (OHWM).** The point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark, such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.

**Overland Flow Path.** A design feature of the major stormwater system which carries flows in excess of the minor stormwater system design capacity in an open channel or swale, or as sheet flow or weir flow over a feature designed to withstand the particular erosive forces involved.

**Oversight Committee.** The Will County Land Use & Development Committee. See Section 1004.

**Parcel.** A contiguous area of land under unified ownership, separately owned and capable of being separately conveyed.

**Peak Flow.** The maximum rate of flow of water at a given point.

**Perennial Streams.** Riverine watercourses whose thalweg generally intersects the groundwater table elevation and flows throughout the year

**Permitting Authority.** The County.

**Plan.** The Will County Comprehensive Countywide Stormwater Management Plan, adopted by the Will County Board on October 13, 1998, as amended from time to time.

**Planning and Zoning Commission(PZC).** See Section 1005.

**Pond.** A body of water of less than two acres, which retains a normal water level year round.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Primary Gravity Outlet.** The outlet structure designed to meet the release rate requirements of this Ordinance.

**Professional Land Surveyor.** A land surveyor registered in the State of Illinois, under The Illinois Land Surveyors Act. (225 ILCS 330/1, et seq.), as amended.

**Professional Engineer.** An engineer registered in the State of Illinois, under The Illinois Professional Engineering Practice Act. (225 ILCS 325/1 et seq.), as amended.

**Property.** Contiguous land under single ownership or control.

**Property Owners Association.** The legal entity created for the purpose of developing, selling, managing, and maintaining a residential, commercial, or industrial development which shall have the primary responsibility for providing for the care, maintenance, renewal, and replacement of stormwater drainage facilities. (may also known as Homeowner's Association).

**Public Bodies of Water.** All open public streams and lakes capable of being navigated by watercraft in whole or in part for commercial uses and purposes and all lakes, rivers and streams, which in their natural conditions were capable of being improved and made navigable, or that are connected with or discharge their waters into navigable lakes or rivers within, or upon the borders of the State of Illinois, together with all bayous, sloughs, backwaters, and submerged lands that are open to the main channel or body of water directly accessible thereto.

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

**Public Flood Easement.** An easement acceptable to the appropriate jurisdictional body that meets the regulations of the OWR, the Department, and the Community, and that provides legal assurances that all areas subject to flooding in the created backwater of the development will remain open to allow flooding.

**Qualified Wetland Professional.** A person trained in natural and/or physical sciences (such as one or more of the disciplines of biology, geology, soil science, engineering, or hydrology) whose training and experience ensure a competent analysis and assessment of stream, lake, pond, and wetland conditions and impacts.

**Record Drawings.** Drawings prepared, signed, and sealed by a registered professional engineer or registered land surveyor representing the final "as-built" record of the actual in-place elevations, location of structures, and topography.

**Recreational Vehicle or Travel Trailer.** A vehicle which is: a) built on a single chassis; b) 400 square feet or less when measured at the largest horizontal projection; c) designed to be self propelled or permanently towable by a light duty truck; and d) designed primarily not for use as a permanent dwelling, but as a temporary living quarters for recreational camping travel or seasonal use.

**Redevelopment:** Development on a parcel upon which the existing condition is buildings, parking lots, and/or infrastructure.

**Regional permits.** Regional permits are offered for pre-approved projects that are considered minor projects that are permissible per IDNR/OWR Part 3708 rules for Northeastern Illinois regulatory floodways. A complete listing of the terms and conditions for specific project types can be obtained from the IDNR/OWR website. However, a regional permit from IDNR/OWR does not exempt a project from securing a site development permit.

**Registered Structural Engineer.** A person licensed under the laws of the State of Illinois as a structural engineer.

**Registered Land Surveyor.** See Professional Land Surveyor.

**Registered or Licensed Professional Engineer.** See Professional Engineer.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Regulatory Floodway.** Regulatory floodways are those portions of the floodplain depicted on maps as floodway and recognized by the IDNR-OWR for regulatory purposes.

**Regulatory Floodplain.** The floodplain as depicted on maps recognized by FEMA as defining the limits of the SFHA.

**Repair, Remodeling, or Maintenance.** Development activities that do not result in any increases in the outside dimensions of a building or any changes to the dimensions of a structure.

**Repetitive Loss.** Flood-related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

**Retention Facility.** A retention facility stores stormwater runoff without a gravity release.

**Rip-Rap.** Large size, coarse aggregate with angular edges normally placed at end sections of storm sewer inlets or outlets, culverts, or along shorelines to reduce soil erosion.

**River Frontage.** That property that is immediately adjacent to and naturally drains directly to the Des Plaines River, Chicago Sanitary and Ship Canal, DuPage River, or Kankakee River without crossing over other private or public property.

**Riverine.** Related to, formed by, or resembling a channel (including creeks and rivers).

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

**Runoff.** The waters derived from melting snow or rain falling within a tributary drainage basin that exceeds the infiltration capacity of the soils of that basin.

**Runoff Pollutants.** Sediment, heavy metals, petroleum-based organic compounds, nutrients, oxygen-demanding organics (BOD), pesticides, salt, and pathogens which may be present in stormwater runoff.

**Seasonal High Groundwater Table.** The upper limits of the soil temporarily saturated with water.

**Sedimentation.** The process that deposits hydraulically moved soils, debris, and other materials either on other ground surfaces or in bodies of water, watercourses, or stormwater drainage systems.

**Sediment Trap.** A structure or area that allows for the temporary deposit and removal or disposal of sediment materials from stormwater runoff.

**Seepage.** The movement of drainable water through soil and rock.

**Site.** A lot or a parcel of land where grading work is performed as a single unified operation.

**Site Development Permit.** A permit issued by the Will County Land Use Department for the construction or alteration of ground improvements and structures for the control of erosion, runoff, and grading, or for the clearing, grading, stripping, excavating, or filling of land.

**(SFHA) Special Flood Hazard Area.** See Floodplain.

**Stormwater Administrator.** That person designated by the Will County Executive to administer and enforce this ordinance in the unincorporated areas of Will County.

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Stormwater Drainage System.** All means, natural, or human-made, used for conducting stormwater to, through, or from, a drainage area to the point of final outlet from a property. The stormwater drainage system includes but is not limited to any of the following: conduits, appurtenance features, canals, channels, ditches, streams, culverts, streets, storm sewers, detention basins, swales and pumping stations.

**Stormwater Facility.** All ditches, channels, conduits, bridges, culverts, levees, ponds, natural and man-made impoundments, wetlands, riparian environment, tile, swales, sewers, or other natural or artificial structures or measures which serve as a means of draining surface and subsurface water from land.

**Stormwater Management Permit.** The permit issued under Article 5. Also called a Site Development Permit.

**Stormwater Runoff.** The waters derived from melting snow or rain falling within a tributary drainage basin which are in excess of the infiltration capacity of the soils of that basin, which flow over the surface of the ground or are collected in channels or conduits.

**Storm Sewer.** A closed conduit for conveying collected stormwater.

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

**Stream.** Any river, creek, brook, branch, flowage, ravine, or natural or man-made drainage way which has a definite bed and banks or shoreline, in or into which surface or groundwater flows, either perennially or intermittently.

**Substantial Improvement.** Any reconstruction, rehabilitation, addition, or improvement of a structure taking place during a ten-year period, in which the cumulative percentage of improvements equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. Substantial Improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures that have incurred repetitive loss or substantial damage, regardless of the actual work done. This term does not, however, include any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or any alteration of a “historic structure” listed on the National Register of historic Places or the Illinois Register of historic Places, provided that the alteration will not preclude the structure’s continued designation as a historic structure.

**Subsurface Drainage.** The removal of excess soil water to control water table levels at predetermined elevations for structural, environmental or other reasons in areas already developed or being developed for agricultural, residential, industrial, commercial, or recreational uses.

**Subsurface Water.** Water beneath the ground or pavement surface. Sometimes referred to as ground water or soil water.

**T Factor.** The T factor is the soil loss tolerance. It is defined as the maximum amount of erosion at which the quality of a soil as a medium for plant growth can be maintained. Erosion losses are estimated by Universal Soil Loss Equation (USLE) and Revised Universal Soil Loss Equation (RUSLE).

**Technical Guidance Manual.** The manual adopted by the County Board, which refers to the Will County Stormwater Management Ordinance, and provides additional explanations and examples.

**Thalweg.** A line along the lowest point in a channel.

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

## ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Travel Trailer or Recreational Vehicle.** A vehicle which is: a) built on a single chassis; b) 400 square feet or less when measured at the largest horizontal projection; c) designed to be self propelled or permanently towable by a light duty truck; and d) designed primarily not for use as a permanent dwelling, but as a temporary living quarters for recreational camping travel or seasonal use.

**Two-Year Event.** A runoff, rainfall, or flood event having a fifty percent (50%) chance of occurring in any given year.

**Usable Space.** Space used for dwelling, storage, utilities, or other beneficial purposes, including without limitation basements.

**Violation.** The failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance is presumed to be in violation until such time as that documentation is provided.

**Water Table.** The upper limit of a free water surface in a saturated soil or underlying material.

**Waters of the U.S.** As defined by the United States Army Corps of Engineers in their Federal Methodology for the Regulation of Wetlands. For purposes of this Ordinance, waters of the U.S. include wetlands, lakes, rivers, streams, creeks, bogs, fens, and ponds. Waters of the U.S. do not include maintained stormwater facilities.

**Watershed.** All land area drained by, or contributing water to, the same stream, lake, stormwater facility, or draining to a point.

**Watershed Benefit.** (see Net Watershed Benefit).

**Watershed Characteristics.** Watershed characteristics include land use, physiology, habitat, climate, drainage system and community profile.

**Watershed Plan.** A study and evaluation of an individual drainage basin's stormwater management, floodplain management, water quality and flood control needs and capabilities.

**Wet Basin:** A detention basin designed to maintain a permanent pool of water after the temporary storage of stormwater runoff.

**Wetland:** As defined in current Federal methodology recognized by the U.S. Army Corps of Engineers for regulatory purposes. Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (known as hydrophytic vegetation). A wetland is identified based upon the three attributes: 1) hydrology, 2) soils and 3) vegetation as mandated by the current Federal wetland determination methodology. Classification of areas shall follow the U.S. Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1.

**Wetland Basin.** A detention basin designed with all or a portion of its bottom area as a wetland.

**Wetland impact.** Wetlands that are hydrologically disturbed or otherwise adversely affected by flooding, filling, excavation, or drainage that results from implementation of a development activity.

**Wetland Mitigation Credits.** A credit is equal to 1 acre of wetland mitigation. The value of mitigation to generate credit is calculated differently depending the form of the mitigation.

**Woodlands.** An area with a contiguous tree canopy area, including younger understory trees, of at least one (1) acre that contains healthy deciduous coniferous trees as determined by a qualified professional.

ARTICLE 1 AUTHORITY, PURPOSE, AND DEFINITIONS

**Sections 105 through 117 Reserved for Watershed and/or Interim Watershed Plans.**

ARTICLE 2 REQUIREMENTS FOR STORMWATER MANAGEMENT

**Sec. 200      General Information**

200.1    Other Applicable Articles

All developments shall meet the requirements specified for general stormwater development (Section 201), site runoff (Section 202), sediment and erosion control (Article 3), performance security and maintenance (Article 6).

200.2    Applicability of Site Runoff Storage Requirements (Detention)

All developments shall comply with the site runoff storage requirements provided in Section 203 of this Ordinance in which:

- a.      Manufactured home parks are to be constructed on a parcel larger than one (1) acre in size.
- b.      Multi-family homes are to be constructed on a parcel larger than one (1) acre in size.
- c.      A parcel is being subdivided into single family residential lots.
- d.      Non-residential development.

200.3    Exemptions From Site Runoff Storage Requirements (Detention)

Site run-off storage is not required under the following circumstances:

- a.      Direct discharge industrial sites where appropriate BMP's are utilized.
- b.      Non Industrial direct discharge sites 160 acres or less having the following minimum river frontage:

<u>Site Area</u>	<u>Required Frontage</u>
0 to 2 Acres	50ft.
up to 5 Acres	100ft.
up to 10 Acres	150ft.
up to 40 Acres	200ft.
up to 80 Acres	350ft.
up to 160 Acres	500ft.

- c.      The development is of a non-residential nature on an existing developed parcel, where new impervious surfaces do not exceed 25,000 square feet in aggregate provided that the design does not further concentrate storm water flows from the existing condition, and the design provides appropriate best management practices on site.
- d.      The development is of a non-residential nature on an existing agricultural parcel, where new impervious surfaces do not exceed 25,000 square feet in aggregate, which are not exempted under Section 204.
- e.      Roadway developments in rights-of-way under the ownership or control of a unit of local governments when the contiguous area of new roadway construction (excluding previously paved areas) does not exceeds two acres;
- f.      Minor subdivision of a single-family residential zoned parcel.
- g.      Construction of a single-family residence, an addition to an existing single-family residence, and/or construction of an accessory structure where the cumulative impervious area does not exceed 25,000 square feet on an existing legal lot or parcel.
- h.      Single-family structures on legally created agricultural parcels.

## ARTICLE 2 REQUIREMENTS FOR STORMWATER MANAGEMENT

- i. Bike trails, pedestrian trails, and multi-purpose trails on Park District or Forest Preserve District property when the trail is designed so as to not further concentrate storm water flows from the existing condition, and when it can be shown by calculations, as required under Section 203.2, that there will be no net increase in storm water discharge rates from the proposed construction during the 2 year and 100 year rainfall events. BMPs can be utilized to help mitigate discharge rates. In addition, a trail shall not be designed, nor constructed in a manner that could result in impoundment of storm water onto another property. The trails shall not exceed twelve (12) feet in width to be exempt from the site runoff storage requirements.
  
- j. A parcel being subdivided into single-family residential lots having a minimum lot size of 2.5 acres or greater. Provided that the exempt subdivision is designed so as to not further concentrate storm water flows from the existing condition, and when it can be shown that there will be no net increase in storm water discharge rates from the proposed construction during the 2 year and 100 year rainfall events. BMPs can be utilized to help mitigate discharge rates (i.e. roadside ditches).

### **Sec. 201 General Stormwater Requirements**

#### 201.1 Requirements Applicable to All Development

No development shall:

- a. Result in any new or additional expense to any person other than the developer for flood protection; nor
- b. Increase flood elevations or decrease flood conveyance capacity upstream or downstream of the area under the ownership or control of the developer. This requirement shall not prohibit the removal or reduction of built obstructions to flow, such as increasing culvert capacity or lowering roadway elevations.

#### 201.2 (RESERVED)

#### 201.3 Building Permits

Stormwater facilities shall be functional before building permits are issued for residential and non-residential subdivision.

#### 201.4 Single Parcel Developments

Stormwater facilities shall be functional where practicable for single parcel developments before building construction begins.

#### 201.5 Overland Flow Paths

The development shall have an overland flow path at the downstream limit of the property that will pass the base flood flow at a stage at least one foot (1') below the lowest adjacent foundation grade in adjacent structures without increasing damage to structures or property. If the upstream drainage area is less than 20 acres, the storm sewer pipe and inlet sized for the base flood can be constructed in lieu of providing an overland flow path. Overland flow paths internal to the site shall be considered as part of the major stormwater system and shall be designed for conveyance of the base flood (critical duration) and shall be a minimum of one (1) cfs per tributary acre without damage to structures.

#### 201.6 Protection of Buildings

All usable space in new buildings or added to existing buildings hydraulically connected to a major stormwater system, site runoff storage facility, or overland flow path shall be elevated, flood proofed, or otherwise protected to at least one (1) foot above the blocked restrictor elevation of the site runoff storage (detention) facility or the calculated high water elevation of the overland flow path, or two (2) feet above the base flood elevation, whichever is greater.

## ARTICLE 2 REQUIREMENTS FOR STORMWATER MANAGEMENT

### 201.7 Depressional Storage

The function of existing on-site depressional storage shall be preserved for both on-site and off-site tributary flows in addition to required detention. When depressional storage is removed it must be compensated for in the site runoff storage facility at 1.25 to 1 ratio if the depression is identified as a Regulatory Floodplain and at a 1 to 1 ratio if the depression is not a Regulatory Floodplain, provided that offsite areas tributary to the existing depressional storage are routed through the site runoff storage facility. This requirement is in addition to the site runoff storage required in Section 203. The Chief Subdivision Engineer may allow the function of depressional storage to be preserved if the applicant performs detailed pre- and post-project hydrologic and hydraulic modeling to identify the effect of the depressional storage on discharges over a range of rainfall frequencies.

## **Sec. 202 Site Runoff Requirements**

### 202.1 Stormwater Facility Discharges

Stormwater facilities shall be required and designed so that runoff exits the site at a point where it exited prior to the subject development and in a manner such that flows will not increase flood damage to adjacent property except when otherwise approved by the Chief Subdivision Engineer. Concentrated discharges from new developments must enter conveyance systems capable of carrying the design flow rate without increasing flood damages or maintenance costs downstream.

### 202.2 Minor Stormwater System Criteria

Minor stormwater systems shall be sized to convey runoff from the tributary watershed under fully developed conditions. Storm sewers shall be sized to convey the 10-year storm in a full (non-surcharged) pipe condition unless otherwise directed by the road authority.

### 202.3 Major Stormwater System Criteria

Major stormwater systems shall be sized to carry the base flood without causing additional flood damage.

### 202.4 Existing Sub-Surface and Surface Drainage Systems

Stormwater systems shall properly incorporate and be compatible with existing subsurface and surface drainage systems including agricultural systems. Designs shall not cause damage to the existing drainage system(s) or the existing adjacent or tributary land including those with agricultural uses.

The following principles and requirements shall be observed in the design:

- a. **Off-Site Outfall:** Existing agricultural subsurface and surface drainage systems shall be evaluated with regard to their capacity, condition, and capability to properly convey low flow groundwater and two year site runoff to a surface outlet without damage to downstream structure and land use on the adjacent properties. If the outfall drain tile and surface drainage systems prove to be inadequate it will be necessary to modify the existing systems or construct new systems which will not conflict with the existing systems and will not impact the existing agricultural land use.
- b. **On-Site:** Agricultural drainage systems shall be located and evaluated on-site. All existing on-site agricultural drain tile not serving a beneficial use shall be abandoned by trench removal prior to other development and recorded on record plans. If any existing drain tiles continue to upland watersheds the developer must maintain drainage service during construction until new sewers can be installed for a permanent connection.
- c. **Off-Site Tributary:** Existing drainage systems shall be evaluated with regard to existing capabilities and reasonable future expansion capacities. All existing tributary drain tiles shall be incorporated into the new conduits including observation structures located at the property limits, shall provide a free flow discharge and shall not allow surface runoff to enter the system.
- d. **New roadway construction** shall preserve existing sub-surface systems within the right-of-way. Inspection wells shall be placed at the right-of-way (ROW) and tiles found to not be flowing between inspection wells at the end of the construction shall be replaced.

## ARTICLE 2 REQUIREMENTS FOR STORMWATER MANAGEMENT

### 202.5 Design Runoff Rate

Design runoff rates for minor stormwater systems may be calculated using the Rational Method.

### 202.6 Design Rainfall

Any design runoff rate calculation method for conveyance shall use Illinois State Water Survey Bulletin 70 based intensity-duration-frequency curves.

### 202.7 Stormwater System Easements

For projects involving subdivision, major and minor storm water systems shall be located within easements or rights-of-way explicitly providing for public access for maintenance of such facilities. For all other projects requiring a permit, easements (minimum ten feet wide) are required for public access for maintenance of stormwater facilities only for new construction or modifications involving components of a drainage system that conveys runoff from off-site properties. For commercial and/or industrial property, the stormwater system does not have to be located within an easement or public right-of-ways unless the system serves multiple properties or is constructed on an adjacent property. Instead, the owner or owner's representative shall provide a signed agreement to Will County authorizing it to enter the facility to maintain the stormwater system if the owner fails to correct any deficiencies brought to the owner's attention by the governmental entity.

### 202.8 Flow and Ponding Depths

Maximum flow depths for new transverse stream crossings shall not exceed six (6) inches at the crown of the road during the 100-year storm condition. For flow over a new roadway or parallel to a new roadway, the product of the flow depth (in feet) and velocity (in feet per second) shall not exceed four (4) for the 100-year storm condition. The maximum flow depth on a roadway shall not exceed 6" at the crown for flow parallel to the roadway. The maximum stormwater ponding depth during the 100-year critical storm event in any yard or parking area shall not exceed nine (9) inches, and the maximum storage elevation shall not be maintained for more than four (4) hours. Inlets shall have capacity to allow the inflow; based on the design pipe capacity, with no more than three (3) inches of ponding over street inlets.

### 202.9 Diversion of Flow to Another Watershed

Transfers of waters between watersheds (diversions) shall be prohibited except when such transfers will not violate the provisions of Section 201.1 and are otherwise lawful. Watersheds for purpose of regulation under this section shall be the major watershed divides as defined in the County Stormwater Management Plan.

### 202.10 Best Management Practices Requirement

Developments shall incorporate all best management practices as may be required pursuant to the United States Clean Water Act, 33 U.S.C. " 1251 et seq., as amended. Developments shall be designed to create a healthy aquatic ecology, provide for sustainability, minimize maintenance and human intervention, and treat stormwater as a multiple-use resource. The Chief Subdivision Engineer does reserve the right to require specific stormwater best management practices at a particular site if it discharges to a sensitive ecological area or if the intended use of the property produces a particularly detrimental water quality of the discharge. Listed below are examples of BMPs that meet the intent of the ordinance:

- 1) Minimize mass grading and disturbance of soils;
- 2) Lay out streets and lots to conform to the natural topography of the site;
- 3) Minimize new impervious surfaces by clustering of neighborhoods and homes, minimizing street widths and parking lots, and reducing lot sizes and building setbacks;
- 4) Preserve and create natural landscaping, buffers and filter strips;
- 5) Utilize permeable areas to maximize infiltration of runoff into the ground through the use of biofilters, filter strips, swales, infiltration trenches, permeable pavement and native vegetated open spaces;

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- 6) Direct runoff to permeable areas and/or utilize stormwater for reuse by:
- a. Directing roof runoff towards permeable surfaces, drywells, French drains, vegetated swales, or other BMPs instead of driveways or other non-permeable surfaces;
  - b. Grading impervious surfaces to direct runoff to permeable areas, utilizing level spreaders or other methods to distribute the impervious runoff onto pervious surfaces;
  - c. Using cisterns, retention structures or rooftops to store precipitation or runoff for reuse; and
  - d. Removing berms and designing pavement edges (e.g., curb cuts) in order to direct water to permeable landscaped areas.
- 7) Improve water quality of stormwater leaving the site through the use of a naturalized detention basin designed to maximize the removal and transformation of runoff pollutants. Design should include:
- a. Emergent vegetation in the bottoms of the wetland basins and along the periphery of wet bottom basins, and side slopes vegetated in native prairie (traditional dry bottom basins are not approved BMPs);
  - b. Stilling basins at major detention basin inlets and maximizing the distance between major inlets and the basin outlet;
  - c. Installation of pre-settlement or mechanical stormwater treatment units prior to discharge of stormwater into primary detention basins; and
  - d. In locations where detention basin discharge to adjacent/downstream wetlands, designing detention basin outlet structures to spread and infiltrate runoff through the use of level spreader devices.

### **Sec. 203      Site Runoff Storage Requirements (Detention/Extended Detention)**

#### 203.1    Release Rate

If no release rate is specified in an adopted watershed plan in accordance with Section 103, then sufficient flood storage shall be provided so that the site will not discharge at a rate greater than 0.15 cfs/acre of development during and after a rainfall event with a 100-year frequency except for sites exempted in 200.3. Unless exempted in 200.3, sites shall not discharge at a rate greater than 0.04 cfs/acre of development during and after a rainfall event with a 2-year frequency.

This area of hydrologic disturbance on the site shall be used to calculate the required site runoff storage volume. The on-site watershed area tributary to the point of discharge shall be used to calculate the allowable release rate for the site runoff storage facility, which shall be the maximum release rate allowed considering only the on-site watershed area runoff.

In the event the downstream creeks, streams, channels, conduits, or other drainage facilities are inadequate to receive the release rate herein above provided and there is no adopted watershed plan available, then the allowable release rate shall be reduced to that rate permitted by the receiving downstream creeks, streams, channels, conduits, or other drainage facilities; and additional detention volume shall be required to store that portion of the runoff exceeding the capacity of the receiving drainage facilities.

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### 203.2 Design Methods

Event hydrograph routing methods shall be used to calculate design runoff volumes for site runoff facilities. The Methods must be HEC-1 (SCS methodology), HEC-HMS, TR-20, or TR-55 tabular method. Event methods shall incorporate the following assumptions:

- a. Antecedent moisture condition = 2; and
- b. Appropriate Huff rainfall distribution; and
- c. 24-hour duration storm with a 1% probability (100-year frequency) of occurrence in any one year as specified by Illinois State Water Survey Bulletin 70 Northeast Sectional rainfall statistics. The isohyetal graphs included in Bulletin 70 shall be used to determine rainfall depths specific to the project site.

### 203.3 Existing Release Rate Less Than Allowable

For sites where the undeveloped release rate is less than the maximum release rate in Section 203.1, the developed release rate and corresponding site runoff storage volume shall be based on the existing undeveloped release rate for the development.

### 203.4 Downstream Water Surface Elevations

All hydrologic and hydraulic computations must utilize appropriate assumptions for downstream water surface elevations, from low flow through the base flood elevation, considering the likelihood of concurrent flood events.

### 203.5 Extended Detention Requirement

The requirements of this section will apply only when an existing agricultural land use is downstream of and adjacent to a site runoff storage facility outlet. The runoff from a 0.75-inch rainfall event over the hydraulically connected impervious area of the new development shall be stored below the elevation of the primary gravity outlet (extended detention) of the site runoff storage facility. The facility may be designed to allow for evapotranspiration or infiltration of this volume into a subsurface drainage system and shall not be conveyed through a direct positive connection to downstream areas.

The hydraulically connected impervious area used in the calculation of required extended detention volume may be reduced by the Chief Subdivision Engineer if the soils are prepared to maximize infiltration and deep rooted grasses or other plants selected for their ability to promote infiltration or water absorption are planted in areas appropriately dedicated. The reduction in hydraulically connected impervious area used in the calculation shall be equal to the area of the development meeting the above soils/native planting requirement.

Subsurface drainage systems may be designed as a component of the extended detention portion of the detention basin to assist in infiltration in accordance with the following criteria:

- a. The extended detention volume shall be discharged at a rate no greater than **(no earlier than)** that required to empty the calculated extended detention volume within 5 days of the storm event.
- b. For purposes of meeting the maximum subsurface drainage discharge requirements, flow control orifices and weirs may be used.
- c. All design extended detention volume shall be provided above the seasonal high ground water table or the invert elevation of the groundwater control system.
- d. Farm field tile shall not be used as a component of the extended detention system, unless evaluated per Section 202.4.

### 203.6 Site Runoff Storage Facility Design Requirements

Storage facilities shall be designed and constructed with the following characteristics:

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- a. The site runoff storage facility shall provide 1 (one) foot of freeboard above the calculated (blocked restrictor) high water elevation.
- b. The storage facilities shall be accessible and easily maintained.
- c. Storage facilities shall facilitate sedimentation and catchment of floating material. Unless specifically approved by the Chief Subdivision Engineer, concrete lined low-flow ditches shall not be used in detention basins.
- d. Storage facilities shall minimize impacts of stormwater runoff on water quality by incorporating best management practices.
- e. Storage facilities shall maximize the normal flow distance between detention inlets and outlets, to the extent possible.
- f. Storage facilities shall be designed such that the existing conditions pre-development peak runoff rate from the 100-year, critical duration rainfall will not be exceeded assuming the primary restrictor is blocked. One foot of freeboard shall be provided over the blocked restrictor water level.
- g. Storage facilities with single pipe outlets shall have a minimum inside diameter of 12 inches. Where flow control orifices are used, the minimum diameter is 4-inch. If design release rates necessitate a smaller outlet, structures such as perforated risers or other self-cleaning restrictors shall be used.
- h. Basin side slopes should not be steeper than 4:1 (horizontal to vertical); five to one (5:1) side slopes are preferred. For wet-bottom basins, side slopes not steeper than 2:1 may be used below the safety ledge.
- i. Wet-bottom storage facilities must include a safety shelf, minimum 6 feet width, 2.5' to 3' below the normal water line.
- j. The permanent pool volume in wet-bottom basins shall be at least equal to the 2-year, 24-hour runoff volume from the tributary watershed. The minimum permanent pool depth is 3 feet, excluding safety shelves. If fish habitat is to be provided, over 25% of the bottom area must be at least 10 feet deep.
- k. Dry bottom detention basins shall be graded with not less than one percent (1%) slope across basin floor.
- l. All detention basins shall be provided with an overflow structure capable of passing pre-development peak runoff rate capable of meeting the requirements of 203.6(f) above.
- m. All detention basins discharging at grade shall discharge a minimum of 20 feet from any property line unless an agreement allowing discharge closer to the property line is secured from the adjacent property owner or road authority. Vegetative buffers, level spreaders, or other appropriate BMPs shall be utilized at the outlet structure to promote spreading and infiltration of the discharge.
- n. Rip-rap or other approved method of dissipating energy shall be utilized at all end sections and point discharge locations.
- o. Standards for naturalized detention basins include: flat side slopes (8:1 from 2 year water level to 0.5 ft. below normal water level), shallow zones of emergent vegetation at water's edge, combination of natural vegetation and open water area. Uses of aerators, cascades, water falls, etc are encouraged. A planting/maintenance shall be submitted and approved by the Chief Subdivision Engineer.

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203.7 Site Runoff Storage Facility Requirements Within the Regulatory Floodplain

Storage facilities located within the regulatory floodplain shall:

- a. Conform to all applicable requirements specified in Article 4 of this Ordinance; and
- b. Store the required amount of site runoff to meet the release rate requirement under all stream flow and backwater conditions in the receiving stream up to the 10-year flood elevation; and
- c. RESERVED
- d. The Chief Subdivision Engineer may approve designs which can be shown by detailed hydrologic and hydraulic analysis to provide a net watershed benefit not otherwise realized by strict application of the requirements in a through c above.

203.8 Site Runoff Storage Facility Requirements Within the Regulatory Floodway

Site runoff storage facilities shall not be located within the regulatory floodway.

203.9 (RESERVED)

203.10 Off-Site Facilities

Site runoff storage facilities may be located off-site if the following conditions are met:

- a. The off-site storage facility meets all of the requirements of this Article 2; and
- b. Adequate storage capacity in the off-site facility is dedicated to the development and placed in an appropriate easement on the off-site property; and
- c. The development includes means to convey stormwater to the off-site storage facility. The conveyance system shall be placed in an appropriate easement on the off-site property.

203.11 RESERVED

203.12 Cross-Stream Structures for Site Runoff Storage Facilities

Structures constructed across the channel to impound water to meet detention requirements shall be prohibited on any perennial stream unless part of a public flood control project with a net watershed benefit. Those streams appearing as blue on a USGS Quadrangle map shall be assumed perennial unless better data is obtained. All cross-stream structures for the purpose of impounding water to provide detention in all cases on perennial and intermittent streams must demonstrate that they will not cause short term or long-term stream channel instability.

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### **Sec. 204 Stormwater Requirements for Agricultural Land Use Including Croplands, Pasture Lands and Farmsteads**

Applicability: Regulations under this section apply only to croplands, pasturelands, farmsteads and outbuildings associated with those agricultural practices. Compliance with the requirements of this Section 204 shall be construed as compliance with the Stormwater Ordinance for the above land uses and no further regulation under the Ordinance will apply. Any other land use, including, but not limited to, greenhouses, nurseries, container grown plants, equestrian facilities, the sale of agricultural products to the public, or any other commercial activities involving the new construction of gravel or paved parking facilities or buildings, where the aggregate area of proposed impervious surfaces is 25,000 square feet or more are required to comply with all applicable sections of this Ordinance.

#### 204.1 Conservation Planning and Performance Standards

To comply with this Section, Landowners shall practice conservation planning whose product shall be a management system, which addresses site runoff, soil erosion and sediment control, surface and subsurface drainage. Any acreage with a signed and approved NRCS Conservation Plan is exempt from the requirements of this section and the ordinance.

Applicable approved practices include:

- a. Vegetated grass waterways
- b. Contour Buffer strips
- c. Critical area planting and cover crops
- d. Terrace ridges and diversions
- e. Contour strip cropping
- f. Contour farming
- g. Conservation crop rotation
- h. Conservation tillage and crop residue management
- i. Other standard practices for conservation planning in accordance with the NRCS Field Office Technical Guide (current edition) or as otherwise approved by the Will County NRCS District Conservationist.

The performance standard for conservation planning and implementation shall be a management system which will develop a set of field practices which will reduce the calculated actual soil loss to the “tolerable soil loss” (T) as calculated by the revised Universal Soil Loss Equation for the actual site conditions. Cropland tillage and resource management methods shall be consistent with the Technical Guide Notice IL-108 and shall be considered evidence of compliance with the “T” performance standard.

#### 204.2 Drainage Practices, Requirements and Design Criteria

Drainage for agricultural purposes shall be consistent with those practices identified as appropriate for “good husbandry” given the soil types, slopes and crops. An agricultural drainage system may consist of both subsurface drainage systems and surface drainage systems. Where active Drainage Districts maintain drainage systems, they shall be consulted on surface and subsurface drainage within the District boundaries. Requirements applying to subsurface and surface drainage system shall be as follows:

- a. Agricultural Subsurface Drainage Systems: Drain tile systems shall be maintained and constructed in accordance with subsurface drainage recommendations for the appropriate soil drainage group as specified by the University of Illinois Extension Service Drainage Guide link <http://urbanext.illinois.edu/lcr/drainage.cfm>. Surface inlets into the subsurface drainage system shall be allowed where their use cannot be practicably avoided due to topography. They shall be installed using flow controls such as orifices and perforated risers with gravel filters and /or vegetative filters. In cases where the installation of the surface inlet is for the purpose of enhancing the drainage of farmed wetlands, the individual shall consult with the Will County NRCS District Conservationist.

## ARTICLE 2 REQUIREMENTS FOR STORMWATER MANAGEMENT

- b. **Surface Drainage Systems:** Surface drainage systems shall be maintained and constructed in accordance with surface drainage recommendations for the appropriate soil drainage group as specified by the University of Illinois Extension Service link <http://urbanext.illinois.edu/lcr//drainage.cfm> . Surface drainage systems shall be built with geotechnically stable slopes and the surface when applicable shall be further stabilized utilizing the establishment of cool and warm season grass mixes as identified in Field Office Technical Guide (Illinois 108).
- c. **Buffer Strips:** Open channels with a definable bed and banks shall use buffer strips having a minimum width of 25 feet in order to reduce the amount of erosion occurring from the conveyed flows as well as to help filter the runoff from the site into the waterway.
- d. Agricultural drainage systems shall also comply with all regulations regarding wetlands as enforced by Federal, State, and Local agencies.

### 204.3 Sediment Control for Open Channels

All open channel drainage systems shall maintain practices adjacent to the open outlet channel that will reduce the transportation of sediment off-site. Runoff from agricultural fields must pass through a sediment control system prior to discharge into the open channel conveyance system. Approved sediment control systems may consist of the following:

- a. Vegetated buffer shall have a minimum width of twenty-five (25) feet planted with permanent grasses appropriate for soil stabilization and filtering;
- b. Grade control structures for over fall stabilization;
- c. Sediment traps adjacent to the stream channel;
- d. Other standard practices for conservation planning in accordance with the NRCS Field Office Technical Guide (current edition) or as otherwise approved by the Will County NRCS District Conservationist or the Administrator.

### 204.4 Maintenance and Construction of Drainage Systems

Agricultural drainage systems shall be maintained so as to convey the expected flows for good drainage practices. The existing agricultural surface drainage systems shall not be enlarged unless such enlargement is consistent with all other sections of this Section 204. Maintenance and construction of subsurface drainage systems will not be subject to the requirements of other sections of this Ordinance except as they are regulated by other agencies. Maintenance projects by legally functioning drainage districts on existing agricultural drainage systems will not be subject to further permitting requirements under this Ordinance except as they relate to the jurisdiction of other agencies.

## **Sec. 205 Conservation Design**

**Applicability:** In a conservation-designed subdivision as defined in the Will County Subdivision Ordinance, a density bonus is granted for each acre (or fractional acre) of land utilized for stormwater infiltration (see Section 31-04 A.1.f.iii of the Subdivision Ordinance).

### 205.1 Infiltration Credit

To obtain the maximum infiltration credit, infiltration BMPs shall be designed, installed, and maintained to infiltrate runoff to the maximum extent practicable in accordance with one of the following goals:

- a. Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90% of the pre-development infiltration volume, based on an average annual rainfall for the region; or

ARTICLE 2 REQUIREMENTS FOR STORMWATER MANAGEMENT

- b. Infiltrate at least 25% of the post-development runoff volume from the 2-year, 24-hour design storm with a Type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes and not composite curve numbers.

Natural conditions such as soil types and slopes will affect the ability of a site to meet these infiltration goals. Projects that are shown to meet these goals will be granted full (100%) credit (i.e. one acre of credit for one acre of land dedicated to stormwater infiltration). Projects that exceed these goals or partially meet these goals will be given credit according to the following table:

Goal #1 90% Average Volume <u>% Calculated</u>	Goal #2 25% 2-Year Volume <u>% Calculated</u>	<u>% Credit</u>
> 92.5%	> 26.0%	110%
90.0% to 92.5%	25.0% to 26.0%	100%
85.5% to 89.9%	23.8% to 24.9%	95%
81.0% to 85.4%	22.5% to 23.7%	90%
76.5% to 80.9%	21.3% to 22.4%	85%
72.0% to 76.4%	20.0% to 21.2%	80%
67.5% to 71.9%	18.8% to 19.9%	75%
63.0% to 67.4%	17.5% to 18.7%	70%
58.5% to 62.9%	16.3% to 17.4%	65%
54.0% to 58.4%	15.0% to 16.2%	60%
50.0% to 53.9%	14.0% to 14.9%	55%
< 50%	< 14.0%	0%

- 205.2 Before infiltrating runoff, pretreatment shall be required for parking lot and/or commercial area runoff that will enter an infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality. Pretreatment options may include, but are not limited to, oil/grease separation, sedimentation, biofiltration, filtration, swales, or filter strips. To minimize potential groundwater impacts, it is desirable to infiltrate the cleanest runoff. To achieve this, a design may propose greater infiltration of runoff from low pollutant sources such as roofs, and less from higher pollutant source areas such as parking lots and commercial areas.
- 205.3 Infiltration from areas requiring pretreatment and regional devices (facilities with a drainage area of 5 acres or greater) for infiltration from residential development shall not be installed within 400 feet of a community water system well or within 100 feet of a private well.

## ARTICLE 3 SEDIMENT AND EROSION CONTROL

### Sec. 300 Sediment and Erosion Control

Applicability: No person shall commence or perform any clearing, grading, stripping, excavating, or filling of land without having first obtained a site development permit from the Development Review Division of the Will County Land Use Department. Requirements for a Site Development Permit are found in Section 500 of this Ordinance.

#### 300.1 Site Planning

Sediment and erosion control planning shall be part of the initial site planning process. In planning the development of the site, the applicant shall consider the susceptibility of existing soils to erosion and topographic features such as steep slopes and stream corridors which must be protected to reduce the amount of sediment and erosion which occurs. Where appropriate, existing vegetation shall be protected from disturbance during construction by fencing or other means. In the planning process the applicant shall also address the following:

- a. For projects that involve phased construction, existing land cover for those areas not under current development shall be addressed. If existing land cover does not consist of an appropriate ground cover then these phases shall be planted temporarily to reduce erosion from idle land.
- b. In planning the sediment and erosion control strategy, preference shall be given to reducing erosion rather than controlling sediment. In order to accomplish this the plan must carefully consider the construction sequence of the phases so that the amount of land area exposed to erosive forces is the minimum consistent with completing construction.

#### 300.2 Standards and Specifications

Specifications for erosion control measures shall be in accordance with the "Illinois Urban Manual" (2002) or latest edition. Sediment and erosion control planning shall be in accordance with "Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois" (revised July, 1988) by the Urban Committee of the Association of Illinois Soil and Water Conservation Districts (The "Green Book") Chapters 1-5. Where the Illinois Urban Manual supersedes sections of The Green Book, the Illinois Urban Manual shall prevail.

All projects that will result in the development of one acre or more, except for agricultural projects regulated solely under Section 204, shall be required to obtain coverage under an appropriate NPDES permit and shall submit an application for a NPDES permit or a Notice of Intent (NOI) to be covered under a general NPDES permit. The developer shall certify to the Chief Subdivision Engineer that all required permits, plans and inspections have been prepared and maintained in accordance with the NPDES permit. Specifically, the developer shall prepare and adhere to a Stormwater Pollution Prevention Plan (SWPPP) prepared for the development project and shall meet the conditions in the permit for SWPPPs. A copy of such plan shall be provided to the Chief Subdivision Engineer prior to commencement of development activities and a copy shall be maintained on the construction site at all times.

#### 300.3 General Requirement

The runoff from disturbed areas shall not leave the development site without first passing through sediment control facilities. This requirement shall apply to all phases of construction and shall include an ongoing process of implementation of measures and maintenance of those measures during both the construction season and any construction shut down periods.

#### 300.4 Extended Construction Shutdown Periods

The condition of the construction site for the winter shut down period shall address proper sediment and erosion control early in the fall growing season so that slopes and other bare earth areas may be stabilized with temporary and/or permanent vegetative cover. All open areas that are to remain idle throughout the winter shall receive temporary erosion control measures including temporary seeding, mulching and/or erosion control blanketing prior to the end of the fall growing season. The areas to be worked beyond the end of the growing season must incorporate soil stabilization measures that do not rely on vegetative cover such as erosion control blankets and heavy mulching.

## ARTICLE 3 SEDIMENT AND EROSION CONTROL

### 300.5 Hydraulic and Hydrologic Design Requirements

In the hydraulic and hydrologic design of major erosion control measures (those whose tributary drainage area is greater than 3 acres) such as sediment basins and traps, diversions, and the like, the design frequency shall be commensurate with the risk of the design event being exceeded. The following design frequencies shall be regarded as minimum design frequencies for the construction period:

1. For those projects whose construction period is less than 6 months then the storm event having a 50% chance (2-year event) of being exceeded in any year shall be used for design purposes;
2. For those projects whose construction period is greater than 6 months but less than 1 year, the design frequency for major sediment basins shall be a rainfall event with a 20% (5-year event) chance of being exceeded in any one year; and
3. For those construction projects expected to last more than 1 year major sediment basins shall be designed for a rainfall event with a 10% (10-year event) chance of being exceeded in any one year.

### 300.6 "As-Needed" Practices on the Plans

The sediment and erosion control plan shall designate a series of practices which shall be implemented either at the direction of the permittee or the permittee's representative on-site or at the direction of the Chief Subdivision Engineer should an inspection of the site indicate a deficiency in soil and sediment erosion control measures. As a minimum, these measures shall include the following:

- a. Sedimentation basins;
- b. Sediment traps;
- c. Diversion swales;
- d. Silt fences;
- e. Temporary seeding;
- f. Mulching;
- g. Erosion control blankets.

### 300.7 Sediment and Erosion Control Plan Requirements

Sediment and erosion control plans shall be in accordance with Article 5 Submittal Requirements but shall include the following;

- a. Detailed construction phasing plan identifying sediment and erosion control measures to be in place for each phase shall be submitted prior to stripping the site of existing vegetation or cover.
- b. Sediment and erosion control measures to be installed initially prior to stripping existing vegetation or mass grading shall be indicated on the plans.
- c. Permanent stabilization measures shall be indicated on a separate plan.
- d. The expected 2-year and 10-year runoff rates from all off-site areas draining into the site shall be identified on the plan.
- e. Methods for conveying flows through the site during construction shall be indicated. These methods must include the temporary and permanent stabilization measures to be used to reduce velocity and erosion from flow through the construction zone.
- f. A maintenance schedule of each measure used shall be indicated on the plan. As a minimum, all sediment and erosion control measures on-site shall be inspected weekly and also by the applicant's designee after a one-half inch or greater rainfall event and any required repairs shall be made to keep these measures functional as designed. All plan modifications shall be reviewed by the Chief Subdivision Engineer or his/her designee. A record of all repairs and modifications shall be maintained by the applicant and available for review by the Chief Subdivision Engineer or his/her designee.

## ARTICLE 3 SEDIMENT AND EROSION CONTROL

- g. Where stormwater detention basins and compensatory storage excavations are part of the approved plan, those areas shall be stabilized within seven (7) calendar days following excavation with sod, mat, or blanket in combination with seeding, or equivalent.
- 300.8 Conveyance of Off-Site Flow  
To the extent practicable, proposed ditches and waterways that are to convey off-site flows through the site shall be stabilized upon construction. Where new waterways are constructed they shall be stabilized to the extent practicable prior to their use to convey flood flows.
- 300.9 Stockpiles  
Stockpiles of soil and other erodable or floatable building materials (sand, limestone, etc.) shall not be located in floodplains, overflow routes or areas subject to frequent inundation. If a stockpile is to remain in place for more than three days, then sediment and erosion control shall be provided for the stockpile.
- 300.10 Storm Sewer Inlets  
Storm sewer inlets shall be protected with sediment trapping and/or filter control devices during construction.
- 300.11 Construction Dewatering  
Water pumped or which is otherwise discharged from the site during construction dewatering shall be filtered, using appropriate sediment and soil erosion control measures, to reduce erosion.
- 300.12 Protection of Public/Private Roadways  
Graveled roads, access drives, parking areas of sufficient width and length, and vehicle wash down facilities, if necessary, shall be provided to prevent soils from being tracked onto public or private roadways. Any soil tracked onto a public or private roadway shall be removed before the end of each workday or sooner as directed by the Authority maintaining the roadway.
- 300.13 Temporary Stream Crossings  
Temporary stream crossings of intermittent and perennial streams used only for and during construction shall be designed to convey a 2-year flood (minimum) or other flood event approved by the Chief Subdivision Engineer without overtopping unless a more frequent design event is allowed by the Chief Subdivision Engineer. The entire crossing shall be designed to withstand hydrodynamic forces and erosive forces up to the base flood event without washing out. Ephemeral streams may be crossed at temporary at-grade crossings provided that the crossing point is stabilized with materials resistive to the erosive forces produced by runoff from the upstream drainage area, and the design is approved by the Chief Subdivision Engineer. Temporary stream crossings shall be removed upon completion of construction activities. All temporary stream crossing shall be completely removed and the stream restored to its preconstruction condition upon completion of construction. Restoration shall incorporate appropriate vegetation consistent with the adjacent existing vegetation prior to construction or in accordance with a restoration plan approved by the Chief Subdivision Engineer

## ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

### **Sec. 400           General**

This article sets forth requirements for developments within floodplains and floodways. In addition, developments in the SFHA draining more than one square mile with no designated floodway must meet IDNR-OWR III Admin Code Part 3700 Rules. References to IDNR/OWR permits or approvals in this Section shall be construed as “their designee” where a portion or all of their authority has been delegated.

Development that qualifies for any of the self-issuing statewide or regional permits administered by IDNR/OWR (Statewide Permit Nos. 1 through 14 and Regional Permit No. 3) are similarly permitted under this Article. The applicant’s Illinois Professional Engineer shall certify to the Chief Subdivision Engineer that the development qualifies for the particular statewide or regional permit in question under the regulations established by IDNR/OWR for such permit. All other provisions of this ordinance and other ordinances applicable to such development, however, continue to apply. However a permit from Will County must still be issued.

### **Sec. 401           Floodplain, Regulatory Floodplain, Base Flood Elevation (BFE) and Regulatory Floodway Locations**

#### 401.1   Regulatory Floodplain

The floodplains are those lands within the jurisdiction of the County of Will that are subject to inundation by the base flood or 100-year frequency flood. The floodplains of the County of Will are generally identified on the countywide Flood Insurance Rate Map of the County of Will prepared by FEMA. The BFE shall be delineated onto the site topography to establish the Regulatory Floodplain area limits for regulation under this Ordinance. Regulatory floodplains shall be delineated onto the site map from the current FEMA FIRM, FBFM or LOMR and include those areas of the SFHA which are not Regulatory Floodplains.

#### 401.2   Base Flood Elevation (BFE)

The BFE shall be:

1.   The elevation of the 100-year profile corresponding to the location of the development as indicated in the flood profiles in the FEMA Flood Insurance Studies listed in Appendix B (which may be updated from time to time) or
2.   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 elevation or depth added to the highest adjacent grade (or at least two feet about the highest adjacent grade if no depth number is provided) shown on the countywide Flood Insurance Rate Map of Will County.
3.   If a base flood elevation or 100-year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the best existing data available from federal, state, or other sources. When a party disagrees with the best available data, they shall submit a detailed engineering study needed to replace existing data with better data and submit it to IDNR/OWR and FEMA for review and consideration prior to any development of the site.
  - a.   When no BFE information exists, the BFE for a riverine SFHA shall be determined using a site-specific floodplain study by a Professional Engineer using appropriate hydrologic and hydraulic models as follows:
    - i.   The base flood elevation for a riverine SFHA shall be determined from a backwater model, such as HEC-II, HEC-RAS, or a dynamic model such as HIP.
    - ii.   The flood flows used in the hydraulic models shall be obtained from a hydrologic model, such as HEC-HMS, HEC-1, TR-20, or HIP or by techniques presented in various publications prepared by the United States Geological Survey for estimating peak flood discharges.

## ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

- iii. Or a technique approved by the Chief Subdivision Engineer and/or the IDNR/OWR.
  - b. Where a channel has a tributary drainage area of 640 acres or more, the above analyses shall be submitted to the IDNR/OWR for concurrent approval.
  - c. For a non-riverine Regulatory Floodplain, the historic flood of record plus three feet may be used for the BFE instead of performing a detailed hydrologic and hydraulic study.
4. For floodplains that are not regulatory, are not draining more than 640 acres, and with no BFE determined, the Chief Subdivision Engineer may require a site-specific floodplain study for the purpose of establishing an FPE for the development.

### 401.3 Regulatory Floodplain Locations

The location of the Regulatory Floodway shall be as delineated on the current effective regulatory maps maintain by the County. The floodways are designated on the countywide Flood Insurance Rate Map of Will County, prepared by FEMA. When two floodway maps exist for a waterway, the more restrictive floodway limit shall prevail. The location of the Regulatory Floodway boundary shall be scaled onto the site plan using references common to both the map and the plan (typically the township section lines). Where an interpretation is needed to determine the exact location of the Regulatory Floodway boundary, IDNR/OWR should be contacted.

Note: If an area of the site is located in the Regulatory Floodway that is higher than the BFE, that area is subject to the Floodway Standards of Section 404, including the appropriate use criteria, until such time as a LOMR is received from FEMA with concurrence by IDNR/OWR.

General criteria for analysis of flood elevations in the regulatory floodway are as follows.

1. The flood profiles, flows, and data in the current effective FIS must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, FEMA and IDNR/OWR shall be contacted for approval and concurrence on the appropriate base conditions data to use. The County Executive and the Chief Subdivision Engineer shall be copied on all related correspondence.
2. 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 with the receiving stream at both the normal water and BFEs.
3. If the applicant is informed by IDNR/OWR, local governments, 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 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, removed or modified as applicable.
4. If the appropriate use will result in a change in the Regulatory Floodway location or a change in the BFE, the applicant shall submit the information required to be issued a Conditional Letter of Map Revision (CLOMR) to IDNR/OWR and FEMA. A public notice inviting public comment on the proposed change in the BFE or location of the Regulatory Floodway will be issued by IDNR/OWR or its designee before a CLOMR is issued. Filling, grading, dredging or excavating may take place upon issuance of a conditional approval from IDNR/OWR and the Administrator. No further development activities shall take place in the existing or proposed floodplain until a Letter of Map Revision (LOMR) is issued by FEMA unless such activities meet all the requirements of the Section 402 of this Ordinance. The Director shall be copied on all related correspondence.

## ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

5. For those circumstances listed below and located in a Regulatory Floodway, at a minimum, the following information shall be submitted to IDNR/OWR for their review and concurrence.
  - a. Analysis of the flood profile due to a proposed bridge, culvert crossings and roadway approaches.
  - b. An engineer's determination that an existing bridge, culvert crossing or approach road is not a source of flood damage and the analysis indicating the proposed flood profile.
  - c. Alternative transition sections and hydraulically equivalent compensatory storage.
  - d. Stormwater Management Permits to local units of government for Regulatory Floodway and Floodplain development.
6. IDNR/OWR will issue permits for any IDNR/OWR projects, dams, etc. all other state, federal or local projects.

### **Sec. 402 General Performance Standards**

The following general performance standards are applicable to all development in a Regulatory Floodplain. The standards of this section apply except when superseded by more stringent requirements in the subsequent sections.

- a. No development except as allowed in Section 406 shall be allowed in the Regulatory Floodplain that singularly or cumulatively creates an increase in flood stage or velocity off-site, or a damaging or potentially damaging increase in flood heights or velocity on-site or threat to public health, safety and welfare.
- b. For all projects involving a channel modification, fill, stream maintenance or a levee, the flood conveyance and storage capacity of the regulatory floodplain shall not be reduced.
- c. If the proposed development would result in a change in the Regulatory Floodplain or BFE as indicated in Appendix B, the applicant shall obtain a LOMR from FEMA. No buildings may be built in the existing or proposed Regulatory Floodplain until the LOMR receives concurrence from IDNR/OWR and is issued by FEMA and the building meets all the Building Protection Standards (Section 402.2). Proposed changes to the Regulatory Floodway delineation and the BFE must be submitted to IDNR/OWR for concurrence.
- d. If the development is located in a public body of water, as defined by IDNR/OWR (Appendix C), a permit or a waiver of a permit must also be received from IDNR/OWR.
- e. Prior to the commencement of any construction, modification or removal of a dam the developer shall obtain an IDNR/OWR Permit or letter indicating a permit is not required.
- f. For public flood control projects, the Floodplain Management standards will be considered met if the applicant can demonstrate to IDNR/OWR and Chief Subdivision Engineer that each of the following conditions are met:
  1. Demonstrate by hydraulic and hydrologic modeling that the proposed project will not singularly or cumulatively result in increased flood heights outside the project site or demonstrate that any increases will be contained in easements for all flood events up to and including the base flood event.
  2. Demonstrate that the project will be operated and maintained by a public agency.

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3. Demonstrate that the project will reduce flood damage to an existing building or structure.

These standards do not preclude the design, engineering, construction or financing, in whole or in part of a public flood control project by persons who are not public agencies.

- g. Proposals for new Subdivisions, Manufactured Home Parks, Planned Unit Developments (PUDs) and additions to Manufactured Home Park and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations.
- h. Critical facilities shall not be permitted within the 500-year floodplain.

### 402.1 Public Health Protection Standards

- a. New and replacement water supply systems, wells and sanitary sewer lines may be permitted if all manholes or other aboveground openings located below the FPE are watertight.
- b. New on-site waste disposal systems, such as septic systems, are allowed in the Regulatory Floodplain only if they meet all of the following conditions:
  1. The invert of any wastewater distribution lines shall be a minimum of 2-feet above the water surface elevation of the base flow of any perennial stream;
  2. The lateral distance from a ditch, creek, or other riverine source to the wastewater distribution lines shall be a minimum of 75;
  3. The elevation of any areas which are to receive wastewater distribution shall be above the ordinary high water mark;
  4. The soil of the receiving field shall be of a type suitable for septic fields;
  5. The tank shall be placed out of the floodplain with the invert of the outlet above the BFE.
- c. New, substantially improved, or replacement wastewater treatment plants shall have watertight openings for those openings located below the FPE. Such facilities should be located to avoid impairment to the facility or contamination of floodwaters during the base flood.

### 402.2 Building Protection Standards

The Building Protection Standards apply to all buildings located in the Regulatory Floodplain; however, it should be noted that most new and replacement buildings are not appropriate uses of the Regulatory Floodway.

- a. The lowest floor including basements of all new residential structures, substantially improved structures and additions shall be elevated up to at least the Flood Protection Elevation.
  1. If placed on fill, the top of the fill for the residential structure shall be at the Flood Protection Elevation (FPE) or higher. The top of fill for an attached garage shall be at least 0.1 foot above the Base Flood Elevation (BFE). The fill shall be placed at that elevation for a distance of ten feet out from the building unless the building design is certified by a registered structural engineer to be protected from damages due to hydrostatic pressures. Additionally, the fill shall not settle below the FPE for the residential structure and not below 0.1 feet above the base flood for an attached garage, and shall be adequately protected against erosion, scour and differential settlement. The fill shall not adversely affect surface drainage from or onto neighboring properties. All structures placed on fill in the floodplain shall meet the requirements of this Ordinance and FEMA Technical Bulletin 10-01, and the applicant's design engineer shall certify that the land or structures to be removed from the Special Flood Hazard Area are reasonably safe from flooding.

#### ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

2. 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 1 foot above existing grade, and consist of a minimum of two openings. The openings must have a total net area of not less than 1 square inch for every 1 square foot of enclosed area subject to flooding below the BFE. The lowest inside grade must match the lowest existing outside grade adjacent to the structure. 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 0.1 feet 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 below the FPE shall be used for storage.
- b. The lowest floor including the basement of all new or substantially improved non-residential buildings shall be elevated at least to the FPE as described above 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 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).
- c. Manufactured Homes and recreational vehicles to be installed on a site for more than 180 days shall be at or above the FPE and shall be anchored to resist flotation, collapse, or lateral movement in accordance with the Illinois Manufactured Home Tie-Down code [(77 Ill. Adm. Code 870 1999)] as amended.
- d. Accessory structures, such as tool sheds and detached garages which are not substantial improvements on an existing single-family lot, may be constructed with the lowest floor below the FPE in accordance with the following criteria:
  1. The building shall not be used for human habitation.
  2. All areas below the FPE shall be constructed with waterproof material. Structures located in a Regulatory Floodway shall meet the Floodway Standards in Section 404.
  3. The structure shall be anchored to prevent flotation and movement.
  4. Service facilities such as electrical and heating equipment shall be elevated or flood proofed to the FPE.
  5. The building shall be no greater than 600 square feet in floor size, and be valued at less than \$7,500. The building shall meet the permanent opening criteria of Article 4, Section 402.2(a) 2.

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

Accessory structures that do not meet all of the above criteria may be constructed if they are dry flood proofed or elevated at least ½ of one foot above the BFE.

### 402.3 Non-Conforming Structures

A non-conforming structure damaged by flood, fire, wind or other disaster may be restored unless the damage meets or exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to the Building Protection Standards of this Ordinance.

### 402.4 LOMR-F

A LOMR-F must be issued by FEMA before a building permit may be issued for structures built on fill in the floodplain. A permit shall not be issued unless the applicant has complied with all the following criteria:

- a. Compensatory storage shall be provided per Section 403.
- b. The elevation of the lowest opening in the basement wall (i.e., window wells, access ways) shall be at or above the Flood Protection Elevation (FPE).
- c. The lowest adjacent grade to the foundation shall be at or above the FPE for a minimum distance of ten (10) feet beyond the outside face of the structure. However, if site conditions are such that this requirement cannot be met, the Chief Subdivision Engineer may waive the ten (10) foot minimum setback if an Illinois Licensed Professional Engineer certifies that an alternative method to protect the building from damage due to hydrostatic pressure has been met. The certifications shall be in the form of a detailed soils and structural design analysis, which shall be submitted to the Chief Subdivision Engineer for review. The Chief Subdivision Engineer may require such additional documentation as necessary to prove that the proposed shorter setback distance will keep the structure reasonably safe. In no case shall the setback distance be less than four (4) feet.
- d. The grade around the perimeter of the structure, measured at a distance of twenty (20) feet from the structure, shall be above the base flood elevation (BFE). However, if site conditions are such that this requirement cannot be met, the Chief Subdivision Engineer may waive the twenty (20) foot minimum setback distance if an Illinois Licensed Professional Engineer certifies that an alternative method to protect the building from damages due to hydrostatic pressures have been met. A detailed soils analysis and structural design proving that a shorter setback distance will keep the structure reasonably safe from flooding, shall be submitted to the Chief Subdivision Engineer for review. In no case shall the setback distance be less than four (4) feet.
- e. The ground around the building shall be compacted fill that meets all requirements of this subsection and is at least five (5) feet thick under the basement floor slab. Nothing in this subsection shall be interpreted to require the removal or replacement of fill that was placed as part of a LOMR-F, if such fill consists of material, including soils of similar classification and degree permeability, as those classified as CH, CL, SC, or ML according to ASTM standard D-2487, Classification of Soils for Engineering Purposes.
- f. The fill material must be homogeneous and isotropic; that is, soil must be all of one material, and the engineering priorities must be in the same direction.

#### ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

- g. All fill material and compaction shall be designed, certified, and inspected by an Illinois Licensed Professional Engineer, as warranted by the site conditions.
- h. The basement floor shall be at an elevation that is no more than five (5) feet below the BFE.
- i. There shall be a granular drainage layer beneath the floor slab, and minimum of one quarter (1/4) horsepower sump pump with a backup power supply shall be provided to remove seepage flow. The pump shall be rated at four (4) times the estimated seepage rate and shall discharge above the BFE and away from the building in order to prevent flooding of the basement or uplift of the floor under the effect of the seepage pressure.
- j. The drainage system shall be equipped with a positive means of preventing backflow.
- k. All foundation elements shall be designed to withstand hydrostatic pressure in accordance with accepted engineering practices.
- l. If the applicant is unable to meet all of the requirements set forth in the preceding paragraphs of this subsection, the Chief Subdivision Engineer may allow the construction of a basement below the BFE only if the applicant demonstrates that the proposed fill and structure meet the guidelines and requirements set forth in FEMA Technical Bulletin 10-01 and are reasonably safe from flooding. In order to demonstrate that the proposed structure is reasonably safe from flooding, the applicant shall submit a detailed engineering analysis of the proposed fill and foundation wall. The engineered basement study shall be completed in accordance with the latest edition of FEMA Technical Bulletin 10-01 with the analysis of the fill being prepared by an Illinois Licensed Professional Engineer.
- m. In order to provide the required compensatory storage on site, in no case shall the depth of excavation in the front and side yards of the lot exceed eighteen (18) inches, as measured from the previously existing natural grade. The rear yard shall be permitted to have a greater depth of excavation, if necessary. All such excavation shall be constructed to drain freely and openly to the watercourse or storm sewer system. The use of mechanical means to drain the compensatory storage area will not be permitted.

#### **Sec. 403            Compensatory Storage Volume Standards**

Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The following standards apply within the regulatory floodplain:

- a. Hydraulically equivalent compensatory storage volume will be required for development in a riverine or non-riverine Regulatory Floodplain and shall be at least 1.25 times the regulatory floodplain flood storage volume displaced. The storage volume displaced below the existing 10-year frequency flood elevation must be replaced below the proposed 10-year frequency flood elevation. The storage volume displaced above the 10-year existing frequency flood elevation must be replaced above the proposed 10-year frequency flood elevation.
- b. Compensatory storage areas shall be designed to drain freely and openly to the watercourse, and in the case of streams and watercourses, such excavation shall be located opposite or adjacent to the areas so filled or occupied.
- c. A recorded covenant running with the land is required to maintain the compensatory storage volume in areas modified to provide compensatory storage volume.
- d. Existing depressional storage shall meet the requirements of Section 201.7.

## ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

### Sec. 404 Floodway Standards

The only development in a Regulatory Floodway which will be allowed are appropriate uses which will not cause an increase in flood heights or velocities for all flood events up to and including the base flood, and which will not create a damaging or potentially damaging increase in flood heights or velocity, or be a threat to public health and safety and welfare, or impair the natural hydrologic and hydraulic functions of the floodway or channel, or permanently impair existing water quality of aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods. Only those appropriate uses listed 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, excavation or channel modifications done to accommodate otherwise non-appropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined 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 standards for the Regulatory Floodplain:

- a. The approved Appropriate Uses are as follows:
  1. Public flood control structures, dikes, dams, and other public works or ~~and~~ private improvements relating to the control of drainage flooding, erosion, water quality or habitat for fish and wildlife;
  2. Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities, and facilities and improvements relating to recreational boating, commercial shipping, and other functionally water dependent uses;
  3. Storm and sanitary sewer outfalls;
  4. Underground and overhead utilities;
  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 and toilet facilities (4 stall maximum) that will not block flood flows nor reduce floodway storage;
  6. Detached garages, storage sheds, boat houses or other non-habitable structures without sanitary facilities that are accessory to existing buildings and will not block flood flows nor reduce regulatory floodway storage;
  7. Bridges, culverts roadways, sidewalks, railways, runways and taxiways and any modification thereto;
  8. Parking lots built at or below existing grade provided that either:
    - a. The BFE is less than one foot above the proposed parking lot; or
    - b. The parking lot is accessory to short-term outdoor recreational facilities and the owner agrees to restrict access during periods of inundation and agrees to accept liability for all damage caused by vehicular access during flooding events;
  9. Regulatory floodway grading, without fill, to create a positive non-erosive slope toward a channel;

#### ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

10. Flood proofing activities to protect previously existing lawful structures including the construction of water-tight 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 10 feet away from the exterior wall of the existing structure, and, which are not considered to be substantial improvements to the structure;
  11. The repair, replacement or reconstruction of a damaged building, provided that none of the outside dimensions of the building are increased and if the building was damaged to fifty (50%) percent or more of the market value before the damage occurred, the building will be protected from flooding to the flood protection elevation;
  12. Modifications to an existing building 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. If the building is improved to fifty (50%) percent or more of the market value before the modification occurred (i.e., a substantial improvement), the building will be protected from flooding to the flood protection elevation.
- b. Additions or changes to the above list of appropriate uses must be approved by the Committee prior to the adoption by the County Board and IDNR/OWR.
  - c. All development in the Regulatory Floodway shall require a Permit from IDNR-OWR and must be in accordance with all provisions of this Ordinance.
  - d. Within the designated floodway, the Construction of an Appropriate Use will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data prepared and signed by a Professional Engineer and provided that any structure meets the protection requirements of this ordinance.
    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.
    2. The following expansion and contraction ratios shall be used to determine transition sections in calculations of effective Regulatory Floodway conveyance:
      - a. Flowing water will expand no faster than at a rate of one foot horizontal for every four feet of the flooded stream's length.
      - b. Flowing water will contract no faster than at a rate of one foot horizontal for every one foot of the flooded stream's length.
      - c. Flowing water will not expand or contract faster than one foot vertical for every ten feet of flooded stream length.
      - d. All cross-sections used in the calculations shall be located perpendicular to flood flows.
      - e. Transition Sections must be used to determine the effective conveyance areas on adjacent properties.
    3. Development of an appropriate use will not result in an increase in the average channel or Regulatory Floodway velocities or stage. 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.

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- e. In the case of on-stream structures built for the purpose of backing up water during normal or flood flows, the increase in flood stage when compared to existing conditions for all storm events up to and including the base flood event shall be contained within recorded easements or the channel banks. A Dam Safety Permit or letter indicating a Dam Safety Permit is not required must be obtained from IDNR/OWR for such structures.
- f. IDNR/OWR will issue permits for any IDNR/OWR projects, dams, etc. and for all other state, local projects.

### **Sec. 405 Riverine Floodplain**

These standards apply to Riverine Regulatory Floodplains without a Regulatory Floodway.

The Applicant shall obtain approval from IDNR/OWR for all development any portion of which is located partially or completely within the Regulatory Floodplain (without a delineated Regulatory Floodway) with a tributary drainage area of 640 acres or more.

- a. The development shall not singularly or cumulatively result in an obstruction of flood flows or potential flood damages outside the site due to an increase in flood heights, velocities, or loss of floodplain area storage.
- b. A Professional Engineer shall submit a study that demonstrates one of the following:
  - 1. Determine a floodway which meets the definition of a Regulatory Floodway and demonstrate that the proposed development meets the Floodway Standards in Section 404, or
  - 2. 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 any lost floodplain storage.

### **Sec. 406 Bridge and Culvert Standards**

These standards are for the reconstruction, modification or new construction of bridges, culvert crossings and roadway approaches located in the regulatory floodplain.

- a. A proposed new structure shall not result in an increase of upstream flood stages greater than 0.1 foot when compared to the existing conditions for all flood events up to and including the base flood event unless contained within the channel banks or recorded easements. The evaluation must be submitted to the IDNR-OWR for review and a permit obtained.
- b. If the proposed new structure will increase upstream flood stages greater than 0.1 foot, the applicant must contact IDNR/OWR for a Dam Safety permit or waiver. The Director shall be copied on all related correspondence.
- c. Lost regulatory floodplain storage must be replaced as required in Section 403 Compensatory Storage Volume Standards except that artificially created storage lost due to a reduction in head loss behind an existing bridge or culvert crossing shall not be required to be replaced, provided no flood damage will be incurred downstream.
- d. Velocity increases must be mitigated by use of appropriate measures to avoid scour, erosion and sedimentation at the structure.
- e. For modification or replacement of existing structures, the existing structure must first be evaluated in accordance with IDNR/OWR Rules (17 Ill. Adm. Code Part 3708) to determine if the existing structure is a source of flood damage. If the structure is a source of flood damage, the

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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 (0.0 feet) 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, for review and concurrence before a permit is issued. The County Executive and the Chief Subdivision Engineer shall be copied on all related correspondence.

- f. If any work is proposed in, near or over a public body of water, a permit or letter indicating a permit is not required must be obtained from IDNR/OWR.
- 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.
- h. Construction vehicles shall cross-streams by the means of existing bridges or culverts. Where an existing crossing is not available, a temporary crossing that has been issued a permit or waiver by IDNR/OWR shall be constructed in which:
  - 1. The approach roads will be 0.5 feet or less above existing grade.
  - 2. The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall.
  - 3. The top of the roadway fill in the channel will be at least 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.
  - 4. The access road and temporary crossings will be removed within one year after installation, unless an extension of time is granted by the Chief Subdivision Engineer.

### **Sec. 407 Wetland, Waters and Buffer Standards**

Waters of the United States is a defined term (Section 104.0) in this ordinance and refers to areas that are under the jurisdictional authority and regulated by the United States Army Corps of Engineers. Isolated Waters of Will County are under the jurisdictional authority of this ordinance and is defined term in Section 104.0.

#### **407.1 Applicability**

- a. Development activities that create an impact within a wetland, Waters of the U. S., Isolated Waters of Will County, or their associated buffers, regardless of the Corps of Engineers Jurisdiction, must submit a Site Development Permit application to the Will County Land Use Department.
- b. The applicant shall submit a jurisdictional determination for the US Army Corp to determine the proper permitting agency.
- c. No Site Development Permit for activities that may impact wetlands, waters, or their associated buffers shall be issued unless the Will County Land Use Department finds that:
  - 1. The development will not detrimentally affect or destroy, without mitigation (see Section 502.6C), wetlands, waters, or their associated buffer areas, nor impair their natural functions, with the exception of impacts to individual wetlands/waters covering 0.1 acre or less total area, which may be impacted without mitigation required and;

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2. The location of natural features and the site's topography have been considered in the designing and siting of all physical improvements, and it has been determined that impacts to wetlands, waters, and buffers cannot be avoided and;
  3. Adequate assurances have been received that the clearing of the site of topsoil, trees, and other natural features will not occur before the commencement of building operations; only those areas approved for the placement of physical improvements may be cleared.
- d. The following existing developments are generally considered to be exempt from wetland provisions of this Ordinance. However, the Chief Subdivision Engineer reserves the right on a case-by-case basis to determine that a particular waterbody within these categories of waters is a regulated Isolated Waters of Will County.
1. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Clean Water Act (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition).
  2. Drainage and irrigation ditches excavated on dry land.
  3. Artificially irrigated areas that would revert to upland if the irrigation ceased.
  4. Artificial lakes created by excavating and/or berming dry land to collect and retain water and which are used exclusively for such purposes as stormwater storage, stock watering, irrigation, or settling basins.
  5. Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or berming dry land to retain water for primarily aesthetic reasons.
  6. Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters.
- e. There shall be no development, including clearing or removal of natural ground cover and/or trees, within Isolated Waters of Will County or Waters of the U.S. for any purpose, unless a permit is granted subject to the provisions of this ordinance.
- f. This ordinance is not intended to preclude the removal of vegetation (e.g., removal of exotic species or selective thinning in order to increase sunlight penetration) as part of a management program for maintenance and restoration of natural areas.
- g. The Will County Land Use Department may limit development activity in or near a wetland, water's or buffer to specific months, and to a maximum number of continuous days or hours, in order to minimize adverse impacts. Also, the Will County Land Use Department may require that equipment be operated from only one side of a stream, lake, or pond in order to minimize bank disruption. Other development techniques, conditions, and restrictions may be required in order to minimize adverse impacts on any related areas not subject to development activity.

#### 407.2 Requirements for Wetland Delineation

A Wetland Delineation Report shall be submitted along with a Site Development Permit Application for any activities that may impact wetlands, Waters of the U.S., Waters of Will County, or their associated buffers.

- a. The 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 Qualified Wetland Professional using an on-site wetland procedure within three (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.

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- b. The following are minimum requirements for the Wetland Determination Report:
1. A plan showing the exact location of wetlands within the development boundaries. The wetland boundary shall be flagged in the field and surveyed, and the boundary of the wetland plotted on a plat of survey,
  2. An aerial photograph delineating the wetland and the development boundary;
  3. A copy of the following maps (most recent) delineating the development boundary:
    - i. U.S.G.S. quadrangle map;
    - ii. NRCS (Natural Resources Conservation Service) wetland map;
    - iii. National Wetland Inventory map
    - iv. FEMA floodplain map;
    - v. Will County soil survey; and,
    - vi. Hydrologic Atlas.
  4. U. S. Army Corps of Engineers data sheets with representative color photographs provided for each data point;
  5. A written description of the wetland(s), the delineation report, including farmed wetland determinations, prepared in conformance with current Corps of Engineers requirements or Food Security Act provisions, and the following growing season and boundary confirmation requirements.
    - a. The growing season for the purposes of a final wetland delineation that will be made part of an application package will generally be between April 15<sup>th</sup> and October 31<sup>st</sup> each year, provided the ground is neither frozen to the point that soil probes or pits cannot be completed or there is any snow cover present. If the weather has been unusually warm or cold at the beginning or end of the growing season, the Chief Subdivision Engineer may shorten or lengthen these periods based on his/her discretion.
    - b. The approximate location, extent, and relative quality of off-site wetlands on properties adjoining the development shall be identified by using the first of the following documents or procedures pertaining at the time of development:
      - i. Site-specific delineation according to the 1987 Federal wetland delineation manual.
      - ii. If a site-specific delineation is not available, use most current NRCS wetland maps.
      - iii. National Wetland Inventory (NWI) map.
    - c. A Floristic Quality Assessment along with a statement regarding whether or not the site contains High Quality Aquatic Resources (HQAR).
    - d. Documentation that the development is in compliance with the Illinois Department of Natural Resources Endangered Species Consultation Program and the Illinois Natural Areas Preservation Act.
    - e. Documentation that the development is in compliance with the US Fish and Wildlife Service's consultation program under the Endangered Species Act.
    - f. Wetland/waters delineation plan view drawing that includes the proposed site development plan, with the existing conditions and topography overlain with the following:

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- i. All onsite wetland and waters areas
- ii. All required buffer areas
- iii. All proposed wetland, waters, and buffer impact areas.
- iv. If applicable, identification of where buffer averaging is proposed, including calculation of the impact and replacement area.
- v. A table listing the acreages of all wetlands, waters, buffers and buffer averaged areas.

### 407.3 Requirements for Buffer Areas

Buffer areas shall be required for all areas defined as either Waters of the United States or Isolated Waters of Will County. Buffer areas are divided into two types, linear buffers and water body buffers. Buffers required by Army Corps of Engineers for wetland impacts under their jurisdiction will be considered as compliant with this Section's requirements.

- 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 Will County. The buffer width shall be determined as follows:
  1. When the channel has a watershed less than one square mile, the minimum buffer shall be 50 feet on each side of the channel.
  2. When the channel has a watershed greater than one square mile, the minimum buffer shall be 75 feet on each side of the channel.
  3. Linear HQAR and streams shall have a minimum buffer width of 100 feet on each side of the channel.
- 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 Will County. The buffers width shall be determined as follows:
  1. For all water bodies or wetlands with a total surface area greater than one tenth (1/10) acre but less than 1 acre, a minimum buffer width of thirty (30) feet shall be established.
  2. For all water bodies or wetlands with a total surface area greater than one (1) acre but less than two and one-half (2 ½) acres, a minimum buffer width of forty (40) feet shall be established.
  3. 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.
  4. Non-linear HQAR shall have a minimum buffer width of one hundred (100) feet.
- c. In areas where state or federal threatened and endangered species are present or for an Illinois Natural Area Inventory Site, buffer widths may be modified upon approval of the Chief Subdivision Engineer. Any modification requires approval by the Chief Subdivision Engineer following consultation with the Illinois Department of Natural Resources or United States Fish and Wildlife Service.
- d. Buffer areas for water bodies meeting the definition of Waters of the United States or Isolated Waters of Will County shall extend from the ordinary high water mark. Buffer areas for wetlands 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 Will County on another property. On site verification of the off site wetland or waters limit is preferred. When an on site determination is not possible, the limit should be determined through review and annotation of aerial photo mapping which must be provided with the wetland delineation report or permit application package.

## ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

- e. Features of the stormwater management system approved by the County may be within the outer fifty (50) percent of the buffer area of the development.
- f. Access through buffer areas shall be provided, when necessary, for maintenance purposes.
- g. All existing roadside ditches, improvement to existing public road and trail developments or alignments, and utility projects that are located in a public right of way are exempt from buffer requirements.
- h. Stormwater discharges that enter a buffer shall have appropriate energy dissipation measures to prevent erosion and scour.
- i. 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:
  - 1. Trails and bike/pedestrian paths may encroach provided: they are no wider than twelve (12) feet; no closer than ten (10) feet from the edge of the wetland; and runoff from such facilities is unconcentrated flow.
  - 2. Utility installation or maintenance, construction of stormwater facilities and maintenance of stormwater facilities shall be allowed.
  - 3. Boat docks, boathouses and piers shall be allowed and the provisions of Section 407.3.1 shall apply.
- j. Buffer areas disturbed by construction or as part of a revegetation plan shall be revegetated using Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, NRCS, et al., (as amended) as a minimum standard. Performance standards for the required revegetation will at a minimum require at least one year of monitoring with at least 90% cover for non-aquatic vegetative zones within one year of planting.
- k. Buffer Averaging: If a Corps of Engineers buffer is not required, the buffer width for a development site may be decreased to a minimum of ½ of the buffer width required, upon approval of the Chief Subdivision Engineer, provided that the new buffer limit is delineated by a path, fence, or permanent signage and that the lost buffer area is made up elsewhere along the same wetland perimeter. The consultation process of IDNR or U.S. Fish & Wildlife Service may override the ability to average buffer areas.
- l. Preservation of buffer areas shall be provided by deed or plat restrictions.

### 407.4 Buffer Area Permitted Activities

- a. Minor improvements such as walkways, benches, comfort stations, informational displays, directional signs, footbridges, observation decks, and docks.
- b. Walkways and observation decks may encroach provided that they are no wider than twelve feet (12) and that the runoff from such surfaces enters the buffer area as unconcentrated flow. These items shall avoid high quality wetland areas, and shall not adversely affect natural areas designated in the Illinois Natural Areas Inventory or the habitat of rare or endangered species.
- c. Only limited filling and excavating necessary for the development of public boat launching ramps, swimming beaches, or the development of park shelters or similar structures is allowed. The development and maintenance of roads, parking lots and other impervious surfaces necessary for permitted uses are allowed only on a very limited basis, and where no alternate location outside of the setback area is available.

#### ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

- d. The maintenance, repair, replacement, and reconstruction of existing structures.
- e. The establishment and development of public and private parks and recreation areas, outdoor education areas, historic natural and scientific areas, game refuges, fish and wildlife improvement projects, game bird and animal farms, wildlife preserves and public boat launching ramps.
- f. A buffer area may be used for passive recreation (eg., bird watching, walking, jogging, bicycling, horseback riding, and picnicking) and it may contain pedestrian, bicycle or equestrian trails provided that impervious surfaces are no wider than twelve (12) feet and that the runoff from such areas enters the buffer area as unconcentrated flow.
- g. Utility maintenance and maintenance of stormwater facilities shall be allowed.
- h. Boat docks, boathouses and piers shall be allowed and the provisions of Section 407.3.c shall apply.

#### 407.5 Mitigation

Mitigation is required for all impacts to wetlands greater than 0.1 acre of Isolated Waters of Will County that are High-Quality Aquatic Resources (HQAR). Mitigation is required for all impacts to wetlands that are greater than 0.25 acre of Isolated Waters of Will County that are not High-Quality Aquatic Resources. Mitigation required by Army Corps of Engineers for wetland impacts under their jurisdiction will be considered as compliant with this Section's requirements. Requirements for mitigation are as follows:

- a. All mitigation shall occur in Will County. Mitigation shall use the following hierarchy; with on-site mitigation preferred. Allowance to the next lower step is permitted only when justified through sequencing specified or when the higher step is not available:
  - 1. On-site wetland mitigation meeting the requirements of this Ordinance;
  - 2. In the same watershed as wetland impact in a Will County approved Wetland Mitigation Bank,
  - 3. Will County Forest Preserve District Wetland Restoration Funds. This mitigation option may only be used for wetland impacts where there are no available mitigation credits within the County.
  - 4. A U.S. Army Corps of Engineers approved Wetland Mitigation Bank.
- b. Mitigation shall provide for the replacement of the lost wetland environment at the following ratios (creation acreage to wetland impact acreage):
  - 1. A minimum of 1.5:1 for impacts to non-HQAR wetlands.
  - 2. A minimum of 3:1 for impacts to HQAR wetlands
  - 3. A minimum of 6:1 for impacts to Forested or Fen HQAR wetlands
  - 4. A minimum of 1:1 for impacts to open waters that are not HQAR
- c. Mitigated Isolated Waters of Will County shall be designed to duplicate or improve the hydrologic and biologic features of the original wetland impact area.
- d. The mitigation plan shall include the proposed grading plan, planting plan, and specifications. It shall also include a wetland mitigation management and monitoring plan indicating the legally responsible parties for long-term operation and maintenance and dedicated funding sources.

#### ARTICLE 4: PROTECTION OF SPECIAL MANAGEMENT AREAS

- e. A Project Mitigation Document shall be submitted in conformance with the latest version of the Chicago District Corps of Engineers Mitigation Guidelines and Requirements.
- f. Creation of wetlands for the mitigation of wetland impacts shall not take place within detention facilities.
- g. A 5-year period of management, maintenance and monitoring program will be required. The proposed management, maintenance and monitoring plan text should generally follow the standards of the Chicago District Corps of Engineers.
- h. A five-year wetland monitoring and maintenance guarantee for 125% of monitoring and maintenance cost estimate shall be submitted prior to obtaining a permit. The guarantee shall be in accordance with Article 12 and shall include costs for construction, monitoring, and management activities during the 5-year monitoring period.
- i. Long-term ownership and funding must be identified. A long-term management plan must be submitted that guides the long-term owner/manager in the proper care of the area. This plan's operation would commence following the required initial maintenance and monitoring period.
- j. Onsite mitigation is preferred when the cumulative area of mitigation and preserved wetlands exceeds 1.5 acres.
- k. If the proposed mitigation area is less than 1.5 acres it is preferred that wetland mitigation banks be used, unless the developer can provide assurances that the area will be successful and will receive a high level of care in perpetuity.
- l. Mitigation areas shall have the same buffer requirements as existing wetlands and waters.
- m. The developer shall provide the Chief Subdivision Engineer annual monitoring reports prepared by a Qualified Wetland Professional on the status of the constructed mitigation measures for five years from date of completion of the mitigation project. The developer shall undertake all necessary remedial action to bring the area into compliance with the wetland mitigation plan.
- n. Where a proposed development activity is less than one (1) acre in area or the development consists of a single family residence, the Land Use Department, upon approval of the Chief Subdivision Engineer, may simplify the submission requirements of the above section provided that the person responsible for any such development shall implement necessary erosion control measures to satisfy the purpose and intent set forth in Article 3 of this Ordinance.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

**Sec. 500            General Requirements**

**500.1    Site Development Permit and Other Permits Required**

Except as otherwise provided in this Ordinance, no person shall commence or perform any clearing, grading, stripping, excavating, or filling of land without having first obtained a Site Development Permit from the Development Review Division of the Will County Land Use Department. Failure to obtain a site development permit is a violation of this Ordinance.

- a.        A Site Development Permit shall not be required for any one of the following construction activities unless the property is located in a floodplain, if there is regulatory floodplain within the property boundary, or if the development impacts a wetland and associated buffer or an existing stormwater drainage system:
1.        Clearing, grading, stripping, excavation, or filling associated with the construction of a single-family residence or an addition to an existing single-family residence on a site equal to or greater than five (5) acres.
  2.        Clearing, grading, stripping, excavating, or filling associated with the construction of an addition to an existing residential building or construction of a single-family accessory structure on a site equal to or greater than two and one-half (2.5) acres provided that the proposed structure is equal to or less than three thousand (3,000) square feet in area.
  3.        Clearing, grading, stripping, excavating, or filling associated with the construction of an addition to an existing residential building or the construction of a single-family residential accessory structure on a site less than 2.5 acres if the footprint of either is equal to or less than one thousand (1,000) square feet in area.
  4.        Clearing, grading, stripping, excavating, or filling associated with the agricultural practices, including the implementation of conservation practices included in a farm conservation plan approved by the Will/South Cook Soil & Water Conservation District, and including the construction of structures used for agricultural purposes, provided the construction meets the requirements of Section 204.
  5.        Clearing, grading, stripping, excavating, or filling associated with the installation, renovation, or replacement of a septic system to serve an existing dwelling or structure.
  6.        Excavation, fill, or any combination thereof which is equal to or less than one hundred (100) cubic yards in volume on a site less than two and one-half (2.5) acres in size when structures are not involved and the proposed construction activity is not within twenty (20) feet of a property line.
  7.        Excavation, fill, or any combination thereof which is equal to or less than two hundred (200) cubic yards in volume on a site equal to or greater than two and one-half (2.5) acres when structures are not involved and the proposed construction activity is not within twenty (20) feet of a property line.
  8.        Removal of plant cover equal to or less than five thousand (5,000) square feet in an area when structures are not involved.
  9.        Driveways installed at existing grade on residential property that do not impact existing stormwater drainage systems.
  10.       Excavation or removal of vegetation in public utility easements for the purpose of installing or maintaining utilities; or
  11.       Excavation or removal of vegetation in a right-of-way for the purpose of installing or maintaining utilities, including storm sewers; or

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

12. Maintenance of an existing stormwater facility, not requiring other state or federal permits or approvals.
- b. A Site Development Permit is required for all development that is located in the regulatory floodplain, requires stormwater detention facilities and/or stormwater management system per Section 200.2, which do not meet the exemptions of Section 200.3 of this Ordinance.
- c. A Site Development Permit is required for any development that:
  1. Creates a wetland impact within an area defined as Waters of the U.S.; or
  2. Creates a wetland impact within an area defined as Isolated Waters of Will County; or
  3. Occurs in buffer areas adjoining Waters of the U.S. or Isolated Waters of Will County.

All development shall secure all appropriate Stormwater Management related approvals, including, without limitation, an IDNR-OWR Floodway/Floodplain Construction permit, a ACOE 404 permit and an IDNR-OWR Dam Safety permit if required, from all Federal, State and Regional authorities and other appropriate Federal, State, and Regional approvals prior to the issuance of a Site Development Permit for areas of a site requiring such other approvals.

500.2 Permit Review Fees

All permit fees shall be paid at the time of permit issuance. Permit fees are established by the County Board. Fees may include, but are not limited to, the cost of permit administration, review and inspections prior to construction, during construction and within the permanent cover establishment period following construction. Refer to County Board Resolution No. 07-86, et seq., for fee schedule.

500.3 Professional Seals and Certifications Required

- a. The design of stormwater facilities, calculations for the determination of the regulatory floodplain, or calculations of the impacts of development shall meet the standards of this Ordinance and shall be prepared, signed, and sealed by a professional engineer registered in the State of Illinois. The professional engineer shall provide an opinion that the technical submittal meets the criteria required by this Ordinance or the applicable certified community ordinance; and
- b. For structures (not including earth embankments) that are subject to a differential water pressure greater than 3 feet the submittal shall include evidence that the subject design has been prepared by a qualified professional who shall, as a minimum, have registration with the State of Illinois as a Professional Engineer. Such reviews shall include stability of the structure under design conditions considering the protection of downstream life and property in the event of a failure. When directed by the Chief Subdivision Engineer the calculations submitted for such structures shall be reviewed, signed and sealed by a Registered Structural Engineer.
- c. For projects which include earth embankments which are subjected to a differential water pressure the submittal shall include evidence that the embankment design and construction specifications are adequate for the design conditions. This review shall include consideration of the existing foundation soils for the embankment, the materials from which the embankment is to be constructed, compaction requirements for the embankment and protection of the embankment from failure due to overtopping. Construction and materials specifications for all such embankments shall be included with the plan set submittal. When directed by the Chief Subdivision Engineer, or when the impounded water pressure differential exceeds three feet, or when appropriate considering the volume impounded and water surface elevation differential to which the embankment is subjected, these calculations may be required to be reviewed, signed and sealed by a qualified Geotechnical or Structural Engineer;
- d. A topographical map of the site, record drawings, and other required drawings shall be prepared, signed, and sealed by a Professional Land Surveyor or Professional Engineer and tied to NAVD 88 and any FEMA benchmarks.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

**Sec. 501 Duration and Revision to Permits**

501.1 Permit Expiration

Permits expire one year following the date of permit issuance or upon expiration of state or federal permits required for Stormwater Management.

501.2 Permit Extension

If the permitted activity has been started but is not completed by the expiration date of the permit, and the permittee intends to pursue the permitted activity, then the permittee may submit a written request that the expiration date be extended. Upon receipt of such request, the Chief Subdivision Engineer may extend the expiration date in one-year increments a maximum of 3 times for permitted activities outside regulatory floodplains and floodways. Expiration dates for permitted activities in regulatory floodplains and floodways may be extended in one-year increments a maximum of 3 times provided the activity is in compliance with the then current requirements of this Ordinance.

501.3 Permit Revision

If, after permit issuance, the permittee decides to revise the approved plans, the permittee shall submit revised plans to the Chief Subdivision Engineer along with a written request for approval. If the Chief Subdivision Engineer determines that the revised plans are in compliance with the then current requirements of this Ordinance or the applicable, an approval of the revised plans may be issued.

**Sec. 502 Required Submittals**

All permit submittals shall include the material listed in the Sections for the applicable type of development, unless the submittal requirements are specifically modified by the procedure in Section 502.1.

502.1 Modification of Submittal Requirements

The Chief Subdivision Engineer may, at his discretion, modify the submittal requirements on a case-by-case basis considering the size, complexity and likelihood that a development will affect the discharge of stormwater. Such modifications shall be requested and answered in writing. The Chief Subdivision Engineer's response shall note the relevant findings, and be specific as to what submittal requirements are changed. The Director shall be copied on all related correspondence. The Chief Subdivision Engineer may not modify submittal requirements for any aspect of the development requiring state or federal permits or approvals, nor for any application in which any variance is requested.

502.2 Application and Project Overview

The Applicant shall provide the following information as a minimum, on forms or in a format approved by the Chief Subdivision Engineer:

- a. The name and legal address of the owner(s) of the site and the permit applicant; and
- b. The common address, legal description, property identification number (PIN) of the site; and
- c. The name of the project, area of the site in acres, type of development; and
- d. A general narrative description of the development, existing and proposed conditions, and project planning principles considered, including Best Management Practices used; and

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

- e. Affidavits signed by the owner or the applicant's authorized representative attesting to their understanding of the requirements of this Ordinance and their intent to comply therewith; and
- f. A statement of opinion by a qualified person either denying or acknowledging the presence of floodplain on the development site; and
- g. Copies of other stormwater related permits or permit applications as required; and
- h. A subsurface drainage investigation report; and
- i. An engineer's estimate of probable construction cost of the stormwater facilities.

502.3 Plan Set Submittal

All applicants for a site development permit shall provide the following basic plan exhibits: Site Topographic Map, General Plan View Drawing, Sediment/Erosion Control Plan, and a Vicinity Topographic Map. Each exhibit may be on more than one drawing for clarity. The development plan and associated stormwater/floodplain calculations shall be submitted on a digital diskette in a format compatible with Will County's Geographic Information System (GIS). The specific information to be included on each exhibit shall be as noted below.

- a. Site Topographic Map meeting the following requirements shall be submitted:
  - 1. Map scales as 1 inch = 50 feet (or less) and accurate to +/- 0.5 feet; and
  - 2. Existing and proposed contours (one foot intervals) on-site and within 100 feet of site; and
  - 3. Existing and proposed drainage patterns and watershed boundaries; and
  - 4. Delineation of pre-development regulatory floodplain/floodway limits; and
  - 5. Delineation of post-development regulatory floodplain/floodway limits; and
  - 6. Location of cross-sections and any other hydrologic/hydraulic computer modeled features; and
  - 7. Location of all on-site drain tiles; and
  - 8. Boundary of all wetlands, lakes, ponds, etc. with normal water elevation noted; and
  - 9. Location of all existing buildings and those to remain on the site noted; and
  - 10. Nearest base flood elevations; and
  - 11. FEMA and any site-specific benchmarks (tied to County benchmarks) used; and
  - 12. Highlight all contours used in the calculation of depressional storage.
- b. General Plan View Drawing meeting the following requirements shall be submitted:
  - 1. Drawing at the same scale as the Site Topographic Map; and
  - 2. Existing major and minor stormwater systems; and
  - 3. Proposed major and minor stormwater systems; and

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

4. Design details for stormwater facilities (i.e. structure and outlet work detail drawings, etc.); and
  5. Scheduled maintenance program for permanent stormwater facilities including BMP measures; and
  6. Planned maintenance tasks and schedule; and
  7. Identification of entities responsible for maintenance; and
  8. Permanent public access maintenance easements granted or dedicated to, and accepted by, a government entity; and
  9. Proposed regulatory floodplain and floodway location (with the base flood and flood protection elevations noted); and
  10. Highlight all plan areas at elevations below the 100-year high water elevation of site runoff storage facilities.
- c. Sediment and Erosion Control Plan meeting the following requirements shall be submitted:
1. Drawings at the same scale as the Site Topographic Map; and
  2. Sediment/erosion control installation measures and schedule; and
  3. Existing and proposed roadways, structures, parking lots, driveways, sidewalks and other impervious surfaces; and
  4. Limits of clearing and grading; and
  5. Floodplain/floodway locations; and
  6. Proposed buffer location, existing soil types, vegetation and land cover conditions; and
  7. List of maintenance tasks and schedule for sediment/erosion control measures.
- d. Vicinity Topographic Map meeting the following requirements shall be submitted.
1. Vicinity topographic map identifying all off-site areas draining to the development and downstream to the receiving intermittent or perennial stream. (A 2' contour map is preferred at a scale readable by the reviewer but a USGS Quadrangle map is acceptable); and
  2. Watershed boundaries for areas draining through or from the development; and
  3. Soil types related to hydrologic soils group, vegetation and land cover affecting runoff upstream of the site for any area draining through the site; and
  4. Location of development site within the major watershed(s); and
  5. Show the overland flow path from the downstream end of the development to the receiving intermittent or perennial stream.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

502.4 Stormwater Submittal

The stormwater submittal shall include narrative discussion and calculations to support a finding that the proposed development complies with the technical requirements of the permitting authorities ordinance. The submittal shall consist of, at a minimum, the following material.

- a. A narrative description of the existing and proposed site drainage patterns and conditions. Include description of off-site conditions, which help to identify stormwater issues considered in the design.
- b. A schedule for implementation of the site stormwater plan.
- c. On-site and off-site runoff calculations which address the following:
  1. Documentation of the procedures/assumptions used to calculate hydrologic and hydraulic conditions (pre development and post development) for sizing major and minor systems; and
  2. Cross-section data for open channels; and
  3. Hydraulic grade line and water surface elevations under design flow conditions; and
  4. Hydraulic grade line and water surface elevations under base flood flow conditions.
- d. Site Runoff Storage Calculations, which address the following:
  1. Calculation of hydraulically connected impervious area and corresponding retention volume.
  2. Documentation of the procedures/assumptions used to calculate hydrologic and hydraulic conditions for determining the allowable release rate.
  3. Documentation of the procedures/assumptions used to calculate on-site depressional storage.
  4. Documentation of the procedures/assumptions used to calculate hydrologic and hydraulic conditions for determining the storage volume (on hard copy and on disc).
  5. Elevation-area-storage data and calculations for site runoff storage.
  6. Elevation-discharge data, and calculations specifically related to the outlet control structure depicted in the plan Exhibits.
  7. The General Plan View Drawing of Section 502.3(b) shall indicate the areas of directly connected impervious areas and any offsetting landscaped areas as defined in Section 203.5.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

502.5 Floodplain Submittal

The applicant shall obtain approval from IDNR-OWR and FEMA for all new base flood and floodway determinations for those cases in which their permitting authority applies or as noted in Section 401 of this Ordinance. The Site Development Permit will not be issued until such approval is received. Documentation supporting a finding that the proposed development is in compliance with Sections 400 and 401 shall be submitted with the application. At a minimum, the following material shall be submitted for approval with the application.

- a. Regulatory floodplain boundary determination:
  1. Provide source of flood profile information.
  2. Provide all hydrologic and hydraulic study information for site-specific floodplain studies, unnumbered Zone A area elevation determinations, and floodplain map revisions.
- b. Floodway hydrologic and hydraulic analyses for the following conditions:
  1. Existing conditions (land used and stream systems).
  2. Proposed conditions (land used and stream systems).
  3. Tabular summary of 100-year flood elevations and discharges for existing and proposed conditions.
  4. Calculations used for model development.
  5. Hydraulic/hydrologic computer model input/output.
- c. Floodplain fill and compensatory storage calculations for below and above 10-year flood elevation up to the base flood elevation:
  1. Tabular summary for below and above 10-year flood elevation of fill, compensatory storage, and compensatory storage ratios provided in proposed plan.
  2. Cross-sections used for the above calculations.
- d. Flood proofing Measures:
  1. Narrative discussion of flood proofing measures including material specifications, calculations, and design details, operation summary.
  2. Insure structures built on fill in or near Special Flood Hazard Areas are reasonably safe from flooding (see TB 10-01 published by FEMA).
- e. Flood Easements when required by this Ordinance.

502.6 Wetland Submittal Requirements

In addition to all other Site Development Permit requirements, wetland permit submittal requirements depend upon whether the development is within Waters of the U.S. or Isolated Waters of Will County as provided below. The applicant shall provide a statement of wetland determination as to which wetlands on the development site are Isolated Waters of Will County or Waters of the U.S. to the U.S. Army Corps of Engineers (Corps) for a jurisdictional determination. A copy of the jurisdictional determination shall be included with the wetland submittal.

- a. For Wetland impacts to Waters of the U.S. or Isolated Waters of Will County, the following information is required:
  1. Wetland delineation and wetland determination report.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

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 “Section 407.3 Buffer Area Requirements” of this ordinance.
4. A cover letter signed by a Qualified Wetland Professional, that provides a clear project purpose and need statement, a description of the proposed activity, area (in acres) of wetland and/or buffer impact;
5. Buffer area requirements as specified in this Ordinance;
6. A delineation of the wetlands consistent with the requirements provided “Requirements for Wetland Delineation” as requires in Section 407.2 of this ordinance, signed by a Qualified Wetland Professional;
7. A statement on the occurrence of any High Quality Aquatic Resource (HQAR) on or adjoining the development, signed by a Certified Wetland Specialist;
8. 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;
9. Documentation that the development is in compliance with the U.S. Fish and Wildlife Service’s consultation program under the Endangered Species Act;
10. A mitigation plan meeting the requirements of this Ordinance;
11. A discussion, hydrology calculations or other supporting information to document that on-site preserved wetlands and off site wetlands will not be impacted either from adverse changes in hydrology or pollutant/sediment loading or erosion.
12. A copy of the Natural Resources Information Report (NRI) for development that is required to obtain a NRI performed by the Will County Soil and Water Conservation District;
13. A narrative of the alternative measures taken to avoid, minimize, or mitigate for wetland impacts to Isolated Waters of Will County;
14. Shoreline and streambank erosion restoration that meet the requirements contained in Section 502.9 and Section 502.10 are exempt from submittal requirements contained in this section.

502.7 Permit Exceptions

The provisions of this ordinance shall not apply to:

- a. Emergency work necessary to preserve life or property; when emergency work is performed under this section, the person performing it shall report the pertinent facts relating to the work to the Will County Land Use Department within ten (10) working days after commencement of the work and shall thereafter obtain a site development permit and shall perform such work as may be determined by the agency to be reasonably necessary to correct any impairment to the watercourse, lake, pond, floodplain or wetland;
- b. Work consisting of the operation, repair, or maintenance of any lawful use of land existing on the date of adoption of this ordinance;

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

- c. Lands adjacent to farm ditches if:
  - 1. such lands are not adjacent to a natural stream or river; or
  - 2. those parts of such drainage ditches adjacent to such lands were not streams before ditching; or
  - 3. such lands are maintained in agricultural uses without buildings and structures.

Where farm ditches are found to contribute to adverse environmental impacts or hazards to persons or property, the Will County Land Use Department may request submittal of a Storm Water Management Application. The Will County Land Use Department may also require that linings, bulkheads, dikes and culverts be removed to mitigate hazards or that other mitigating measures be taken, such as the maintenance of a natural vegetation buffer strip.

502.8 Conditions and Restrictions for Permitting Stream Modification

Stream modification is subject to the following conditions and restrictions:

- a. water quality, habitat, and other natural functions must be improved by the modification;
- b. no HQAR habitat area may be destroyed, and
- c. all of the requirements of a Site Development Permit must be provided as well as the information required in Section 502.10 below.

502.9 Required Content of Stream Modification/Relocation Plan

Stream relocation may be permitted in accordance with a stream relocation plan that provides, to the extent possible, for:

- a. the creation of a natural meander pattern, pools, riffles, and substrate;
- b. the formation of gentle side slopes (at least three feet horizontally per one foot vertically), including installation of erosion control features;
- c. the utilization of natural materials wherever possible;
- d. the planting of vegetation normally associated with streams, including primarily native riparian vegetation that is capable of holding banks and soil in place;
- e. the creation of spawning and nesting areas where appropriate;
- f. the re-establishment of the native fish population where appropriate;
- g. the restoration of water flow characteristics compatible with native fauna habitat areas, where appropriate;
- h. the filling and revegetation of the prior channel;
- i. a proposed phasing plan, specifying time of year for all project phases;
- j. plans for sediment and erosion control; and
- k. establishment of a low-flow channel which reflects the conditions of a natural stream.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

502.10 Criteria for Permitting Armoring of Channels and Banks

Armoring in the form of bulkheads, riprap or other materials or devices is not permitted except in accordance with a Site Development Permit as well as the following:

- a. the use of revegetation and gradual bank slopes are practicable;
- b. significant erosion cannot be prevented in any other way;
- c. the bulkhead or other device is not placed within a wetland, or between a wetland and a lake or pond except where necessary to resolve a health, safety or welfare issue; and
- d. the bulkhead, riprap or other device will minimize the transmittal of wave energy or currents to other properties.

502.11 Criteria for Permitting the Use of Culverts

Culverts are not permitted in streams except in accordance with a Site Development Permit as well as the following:

- a. where a culvert is necessary for creating access to a property (use of culverts as a convenience, in order to facilitate general site design, is not to be considered);
- b. the culvert must allow passage of fish inhabiting the stream, and accommodate the 100-year flood event without increasing upstream flooding, except where a restricting culvert is desirable as part of an overall storm and floodwater management plan;
- c. the culvert must be maintained free of debris and sediment to allow free passage of water, and if applicable, fish; and
- d. the stream bottom should not be significantly widened for the placement of a culvert as this situation will likely increase erosion and downstream sedimentation; if multiple culverts must be installed, one culvert should be at the level of the bottom of the stream and the others at or above normal water elevation.

502.12 Stream Maintenance Easement

The applicant shall grant an access easement for stream maintenance purposes to Will County over a twenty-five feet wide strip adjacent to the stream bank except in the case where the property owner is another unit of government.

502.13 Effect on Other Permits

The issuance of a Site Development Permit under the provisions herein shall in no way affect the owner's responsibility to obtain the approval required by any other statute, ordinance, or regulation of any state agency or subdivision thereof, or to meet other Will County ordinances and regulations. Where state and/or federal permits are required, a Site Development Permit will not be issued until they are obtained.

**Sec. 503 Submittals Prior to Permit Issuance**

The following additional submittals are required prior to issuance of the Site Development Permit:

503.1 Performance Security

Performance security in accordance with Article 12 shall be required prior to permit issuance.

503.2 Maintenance Schedule and Funding

A completed maintenance schedule for the stormwater management facilities and special management areas in accordance with Article 6 shall be submitted along with identification of the entity responsible for maintenance and funding and back-up funding sources for maintenance in accordance with Section 605.

ARTICLE 5. SITE DEVELOPMENT PERMIT SUBMITTAL REQUIREMENTS.

**Sec. 504 Record Drawings**

The developer is required to submit record drawings of all permitted stormwater facilities. The record drawings shall be signed and sealed by a Professional Engineer or Professional Land Surveyor who shall state that the project as constructed is substantially in conformance with the project as permitted. The record drawings shall include calculations verifying that the volumes of detention and compensatory storage required in the permit have been provided.

- a. It is recommended that the “as built” volume calculations and record drawings for the detention and compensatory storage areas be submitted for approval by the Chief Subdivision Engineer prior to final grading and landscaping of the area.
- b. “As built” grading plan shall be submitted to the Chief Subdivision Engineer prior to issuance of final certificate of occupancy for a structure if a site grading plan was a requirement of the permit. This “as built” grading plan shall include sufficient specific actual land elevations to prove that the grading was constructed in accordance with the intent of the grading plan submitted for the building permit.
- c. In addition, an Elevation Certificate must be submitted for any construction built in a SFHA. The Chief Subdivision Engineer will review and maintain the completed elevation certificates showing the “finished construction” elevations for all buildings constructed or substantially improved in the SFHA, and copies of the elevation certificates will be available to the property owner, their agents, and FEMA.

**Sec. 505 Issuance or Denial of Permit and Appeal of Permit Denial**

The Chief Subdivision Engineer shall either issue or deny a Site Development permit within 30 days of receiving a complete Permit application and all required submittals and fees, unless additional time is granted by both the Chief Subdivision Engineer and the Applicant. When a permit is denied, the applicant may appeal the Chief Subdivision Engineer’s decision to the Land Use & Development Committee provided such appeal is made in writing within 15 days of the date of the notification of denial. The Land Use & Development Committee shall render a decision to issue the Site Development permit, issue the permit with conditions, or uphold the Chief Subdivision Engineer’s denial of the permit. The Land Use & Development Committee shall render ~~his~~ their decision within 30 days of the appeal. Failure to take action shall be deemed action to uphold the permit denial by the Chief Subdivision Engineer.

Upon denial by the Land Use & Development Committee, the applicant may file an appeal in writing within 15 days of the denial or decision or the Committee’s action to the County Board. This appeal shall be addressed to the County Executive with copies sent to the Chairman of the Land Use & Development Committee and to the Chief Subdivision Engineer.

ARTICLE 6 LONG TERM MAINTENANCE

**Sec. 600 Long-Term Maintenance**

Unless maintenance responsibility has been delegated to and accepted by another qualified entity under this section, the owner shall maintain that portion of a stormwater drainage system located upon his land. With the approval of the Chief Subdivision Engineer, the stormwater drainage system, or specified portions thereof, may be:

- a. Dedicated or otherwise transferred to and accepted by the County, Township, or other public entity; or
- b. Conveyed or otherwise transferred to and accepted by a homeowner's association, or similar entity, the members of which are to be the owners of all of the lots or parcels comprising the development; or
- c. Conveyed to one or more persons or in one or more undivided interests to one or more persons.

Except for those portions of a stormwater drainage system to be dedicated or otherwise transferred to the permitting authority or other public entity, included in the application for a site development permit shall be a plan for the long-term management, operation and maintenance of the stormwater drainage system and a description of the sources of funding therefore. Amendments to the plan must be approved by the Land Use and Development Committee.

**Sec. 601 Transfer to Permitting Authority or Other Public Entity**

If any portion of the stormwater drainage system is to be dedicated or otherwise transferred to the County, Township, or other public entity under Section 600(a), appropriate easements for ingress and egress to and maintenance of such portions shall be reserved for the benefit of such entity on the final plat.

**Sec. 602 Transfer to Homeowner's or Similar Association**

If any portion of the stormwater drainage system is to be conveyed or otherwise transferred to a homeowner's or similar association under Section 600(b) then:

- a. Appropriate easements for ingress and egress to and maintenance of such portions shall be reserved for the benefit of such association and the permitting authority on the final plat;
- b. The association shall be duly incorporated and a copy of the Certificate of Incorporation, duly recorded, and bylaws, and any amendment to either of them, shall be delivered to the Chief Subdivision Engineer;
- c. The bylaws of the association shall, at a minimum, contain:
  - 1. A provision acknowledging and accepting the association's obligation to maintain certain portions of the stormwater drainage system as required by this ordinance;
  - 2. A mechanism for imposing an assessment upon the owners of all of the lots or parcels comprising the development sufficient, at a minimum, to provide for the maintenance of those portions of the stormwater drainage system as required by this Ordinance and the payment of all taxes levied thereon;
  - 3. A provision adopting the plan of long term maintenance set forth in the application for a Site Development Permit, with approved amendments;
  - 4. A provision identifying the officer of the association responsible for carrying out the obligations imposed upon the association under this ordinance, and an obligation to inform the Chief Subdivision Engineer of the name, address and phone number of this officer and any changes thereto;

ARTICLE 6 LONG TERM MAINTENANCE

- 5. A provision requiring the consent of the permitting authority to any amendment of the bylaws changing any of the provisions of the bylaws required by this ordinance; and
  - 6. A provision requiring the consent of the permitting authority to the dissolution of the association
- d. Any conveyance or other instrument of transfer delivered under Section 600(b) shall include a covenant affirmatively imposing upon the association the obligations set forth in this section and the association's affirmative acceptance thereof.

**Sec. 603 Conveyance to One or More Persons**

If any portion of the stormwater drainage system is to be conveyed to one or more persons under Section 600(c), then:

- a. Appropriate easements for ingress and egress to and maintenance of such portions shall be reserved for the benefit of the permitting authority on the final plat;
- b. The final plat shall contain a legend imposing the maintenance obligations of this section upon the grantee and his successors in interest as a covenant running with the land and incorporating by reference the plan of long term maintenance set forth in the application for a Site Development Permit, with approved amendments;
- c. The final plat shall contain a legend reserving the right of the permitting authority to enter upon the land to perform the maintenance required in this section if the owner does not do so and to place a lien against the land for the cost thereof;
- d. Any conveyance delivered under Section 600(c), and any subsequent conveyance, shall include a covenant affirmatively imposing upon the grantee the obligations, restrictions and provisions set forth in this section and the grantee's affirmative acceptance thereof.

**Sec. 604 Incorporation of Maintenance Obligations in Site Development Permit**

The provisions of this Article shall be incorporated by reference in the Site Development Permit and the applicant's acceptance of the permit shall be deemed to be the applicant's acceptance and assumption of the obligations imposed under this section. At the option of the Chief Subdivision Engineer, the Site Development Permit may be recorded.

**Sec. 605 Funding of Long Term Maintenance of Stormwater Facilities**

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ARTICLE 7 ENFORCEMENT AND PENALTIES

**Sec. 700 Inspection and Maintenance Authority**

Pursuant to the authority granted by 55 ILCS 5/5-1104 and 5-1062, the County may, after ~~30~~ **10 (ten)** days notice to the owner or occupant, enter upon any lands or waters within the County for the purpose of inspecting and/or maintaining stormwater facilities or causing the removal of any obstruction to an affected watercourse.

**Sec. 701 Required Inspections**

Any development constructed pursuant to a Site Development Permit shall be subject to periodic inspections by the Chief Subdivision Engineer or their designee to ensure conformity with permit provisions and conditions.

**Sec. 702 Offenses**

Any person who violates, disobeys, omits, neglects, refuses to comply with, or resists the enforcement of any provision of this ordinance (“ordinance violation”) or any requirement or condition in any permit issued pursuant to this ordinance (“permit violation”), and, in the case of a permit violation, fails to correct such violation, omission or neglect, or cease such disobedience, refusal or resistance after notice and reinspection as provided in Sec. 702.1 below, shall be guilty of an offense under this ordinance.

**702.1 Permit Violation – Notice**

Whenever the Chief Subdivision Engineer determines that a permit violation exists, he shall give notice of the violation in the manner prescribed in Section 1006 to the permittee. Such notice shall state the nature of the violation and fix a date not less than 10 days after the date of the notice when the site will be reinspected.

**Sec. 703 Offenses – Penalties: Remedies**

- a. Any person found guilty of an offense under this ordinance shall pay a civil fine in an amount not less than \$25 and not more than \$1000. Each calendar day during which such violation continues to exist shall constitute a separate offense.
- b. In addition to any fine imposed under 703(1), the Chief Subdivision Engineer may revoke any Site Development Permit issued to such person.
- c. In addition to any fine imposed under Subsection 703(1) or action taken under Subsection 703(2), the Chief Subdivision Engineer may issue an order requiring the suspension of any further work on the site. Such stop-work order shall be in writing, shall indicate the reason for its issuance, and shall specify the action, if any, required to be taken in order to resume work. One copy of the stop-work order shall be posted on the site in a conspicuous place and one copy shall be delivered in the manner prescribed in Section 1006 to the permittee, if any, or if none, to the person in whose name the site was last assessed for taxes as disclosed by the records of the Supervisor of Assessments.
- d. In the enforcement of this ordinance, the Chief Subdivision Engineer may bring any action, legal or equitable, including an action for injunctive relief that may be necessary.
- e. Any person, firm, corporation or governmental body not exempted by state law that commences any clearing, grading, stripping, excavating, or filling of land without first obtaining a site development permit from the County shall be required to obtain an after the fact site development permit. Refer to County Board Resolution No. 07-86, et seq., for the after the fact site development permit fee.

ARTICLE 8 GENERAL PROVISIONS

**Sec. 800            Scope of Regulation**

This ordinance applies to all development within the unincorporated areas of Will County

**Sec. 801            Exemptions**

- a.        This Ordinance does not apply to development which has been substantially completed before the effective date of the Ordinance.
- b.        Nonconforming structures shall not be replaced or enlarged in any manner unless such replacement or enlargement conforms to the requirements of this ordinance.

**Sec. 802            Reserved**

**Sec. 803            Interpretation**

- a.        This ordinance shall be liberally construed to protect the health, welfare, safety, and the environment of the residents of the County and to effectuate the purposes of this ordinance and the enabling legislation.
- b.        Nothing in this ordinance shall be deemed to consent to, license, permit to locate, construct, or maintain any structure, site, facility or operation, or to carry on any trade, industry, occupation, or activity.
- c.        When provisions of this ordinance differ from any other applicable law, statute, ordinance, rule or regulation, the more stringent provision shall apply.
- d.        The provisions of this ordinance are cumulative of all other laws, statutes, ordinances, rules and regulations which relate to the subject matter hereof and, except as otherwise expressly provided herein, nothing in this ordinance shall be construed as a limitation upon the application or enforcement of any such law, statute, ordinance, rule or regulation. To the greatest extent possible, the provisions of this ordinance shall be construed to be consistent with the provisions of such other laws, statutes, ordinances, rules or regulations, and with each other, to the end that all such provisions may be given their fullest application.

**Sec. 804            Warning and disclaimer of liability**

- a.        The degree of flood protection provided by this ordinance is considered reasonable for regulatory purposes and is based upon engineering experience and scientific methods of study. Increased flooding may result from causes beyond the control of any governmental authority. This ordinance does not, therefore, guarantee that areas outside the floodplain or permitted land uses within the floodplain will be free from flooding and associated damages.
- b.        Nothing in this ordinance shall be construed or applied in any manner to create liability on the part of or a cause of action against the County, any municipality or other governmental authority, or any elected official, or any officer, agent, or employee of any of the foregoing, or any certified review specialist for any flood damage resulting from reliance on the provisions of this ordinance.

**Sec. 805            Reserved**

ARTICLE 8 GENERAL PROVISIONS

**Sec. 806           Violations**

- a.       It shall be unlawful for any person to undertake any development without first securing a Site Development Permit as required by this ordinance.
- b.       It shall be unlawful for any person to violate, disobey, omit, neglect and refuse to comply with, or resist enforcement of any provision of this ordinance or any condition of a § Site Development permit.

**Sec. 807           Severability**

The several provisions of this ordinance shall be severable in accordance with the following rules:

- a.       If any court of competent jurisdiction shall adjudge any provision of this ordinance to be invalid, such judgment shall not affect any other provision of this ordinance.
- b.       In any court of competent jurisdiction shall adjudge to be invalid the application of any provision of this ordinance, to a particular parcel of land, a particular structure, or a particular development, such judgment shall not affect the application of said provision to any other land, structure or development.

**Sec. 808           Amendments**

No amendment to this ordinance may be passed without a public hearing first being held before the Land Use & Zoning Committee of the Will County Board upon notice as provided in Section 1007.

**Sec. 809           Effective Date**

This Ordinance shall take effect for all purposes, and its effective date shall be June 17, 2010

ARTICLE 9 VARIANCES.

**Sec. 900 Purpose**

In order to provide a narrowly circumscribed means by which relief may be granted when strict compliance with the requirements of this ordinance is impossible or impracticable, variances from the specific provisions of this ordinance may be granted according to the standards set forth in this Article.

**Sec. 901 Application for Variance**

An application for a variance, signed by the owner or developer of the development to which it relates, shall be filed with the Chief Subdivision Engineer, who shall forward a copy of the application to the Planning and Zoning Commission for public hearing. The application shall be in such form, contain such information, and be accompanied by such plans as the Commission may by rule require. No application for a variance will be accepted for filing unless it relates to a previously or contemporaneously filed application for a site development permit. Applications for a variance shall be filed in such number of duplicate copies as the Commission may by rule require. No action will be taken on an application for a variance unless it and the corresponding application for a site development permit to which it relates are complete as determined by the Chief Subdivision Engineer.

An application for variance shall set forth:

1. The common addresses and legal descriptions of all lands comprising the development;
2. The names and addresses of all owners of record of the legal title of all lands comprising the development;
3. If title to any of the land comprising the development is held in trust, the names and addresses of all beneficiaries of the trust;
4. The names and addresses of the developers of the land, if different from the owner;
5. The names and addresses of all consultants retained by the developer in connection with the application for a variance;
6. The names and addresses of all property owners within 250 feet of the development;
7. The specific feature or features of the development that require a variance;
8. The specific provision of this ordinance from which a variance is sought and the precise extent of the variance there from;
9. A statement of the characteristics of the development that prevent compliance with the provisions of this ordinance;
10. A statement that the variance requested is the minimum variance necessary to permit the development;
11. A statement as to how the variance requested satisfies the standards set forth in Section 904 of this ordinance.

**901.1 Application and Notice of Hearing**

Not more than 30 nor less than 15 days before the hearing, notice of the hearing shall be sent, by the applicant, certified letter return receipt requested to the following: the Director, to all property owners within 250 feet of the development as disclosed in the application, and to each Certified Community within the same watershed as the development. Within the same time period, notice of the hearing shall be published at least once in a newspaper of general circulation in the County. The notices given under the section shall meet the requirements set forth in 55 ILCS 5/5-12009. The published notice may be supplemented by such additional form of notice as the Commission may provide by rule. The Commission may dismiss any application whenever the applicant fails to appear for a scheduled and advertised public hearing, or whenever the applicant fails at more than one meeting to provide the documentation necessary to demonstrate compliance with the notice requirements. No variation shall be made without first having posted a sign(s) on the property in accordance with the provision of Section 901.2.

ARTICLE 9 VARIANCES.

901.2 Sign Posting Requirements

The applicant shall be required to erect at least one sign for every five hundred (500) linear feet of street frontage with a minimum of one (1) sign on each street abutting the property in order to adequately inform the public. The applicant shall be responsible for ensuring that the sign(s) is/are placed and maintained as herein provided. Failure to properly post sign(s) shall be grounds for deferral or denial of the application. Sign(s) shall be posted upon the subject property at least fifteen (15) days prior and not more than thirty (30) days prior to the public hearing. The applicant shall be responsible for removing said sign(s) within five (5) days after completion of the public hearing. Should the applicant and/or his assigned agent refuse or fail to remove such sign or signs as herein provided, the Land Use Department shall cause said sign(s) to be removed and shall bill the applicant for the cost of said removal. The applicant shall provide a sworn certification to the Planning and Zoning Commission Secretary that such notice was posted upon the subject property prior to the public hearing. The Chief Subdivision Engineer, or his/her designee, may vary the provisions of this Section when these provisions are found inappropriate under the circumstances to provide the intended notice. This discretion shall rest solely with the Chief Subdivision Engineer, or his/her designee, and not with the applicant; shall include, but not limited to, sign content, format, size, material, quantity, and location; notwithstanding the exercise of this discretion, the minimum requirements provided in this Section shall be satisfied. All expenses incurred to fulfill the requirements of this Section shall be the responsibility of the applicant.

**Sec. 902            Application Fee**

With the filing of the application for a variance, the applicant shall pay the fee prescribed by a separate act of the Will County Board.

**Sec. 903            Public Hearing**

A public hearing for the variance shall be held by the Planning and Zoning Commission within 90 days after its filing.

**Sec. 904            Granting of Variances**

904.1 A variance from the provisions of this ordinance shall not be granted unless the variance is consistent with the purpose of this Ordinance (Section 102) and meets the following standards based upon substantial evidence submitted at the hearing:

- a. The variance will not increase measurably the probability of flood damage to insurable structures.
- b. The variance requested is the minimum required considering each of the following statements of underlying intent of this ordinance and there are no means other than the requested variance by which the alleged hardships can be avoided or remedied to a degree sufficient to permit the reasonable continuation of the development:
  1. Detention of stormwater shall also contribute to the improvement of the quality of stormwater runoff.
  2. The volume of detention storage provided in open air vegetated facilities is maximized consistent with other land use site constraints including zoning requirements essential for the proposed development.
  3. Conveyance of stormwater from the project shall not increase peak discharges from existing offsite conveyance facilities beyond design capacity for any storm event from the 2-year to the 100-year flood frequency.

ARTICLE 9 VARIANCES.

4. High quality natural areas shall be preserved on the site, including but not limited to, wetlands, woodlands, natural floodplain storage, and other valuable environmental and biological resources, as determined by the Chief Subdivision Engineer.
5. The variance is not requested solely for the purpose of increasing the density of the development nor impervious areas on the site.
6. The variance is not requested solely as a result of economic hardship.
7. If applicable, the variance is required due to unique, natural topographical features of the site.
8. The applicant's circumstances are not self-imposed.

904.2 No variance shall be granted for any development in the regulatory floodway, the effect of which would be to create regulation less restrictive than the federal or state minimum standards applicable to development in such areas.

904.3 When a variance would lessen the degree of flood surface runoff protection to any structure, the Chief Subdivision Engineer shall notify the applicant that the variance, if granted, may result in increased rates for flood insurance.

**Sec. 905 Recommendations**

905.1 The Chief Subdivision Engineer or his or her designee shall review the application for a variance and present his or her written recommendations to the Land Use & Development Committee at the public hearing.

905.2 Not more than 45 days after the close of the hearing, the Planning and Zoning Commission shall forward its written recommendations to the Land Use & Development Committee or its successor. The written recommendations of the Planning and Zoning Commission, when forwarded, shall be accompanied by written findings of fact with respect to each of the considerations set forth in Section 904 with citations to the evidence taken at the public hearing.

**Sec. 906 Decision**

The County Board shall grant the variation, grant the variation with modifications or conditions, or deny the variation in writing within 45 days after receipt of the written request for variance, but in the event the County Board does not act as aforesaid then the application is denied.

**Sec. 907 Conditions**

907.1 A variance less than or different from that requested may be granted when the record supports the applicant's right to some relief, but not to the relief requested.

907.2 In granting a variance, the County Board may impose such specific conditions and limitations concerning any matter relating to the purposes and objectives of this ordinance on the applicant as may be necessary or appropriate.

907.3 Whenever any variance is granted subject to any condition or limitation to be met by the applicant, upon meeting such conditions, the applicant shall file evidence to that effect with the Chief Subdivision Engineer.

ARTICLE 9 VARIANCES.

**Sec. 908 Building Permits and Site Development Permits**

No building or structure shall be erected, constructed, reconstructed, enlarged, moved, or structurally altered, nor shall any excavation or grading commence without a building permit, site development permit, or other appropriate permit. No building permit, and no other permit pertaining to other use of land, buildings or structures, shall be issued by employees of the county unless the proposed use thereof complies with all the provisions of this Ordinance, nor shall any such permit be issued unless the application for such permit has certification thereon under oath by the Chief Subdivision Engineer that the proposed use is in compliance with the provisions of this Ordinance. Any permit issued in conflict with the provisions of this Ordinance shall be void.

**Sec. 909 Effective Period**

No order of the County Board granting a variation shall be valid for a period longer than one (1) year from the date of such order unless a building permit or site development permit is obtained within such period and the erection or alteration of a building, any excavation or grading, is started or the use is commenced within such period. The board may grant an extension of this period, valid for no more than one hundred and eighty (180) additional days, upon written application and good cause shown, without notice or hearing. The Board may grant one (1) additional extension of this period, valid for no more than one hundred eighty (180) additional days, upon written application within the initial extension and upon good cause shown without notice or hearing. If any of the benefits conferred by any variation, whether heretofore or hereafter granted, are abandoned, or are not utilized for any continuous period of one (1) year, said variation shall, to the extent of such abandonment or non-utilization, become invalid after a public hearing as provided for herein.

**Sec 910 Reversion**

910.1 Scope of Authority:

A variance shall be reverted or revoked as provided in this Section if the testimony upon which such variance was falsely given.

910.2 Initiation

Reversions may be proposed by the County Board, Planning and Zoning Commission, or by any person aggrieved by a variance from this ordinance.

910.3 Processing

The process for reverting a variance shall be as follows:

1. An application for a reversion shall be filed with the Chief Subdivision Engineer. and shall be in such form, contain such information, and be accompanied by such plans as the Planning and Zoning Commission by rule may require.
2. A copy of such application shall thereafter be forwarded by the Chief Subdivision Engineer to the Planning and Zoning Commission with a request to hold a public hearing.

ARTICLE 9 VARIANCES.

3. The Planning and Zoning Commission shall hold a public hearing within ninety (90) days after receiving the application from the Chief Subdivision Engineer. Notice of the time and place of such hearing shall be published at least once, not less than fifteen (15) days before the hearing in a newspaper of general circulation in the County. A copy of the notice of public hearing shall be mailed to the Clerk of each municipality within the same watershed where the variance was granted. Copy of such notice shall be mailed by registered letter to the current interest holders of the land as found on the last tax assessment.
4. The Planning and Zoning Commission shall within sixty (60) days after the hearing transmit a written report giving its findings and recommendations to the County Board.

910.4 Decision

The County Board, upon recommendation of the Planning and Zoning Commission, may grant or deny any proposed reversion or may refer it back to the Planning and Zoning Commission for further consideration.

910.5 Permits Affected by Reversion

When a reversion action has been initiated, no building permit or site development permits for the site shall be issued, until the Will County Board has decided the matter of the reversion.

ARTICLE 10. ADMINISTRATION.

**Sec. 1000      Responsibility for Administration**

- a.      The County Board shall determine policy related to this ordinance.
- b.      The Chief Subdivision Engineer shall administer this ordinance. In performing his/her duties, the Chief Subdivision Engineer may delegate and oversee enforcement of responsibilities to any named designee.
- c.      Will County shall remain solely responsible for unincorporated Will County's standing in the National Flood Insurance Program, including:
  1.      The maintenance of all records and the submission of all reports required for eligibility in the program, including elevation certificates, flood proofing certificates, and lowest floor elevations; and
  2.      The notification of the Director of the Will County Stormwater Management Committee, FEMA and IDNR-OWR of any proposed amendment to this ordinance.

**Sec. 1001      Duties of County Executive**

The County Executive shall:

- a.      Supervise the enforcement of this ordinance;

**Sec. 1002      Duties of Chief Subdivision Engineer**

The Chief Subdivision Engineer shall:

- a.      Receive a listing of all required federal, state, regional and County permit applications filed for the project prior to issuing a permit under this ordinance for areas covered by other stormwater related jurisdictions. The Chief Subdivision Engineer may request copies of the stormwater related permit applications;
- b.      Ascertain whether any floodplains/floodways exist on any site that is the subject of an application for a permit under this ordinance and whether or not any new development is within the SFHA;
- c.      Review permit applications and determine whether to issue or deny permits;
- d.      Ensure that the required notice of an application for a variance has been given in accordance with Section **903**, 1006 and 1007;
- e.      Notify an applicant for a variance that such variance may result in increased rates for flood insurance;
- f.      Notify the Director of an application for a variance;
- g.      Provide for inspections of developments as required by this ordinance;
- h.      Investigate complaints of violations of this ordinance;
- i.      Notify violators within regulatory floodplains that failure to comply with the provisions of the National Flood Insurance Program could make them ineligible to receive flood insurance;
- j.      Initiate any proceeding necessary to enforce this ordinance;
- k.      Advise, consult and cooperate with other governmental agencies to promote the purposes of this ordinance;

ARTICLE 10. ADMINISTRATION.

- l. Maintain copies of all applications and submittals, federal and state permits, variances, CLOMR, LOMR, CLOMA, LOMA and all documentation associated with any of the foregoing for public inspection;
- m. Maintain documentation and data on the cost of any improvement to a structure in the floodplain in order to enforce the provisions of this ordinance pertaining to substantial improvements to such structures;
- n. Notify adjacent communities in writing 30 days prior to issuing a permit for the alteration or relocation of a watercourse.

**Sec. 1003 Representative Capacity**

In all cases when any action is taken by the Chief Subdivision Engineer or his or her duly appointed designee, to enforce the provisions of this ordinance, such action shall be taken either in the name of the County and neither the Chief Subdivision Engineer nor his or her designee, in so acting shall be rendered personally liable.

**Sec. 1004 Oversight Committee**

The Land Use & Development Committee shall act as the oversight committee for the County.

**Sec. 1005 Planning and Zoning Commission**

Unless otherwise stated herein, the Planning and Zoning Commission's creation, membership, meetings and rules, and its finality of decisions shall follow Section 14.4 of the Will County Zoning Ordinance.

1005.1 Jurisdiction

The Planning and Zoning Commission is hereby vested with the following jurisdiction and authority:

- 1. To hear appeals from any order, requirement, decision or determination made by the Chief Subdivision Engineer under this Ordinance.
- 2. To hear and pass upon application for variations from the terms provided in this Ordinance in the manner prescribed by, and subject to, the standards established herein.
- 3. To hear and make recommendations to the County Board on all matters as is required under this comprehensive amendment as prescribed by statute.

**Sec. 1006 Service**

Unless otherwise provided herein, service of any notice or instrument under this ordinance may be made upon any person in one of the following manners:

- a. By Certified Mail/Return Receipt Requested, Postage prepaid & addressed to the address then on file for such person, if any, or if none, to such person's last known address; or
- b. By any method prescribed under the Illinois Code of Civil Procedure.

**Sec. 1007 Publication**

Unless otherwise provided herein, publication of any notice or other instrument under this ordinance shall be made by publishing such notice or other instrument once in a newspaper published within the County having a general circulation within the County, such publication being not less than fifteen or more than thirty days before the hearing or other event to which the publication relates.

ARTICLE 11

**RESERVED**

## ARTICLE 12 PERFORMANCE SECURITY

### **Sec. 1200      General Security Requirements**

- 1200.1 As security to the County for the performance by the developer of the developer's obligations to complete the construction of any stormwater facilities required by the Site Development Permit, to pay all costs, fees and charges due from the developer pursuant to the permitting authorities of this Ordinance and to otherwise faithfully perform the developer's undertakings pursuant to this Ordinance the developer shall, prior to issuance of a Site Development Permit:
- a. Post a development security as provided in Section 1201 of this Ordinance; and
  - b. Post a sediment and erosion control security as provided in Section 1202 of this Ordinance, if a sediment and erosion control plan is required pursuant to Section 502 of this Ordinance.
  - c. Post a maintenance and monitoring security for wetland mitigation (see Section 407).
  - d. A single letter of credit may be provided combining a & b above if approved by the Chief Subdivision Engineer.
- 1200.2 The developer shall bear the full cost and responsibility of securing and maintaining the securities required by this Section.
- 1200.3 Exemptions  
A development security shall not be required for any of the following developments unless the Chief Subdivision Engineer deems one necessary for the project:
- a. Developments on individual parcels that are associated with a single family residence, including but not limited to homes, additions, decks, sheds, and swimming pools.
  - b. Agricultural practices applicable under Section 204 of this Ordinance.

### **Sec. 1201      Development Security**

- 1201.1 A development security shall be posted and shall include:
- a. A schedule, agreed upon by the developer and the Chief Subdivision Engineer, for the completion of the construction of any stormwater facilities required by the permit; and
  - b. An irrevocable letter of credit, or cash deposit as the Chief Subdivision Engineer may approve, in an amount equal to not less than one hundred twenty-five percent (~~110~~ 125%) of the estimated probable cost to complete the construction of any stormwater facilities required by the Development Permit, which estimated probable cost shall be prepared by a Registered Professional Engineer and shall be approved by the Chief Subdivision Engineer. A corporation with a bond rating of "A" or higher from a major investment firm (i.e. Standard and Poor, Moody, or equivalent) would be deemed to have adequate credit worthiness and is not required to post a Letter of Credit for projects that are not required to be located in public easements; and
  - c. A statement signed by the applicant granting the Chief Subdivision Engineer the right to draw on the security and the right to enter the development site to complete required work in the event that work is not completed according to the work schedule; and
  - d. A statement signed by the applicant that the applicant shall indemnify the and the Department for any additional costs incurred attributable to the concurrent activities of or conflicts between the applicant's contractor and the Department's remedial contractor at the site.
- 1201.2 The security required by this Section shall be maintained and renewed by the applicant, and shall be held in escrow by the Chief Subdivision Engineer until the conditions set forth in this Section or other applicable provisions are satisfied.

## ARTICLE 12 PERFORMANCE SECURITY

1201.3 The Chief Subdivision Engineer may approve periodic reductions in the letter of credit based on progress of construction. However, not more than 75% of the security provided for in this section may be released prior to approval of record drawings and final inspection. A minimum of twenty-five percent (25%) or \$3,000, whichever is greater, of the security shall be retained for a period of time not to exceed two years after completion of construction of all stormwater facilities required by the permit.

### **Sec. 1202 Sediment and Erosion Control Security**

1202.1 If a sediment and erosion control plan is required pursuant to Section 502 of this Ordinance, then a sediment and erosion control security shall be required. Such a security shall include:

- a. An irrevocable letter of credit, or cash deposit as the Chief Subdivision Engineer shall approve, in an amount equal to not less than one hundred twenty-five percent (125%) of the estimated probable cost to install and maintain the sediment and erosion control measures, which estimated probable cost shall be approved by the Chief Subdivision Engineer. A corporation with a bond rating of "A" or higher from a major investment firm (i.e. Standard and Poor, Moody, or equivalent) would be deemed to have adequate credit worthiness and is not required to post a Letter of Credit for projects that are not required to be located in public easements; and
- b. A statement signed by the applicant granting the Chief Subdivision Engineer the right to draw on the security and the right to enter the development site to complete sediment and erosion control measures in the event that such measures are not installed and/or maintained according to the established schedule.

1202.2 The security required by this Section shall be maintained and renewed by the applicant, and shall be held in escrow by the Chief Subdivision Engineer until the conditions set forth in this Section are satisfied.

1202.3 After completion of construction, establishment of vegetation, removal of all sediment from stormwater facilities, and final inspection and approval by the Chief Subdivision Engineer, one hundred percent (100%) of the sediment and erosion control security shall be released.

### **Sec. 1203 Letters of Credit**

1203.1 Letters of credit posted pursuant to Sections 1200, 1201 and 1202 of this Ordinance shall be in a form satisfactory to the Chief Subdivision Engineer.

1203.2 Each letter of credit shall be from a lending institution: (a) acceptable to the Chief Subdivision Engineer; (b) having capital resources of at least ten million dollars (\$10,000,000), or such other amount acceptable to the Chief Subdivision Engineer; (c) with an office in the Chicago Metropolitan Area; and (d) insured by the Federal Deposit Insurance Corporation.

1203.3 Each letter of credit shall, at a minimum, provide that:

- a. It shall be fully, irrevocably, and unconditionally in effect until the installation and construction of said site improvements are completed and approved by the Chief Subdivision Engineer or for a period not to exceed 15 months, whichever is later. It shall not be canceled without the prior written consent of the Chief Subdivision Engineer and shall not expire without written notification to the Chief Subdivision Engineer at least 45 days prior to expiration, and
- b. It shall not require the consent of the developer prior to any draw on it by the Chief Subdivision Engineer; and
- c. If at any time it will expire within 45 or any lesser number of days, and if it has not been renewed and the renewal submitted to the Chief Subdivision Engineer, and if any applicable obligation of the developer for which its security remains uncompleted or is unsatisfactory, then the Chief Subdivision Engineer may, without notice and without being required to take any further action of any nature whatsoever, call and draw down the letter of credit and thereafter either hold all proceeds as security for the satisfactory completion of all such obligations or employ the proceeds

## ARTICLE 12 PERFORMANCE SECURITY

to complete all such obligations and reimburse the County for any and all costs and expenses, including legal fees and administrative costs, incurred by the County, as the Chief Subdivision Engineer shall determine.

- 1203.4 If at any time the Chief Subdivision Engineer determines that the funds remaining in the letter of credit are not, or may not be, sufficient to pay in full the remaining unpaid cost of all stormwater facility construction or sediment and erosion control measures, then, within ten (10) days following a demand by the Chief Subdivision Engineer, the developer shall increase the amount of the letter of credit to an amount determined by the Chief Subdivision Engineer to be sufficient to pay such unpaid costs. Failure to so increase the amount of the security shall be grounds for the Chief Subdivision Engineer to draw down the entire remaining balance of the letter of credit.
- 1203.5 If at any time the Chief Subdivision Engineer determines that the bank issuing the letter of credit is without capital resources of at least ten million dollars (\$10,000,000), is unable to meet any federal or state requirement for reserves, is insolvent, is in danger of becoming any of the foregoing, or is otherwise in danger of being unable to honor such letter of credit at any time during its term, or if the Chief Subdivision Engineer otherwise reasonably deems the bank to be insecure, then the Chief Subdivision Engineer shall have the right to demand that the developer provide a replacement letter of credit from a bank satisfactory to the Chief Subdivision Engineer. Such replacement letter of credit shall be deposited with the Chief Subdivision Engineer not later than ten (10) days following such demand. Upon such deposit, the Chief Subdivision Engineer shall surrender the original letter of credit to the developer.
- 1203.6 If the developer fails or refuses to meet fully any of its obligations under this Ordinance then the Chief Subdivision Engineer may, in his or her discretion, draw on and retain all or any of the funds remaining in the letter of credit. The Chief Subdivision Engineer thereafter shall have the right to take any action he or she deems reasonable and appropriate to mitigate the effects of such failure or refusal, and to reimburse the County from the proceeds of the letter of credit for all of its costs and expenses, including legal fees and administrative expenses, resulting from or incurred as a result of the developer's failure or refusal to fully meet its obligations under this Ordinance. If the funds remaining in the letter of credit are insufficient to repay fully the County for all such costs and expenses, and to maintain a cash reserve equal to the required letter of credit during the entire time such letter of credit should have been maintained by the developer, then the developer shall, upon demand of the Chief Subdivision Engineer therefore, immediately deposit with the Chief Subdivision Engineer such additional funds as the Chief Subdivision Engineer determines are necessary to fully repay such costs and expenses and to establish such cash reserve.

ARTICLE 13

**RESERVED**

ARTICLE 13

**Appendix A**

**RESERVED**

## APPENDICIES

**Appendix B****FEMA FIRM MAPS EFFECTIVE AS FOLLOWS:****Flood Insurance Study Date: March 17, 2003**

<b>PANEL NUMBER</b>	<b>COMMUNITY NUMBER</b>	<b>EFFECTIVE DATE</b>	<b>PANEL NUMBER</b>	<b>COMMUNITY NUMBER</b>	<b>EFFECTIVE DATE</b>
17197C0010 E	170695	9/6/1995	17197C0270 E	170695	9/6/1995
17197C0017 E	170695	9/6/1995	17197C0280 E	170695	9/6/1995
17197C0030 E	170695	9/6/1995	17197C0285 E	170695	9/6/1995
17197C0031 E	170695	9/6/1995	17197C0286 E	170695	9/6/1995
17197C0032 E	170695	9/6/1995	17197C0290 E	170695	9/6/1995
17197C0033 F	170695	9/22/1999	17197C0295 E	170695	9/6/1995
17197C0034 E	170695	9/6/1995	17197C0303 E	170695	9/6/1995
17197C0036 E	170695	9/6/1995	17197C0305 E	170695	9/6/1995
17197C0037 E	170695	9/6/1995	17197C0310 E	170695	9/6/1995
17197C0038 E	170695	9/6/1995	17197C0311 E	170695	9/6/1995
17197C0039 E	170695	9/6/1995	17197C0315 E	170695	9/6/1995
17197C0045 F	170695	9/22/1999	17197C0320 E	170695	9/6/1995
17197C0052 E	170695	9/6/1995	17197C0326 E	170695	9/6/1995
17197C0053 E	170695	9/6/1995	17197C0327 E	170695	9/6/1995
17197C0054 E	170695	9/6/1995	17197C0331 E	170695	9/6/1995
17197C0056 E	170695	9/6/1995	17197C0350 E	170695	9/6/1995
17197C0058 E	170695	9/6/1995	17197C0351 F	170695	11/6/2000
17197C0061 E	170695	9/6/1995	17197C0353 E	170695	9/6/1995
17197C0062 E	170695	9/6/1995	17197C0354 F	170695	11/6/2000
17197C0065 F	170695	9/22/1999	17197C0358 F	170695	11/6/2000
17197C0070 E	170695	9/6/1995	17197C0359 F	170695	11/6/2000
17197C0090 E	170695	9/6/1995	17197C0361 E	170695	9/6/1995
17197C0095 E	170695	9/6/1995	17197C0362 E	170695	9/6/1995
17197C0110 E	170695	9/6/1995	17197C0365 E	170695	9/6/1995
17197C0126 E	170695	9/6/1995	17197C0366 E	170695	9/6/1995
17197C0127 E	170695	9/6/1995	17197C0367 E	170695	9/6/1995
17197C0130 F	170695	9/24/2002	17197C0370 E	170695	9/6/1995
17197C0134 E	170695	9/6/1995	17197C0378 F	170695	11/6/2000
17197C0135 F	170695	9/22/1999	17197C0379 E	170695	9/6/1995
17197C0137 E	170695	9/6/1995	17197C0385 E	170695	9/6/1995
17197C0139 E	170695	9/6/1995	17197C0386 E	170695	9/6/1995
17197C0140 E	170695	9/6/1995	17197C0390 E	170695	9/6/1995
17197C0141 F	170695	3/17/2003	17197C0395 E	170695	9/6/1995
17197C0142 E	170695	9/6/1995	17197C0405 E	170695	9/6/1995
17197C0143 F	170695	3/17/2003	17197C0408 E	170695	9/6/1995
17197C0144 E	170695	9/6/1995	17197C0409 E	170695	9/6/1995
17197C0153 E	170695	9/6/1995	17197C0410 E	170695	9/6/1995
17197C0154 E	170695	9/6/1995	17197C0415 E	170695	9/6/1995
17197C0155 E	170695	9/6/1995	17197C0416 E	170695	9/6/1995
17197C0156 E	170695	9/6/1995	17197C0417 E	170695	9/6/1995
17197C0157 E	170695	9/6/1995	17197C0420 E	170695	9/6/1995
17197C0158 E	170695	9/6/1995	17197C0430 E	170695	9/6/1995
17197C0159 E	170695	9/6/1995	17197C0440 E	170695	9/6/1995
17197C0161 E	170695	9/6/1995	17197C0450 E	170695	9/6/1995
17197C0162 E	170695	9/6/1995	17197C0475 E	170695	9/6/1995
17197C0163 E	170695	9/6/1995	17197C0500 E	170695	9/6/1995
17197C0164 E	170695	9/6/1995	17197C0505 E	170695	9/6/1995
17197C0170 E	170695	9/6/1995	17197C0507 E	170695	9/6/1995
17197C0180 E	170695	9/6/1995	17197C0509 E	170695	9/6/1995
17197C0185 E	170695	9/6/1995	17197C0510 E	170695	9/6/1995
17197C0190 E	170695	9/6/1995	17197C0515 E	170695	9/6/1995
17197C0195 F	170695	3/17/2003	17197C0520 E	170695	9/6/1995
17197C0211 F	170695	3/17/2003	17197C0526 E	170695	9/6/1995
17197C0212 F	170695	11/6/2000	17197C0528 E	170695	9/6/1995
17197C0213 E	170695	9/6/1995	17197C0530 E	170695	9/6/1995
17197C0214 E	170695	9/6/1995	17197C0535 E	170695	9/6/1995
17197C0216 F	170695	11/6/2000	17197C0540 E	170695	9/6/1995
17197C0218 E	170695	9/6/1995	17197C0545 E	170695	9/6/1995
17197C0255 E	170695	9/6/1995	17197C0560 E	170695	9/6/1995
17197C0260 E	170695	9/6/1995	17197C0580 E	170695	9/6/1995
17197C0265 E	170695	9/6/1995	17197C0585 E	170695	9/6/1995

## APPENDICIES

### **Appendix C** **PUBLIC BODIES OF WATER**

<http://dnr.state.il.us/owr/resman/3704RULE.htm#370440>

- "Public Bodies of Water" or "Public Waters" All lakes, rivers, streams and waterways which are or were navigable and are open or dedicated to public use including all bayous, sloughs, backwaters and submerged lands connected by water to the main channel or body of water during normal flows or stages.
- The following public bodies of water were navigable in their natural condition or were improved for navigation and opened to public use. The entire length and surface area in Illinois, including all backwater lakes and sloughs open to the main channel or body of water at normal flows or stages, are open to the public unless limited to a head of navigation as stated. Head of navigation descriptions use the U.S. rectangular survey system and these abbreviations: T = township, R = range, PM = principal meridian, Sec. = section, 1/4 = quarter section, N = north, E = east, S = south, W = west, USGS = U.S. Geological Survey.
  - Kankakee River
- The following public bodies of water are primarily artificial navigable waters that were opened to public use.
  - Illinois and Michigan Canal

APPENDICES

Appendix D  
Comment By IDNR

Streams Studied by Detailed Methods within the Flood Insurance Study

Butterfield Creek	Kahler Road Drainage Ditch	Spring Creek
Deer Creek	Kankakee River	Springhole Creek
Des Plaines River	Lily Cache Creek	St. Anne School Tributary
DuPage River	Long Run Creek	St. Francis Academy Creek
Marley Creek	Manhattan Creek	Sugar Run
Fiddymet Creek	Marley Creek	Sunnyland Drain
Forked Creek	Milne Creek	Thorn Creek
Goose Creek	Naperville Road Tributary	Thorne Creek
Hammel Creek	Normand Drain	Trim Creek
Hickory Creek	Plum Creek	Union Drainage Ditch
Illinois and Michigan Canal	Robin Hill Drive Split Flow	Unnamed Creek (South of 87 <sup>th</sup> Street)
Jackson Creek	Rock Run	Wolf Creek

## APPENDICIES

### Appendix E

#### High Quality Aquatic Resources(HQAR)

The following descriptions of high-quality aquatic resources. This list is to be used as a guideline for identifying high quality resources in Will County. High quality aquatic resources are reviewed on a case-by-case basis and may include species not found in this list.

**Advanced Identification (ADID) Sites:** Aquatic sites that have been identified by the District and U.S. Environmental Protection Agency, in advance of specific permit requests, as areas generally unsuitable for disposal of dredged or fill material. ADID sites include various waters of the U.S., including wetlands, identified in Kane, Lake and McHenry Counties.

**Bog:** A low nutrient peatland, usually in a glacial depression, that is acidic in the surface stratum and often dominated at least in part by the genus *Sphagnum*. P.

**Ephemeral Pool:** A seasonally inundated depression within a forested wetland or upland community, usually located on a moraine, glacial outwash plain, or in an area shallow to bedrock; also known locally as a “vernal pool.” These areas may not be permanently vegetated.

**Dune and Swale Complex:** Areas usually parallel to the Lake Michigan shoreline and typified by sandy, linear, upland ridges alternating with low-relief wetland created over time during changes in the Lake Michigan’s water levels.

**Fen:** A peatland, herbaceous (including calcareous floating mats) or wooded, with calcareous groundwater flow.

**Forested Wetland:** A wetland dominated by native woody vegetation with at least one of the following species or genera present: *Carya* spp., *Cephalanthus occidentalis*, *Cornus alternifolia*, *Fraxinus nigra*, *Juglans cinerea*, *Nyssa sylvatica*, *Quercus* spp., *Thuja occidentalis*, *Betula nigra*, *Betula alleghaniensis*, *Betula papyrifera*, *Fagus grandifolia*

**Sedge meadow:** A wetland dominated by at least one of the following genera: *Carex*, *Calamagrostis*, *Cladium*, *Deschampsia*, *Eleocharis*, *Rhynchospora*, *Scleria*, or *Eriophorum*.

**Seep:** A wetland, herbaceous or wooded, with saturated soil or inundation resulting from the diffuse flow of groundwater to the surface stratum.

**Streams rated A or B in the Illinois Biological Stream Characterization Study:** Reference Illinois Environmental Protection Agency’s Biological Stream Characterization (BSC): Biological Assessment of Illinois Stream Quality (latest edition) for a current listing.

**Wet Prairie:** A wetland dominated by native graminoid species with a diverse indigenous forb component that is seasonally saturated and/or temporarily inundated and may resemble a fen in its best development. Species found in a high quality wet prairie include at least one of the following: *Calamagrostis Canadensis*, *Spartina pectinata*, *Aster puniceus firmus*, *Beckmannia syzigachne*, *Chelone glabra*, *Eleocharis wolfii*, *Lysimachia quadrifolia*, *Oenothera perennis*, *Oenothera pilosella*, *Pedicularis lanceolata*, and *Solidago ohioensis*.

**Wetlands Supporting Federal or Illinois Endangered or Threatened Species:** For current state-listed species, reference Illinois Endangered Species Protection Board’s “Checklist of Endangered and Threatened Animals and Plants of Illinois” and/or contact the Illinois Department of Natural Resources. For Federally-listed species, reference the U.S. Fish and Wildlife Service’s “Endangered and Threatened Wildlife and Plants” list (latest edition) and/or contact the U.S. Fish and Wildlife Service.

**Wetlands with a Floristic Quality Index of 20 or greater or a Mean C-Value of 3.5 or greater:** Reference Plants of the Chicago Region (F. Swink and G. Wilhelm, 4<sup>th</sup> edition, Indianapolis: Indiana Academy of Science, 1994).

Further information on the areas described above can be found in the U.S. Environmental Protection Agency’s Advanced Identification studies for Kane, Lake and McHenry Counties, the Chicago Wilderness’ Biodiversity Recovery Plan, the Forest Preserve District of Cook County’s The Natural Communities of Cook County: An Ecological Classification System for Terrestrial Communities, Swink and Wilhelm’s Plants of the Chicago Region, and the Illinois Environmental Protection Agency’s Biological Stream Characterization (BSC): Biological Assessment of Illinois Stream.