

**St. Clair County**  
**Illinois**

The seal of St. Clair County, Illinois, is a circular emblem. It features a central figure, likely a Native American, holding a bow and arrow. The text "ST. CLAIR COUNTY" is arched across the top, and "OF ILLINOIS" is arched across the bottom. The seal is rendered in a light, semi-transparent style behind the text.

# Stormwater Control Code Chapter 33

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Revised Effective May 1, 2017 (Ord. 17-1166 April 24, 2017)



## CHAPTER 33

### STORMWATER CONTROL CODE

#### ARTICLE I - GENERALLY

**33-1-1**      **AUTHORITY AND PURPOSE.** This Code is enacted by St. Clair County in accordance with the **Illinois Compiled Statutes 55 ILCS 5/5-1041, 55 ILCS 5/5-1049, 55 ILCS 5/5-1062.2, 55 ILCS 5/5-1063, 55 ILCS 5/5-1104, 55 ILCS 5/5-1113, 55 ILCS 5/5-12001, 55 ILCS 5/5-15001 et seq., 415 ILCS 5/43, 35 Ill. Adm. Code, Subtitle C, the Clean Water Act** and other applicable authority, all as amended from time to time.

The purpose of this Code is to diminish threats to public health and safety, protect property, prevent damage to the environment and promote public welfare by guiding, regulating and controlling the design, construction, use and maintenance of any new development or redevelopment or other activity which disturbs or breaks the topsoil or otherwise results in the movement of earth and/or changes in the stormwater drainage pattern and/or stormwater flows from that which would have occurred if the land had been left in its natural state. This stormwater runoff and resulting soil erosion could result in the inundation of damageable properties, the erosion and destabilization of downstream channels, and the pollution of valuable stream and lake resources. Because development and redevelopment of land causes increases in stormwater runoff quantity and rate and can cause impairment of water quality and loss of valuable topsoil, this Code regulates these activities to minimize adverse impacts to these vital natural resources.

This Code is adopted to accomplish the following objectives:

(A)            To assure that new development or redevelopment does not increase drainage or flood hazards, or create unstable conditions susceptible to soil erosion;

(B)            To protect new buildings and major improvements to buildings from flood damage due to increased stormwater runoff and soil erosion;

(C)            To protect human life and health from the hazards of increased flooding and soil erosion on a watershed basis;

(D)            To lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged public facilities and utilities, correction of channel erosion problems, and flood rescue and relief operations caused by storm water runoff and soil erosion from development or redevelopment;

(E)            To protect, conserve, and promote the orderly development of land and soil, water, air, animal, and plant resources;

(F)            To preserve the natural hydrologic and hydraulic functions of watercourses and flood plains and to protect water quality and aquatic habitats;

(G)            To preserve the natural characteristics of stream corridors in order to manage flood and stormwater impacts, improve water and groundwater quality, reduce soil erosion, protect aquatic and riparian habitat, maintain quality forest resources, provide recreational opportunities, provide aesthetic benefits, enhance community and economic development.

(H) To encourage and approve new and innovative approaches that decrease impervious surfaces, increase absorption, and reduce the need for retention basins and stormwater handling structures.

**33-1-2**      **FINDINGS.** The County Board hereby finds as follows:

(A) The soil types found in the County are susceptible to erosion and, if left unprotected, could result in severe loss of soil with resultant damage to property, public safety, and the environment;

(B) The topography of the County contains areas with steep slopes upon which, if clearing of trees and/or inappropriate construction takes place, severe erosion and slope stability problems could occur resulting in damage to property;

(C) Excessive quantities of soil may erode from areas undergoing development for certain land use changes, including but not limited to, the construction of dwelling units, commercial buildings and industrial plants, the building of roads and highways, the modification of stream channels and drainage ways, and the creation of recreational facilities;

(D) The washing, blowing, and deposition of eroded soil across and upon roadways endangers the health and safety of users thereof, by decreasing vision and reducing traction of road vehicles;

(E) Soil erosion necessitates the costly repairing of gullies, washed-out fills, and embankments;

(F) Sediment from soil erosion tends to clog sewers and ditches and to pollute and silt rivers, streams, lakes, sinkholes, wetlands, and reservoirs;

(G) Sediment limits the use of water and waterways for most beneficial purposes, promotes the growth of undesirable aquatic weeds, destroys fish and other desirable aquatic life, and is costly and difficult to remove; and

(H) Sediment deposition reduces the channel capacity of watercourses and the storage capacity of floodplains and natural depressions, resulting in increased risk to public health and safety from flooding.

**33-1-3**      **APPLICABILITY.** This Code applies to all new development or redevelopment in the County. Except as otherwise provided in this Code, no person, firm or corporation, public or private, the State of Illinois and its agencies or political subdivisions, the United States of America, and its agencies or political subdivisions, any agent, servant, officer or employee of any of the foregoing which meets the following provisions or is otherwise exempted in this Code, shall commence any development or redevelopment activities without first obtaining a Stormwater Management and Erosion Control Permit from the Building and Zoning Department. This Code shall apply to all new development and redevelopment in the County as set forth herein:

(A) Any new development or redevelopment that will include an area that will meet or exceed **ten thousand (10,000) square feet** of total impervious surface (i.e., streets, roof, patio or parking area or any combination thereof); or that involves **one (1) acre** or more of land;

(B) Any land disturbing activity (i.e., clearing, grading, stripping, excavating, filling, or any combination thereof) that will affect an area that will meet or exceed **one (1) acre** of land; or

(C) Notwithstanding (A) and (B) of this Section, any land disturbing activity, if the activity is within **twenty-five (25) feet** of any channel as defined in this Code including but not limited to any river, lake, pond, stream, sinkhole, or wetland; or

(D) Projects involving land disturbing activity that will exceed **one hundred (100) cubic yards**.

(E) Any land disturbing activity on the sloping side of the slope disturbance line; and is in conjunction with paragraphs (A), (B), (C) or (D) of this Section.

**33-1-4 EXEMPTIONS.** Being exempt from this Code does not eliminate the requirement of obtaining approval for individual sediment and erosion control site plans from the appropriate local jurisdiction. A Stormwater Management and Erosion Control Permit shall not be required for the following:

(A) Any development, redevelopment, or other activity not falling within the specifications set forth in **Section 33-1-3** of this Code, or projects that do not disturb vegetative cover or soil.

(B) Soil disturbing activities associated with agricultural crop production including the implementation of conservation measures included in a Farm Conservation Plan approved by the Soil and Water District. For the purposes of this Code, levees, berms, and channel modification are considered storm water appurtenances and are not agricultural use of land. Any man-made changes to agricultural land, other than activities associated with growing crops, conservation practices, or best management practices constructed or installed to reduce erosion or control stormwater runoff on agricultural land, are not considered agricultural use of land for purposes of this Code and are not exempt from the applicability provision specified in **Section 33-1-3** of this Code.

(C) The maintenance of any existing stormwater drainage/detention component or structure or any existing soil erosion/sediment control component or structure; including dredging, levee restoration, tree removal, or other function which maintains original or appropriate design capacities of the above.

(D) Development that has been approved by the appropriate authority through the preliminary plat stage before the date of effective date of this Code.

(E) The maintenance of any street, road, highway or interstate highway performed by any unit of government whose powers grant such authority.

**33-1-5 RESPONSIBILITY.**

(A) As a condition of the application for a stormwater permit, the applicant shall not be relieved of responsibility for damage to persons or property otherwise imposed by law, and the County or its officers or agents will not be made liable for such damage by (1) the issuance of a Stormwater Management and Erosion Control Permit under this Code, (2) compliance with the provisions of that Stormwater Management and Erosion Control Permit or conditions attached to it by the Building and Zoning Department, (3) failure of County Officials to observe or recognize hazardous or

unsightly conditions, (4) failure of County Officials to recommend denial or to deny a Stormwater Management and Erosion Control Permit, or (5) granting or denying exemptions from the Stormwater Management and Erosion Control Permit requirements of this Code.

(B) Upon receipt of the notification of the completion of the requirements of the Stormwater Management and Erosion Control Permit from the Applicant as required by this Code, the Building and Zoning Department shall within **thirty (30) days** notify the Applicant of any noncompliance issues or shall issue a letter certifying compliance with the permit and the Code.

**33-1-6** **OTHER RELEVANT PERMITTING.** Applicants may seek required Federal, State, and Local permits concurrently with the application for the Stormwater Management and Erosion Control Permit. The applicant shall be solely responsible for acquiring other necessary permits. These other permits may include but are not limited to:

(A) Permits in accordance with the Clean Water Act, **33 U.S.C. Section 1251 et seq.**, including any joint permit application requirements (i.e., Floodway Construction Permit from DNR);

(B) Any permits required under the Rivers and Harbors Act, **33 U.S.C. Section 401 et seq.**;

(C) Permits required by the Illinois Department of Natural Resources "IDNR", Office of Water Resources in accordance with the Rivers, Lakes and Streams Act, **615 ILCS 5/18, 23, 23(a) and 29(a)**, and consistent with any applicable regulations including those found at **17 Ill. Adm. Code Parts 3700 et seq., 3702 et seq., and 3704 et seq.**;

(D) Any permits required by the Farmland Preservation Act, **505 ILCS 75/1 et seq.**;

(E) Any permits that may be required by the Illinois Environmental Protection Act (**415 ILCS 5/39 et seq.**), and any regulations adopted thereunder including any permits that may be required under the National Pollutant Discharge Elimination System Permit (NPDES) through the Illinois Environmental Protection Agency, Division of Water Pollution Control, and

(F) Any permits required by any other applicable stormwater discharge laws that may be adopted. Compliance with all applicable federal and state statutes and regulations and all local ordinances and codes shall also be required.

**33-1-7** **SEPARABILITY/SEVERABILITY.** The provisions and sections of this Code shall be deemed to be severable in accordance with the following:

(A) If any Court of competent jurisdiction shall adjudge any provision of this Code to be invalid, such judgment shall not affect the validity of any other provision of this Code.

(B) If any Court of competent jurisdiction shall adjudge the application of this Code or any provision thereof to be invalid or inapplicable 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.

**33-1-8 NONCONFORMING USES.** Nonconforming structures and uses shall not be replaced or enlarged in any manner unless such replacement or enlargement conforms to the requirements of this Code and has been approved by the local government having jurisdiction. Prior development not conforming to the standards of this Code, while developed under the standards of the time, may have inadequate detention/retention capabilities and may be significantly contributing to current stormwater runoff problems. Remediation of these existing problems is encouraged through joint efforts on the part of government and private owners and developers.

**33-1-9 VIOLATIONS.**

(A) Consistent with this Code, it shall be unlawful for any person to undertake any development with the County without first securing a Stormwater Management and Erosion Control Permit as required by this Code.

(B) It shall be unlawful for any person to violate, disobey, omit, neglect, or refuse to comply with, or to resist enforcement of, any provision of this Code or any condition of any Stormwater Management and Erosion Control Permit issued pursuant to this Code.

**33-1-10 NPDES COMPLIANCE.** New development and redevelopment, that this Code applies to must comply with the NPDES regulations (the General NPDES Permit No. ILR40 and the NOI (Notice of Intent)). NPDES compliance is obtained by adhering to this Code, ILR10 permits, the General NPDES for St. Clair County and the NOI submitted for each individual community and all future steps taken by the individual communities to implement the NOI.

(A) **Public Education and Outreach on Stormwater Impacts.** In accordance with the General NPDES Permit No. ILR40-0270 and the NOI, St. Clair County will comply and implement activities as outlined in the Public Education and Outreach on Stormwater Impacts.

(B) **Public Involvement/Participation.** In accordance with the General NPDES Permit No. ILR40-0270 and the NOI, St. Clair County will comply and implement activities as outlined in the Public Involvement/Participation.

(C) **Illicit Discharge Detection and Elimination.** In accordance with the General NPDES Permit No. ILR40-0270 and the NOI, St. Clair County will comply and implement activities as outlined in the Illicit Discharge Detection and Elimination.

(D) **Construction Site Stormwater Runoff Control.** In accordance with the General NPDES Permit No. ILR40-0270 and the NOI, St. Clair County will comply and implement activities as outlined in the Construction Site Stormwater Runoff Control.

(E) **Post-Construction Stormwater Management in New Development and Redevelopment.** In accordance with the General NPDES Permit No. ILR40-0270 and the NOI, St. Clair County will comply and implement activities as outlined in the Post-Construction Stormwater Management in New Development and Redevelopment.

(F) **Pollution Prevention/Good Housekeeping.** In accordance with the General NPDES Permit No. ILR40-0270 and the NOI, St. Clair County will comply and implement activities as outlined in the Pollution Prevention/Good Housekeeping.

**33-1-11 INFORMATION ACCESSIBILITY TO THE PUBLIC.** Documents relating to the adherence to this Code are available for review by request at the Building and Zoning Department.



## ARTICLE II - DEFINITIONS

**33-2-1**      **DEFINITIONS.** For the purposes of this Code certain terms are defined and set forth below:

**Adverse Impacts:** Any negative impact, as defined by St. Clair County, on plant, soil, air or water resources affecting their beneficial uses including recreation, aesthetics, aquatic habitat, quality, and quantity.

**Applicant:** Any person, business entity of any structure or type, governmental agency, or any other entity who executes the necessary forms to procure official approval of a Stormwater Management and Erosion Control Permit to carry out construction of a new development or redevelopment or to engage in any land clearing activities as defined in subsection (B) of **Section 33-1-3** of this Code in the County.

**Base Flood Elevation:** The elevation in relation to mean sea level of the crest of the base or 100 year frequency flood event. The elevation at all locations delineating the level of flooding resulting from the **one hundred (100) year** frequency flood event, which has a **one percent (1%)** chance of occurring in any given year.

**Board:** The St. Clair County Board which may also be referred to as the County Board.

**Building Permit:** A permit issued by the County for the construction, erection, or alteration of a structure or building and the related ground and surface preparation prior to and after completion of construction, erection or alteration of a structure or building which is issued by the local government having jurisdiction for the construction, erection or alteration of a structure or building.

**Bypass Flows:** The Stormwater runoff from upstream properties that are tributary to a property's drainage system, but not under its control.

**Certify or Certification:** Formally attesting that specific inspections and tests were performed, and that such inspections and tests comply with the applicable requirements of this Code.

**Channel:** Any defined or undefined river, stream, creek, brook, branch, natural or artificial depression, ponded area, on-stream lake or impoundment, karst area (sinkhole), 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 or groundwater flows, 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), filling, widening, deepening, straightening, relocating, lining, and significant removal of bottom or woody rooted vegetation. Channel modification does not include the clearing of unnatural debris or removal of trash.

**Clearing:** Any activity which removes the natural vegetative ground cover or that disturbs soil where no vegetative cover exists.

**Compensatory Storage:** An artificial excavation which provides a hydraulically equivalent volume of storage within the floodplain, used to balance the loss of natural flood storage capacity when fill or structure are placed within the floodplain.

**Conduit:** Any channel, pipe, sewer or culvert used for the conveyance or movement of water, whether open or closed.

**Cubic Yard:** A **one (1) yard by one (1) yard by one (1) yard (1 x 1 x 1)** amount of material in excavation and/or fill.

**Detention Basin:** A facility constructed or modified to provide for the temporary storage of stormwater runoff and the controlled release by gravity of this runoff at a prescribed rate during and after a flood or storm.

**Detention Time:** The amount of time stormwater is held within a detention basin.

**Development:** Any man-made change to real estate or property, including:

- (A) The division or subdivision of any tract or parcel of property;
- (B) Construction, alteration, reconstruction or placement of a building or structure or any addition to a building or structure;
- (C) Installation of a manufactured home on a site, preparing a site for a manufactured home, or installing a travel trailer on a site for more than **one hundred eighty (180) days** per year;
- (D) Construction of roads, bridges, or similar projects;
- (E) Redevelopment of a site;
- (F) Filling, dredging, grading, clearing, excavating, paving or other non-agricultural alterations of a ground surface;
- (G) Storage of materials or deposit of solid or liquid waste;
- (H) Any other activity that might alter the magnitude, frequency, direction, or velocity of stormwater flows from a property.

**Drainage Plan:** A plan, including engineering drawings and supporting calculations, which describes the existing stormwater drainage system and environmental features, including topography, and which describes proposed alterations or changes to the drainage system and environment of a property including any proposed grading.

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

**Erosion:** The general process whereby soil or earth is moved by rainfall, flowing water, wind or wave action.

**Excavation:** Any act by which organic matter, earth, sand, gravel, rock or any other similar material, is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the conditions resulting from such actions.

**Excess Stormwater Runoff:** The volume and rate of flow of stormwater discharged from a new development or redevelopment which is or will be in excess of that volume and rate which existed before development or redevelopment.

**Existing Grade:** The vertical elevation of the existing ground surface prior to excavation or filling.

**FEMA:** Federal Emergency Management Agency.

**Fill:** Any act by which organic matter, earth, sand, gravel, rock, or any other material, is deposited, placed, replaced, pushed, dumped, pulled, transported or moved by man to a new location and shall include the resulting conditions.

**Final Grade:** The vertical elevation of the ground surface after grading work is completed in accordance with the engineering plans.

**Flood Fringe:** That area as designated by FEMA as that portion of the floodplain outside of the floodway. This area is subject to inundation from the base flood but conveys little or no flow.

**Flood Hazard Boundary Map (FHBM):** A very generalized map prepared by FEMA which shows only where floodplains are located based on very basic data. FHBM's do not include base flood elevations.

**Flood Insurance Rate Map (FIRM):** A map prepared by FEMA that depicts the special flood hazard area (SFHA) within a community. This map includes insurance rate zones and regulatory floodplains and may or may not depict regulatory floodways.

**Floodplain:** That land adjacent to a body of water with ground surface elevations at or below the base flood or the **one hundred (100) year** frequency flood elevation which is subject to inundation. The floodplain as designated by FEMA is also known as the Special Flood Hazard Area (SFHA) and is generally identified on the FIRM, Flood Boundary and Floodway Map, or the FHBM of the community. This area is the collective combination of the regulatory floodway and the flood fringe.

**Floodway:** The channel and that portion of the floodplain, including on-stream lakes, adjacent to a stream or watercourse which is needed to store and convey the anticipated existing and future **one hundred (100) year** frequency flood discharge with no more than a **0.1 foot** increase in stage due to any loss of flood conveyance or storage and no more than a **ten percent (10%)** increase in average velocities. Floodways are designated by FEMA on some FIRMs and FFBMs. However, there are floodways on all streams whether mapped by FEMA or not.

**Grading:** The excavation or fill or any combination thereof and shall include the conditions resulting from any excavation or fill.

**Hydrograph:** A graph showing for a given location on a stream or conduit, the flow rate with respect to time.

**Hydrograph Method:** This method estimates runoff volume and runoff hydrographs for the point of interest by generating hydrographs for individual sub-areas, combining them, and routing them through stream lengths and reservoir structures. Factors such as rainfall amount and distribution, runoff curve number, time of concentration, and travel time are included.

**Impervious Surface:** That area of property that is covered by materials other than soil and vegetation and that has no intended capacity to absorb stormwater, such as parking lots, driveways, sidewalks, patios, tennis courts, roofs and other structures.

**Infiltration:** The passage or movement of water into the soil surfaces.

**Loess Soil or Loess:** A sediment, commonly non-stratified and unconsolidated, composed predominately of silt sized particles with accessory clay and sand.

**Lot:** An individual platted parcel in an approved subdivision.

**Major Drainage System:** That portion of a drainage system needed to store and convey flows beyond the capacity of the minor drainage system.

**Minor Drainage System:** That portion of a drainage system designed for the convenience of the public. It consists of street gutters, storm sewers, small open channels, and swales and, where man-made, is to be designed to handle the **ten (10) year** runoff event.

**Mitigation:** When the prescribed controls are not sufficient and additional measures are required to offset the development, including those measures necessary to minimize the negative effects which stormwater drainage and development activities might have on the public health, safety and welfare. Examples of mitigation include, but are not limited to compensatory storage, soil erosion and sedimentation control, and channel restoration.

**Modified Rational Method:** As described in the Illinois Department of Transportation "Drainage Manual", this method is based on the principal that the maximum rate of runoff from a given drainage area occurs at that point in time when all parts of the watershed are contributing to the flow. The rainfall generating the peak flow is assumed to be of uniform intensity for the entire watershed with a rainfall duration equal to the time of concentration.

**Natural:** Conditions resulting from physical, chemical, and biological processes without intervention by man.

**Natural Drainage:** Channels formed in the existing surface topography of the earth prior to changes being made by unnatural causes.

**One Hundred-Year Event:** A rainfall, runoff, or flood event having a **one percent (1%)** chance of occurring in any given year. A **twenty-four (24) hour** storm duration is assumed unless otherwise noted.

**Parcel:** All contiguous land held in a single ownership.

**Peak Flow:** The maximum rate of flow of water at a given point in a channel or conduit.

**Permittee:** Any person to whom a Stormwater Management and Erosion Control Permit is issued.

**Person:** Any individual, business entity, or other entity, public or private, the State of Illinois and its agencies or political subdivisions, the United States of America, and its agencies or political subdivisions, and any agent, servant, officer or employee of any of the foregoing.

**Positive Drainage:** Provision for overland paths for all areas of a property including depressional areas that may also be drained by storm sewer.

**Prime Farmland:** Land that is best suited to food, feed, forage, fiber and oilseed crops. It may be cropland, pasture, woodland, or other land, but it is not urban and built up land or water areas. It is either used for food or fiber or is available for those uses. The soil qualities, growing season and moisture supply are those needed for a well managed soil to economically produce a sustained high yield of crops. Prime farmland produces the highest yields with minimum inputs of energy and economic resources, and farming it results in the least damage to the environment.

**Property:** A parcel of real estate.

**Redevelopment:** Any man-made change to property as described in this Section that is being made to property already having man-made changes.

**Retention Basin:** A facility designed to completely retain a specified amount of stormwater runoff without release except by means of evaporation, infiltration, emergency bypass or pumping.

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

**Single Family Residential Construction:** The development of a single family residence and/or one outbuilding that is not part of a residential development. The outbuilding shall not exceed **thirty (30) feet** by **thirty (30) feet** covered area.

**Site:** A parcel of land, or a contiguous combination of parcels of land, where grading is performed as a single unified operation.

**Sinkhole, (Karst Areas):** Land surface depression or blind valley which may or may not have surface openings to cavernous underground areas and are the result of water movement through silts and jointed limestone. These conditions make such areas unstable and susceptible to subsidence and surface collapse. Fractures in the limestone may channel runoff water to public or private water supplies, making those sources especially susceptible to groundwater contamination.

**Slope Disturbance Line:** The line which delineates relatively level building areas from areas where slopes exceed a ratio of **three to one ratio (3:1)** (horizontal:vertical) and where special precautions must be taken for development, redevelopment, or other land disturbing activities.

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

**Storm Water Management and Erosion Control Permit (SMEC Permit):** The Permit required by this Code before commencement of any development, redevelopment, or land disturbing activities as described in **Section 33-1-3** of this Code, which is issued by the Building and Zoning Department.

**Storm Water 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.

**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.

**Stripping:** Any activity which removes the vegetative surface cover, including tree removal, by spraying or clearing, and the storage or removal of top soil.

**Ten-Year Event:** A runoff, rainfall, or flood event having a **ten percent (10%)** chance of occurring in any given year. A **twenty-four (24) hour** storm duration is assumed unless otherwise noted.

**Time of Concentration:** The elapsed time for stormwater to flow from the most hydraulically remote point in a drainage basin to a particular point of interest in that watershed.

**Tributary Watershed:** All of the land surface area that contributes runoff to a given point.

**Two-Year Event:** A runoff, rainfall, or flood event having a **fifty percent (50%)** chance of occurring in any given year. A **twenty-four (24) hour** storm duration is assumed unless otherwise noted.

**Vacant:** Land on which there are no structures or only structures which are secondary to the use or maintenance of the land itself.

**Watershed:** All land area drained by, or contributing water to, the same stream, creek, ditch, lake, marsh, stormwater facility, groundwater or depressional area.

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

**Wetlands:** Defined by regulation as "those areas that are inundated or saturated by surface or groundwater 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." For general, but not inclusive locations of designated wetlands refer to mapping prepared jointly by the Fish and Wildlife Service, a division of the U.S. Department of Interior and the Office of Resource Conservation, a division of the Illinois Department of Natural Resource or the National Wetlands Inventory Mapping, 1987. The applicant may be required to provide a field investigation by a qualified wetland delineator.

**ARTICLE III - PERMIT PROCEDURES**

**33-3-1**     **APPLICATION FOR PERMIT.**     Application for a Stormwater Management and Erosion Control Permit hereinafter referred to as "Permit" shall be made by the owner of the property or his authorized agent to the Building and Zoning Department on a form furnished for that purpose. Each application shall bear the name(s) and addresses of the owner(s) or the developer(s) of the site, the contractor(s) and of any consulting firm retained by the applicant together with the name of the applicant's principal contact at such firm, and shall be accompanied by a filing fee in accordance with **Section 7-1-53 Building Regulations**. Each application shall include certification that any land clearing, construction, or development involving the movement of earth shall be in accordance with the plans approved upon issuance of the permit. A simplified form for single-family residential construction projects is available from the Building and Zoning Department.

**33-3-2**     **REVIEW AND APPROVAL OF PERMIT APPLICATIONS.**

(A)             The Building and Zoning Department or designee, will review each application for a Permit to determine its conformance with the provisions of this Code. The Administrator may also refer any application to any other local government or public agency within whose jurisdiction the site is located for review and comment.

(B)             Within **thirty (30) days** after receiving an application, the Building and Zoning Department shall in writing:

- (1)     Approve the permit application if it is found to be in conformance with the provisions of this Code, and issue the permit;
- (2)     Approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this Code, and issue the permit subject to these conditions;
- (3)     Disapprove the permit application, indicate the deficiencies and the procedure for submitting a revised application and/or submission; or
- (4)     Request an additional **thirty (30) days** for review because of the nature and complexity of the proposed project and the application.

(C)             Pending preparation and approval of a revised permit, development activities may be allowed to proceed in accordance with agreed conditions established by the County.

**33-3-3**     **EXPIRATION OF PERMIT.**     Every Permit shall expire and become null and void if the work authorized by such permit has not been commenced and actively pursued within **one hundred eighty (180) days**, or if not completed by a date which shall be specified in the permit, except that the Building and Zoning Department may, if the permittee presents satisfactory evidence that unusual difficulties have prevented work



being commenced or completed within the specified time limits, grant a reasonable extension of time if written application is made before the expiration date of the permit. The County may require modification of the erosion control plan to prevent any increase in erosion or off-site sediment runoff resulting from any extension.

**33-3-4**      **APPEALS.**

(A)            Any person directly aggrieved by any decision, order, requirement, or determination of the Building and Zoning Department made pursuant to an interpretation of this Code shall have the right to appeal such action directly to the Environment Committee (hereinafter: the Committee).

(B)            Every applicant for an appeal shall notify the Committee in writing of the decision being appealed, which shall include a short, plain statement containing the reasons why the decision is being appealed and how the applicant has been directly aggrieved by the action taken.

(C)            Upon receipt of such notice of appeal, the Committee shall set a date for public hearing before the Committee. Such public hearing shall commence not fewer than **fourteen (14) days**, nor more than **forty-five (45) days** after the date on which a properly prepared notice of appeal was received. The applicant shall be promptly notified of the public hearing date.

(D)            Factors to be considered on appeal include, but need not be limited to, the effects of the proposed development activities on the surface water flow to tributary and downstream lands, any comprehensive watershed management plans, or the use of any retention facilities; possible saturation of fill and unsupported cuts by water, both natural and domestic; runoff surface waters that produce erosion and silting of drainage ways; nature and type of soil or rock which when disturbed by the proposed development activities may create earth movement and produce slopes that cannot be landscaped; and excessive and unnecessary scarring of the natural landscape through grading or removal of vegetation.

(E)            The Committee shall decide the appeal within **sixty (60) days** after the conclusion of the public hearing. All decisions on appeals shall be in writing and shall include a statement of the reasons for the decision. The failure of Committee to act within **sixty (60) days** shall be deemed to be a decision granting the appeal.

(F)            The applicant may appeal the decision of the Committee to the County Board by filing a notice thereof in the form required by (B) of this Section with the County Board within **fourteen (14) days** after the date of decision by the Committee. Failure to properly file such notice shall render final the decision of the Committee.

(G)            Within **forty-five (45) days** after receipt of a properly prepared and filed notice of appeal, the County Board shall, without hearing, affirm, reverse, or modify the decision of the Committee. The failure of the County Board the act within **forty-five (45) days** shall be deemed to be a final decision of the County Board granting the appeal.

(H)            The decision of the County Board shall in all instances be considered a final decision for the purpose of administrative review.

**33-3-5**      **AMENDMENT OF PERMIT.** Major amendments to the Permit shall be submitted to the Building and Zoning Department and shall be processed and approved or disapproved in the same manner as the original permit. Field modification of a minor nature may be authorized in writing by the Building and Zoning Department to the permittee.

**33-3-6**      **EXCEPTIONS ALLOWED.** The Environment Committee may, by a vote authorize exceptions to any of the requirements and regulations set forth in this Code in accordance with the following requirements:

(A)            Application for exception shall be made by a Verified Petition for Exception from the Applicant for a Permit, stating fully grounds of the Petition and the facts relied upon by the Applicant. Such Petition shall be filled with the Permit Application.

(B)            In order for the Verified Petition for Exception to be granted, the Building and Zoning Department must find that all of the following facts exist with respect to the land referred to in the Petition:

- (1)            That the land is of such shape or size or is affected by such physical conditions or is subject to such title limitations of record, that it is impossible or impractical for the Applicant to comply with all of the requirements of this Code;
- (2)            That the exception is necessary for the preservation and enjoyment of a substantial property right of the Applicant; and
- (3)            That the granting of the exception will not be detrimental or injurious to the public welfare, environment, or to other property in the vicinity of the subject property.

(C)            Each Verified Petition for Exception shall be reviewed by the Building and Zoning Department. The Building and Zoning Department shall make written recommendations upon review of the application. These written recommendations shall be filed with the Environment Committee within **thirty (30) days** of receiving an application that includes a Verified Petition for Exception. The Building and Zoning Department shall review such recommendations prior to granting or denying any requested exceptions.

(D)            The Environment Committee shall hold a public hearing on each Verified Petition of Exception within **forty-five (45) calendar days** of receiving the recommendations of the Building and Zoning Department or at the next regularly scheduled Environment Committee meeting, whichever is sooner. The next regularly scheduled Environment Committee meeting shall be considered to be one that occurs at least **one (1) week** after receiving the Building and Zoning Department's recommendations. No later than the next Board meeting or **thirty (30) calendar days** after the public hearing, whichever is later, the Environment Committee shall either approve the Petition for Exception with the exceptions and conditions it deems necessary and appropriate or it shall disapprove the Petition for Exception or it shall take such other action as appropriate. Failure of the Environment Committee to act as described herein shall constitute approval of the Verified Petition for Exception. Failure of the Board to have a quorum at a particular meeting (after the public hearing) shall not be considered the next regularly scheduled meeting for purposes of granting a Verified Petition for Exception since no vote on the issue can be taken. A Petitioner may agree to continuances of these deadlines.

**33-3-7**      **RETENTION OF PERMIT APPLICATIONS AND ATTACHMENTS.** Plans, specifications, and reports for all site developments shall be retained in original form or on microfilm by the Building and Zoning Department.

**ARTICLE IV - STORMWATER MANAGEMENT AND  
EROSION CONTROL PERMIT REQUIREMENTS**

**33-4-1 STORMWATER DRAINAGE AND DETENTION PLAN REQUIREMENTS.** Each applicant shall submit complete information as specified in this Article to ensure that the provisions of this Code are met. The submittal shall include sufficient information to evaluate the environmental characteristics of the property, the potential adverse impacts and benefits of the development on water resources both on-site and off-site, and the effectiveness of the proposed drainage plan in managing stormwater runoff. The applicant shall certify on the drawings that all clearing, grading, drainage, and construction shall be accomplished in strict conformance with the drainage plan. The information required in this Section shall be submitted for both existing and proposed property conditions for all developments and redevelopments subject to this Code.

**33-4-2 DRAINAGE PLAN REQUIREMENTS/TOPOGRAPHIC SURVEY.** The Drainage Plan shall include a topographic survey of the property at **two (2) foot** contours of all areas to be disturbed unless otherwise specified or approved by the Municipal Engineer of the Municipality where the property is located or by the County Engineer if not within any Municipality. The plan map shall be keyed to a consistent datum specified by the Building and Zoning Department. If the mapping is compiled using a digital format and the Global Positioning System (GPS), the applicant will provide both paper and digital copies including GPS points.

**33-4-3 MAPPING AND DESCRIPTIONS.** The Drainage Plan shall include an existing drainage and proposed drainage plan for the property and **one hundred (100) feet** surrounding the property at a scale of not more than **one hundred (100) feet to one (1) inch**, and shall including the following information:

- (A) property boundary, dimensions, and approximate acreage;
- (B) building setback lines;
- (C) all existing and proposed structures and sizes;
- (D) area in square feet of existing and proposed impervious surface;
- (E) all existing, or proposed easements and covenants;
- (F) all existing, abandoned, or proposed water or monitoring well head locations;
- (G) all sanitary or combined sewer lines and septic systems;
- (H) the banks and centerline of streams and channels;
- (I) shoreline of lakes, ponds, and detention basins with normal water level elevation;
- (J) farm drains and tiles, if available or known;
- (K) soils classifications;
- (L) location, size and slope of stormwater conduits and drainage swales;
- (M) depressional storage areas;
- (N) detention facilities showing inlet and outlet control facilities;

- (O) roads, streets and associated stormwater inlets including finished grades;
- (P) base flood elevation, floodplain, and regulatory floodway;
- (Q) basis of design for the final drainage network components;
- (R) a statement giving any applicable engineering assumptions and calculations;
- (S) a vicinity map showing the relationship of the site to its general surroundings at a scale of not less than **two thousand (2,000) feet to one (1) inch (1:24,000)**;
- (T) title, scale, north arrow, legend, seal of Licensed Professional Engineer, date, and name of person preparing plans;
- (U) cross-section data for open channel flow paths and designated overland flow paths;
- (V) direction of storm flows;
- (W) flow rates and velocities at critical points in the drainage system;
- (X) a statement by the design engineer of the drainage system's provision for handling events greater than the **one hundred (100) year, twenty-four (24) hour** runoff; and
- (Y) a statement of certification of all drainage plans, calculations, and supporting data by a Licensed Professional Engineer.

**33-4-4 ENVIRONMENTAL FEATURES.** A depiction of environmental features of the property and immediate vicinity shall be included in the permit application including the following:

- (A) the estimated limits of designated regulatory and non-regulatory wetland areas;
- (B) the location and limits of sinkholes (karst areas);
- (C) the location of tree clusters, tree lines, and areas of serious tree density and the identification and location of trees with unique characteristics in areas where land disturbance will take place;
- (D) any designated natural areas and prime farmland; and
- (E) any proposed environmental mitigation features.

**33-4-5 MINIMIZATION OF INCREASES IN RUNOFF VOLUMES AND RATES.** In the selection of a drainage plan for a development or redevelopment, the applicant shall evaluate and implement site design features which minimize the increase in runoff volumes and rates from the site. The applicant's drainage plan submittal shall include evaluations of site design features which are consistent with the following hierarchy:

- (A) Preservation of regulatory floodplains, flood prone areas and wetland areas;
- (B) Minimization of impervious surfaces on the property, consistent with the needs of the project including the use of innovative materials;
- (C) Attenuation of flows by use of open vegetated swales and natural depressions and preserve the existing natural stream channel;

- (D) Infiltration of runoff on-site;
- (E) Providing stormwater retention structures;
- (F) Providing wet or wetland detention structures;
- (G) Providing dry detention structures; and
- (H) Construct storm sewers.

**33-4-6**     **WATER QUALITY.** The drainage system of the development or redevelopment shall be designed to minimize adverse surface and groundwater quality impacts off-site and on the property itself.

Water quality shall adhere to:

(A)           **Illinois Environmental Protection Act – 415 ILCS 5/12, from Ch. 111 ½, par. 1011 and 1012;**

(B)           Illinois Pollution Control Board Rules and Regulations – Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board, Part 302 Water Quality Standards; and

(C)           Illinois Pollution Control Board Rules and Regulations – Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter I: Pollution Control Board, Part 304 Effluent Standards.

Detention basins shall incorporate design features to capture stormwater runoff pollutants. In particular, designers shall give preference to wet bottom and wetland type designs and all flows from the development shall be routed through the basin (i.e., low flows shall not be bypassed). Detention of stormwater shall be promoted throughout the property's drainage system to reduce the volume of stormwater runoff and to reduce the quantity of runoff pollutants.

**33-4-7**     **MULTIPLE USES/GREENSPACE/PROTECTION OF TREES.**

(A)           The drainage system should incorporate multiple uses where practicable. Uses considered compatible with stormwater management include but are not limited to open space, aesthetics, swales, aquatic habitat, recreation (boating, fishing, trails, playing fields), wetlands and water quality mitigation areas.

(B)           Municipalities that adopt this Code are encouraged to incorporate such compatible areas into any existing or future green space requirements.

(C)           Developers and owners are encouraged to incorporate "tree friendly" practices including protection of trees, especially the preservation of well-established trees and the properly routing of trucks and other large vehicles so as not to run over or park where tree roots are.

**33-4-8**     **RAIN FALL.** Unless a continuous simulation approach to drainage system hydrology is used, all design rainfall events shall be based on the **Illinois State Water Survey's Circular Bulletin 70**. The first quartile point rainfall distribution shall be used for the design and analysis of detention basins and conveyance systems with critical durations less than **six (6) hours**. The second quartile point rainfall distribution shall be used for the design and analysis of detention basins and conveyance systems with critical durations of **six and one-twelfth (6.1) hours** to **twelve (12) hours**. The

third quartile point rainfall distribution shall be used for the design and analysis of detention basins and conveyance systems with critical durations greater from **twelve and one-twelfth (12.1) hours** to **twenty-four (24) hours**. The fourth quartile distribution shall be used in the design and analysis of detention basins and conveyance system with durations greater than **twenty-four (24) hours**. The quartile distributions are presented in Table 37 of Bulletin 70. Refer to Table 13 of Bulletin 70 for rainfall intensity, duration, and frequency. The NRCS Type II distribution may be used as an alternate to the distributions in Bulletin 70.

**33-4-9**      **RELEASE RATES.**

(A)            The drainage system for developments or redevelopments shall be designed to control the peak rate of discharge from the property for the **two (2) year, twenty-four (24) hour** storm event and the for **one hundred (100) year, twenty-four (24) hour** storm event to levels which will not cause an increase in flooding or channel instability downstream when considered in aggregate with other developed properties and downstream drainage capacities. This shall include consideration of the timing of the peak discharge on the receiving stream when such information is developed or available.

(B)            Until watershed specific information is readily available, release rates shall be as follows:

- (1)            The applicant shall use the following event programs (or the equivalent as approved by the Building and Zoning Department): **WIN TR-55, TR-20, TR-55, HEC-1, or HEC-HMS.**
- (2)            If the development is less than **two (2) acres** or the impervious surface or the development is less than **one (1) acre**, the Rational Method may be used.

The applicant must demonstrate that the post-development discharge from the site shall not exceed the predevelopment discharge from the site. Stormwater storage shall start at the **two (2) year, twenty-four (24) hour** rainfall event.

**33-4-10**      **DETENTION BASIN OUELET DESIGN.** Backwater on the outlet structure from the downstream drainage system shall be addressed by the applicant in designing the outlet.

**33-4-11**      **DETENTION STORAGE REQUIREMENTS.** The minimum design storage to be provided in the detention basin shall be based on the runoff difference before and after development from the **one hundred (1000 year, twenty-four (24) hour** event. All detention basin storage shall be computed using Hydrograph Methods utilizing reservoir routing (also called modified pools or level pool) or by means of an equivalent method. Major and minor conveyance systems as well as detention basins shall be designed as specified in this Section of this Article.

**33-4-12 DRAINAGE SYSTEM DESIGN AND EVALUATION.** The following criteria shall be used in evaluating existing conditions and designing the drainage system. The design shall provide capacity to pass the **two (2) year, twenty-four (24) hour** peak flow rate in the minor drainage system and an overload flow path for flows in excess of the design capacity. The stormwater system shall not result in the interbasin transfer of drainage unless no other practicable alternative exists.

**33-4-13 POSITIVE DRAINAGE.** Whenever practicable, all developments must be provided an overland flow path that will pass the **one hundred (100) year, twenty-four (24) hour** flow at a stage at least **one (1) foot** below the lowest foundation grade in the vicinity of the flow path. Overland flow paths designed to handle flows in excess of the minor drainage system capacity shall be provided drainage easements. Street ponding and flow depths shall not exceed curb heights.

**33-4-14 ANTECEDENT MOISTURE.** Computations of runoff hydrographs which do not rely on a continuous accounting of antecedent moisture conditions shall use antecedent moisture conditions II (normal) as a minimum.

**33-4-15 WET DETENTION BASIN DESIGN AND DEPTH.** Wet detention basins shall be designed to remove stormwater pollutants, to be safe, to be aesthetically pleasing, and as much as feasible to be available for recreational use. Wet basins shall be at least **three (3) feet** deep, excluding near-shore banks and safety ledges. If fish habitat is to be provided, said basin shall be at least **eight (8) feet** deep over **twenty-five percent (25%)** of the bottom area to prevent winterkill.

**33-4-16 WET BASIN SHORELINE SLOPES.** The side slopes of wet basins at the normal pool elevation shall not be steeper than **three to one ratio (3:1)** or **three (3) feet** horizontal to **one (1) foot** vertical). It is recommended that aquatic vegetation be established around the perimeter to provide protection from shoreline erosion.

**33-4-17 PERMANENT POOL VOLUME.** The permanent pool volume in a wet basin at normal depth shall be equal to the runoff volume from its watershed for the **two (2) year, twenty-four (24) hour** event as a minimum (calculated during dry weather conditions).

**33-4-18 WET BASIN INLET AND OUTLET ORIENTATION.** The distance between detention inlets and outlets shall be maximized. Inlets and outlets shall be at opposite ends of the basin providing that the orientation does not create undue hardship based on topography or other natural constraints. Designers are encouraged to use baffles or berms in the basin bottom to prevent short circuiting. There shall be no low

flow bypass between the inlet and outlet. Paved low flow channels shall not be used. The minimum flow length shall be **ten (10) feet** with a recommended minimum ratio of **two-to-one (2:1)** length to width.

**33-4-19 DRY DETENTION BASIN DESIGN.** In addition to the other requirements of this Code, dry basins shall be designed to remove stormwater pollutants, to be safe, to be aesthetically pleasing and as much as feasible to be available for multiple uses.

**33-4-20 DRY BASIN DRAINAGE.** Dry basins shall be designed so that **eighty percent (80%)** of their bottom area shall have standing water no longer than **seventy-two (72) hours** for any runoff event less than the **one hundred (100) year, twenty-four (24) hour** event. Grading plans shall clearly distinguish the wet portion of the basin bottom. Underdrains directed to the outlet may be used to accomplish this requirement.

**33-4-21 VELOCITY DISSIPATION.** Velocity dissipation measures shall be incorporated into dry basin designs to minimize erosion at inlets and outlets and to minimize re-suspension of sediment.

**33-4-22 DRY BASIN INLET AND OUTLET ORIENTATION.** Dry basin inlet and outlet orientation shall be the same as that specified in **Section 33-4-18** of this Code.

**33-4-23 TEMPORARY STILLING/SEDIMENTATION BASIN.** A stilling/sedimentation basin shall be constructed at each major inlet to a dry basin during construction. The volume of the basin shall be a minimum of **five hundred (500) cubic feet** per acre of impervious surface in the drainage area. Side slopes shall be no steeper than **three (3) feet to one (1) foot** ratio and basin depth shall be a minimum of **three (3) feet** in order to minimize re-suspension of sediment and pollutants.

**33-4-24 EXISTING DEPRESSIONAL AREAS.** Existing depressional storage volume will be maintained and the volume of detention storage provided to meet the requirements of this Code shall be in addition to existing storage.

**33-4-25 MINIMUM DETENTION OUTLET SIZE.** Where a single pipe outlet or orifice plate is to be used to control discharge, it shall have a minimum diameter of **twelve (12) inches**. If this minimum orifice size permits release rates greater than those specified in this Section, and regional detention is not a practical alternative, outlets, structures such as perforated risers, or flow control orifices shall be used.



**33-4-26**     **DETENTION IN FLOOD PLAINS.** The placement of detention basins within the flood plain is strongly discouraged because of questions about their reliable operation during flood events. However, the stormwater detention requirements of this Code may be fulfilled by providing detention storage within flood fringe areas on the project site provided the following provisions in this Chapter are met as well as compliance with **Section 33-1-6** of this Code is shown.

**33-4-27**     **DETENTION IN FLOOD FRINGE AREAS.** The placement of a detention basin in a flood fringe area shall require compensatory storage for **one and one-half (1.5) times** the volume below the base flood elevation occupied by the detention basin including any berms. The applicant shall demonstrate its operation for all stream-flow and floodplain backwater conditions. Excavations for compensatory storage along watercourses shall be opposite or adjacent to the area occupied by detention. All floodplain storage lost below the existing ten-year flood elevation shall be replaced below the existing **ten (10) year** elevation. All flood plain storage lost above the existing **ten (10) year** flood elevation shall be replaced above the existing **ten (10) year** flood elevation. All compensatory storage excavations shall be constructed to drain freely and openly to the watercourse and comply with **Section 33-1-6** of this Code.

**33-4-28**     **DETENTION ON PRIME FARMLAND.** The placement of detention basins shall avoid the utilization of prime farmland whenever feasible. All detention basin construction shall examine potential impacts to adjacent agricultural land and shall address measures that will be implemented to eliminate such impacts.

**33-4-29**     **DETENTION IN FLOODWAYS.** Detention basins shall not be placed in the floodway. Not all floodways are mapped. If the drainage area of the waterway at the proposed construction location is **one (1) square mile** or greater, the applicant shall contact the Illinois Department of Natural Resources, Office of Water Resources for a determination as to State permit requirements.

**33-4-30**     **ON-STREAM DETENTION.** On-stream detention basins are discouraged but allowable if they provide regional public benefits and if they meet the other provisions of this Code with respect to water quality and control of the **two (2) year and one hundred (100) year twenty-four (24) hour** events from the property. If on-stream detention is used in watersheds larger than **one (1) square mile**, the applicant will use hydrographic modeling to demonstrate that the design will not increase the water level for any properties upstream or downstream of the property.

- (A) Impoundment of the stream as part of on-stream detention shall:
  - (1) Require the implementation of an effective non-point source management program throughout the upstream watershed which shall include as a minimum:

- (a) Best Management Practices (BMPs) for runoff reduction consistent with all reference documents listed in the appendix and in **Section 33-4-50** of this Code; and
  - (b) **Two (2) year, twenty-four (24) hour** detention/ sedimentation basins for all development consistent with the provisions of this Code.
- (2) Include a design calling for gradual bank slopes, appropriate bank stabilization measures, and a pre-sedimentation basin; and
- (3) Comply with all applicable provisions of this Code.
- (B) Impoundment of the stream as part of on-stream detention SHALL NOT:
- (1) Prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning;
  - (2) Cause or contribute to the degradation of water quality or stream aquatic habitat;
  - (3) Involve any stream channelization or the filling of wetlands;
  - (4) Occur downstream of a wastewater discharge;
  - (5) Contribute to the duration or flood frequency of any adjacent land.

**33-4-31 DRAINAGE INTO WETLANDS, RIVERS, STREAMS, LAKES, PONDS, AND DEPRESSIONAL STORAGE AREAS.** Wetlands, rivers, streams, lakes, ponds and depressional storage areas shall be protected from damaging modifications and adverse changes in runoff quality and quantity associated with land developments. In addition to the other requirements of this Code, the following requirements shall be met for all developments whose drainage flows into wetlands, rivers, lakes, ponds or depressional storage areas:

(A) Existing wetlands, rivers, lakes, ponds or depressional storage areas shall not be modified for the purposes of stormwater detention unless it is demonstrated that the proposed modifications will maintain or improve its habitat and ability to perform beneficial functions and is in compliance with **Section 33-1-6** of this Code.

(B) Existing storage and release rate characteristics of wetlands, rivers, streams, lakes, ponds or depressional storage areas shall be maintained and the volume of detention storage provided to meet the requirements of this Section shall be in addition to this existing storage.

(C) Existing wetlands, rivers, lakes, ponds, or depressional storage areas shall be protected during all phases of development and as further regulated in this Code. Filling in wetland areas is discouraged and no wetland area shall be filled without obtaining appropriate permits under the Clean Water Act.

(D) Site drainage patterns shall not be altered to substantially decrease or increase the existing area tributary to the wetlands, rivers, streams, lakes, ponds or depressional storage areas.

(E) All runoff from the development shall be routed through a preliminary detention sedimentation basin designed to capture the **two (2) year, twenty-four (24) hour** event and hold it for at least **twenty-four (24) hours**, before being discharged to the wetland, river, lake, pond, or depressional storage area. This basin shall be constructed before property grading begins and shall be maintained throughout the construction process. In addition, the drainage hierarchy defined in **Section 33-4-5** should be followed to minimize runoff volumes and rates being discharged to the wetland, river, stream, lake, pond, or depressional storage area and as further regulated in this Code.

(F) A buffer strip of at least **twenty-five (25) feet** in width, preferably vegetated with native plant species, shall be constructed or restored around the periphery of a wetland, river, stream, lake, pond or depressional storage area.

**33-4-32** **LOESS SOILS.** Care must be taken to avoid open flow discharges of stormwater over silt (loess) soils due to high potential for erosion. Most of the soils in the County are loess. Soil classification conforming to the Unified Soil Classification is required to identify soil types and appropriate erosion control and construction practices.

**33-4-33** **SINKHOLES, KARST AREA.** The following requirements apply for new developments or redevelopments where sinkholes are determined to be present:

(A) A storm water detention basin shall not be placed in or over a sinkhole.

(B) Storm water detention basins shall not be located closer than **one hundred (100) feet** from the rim of a sinkhole.

(C) The outflow from a storm water detention basin, channel, ditch or any stormwater runoff generated as a result of a development or redevelopment shall not empty into or be directed or redirected by any means into or through any sinkhole.

(D) If, after the review of the stormwater drainage plan, the Building and Zoning Department determines that more detailed information is required, a sinkhole evaluation may be required. A sinkhole evaluation which addresses the geologic, engineering, and environmental factors resulting from a development or redevelopment shall then be performed by a professional with experience and expertise in karst topography. The results of the evaluation shall be certified by a professional engineer with adequate knowledge and experience in the field of erosion, sediment control, and soils or by a Certified Professional in Erosion and Sediment Control. This evaluation shall be the responsibility of the applicant and performed at no cost to the Building and Zoning Department. After a review of this evaluation, the Building and Zoning Department may either approve or disapprove the drainage plan as submitted.

(E) Whenever a new sinkhole appears or whenever it becomes apparent that a sinkhole has not yet been identified on County resource maps, it shall be reported to the Building and Zoning Department.

**33-4-34 STREET DETENTION, PARKING LOT DETENTION, AND CULVERT DRAINAGE.** The following standards shall be complied with:

(A) **Street Detention.** If streets are to be used as part of the minor or major drainage system, ponding depths shall not exceed curb heights and shall not remain flooded for more than **eight (8) hours** for any event less than or equal to the **one hundred (100) year, twenty-four (24) hour** event.

(B) **Parking Lot Detention.** The maximum stormwater ponding depth in any parking area shall not exceed **six (6) inches** for more than **four (4) hours**.

(C) **Culvert, Road and Driveway Crossings.** Sizing of culvert crossings shall be determined by giving consideration to entrance and exit losses as well as tailwater conditions on the culvert.

**33-4-35 INFILTRATION PRACTICES.** To effectively reduce runoff volumes, infiltration practices including basins, trenches, and porous pavement should be located in hydrologic soil groups "A" and "B" as designated by the U.S.D.A. Natural Resources Conservation Service (using the Unified Classification Code). Infiltration basins and trenches designed to re-charge groundwater shall not be located within **seventy-five (75) feet** of a water supply well or building foundation. A sediment settling basin shall be provided to remove coarse sediment from stormwater flows before they reach infiltration basins or trenches. Stormwater shall not be allowed to stand more than **seventy-two (72) hours** over **eighty percent (80%)** of the dry basin's bottom area for the maximum design event to be ex-filtrated. The bottom of infiltration basins or trenches shall be a minimum of **four (4) feet** above the seasonally high groundwater and bedrock level. Engineering calculations demonstrating infiltration rates shall be included with the application.

**33-4-36 VEGETATED FILTER STRIPS AND SWALES.** To effectively filter stormwater pollutants and promote infiltration of runoff, sites should be designed to maximize the use of vegetated filter strips and swales. Whenever practicable, runoff from impervious surfaces should be directed onto filter strips and swales comprised of native grasses and forbs before being routed to a storm sewer or detention basin.

**33-4-37 SAFETY CONSIDERATIONS.** The drainage system components, especially all detention basins, shall be designed to protect the safety of any children or adults coming in contact with the system during runoff events.

**33-4-38 SIDE SLOPES.** The side slopes of all detention basins at **one hundred (100) year, twenty-four (24) hour** capacity shall be as level as practicable to prevent accidental falls into the basin and for stability and ease of maintenance. Side slopes of detention basins and open channels shall not be steeper than **three-to-one (3:1)** horizontal to vertical.

**33-4-39**     **SAFETY LEDGE.** All wet detention basins shall have a level safety ledge at least **four (4) feet** in width located **two and one-half (2.5) to three (3) feet** below the normal water depth.

**33-4-40**     **VELOCITY.** Velocities shall be controlled to safe levels taking into consideration rates and depth of flow. Velocities throughout the surface drainage system shall not exceed permissible velocities as described in the USDA NRCS Engineering Field Manual. Generally, these maximum velocities will be less than **four (4) feet** per second.

**33-4-41**     **OVERFLOW STRUCTURES.** All stormwater detention basins shall be provided with an overflow structure capable of safely passing excess flows at a stage at least **one (1) foot** below the lowest foundation grade in the vicinity of the detention basin. The design flow rate of the overflow structure shall be equivalent to the **one hundred (100) year, twenty-four (24) hour** inflow rate.

**33-4-42**     **MAINTENANCE CONSIDERATIONS/PROTECTION OF TREES.** The stormwater drainage system shall be designed to minimize and facilitate maintenance. Turfed side slopes shall be designed to allow lawn-mowing equipment to easily negotiate them. Wet basins shall be provided with alternate outflows which can be used to completely drain the pool for sediment removal. Pumping may be considered if drainage by gravity is not feasible. Pre-sedimentation basins shall be included, where feasible, for localizing sediment deposition and removal. Site access for heavy equipment shall be provided. Vehicles and heavy equipment shall not run over the roots of established trees.

**33-4-43**     **ACCOMMODATING FLOWS FROM UPSTREAM TRIBUTARY AREAS.** Stormwater runoff from areas tributary to the property shall be considered in the design of the property's drainage system. Whenever practicable, flows from upstream areas that are not to be detained should be routed around the basin being provided for the site being developed.

**33-4-44**     **UPSTREAM AREAS NOT MEETING CODE REQUIREMENTS.** As it is likely that there are upstream areas tributary to the applicant's property that do not meet the storage and release rates of this Code, regionalized detention on the applicant's property shall be reasonably explored by the applicant and the results shall be reported to the County in the permit application and shall be supplied to the municipality having jurisdiction over the property or to the County if no municipality has jurisdiction:

- (A) In such cases, the following steps shall be followed:
  - (1) The applicant shall compute the storage volume needed for his property using the release rates of **Section 33-4-9** of this Code;

- (2) The applicant shall identify and describe areas tributary to the applicant's property that do not meet the storage and release rate requirements of this Code.
- (3) Using the areas determined above plus the applicant's property area, the applicant shall compute the total storage needed for the combined properties.
- (4) Allowable release rates shall also be computed using the combined property areas. Storage shall be computed as described in **Section 33-4-9** of this Code. If tributary areas are not developed, a reasonable developed land cover based on local zoning shall be used for the purposes of computing storage.

(B) Once the necessary combined storage is computed, any municipality having jurisdiction over the property or the Building and Zoning Department may choose to pay for over-sizing the applicant's detention basin to accommodate the regional flows. The applicant's responsibility will be limited to the storage for his property as computed in accordance with this Code. If regional storage is selected by any municipality, or the County, then the design to be implemented shall comply with all of the provisions of this Code. If regional storage is rejected after due consideration, the applicant shall bypass all tributary area flows around the applicant's basin whenever practicable. If the applicant must route upstream flows through his basin and the upstream areas exceed **one (1) square mile** in size, the applicant must meet the provision of **Section 33-4-30** for on-stream basins.

**33-4-45 UPSTREAM AREAS MEETING CODE REQUIREMENTS.** When there are areas tributary to the applicant's property that meet the storage and release rate requirements of this Code, the upstream flows may be bypassed around the applicant's detention basin if this is the only practicable alternative. Storage needed for the applicant's property shall be computed as described in **Section 33-4-9**. However, if the County or the municipality having jurisdiction over the property, decides to route tributary area flows through an applicant's basin, the final design storm water releases shall be based on the combined total of the applicant's property plus tributary areas. It must be shown that at no time will the runoff rate from the applicant's property exceed the allowable release rate for his/her property alone.

**33-4-46 EARLY COMPLETION OF DETENTION FACILITIES.** Where detention, retention, or depressional storage areas are to be used as part of the drainage system for a property, they shall be constructed as the first element of the initial earthwork program. Any eroded sediment captured in these facilities shall be removed by the applicant on a regular basis and before project completion in order to maintain the design volume of the facilities.

**33-4-47**     **SOIL EROSION AND SEDIMENT CONTROL.** It is the objective of this Code to control soil erosion and sedimentation caused by development activities, including clearing, grading, stripping, excavating, and filling of land, in the County. Measures taken to control soil erosion and off-site sediment runoff shall be adequate to assure that sediment is not transported from the site by a storm event of **ten (10) year, twenty-four (24) hour** frequency or less. The following principles shall apply to all development or redevelopment activities within the County and to the preparation of the submissions required under this Code:

(A)           Development or redevelopment shall be related to the topography and soils of the site so as to create the least potential for erosion. Areas of steep slopes greater than **three to one (3:1)** where high cuts and fills may be required are to be avoided wherever possible, and natural contours should be followed as closely as possible.

(B)           Natural vegetation shall be retained and protected wherever possible. Areas immediately adjacent to natural watercourses, lakes, ponds, sinkholes, and wetlands are to be left undisturbed wherever possible. Temporary crossings of watercourses, when permitted, must include appropriate stabilization measures.

(C)           Special precautions shall be taken to prevent damages resultant from any necessary development activity within or adjacent to any channel or wetland. Preventive measures shall reflect the sensitivity of these areas to erosion and sedimentation.

(D)           The smallest practical area of land should be exposed for the shortest practical time during development.

(E)           Sediment basins or traps, filter barriers, diversions, and any other appropriate sediment or runoff control measures shall be installed prior to site clearing and grading and maintained to remove sediment from runoff waters from land undergoing development.

(F)           The selection of erosion and sediment control measures shall be based on assessment of the probable frequency of climatic and other event likely to contribute to erosion, and on evaluation of the risks, costs, and benefits involved.

(G)           In the design of erosion control facilities and practices, aesthetics and the requirements of continuing maintenance must be considered.

(H)           Provision shall be made to accommodate the increased runoff caused by changed soil and surface conditions during and after development. Drainage ways should be designed so that their final gradients and the resultant velocities and rates of discharge will not create additional erosion on-site or downstream.

(I)           Permanent vegetation and structures shall be installed and functional as soon as practical during development.

(J)           Those areas being converted from agricultural purposes to other land uses shall be vegetated with an appropriate protective cover prior to development.

(K)           All waste generated as a result of site development activity shall be properly disposed of and shall be prevented from being carried off the site by either wind or water. No waste materials may be burned. Landscape waste may be burned by proper use of an Illinois EPA permitted air curtain destructor.

(L)           Measures shall be implemented at all construction sites in order to prevent sediment from being tracked onto public or private roadways and to control fugitive dust from traveling off-site.

(M) All temporary soil erosion and sediment control practices shall be maintained to function as intended until the contributing drainage area has been permanently stabilized at which time they shall be removed.

**33-4-48 EROSION AND SEDIMENT CONTROL PLAN SUBMITTAL REQUIREMENTS.**

Each applicant shall submit sufficient information to evaluate the environmental characteristics of the property, the potential adverse impacts of the development related to erosion both on-site and off-site, and the effectiveness of the proposed erosion and sediment control plan in reducing sediment loss. The applicant shall certify on the drawings that all clearing, grading, drainage, excavation, and construction shall be accomplished in strict conformance with the erosion and sediment control plan. The following information shall be submitted for both existing and proposed property conditions:

(A) Mapping and Descriptions as specified in **Section 33-4-3** of this Code.

(B) Existing and proposed erosion and sediment control features of the property and immediate vicinity including:

- (1) Location and description of the erosion and sediment control measures to be employed during construction;
- (2) Location of the slope disturbance line;
- (3) For any structures proposed to be located on the slope side of the slope disturbance line, the map shall include the limits of disturbance including tree removal, erosion and sediment control measures during construction, cross section view of any proposed cut or fill, erosion and sediment control measures during construction, details of method(s) proposed for providing slope stability, permanent stormwater control measures, and permanent erosion and sediment control measures all being certified by a registered professional engineer with adequate knowledge and experience in the field of erosion, sediment control, and soils, or by a Certified Professional in Erosion and Sediment Control;
- (4) The predominant soil types on the site, their location, and their limitations for the proposed use as defined by the U.S.D.A. Natural Resources Conservation Service;
- (5) The proposed use of the site, including present and planned development, areas of clearing, stripping, grading, excavation and filling; proposed contours, finished grades, and street profiles; the stormwater plan; types and locations of utilities, areas and acreages proposed to be paved, sodded or seeded, vegetatively stabilized, or left undisturbed; and the location of well-established and unique trees and tree lines or tree clusters;
- (6) The erosion and sediment control plan showing all measures necessary to meet the requirements of this Code throughout



all phases of construction and those remaining permanently after completion of the development of the site, including:

- (a) Location and description, including standard details, of all sediment control measures, runoff control measures, including diversions, waterways and outlets, and design specifics of sediment basins and traps including outlet details;
- (b) Location and description of all soil stabilization and erosion control measures, including seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, kind and quantity of mulching for both temporary and permanent vegetative control measures, and types of non-vegetative stabilization measures;
- (c) Location and description of methods to prevent tracking of sediment off-site including construction entrance details, as appropriate;
- (d) Description of dust and traffic control measures;
- (e) Locations of stockpiles and description of stabilization methods;
- (f) Location of off-site fill or borrow volumes, locations and methods of stabilization;
- (g) Provisions for maintenance of control measures, including type and frequency of maintenance, easements, and estimates of the cost of maintenance; and
- (h) The proposed phasing of development of the site, including stripping and clearing, rough grading and construction, and final grading and landscaping. Phasing should identify the expected date on which clearing will begin, the estimated duration of exposure of cleared area, and the sequence of installation of temporary sediment control measures (including perimeter controls), installation of stormwater drainage, paving streets and parking areas, final grading and the establishment of permanent vegetative cover, and the removal of temporary measures. It shall be the responsibility of the applicant to notify the Building and Zoning Department of any significant changes which occur in the site development schedule after the initial erosion and sediment control plan has been approved.

**33-4-49 DESIGN AND OPERATION STANDARDS AND REQUIREMENTS.** The design criteria, standards, and methods shall be prepared in accordance with the requirements of this Code and the standards and specifications contained in "Illinois Urban Manual" (A Technical Manual Designed for Urban Ecosystem Protection and Enhancement), prepared for the Illinois Environmental Protection Agency by the U.S.D.A. Natural Resources Conservation Service, which standards and methods are hereby incorporated into this Code by reference. In the event of conflict between the provisions of said manuals and of this Code, this Code shall govern.

**33-4-50 EROSION AND SEDIMENT CONTROL DESIGN REQUIREMENTS.** Developments or redevelopments shall also meet the following:

(A) Control measures shall be constructed to control runoff from the property so that to the extent possible sediment is retained on-site.

(B) Temporary on-site control measures required shall be constructed and functional prior to initiating clearing, grading, stripping, excavating, or fill activities on the site.

(C) Disturbed areas shall be stabilized with permanent measures within **seven (7) calendar days** following the end of active disturbance, or re-disturbance consistent with the following criteria:

(1) Appropriate permanent stabilization measures shall include seeding, mulching, sodding, with non-vegetative measures as a last resort.

(2) Areas having slopes greater than **eight percent (8%)** shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent, as approved by the Building and Zoning Department.

(D) All temporary and permanent erosion and sediment control practices must be maintained and repaired as needed to assure effective performance of their intended function.

(E) All temporary erosion and sediment control measures shall be disposed of in a proper manner within **thirty (30) days** after final site stabilization is achieved with permanent approved soil stabilization measures. Trapped sediment and other disturbed soils resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

(F) Site Development Requirements include on-site sediment control measures, as specified by the following criteria and shall be constructed as specified in the handbooks referenced in **Section 33-4-50** of this Code, and shall be functional prior to initiating clearing, grading, stripping, excavating or filling activities on the site.

(1) For developments or redevelopments less than or equal to **one (1) acre** in total area, filter barriers (including filter fences, straw bales, or equivalent control measures) shall be constructed to control all on-site runoff. Vegetated filter strips, with a minimum width of **twenty-five (25) feet**, may be used as an alternative only where runoffs in sheet flow is expected.

- (2) For developments or redevelopments more than **one (1) acre** but less than **five (5) acres**, a sediment trap or equivalent control measure shall be constructed at the downslope point of the disturbed area.
- (3) For developments or redevelopments greater than or equal to **five (5) acres**, a sediment basin or equivalent control measure shall be constructed at the downslope point of the disturbed area.
- (4) Sediment basin and sediment trap designs shall provide for both "dry" detention and "wet" detention sediment storage. The detention storage shall be composed of equal volumes of "wet" detention storage and "dry" detention storage and each shall be sized as regulated in this Code. The release rate of the basin shall be that rate as regulated in **Article III**. The elevation of the outlet structure shall be placed such that it only drains the dry detention storage.
- (5) The sediment storage shall be sized to store the estimated sediment load generated from the site over the duration of the construction period with a minimum storage equivalent to the volume or sediment generated in **one (1) year**. For construction periods exceeding **one (1) year**, the 1-year sediment load and a sediment removal schedule may be substituted.
- (6) The alteration of sinkholes by filling, grading or excavation is prohibited, including an area within **twenty-five (25) feet** from the rim.
- (7) To the extent possible or as otherwise regulated in this Code, all native trees **eight (8) inches** in diameter and larger shall be protected for their present and future value for erosion protection and other environmental benefits. Trees that have been selected for preservation shall be marked prior to the beginning of any clearing, grading, stripping, excavation, or filling of the site. A "No" construction zone shall be established and marked at the perimeter of the drip line of each tree which is to be preserved. Planting trees for erosion control is also encouraged.

(G) Stormwater conveyance channels, including ditches, swales, and diversions, and the outlets of all channels and pipes shall be designed and constructed as regulated in this Code. All constructed or modified channels shall be stabilized within **forty-eight (48) hours**, consistent with the following standards and as required in the handbooks referenced in **Section 33-4-50** of this Code:

- (1) For grades up to **four percent (4%)** seeding in combination with mulch, erosion blanket, or an equivalent control measure approved by the Building and Zoning Department shall be applied. Sod or erosion blanket or mat shall be applied to the bottom of the channel.

- (2) For grades ranging from **four percent (4%)** to **eight percent (8%)**, sod or an equivalent control measure shall be applied in the channel.
- (3) For grades greater than **eight percent (8%)**, rock, rip-rap, or an equivalent control measure shall be applied over filter fabric or other type of soil protection as approved by the Building and Zoning Department, or the grade shall be effectively reduced using drop structures.

(H) Land disturbance activities in stream channels shall be avoided, where possible. If disturbance activities are unavoidable, the following requirements shall be met.

- (1) Construction vehicles shall be kept out of the stream channel to the maximum extent practicable. Where construction crossings are necessary, temporary crossings shall be constructed of non-erosive material, such as riprap or gravel.
- (2) The time and area of disturbance of stream channels shall be kept to a minimum. The stream channel, including bed and banks, shall be stabilized within **forty-eight (48) hours** after channel disturbance is completed, interrupted, or stopped.
- (3) Whenever channel relocation is necessary, the new channel shall be constructed under dry conditions and fully stabilized before flow is diverted, incorporating meanders, pool and riffle sequence, and riparian planting.

(I) Storm sewer inlets and culverts shall be protected by sediment traps or filter barriers meeting accepted design standards and specifications.

(J) Soil storage piles containing more than **ten (10) cubic yards** of material shall not be located with a down slope drainage length of less than **twenty-five (25) feet** to a roadway, drainage channel, or sinkhole. Filter barriers, including straw bales, filter fence, or equivalent approved by the Building and Zoning Department, shall be installed immediately on the down slope side of the piles.

(K) If dewatering devices are used, discharge locations shall be protected from erosion. All pumped discharges shall be routed through appropriately designed sediment traps or basins, or their equivalent and shall not be deposited into a sinkhole.

(L) Each site shall have graveled (or equivalent) all weather entrance roads, access drives, and parking areas of sufficient length and width to prevent sediment from being tracked onto public or private roadways. Any sediment reaching a public or private road shall be removed by shoveling or street cleaning (not flushing) before the end of each workday and transported to a controlled sediment disposal area.

**33-4-51** **MAINTENANCE OF CONTROL MEASURES.** All soil erosion and sediment control measures necessary to meet the requirements of this Code shall be maintained periodically by the Permittee and/or subsequent land owners during the period of land disturbance and development of the site in a satisfactory manner to ensure adequate performance. Subsequent land owners include individual lot owners

with a permitted development even when an individual lot is under an acre or does not meet the applicability requirements of this Code. The Permittee shall be responsible to ensure that all provisions of the permit are complied with for all lots in any subdivision or development project during all land disturbing activities and development even when other owners, builders, or entities may be engaging in the development and land disturbing activities. This may be achieved by placing covenants on the deeds including fore care of common areas.

' '!(!)&` 7CBHFC@C: 7CBGFI 7H-CB`G-H9`K 5GH9G' All waste materials generated during construction activities must be properly disposed. Examples of construction site waste may consist of, but not be limited to, all building materials, raised structure debris, concrete (including concrete truck wash), asphalt, brick, excess soil, rebar, erosion and sediment control materials, cleared vegetation, chemicals, temporary bathroom facilities and all other construction site wastes.

' '!(!)'` 7CBGFI 7H-CB`G-H9`GHCF A`K 5H9F`DC@@ H-CB` DF 9J 9BH-CB`D@5B" Activities that are applicable to this Code, per GYM]cb`' ' !%' , must provide a Construction Site Stormwater Pollution Prevention Plan (CSSPPP).

The Construction Site Stormwater Pollution Prevention Plan may be a full sized plan sheet with necessary notes for requirements or may be a narrative explaining construction site operating procedures to minimize or eliminate stormwater pollution as a result of construction activities.

The items covered in an approvable CSSPPP are dependent on the activities and the materials required on site to complete the project. Therefore, the detail of the Plan may be more or less depending on site activities planned. Standard items included in a CSSPPP are, but are not limited to:

- (A) Purpose
- (B) Construction Site Description
- (C) Activities/Materials to be Addressed in the CSSPPP
- (D) Construction Site Operating Procedures
- (E) Activities/Materials Monitoring and Maintenance
- (F) Emergency and Spill Procedures

Should construction site activities/materials change during construction, the CSSPPP must reflect the changes. Therefore, the plan must be kept on-site at all times and be altered as necessary with the approval of the Inspector. Should major changes be warranted, a revised plan must be submitted for review and approval.

' '!(!)(` GI 68-J`G-CB`D@5HG`5B8`7CAA 9F 7-5@ 89J 9@CDA 9BHG'  
The permit fee for residential development, multi-family residential and commercial development shall be based on the number of lots. The number of lots will be assessed as the total plan number of lots in the proposed development. The filing fee will be in accordance with GYM]cb`+!%)' `6i ]X]b[ `FY[i `U]cbg

**ARTICLE V - LONG-TERM MAINTENANCE RESPONSIBILITIES**

**33-5-1 LONG-TERM MAINTENANCE RESPONSIBILITY.**

(A) Developers shall provide for maintenance of engineered stormwater controls including stormwater retention or detention basins and other erosion control and stormwater management structures by setting up a home owner's association with appropriate covenants and deed restrictions or by providing a binding contract for the purpose of maintenance.

(B) At such time as the County has authority to provide funding for long-term maintenance through tax revenues or some other source it may waive (or reinstate) the requirement in subsection (A) of this Section.

(C) The County may as alternative to subsection (B) of this Section create an alternative perpetual-type fund for purposes of long-term maintenance of structural measures whereby an up front payment would be made by the permit applicant to the County to be used to cover future expenses for long-term maintenance costs of structures developed for stormwater management and erosion and sediment control. Public notice shall be given at least **thirty (30) days** prior to a vote on this issue.

**ARTICLE VI - INSPECTIONS**

**33-6-1      INSPECTIONS.**

(A)            The County Inspector or designated representative thereof and/or inspector from the respective municipalities adopting this Code by Resolution within their jurisdictions may make inspections at any time to determine compliance with an issued permit, the application for such is specific authorization therefore, and this Code and may either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the Stormwater Management and Erosion Control Permit as approved. Copies of all issued permits shall be kept on site and visible during progress of work. Inspectors may, but are not required to, inspect at each stage of development but shall spot check development activities in the County.

(B)            In order to obtain inspections and to ensure compliance with this Code, the permittee shall notify the appropriate County or Municipal Inspector within **two (2) working days** of the completing of the construction stages specified below:

- (1)    Prior to any grading (including stripping and clearing);
- (2)    Upon completion of installation of the stormwater drainage and erosion and sediment control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading;
- (3)    After rough grading and temporary seeding;
- (4)    After final grading;
- (5)    After final stabilization and landscaping, prior to removal of sediment controls.

**33-6-2      SPECIAL PRECAUTIONS.** If at any stage of the grading of any development site, a County Inspector determines by inspection that the nature of the site is such that further work authorized by an existing permit is likely to imperil any property, public way, stream, lake, wetland, or drainage structure, a County Inspector may require, as a condition of allowing the work to continue, that such reasonable special precautions to be taken as is considered advisable to avoid the likelihood of such peril. "Special precautions" may include, but shall not be limited to, a more level exposed slope, construction of additional drainage facilities, berms, terracing, compaction, or cribbing, installation of plant materials for erosion control, and obtaining and following recommendations of registered professional engineer with adequate knowledge and experience in the field of erosion, sediment control, and soils or by a Certified Professional in Erosion and Sediment Control for further work.

**33-6-3      WORK STOPPAGE.** Whenever it appears that storm damage may result because the grading on any development site is not complete, work may be stopped by written order of the County Inspector and the permittee shall be required to install temporary structures or take such other measures as may be required to protect adjoining property or the public safety. On large developments or where unusual site conditions prevail, a County Inspector may specify the time of starting grading and time of completion or may require that the operations be conducted in specific stages so as to ensure completion of protective measures or devices prior to the advent of seasonal rains.

**ARTICLE VII - ENFORCEMENT**

**33-7-1 STRICT ENFORCEMENT.** The terms of this Code and the terms of any Stormwater Management and Erosion Control Permit issued pursuant to this Code shall be strictly enforced either administratively by the County as set forth herein or by the filing of a civil or criminal case for the purpose of enforcing this Code. Nothing in this Code abridges the rights of affected private parties to sue for injunctive relief and damages. Enforcement may include, but is not limited to, the seeking of injunctive relief which is specifically authorized herein or such enforcement may include the bringing of criminal charges.

**33-7-2 STOP WORK ORDERS AND REVOCATION OF PERMIT.** In the event any person holding a permit issued pursuant to this Code violates the terms of the permit, or carries on-site development in such a manner as to materially adversely affect the health, welfare, environment, or safety of persons residing or working in the neighborhood of the development site or so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the Director of Building and Zoning may suspend or revoke the Permit as follows:

(A) Suspension of a permit through a written stop-work order issued by the County Inspector and delivered to the permittee or his agent or the person performing the work. The stop-work order shall be effective immediately, shall state the specific reason for issuance, and shall state the conditions under which work may be resumed, if any.

(B) The Director of Building and Zoning may revoke a Stormwater Management and Erosion Control Permit under any of the following circumstances:

- (1) When the application, plans, or other supporting documents by this Code reflect a false statement or misrepresentation as to material fact; or
- (2) When the permit holder fails to post or maintain bond/security, execute covenants, or dedicate easements as required; or
- (3) Any violation of this Code or other applicable local, State or Federal statutes, regulations or requirements.

**33-7-3 PENALTIES.**

(A) Any person who violates, disobeys, omits, neglects or refuses to comply with, or who resists enforcement of, any provision of this Code, or any condition in any permit issued pursuant to this Code, shall be subject to a fine not in excess of **One Thousand Dollars (\$1,000.00)** for each offense. Each calendar day a violation continues to exist shall constitute a separate offense.

(B) For purposes of this **Section 33-7-2**, the owner, any occupant, or the developer and any contractor doing development work on the land shall be jointly and severally liable for any violation of this Code.



(C) In the enforcement of this Code, the Director of Building and Zoning shall have the authority to institute, or cause to be instituted, in the name of the County, any and all actions, legal or equitable, including appeals, that are required for the enforcement of this Code.

(D) In circumstances of substantial danger to the environment, to the public health and welfare, or to the livelihood of any person, the Director of Building and Zoning shall have the authority to cause to be instituted a civil action for an immediate injunction to halt any discharge or other activity causing or contributing to the danger, or to require such other action as may be necessary.

(E) In addition to any other penalty authorized by this Section, any person found to be in violation of any provision of this Code or any permit issued pursuant to this Code shall be required to restore the site to the condition existing prior to commission of the violation, or to bear the expense of such restoration. If such restoration is impossible or impracticable, then such other action may be prescribed by the County to accomplish the stated purposes of this Code.

## **ARTICLE VIII - ENFORCEMENT DATE**

**33-8-1** **ENFORCEMENT DATE.** The terms of this Code and all requirements of the Stormwater Management and Erosion Control Permit shall take effect on **January 4, 2010**, following County Board approval. The County reserves the right to update this Code.

**(Ord. No. 09-990; 06-29-09)**