GLOSSARY OF TERMS

The following glossary of terms is intended for use with the Cook County Stormwater Management Plan. To improve understanding by the reader the descriptions included here may, in some cases, deviate from the definitions used in federal, state, and local regulations.

ARMORING: The practice of reinforcing a streambank in order to prevent erosion. Hard armoring utilizes hard materials such as rip-rap, stone, gabions or concrete.

BASE FLOOD: The flood having a 1% chance of being equaled or exceeded in any given year, also known as the "100-year" or "1% chance" flood. The base flood is a statistical concept used to ensure that all properties are protected to the same degree against flooding.

BASE FLOOD ELEVATION: The water surface elevation resulting from the 100-year frequency or 1% chance flood event.

BASIN: A natural or artificially created space or structure that is capable of holding water by reason of its shape and the character of its confining material. Water cannot flow out of a basin without artificial aid. The surface area within a given watershed.

BEST MANAGEMENT PRACTICE (BMP): A measure used to control the adverse stormwater-related effects of development. BMPs include structural devices (e.g., swales, infiltration basins, and detention basins) designed to remove pollutants, reduce runoff rates and volumes, and protect aquatic habitat. BMPs also include non-structural urban site design measures such as minimizing impervious surfaces, utilizing native landscaping, and establishing buffers along streams, lakes, and wetlands. Finally, BMPs include institutional measures such as public education efforts to stop dumping of household chemicals into storm drains.

BIOENGINEERING: A discipline that integrates the engineering sciences with the biological sciences. Bioengineering includes using living systems through the application of the engineering sciences to provide erosion control, water quality, and habitat enhancement with aesthetics and effectiveness.

BRIDGE: A structure erected on foundations, piers, or abutments over a depression or an obstacle such as a river, roadway, or railroad; it carries a roadway for vehicular and pedestrian traffic.

BUFFER: A strip of land along a stream, lake, or wetland planted with native vegetation. The width of the buffer is measured from the ordinary high water mark of a perennial or intermittent stream, the ordinary high water mark of a lake or pond, or the edge of a wetland. Development within buffers is typically limited to improvements such as piers or docks necessary to allow access to the water.

CHANNEL: Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash, or natural or manmade drainage way, which has a definite bed and bank or shoreline, in or into which surface 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), widening, deepening, filling, straightening, relocating, lining, and significant removal of vegetation. Channel modification does not include the clearing of debris or removal of trash.

COMMON ENEMY RULE: Surface water is a common enemy, and each landowner has an unlimited legal privilege to deal with it as he or she pleases without regard to the consequences that might be suffered by a neighbor. Opposed to it is the natural drainage rule, which requires the owner of lower land to accept surface water that naturally drains onto that land.

COMMUNITY: A term used by the Federal Emergency Management Agency to designate local governments eligible to participate in the National Flood Insurance Program. A local government can be a "community" if the state enabling legislation gives it the authority to regulate land use and development. It usually includes cities, villages, towns, boroughs, Indian tribes, and counties (usually for their unincorporated areas only).

COMPENSATORY STORAGE: An artificially excavated, hydraulically equivalent volume of storage within the floodplain used to balance the loss of flood storage capacity when fill or structures are placed within the floodplain.

CULVERT: A closed conduit other than a bridge that conveys water in a natural channel or waterway beneath and across a roadway.

DAYLIGHT: The conversion of storm sewers into open drainageways.

DEPRESSIONAL STORAGE: The volume of storage available below the base flood elevation contained in low lying areas that have no drainage outlet.

DESIGN EVENT: A precipitation event that, statistically, has a specified duration and probability of occurring in any given year (expressed as average frequency of occurrence in years or as probability in percent).

DETENTION: Temporarily storing stormwater runoff, typically in a detention basin or reservoir, prior to gradually releasing the runoff into the receiving waters. The flowrate of stormwater exiting the detention area is typically controlled by a restricted outflow structure that limits the flowrate of water exiting the detention area.

DETENTION BASIN: A facility designed to temporarily store runoff either on, below, or above the ground surface, accompanied by controlled release of the stored water.

DEVELOPMENT: Any activity, excavation or fill, alteration, subdivision, change in land use, or practice, including without limitation, redevelopment, undertaken by private or public entities, that effects the discharge of stormwater. Development does not include maintenance of stormwater facilities.

DISCHARGE: The rate at which water moves through a channel or pipe; measured by volume per unit of time (cubic feet per second).

DITCH: An artificially constructed open drain or a natural drain that has been artificially improved.

DOMINANT ESTATE: Property so situated that its owners have rights on adjacent property, such as a right-of-way or a right of natural drainage. The adjacent land is called the servient land.

DRAIN: Any ditch, watercourse, or conduit, whether open, covered, or enclosed, natural or artificial, or partly natural and partly artificial, by which waters coming or falling upon lands are carried away.

DRAINAGE DISTRICT: A special district created by petition or referendum and court approval. It has the power to construct and maintain drainage improvements and to pay for the improvements

with assessments on the land within the district boundaries. An assessment on the land cannot be greater in value than the benefits of the drainage improvements.

DRAINAGE AREA: The area from which water originates at a given point or location on a stream.

DRY BOTTOM BASIN: A detention basin designed to drain completely after temporary storage of stormwater runoff and to be normally dry over the majority of its bottom area.

EASEMENT: An acquired right to cross or use another's property.

EROSION: The general process whereby earth is removed by flowing water, wave action, or wind.

EXTENDED DETENTION: A stormwater design feature that provides for the detention and gradual release of a volume of water over a specified period of time to increase the settling of urban pollutants and to protect the channel from frequent flooding.

FILTER FABRIC: A temporary barrier of permeable fabric designed to intercept and slow the flow of sediment-laden stormwater runoff; traps sediment and sediment bound pollutants while allowing the stormwater runoff to permeate through the fabric.

FLOOD CONTROL: Flood mitigation measures, usually structural, to reduce the extent (elevation and/or area) of flooding. Generally includes reservoirs, levees, and channelization.

FLOOD MITIGATION: An action or set of actions taken to prevent flooding or mitigate the impacts of flooding. Remedial and/or preventative actions come in the form of stormwater regulations for development, floodplain management, stormwater detention/retention, levees, and non-structural activities such as open space preservation.

FLOOD PROTECTION ELEVATION: The elevation above which regulated structures within the floodplain must be elevated. The flood protection elevation is equal to the base flood elevation plus a specified amount of freeboard. The freeboard is typically one or two feet.

FLOODPLAIN: A relatively level, continuous area adjacent to a lake or stream channel which is submerged during times of flood; and natural depressions including wetlands which are periodically inundated by stormwater.

FLOODPLAIN MANAGEMENT: A set of actions taken to minimize damage to persons and property within the floodplain. These actions often include floodplain development regulations, floodplain acquisition and preservation and floodproofing.

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

FLOODWAY: The channel and that portion of the floodplain adjacent to a stream or watercourse which is needed to convey the anticipated existing 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 increase in velocities. In some cases, the floodway may include that portion of the floodplain containing 90% of the floodplain storage volume. Floodways can be calculated based on either existing or future land use runoff conditions.

FREEBOARD: An increment of elevation added to a design elevation or structure to provide a factor of safety for uncertainties in calculations, unknown localized conditions, wave actions, future development, and unpredictable effects such as those caused by ice or debris jams.

HIGH WATER MARK: The point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation or other easily recognized characteristics.

HYDRAULICS: The science dealing with the mechanical properties of liquids; it describes the pattern and rate of water movement.

HYDRAULICALLY EQUIVALENT, INCREMENTAL COMPENSATORY STORAGE: Compensatory storage placed between the proposed normal water elevation and the proposed 100-year flood elevation. All storage lost or displaced below the existing 10-year flood elevation is replaced below the proposed 10-year flood elevation. All storage lost or displaced above the existing 10-year flood elevation is replaced above the proposed 10-year flood elevation.

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

IMPERVIOUS SURFACE: Man-made or natural materials through which water, air or roots cannot penetrate and which prevents the movement of surface water down to the water table.

INFILTRATE: The passage or movement of water into the soil.

ISOLATED WETLANDS: Wetlands completely surrounded by upland with no definable surface-water connection to the surface tributary system, interstate wetlands or other Waters of the United States and is itself not defined as a Water of the United States by the Federal Government.

MAINTENANCE: Preserving and keeping each type of roadway, structure, and facility as close as possible to its original condition or as later improved.

MITIGATION: Any action taken to permanently eliminate or reduce the long-term risk to human life and property and the negative impacts on natural and cultural resources that can be caused by natural and technological hazards. Mitigation is an action that compensates for the impact of development on a wetland.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP): A federal program to provide flood insurance to businesses and residents within communities adhering to minimum state and federal floodplain management standards. The NFIP is administered by the Federal Emergency Management Agency (FEMA)

NATURAL DRAINAGE RULE: Where two adjoining pieces of land are so situated that one is dominant and the other servient, the dominant landowner has the right to have water flow naturally from his or her land to that of the servient landowner.

NON-POINT SOURCE POLLUTION: Pollution which has no single discharge point or origin. Pollutants are usually comprised of sediment, organic compounds, toxic metals and various pathogens. Sources of non-point source pollution typically include urban and agricultural runoff and effluent from septic systems and landfills.

ONSTREAM DETENTION: A stormwater management system designed to manage stormwater in its original stream or drainage channel.

OUTFALL: The point, location, or structure where stormwater runoff discharges from a stormwater facility to a receiving body of water.

PEAK FLOW: The maximum rate of flow of water at a given point in a channel or conduit.

PERMEABLE: Having pores or openings that permit liquids or gases to pass through.

POINT SOURCE POLLUTION: Pollution which is discharged from a single point or structure. Most often, a point source is a pipe delivering effluent from a wastewater treatment facility or industrial facility.

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

RECEIVING WATER BODIES: Streams, lakes, wetlands, etc., into which stormwater is discharged.

RECHARGE: Replenishment of groundwater reservoirs by infiltration through permeable soils.

REMEDIATE: To remedy or fix a problem. For example, flood control reservoirs can be used to remediate flooding problems.

RETENTION FACILITY: A basin designed to completely retain a specified amount of stormwater runoff without release except by means of evaporation, infiltration, emergency bypass or pumping.

RETROFIT: A stormwater best management practice installed after development has occurred to improve water quality and meet other watershed restoration objectives.

RIPARIAN: Land bordering a stream, river or lake.

RIPARIAN ENVIRONMENT: Land bordering a waterway or wetland that provides habitat or amenities dependent on the proximity to water.

RIP-RAP: Stone of a nominal diameter often placed in area of pool fluctuation or high velocity flow to prevent erosion of the underlying soil particles.

RIVERINE: Of or produced by a river. Riverine floodplains have readily identifiable channels. Floodway maps can only be prepared for riverine floodplains.

RUNOFF: Water which moves through the landscape, either as surface or subsurface flow, which originates from atmospheric precipitation, initially in the form of rain or snow. Runoff is that portion of the hydrologic budget which produces surface water in streams, lakes, and wetlands.

SEDIMENT: Solid soil material, both mineral and organic, that is being moved or has been moved from its original site by wind, gravity, flowing water or ice.

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

SETBACK: The horizontal distance between any portion of a structure or any development activity and the ordinary high water mark of a perennial or intermittent stream, the ordinary high water mark of a lake or pond, or the edge of a wetland, measured from the structure's or development's closest point to the ordinary high water mark, or edge. Allowable development

features within setbacks typically include minor improvements such as walkways and signs, utilities, park facilities, and lawns.

STORM SEWERS: Usually enclosed conduits that transport excess stormwater runoff toward points of discharge, sometimes called storm drains.

STORMWATER: Those waters that run off the land surface which originate from atmospheric precipitation, whether initially in the form of rain or snow.

STORMWATER MANAGEMENT: A set of actions taken to store, convey, or otherwise manage stormwater runoff to minimize the negative impacts of runoff from urban surfaces. Broadly interpreted, stormwater management encompasses both structural and non-structural measures to directly manage runoff as well as measures to protect natural water features such as streams, floodplains, lakes, and wetlands.

STRUCTURAL FLOOD CONTROL MEASURES: Flood control techniques that modify flood flows. Examples are dams, reservoirs, levees, channel alterations, and diversions.

SURFACE WATER: Waters that fall on the land from the skies or arise in springs and diffuse themselves over the surface of the ground. Such waters follow no defined course or channel, and do not gather into or form any more definite body of water than a mere bog or marsh.

TOTAL MAXIMUM DAILY LOAD (TMDL): A calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. It is the total of the allowable loads of a single pollutant from all contributing point and non-point sources, and includes a margin of safety and consideration of seasonal variations.

URBAN RUNOFF: Runoff with characteristics reflective of urban land use. This usually includes increased volumes due to imperviousness and to degraded quality representative of non-point pollution associated with domestic activities.

URBAN RUNOFF SEDIMENTS: Contaminants commonly found in urban runoff which have been shown to adversely affect uses in receiving water bodies. Pollutants of concern include sediment, heavy metals, petroleum-based organic compounds, nutrients, oxygen-demanding organics (BOD), pesticides, salt, and pathogens.

WATERSHED: All land area drained by, or contributing water to, the same stream, lake, or stormwater facility.

WET BOTTOM BASIN: A detention basin designed to maintain a permanent pool of water after the temporary storage of stormwater runoff.

WETLAND: An area that is inundated or saturated by surface water 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.

WETLAND MITIGATION: Measures taken to compensate for wetland disturbances such as filling, dredging, draining, impoundment, and vegetation removal. Mitigation measures include enhancement of existing wetlands (including the disturbed wetland) and creation of new wetlands.

WETLAND MITIGATION BANK: A site where aquatic resources such as wetlands or streams are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for authorized impacts to similar resources. Third party mitigation banks generally sell

compensatory mitigation credits to permittees whose obligation to provide mitigation is then transferred to the mitigation bank sponsor.

2-YEAR EVENT: A runoff, rainfall, or flood event having a fifty percent chance of occurring in any given year. On average, an event of this size or larger will occur once every 2 years. Rainfall depths of various frequencies and durations can be found in Bulletin 70 from the Illinois State Water Survey.

100-YEAR EVENT: A rainfall, runoff, or flood event having a one percent chance of occurring in any given year. On average, an event of this size or larger will occur once every 100 years. Rainfall depths of various frequencies and durations can be found in Bulletin 70 from the Illinois State Water Survey.