You may be experiencing drainage problems such as a flooded basement, basement seepage, excessive sump pump flow, or water ponding on your yard for long periods after it stops raining. Depending on whether your problem is with surface water or subsurface water, the options for resolving the problems are different. This pamphlet provides guidance in addressing your drainage problems and provides a general understanding of Illinois Drainage Law and the DuPage County Stormwater Ordinance. In most cases, the property owner is responsible for addressing problems on their property.

Overview of Illinois Drainage Law

Illinois Drainage Law is based on the civil-law of natural drainage. The basic principle of the law of natural drainage is that the landowners take whatever advantages or inconveniences of drainage nature places upon their land. This unlimited right was modified by the 1974 Supreme Court adoption of the limitation for Reasonable Use. Application of the above principals are not clearly defined in the Law but in general, owners of lower ground must receive water that naturally flows from higher ground, however, any alteration of the flow of water from higher ground is governed by the reasonable use of said land.

In summary, landowners may not:

- Obstruct the flow of surface water using dams created by landscaping berms, fences, gardens or compost bins; or
- Increase or accelerate the flow of water unreasonably as to cause erosion or damage downstream.

DuPage County Stormwater Ordinance

The Village of Glen Ellyn has adopted the DuPage County Countywide Storm Water and Floodplain Ordinance. All developments in the Village of Glen Ellyn must adhere to this Ordinance. In general it requires that site improvements do not:

- Result in unreasonable new or additional expense for flood protection by downstream properties;
- Unreasonably increase flood elevations or decrease flood conveyance.
- Degrade surface or groundwater quality.

Types of Water

Surface Water

Stormwater runoff will flow from higher to lower ground. During low magnitude storm events much of the water will be absorbed into the ground and very little will runoff as surface flow. As the storm magnitude increases the volume of runoff will increase. Once the ground is saturated and the rain can no longer infiltrate into the ground, you should envision all of the grass area as being a paved parking lot since all of the subsequent rainfall will be converted to surface runoff. With this image in mind it should help you to envision the need to provide a positive path for the flow of water through your property and away from your home. Drainage swales, drainage pipes, diversion berms and other flood protection methods can be utilized to direct the water away from your foundation. Achieving overland drainage via swales or grade diversions is preferable to underground piping systems since their capacity to convey flood flows is typically much greater than with an underground piping system.

Subsurface Water

The water table is the level of the groundwater and it can fluctuate several feet throughout the year. Groundwater may continuously flow at a level that is intercepted by your basement or crawl space throughout the year or just during rainy periods. When basements are constructed, underground drain pipes and sump pumps are used to take groundwater away from the foundation and to discharge it away from the house. During a storm event surface waters need to be diverted away from foundation walls otherwise the water can flow very quickly down along the basement walls or enter into window wells and then have to be pumped out via your sump pump system. These flows can be significantly greater in magnitude than normal groundwater flows and may overwhelm the capacity of the sump pump system. In addition the discharge of the sump pump must be located so that the water does not recirculate back into the sump drainage system. Downspout discharge can also be a major source of water into the sump drainage system. A simple splash block, gutter extension or grade change may all be what is necessary to prevent this surface water from entering into the sump drainage system. Since the function of your sump pump is critical during storm events, when power outages are more likely, a battery backup sump pump or stand by generator can be a wise investment.

Downspout and Sump Pump Discharges

One of the largest numbers of unresolved drainage complaints received by the Village is due to sump pump discharges. Because sump pumps are discharging subsurface water these discharges can occur during non-rainfall periods. This discharge of water can cause areas to be wet and soggy and prevent the normal use and enjoyment of the affected property. To minimize the impact of active sump pump discharges onto adjoining properties the Village does allow for the connection of the sump pump to the public storm sewer system. If a storm sewer is not in close proximity, then the discharge of the sump into a drywell or underground pit constructed of stone may be a viable option. In surface outlet situations, sump pump, pipe, or downspout discharges should be directed to flow at least 20 feet overland before it drains onto adjoining properties or the public right of way.

Sanitary Sewer Backups & Overhead Sewers

During rainfall events, stormwater may enter into the Village main sanitary sewer lines and overwhelm the capacity of the sewer to handle the increased flow of water. In these cases the sewer line becomes pressurized and water can actually back up into the service laterals of the adjoining homes. Current practice is to install overhead sewers into all buildings; however, many older homes have a direct gravity feed from the house into the main sewer line. If the elevation of the basement is below the pressurized water level in the sewer line, the sewage flow will back up into the basement. Although this is actually sanitary sewer water, most of the source of the water is from the surface runoff and so many homeowners mistakenly believe the flooding in their basement is caused by surface flows. If your basement does flood, you should first check if the source of the water is sewage backup. The Village Public Works Department or Development Civil Engineer can assist you in this evaluation. Installing overhead sewer lines will permanently solve any sewage backup issues. The Village currently has a cost sharing program for installing overhead sewers.

Surface Ponding

Surface water must flow from higher to lower ground. In some instances the slope of the land is relatively flat and because of minor ground variations, vegetation and manmade obstructions the water will pond on the surface before infiltrating into the ground. In general, surface water ponding should dissipate within 72 hours of a rainfall event. Because of the natural topography of Glen Ellyn, many homeowners' yards are located in natural depressional areas that have no surface outlet. These areas need to be drained by an underground storm sewer system. To ensure that these areas drain during and after storm events the storm grates must be maintained open and free of debris. The Village cannot inspect every storm drainage structure during a rain event so, if you are in a low area, your vigilance and assistance in keeping the storm grates clear of litter and debris will help minimize the duration of ponding which occur in these areas. For rear yard depressional areas the extension of a storm line from the public system to the rear yard can be done by the homeowner. Many times there are multiple properties impacted by the lack of a positive surface outlet and so neighboring homeowners need to work together to provide a solution. Residents should contact the Public Works Department at 630-469-6756 if they desire to connect to the public storm sewer system.

Flood Plain Properties

Flood plain maps are available for viewing at the Civic Center to assist in determining if a property is located within a designated flood zone. Access to this information is also available on the Village's website. These maps are approximate only. Actual ground and foundation elevations must be obtained to determine the flood risk for a property. A Professional Engineer or Land Surveyor can be hired to obtain this information. The Village Development Civil Engineer can assist you in reading the flood plain maps and identifying flood protection elevations.

General Permit Requirements

All new home construction is governed by the building permit process of the Village. This permitting process requires a significant amount of detail be provided by the applicant to demonstrate that the new construction will not significantly impact the adjoining properties. It is understood that typically new construction is adding significant amounts of impervious area and thus increasing the volume of runoff that is being generated from the property. Numerous techniques are employed and required to mitigate these impacts so that for 90% of the storm events neighboring properties should not experience any increase in runoff from the new construction.

Improvements to existing properties, such as patios, decks, driveway extensions, sport courts, garages and building additions that create increases of more than 300 sf of new impervious area must implement measures to mitigate the increased impervious area on downstream properties.

Permitting requirements, forms, and applications are available on the Village's web site.

WHERE DO I FIND HELP?

In many instances a professional landscaper familiar with Glen Ellyn codes can help. In more difficult situations, homeowners' may require the services of a Professional Engineer to design a solution to the problem.

As a first step the homeowner may contact the Village's Development Civil Engineer in the Community Development Department. He/she can perform a drainage review of your property to assess the overall drainage pattern in your area and site specific drainage limitations of your property. He/she can also coordinate the involvement of the Public Works Department if the problem involves the extension of storm sewer lines or sewage back-up issues.

VILLAGE OF GLEN ELLYN

DRAINAGE AROUND YOUR HOME

COMMUNITY DEVELOPMENT DEPARTMENT

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