



# DUPAGE COUNTY

## Guide to Preventing & Repairing Flood Damage







# *Flood Preparation Guidebook*

DuPage County's Stormwater Management Department has created this guidebook to help homeowners understand flooding issues and reduce future flooding impacts on their property. The guidebook lays out common types of flooding and recommends specific actions to help you reduce the threat of flooding damage and repair any damage that may occur.

## **What's causing the flood damage?**

Flooding is a natural occurrence. However, in DuPage County, a flat landscape combined with development over the past few decades contributes to flooding. Flood damage has also increased with more impermeable surfaces and development in the floodplain, before regulations restricted it. On top of all this, storm events are increasing in frequency and severity throughout the Midwest, and the increase in rainfall can overwhelm our infrastructure.

DuPage County is a national leader in addressing difficult flooding issues. Despite the County's investments in new stormwater infrastructure, homeowners are still experiencing flood damage due to past decisions.

## **What can be done?**

We understand how frustrating flooding can be for residents, and we're always working to minimize large-scale flooding. DuPage County has invested in flood control facilities, green infrastructure projects, reservoirs, pumping systems and other mitigation programs to help alleviate the stress flooding may cause communities. However, solving local flooding problems requires a community effort. This means that the solutions to flooding damage **must** come from everyone, not just government agencies. We each need to do our part to preserve the community we call home by protecting our homes and properties.



# Flooding Checklist: What Kind of Flooding Are You Experiencing?

Use this checklist to find the information included in this guidebook that will be most helpful for your particular flooding situation.

✓ Water seeping through foundation cracks and joints into your home or basement

✓ Water backing up through a floor drain in your basement floor

✓ Water seepage coming up through the floor

✓ Overflowing sump pit

*If you're experiencing problems like these, you have **Underground Flooding**. Continue to page 4 to see what you can do to reduce the damage and prevent future flooding.*

✓ Water flowing into your home through an opening (i.e., window, door, etc.)

✓ Standing water in your yard

✓ Water flowing onto your property from a clogged sewer grate or drainage ditch

✓ Water flowing onto your property from an adjacent property

✓ Water flowing onto your property when nearby waterways overflow

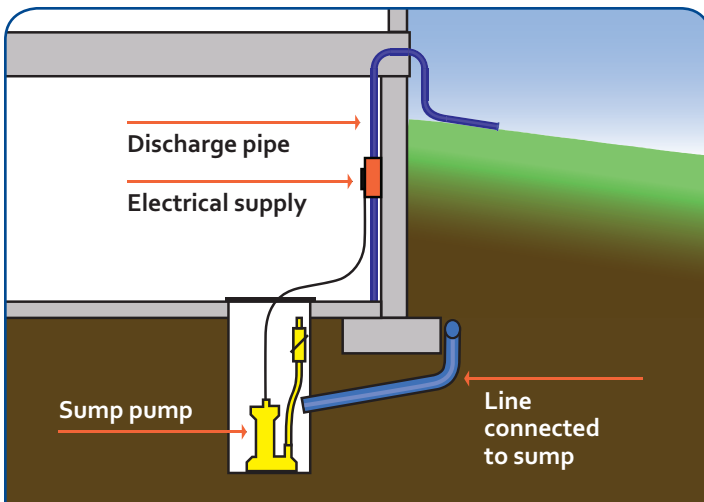
*If you're experiencing problems like these, you have **Surface Flooding**. Skip to page 7 to see what you can do to reduce the damage and prevent future flooding.*

**If you are experiencing problems from both lists,**  
*continue to page 4 to see what you can do to reduce the damage and prevent future flooding.*



# Underground Flooding

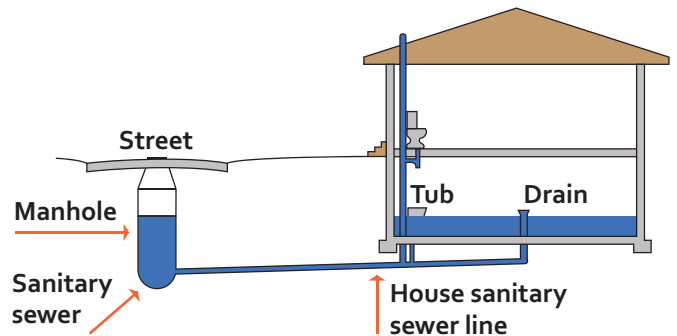
Nothing is more frustrating than coming home to a wet basement, especially when it has happened before. Basement flooding is usually caused by in-home drainage issues. Knowing the causes of basement flooding is an important first step towards preventing future flooding problems. There are several reasons why your home may be experiencing underground flooding:



## No sump pump or sump pump failure

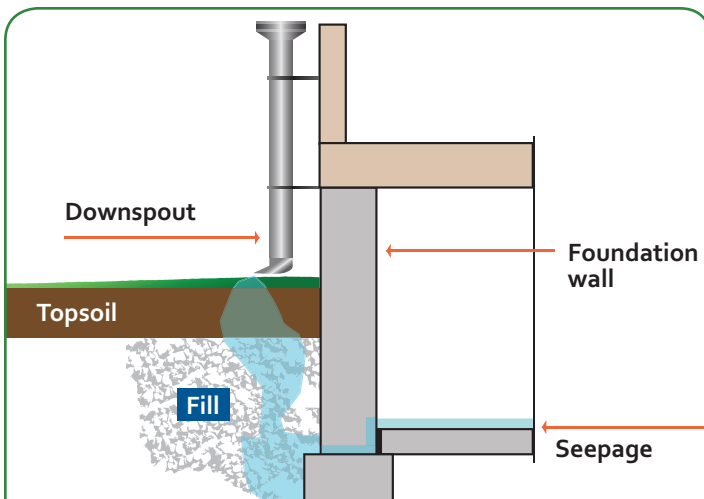
Sump pits collect water surrounding or flowing into your basement. The sump pump then discharges that water away from your home. Lack or failure of a sump pump system can lead to basement flooding.

## Sanitary Sewer Backup in a Residential Basement



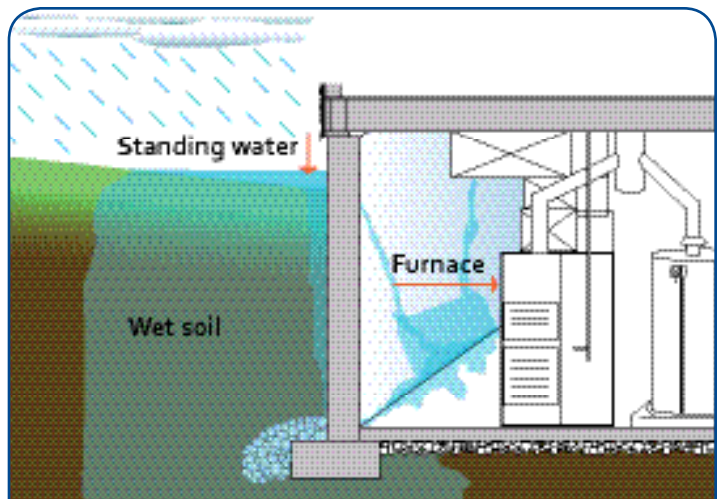
## Overloaded local drainage system

Municipal sewers may become clogged or overwhelmed during heavy storms. If sewer lines are overloaded, water that is supposed to travel out through the pipes can get pushed back up through floor drains.



## Poor drainage surrounding your property

Surface water may be collecting around your home due to overflowing gutters, poorly placed downspouts or poorly graded land. This water may collect next to your home's foundation, overwhelming your drainage system or seeping into your basement.



## High water table

Your home may have been built in an area with a high water table, which means the soil surrounding your basement is occasionally saturated with water. When the water level is higher than your basement floor, your house functions like a boat and water may enter through cracks.



# Underground Flooding Actions

If you're experiencing **underground flooding** – water seeping through foundation cracks or backing up through basement floor drains – consider taking the following preventative actions:



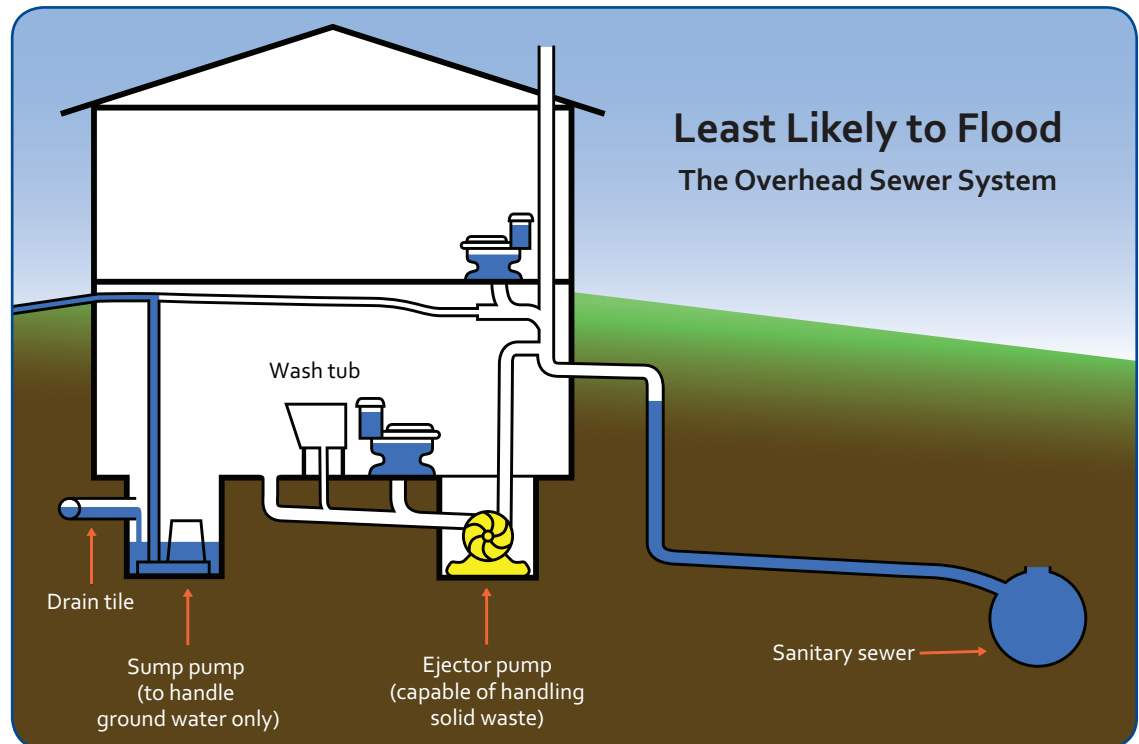
## Install overhead sewers

Overhead sewer systems protect homes from basement sewage backup. Wastewater collects in the basement and then is pumped up to pipes at ground level (overhead, near the basement ceiling). Those pipes then connect with local sewer system. This system prevents most sewer backups because it forces the water to work against gravity. Contact your local government for guidance on installation and permits.

### Quick Tip!

DuPage County offers a cost-share program for homeowners on their system who install overhead sewers. For more information, contact DuPage County at (630) 407-6500. If you're not on DuPage's system, check with your local service provider for programs.

In-home drainage flooding can also occur if you are experiencing overland flooding on your property.



### Quick Tip!

While you're changing your clocks for daylight savings, don't forget to check your backup sump pump battery. A dead battery will do you no good in a power outage!



## Install a sump pump and back-up sump pump in case of power failure

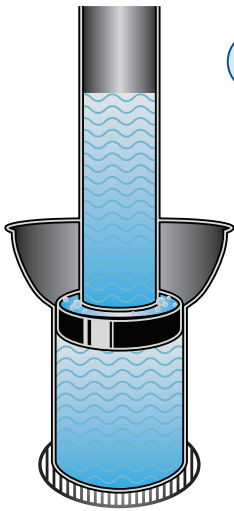
Sump pump systems help collect water surrounding your home and discharge it away from the foundation. They are especially important during heavy rainfall. In case you experience a power outage during a storm, your home should have a backup sump pump that is either battery-powered or connected to a backup generator.



# Underground Flooding Actions

If you're experiencing **underground flooding** – water seeping through foundation cracks or backing up through basement floor drains – consider taking the following preventative actions:

✓ Take simple waterproofing measures, such as:



## 1 Installing a sewer plug or standpipe

A standpipe sticks out of a floor drain. The pipe usually extends a foot higher than previous floods you've experienced. The water will rise up the pipe without spilling out into your basement.



## 2 Using sealant around foundation cracks and joints

*All basements are different. Consider consulting a professional, including licensed contractors, engineers and government staff, before taking any waterproofing actions.*



## 3 Elevating or moving valuables, keepsakes and non-waterproof items out of the basement.

## ✓ Direct drainage away from your house

Ensure downspouts are not connected to a sewer line that frequently backs up. During heavy rainfall events, sewers may reach capacity and additional runoff from our gutters puts more stress on the system, which may lead to more water backing up into homes and basements.

If you are connected to such a sewer line, make sure to direct drainage away from your house when disconnecting the downspout, so that water does not seep back into your foundation.

*To find out what to do after you flood, skip to page 10. If you also experience Surface Flooding, go to the next page.*

### Quick Tip!

Consider installing rain barrels and cisterns. Rain barrels and cisterns are large tanks that can be connected to your home's gutter downspout. They are an easy and inexpensive way to capture and store water falling from gutters, which can later be used to water gardens and lawns.





# Surface Flooding

**Surface flooding** is when water is flowing or collecting on the surface of your property. This type of flooding can be severe and cause homeowners significant property damage. Fast moving floodwaters can also be dangerous to people and pets. Knowing the cause of this flooding is an important first step towards reducing the damage caused by it. There are three reasons why your property may be experiencing surface flooding:



## Poor grading of your property or an adjacent property

*Water always flows downhill and will pool at the lowest points. Not addressing poor grading can lead to more issues over time.*

## Inadequately sized, poorly maintained or blocked stormwater infrastructure

*Leaves and debris can block stormwater drains, causing water to back up onto adjacent streets and properties. Properties can be subject to flooding from drainage systems, regardless of how well they're maintained. Some ditches and sewers are simply inadequate to handle larger stormwater flows.*



## Nearby swollen waterways

*If you're experiencing flooding due to a nearby waterway, you may be in a mapped floodplain. Visit [www.dupageco.org/swm](http://www.dupageco.org/swm) to learn more.*



# Surface Flooding Actions

If you're experiencing **surface flooding** – water flowing or collecting on the surface of your property – consider taking the following preventative actions:



## Install a rain garden or bio-swale

A rain garden is a small garden with native plants that reduces stormwater flow by providing a pleasant area where rain can naturally soak into the ground, instead of entering sewer systems. Bio-swales are similar and are ideally situated near a major source of stormwater runoff, such as a drainage ditch.

Runoff is collected from paved and other hard surfaces and directed into the garden.

Image: The Nature Conservancy

A depression in the earth is filled with a mixture of sand, topsoil and compost that filters water.



Native plants do not require fertilizer and help filter pollutants.

Native plants provide food and habitat for birds, butterflies and other pollinators.

A typical rain garden is between six and nine inches deep.



## Maintain your drain

Regularly clear debris from drainage ditches on your property and nearby sewer grates. If flooding from a clogged drain is occurring during a rain event, contact your local government for assistance. Do not attempt to unclog yourself.



## Did You Know?

Rain gardens are an example of **green infrastructure**. Green infrastructure is a stormwater management practice that protects, restores and simulates the natural water cycle. Unlike grey infrastructure that relies mostly on pipes and conventional hard surfaces, green infrastructure uses soil and plants to allow rainwater to soak into the ground. Putting water back into the ground helps to recharge aquifers and reduces surface runoff to streams and rivers. Other examples of green infrastructure include:

### Rain Barrels



### Permeable Pavers



Rain barrels store stormwater which can be used to water gardens and lawns, while permeable pavers decrease runoff by allowing water to percolate through the pavement's surface.



# Surface Flooding Actions

If you're experiencing **surface flooding** – water flowing or collecting on the surface of your property – consider taking the following preventative actions:



*A well-graded yard*



## Regrade your yard to keep water away from your house

If the land surrounding your house slopes towards your foundation, you may be more likely to experience overland flooding. Encourage positive drainage away from your home by creating a gentle slope against your foundation. This work will require a permit, so ask a professional if this is the right option for you.



## Use sandbags to hold back rising water levels

If overland flooding is severe, you may have to set up sandbags before or during major storm events. Sandbags may be found at your local municipality or township and can be found at your local hardware store. Ensure you do not redirect drainage onto neighboring properties.



## Quick Tip!

Sandbags can be heavy and difficult to transport and dispose of without some help.

Try *sandless sandbags*, a lightweight alternative to actual sandbags. Sandless sandbags are light when dry but will swell up when wet. You can find sandless sandbags at most local retailers.



# After the Flood

No matter the type of flooding you experience, cleanup is usually the same. After your home or property has taken on water, you are probably asking these two questions:



## 1 How do I get rid of standing water?

First, make sure to shut off electricity in your basement, if possible. If the water is higher than your wall circuits and/or you can't reach the circuit breaker, contact your ComEd or your local energy provider to turn off your power. Do not enter a flooded basement when the power is still on. Then, allow any high floodwaters around your home to recede. There should be no standing water near your foundation.

Obtain a pump and a hose, which can be rented from your nearby hardware store, and place it in the lowest spot of your flooded floor. Run the hose out to your yard, making sure that all drainage is directed away from the house and not toward others. Run an extension cord from the pump to a working circuit upstairs and turn on the pump.

If your basement has experienced minimal flooding (less than 1-inch deep), then consider cleaning it up with a wet vacuum. A wet vacuum can hold 4 to 5 gallons and can be rented from your nearby hardware store.

## 2 How do I properly clean up mold and other waste?

To prevent mold buildup, remove any porous surfaces that got wet from flooding. This includes drywall, carpeting, cardboard boxes and wood paneling. Make sure that the wood framing dries out completely before you replace any drywall or panels. In the event of a sanitary sewer backup, be sure to sanitize affected areas.

Run a dehumidifier in the basement or affected room to help accelerate the drying process.





## ***Contacts***

### **DuPage County Stormwater Management**

630.407.6700

### **Illicit Discharge Detection & Elimination**

630.407.6796

### **Protect DuPage**

630.682.7207

### **ComEd**

1-800-Edison-1

### **Nicor**

1-888-Nicor4U

### **Emergencies**

911

### **Get Flood Insurance Before You Flood!**

**[www.floodsmart.gov](http://www.floodsmart.gov)**

For more information regarding the content of this guidebook or other stormwater issues in your DuPage County neighborhood, please visit

**[www.dupageco.org/swm](http://www.dupageco.org/swm)**.



**S**ince 1988, DuPage County Stormwater Management has been at the forefront of regional stormwater planning. Led by the Stormwater Management Planning Committee, which is comprised of both County and municipal representatives, the program strives to reduce flooding and protect local waterways. Stormwater Management provides watershed planning, floodplain mapping, water quality programs, regulatory services and flood operations and maintenance of 17 flood control facilities throughout DuPage County.

Stormwater Management's goal is to ensure residents are provided with regional stormwater management. To accomplish, the program aims to mitigate the effects of urbanization on stormwater drainage, resulting in the reduction of damaging flood events and an improvement to water quality in the County's streams. This is achieved through large flood control facilities, flood protection projects, environmental projects, reservoirs and green infrastructure.

Nonetheless, there is still work to be done to prevent both overbank and localized flooding, and we need help from communities and residents to accomplish this.

For more information, please visit us at [www.dupageco.org/swm](http://www.dupageco.org/swm) or follow us at [www.facebook.com/lovebluedupage](https://www.facebook.com/lovebluedupage) and [www.twitter.com/lovebluedupage](https://www.twitter.com/lovebluedupage).

Sincerely,

Jim Zay

*Chairman, DuPage County Stormwater  
Management Planning Committee*

