

### **If you have a sump pump...**

- Maintain your approved lot grade plan. Do not change this plan when you landscape your property. Sump pump pipes should discharge water at least one foot from the foundation wall. (*The flow from here should meet or exceed the slope of 6 inches for the first 10 feet*).
- If your sump pump discharges on the ground, place a splash pad below where the sump pump discharge pipe comes through the foundation wall.
- Never turn off your sump pump.
- **Do not hook up your sump drainage to the sanitary sewer system.**
- The sanitary sewer system is designed to manage normal flows of sewage, not rain-water or water from sump pumps.
- It is dangerous to drain sump water onto the sidewalk. The resulting algae and ice build-up create a slippery surface that can create a liability issue.
- Consider a backup battery system for your sump pump in case of power outages.

### **Questions, Answers, and Facts**

#### ***What type of piping and materials do I need to use?***

Approved ridged piping such as ABS or PVC must be used. Flexible piping is not allowed inside the home. Permanent solid piping must be used. A check valve shall be installed as close to the discharge side of the pump as possible. *Flexible piping may be used on the outside of the home or in the yard.*

#### ***Do I have to participate in this program?***

Yes, every residence must participate in this program. If you do not have a drantile system with a sump pump an inspection is still required for verification.

#### ***How much does the inspection cost?***

There is no cost if the inspection is done by the City or their representative.

#### ***Can I have someone else complete the inspection?***

In 2007, the City altered its Code to allow property owners to have a private licensed plumber inspect their sump pump. In order to do this, contact the Utility Billing Department at 651.204.6021. All requirements regarding repairs still apply. All costs for private inspection(s) will be borne by the property owner and are not reimbursable by the City.

#### ***How will I know when my neighborhood will be inspected?***

A letter will be sent out to your address. This may be included in your utility bill mailings.

#### ***What if I am an owner of a rental property in Vadnais Heights?***

Every effort is made to notify the resident and the owner. The owner listed by Ramsey County's records is ultimately responsible for completing this inspection.

#### ***Does an adult have to be present for the inspection?***

Yes.

#### ***Is there any financial assistance?***

The City will reimburse your expenses relating to correcting a failed inspection up to \$150.00. All you need to provide is a copy of your passed inspection along with a legible copy of your receipts. The City will reimburse for labor (from a licensed plumber only) and materials **excluding sump pumps**.

#### ***What if I refuse to participate?***

Unfortunately, the City will bill you \$200.00 each quarter on your utility bill until your residence is in compliance.

### **City of Vadnais Heights**

Phone 651.204.6000

Fax 651.204.6100

# Vadnais Heights Sump Pump Inspections

*A guide for  
residents*



# History and Requirements

The City of Vadnais Heights initiated a Sump Pump Inspection Program in 2006. The goal of this program is to reduce the amount of infiltration and inflow of freshwater into the sanitary sewer system. This program will also ultimately reduce the cost of treatment and maintenance of the waste water treatment plant equipment.

## *What is inflow and infiltration?*

Inflow and infiltration are terms used to describe the ways freshwater (groundwater and storm water) enter the sanitary sewer system. Infiltration occurs when groundwater seeps into the sewer pipes through cracks, leaky joints, or deteriorated manholes. Inflow occurs when water is directed from sump pumps or downspout drains into the sanitary sewer.

## *Why is this water a problem?*

Freshwater entering the waste water treatment system creates two main problems.

**First**, it consumes system capacity. It is estimated that for every inch of rainfall the average roof sheds about 1,000 gallons of water. An 8-inch sanitary sewer can handle domestic wastewater flow from up to 200 homes, but only 8 sump pumps, operating at full capacity, or six homes with downspouts connected to the sewer, will overload this same 8-inch line. If freshwater is directed into the sanitary sewer the capacity is ultimately

overwhelmed, sewers back-up into houses, and the system will eventually overflow from manholes causing flooding of raw sewage into the environment. This creates health and safety issues that could have significant costs associated with it.

**Secondly**, freshwater that reaches the waste water treatment plant is treated unnecessarily. This increases the cost of treatment and adds to the wear-n-tear of the equipment, reducing it's life span. The added cost of operations is then passed onto each customer.

## *What is the solution?*

Inflow water needs to be directed to the ground surface where it can then make its way to drainage ditches or storm sewers. The Sump Pump Inspection Program will identify those sump pumps or rain gutter drains that are improperly connected to the sanitary sewer and will provide direction on how to remedy this problem.

## *What is a sump pump?*

The sump pump is a mechanical device, which is located in the sump pit and is used to regulate the level of water within the sump. This device enables ground water to be discharged onto the surface or to the storm sewer system. In those areas that are adjacent to a lake, ravine, river, embankment or in areas that have a very high ground water table, it is required to connect the foundation drainage system to a storm service for the purpose of minimizing soil erosion.

## **Sump Pump Discharge**

The sump removes water from the drain tile (a perforated pipe adjacent to the foundation walls designed to collect ground water), which flows to the sump pit. Once the water in the sump pit reaches a certain level, the sump pump starts and pumps the groundwater through the discharge pipe. The sump pump discharge pipe is usually located at the side of the house. In most areas, the sump pump discharge spills onto a splash pad, concrete sidewalk or through a flexible hose to the common drainage swale. It is important to provide a splash pad and/or a flexible hose below the discharge point. In addition, the flexible hose and/or splash pad should be directed to the adjacent drainage swales. However, the flow should not be directed onto an adjacent property or City property.

## **Lot Drainage Tips**

1. Install an effective drainage system and keep downspouts clean.
2. Keep your drainage system clear so that water can move freely down and away from the side of your house.
3. Attach extensions so that water is delivered at least 10 feet from the foundation.
4. Disconnect any downspouts or 'clear' water connections that drain directly into the sanitary sewer system.
5. Grade and landscape your lot to move water away from the house.
6. Ensure a positive slope away from the wall for at least the first 10 feet. The ground should drop a minimum of 6 inches in this area.
7. Use landscaping to disperse the water more evenly
8. Seal the cracks between your house and your driveway or sidewalk.