



ISSUE UPDATE

SANITARY SEWER OVERFLOW (SSO) OVERFLOW CONTROL PROGRAM

Introduction

Previous issue updates have described the City's program to reduce excessive wet weather flows to the sanitary sewer system. Basic information on the problem is provided on the back side. Our proposed solution involves two major elements. The first track addresses the "public" portion of the system, generally the common sewers and manholes located in the City streets or other easements. This track is fairly well defined and underway with a \$1,000,000 manhole rehabilitation project scheduled for the summer of 2008 and a second phase of manhole and sewer line rehabilitation slated for 2009.

Addressing private property sources:

The second program track addresses storm water and groundwater entering the system from private property through building sewer laterals. Storm water inflow sources, such as roof drains and area drains, are being identified through the City's smoke testing program. The smoke testing is approximately 75% complete and we hope to complete that testing yet this year – weather permitting. In 2008 we will be working with property owners to eliminate storm water inflow sources identified from the smoke testing program.

However, the major source of excess flow from private property is from basement or foundation footing drains that are discharging to the sanitary sewer either by gravity through a direct connection, or through a sump pump discharge connection to the building sanitary sewer.

Demonstration Project

In October, the Owosso City Council accepted a staff proposal to allocate up to \$100,000 to finance a number of individual gravity footing drain separations on a demonstration basis. The demonstration project is important for Owosso because we anticipate encountering a variety of such connections that will require a variety of separation methods with varying costs. Other communities facing this same problem have reported costs ranging from \$1500 to \$10,000 per home. The goals of our demonstration project are to: assess the actual local costs for eliminating such sources, to demonstrate exactly what is involved both for the contractor doing the work and the inconvenience for the property owner, to assess the capacity of local plumbing contractors to perform the work, and to document through follow-up metering how much actual flow is reduced by redirecting these flows from the sanitary to the storm sewer.

Desired demonstration project sites

We desire a variety of locations and age of construction, though we are also looking for sites with significant groundwater. Vacant homes for sale are particularly desirable. The seller could take advantage of the demonstration project financing of the work. The buyer would get a certification that the home conforms to our current sewer ordinance requirements and assurance that they would not be tagged with higher sewer rates or further separation work related to any illicit connection to the sewer system.

Why volunteer to be considered for a demonstration project separation?

- ❖ You would assist in solving a difficult and real environmental problem.
- ❖ If a gravity footing drain connection is found, the demonstration project will pay all necessary costs for the separation. In the future the City will likely pay some portion of the cost for such separations, but likely will not pay the entire cost (future program details are dependent on the findings from the demonstration project).
- ❖ In the future the City will likely impose higher sewer use charges on residences with such connections to cover the cost for handling and treating that additional flow to the sanitary sewer. The range of such future surcharges is projected to vary from an additional \$7.50 to \$37.50 per month based on current costs for treating wastewater. Separating now will assure you avoid such future surcharges.
- ❖ Gravity footing drain connections are subject to plugging and failure over time leading to a wet basement and potential basement structural problems. If there is a current wet basement problem due to a failing footing drain outlet, then the separation may be part of the solution for that wet basement problem.

The first step is to request additional information, which can be done with no obligation. You can contact me directly, or request an information packet (725-0599), or pick up that packet at the City Hall information desk. You can also discuss your situation with your local plumbing contractor.

**Gary Burk, Utilities Director, City of Owosso, 301 W. Main St., Owosso, MI 48867
E-Mail gary.burk@ci.owosso.mi.us Phone 989-725-0555 FAX 989-725-0524**

What is a Sanitary Sewer Overflow (SSO)?

The City Sanitary Sewer System is designed to carry wastewater flows. It is not designed to carry an excessive amount of storm water or groundwater. However, storm water and groundwater (referred to as Inflow and Infiltration or I/I) reach the sanitary sewer system under wet weather conditions in such volume to cause the system to surcharge and overflow untreated wastewater (known as a Sanitary Sewer Overflow or SSO) to the river in violation of state law.

Wastewater flows

On an annual average basis more than half the flow from the City to the wastewater plant comes from inflow and infiltration. This is water that does not need treatment except for being mixed with wastewater. The typical household may discharge 200 to 400 gallons per day to the sanitary sewer. A standard sump pump will discharge that much in 5 to 10 minutes of operation. Under severe wet weather conditions, a residential footing drain can discharge on the order of 5,000 to 10,000 gallons of water per day. The daily peak flow rate from the City under dry weather conditions is between 1400 and 1500 gallons per minute (gpm). The sewer system design peak rate is 6600 gpm. When flows exceed this design rate the main interceptor sewer begins to back up and surcharge. If flows exceed 7500 gpm for over a few hours, the system surcharges to the point where untreated sewage overflows directly to the river from low-lying manholes. Over the past ten years there were 5 such overflows, or an average of an overflow event every two years. The overflows typically occur when there is a combination of saturated ground and precipitation (and/or snowmelt) severe enough to also bring the river to flood stage.