

# Stormwater Management

Village of Cazenovia

Prepared by EcoLogic, LLC

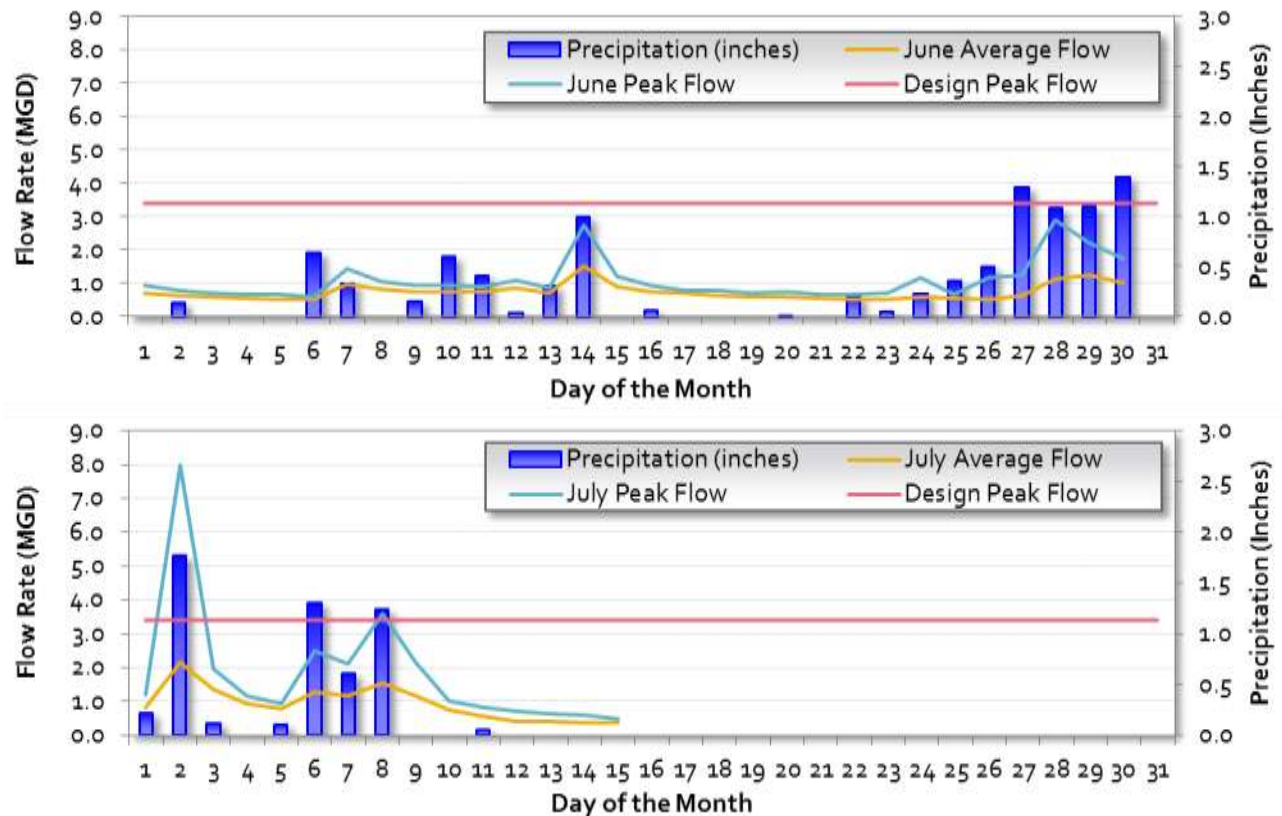
Information Session, July 23, 2013

# Madison County Sewer District Daily Wastewater Flow Rates with Daily Precipitation

Stormwater runoff in the sanitary sewer system impacts the wastewater treatment plant by increasing flow through the plant. The higher flow rates sometimes exceed what the plant was designed to handle.

In these graphs, the daily precipitation (inches) is represented by the vertical blue bars. The average daily rate of flow in MGD (million gallons per day) through the treatment plant is represented by an orange line. The peak daily flow is represented by the green line. The horizontal red line at 3.4 MGD represents the peak flow that the treatment plant is designed to handle.

In general, the peak daily flow (green line) is below the red line, indicating that the flow through the plant is not exceeding the design peak. There are two dates in July where the peak flow exceeds the design limit of 3.4 MGD.



The daily peak flows in the treatment plant generally correspond to precipitation events - where there is precipitation over half an inch, there is generally a corresponding spike in the daily peak flow at the plant. This means that the stormwater runoff from the precipitation is getting into the sanitary sewer system, and is going to the treatment plant.

# How does storm water get into the sanitary sewer system?



This graphic shows the ways that stormwater runoff can get into the sanitary sewer system. In some cases, it seeps in through breaks in the pipes. However, in other cases it gets in through deliberate connections that channel the stormwater runoff into the sanitary sewer system.



This photograph shows an illegal connection of a basement sump pump to the sanitary sewer line. In the Village of Cazenovia, such connections are illegal.

## Article VI, §136-32 of the Village of Cazenovia Code

*No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, cooling water, swimming pool water or unpolluted industrial process waters to any sanitary sewer.*

# What does this mean? What is being done?

During large rain events, when the flows run high at the treatment plant, the cost of treatment increases:

- Extra equipment is turned on, resulting in increased cost for power
- An additional water treatment chemical is added to preserve the plant's biological treatment capacity
- More chlorine is needed for disinfection
- A dechlorination chemical is needed to remove the extra chlorine to protect the fish in the stream
- Extra staff must be paid to be on-hand to manage the extra treatment.

This year, the MCSD has already depleted its chemical budget line item as a result of the extra treatment needed for stormwater runoff.

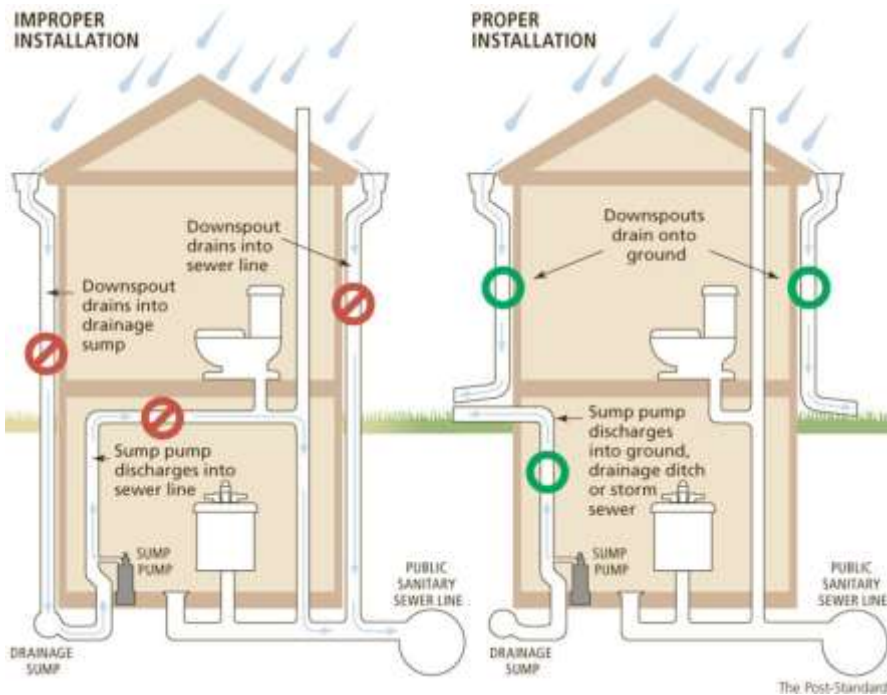


The Madison County Sewer District is taking steps to address stormwater runoff infiltration, such as checking the integrity of sewer lines.

The Village of Cazenovia is considering a six-month amnesty program for residents who have an illegal hook-up to the sewer system. During the six months, the Village will assist residents to correct their illegal hook-ups. The Village is also considering implementing a penalty after the six-month amnesty period for those who continue to use illegal hook-ups.

# What can I do?

Learn about the correct way to manage stormwater runoff on your property. This graphic demonstrates the proper and the improper installation of gutters and sump pumps.



Other things you can do:

- Check your sump pump and rain gutters to make sure that they are not discharging stormwater runoff to the sanitary sewer line.
- Divert your roof gutters into a garden or rain barrel.
- Use porous surfaces for sidewalks, driveways or walkways on your property. These surfaces will allow rainwater to soak through and into the ground rather than runoff and potentially contribute to flash-flooding downhill.



# Credits And Contacts

- \* Data, graphics, and photographs (except rain barrel photograph) provided by Jim Cunningham, Manager of the Madison County Sewer District
- \* Rain barrel photograph taken at Cazenovia Library by EcoLogic, LLC

## **For More Information, contact:**

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- \* Mayor Kurt Wheeler
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