

# **Village of Clayton Wastewater System Overview**

**Public Meeting Regarding Illegal  
Sump/Stormwater Connections  
February 22, 2016**

# Wastewater Treatment Plant (WWTP)

- \* Constructed in 1976; several upgrades since then
- \* Permitted by NYSDEC to treat maximum 1.1 Million Gallons per day (MGD)
- \* Receives influent from Village collection system
- \* Receives flow from Cape Vincent Department of Corrections Facility via force main

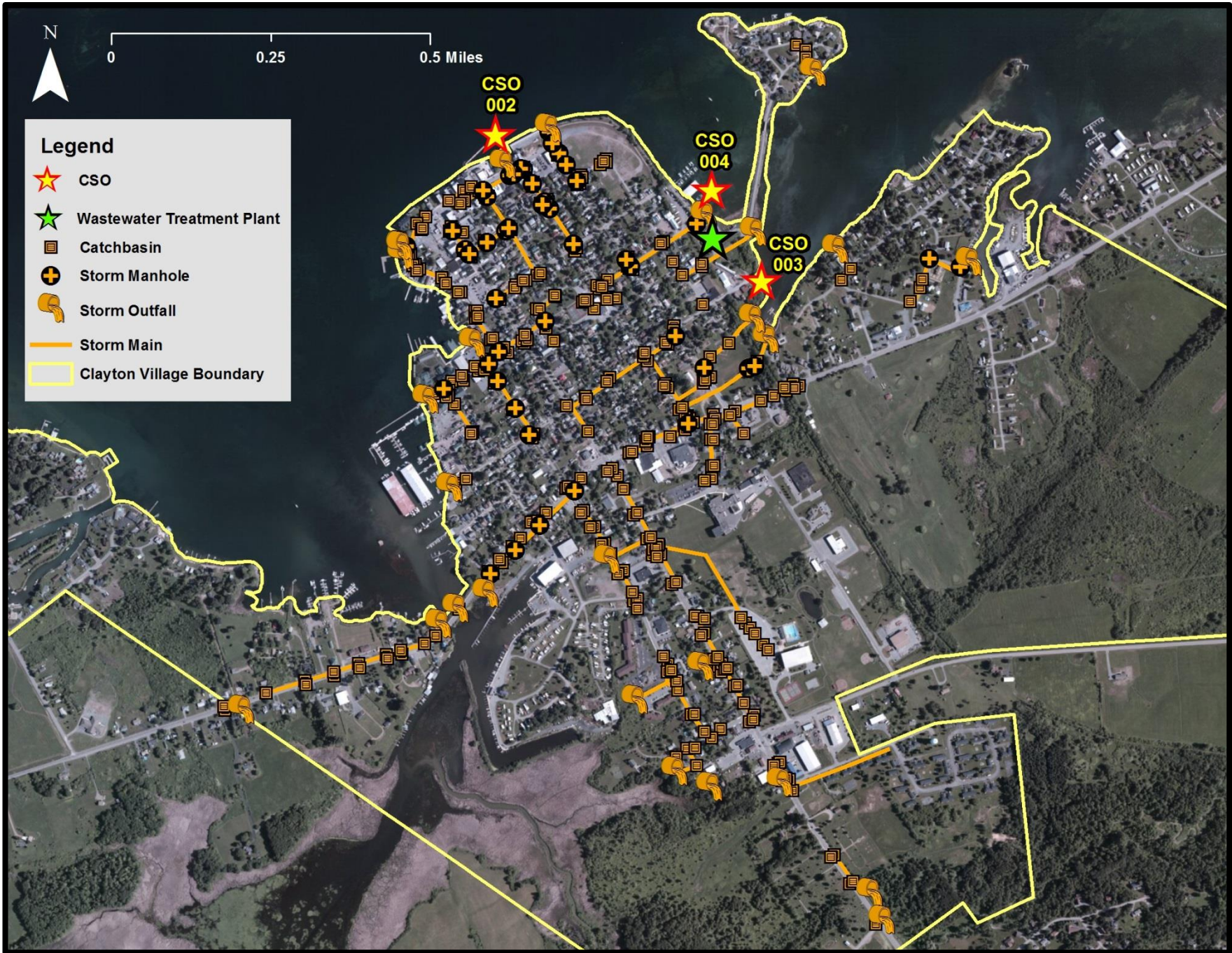
# Collection System

- \* \$4.3M Collection System improvement project completed 2014
  - \* 16.6 total miles of sewer main in the Village
  - \* Relining and repairs made to 3.7 miles of the system
  - \* Upgrades to Riverside Drive, East Union and Mitchmar Pump Stations plus addition of new pump station at Harbor Hotel
- \* 15 pumping stations
- \* 30 individual grinder pump stations

# What Are CSOs?

## Combined Sewer Overflow

- \* CSO discharges combined sanitary and sewer flow
- \* Flow in excess of the capacity of the system
- \* Untreated flow discharges directly to the River
- \* System included three Combined Sewer Overflows (CSO): 1 at East Union PS, 1 at Riverside Drive PS, and 1 at the WWTP

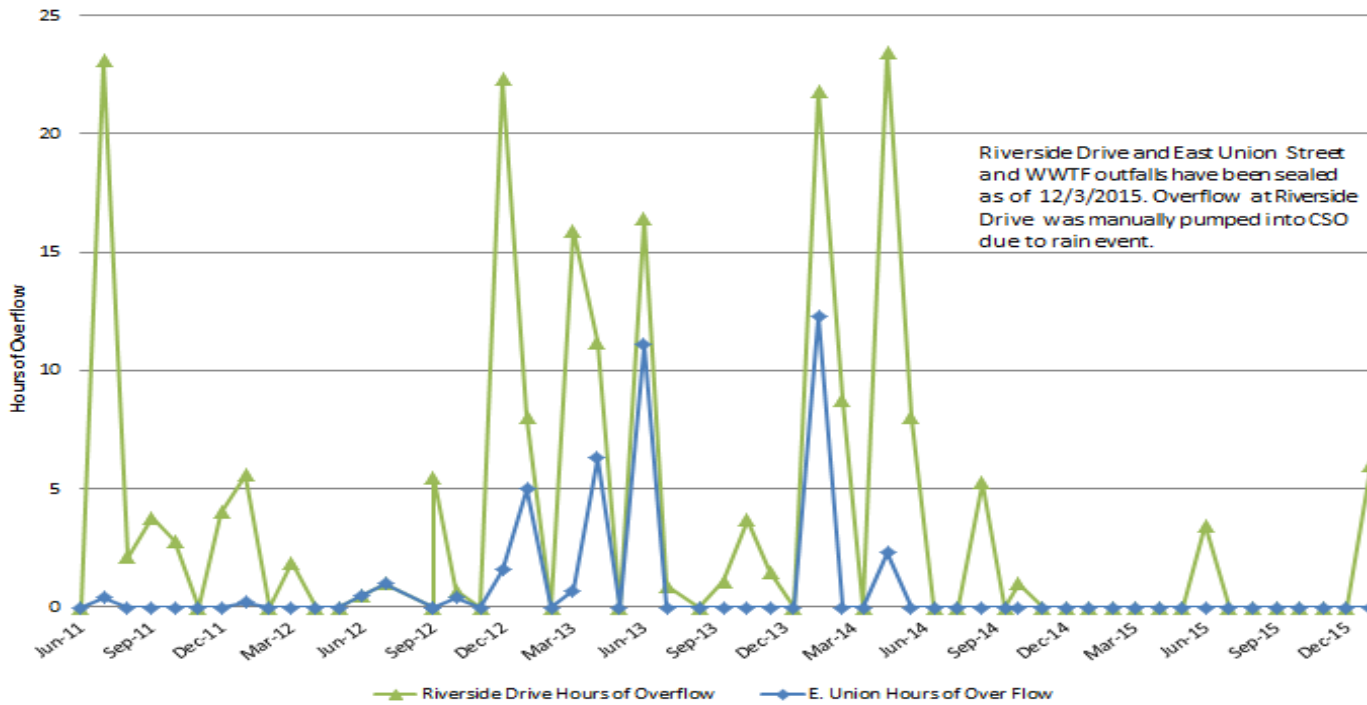


# Why Seal CSOs?

- \* Improved Water Quality
  - \* During CSO events, raw sewage was discharged into the receiving stream (i.e., St. Lawrence River)
- \* Regulatory Compliance
  - \* NYSDEC regulations require municipalities to reduce/eliminate CSOs via their Long-Term Control Plan
  - \* Offset Control Plan: for each new gallon of sewage accepted 2 gallons of stormwater have to be removed
  - \* Existing CSOs did not meet regulatory requirements for flow monitoring, etc.
- \* Economic Development
  - \* Clayton's economy is based on tourism; discharging raw sewage into the St. river near public recreation areas and boaters is not only a public health concern but one of economic vitality for the Village as a whole.

# Historical CSO Flow

Village of Clayton CSO Overflow Hours for Riverside Drive and E. Union

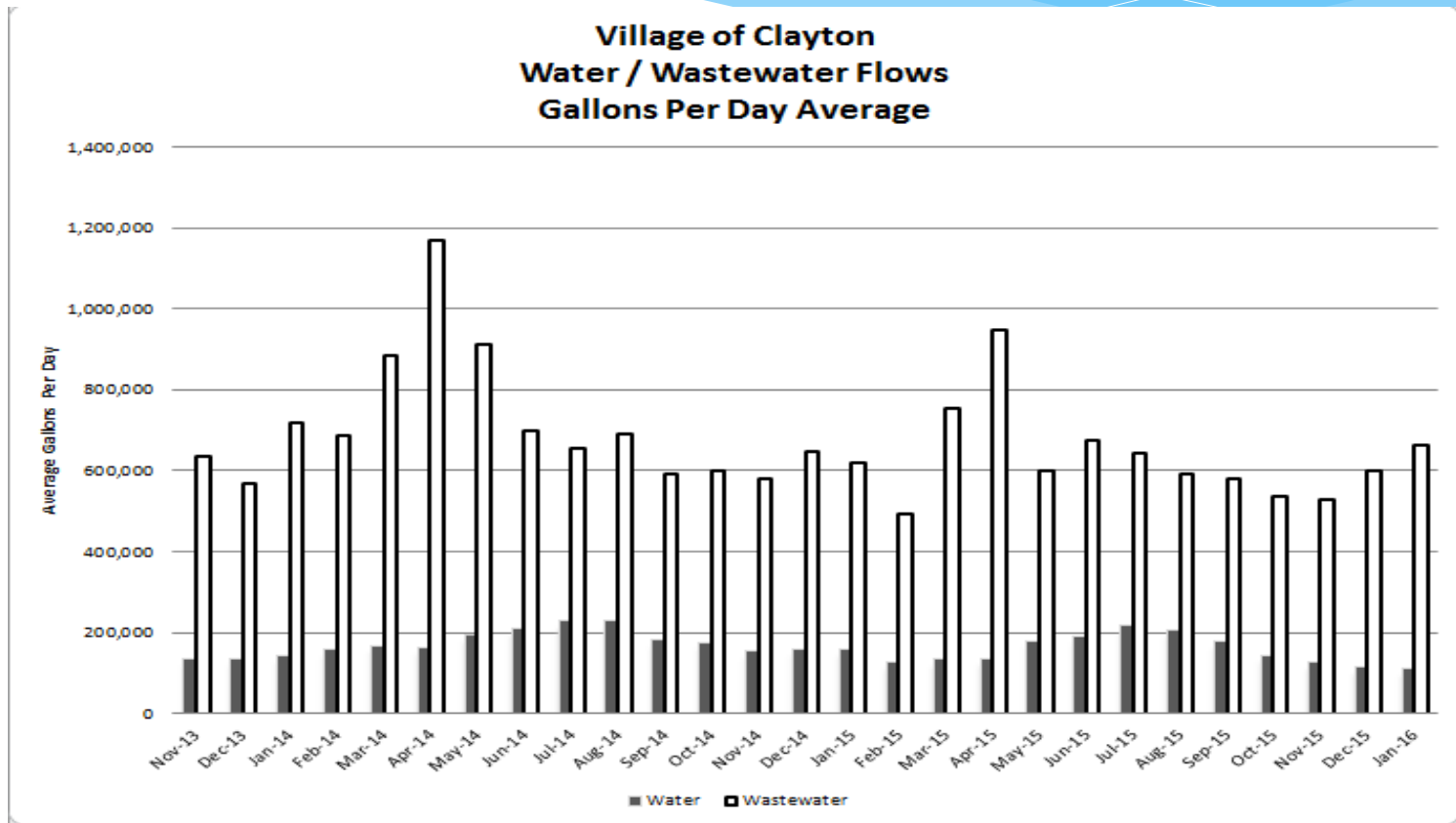


# How do we Benefit?

- \* Removing excess water flow to WWTP
- \* 57,650,750 gals produced vs. 230,150,900 gals treated
  - \* Reduces energy to treat waste stream
  - \* Reduces maintenance and repair on equipment
  - \* Improves efficiency of WWTP to treat waste
  - \* Improves system capacity allowing future development
  - \* Maintain River quality and environment
    - \* Promotes recreation, tourism
- Reduce cost of sampling, testing and reporting



# Water Produced vs Wastewater Treated



# CSO Decommissioning

- \* December 2015 – Village Board Made Decision to Decommission CSOs



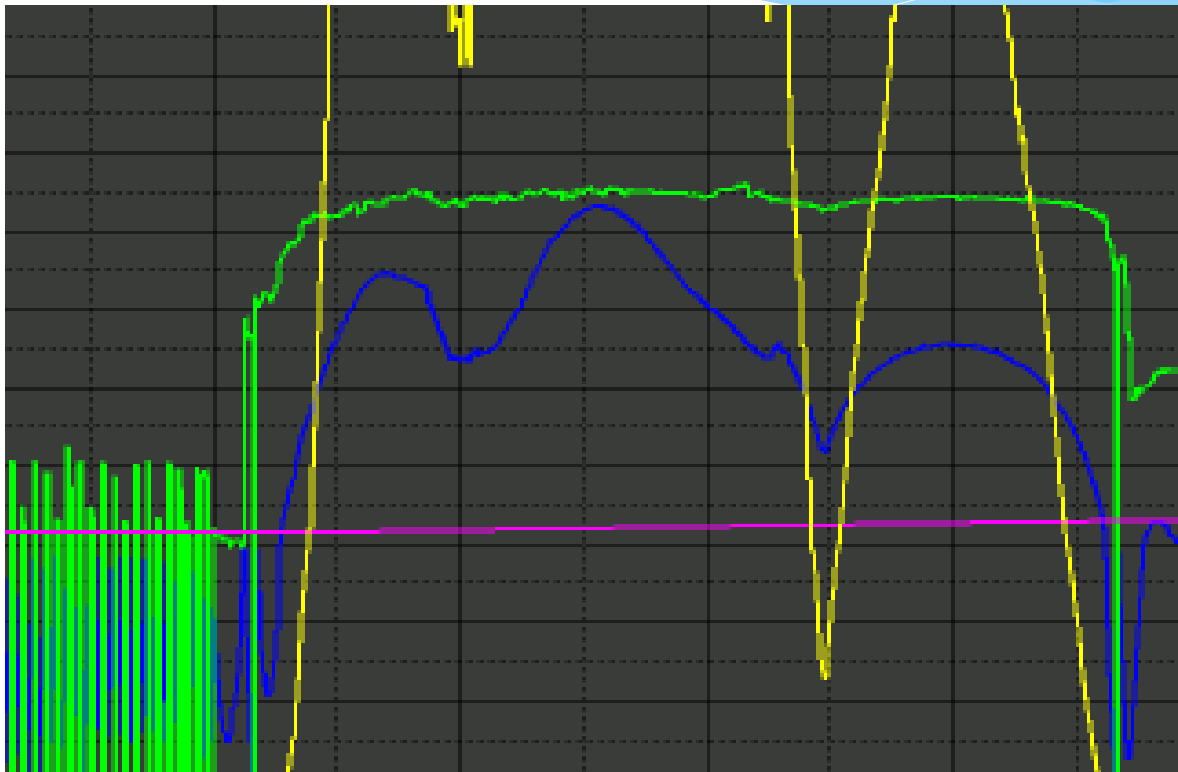
# With CSOs Decommissioned - What Can We Do to Prevent Manual Overflow Events?

- \* Identify sources contributing to high flow
  - \* Storm drains connected to sewer
  - \* Yard drains / catch basins connected to sewer
  - \* Roof leaders / drains connected to sewer
  - \* Sump pumps connected directly to sewer

# Storm Water Infrastructure Village of Clayton

- \* 322 Storm Water Catch Basins
- \* 45 Storm Water Manholes
- \* 27 Storm Outfalls
- \* 34,875 feet (6.6 miles) of Storm Water Lines

# Riverside Drive Pump Station Flow SCADA Flow Data From 1/10/16



# What Goes In Must Come out

- \* Water Produced vs. Water Treated
  - \* 57,650,750 gals produced vs 230,150,900 gals treated
  - \* NYDOH 10% water loss
  - \* Typical ½ hp sump pump can discharge 3,000 gal/hr
  - \* Typical ¾ hp sump pump can discharge 3,500 gal/hr
    - \* Approximate flow at 10 ft/head

# Action Plan – Next Steps

- \* Identify connections to be eliminated
  - \* Smoke and Dye test collection system
  - \* Inspections to identify sump pumps, roof leaders and yard drains tied into sanitary system
- \* Proactively continue to improve the system
- \* Request community assistance to improve and protect our infrastructure and environment.

# Questions?

