

I. FORWARD

The Village of Catskill is a small municipality located on the eastern side of Greene County, along the Catskill Creek, in the State of New York. The Village owns and operates a combined sewer system (CSS) comprised primarily of approximately 95,000 linear feet of separated and combined sewer line; 5 permitted active combined sewer overflows (CSO); a main interceptor line of 7,860 feet; 8 wastewater pumping stations; and a WWTP.

The Village faces several problems concerning its sanitary facilities all which are common among municipalities with older systems such as this. The deterioration of pipes is inevitable over time and allows for water to enter into the system through cracks in the lines, joints and other pipe deficiencies. The other major problem with a combined sewer system is the inflow of water into the system during wet weather conditions caused by runoff. This increased flow causes the sewer system to flow at levels exceeding the piping and the wastewater treatment plant (WWTP) capacity. Therefore this excess wastewater is discharged through one of the several CSO's located within the village into the Catskill Creek prior to treatment. The overall impact of the sewer overflows on the water quality in Catskill Creek are that although high localized levels of coliform bacteria have been measured in the vicinity of discharged points, the bacteria died off quickly in the adverse stream climate

Improvements in the creek water have been anticipated as CSO's are eliminated, resulting in reduced amounts of pathogen-laden and other conventional sewage pollutant discharges from entering the creek. The CSO sources of water pollution result from discharges of wastewater from street and adjacent residential and commercial developments in the Village. The Village currently does not have any industrial facilities; the only known non-CSO source of water pollution is the WWTP, which produces a relatively good effluent consistent with the type of raw sewage received at the plant.

Within the last thirty years the Village of Catskill has proactively implemented projects to separate sanitary and stormwater flows to help reduce overflows into Catskill Creek. With this reduction the quantity of wastewater treated by the wastewater treatment plant (WWTP) is increased and eliminates the need for the CSO's. The WWTP is being operated with all available unit processes optimized therefore minimizing the flow to the CSO's. Through infrastructure improvement projects and regulation enforcement, the Village and the State of New York are in the process of reducing the overflows.

The Village has undertaken the following projects aimed at separating sanitary and storm flows to help reduce overflows into Catskill Creek:

- In 1988, on High Street between Spring Street and Woodland Avenue and the construction of a new 36-inch sewer beneath the Penn Central railroad tracks.
- In 1989, along Broome Street from West Bridge Street to Grandview Avenue;
- In 2000, on Main Street between Union and Canal Streets, including a new energy dissipating structure constructed on Catskill Creek southwest of the intersection of Thompson and Water Streets;
- In 2001, along Clinton Avenue and north towards High Street;
- In 2004, on Grandview Avenue between Maple Avenue and Broome Street, as well as on Landon Avenue, Koppell Avenue and Laurel Lane between Grandview Avenue and Bogardus Street;
- In 2006, on Maple Avenue/Route 9W from intersection with Cauterskill Avenue, northeast towards Catskill Creek;
- In late 2007, commencement on Main Street between William Street and Bridge Street;
- In 2008, CSO #005, Allen Street, was plugged.
- In 2009, infrastructure improvements to the collection system involved the separation of combined piping along Water St., Factory St., William St., and Main St. Approximately 750 linear feet of sanitary sewer and 1,425 linear feet of storm sewer piping were installed.
- In 2010, the combined sewer separation and replacement occurred on Water Street between Bridge Street and Factory Street. Approximately 300 linear feet of storm drain and sewer were separated. CSO #006, Bushnell Avenue was capped/ plugged eliminating it as an active outfall. Additional separation work included the removal of approximately 110 linear feet of interconnected storm line, located on West Bridge St. and connecting to a storm pipe in Elliot Park, as well as the separation of four interconnected catch basins on West Main Street.

Based upon comparison of rainfall monitoring and flows to the WWTP, the Village's combined sewer separation projects have proven to have made a positive impact on the amount of overflow experienced.

In addition, the Village is implementing the following Best Management Practices (BMP) as part of the DEC SPDES permit. The BMP is designed to minimize the amount of untreated combined sewage to the Catskill Creek. The BMP include the following nine minimum controls as well as an additional six control measures:

1. CSO Maintenance/Inspection
2. Maximum Use of Collection System for Storage
3. Industrial Pretreatment
4. Maximum Flow to Publicly Owned Treatment Works (POTW)

5. Wet Weather Operating Plan
6. Prohibition of Dry Weather Overflow
7. Control of Floatable and Settable Solids
8. Combined Sewer System Replacement
9. Combined Sewer/Extension
10. Connection Prohibitions
11. Septage and Hauled Waste
12. Control of Run-Off
13. Public Notification
14. Characterization and Monitoring
15. Annual Report

Recognizing the need to treat all sanitary sewage flows and reduce the incidence of combined sewage overflows, the Village will continue to work aggressively to reduce the number and volume of CSO's in their collection system.