A combined sewer system is often found in older communities where single pipe systems were originally installed to collect sewage and stormwater. Combined sewer overflows (CSO) happen during wet weather events when the discharge of wastewater and stormwater flows into a river, stream, lake, or ocean. These overflow events can cause serious water pollution problems therefore CSO sites require a permit from regulatory agencies.

- A requirement of holding a CSO permit is to report all overflow events and duration for each CSO site when they occur. Failure to properly report events can result in heavy fines to the permit holder. The challenge is to find an efficient, cost effective method of:
  - Monitoring CSO sites remotely
  - Collecting data without a costly, time-consuming and hazardous site visitation
  - Creating reports

Use a Telog Remote Telemetry Unit and Telogers Enterprise software, an information management system, to:

- Eliminate the lag time in your reporting system
- Remotely transfer data from the field
- Automatically download data for real-time reporting

The RTU provides real-time monitoring and alarming of instruments and sensors found in the harsh environment of sewers and underground water vaults. It forwards data wirelessly over existing packet switched 1XRTT cellular networks, to a host computer operating Telogers Enterprise software.

Data communication may be scheduled as frequently as every five minutes, on an hourly or daily basis, or as an immediate, automatic response to site alarm of an overflow condition.

Real-time Data at a Lower Cost
With only a 6-volt lantern battery, the RTU can operate for six months to two years eliminating hard-wired power sources and telephone lines so Telog RTUs can provide immediate cost savings over more complex, wire-dependent systems. Site visits to retrieve data from installed monitors are eliminated as well, with a resulting savings in time as field technicians spend more time on repairs and inspections and less time accessing devices in harsh underground or outdoor conditions.
From RTU to Enterprise
Once transferred data reaches Enterprise, users have immediate access to gain a clear understanding of the extent of the CSO event and the initial action required—without visiting the CSO site.

Data is available for analysis and reporting to water utility authorities, consulting engineers and the regulatory agency. Real-time information also aids in the use of modeling programs, helping municipalities predict CSO events and their potential hazards to adjacent waterways, beaches, and public or private lands.

Using Telogers Enterprise easy-to-use templates for required regulatory reporting, your reports can be sent via email to all relevant offices.

The tabular graph shown in Figure 6 provides additional information such as total flow.