

CITY OF COLUMBIA CLEAN WATER 2020



CLIENT
City of Columbia, SC

LOCATION
Columbia, SC

DURATION
9 months

ROLE
Subconsultant
Utility Management
Services

BUDGET
\$65,000

COMPLETED
March 2020



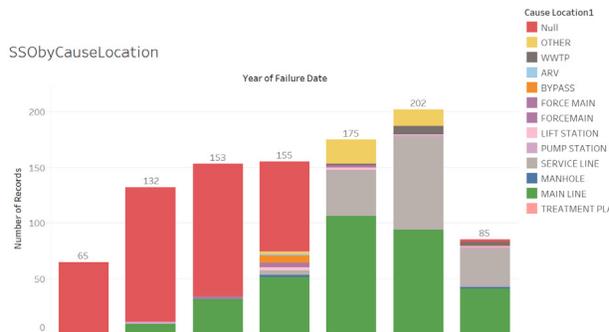
Every year, utilities are increasing the amount of data they collect. However, as data collection increases, the resources and

techniques for pulling insight from this data does not necessarily grow in kind.

Over the past three years, the City of Columbia (City) has greatly improved the data it collects regarding the operations and condition of its sewer system. The City had a desire to better utilize this data collection in streamlining and focusing operations with the goal of ultimately reducing Sanitary Sewer Overflows (SSOs). In partnership with CDM Smith, Blue Cypress led a project to build actionable insights in the City's utility data.

The goal of this project was to identify actionable, key insights regarding the effectiveness of collection system operations and maintenance strategies in an effort to evolve program strategies to more efficiently and effectively meet program goals related to regulatory compliance, environmental levels of service, and customer service. To accomplish this goal, Blue Cypress broke the project in two phases; a discovery phase and a findings phase.

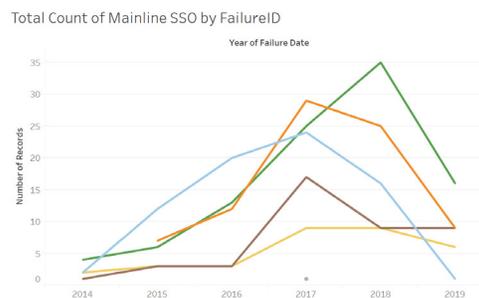
The purpose of the discovery phase was to conduct a thorough document review and existing data analysis. Documentation such as strategic plans and standard operating procedures (SOPs) were reviewed to ensure that strategies are well documented, resources are being deployed effectively, and to identify any regulatory compliance issues. This document review highlights



existing program strategies that can be confirmed and assessed against existing data.

Building from the document analysis, the team reviewed data sources including the GIS database, SSO database, CCTV database, and the Computerized Maintenance Management System database.

To connect these varying sources and provide actionable insight, Blue Cypress used Tableau, a powerful data visualization tool used in the Business Intelligence (BI) Industry. Tableau was utilized to scrub raw data from a variety of data sources into a consistent, easily analyzable format and to develop dashboards to present actionable insights. By combining disparate data sources and presenting the information in a readily consumable format, the assessment team was able to discover system and organizational trends that were not identifiable to



CITY OF COLUMBIA CLEAN WATER 2020



the owners of any single database.

The team then developed a series of findings and recommendations that leveraged the context of the document review and the actionable insights of the data assessment. The team documented key findings and categorized recommendations by effort level and impact to facilitate implementation; this context helps the City appropriately prioritize actions over limited implementation resources. Overall, this effort will help drive the City towards more efficient and effective operations. The findings leverage key organizational strengths with existing data insights to build a roadmap that narrows the gap between current programs and national best practices.

SSO Dashboard

