



## ORGANIZATIONAL ALIGNMENT

### OVERVIEW OF THE SANITARY MAINTENANCE PROGRAM

Prior to the revised Sanitary Maintenance Program, Schaumburg's approach to sanitary operations and infrastructure was reactionary. Asset risk was evaluated based on age of the pipe and location of the sanitary basin where the pipe resides. Engineering staff focused evaluation efforts on singular sanitary basins before moving onto the next geographical location. Operations staff performs sanitary line cleaning and flow assessment. The Village assesses 20% of total mainline each year per operational standards and agreements with the Metropolitan Water Reclamation District (MWRD). Assessment and cleaning totals were tracked in an older software system designed for labor hour input. As a result of recording practices, total length assessed was often miscalculated. When a service line required multiple cleaning passes the total length of pipe cleaned and assessed was double counted, therefore skewing goal tracking.

With the development of the new Sanitary Maintenance Program, the Village now incorporates mainline material into risk calculations. Several sections of the sanitary system were built with asbestos-cement pipe (ACP). ACP's wall thickness degradation caused three large-scale failures within the mainline in a two year period. Now the Village prioritizes sanitary pipe materials based from probability-of-failure (POF) while factoring in location, number of connections, and flow. Sanitary assets with higher total risk receive first priority for condition assessment and televising.

The new program, in addition to utilization of Cityworks AMS, also provides staff the opportunity to adjust asset failure risk based on observed conditions while maintaining the system. The Sanitary division purchased a Sewer Line Rapid Assessment Tool (SL-RAT) to aid in-field evaluations. Staff enter the tool's results directly into the asset's data in GIS through Cityworks AMS.

Staff developed a report to evaluate cleaning and televising labor efforts in real-time. Staff combined sanitary maintenance data across three years: invalid data was eliminated, and incorrect data was adjusted to correct values for assessment footage. Now armed with conditioned data, staff analyzed deficiencies in the current maintenance practices, including the double counting of assessed pipe.

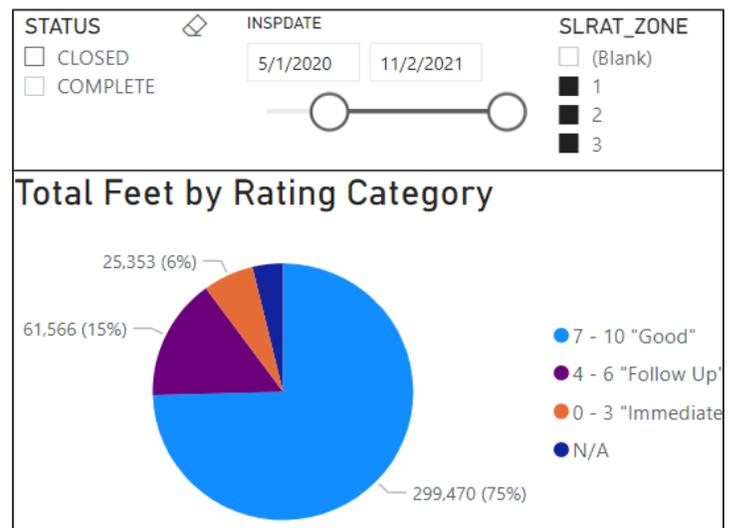


Figure 6: Snapshot of Sanitary Assessment Report

Analysis revealed Village's actual cleaning cycle was approximately 11 years while the assessment cycle was 20 years. Use of the SL-RAT allowed Sanitary staff to split cleaning efforts into standard cleaning and heavy cleaning practices. This allows the Sanitary division to more effectively assign staff assignments based on assessed conditions. Adjusted team efforts allowed the Village to reach the operational standard of 20% assessed mainline annually. Additionally, by adjusting cleaning procedures, staff reduced the total length of sanitary main required for cleaning to 50,000 feet a year. This pushes the Village's assessment cycle to five years, while the cleaning cycle moves up to 20 years due to effective prioritization. The result of these efforts allows the Sanitary division to focus on problem areas and more rapidly address sewer back-ups.