

Guidance for Developing Acceptable Schedules for Cleaning and Inspecting Sanitary Facilities

This guidance, developed in cooperation with the public works and sewer utility staff from seven municipalities within the Milwaukee Metropolitan Sewerage District service area, is intended for use and consideration by municipal staff when establishing schedules for cleaning and inspecting sanitary facilities.

Cleaning

General:

- Gravity Sewers: A proactive maintenance program is recommended whereby “non-problem” gravity sewers are cleaned at least once every five years.
- Force Mains: Cleaning will be determined by local conditions.

“Problem Areas”. Problem areas are defined as those portions of the municipal or private system that are prone to accumulation of grease, roots, solids and/or deposits and would therefore require cleaning on a more frequent basis than that identified as general cleaning above. The schedule for cleaning “problem areas” should be based upon municipal knowledge and documentation, and can be as frequent as monthly.

Inspection

Warranty Inspection: An inspection should occur prior to the end of any warranty period. Engineering staff should notify public works/utility staff approximately three months prior to warranty period end. Public works staff will inspect the warranted facilities, providing inspection records to engineering or other appropriate staff, which allows adequate time for review of inspection records and corrective action under the warranty. For subdivisions, the warranty period should extend to a build-out of the subdivision of 80 percent completion.

Manholes: Manholes are recommended to be inspected on a five-year schedule.

Lift Stations: Periodic inspections are recommended for:

- A. Pumps
- B. Controls
- C. Wet wells
- D. Generators
- E. Buildings and Grounds
- F. Valves and Valve Vaults
- G. Misc.

Inspection schedules should be defined in the written Standard Operating Procedure, which is based upon the manufacturers’ O&M manual and municipal knowledge and documentation.

Force Mains: Annual force main route inspections are recommended to ensure normal functioning and to identify potential problems. If there is an unexplained loss of pumping capacity, additional inspection is warranted. This additional inspection will be defined based upon the pump station and force main configuration.

- Air Release Valves:. Quarterly inspection recommended, which includes exercise of the valve and pump out accumulated ground water.

Gravity Sewers: Inspection schedules should be based on prior condition assessment rating. For purposes of this guidance, the NASSCO condition grades will be utilized; however, any other objective sewer condition assessment methodology may be used to develop condition grades.

Condition grades, including general description, are as follows:

5-Immediate Attention	Defects requiring immediate attention. Pipe has failed or will likely fail within the next five years.
4-Poor	Severe defects that will become Grade 5 defects within the foreseeable future. Pipe will probably fail in 5 to 10 years.
3-Fair	Moderate defects that will continue to deteriorate. Pipe may fail in 10 to 20 years.
2-Good	Defects that have not begun to deteriorate. Pipe unlikely to fail for at least 20 years.
1-Excellent	Minor defects. Failure unlikely in the foreseeable future.

In addition to consideration of the prior condition assessment, other factors such as pipe material, depth, soils and surface conditions may also affect pipe survivability. These should also be considered when establishing inspection schedules.

Flow monitoring data should be utilized to trigger immediate or accelerated inspections and corrective actions.

Inspection schedule recommendations, which should be modified based upon factors as stated above:

Grade 5:	Repair or replacement should be undertaken. If not scheduled for current year reconstruction or relining, inspect quarterly or as conditions dictate.
Grade 4:	Annual inspection is to occur. This sewer shall immediately be placed in a capital program with scheduled repair or replacement within five years.
Grade 3:	Inspections to be scheduled on 5-year cycles.
Grade 2:	Inspections to be scheduled on 10-year cycles.
Grade 1:	Inspections to be scheduled on a 10-year cycle, which can be adjusted based upon municipal knowledge of local conditions.