

Town of Alpine

Sewer Line Preventative Maintenance Program

Purpose

The purpose of this program is to establish a proactive sewer line maintenance schedule in order to maintain proper sewer system function, reduce the likelihood of blockages or backups, and identify potential structural issues within the collection system before they become emergencies.

This preventative approach allows the Town of Alpine to monitor pipe condition, maintain proper flow, and plan for repairs in a responsible and cost-effective manner.

Background

Municipal sewer collection systems require routine maintenance and inspection in order to operate effectively and protect public health, the environment, and community infrastructure. Over time, sewer lines can accumulate debris, grease, sediment, and other materials that restrict flow and increase the risk of blockages or backups. In addition, aging infrastructure may experience structural changes such as joint separation, minor deformation, root intrusion, or infiltration of groundwater.

Without regular inspection and cleaning, these conditions can gradually worsen and may eventually lead to sewer overflows, service disruptions, or costly emergency repairs. Preventative maintenance programs are widely recognized as the best practice for wastewater collection system management and are commonly implemented by municipalities to maintain system reliability.

Routine sewer line maintenance typically includes mechanical or hydro-jet cleaning to remove buildup and restore full pipe capacity, along with periodic Closed-Circuit Television (CCTV) inspections to evaluate the internal condition of the pipes. CCTV inspections allow utility operators to visually identify developing structural issues, monitor pipe condition over time, and plan maintenance or repairs before problems escalate.

Establishing a structured sewer line maintenance program provides several benefits, including improved system performance, extended infrastructure lifespan, reduced emergency repair costs, and better documentation of system condition for long-term planning and regulatory compliance. By implementing a regular cycle of cleaning and inspection, municipalities can proactively manage their wastewater infrastructure and ensure reliable service for the community.

- Debris accumulation
- Pipe deformation
- Flow restriction or stagnation

Implementing a scheduled program will allow Public Works staff to monitor conditions and address minor concerns before they escalate into larger infrastructure failures.

Maintenance Schedule

The Town will implement a rotating sewer line maintenance schedule designed to ensure that all areas of the wastewater collection system receive routine cleaning and inspection on a consistent basis. Rather than performing maintenance across the entire system in a single year, the Town will divide the sewer system into designated service areas and rotate maintenance activities through those areas over time.

Under this program, each service area will receive both hydro-jet cleaning and Closed-Circuit Television (CCTV) inspection every four (4) years. By rotating through different areas of town annually, Public Works staff can maintain the entire system on a predictable cycle while spreading the workload and associated costs across multiple years.

The maintenance rotation will operate as follows:

Year	Maintenance Area	Activities
Year 1	Area A	Jet sewer mains and perform CCTV inspection
Year 2	Area B	Jet sewer mains and perform CCTV inspection
Year 3	Area C	Jet sewer mains and perform CCTV inspection
Year 4	Area D	Jet sewer mains and perform CCTV inspection
Year 5	Return to Area A	Begin cycle again

This rotating schedule allows the Town to:

- Maintain a four-year inspection and cleaning cycle for all sewer mains
- Identify developing issues early through routine inspection
- Maintain system flow capacity through scheduled cleaning
- Manage staff workload and budget planning in a consistent and efficient manner

Public Works will maintain records of all cleaning and inspection activities, including video documentation and condition reports from CCTV inspections. Any structural concerns identified during inspections will be evaluated and scheduled for repair based on severity and operational priority.

The rotation schedule may be adjusted as needed to address emergency repairs, priority maintenance areas, or operational needs identified by the Public Works Department.

Inspection Documentation

All CCTV inspections will include:

- Digital video recording of the sewer main
- Written inspection logs
- Identification of any structural defects
- Identification of infiltration, offsets, or pipe deformities
- Documentation of maintenance or repair recommendations

Inspection records will be retained by the Town of Alpine Public Works Department for future comparison and infrastructure planning.

Corrective Maintenance

If inspections identify issues such as:

- Offset joints
- Pipe deformation
- Root intrusion
- Cracks or structural defects
- Infiltration or inflow

Public Works staff will evaluate the severity and determine appropriate corrective action. This may include:

- Targeted cleaning
- Spot repairs
- Joint sealing
- Point repairs or pipe replacement
- Notification of affected property owners when applicable

Issues that present an immediate risk to system operation will be prioritized for repair.

Program Benefits

This preventative maintenance program will:

- Reduce the likelihood of sewer backups
- Extend the life of sewer infrastructure
- Provide documented system condition history
- Allow for better long-term capital planning
- Reduce emergency repair costs
- Support regulatory compliance and system management

Program Administration

This program will be administered by the **Town of Alpine Public Works Department** under the direction of the **Public Works Director**.

Maintenance scheduling may be adjusted based on:

- Observed system conditions
- Emergency repairs
- Budget considerations
- Operational priorities