Town of Eliot Maine
Municipal Sewer System
Website Index

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Water and Wastewater Information for all Sewer and Water Users

Water meter readings are done quarterly by The Kittery Water District. The water rate is currently addressed in 1,200 cubic foot increments. Payments to be made payable to the Kittery Water District.

17 State Road, Kittery, ME. 03904
Tel: 207-439-1128
FAX: 207-439-8549
Email: KitteryWater@comcast.net Internet: www.kitterywater.org
Hours of Operation: Monday - Friday 7:30 - 4:00

After the water readings are done, the information is forwarded to the Town of Eliot for the sewer billing. The sewer rate is $0.95 per 100 cubic feet of water. The sewer bill is then calculated based on use and includes a service charge and reserve. If you have any questions about you sewer bill, please call the Town Office at 439-1813. Other questions regarding wastewater treatment may be made to the Kittery Sewer District department, Steve Tapley Superintendent at 439-4646.

Please note that ALL water usage affects your sewer bill. It is in your best interest to repair any drips or leaks in toilets and faucets immediately. This wasted water increases both water and sewer bills.

Would you like to receive a lower sewer bill! You can help reduce operating costs!

The sewer use ordinance prohibits the discharge of any floatable oil, fat, wax, grease or suspended solids into the municipal sewer system as grease will solidify when it comes in contact with cold water. To avoid problems for you and your neighbors, it is suggested that items such as bacon grease be poured into an empty can, allow to harden and disposed of with your regular trash.

It is also against the ordinance to discharge roof downspouts, exterior foundation drains, sump pumps or other sources of surface run-off or ground water into the sewer system. These discharges, which create high flows at our pumping stations and treatment plant, these additional flows must be treated as wastewater thus increasing chemical cost.

Remember the discharge of grease or sump pump to the municipal sewer system is not only, illegal, it is costly to process.

Our Municipal Sewer System

Maine Aerial Photography

http://megisims.state.me.us/website/orthomap/viewer.htm

General

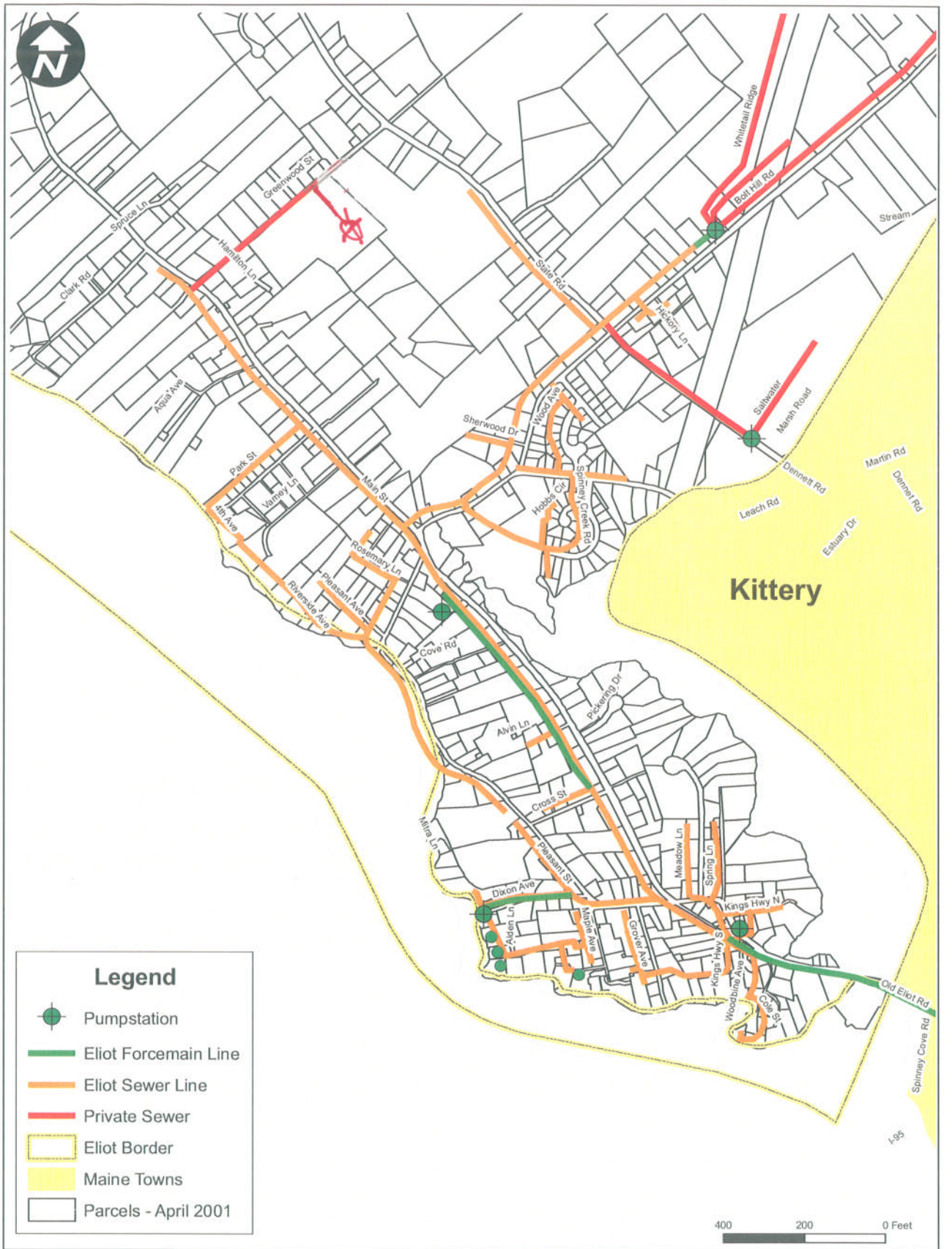
Wastewater collection, treatment and disposal in the Town of Eliot consists of the municipal wastewater collection system, private on-site community wastewater disposal systems and individual on-site wastewater disposal systems. A summary of the data collected with respect to these systems is provided below. The collection system was designed and constructed in the mid 1980's. The area served was divided into basins. Those basins were then tied together via a series of pumping stations. The main pumping station being located at the intersection of Main Street and Kings Highway South were it is then pumped to Kittery.

Municipal Wastewater Collection System

The existing municipal wastewater collection system consists of gravity sewer, force mains and pumping stations. There are also privately owned pump stations and force mains that pump into the existing wastewater collection system. A breakdown of the municipal sewer collection system including the privately owned pump stations and force mains connected to the municipal wastewater collection system is provided in a table below, Breakdown of Municipal Wastewater Collection System.

BREAKDOWN OF MUNICIPAL WASTEWATER COLLECTION SYSTEM

Municipal Gravity Sewers		
Size, inches	Material	Linear Feet
8	**PVC**	**32,256**
8	**DI**	**969**
10	**PVC**	**642**
10	**DI**	**1788**
12	**PVC**	**3,890**
18	**DI**	**45**
Municipal Force Mains		
Size, inches	Material	Linear Feet
6	**DI**	**3,316**
Municipal Pump Stations		
Location	Type	
Main Street	**Submersible**	
Pleasant Street	**Submersible**	
Dixon Street	**Submersible**	
Privately Owned Force Mains and Pumping Stations		
Size, inches	Material	Length	Location/Owner
4/6	**PVC**	**5,100**	**Eliot Commons**
4	**PVC**		**Baran's Place**
3	**PVC**		**Salt Water Marsh**
3	**PVC**		**Blueberry Lane**
3	**PVC**		**Cole Brown Estates**



TOWN OF ELIOT, ME

EXISTING SEWER FACILITIES MAP

March 2008

CONSULTING ENGINEERS

TOWN OF ELIOT SEWER COMMITTEE

NOTICE TO ALL USERS OF THE ELIOT SEWER SYSTEM
September 5, 2007

The purpose of this correspondence is to make the users of the Town of Eliot municipal sewer system aware of the following problems found in recent months.

1. *Inflow:*
   Currently the sewer system is experiencing high flow situations during major storm events. Based on recent flow monitoring these fluctuations in flow levels are being caused by inflow of rainwater into the system. We remind you that it is prohibited for the users of the system to allow basement drains and sump pumps to flow into the sewer system and we ask that other methods of removing such water be used.

2. *Black Flow Prevention:*
   All sewer system users have the potential of the sewer system backing up. We ask that a back flow prevention device be installed to mitigate any potential problems. This is extremely important for users who are experiencing difficulties in using the system during storms.

3. *Grease:*
   Recent examination has shown that the lower Bolt Hill sewer main is nearly completely clogged with grease. This has resulted in having the entire system cleaned.

   Grease of any type should not be discarded into the sewer system. As the grease cools, it solidifies in the sewer system causing blockages. This blockage can adversely affect any user of the system. Grease should be collected, cooled, and discarded into the trash. Grease is a non-point source of harm to the sewer system and its removal from the system is expensive to all. (NOTE: The restaurants of Eliot Commons all have proper grease traps, are inspected periodically, and are not considered the source of this problem.)

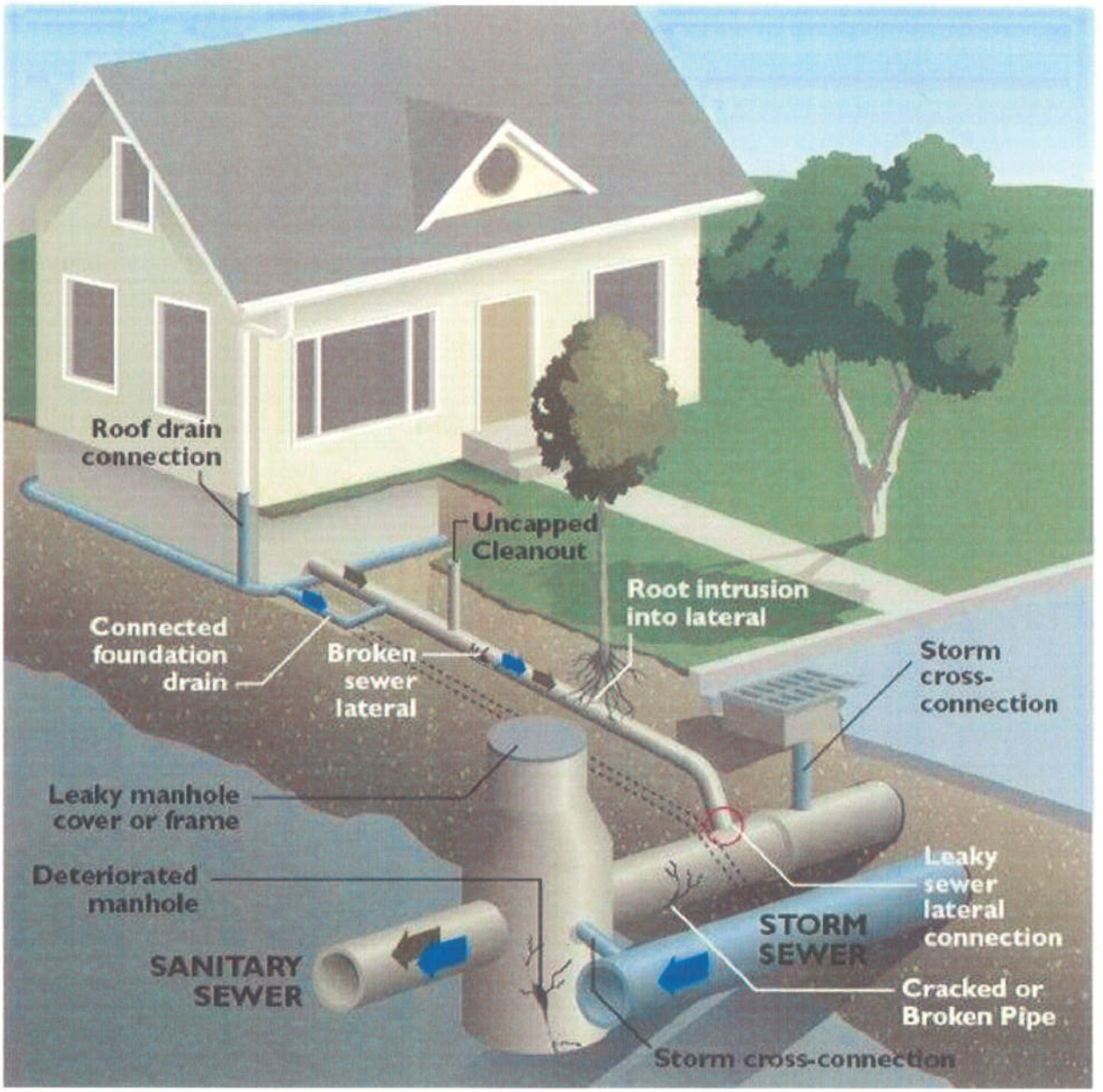
   Please remember that the sewer system was constructed in the mid to late 80's and has a limited life expectancy. We need to treat the system well and in turn; it should not give us problems in the future.

Thank you for your consideration in these matters,
Town of Eliot Sewer Committee

Director: Dan Blanchette, Administrative Assistant
Secretary: Wendy Rawski and Norma Spinney
Overseers: Board of Selectmen

Sewer Committee: Jim Marchese Chairman, Jack McDonough Vice Chairman, Nancy Shapleigh, Robert Ducharme, Steve Beckert, Dwight Snow, Rich Russell, Mary Beth Wiser, Russell Sylvester, Donald Sylvester
Sewer Committee Consulting Engineer: Heidi Marshall, CLD

Formed by the Board of Selectmen on October 25, 2001 to meet on a monthly basis



Infiltration Sources

INFLOW & INFILTRATION

Inflow and Infiltration Elimination Program

Because of continuing problems with overloaded sanitary sewers, the Town of Eliot may be inspecting the entire sanitary sewer system for inflow and infiltration. This inspection may reveal the primary sources of any inflow and infiltration that are causing the problems.

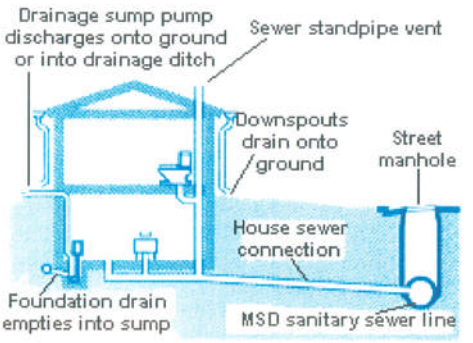
What are inflow and infiltration?

Inflow and infiltration are terms used to describe the ways that groundwater and stormwater enter the sanitary sewer system.

Inflow is water that is dumped into the sewer system through improper connections, such as downspouts and groundwater sump pumps.

Correct Connections

All water from rainstorms and underground seepage should be discharged onto the ground or into a drainage ditch.



Infiltration is groundwater that enters the sewer system through leaks in the pipe.

All of this water is called "clear water" (although it may be dirty) to distinguish it from sanitary sewage.

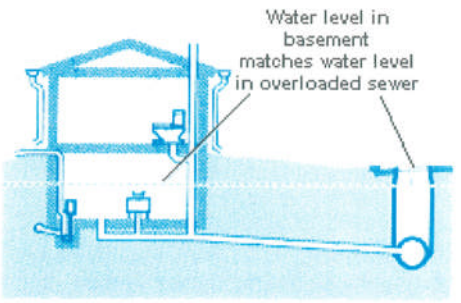
Why is this water a problem?

Clear water belongs in storm drainage systems or on the surface of the ground, and not in the sanitary sewers. When clear water gets into the sanitary sewers, it must be moved and treated like sanitary waste. Too much clear water often causes sewer backups and overflows when it rains.

What is a sanitary sewer?

Basement Flooding

When the sanitary sewers were overloaded, the water level in the manholes and the sewers rises. When it rises above the level of the basement floor, the sewers can back up and flood the basement.



A sanitary sewer is a pipe located in the street or easement that is designed solely to transport wastewater from sanitary fixtures inside your house or place of business. Sanitary fixtures include toilets, sinks, bathtubs, showers and lavatories.

What is a storm sewer?

A storm sewer is a pipe designed to carry rainwater away. Storm sewers are normally much larger than sanitary sewers because they are designed to carry much larger amounts of water. Drainage ditches and swales can also perform this function where storm sewers are not available.

What is an improper connection to the sanitary sewer system?

An improper connection permits water from sources other than sanitary fixtures and floor drains to enter the sanitary sewer system. That water should be going to the storm sewer or allowed to soak into the ground without entering the sanitary sewer.

What are different types of improper sanitary sewer connections?

Some examples of improper connections include downspouts, groundwater sump pumps, foundation drains, drains from window wells and outdoor basement stairwells and drains from driveways.

Where should the water from downspouts, groundwater sump pumps, and/or other clear water sources be directed?

The Town of Eliot's Sewer Use Ordinance and the Maine State Plumbing Code require this water to be diverted to storm sewers (where available) or above-ground drainage ditches and swales.

Why is it important for everyone to remove improper connections?

Removing improper connections will significantly reduce the flow of clear water to the sanitary sewer system. This will reduce the possibility of basement flooding due to overloaded sanitary sewers and lessen the amount of water that has to be treated.

How can overloaded sanitary sewers cause basement flooding?

The water in an overloaded sewer flows at a higher level than normal. If the home has sanitary fixtures or floor drains that are below this higher, overload level, water can flow backward through the sanitary sewer lines into the home.

Do improper connections really contribute large amounts of clear water to the sanitary sewer system?

Yes, and here's why: An eight-inch sanitary sewer can handle domestic wastewater flow from up to 200 homes, but only eight sump pumps, operating at full capacity, or six homes with downspouts connected to the sewers, will overload this same eight-inch line.

How does ELIOT identify the sources of clear water entering the sanitary sewer system?
There are four major methods: dye testing, television inspection, smoke testing and flow monitoring.
By flushing water and clothing dye into a suspicious downspout or sump pump, ELIOT can determine sources of clear water entering the sewers by the color of the water as it flows through the pipes.
By guiding portable television cameras through the sewer pipes, ELIOT can detect many of the sources of clear water entering the sewers.
By filling the sanitary sewer line with smoke and watching where it emerges, ELIOT can detect many more sources of clear water. The smoke is kept from entering buildings by the drain traps required on all sanitary fixtures and drains. It will emerge from the sewer stand-pipe vents on the roof of buildings — and from improper connections such as downspouts. It may also emerge from holes in the ground that lead to leaks in sewer lines.
By inserting special measuring devices into the sewer lines, ELIOT crews can monitor the water flowing through them. If the flow increases during rainstorms, it's a sure sign of infiltration.
What happens when you detect a leak or an improper connection?
If the leak is in the public sewer line, ELIOT will repair it.
If the source of the clear water is in a private line entering the public sewer, ELIOT will notify the property owner. The property owner should consult with a licensed plumber to determine the source of the inflow or infiltration and to have the problem corrected.
ELIOT will conduct a follow-up inspection. If the problem has not been corrected, the property owner and the local plumbing inspector will be notified by ELIOT. This could result in further investigation as a violation of the Maine State Plumbing Code and ELIOT's Wastewater Discharge Regulations.
What can a property owner do to minimize basement sewer backups?

- **Consult with a licensed plumber to review your particular plumbing system.**
- **Consider the installation of a backwater check valve in the basement sewer line.**
- **Consider the installation of a removable standpipe in the basement floor drain. .**

Last Updated: 9/29/2008

I&I Detection

How Sources of I&I are Detected

Flow Monitoring – sewage flow rates are monitored at various locations within the municipal sewage collection system. The flow data is analyzed, along with rainfall data, to determine if there is excessive I&I within the study area.

Smoke Testing – a non-toxic, stainless, odourless, vegetable-based "smoke" is injected, under pressure, into a sanitary sewer manhole. If smoke escapes from a source not connected to the sanitary sewer system, this would indicate a sewer I&I cross-connection.

Dye Testing – non-toxic dye is added to an upstream freshwater source believed to be contributing to I&I. The downstream sanitary sewer is then monitored for traces of the dye to confirm the existence of a sewer cross-connection.

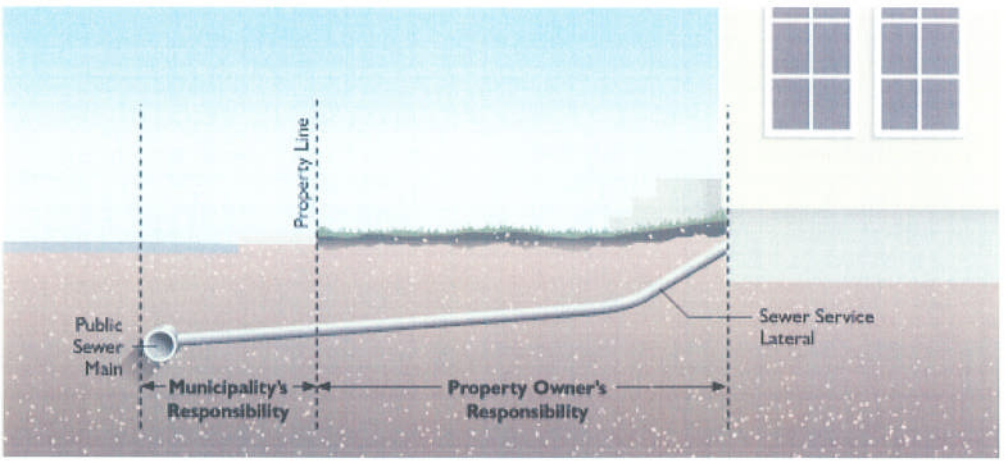
Closed Circuit Television Inspections – a video camera is sent through a sewer line to record the condition of the sewer. The video footage is analyzed for cracks, intrusions and leaks.

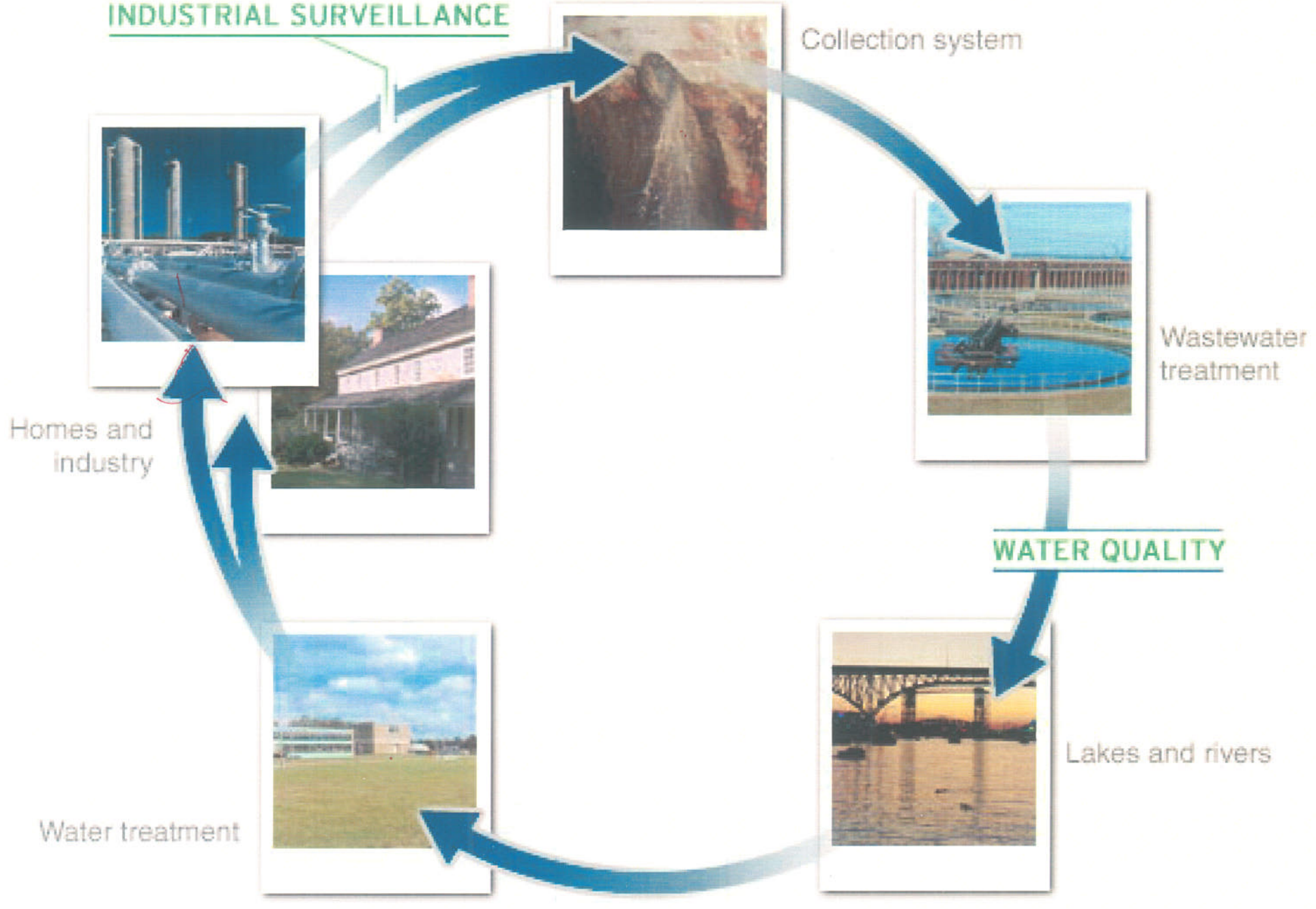
Inspections – building inspectors and trained maintenance personnel visually inspect and assess the condition of the sewer system.

Sanitary Sewer Maintenance Responsibilities

Homeowners – own and maintain the sewer service laterals on their property. Sewer service laterals are sewer pipes that connect a building's plumbing to the municipal sewer system.

Municipality – owns and maintains public sewer mains and the part of the sewer service laterals located between the property line and the sewer mains.




INDUSTRIAL SURVEILLANCE
Collection system
Wastewater treatment
WATER QUALITY
Lakes and rivers
Water treatment
Homes and industry

You may have a leak!

A step-by-step guide to help you identify the problem

How did I get that leak?

The most common leaks in the household result from worn out parts in faucets, showerheads and toilets. Most repairs can be done by do-it-yourselfers with minimal difficulty. You can also have the work done by a professional.

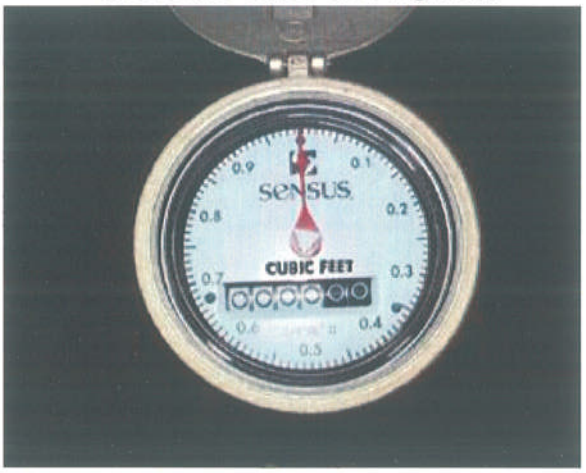
This guide will help you determine which part of your water system may have leaks. You should repair leaks as soon as possible. Even a small drip can waste 20 gallons a day or more!

How do I check for leaks?

1. Make sure no water is being used inside or outside the house.
2. Locate your water meter. The meter is usually located in the basement or in an underground box on a property corner or line. Your meter can usually be identified by matching the meter number on your bill with the number stamped on the meter lid or the meter body.
3. Record the meter reading and wait 1-2 hours. **Do not use any water during this time.** (Some meters have a small star, triangle or red indicator needle, often referred to as a leak detector. This should not be moving when water is not being used.
4. Read the meter again. If the reading has changed, you may have a leak.
5. Next, you will want to identify whether or not the potential problem is in the service line (from meter to house), in the house, or possibly in the irrigation system. Shut off your house master valve and verify that the valve is working properly by opening another fixture in the house. The master valve is where the water enters the house, and is often located in your basement. If you have an irrigation system, shut off the main valve and verify that it is working properly.
6. At this time repeat steps #1 through #4.
7. If the reading has changed, it may indicate the possible leak is between the meter and master valve. If the reading has remained the same, it may indicate the possible leak is in the house, past the master valve.
8. If the meter reading or dial position has not changed after completing steps

5 through 7, the possible leak may be associated with your irrigation system. Have someone watch your meter while you turn the irrigation system on at the irrigation master valve. If the dial starts spinning, this may indicate the leak is in that system.

A break in an irrigation zone line may not cause the meter to spin at this time. Further investigation may be required to determine if a broken zone line is the cause of a high bill.



WASTEWATER FEASIBILITY STUDY

Final Report

SUBMITTED TO:

THE TOWN OF ELIOT
141 STATE ROAD
ELIOT, MAINE 03903

April 23, 2003

Prepared by

CONSULTING ENGINEERS Inc.

Maine • New Hampshire • Vermont