

YOUR UTILITY DOLLARS

KEEPING WATER SAFE FOR LAKERS



PUBLIC WORKS
ENVIRONMENTAL SERVICES


Sylvan Lake



Introduction

Did you know that if you pay a utility bill, you are an important part of our water treatment system?

The Town of Sylvan Lake thanks all residents for working to keep our community a safe place to live.

We know how hard it is when bills keep going up. The cost of supplies to treat your water keeps going up too. The staff working for you care about costs, because we pay the same bills! We are always trying to find ways to do things more efficiently to keep costs down.



Contents

Introduction.....	2
How do we get more water?	4
Water comes from rain and snow	5
What does your utility bill pay for?	6
Your drinking water	8
Your water system	9
Keeping your costs down	10
Preventing sewer backups.....	10
Don't flush it.....	11
Water conservation.....	12
Save money, fix leaks.....	12
Where does stormwater go?	13
Water system projects.....	14
You make it happen	15
Contact us	16

WHAT IS SUSTAINABILITY?

Sustainability is often defined as: “development that meets the needs of the present generation without compromising the ability of future generations to meet their needs” (The Brundtland Report, 1987).

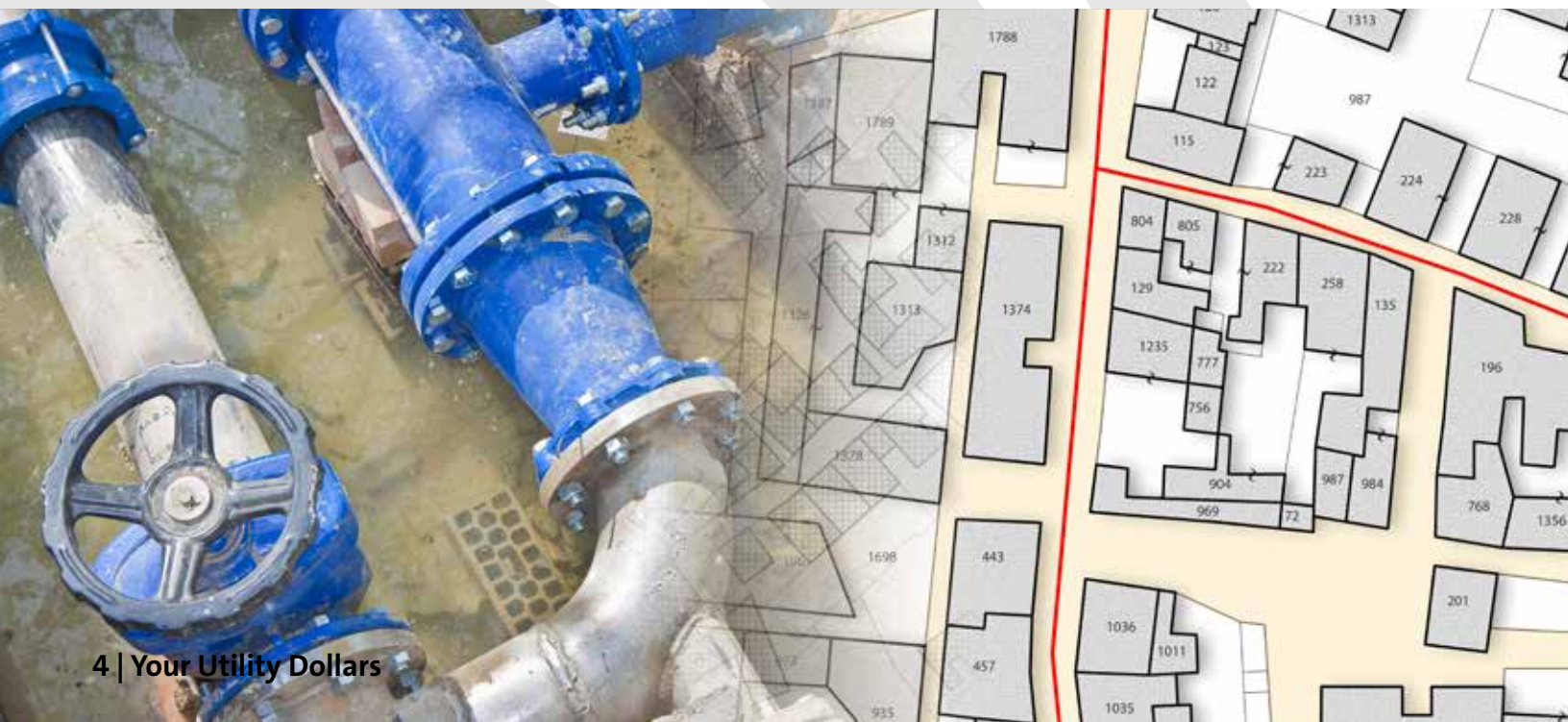
Environmental Services is a department within the Public Works Division. One of the goals of Environmental Services is to make sure that future Sylvan Lakers will have the same opportunity to enjoy this great community as we do today. That means working to protect and conserve our water supply for future generations.



Sylvan Lake is growing... how do we get more water?

We can't make water

We borrow it from the environment





Our water comes from wells fed by mountain runoff.¹

Snow, rain, sleet and hail fill the Paskapoo formation with water. Our wells draw water out of aquifers in the Paskapoo formation. Since we don't control precipitation, we have no direct control over how much water ends up in our wells.

- It costs a lot of money to obtain, treat, and deliver our water.
- The more water we must treat each year, the more it costs to treat.
- Wasteful water practices increase these costs for everyone's utility bill, not just the person wasting water.
- Saving water means lower costs. Since the cost of everything is increasing, every little bit helps to keep bills down



YOU are the U in Utility

Since the town can't grow more water, it is up to you to use water carefully.

Water is a limited resource

- Water is limited, even though it seems unlimited because our taps never stop flowing. Many communities across the world are facing real water shortages
- Even communities in Alberta like Okotoks are facing development-limiting water shortages
- We can't make more water, but our population is growing quickly, "Sylvan Lake had a population of 16,354 in 2021. The population of Sylvan Lake increased 0.88% year-over-year and increased 6.97% in the last five years"²

How do we make sure that we have enough water for years to come? By not wasting water!

- Find water leaks
- Conserve water. Get tips here: sylvanlake.ca/water-sewer
- Follow water conservation April 1 - Oct 31
- Stormwater isn't treated before it returns to the environment, so protect your water quality
 - Don't wash your vehicle in the street or dump chemicals
 - Use the free annual toxic waste round up

What does your utility bill pay for?

- Managing/operating the systems that treat and carry water
- Property taxes are not used for utility operating costs or projects

[illegible]

Sometimes utility bill funds don't cover the costs.
Yikes! What do we do then?

- Apply for provincial and federal grants
- Borrow by taking loans
- Raise money with development levies. That means developers pay fees in exchange for permission to develop in the Town

Utility bills pay for the supplies we must buy to keep your water safe

What kind of supplies does the town use to get, treat, and supply water?

Supplies are getting more expensive:

- Chemicals to kill germs in the water
 - Water safety supplies and testing machines
 - **Pipelines:**
 - 107 km fresh water
 - 94 km wastewater
 - 18 km wastewater pipeline from Sylvan Lake to the Red Deer Treatment Plant
 - 530 fire hydrants
 - 955 water valves
 - 1082 sanitary manholes
 - 2 water reservoirs
 - 7 water wells
 - 29 PLCs
 - 1 SCADA system
 - 5 chemical pumps
 - 11 distribution pumps
 - 5 injection lines
 - 12 water parameter analyzers
 - 1 bulk water station
 - 6253 water meters
 - 907 storm manholes
 - 1053 storm catch basins
 - 22 storm ponds
 - 491 culverts
 - 3 storm stations
 - 15 wastewater stations
- That's not all, but we couldn't fit more 😊. View the system: geo.sylvanlake.ca/infrastructuremap

Staff are an important part of the system

- We have 10 full time staff who keep water safe, keep the water system running smoothly, and make sure we have enough water for drinking and firefighting

What kind of repairs does the water system need?

- Scheduled and emergency maintenance
- Repairs range from \$5,000 - \$25,000, depending on factors like soil type and the location of the valve or main needing repair
- Preventive maintenance costs less than emergency repairs, so we have a preventative maintenance schedule. This helps reduce emergencies and system failures

The Red Deer plant treats our wastewater

- We outgrew our old wastewater lagoons, so now we pipe our wastewater to the Red Deer Treatment Plant
- For now, building a pipeline to the Red Deer treatment Plant is much cheaper than building our own plant
- We pay for the plant to treat our wastewater; the Town does not control these rates
- In 2021, the pipeline sent 1,462,782.39 m³ of our wastewater/ sewer water to the Red Deer Treatment Plant

What will we need in the future?

- The rate the town pays to pipe wastewater the Red Deer Treatment Plant is increasing in 2023, 2024, and 2025
- Restoration of the old lagoons
- System maintenance, repairs, and upgrades



Actual well in Sylvan Lake

Your drinking water

Where does it come from?

Our water comes from wells, not the lake

- » The Town has 7 ground water wells. The wells collect water from underground aquifers in and around the Town. The water from the wells supply our two water treatment facilities, known as water reservoirs:
 - North water reservoir: Our newest reservoir servicing up to 30,000 residents. It can expand to serve up to 60,000 residents
 - South water reservoir: This reservoir was built in the 1980s. We are upgrading it so that it can continue to receive raw well water and distribute treated water to residents

How does the water get to my house?

- » Once your water is treated in the water reservoirs, it is sent through water mains and water service lines to homes and businesses

Do we have good water?

Our water quality

- » Alberta Environment and Parks classified our 7 wells as high quality ground water
 - This classification means that our water comes from an underground aquifer and must be monitored for safety
- » Water quality standards are set by Health Canada and Alberta Environment and Parks
 - The Town makes sure our water quality meets standards by monitoring the water system daily, weekly, monthly and annually
 - We monitor treated water before it enters the distribution system, and at random locations throughout the distribution system

How do we keep water safe?

Our water treatment

- » We disinfect our water with chlorine to kill bacteria in the reservoir and water mains
- » Chlorine residual is how much chlorine is left after bacteria is killed
- » Our chlorine residual is less than many other cities:
 - Red Deer: 2.00 - 2.24 mg/L
 - Edmonton Chlorine: 1.75 - 2.15 mg/L
 - Sylvan Lake: 0.90 - 1.25 mg/L
 - Residual data from Oct - Nov 2021

What about hard water?

How hard is our water?

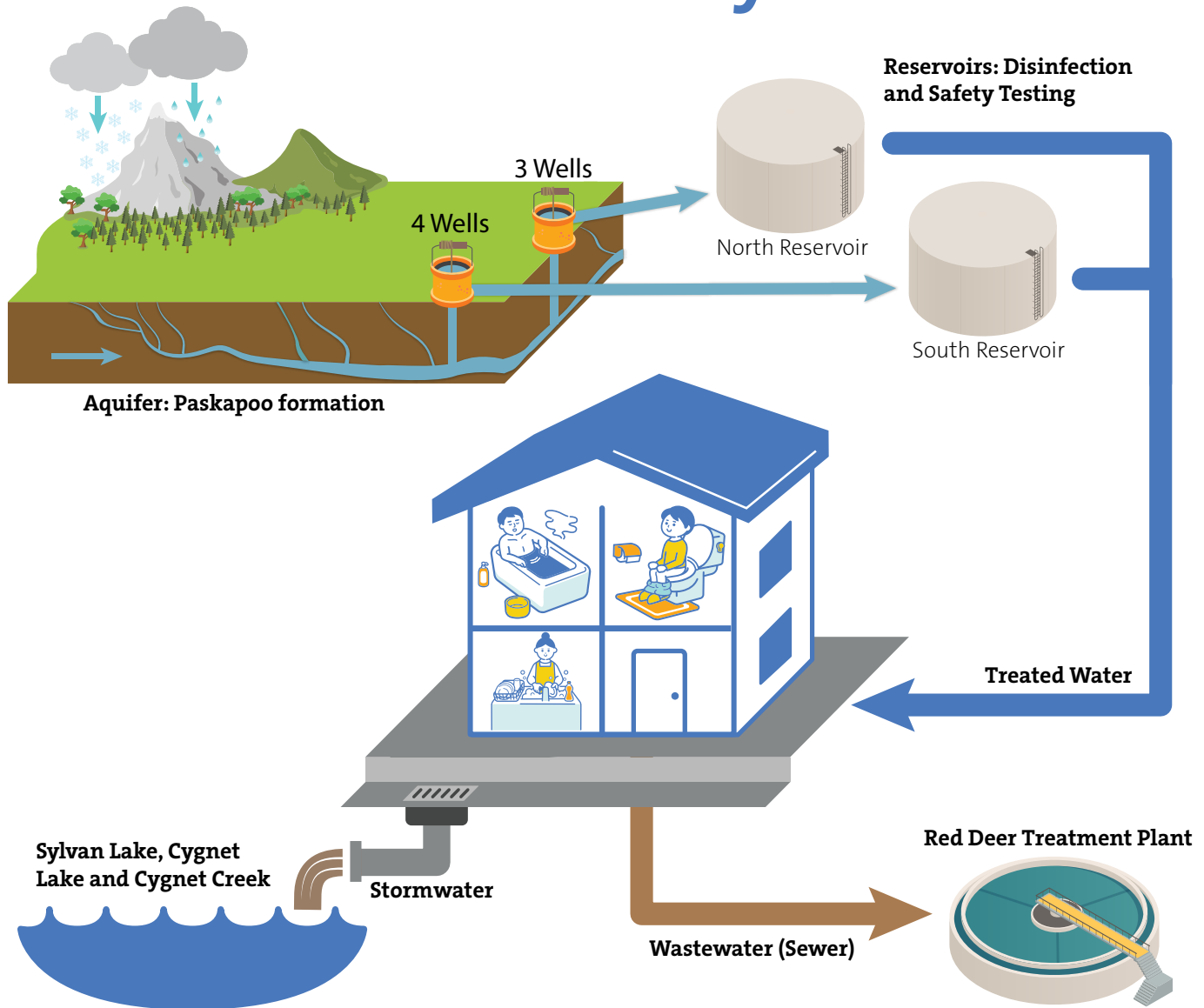
- » Our water has a hardness level between 184 - 317 mg/L
- » Hardness level changes depending on the area of Town
- » Edmonton hardness level: 185 mg/L

Why do we have hard water?

- » What makes our water hard?
 - Hardness levels differ between communities based on where the water comes from
 - Our water comes from wells fed by underground aquifers. These aquifers run through naturally occurring sedimentary rock and limestone, and it is the stone formations that create water hardness
- » Are you considering installing a water softener?
 - How you set up your water softener depends on what part of town you live in. Check our water analysis report before purchasing a softener: sylvanlake.ca/water-sewer



Your Water System



How do we make sure your water is safe?

Regular testing

- » Our water system operators sample and test water regularly. Some of the things we test for include:
 - **Turbidity:** if the water is cloudy, and why it is cloudy. It can indicate if water is polluted by things like silt, microorganisms, or other dissolved materials.
 - **pH:** how acidic or basic the water is. pH can tell us how easy it is for materials to dissolve in the water. Those materials can be good for us or can hurt us. pH helps us figure out how easy it is for those materials to be absorbed by living things. pH also can tell us how well our water treatment chemicals are working. pH is monitored 24 hours a day.
 - **Bacteria:** we look for bugs that can make us sick, such as E. coli and other bacteria
- » We watch the test results carefully so we know that our treatment and distribution processes are working to keep residents safe

Yearly Testing

- » Every year, we take a potable water analysis sample
- » We send the sample to an International Standard Organization (ISO) Laboratory
- » This test tells us what materials are in your water
- » It makes sure that our water is within the ranges set by Health Canada and Alberta Environment



Tip: Remove calcium scale from hard surfaces with pickling vinegar.
Use in a well ventilated area

Keeping your costs down

Yikes!!!! Preventing sewer back ups



photo courtesy of: <https://www.flickr.com/photos/thebees/9271396193>

What is a sewer back up?

- » If the sewer service line gets blocked or damaged, it blocks the normal flow of water into the municipal main sewer line. And that means raw sewage can back up through your floor drain

Some signs of a sewer drain block:

- » Several plumbing fixtures are blocked or drain slowly
- » The toilet plugs easily or makes gurgling noises when flushing
- » The washing machine doesn't drain or backs up into the toilet or bathtub

Tips to prevent it!

- » Don't pour fats or oils down the drain as they can harden and block drains
- » Don't flush anything that's not toilet paper, poo, or pee (including anything that says flushable like wipes, as they are not actually flushable)
- » Use your garbage disposal correctly. Always run water before and after to wash food waste down the drain

- » Backwater valves / back flow prevention devices are one way valves that prevent sewer water from flowing back into your home if there is a backup in the municipal main sewer line. A plumber can install one if your home does not already have one. Check your valve regularly to make sure it is in good working order

What else can cause a sewer back up?

- » Flushing unflushables
- » Tree roots from trees planted on property
- » Municipal main sewer line back up

What if your sewer backs up?

- » Call Public Works: 403 887 2800
- » Town staff will check the municipal main sewer lines to ensure they are not backing up, and provide you with a sewer back up sheet with additional information
- » Learn more at: www.sylvanlake.ca/water-sewer



DON'T Flush It

Unflushables create clogs in our sewer system, causing sewer backups and expensive repairs! Utility bills fund these repairs.

Clogs within your property can cause sewer backups, and are your responsibility to fix. Clogs and sewer backups could cost you thousands.

Don't flush it:

- » Wipes (toilet, baby, beauty, cleaning). They are not flushable despite what manufacturers say
- » Medications
- » Kleenex
- » Plastics
- » Paper towels
- » Dental floss
- » Condoms
- » Hair
- » Tampons



OK TO Flush It

» Toilet paper, poo, pee

Keeping your costs down

Protect Your Drinking Water Reserves

Mandatory Water Conservation | April 1 - October 31

- » Homes with even-numbered addresses may water their lawns on even-numbered days of the month, and homes with odd-numbered addresses may water on odd days of the month.
- » No watering of lawns on any day from: 10:00 AM - 7:00 PM
- » Watering by hand is permitted, and exemptions are made for yards with new sod or seed



Did you know?

- » All of Sylvan Lake's drinking water comes from local wells
- » Drinking water does not come from the lake

Town wells may not be exactly as shown 😊

Save money, fix leaks

- » Inspect your taps for drips (up to 75 m³ water loss per year per dripping faucet)
 - » Add food colouring to your toilet tanks and let sit for 30 minutes. If there is colour in the bowl, you have a leak. (up to 259 m³ of water per month per toilet)
 - » Inspect your hot water tank relief valve. These sneaky valves may leak into your floor drain and go unnoticed
 - » If you can, install low water use fixtures such as low flush toilets
 - » If you have an upgraded water meter, you can use it to troubleshoot leaks.
- Get instructions here: sylvanlake.ca/water-sewer

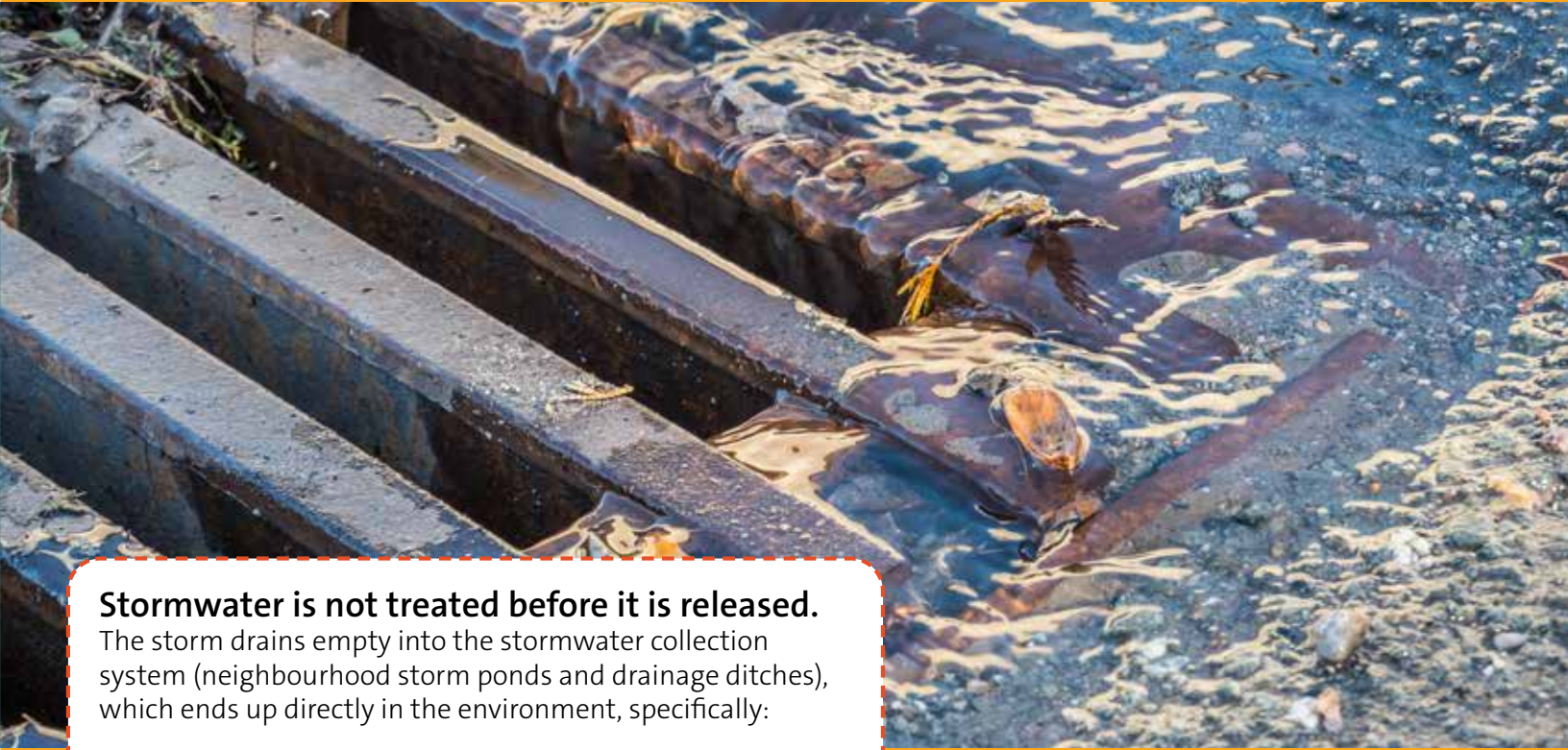


Type of leak	Volume of wasted water*	Increased cost on monthly utility bill**
Small toilet leak	240 L/day (7.4 m ³ /month)	\$28.86
Medium toilet leak	500 - 2,400 L/day (15 - 72 m ³ /month)	\$58.50 - \$283.68
Large toilet leak (flapper wide open)	24,000 L/day (720 m ³ /month)	\$2,836.8
Appliances	Other appliances within your home may use more or less water during a leak.	

* Volume is dependent on the type of toilet and the type of leak.

** Estimate is based on Town of Sylvan Lake 2024 utility consumption rates for water and sewer.

When water goes down our storm drains, **WHERE DOES IT GO???**



Stormwater is not treated before it is released.

The storm drains empty into the stormwater collection system (neighbourhood storm ponds and drainage ditches), which ends up directly in the environment, specifically:

» **Sylvan Lake, Cygnet Lake and Cygnet Creek**

How can you help protect your community's most precious asset (Hint: the lake)?

Don't let chemicals go down the drain:

- » Fix vehicle oil leaks
- » Don't wash your vehicles in your yard or on the street
- » Don't pour anything on the ground or down storm drains. Save unused chemicals, paint, etc for the annual (and free) Toxic Waste Roundup

Don't release goldfish or other pets into ponds or creeks:

- » Goldfish outcompete our native fish, cost taxpayers extra money, and damage our fishing tourism industry





Your utility dollars work hard to keep the system running smoothly now and in the future

Some recent projects include:

- Aging infrastructure repairs and replacements
- A new pipeline to export sewage to Red Deer wastewater treatment facility because we outgrew our lagoons
- New drinking water reservoir
- New Hampton Pointe stormwater station to address high water levels in Hewlett Park





Why are Town employees able to provide safe water?

Because our **amazing Lakers** make it possible by sharing the responsibilities:

- Sharing the cost of water treatment and delivery
- Reducing the cost of water treatment by conserving water and limiting wasteful use of water

**Thank you
to all Lakers**

who work hard
to protect our
water for future
generations!



Your Utility Dollars

For more information:

Public Works

Environmental Services

T 403 887 2800

sylvanlake.ca/water-sewer

sylvanlake.ca/contact

Get your utility bill by email!

Email your account number and name to:
ut@sylvanlake.ca

References:

1. Facts About Water in Alberta, Government of Alberta, Page 23,:
<https://open.alberta.ca/dataset/1832cd36-bbeb-4997-ae81-67d3eedfcfe5/resource/18a9d64b-bad8-413a-8c63-77a548ec9d88/download/4888138-2010-facts-about-water-in-alberta-2010-12.pdf>
2. Population Statistics:
<https://regionaldashboard.alberta.ca/region/sylvan-lake/population/#/?from=2017&to=2021>

