

Castlegar's Liquid Waste Management Plan

What is a Liquid Waste Management Plan?

A Liquid Waste Management Plan (LWMP) is a formal document approved by the Minister of Environment and Climate Change Strategy (ENV).

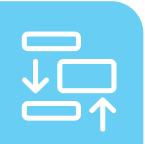
It is a plan designed to protect public health and the environment through the management, resource recovery, and disposal of treated liquid waste. It explains how a community will handle liquid waste, including wastewater, treated wastewater, and stormwater.

Our Process:



Define the problem and identify solution options

Stage 2:



Assess and evaluate the options from Stage 1 and pick one option for detailed planning

Stage 3:



Formally adopt the final option and design the action plan

Public engagement plays a vital role in shaping the decisions throughout this project. Your voice is essential in guiding the direction of the LWMP



Take the online survey:



For more information, visit: castlegar.ca/lwmp



How does a Liquid Waste Management Plan impact our community?



Clear Path Forward

Guides Council and staff for 20+ years



Big Picture Approach

Solves multiple problems simultaneously



Community Specific

Empowers tailored solution development



Saves Time and Money



Financial Security

Promotes financial security for projects



Enables implementation without further approvals

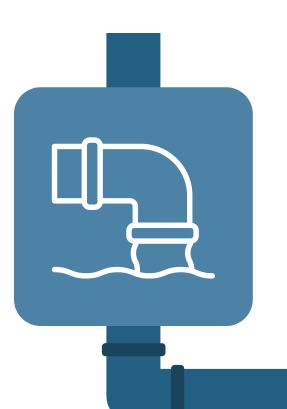


Community can move at its own pace towards solutions



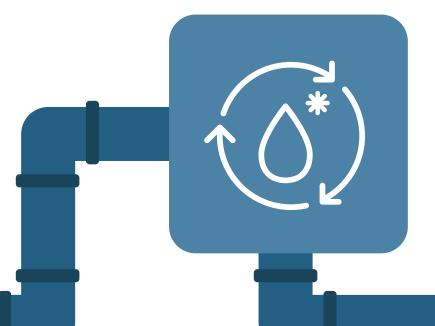
Current Liquid Waste Management Systems

Sewer collection, wastewater treatment, septic systems, and stormwater are all addressed in a LWMP.



Sewer Collection

The City has 12 lift stations and 75 km of sewer pipe. These collect wastewater from homes and businesses and send it to the North Sewage Treatment Plant (NSTP) or South Sewage Treatment Plant (SSTP).



Wastewater Treatment

Wastewater from the north side of the City flows to the NSTP, while the south side's wastewater goes to the SSTP. Wastewater is treated at the plants before being released into the Columbia River.



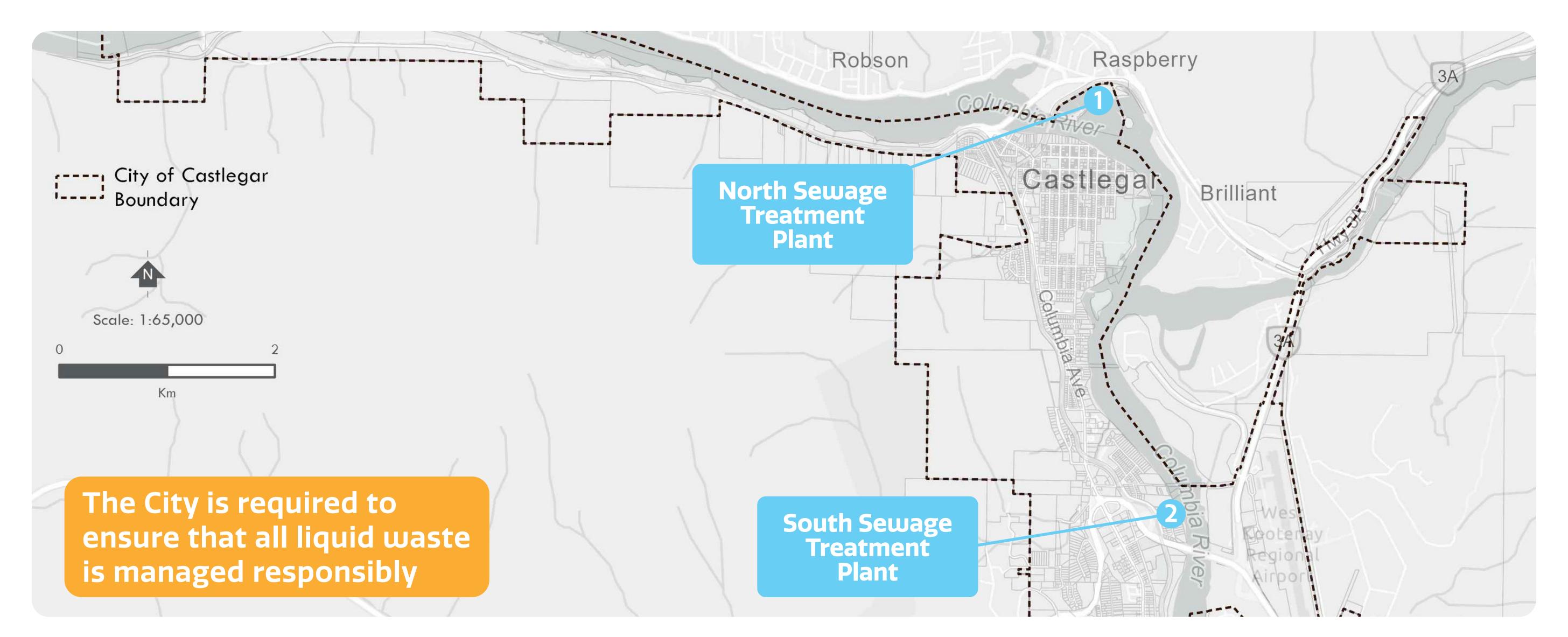
Septic Systems

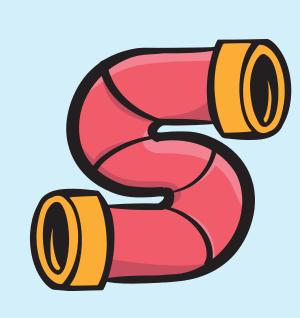
Properties in the Blueberry neighbourhood use septic tanks and dispersal fields instead of discharging into the City's sewer system. These systems separate liquids and solids: the liquids soak into the ground for natural filtration, while the solids are pumped and discharged at the Ootischenia Regional Landfill.



Stormwater

This is another type of liquid waste. In some areas, it soaks into the ground, while in others, it's collected by storm drains and sent to the Columbia River, usually without much treatment.





Current Liquid Waste Challenges

The City of Castlegar is working hard to manage our liquid waste. We face some challenges that are unique to our community, and others that are shared by many other local governments. These challenges are shown in the following table:

Challenge	Description		
Aging Infrastructure	As our pipes and other assets age, they need to be replaced.		
City Growth	As the City grows, its wastewater infrastructure must grow too.		
Regional Landfill Capacity	The regional landfill's ability to receive septage material is nearing capacity (this is where septage from the Blueberry neighbourhood is disposed). We need new ways to manage this waste.		
Biosolids Management	Both treatment plants lack long-term biosolids management plans (biosolids are the solids recovered from the wastewater treatment process).		
Wastewater Treatment Plant Concerns	South Sewage Treatment Plant		
	The plant faces odour issues, is nearing capacity and struggles with sludge management. The plant also struggles to balance long-term costs with immediate expenses.		
	North Sewage Treatment Plant		
	The plant struggles with equipment issues that impact water quality returned to the Columbia River, while its discharge location threatens fish habitats and recreation. Managing biosolids and sludge is also a challenge. The plant struggles to balance long-term costs with immediate expenses.		

The City is working to address all these challenges through the LWMP, but the biggest focus is on improving our wastewater treatment plants and confirming a long-term solution for treatment. In the meantime, the City is also implementing intermediate measures to tackle some of these challenges.



CODUE WASTE MANAGEMENT

Share Your Thoughts!

In terms of liquid waste, what is going well with services today?

In terms of liquid waste, what is not going well with services today?

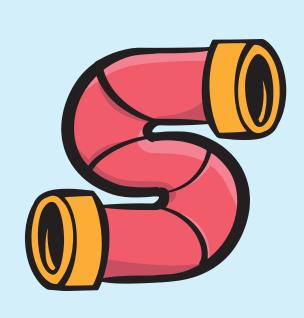
What are the highest priority challenges or concerns related to liquid waste management?

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What are the Solution Options for our Wastewater Treatment Plants?

Three potential options to address treatment plant concerns have been previously proposed and studied, before the beginning of the LWMP process. These options present possible and promising solutions; however, additional options, opportunities, or ideas may be revealed through the ongoing LWMP work. The potential options that exist so far, and their respective advantages and disadvantages are compared in the table below:

Factor	Option 1: Retain Both Plants	Option 2: Divert Flows to the NSTP	Option 3: Divert Flows to the SSTP
Description	Upgrade both plants including odour reduction at the SSTP, extending the outfall at the NSTP and replacing equipment and processing.	Redirect all flows to the NSTP with a lift station at the SSTP site. Close the SSTP and update wastewater treatment and return locations at the NSTP.	Redirect all flows to the SSTP with a lift station at the NSTP, upgrade to enhance odour control, and work to increase capacity at the SSTP.
Capital Cost	\$	\$\$	\$\$\$
Operational Cost	\$\$\$	\$	\$\$
Lifetime Cost	\$\$\$	\$	\$\$
Operational Effort & Complexity	High	Low	Medium
Proximity to Residential Areas (odour considerations)	SSTP is close to residential areas	NSTP has some buffer (e.g. plants) from residential areas	SSTP is close to residential areas
Compatibility with Septic Handling/ Biosolids Management	Moderate	Very Good	Poor



CODE WASTE MANAGEMENT

Share Your Ideas!

Which wastewater treatment option do you prefer, and why?

Option 1: Retain Both Plants

Option 2: Divert Flows to the NSTP

Option 3: Divert Flows to the SSTP

Is there something missing from the solutions board that you'd like addressed?

What's your highest and lowest priority for a wastewater treatment plant?

	Highest	Lowest
Cost		
Operational Simplicity		
Resource Recovery		
Environment		
Location & Proximity to Industry		
Other		

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