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CASTLEGAR

Liquid Waste Management Plan

Stage 1 Engagement
What We Learned Report

April 25, 2025



Prepared for:

City of Castlegar

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Background

The City of Castlegar is developing a Liquid Waste Management Plan (LWMP) to guide the City's management of liquid waste over the next 20 years. An LWMP is a legal document, approved by the provincial government, that enables municipalities to develop holistic plans for liquid waste management that consider the unique needs of the community, businesses, and geography, while meeting environmental regulations.

The City has completed several studies on wastewater treatment in recent years which have outlined various challenges to liquid waste management in the City:

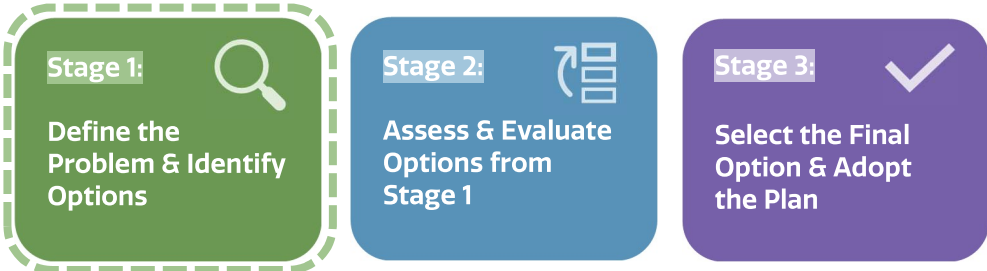
- Should the two wastewater treatment plants be combined into one plant? Where should that plant be situated?
- How should the City manage, mitigate, and/or eliminate the odour issues at the South Sewage Treatment Plant?
- The North Sewage Treatment plant may need upgrades in the near future. What considerations should be included in the design?
- How should the City manage unsewered areas like Blueberry, or future unsewered areas not yet within City limits?

Rather than look at each challenge and solution individually, an LWMP looks at the entire City to create a single plan to address community challenges, as well as any others that come up during consultation and investigation.

How We Engaged

An LWMP requires community engagement and feedback and occurs over three distinct phases set out by the Ministry of Environment and Parks:

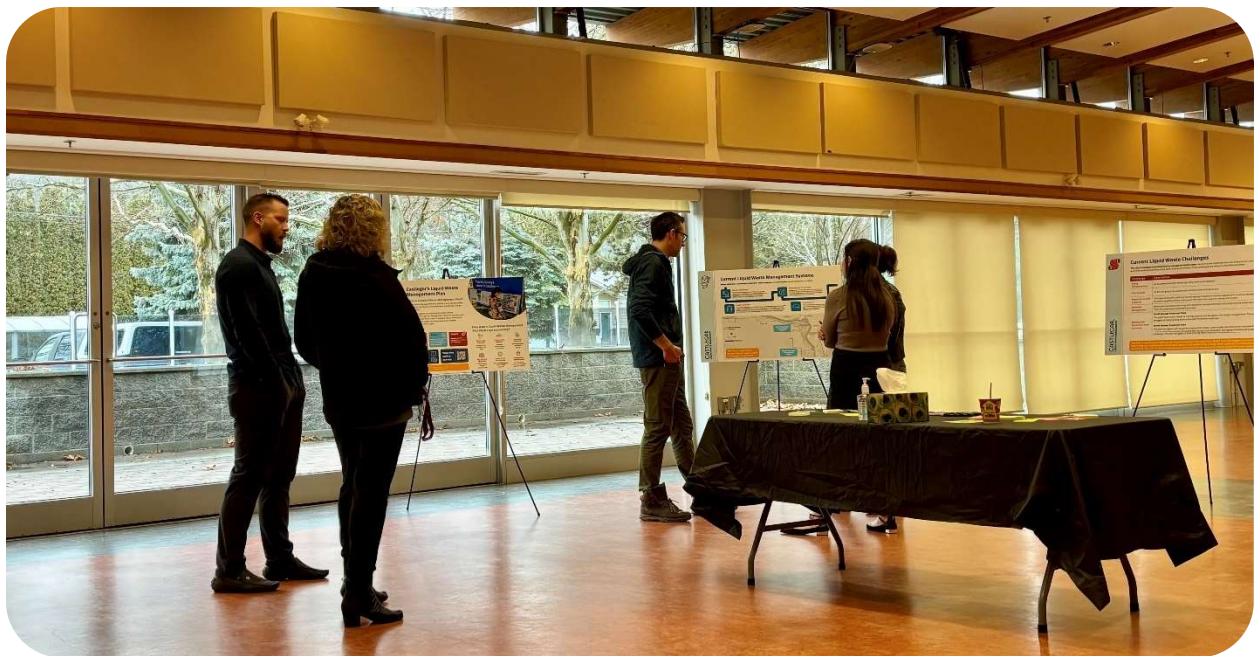
FIGURE 1: LWMP CREATION PROCESS



This report summarizes the community engagement completed for Stage 1, which gathered feedback from approximately 186 participants. The participants had the opportunity to share their perspectives through two main engagement activities: two community open houses and an online survey. The project is further supported by a public advisory committee, which helped plan broader engagement and review engagement materials. The City also reached out to Indigenous communities separately through a government-to-government process.

What We Learned

Community Open Houses



On February 25 and 26, 2025, the City hosted two community open houses and invited residents to share their ideas and preferences for liquid waste management in Castlegar. The open houses were held in two different locations (Castlegar & Area District Complex and the Community Forum) to cover a wider range of residents and learn about the specific concerns of residents living near the North and South sewage treatment plants.

The events attracted 36 participants who shared their preferences for wastewater treatment, their priorities for how liquid waste is managed, and other concerns they have related to liquid waste management.

Results from the Open House Activities

Questions were displayed on poster boards, and participants were encouraged to answer them using sticker-dots and written comments. These questions and their responses are further outlined below.

Information about the project was displayed to provide context for participants, and members of the project team were present to answer questions and foster discussion. The participant responses to the questions presented at the open houses are summarized below.

Which wastewater treatment option do you prefer, and why?

Open house participants were invited to place a sticker dot on their preferred treatment option. The largest number of participants (10) would prefer to see treatment diverted to the City's North Sewage Treatment Plant and close the South Sewage Treatment Plant. Two participants indicated they would like to see both plants continue to operate, while one participant supported closing the North plant and keeping the South facility operating.

QUESTION 1 RESPONSES

Option	# of Stickers
Option 1: Retain both plants	2
Option 2: Divert flows to the NSTP	10
Option 3: Divert flows to the SSTP	1

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

Open house participants (5) selected the environment as their highest priority for a wastewater treatment plant, followed by operational simplicity (2), location (2) and resource recovery (2). One participant selected cost as their highest priority.

QUESTION 2 RESPONSES

Option	Highest Priority	Lowest Priority
Cost	1	1
Operational Simplicity	2	1
Resource Recovery	2	0
Environment	5	0
Location & Proximity to Industry	2	1

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

Written comments from participants fell into the following top themes:

- Long-term infrastructure planning
- Stormwater awareness and education
- Odour control
- Water quality and testing
- Reduction of environmental impacts

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

Written comments from participants fell into the following top themes:

- Identify additional sites for relocating the treatment plant
- Show estimated timing and costs of potential options
- Mention of water quality
- Provide more information / education about stormwater

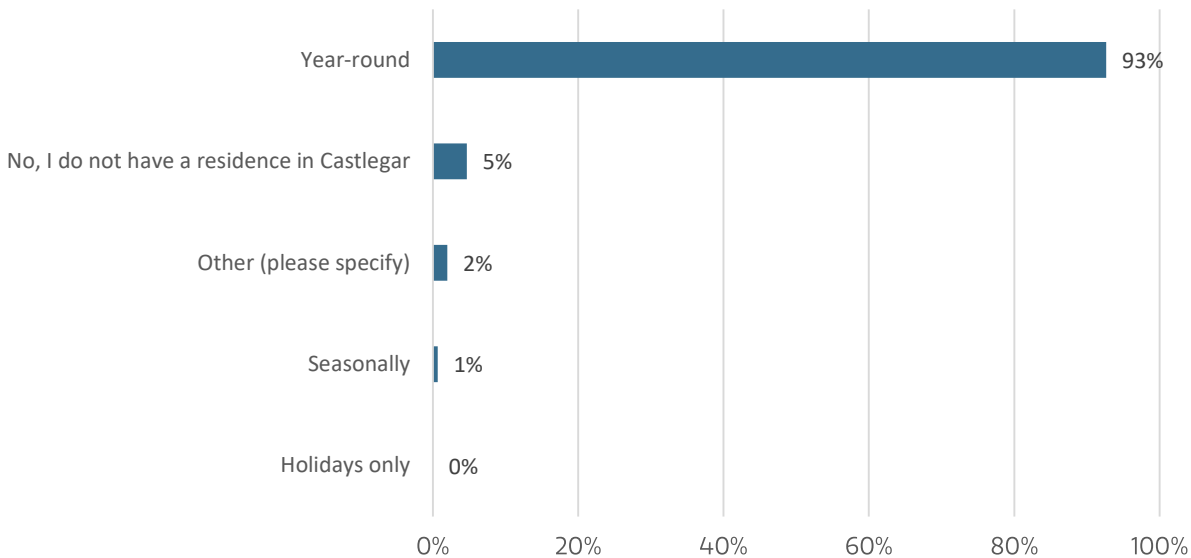
Survey

The Stage 1 LWMP survey was open between February 10 to March 1, 2025, and received a total of 150 responses. The survey asked participants to select their preferred approaches for how the City manages liquid waste and stormwater, and it also provided an optional section to provide additional feedback. The survey was available online through the City's website, with the option to pick up a physical copy from City Hall.

Who We Heard From

The survey began with seven demographic questions, to provide a better understanding of who the City was hearing from and their relationship to the City's sewer infrastructure. The results of these questions are summarized below.

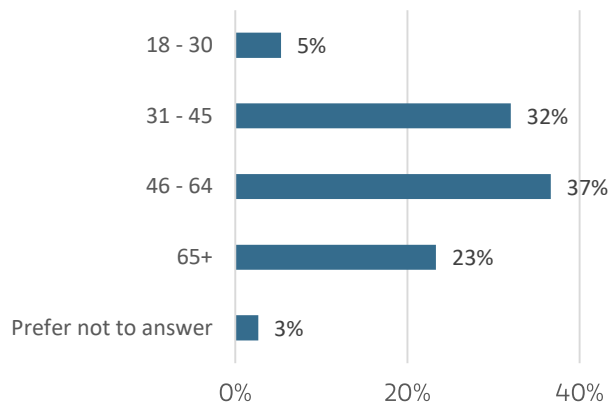
Do you live in Castlegar? (150 responses)



A majority of survey respondents (93%) live in Castlegar year-round, with the remaining respondents indicating they live outside of Castlegar (5%) or live here seasonally (1%).

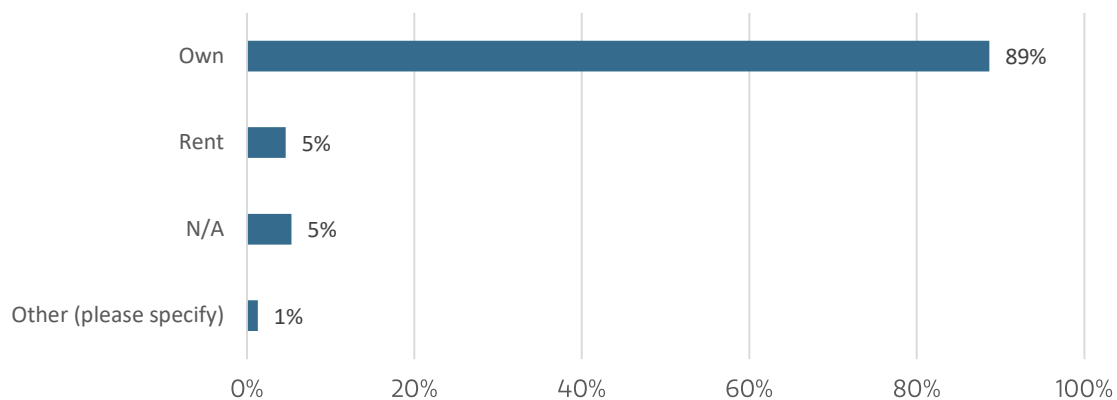
"Other" respondents (2%) indicated they own property in Castlegar, live just outside municipal boundaries, or are currently in the process of moving to the City.

Please select your age group. (150 responses)



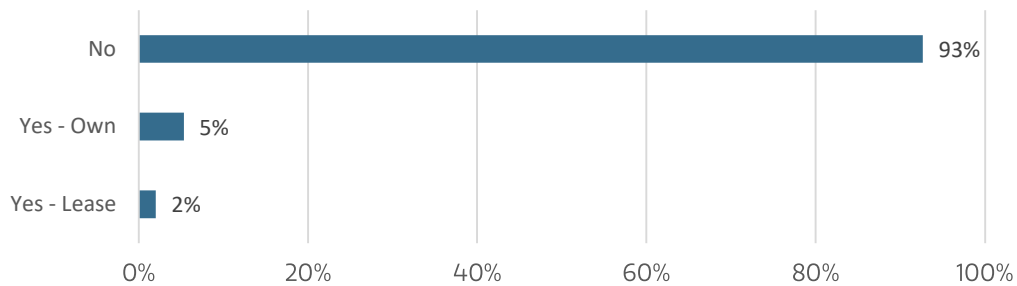
The highest number of respondents (37%) were in the 46-64 age category, closely followed by those aged 31 to 45 (32%). Almost one-quarter of respondents (23%) were above the age of 65, and approximately five per cent of respondents were under the age of 30.

Do you own or rent a residence in Castlegar? (150 responses)



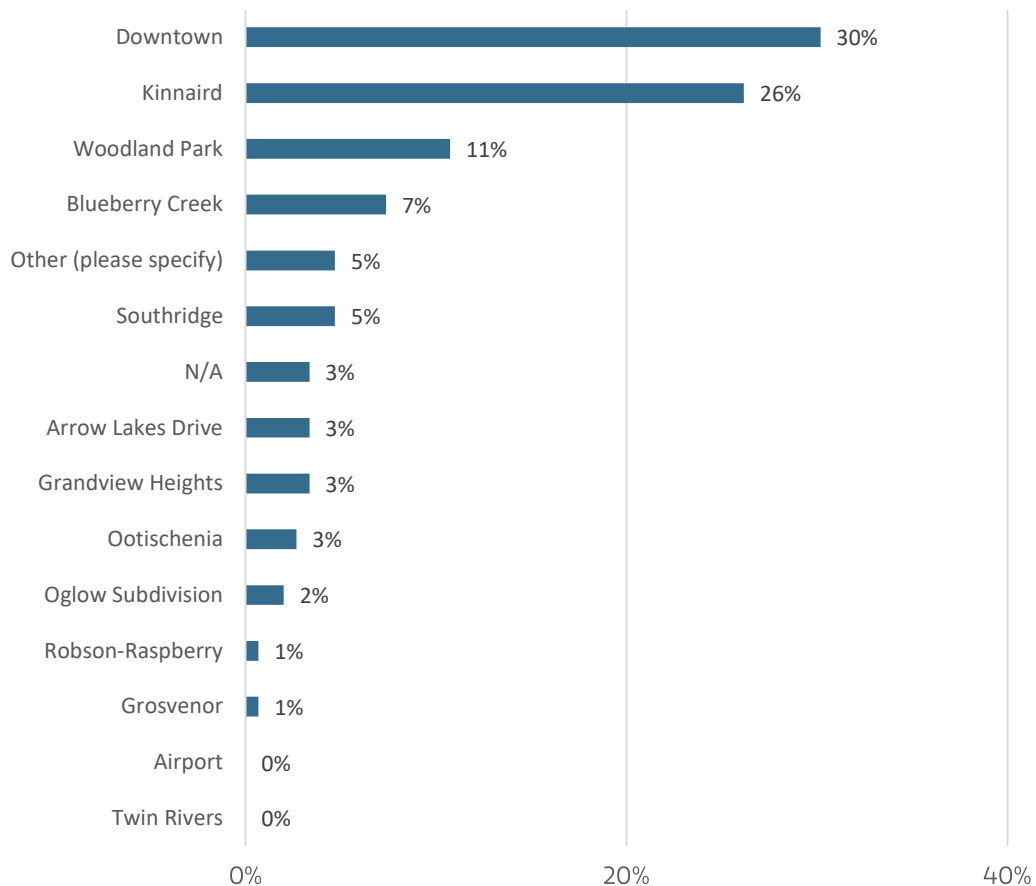
Most survey participants (89%) indicated they own their residence in Castlegar, with smaller numbers of respondents indicating they rent (5%) or do not live in Castlegar (5%). Other respondents (1%) indicated they both own and rent in the City, or own a mobile home located in the City.

Do you own or lease a business property in Castlegar? (150 responses)



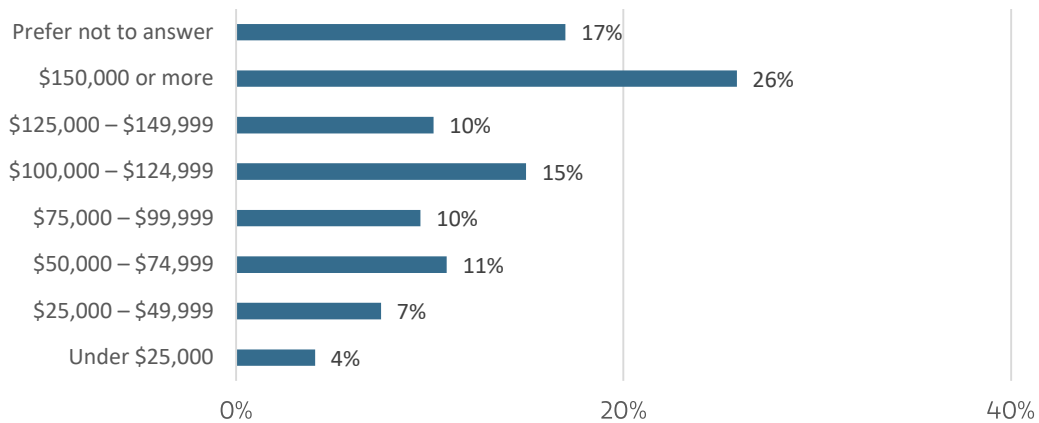
Approximately seven per cent of respondents own (5%) or lease (2%) a business property in Castlegar.

What neighbourhood do you live in? (149 responses)



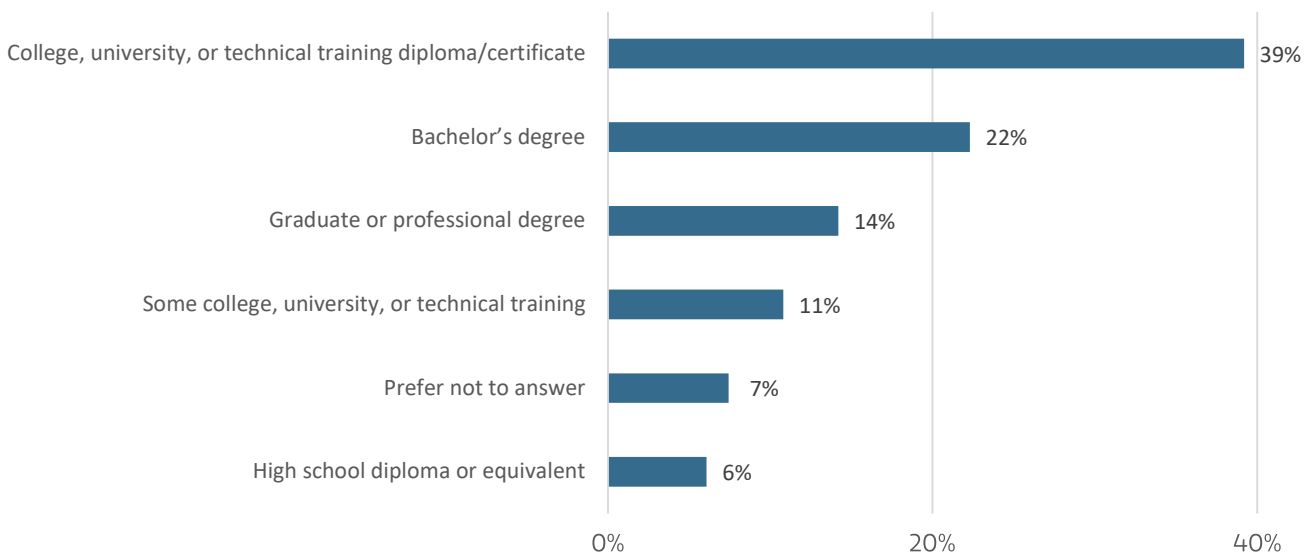
The highest number of respondents live Downtown (30%) or in the Kinnaird neighborhood (26%), followed by Woodland Park (11%), Blueberry Creek (7%), and Southridge (5%). The remaining neighbourhood areas received between 1 and 5 respondents, with the exception of Twin Rivers and the Airport, which received none.

What is your estimated total household income before taxes? (147 responses)



Approximately one-quarter of respondents indicated a household income of \$150,000 or more. Almost one-third of respondents (32%) indicated a household income under \$100,000.

What is the highest level of education you have completed? (148 responses)



The highest number of respondents (39%) have completed up to a college, university, or technical school diploma, followed by respondents who completed a bachelors degree (22%) or a graduate degree (14%).

What Do You Think?

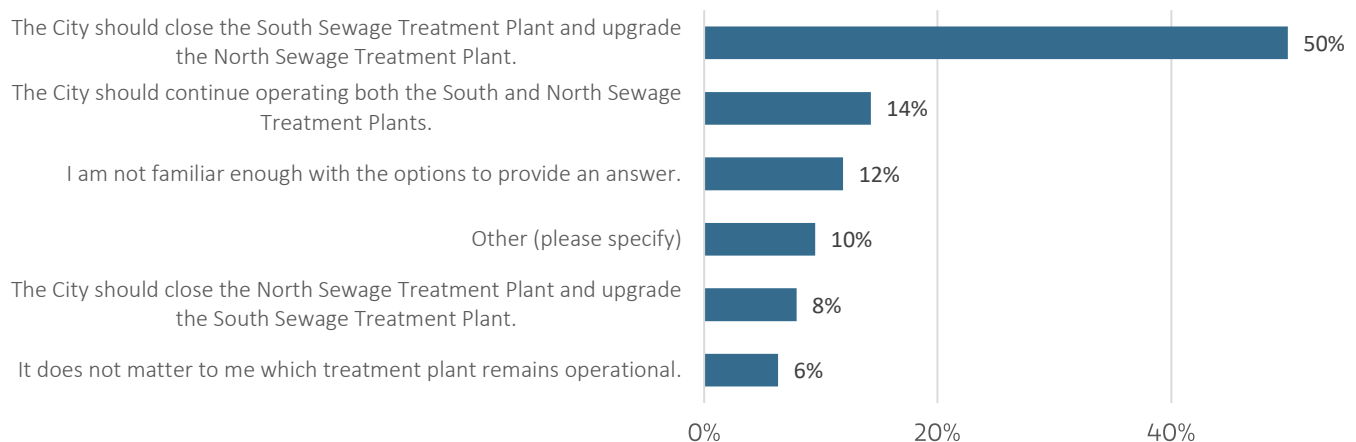
The following questions asked participants to rate their preferences and priorities related to Castlegar's long-term liquid waste management. For questions addressing the North and South sewage treatment plants, the survey also contained information about the facilities, including a comparison of their respective advantages and disadvantages.

For the purposes of this engagement summary, some results have been filtered by the respondents' selected neighbourhood to help understand how geographic proximity to the treatment plants might influence the community's priorities for a future solution.

Please note that as this was a self-selecting survey, the results are not wholly representative of the entire Castlegar community.

Based on your understanding of Castlegar's options for wastewater treatment, which statement best reflects your perspective? (126 responses)

All responses



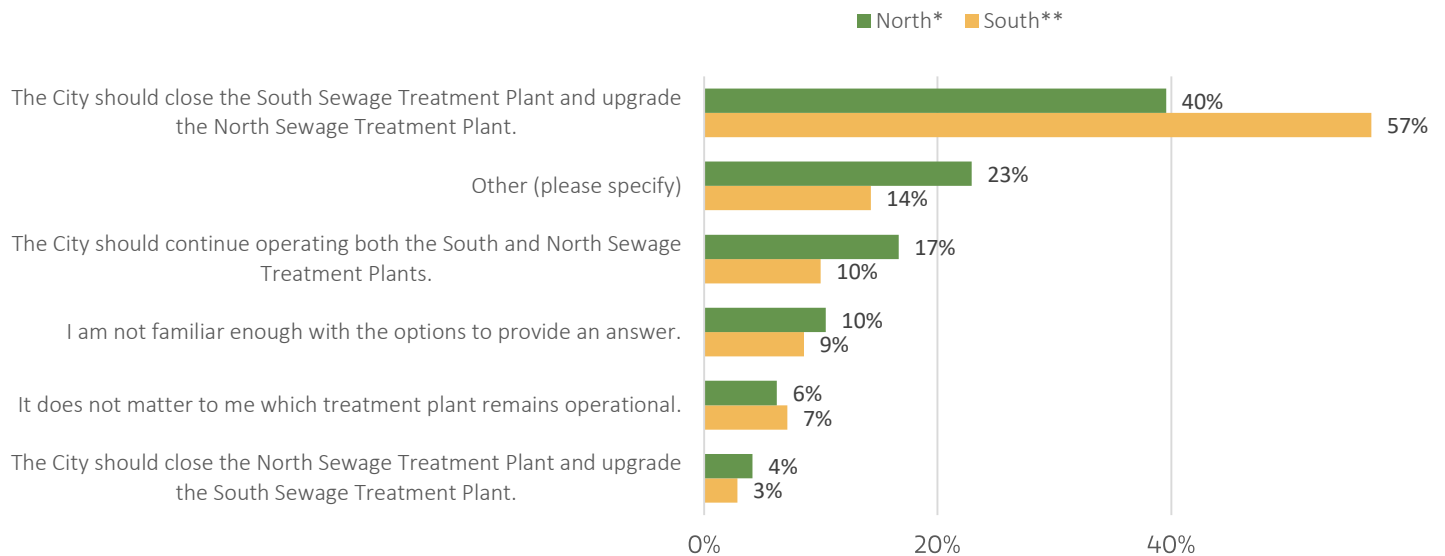
Based on their current understanding of the provided options, exactly half of all respondents (50%) indicated that the City should close the South Sewage Treatment Plant and upgrade the north facility. The remaining respondents preferred other options, such as continuing to operate both (14%), closing the North Sewage Treatment Plant (8%) or another option not provided (10%).

Approximately 12 percent of respondents were not familiar enough with the options to provide an answer, and the remaining 6 percent indicated they had no preference.

Respondents who selected "Other" (10%) provided their own response beyond the presented options. Ideas included upgrading both plants, closing both plants (and partnering with the Celgar pulp mill to

treat liquid waste), operating one plant but keeping the other as a backup, as well as other suggestions about relocating the facility to different locations within the municipality.

"North and South" Neighbourhoods Comparison



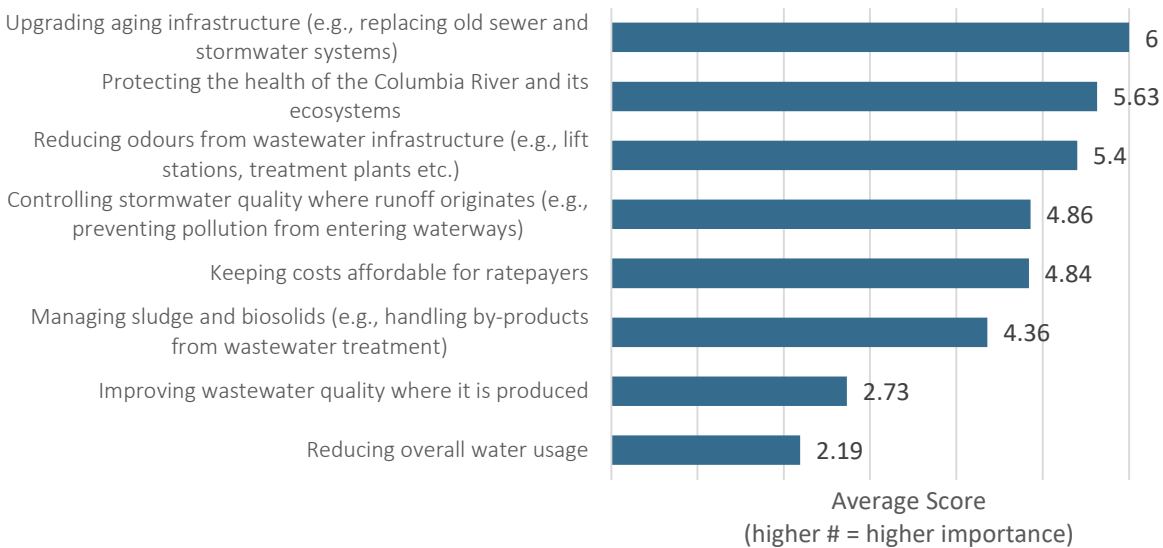
* Respondents who live in Downtown, Twin Rivers, Oglow Subdivision, Arrow Lake Drive, or Robson-Raspberry. (48 responses)

** Respondents who live in Kinnaird, Southridge, Woodland Park, Grosvenor, Blueberry Creek, Grandview Heights, Airport, or Ootischenia. (70 responses)

When filtering the survey results by north and south neighbourhoods, respondents living closer to the South Sewage Treatment Plant showed a stronger preference (+17%) for closing that facility and upgrading the north treatment plant.

Please rank the following liquid waste management concepts in order of importance to you (126 responses)

All responses

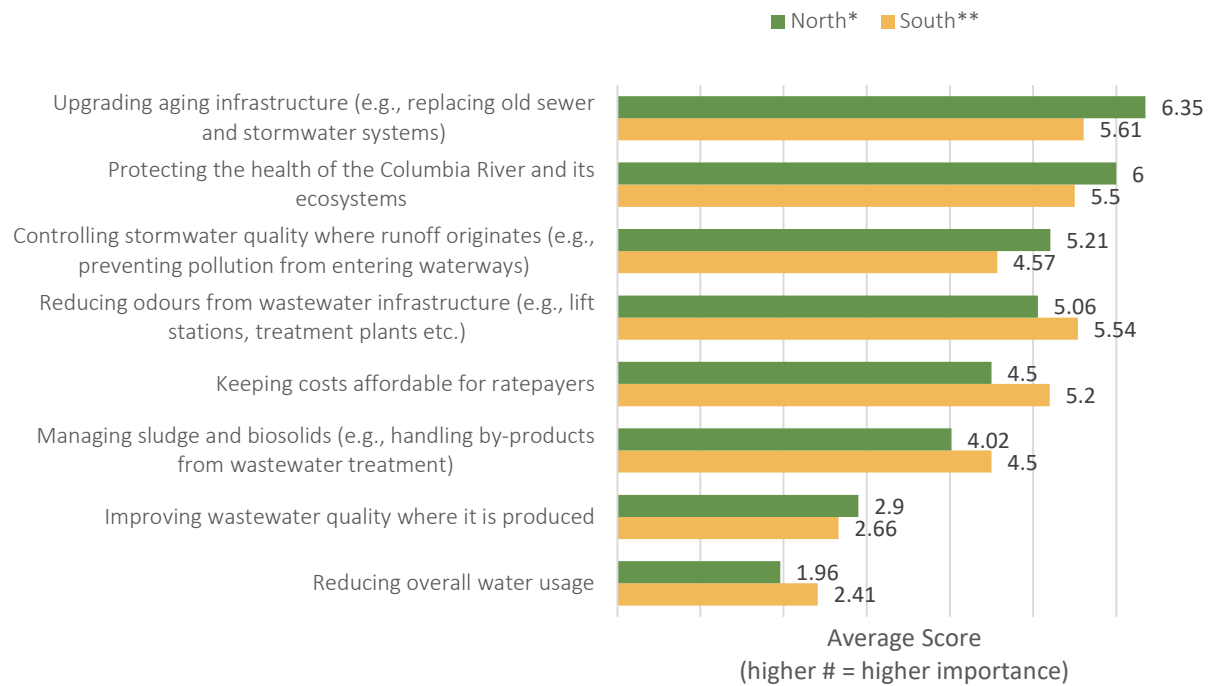


On average, respondents indicated that their highest-priority concept was updating aging infrastructure in the community, such as old sewer and stormwater systems. This was followed by protection of the Columbia River and its ecosystems (5.63) and reducing odours from wastewater infrastructure (5.4).

Respondents also showed moderate support for controlling stormwater quality to prevent pollution (4.86), keeping costs affordable for ratepayers (4.84), and managing sludge and biosolids (4.36).

The concepts receiving the lowest show of support were improving wastewater quality where it is produced (2.73) and reducing overall water usage (2.19).

"North and South" Neighbourhoods Comparison



* Respondents who live in Downtown, Twin Rivers, Oglow Subdivision, Arrow Lake Drive, or Robson-Raspberry. (48 responses)

** Respondents who live in Kinnaird, Southridge, Woodland Park, Grosvenor, Blueberry Creek, Grandview Heights, Airport, or Ootischenia. (70 responses)

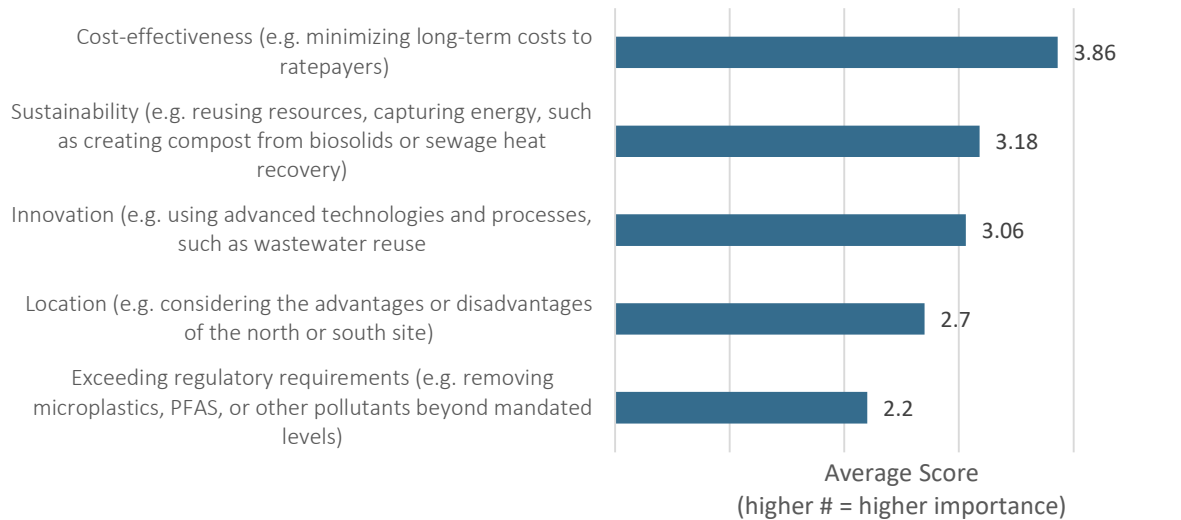
Results between north and south neighbourhoods were fairly similar, with some minor distinctions.

On average, respondents closer to the North Sewage Treatment Plant had higher rankings for updating old infrastructure, protecting the Columbia River, controlling stormwater runoff, and improving wastewater quality.

Respondents living closer to the South Sewage Treatment Plant had higher rankings reducing odours from wastewater infrastructure, keeping costs affordable for ratepayers, managing biosolids, and reducing overall water usage.

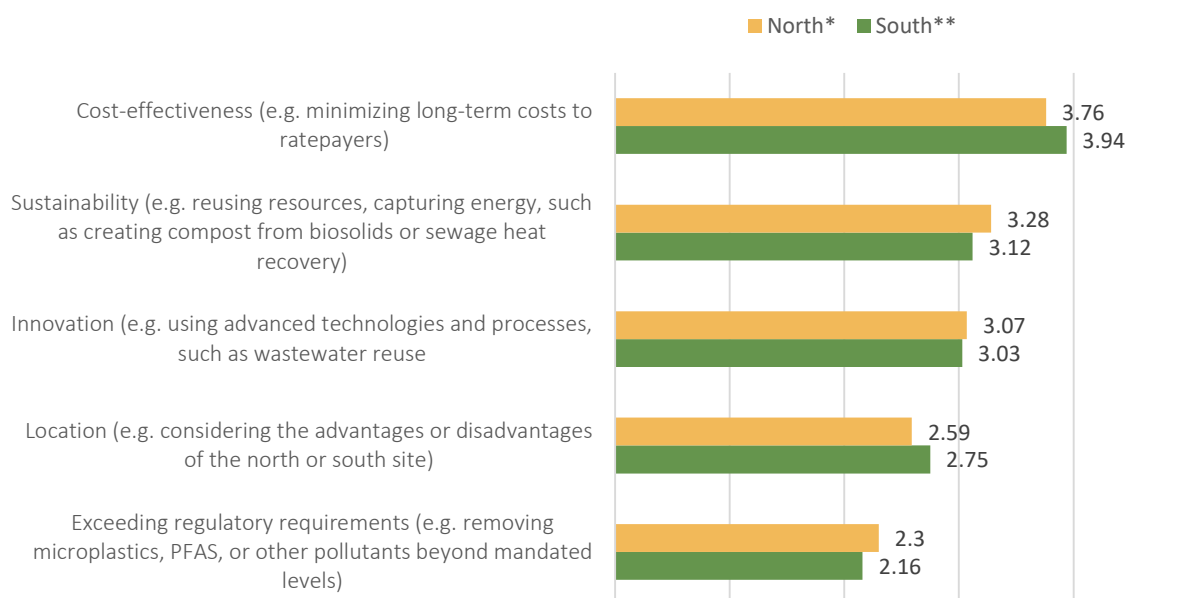
Please rank the following priorities when evaluating the option of combining the north and south sewage treatment plants into one location (122 responses)

All responses



Overall, survey respondents indicated that cost-effectiveness was a top priority to consider when evaluating the futures of the North and South sewage treatment plants. Respondents also rated sustainability and innovation as their preferred priorities.

"North and South" Neighbourhood Comparison



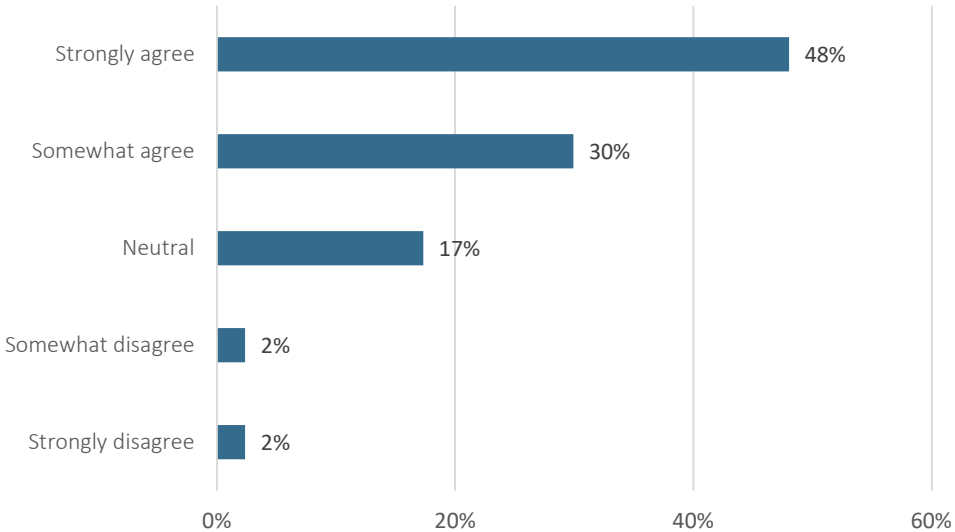
* Respondents who live in Downtown, Twin Rivers, Oglow Subdivision, Arrow Lake Drive, or Robson-Raspberry. (46 responses)

** Respondents who live in Kinnaird, Southridge, Woodland Park, Grosvenor, Blueberry Creek, Grandview Heights, Airport, or Ootischenia. (68 responses)

Results between north and south neighbourhoods were quite similar. Respondents in the south rated cost effectiveness and location as higher priorities than sustainability, innovation or exceeding regulatory requirements, which were slightly preferred by respondents in the north neighbourhoods.

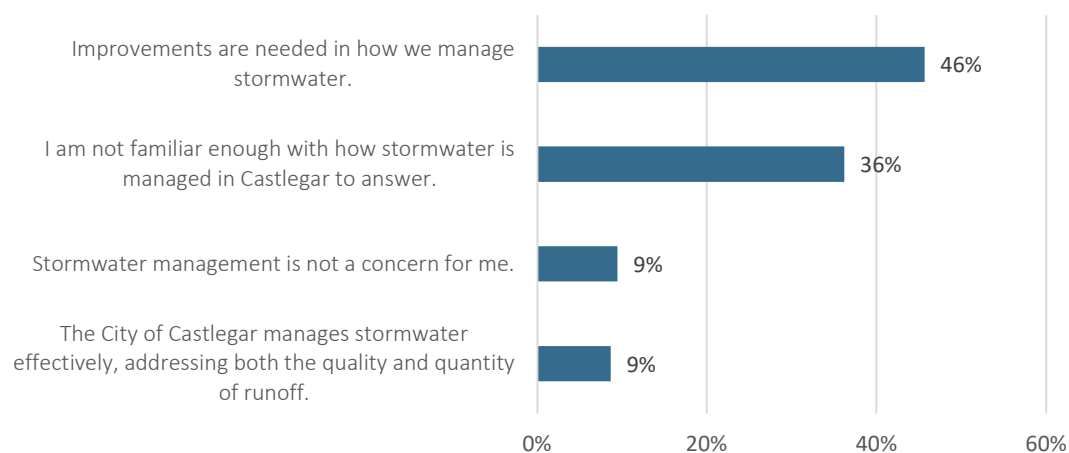
Please rate your level of agreement with the following statement: (127 responses)

“The liquid waste management plan should include innovative elements such as water reuse opportunities (e.g., using treated water for irrigation), heat recovery, biosolids composting, and/or others.”



Nearly half of all respondents (48%) strongly agreed that the LWMP should include innovative elements such as water reuse or biosolids composting. An additional 30 percent of respondents somewhat agreed with the statement, and 17 percent rated their level of support as neutral. The remaining respondents (4%) somewhat or strongly disagreed with the statement.

Based on your knowledge of Castlegar's stormwater management, please select the statement that best reflects your perspective. (127 responses)



Almost half of respondents (46%) agreed that improvements are needed in how the City manages stormwater, while only 9 per cent of respondents said that Castlegar manages it effectively.

However, more than one-third of respondents (36%) indicated that they are not familiar enough with stormwater management to provide an answer. The remaining nine percent of respondents said that stormwater management is not a concern for them

Are there any additional liquid waste management issues or potential solutions you believe should be considered in the plan? If so, please describe them below. (46 responses)

The most common themes from 46 responses included:

- Incorporating the Blueberry Creek neighbourhood into the City's sewer system
- Collecting of oil waste (e.g. used cooking oil and motor oil)
- Promoting education of community-wide issues to inform residents and ratepayers
- Exploring partnership and/or funding opportunities to modernize City infrastructure and treatment solutions
- Incentivizing rainwater collection programs to help manage stormwater
- Encouraging responsible care of septic systems
- Continuing to manage odour from current and future sewer infrastructure

What is the most important outcome of the Liquid Waste Management Plan for Castlegar? (84 responses)

The most common themes from 84 responses included:

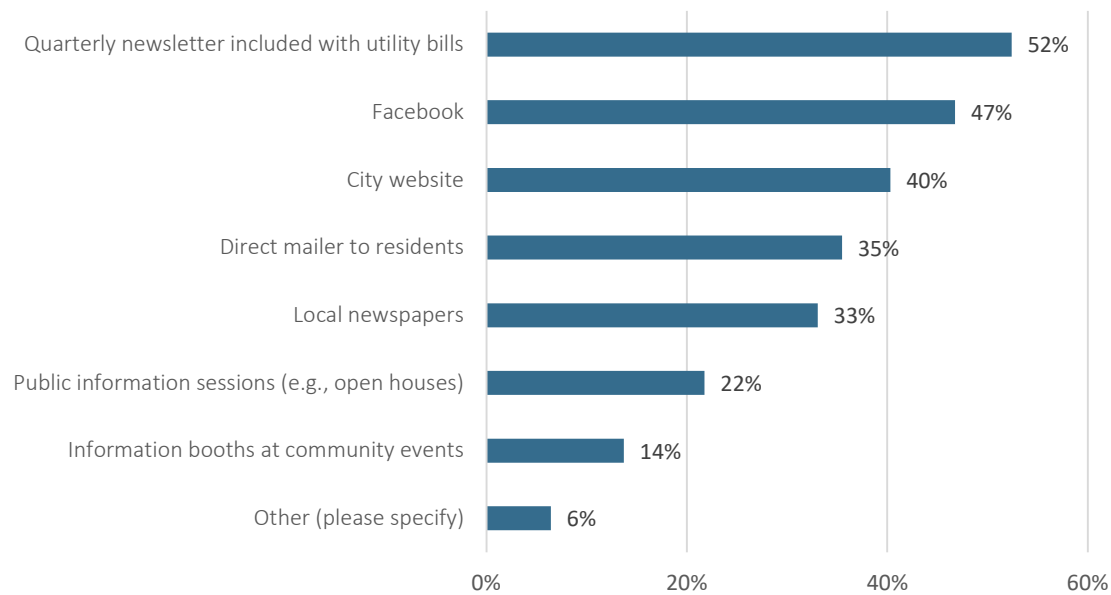
- Reducing negative impacts on the environment
- Improving quality of life for residents (e.g. controlling odours, modernizing infrastructure)
- Promoting long-term sustainability and dependability of the City's systems
- Prioritizing cost-effectiveness

Are there any cultural or environmental considerations that you believe should be included in the City's Liquid Waste Management Plan? If so, please describe them below? (38 responses)

The most common themes from 38 responses included:

- Consulting with local Indigenous communities
- Ensuring the safety of the Columbia River, fish and wildlife
- Keeping the plan simple and results-oriented
- Focusing on water stewardship for current and future generations
- Exploring the use of UV light and ponds for eco-friendly treatments

Which methods do you prefer for receiving updates about the City's Liquid Waste Management Plan (LWMP)? Select all that apply.



In the survey's final question, respondents indicated a preference to receive updates through the quarterly newsletter (52%), Facebook (47%), and the City of Castlegar website (40%).

Next Steps

Thank you to all community members who took the time to share their perspectives with the City about the Liquid Waste Management Plan. Your perspectives are invaluable to shaping our community and the future solutions for liquid waste.

Residents are encouraged to keep an eye out for further opportunities to share feedback on the Plan that is being developed.