

Chemtrade's North Vancouver chlor-alkali facility is one of Canada's largest providers of liquid chlorine – accounting for 40 per cent of all liquid chlorine available in Canada. Regionally, this equates to over 70 per cent of the liquid chlorine available in BC and Alberta. **Why is this important?** A study conducted by [Statistics Canada in 2015](#) found that 96 per cent of Canadian communities relied on chlorine to treat its municipal water supply, which equates to over 30.7 million Canadians. **Knowing the significant role that Chemtrade liquid chlorine plays in supporting safe drinking water for millions of Canadians, and the growing uncertainty in North American trade, we need to start having conversations now regarding our potential future operations.**

In this issue:

- *Securing Canadian production of a critical product*
- *Moving forward with rezoning application*
- *Updated Frequently Asked Questions*
- *Ways to stay in touch*

Securing Canadian production has never been more important

As we have seen in recent weeks, growing uncertainty in the trade relationships across North America, but particularly between Canada and the United States has brought the need to secure Canadian production and manufacturing to the forefront.

Our facility in North Vancouver has been operating safely and reliably since 1957. We are the largest producer of liquid chlorine in Canada – supplying 40 percent of all liquid chlorine on a national scale, and up to 70 per cent of the available liquid chlorine in Western Canada. Liquid chlorine has many uses, but arguably the most significant use is for the treatment of safe drinking water by 96 per cent of Canadian municipalities.

There are three other chlor-alkali facilities in Canada (one in Saskatchewan and two in Quebec), which have a combined production of less than our facility in North Vancouver. Should we stop production, Canadians would be left to source chlorine from these smaller facilities, or look to import from the United States, a market which has limitations on what it can export, and growing uncertainty in our trade relationships.

In 2021, the United States Environmental Protection Agency ordered that domestic market needs for liquid chlorine must be met before export, and at the same time, the US is facing the closure of several chlor-alkali facilities in the coming years. This will result in even more challenges for an already stretched US supply chain.

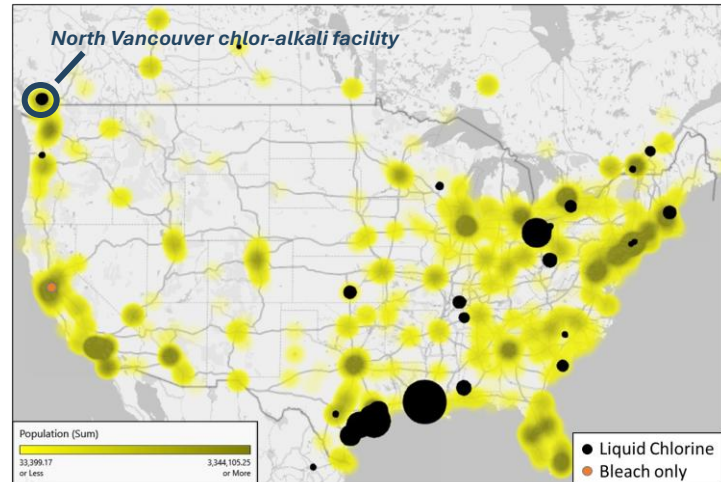


Our North Vancouver chlor-alkali facility is a critical Canadian producer of liquid chlorine, required for the treatment of safe drinking water by communities across Canada

The products produced at this facility - liquid chlorine, caustic soda, hydrochloric acid and hydrogen gas - support several major industries, and are a critical link in the Canadian supply chain. Some examples include:

- **Drinking water treatment** – used by 96 per cent of Canadian municipalities to treat local drinking water supplies
- **Metal production** – such as steel manufacturing
- **Oil and gas industry** – used in the refinement process
- **Industrial chemical production** – like solvents, cleaners, food preservatives, etc.
- **Pulp and paper industry** – for paper production
- **Clean hydrogen energy** – the hydrogen produced at our facility is a carbon neutral source of power and is currently being utilized as a local energy source at the facility and through sale to nearby businesses
- **Renewable battery production** – Canada is the world's second largest producer of renewable batteries, and the products we produce have the potential to further support this growing industry

Water treatment demand vs. chlorine production locations



- Black/orange circles represent chlorine production sites and size of capacity
- Yellow to grey heat map represents population density (drinking water consumption)

As we continue to engage with the Vancouver Fraser Port Authority, the District of North Vancouver, all levels of government, community members, First Nations and stakeholders, we want to ensure there is an understanding not only of the role we play in support Canadian drinking water and several key industries in Canada, but also in supporting the BC and Canadian economies.

The facility creates 118 local, well-paid jobs, and injects hundreds of millions of dollars into the BC and Canadian economy through taxes, payroll, and direct and indirect spending with contractors, suppliers, and vendors.



Have you ever wondered what that pile of white material is at the Chemtrade site? The answer is solar-dried sea salt, which we import from the Baja region of Mexico. It is delivered via barge every six weeks or so and is critical for our production process. In order to make chlorine, we combine salt, water and electricity.

Continuing to move forward with plans to apply for rezoning with the District of North Vancouver

Through conversations with the District regarding our plans to move forward with some proposed safety improvement projects at site, we learned that in order to proceed, we will be required to apply for rezoning.

We are currently working to prepare our application, a process we expect to take several weeks to potentially months as it requires the preparation of several detailed reports, many of which require third-party support. Once the application is filed, there will be both in-person and virtual and engagement opportunities – which will be communicated through ads in the NorthShore News, this newsletter, our website (www.AskChemtrade.ca) and direct email notifications for those people who have signed up for notifications through the website.



Until this process formally launches, we will continue with our current engagement efforts, which include public tours of the facility, updates to the Community Advisory Panel (CAP), offers of presentations to local groups and associations, and dedicated engagement with Nations and government.

Chemtrade hosted two public open house meetings regarding planned continued operations and proposed safety improvements in North Vancouver on June 6, 2024

To request a presentation, or to sign up for a tour of the facility, please contact Amy Jonsson at ajonsson@chemtradelogistics.com.

Taking questions from the community

We have continued to receive questions through our engagement website, www.AskChemtrade.ca, and are happy to share the answers to those questions below, and also post them on our website.

If you have a questions you would like to see answered, please send it to us, either through www.askchemtrade.ca/frequently-asked-questions-faq or by email to Amy Jonsson at ajonsson@chemtradelogistics.com.

What if your rezoning application is not approved?

We are applying for rezoning as part of the process to complete our proposed safety improvements, which would dramatically reduce risk for the community – bringing our current risk curves to near or at our property line, while also improving overall facility safety.

When we engaged with the District regarding our planned safety improvements for the facility, they advised us that in order to provide the building permits required for the improvements, we would need to go through the rezoning process to have the manufacturing of liquid chlorine listed as an exemption within the bylaw.

There are a few things that are important to note. The first is that **if the rezoning application is approved, there will be no change in how we operate, the products we produce, and the volume of our production.** The second is that the **facility has been operating safely and reliably in the current location since 1957.** And the third is that we are the **largest producer of liquid chlorine in Canada, providing over 40 per cent of the chlorine used to treat drinking water in Canada.** We know from a 2015 Stats Canada survey, that 96 per cent of Canadian municipalities use chlorine to treat their municipal water supplies.

If the District does not approve our rezoning application, we would be unable to move ahead with our planned safety improvements. This leaves the future of the facility uncertain beyond 2030 and would leave a large gap in the supply chain in both Canada and the US, particularly in Western Canada as the next closest chlor-alkali facility is in Saskatchewan. Recently, the closure of several chlor-alkali facilities across the United States in the coming years has been announced, making it even more unclear as to how this market gap for Western Canada and the Western US would be filled.

Will you go ahead and do the safety improvements without the rezoning approval?

No – we would be unable to. We need development permits from the District of North Vancouver to move forward with the safety improvements as the improvements include capital projects such as the construction of a containment structure around the rail loading area.

If the rezoning application is not successful, we will not be able to apply for development permits so we would not be able to move forward with our safety improvements.

Would you continue to operate without rezoning approval?

We are engaging with the District to ensure we are meeting all requirements for rezoning and demonstrating our value to the community - but also our value nationally as the largest domestic supplier of liquid chlorine, critical for safe drinking water here in Canada.

We hope to secure rezoning so we can move forward with our proposed safety improvements, which will greatly reduce potential risk to the community, bringing our current risk curves to near or at our property line, while also improving overall facility safety.

The District would also see immense benefits from our proposed safety improvements. This is because with the reduced risk curves, the District would be able to develop the land outside of our property line without restrictions.


Ultimately, if the District does not approve our rezoning application, we will have to look at our current operations, and what our options are moving forward. Again, this is not our preference as our hope is to be able to move forward with our planned safety improvements which will reduce risk to the community and secure safe drinking water for millions of Canadians.

What is your zoning changing from and to?

Our actual zoning for the land the facility is located on would not change from its existing classification, which is Employment Zone – Industrial. If successful, the rezoning application would allow for the production of chlorine to be listed as an allowable activity for our facility.

Just as a reminder, our facility is located in a heavily industrial area – our neighbors include an active Port, a waste and recycling transfer station, a sodium chlorate facility, an aggregates supplier, and a proposed liquid hydrogen facility.


Investing in the community for the future




Chemtrade has invested \$500M since 2010 to continue to make the plant safer and more efficient. This includes state-of-the-art technology improvements that have resulted in a lower carbon footprint and reduced the risk of operational upsets.

Reducing the amount of liquid chlorine on-site

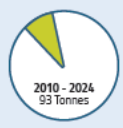
An effective way to reduce risk from liquid chlorine is to minimize the quantity of liquid chlorine on site. Chemtrade follows a produce-and-ship model to reduce on-site inventory while meeting customer needs.



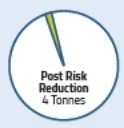
Original design with large bulk storage capacity



Elimination of 80% of bulk storage



Elimination of 94% of bulk storage



Potential elimination of 99.6% of bulk storage

Land-use planning around industrial sites

Major Industrial Accidents Council of Canada (MIACC) land use planning guidelines indicate what could be built in the proximity of Chemtrade today and how proposed risk reduction efforts could allow for more development in the future.

Annual Individual Risk

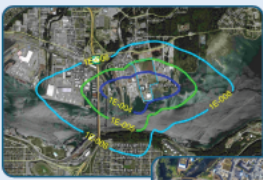
Risk Source	100 in a million (10 ⁻⁴)	10 in a million (10 ⁻⁵)	1 in a million (10 ⁻⁶)
No other land use	Industrial	Manufacturing, Warehouses, open space (parkland, golf course, etc.)	Commercial, offices, low-density residential
Allowable Land Uses	Industrial	Manufacturing, Warehouses, open space (parkland, golf course, etc.)	All other uses, including institutions, high density residential, etc.

Future Investment


If operations on-site were to extend beyond 2030, Chemtrade is looking to implement a series of risk reduction capital projects intended to drastically reduce the risk that liquid chlorine poses to the surrounding area. These projects are being developed in partnership with third-party experts.

Based on these proposals, there would be extremely limited restrictions on land development outside of the Chemtrade fence line and the potential risk to the surrounding community would be greatly reduced.

A lease renewal would allow for these improvement projects to be completed over the next several years, during planned facility shutdowns.



Current risk curves as developed in 2006



Risk curve modelling following the execution of additional risk mitigation projects

Risk (per year) (over 15yr)

- 1E-3
- 1E-4
- 1E-5
- 1E-6

Above is an example of the information shared during our June 6, 2024 open house (also available on www.AskChemtrade.ca) regarding our planned safety improvements and changes to operations, and how they will impact the facility risk curves.

If you get the rezoning application approved, will you be changing how you operate?

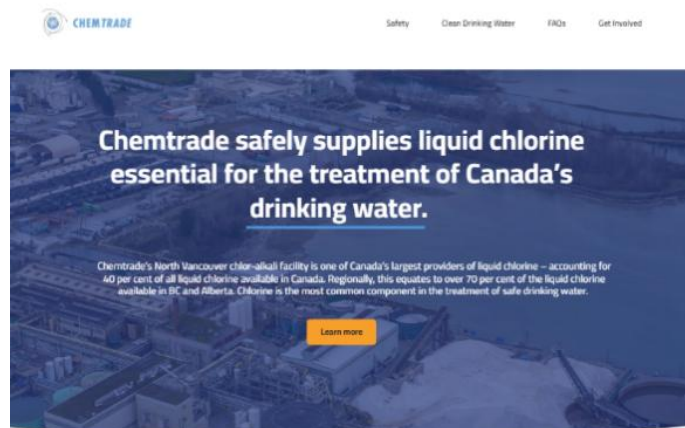
The approval of our rezoning application is required so that we can apply for development permits to move forward with our proposed safety improvements. These improvements will make the facility even safer and further reduce potential risk. **We would not be increasing production amounts or products manufactured at the facility – production levels would remain consistent.**

What we would change is the amount of liquid chlorine stored on site, **reducing it from the approximately 94 tonnes which we currently store on site, down to four tonnes.** To give you context, using the year 2000 as the benchmark, at that time we stored over 1,600 tonnes of liquid chlorine on site. The reduction to 94 tonnes stored onsite today and planned further reduction to four tonnes following rezoning approval, represents a significant change in how we operate and contributes to our significant reduction in risk profile for the area surrounding our facility.

The transition to four tonnes of storage will require us to move towards a manufacture and ship model, but as our production is not increasing, we do not anticipate an increase in railcars to or from the site.

Ways to contact us

We would love to hear from you, and there are several ways to contact us. The first is by visiting www.AskChemtrade.ca where you will be able to submit questions, find up-to-date information, and send us a message directly. The second is by reaching out directly to our Director, Corporate Communications Amy Jonsson at ajonsson@chemtradelogistics.com who will be able to answer questions or connect you with someone who can. Or you can visit our Facebook page (<https://www.facebook.com/chemtrade>) and send us a message that way.



A Vision for the Future

Chemtrade's site has operated safely in North Vancouver for more than 65 years.

Chemtrade is engaging with the North Vancouver community to extend its current lease agreement, set to expire in 2024, and continue producing chlorine to support a stable supply chain for clean drinking water in Canada.

This is a complex process that includes working with the local community, local partners, the Port of Vancouver, the District of North Vancouver and other levels of government. We want to make the right decisions, not just for the local community, but also for the millions of Canadians who rely on chlorine to treat their drinking water.

Since 2010, over \$200 million has been invested in the North Vancouver site to improve safety, reliability, and modernize the facility.

We want to engage with the North Vancouver community about these plans and the importance of this site for the community, province, and country.