

LAURENTIA

QUÉBEC PORT AUTHORITY

Submission by the Québec Port Authority to the Canada Impact Assessment Agency as part of the consultation phase of the Draft Environmental Assessment Report for the Laurentia Terminal Project.



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SUBMITTED TO THE IMPACT
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Laurentia

A safe, environmentally friendly project that creates sustainable prosperity

A safe project for human health

The expert reports conclude that the project will not lead to any significant air degradation, especially for the residents of the surrounding neighbourhoods, and will therefore have no impact on human health.

During the construction phase, during a few peak periods, i.e. 6 to 10 days per year, certain pollutant emissions could exceed standards on the construction site itself and in the Baie de Beauport recreational sector. To prevent these situations, the Port will have measuring stations that will enable it to react quickly by reducing or temporarily halting work while the situation is resolved.

Nearly 20% reduction in GHGs

The Laurentia project will result in a significant reduction in greenhouse gases of 18.5% compared to the current situation. From 2024 to 2038, Laurentia will have eliminated 1 million tonnes of GHGs from the atmosphere.

This decline will come mainly from a greater use of large ships and rail rather than trucking, as well as an overall decrease in the distances to be travelled throughout the supply chain.

Compensable impacts on fish

The impacts of the Laurentia project on fish and fish habitat will be limited and fully compensable. With respect to striped bass, the MFFP believes that its reintroduction into the river in the early 2000s was "a great success" and that there are at least two spawning grounds for this fish species in the St. Lawrence, if not more. The future terminal will also have a very limited impact on the overall striped bass use area in Baie de Beauport.

The studies carried out by the Port also lead to the conclusion that American shad and sturgeon will not be significantly impacted by the construction of the terminal, and that this can be compensated for by the creation of new nursery areas.

A structuring project for the Québec economy

The Laurentia project will enable Québec to occupy a prominent place on the world maritime scene, which is currently undergoing a profound period of transformation.

In 20 years, in the interest of efficiency, the size of the largest ships has doubled, requiring deep-water docks to accommodate them, as Laurentia proposes. This new terminal will allow the St. Lawrence to remain a competitive and relevant shipping route in this new global maritime universe, in addition to acting as a springboard for Eastern Québec companies in their conquest of international markets.

Social acceptability

Through the Port-Community Cohabitation Committee, which brings together 17 different organizations, as well as through its participation in some 15 external committees and working tables, the Port is constantly listening to the concerns of the various groups in the community.

As a result of this ongoing dialogue, the Laurentia project has undergone various improvements in recent years. These include the project to implement, in collaboration with the authorities concerned, a by-pass route to the main truck routes that will access Laurentia. The Port also plans to create a new urban park near Baie de Beauport by greening 4 hectares of the port area.

First Nations

The Port of Québec has established an open and constructive dialogue with First Nations on various topics of interest to these communities, including fish and fish habitat.

The exchanges could lead to the implementation of compensation projects, including for striped bass and sturgeon, in addition to the conclusion of collaboration agreements, particularly with respect to research and the advancement of knowledge.

Économy

The Laurentia project will enable Québec to occupy a prominent place on the maritime world scene, which is currently in the midst of a profound transformation.

This deep-water container terminal will be a springboard for Eastern Québec companies to develop their international markets, in addition to making the St. Lawrence a more competitive transportation route in the future, to the benefit of companies and all players in the maritime sector in Québec.

Accelerated transformation of the global shipping industry

The Laurentia project is a response to the rapid and profound transformation of global maritime trade. The transportation of goods at sea relies on ships whose size has changed radically over the past 20 years. In 2000, the largest ships had a capacity of 9,000 TEUs, whereas today they reach 22,000 TEUs, an increase of more than 100%. These larger ships allow for efficiency gains and a reduction in transport costs, in addition to contributing to the reduction of GHG emissions. In order to accommodate these large ships, it is necessary to have deep-water port infrastructures, as proposed by Laurentia.

A structuring project for the Québec economy

With Laurentia, the St. Lawrence Seaway Corridor will have a first-rate deep-water port infrastructure directly integrated with the CN intermodal network that will allow for the efficient operation of large trains along the Québec-Ontario corridor.

This new high-performance and technologically advanced logistics chain will accommodate ships of more than 9,000 TEUs comparable to those found on the U.S. East Coast seaboard, thereby generating the economies of scale required to facilitate competitive access to international markets, particularly for Québec and Ontario companies.

The development of the terminal will be based on robust commercial assumptions, a partnership with major international leaders specializing in logistics who will invest more than \$500 million in it, and the strategic geographic location of the port of Québec City which, more than 1,300 km from the Atlantic Ocean, will be a real vector for trade between the heart of North America and the rest of the world.

Several other economic benefits

In addition to its structuring spin-offs, the Laurentia project contains several other economic benefits:

- 595 million in private investments in Québec City
- Creation of 1700 jobs during the construction phase (4 years)
- 1,000 well-paying direct and indirect jobs in the exploitation phase
- Ultra-modern infrastructures that reduce transportation and supply chain costs, representing recurring productivity gains of \$139 million annually for Québec's exporting and importing companies.
- Creation of better-paying jobs in the Québec City region
- Contribution to the creation of a logistics and maritime innovation cluster in the Québec City region
- Contribution to post-pandemic economic recovery

Air quality

The Laurentia project will not have a significant impact on the air quality of the neighbourhoods bordering the port area, including Cité-Limoilou.

The scientific analyses and modeling carried out by the Québec Port Authority over the past few years lead to the conclusion that the Laurentia project, during the construction period, will not have a significant impact on the air quality of the surrounding neighbourhoods, and that this impact will be negligible when it comes into operation.

A pre-existing air quality problem in Cité-Limoilou

The Limoilou and Maizerets districts have been grappling with air quality issues for a long time, particularly with regard to fine particles (PM_{2.5}) and nickel. The Port of Québec's activities are a negligible source of fine particles and nickel. The origin of these two pollutants in the sector is largely attributable to other sources. As revealed by the Direction de la santé publique (DSP) in a study published in 2019, fine particles in Cité-Limoilou are mainly generated by transportation, various industrial activities and wood heating in winter. Consequently, solving the air quality problem in Limoilou requires concerted action by all stakeholders concerned. That said, an encouraging factor, air quality in the neighbourhood has nevertheless improved over the past 10 years, the DSP also noted. With respect to nickel, in a notice published in 2015, the DSP stated that the risk that the concentrations observed in Limoilou would pose problems for the health of the population is "low", even though the concentrations may exceed Québec standards.

No significant impact during construction, and negligible during commissioning

As for the Laurentia project, during the construction period, it will not have a significant impact (well below standards) on the quantity of fine particles and nickel in the surrounding neighbourhoods (i.e. beyond the 300-metre buffer zone around the construction site).

Only the Baie de Beauport Recreational Park could be affected by a few PM_{2.5} and NO₂ exceedances, considering the initial concentrations and modelled emissions from the project, but only 6 to 10 days per year, when work will be at peak periods. Moreover, when it comes into operation, the Laurentia terminal will have a negligible impact on air quality in the surrounding neighbourhoods.

Mitigation measures

The Port of Québec has planned various effective mitigation measures to reduce the impacts of the Laurentia Project, both during construction and after its commissioning. These measures will aim to prevent emissions exceeding daily standards during construction in sensitive areas, such as Baie de Beauport. The Port may also require a temporary work stoppage depending on weather conditions if required. The Port also plans to analyze on an ongoing basis the air quality in the area surrounding its facilities and make this data available to the public at all times when the terminal goes into operation, data already available for PM_{2.5}:

<https://www.portquebec.ca/on-sengage/on-prend-soin-de-notre-milieu/gestion-en-continu-de-la-qualite-de-lair>

Greenhouse gases

Overall, the Laurentia terminal will reduce greenhouse gas emissions by nearly 20% compared to the current situation.

A study conducted in 2020 by the firm Deloitte established that the use of larger ships, the reduction in distances travelled at sea (-6%) and by truck (-90%), as well as a slight increase by train (+9%) resulting from the commissioning of the Laurentia terminal will have the effect of reducing greenhouse gases by 18.5% overall.

Laurentia: overall benefits for GHG reductions

The Deloitte study identified significant overall benefits of the Laurentia project on greenhouse gas (GHG) emissions. For the period 2024-2038, the Laurentia terminal will reduce greenhouse gas emissions by more than 1 million tonnes, in addition to reducing nitrogen oxides (NO_x), sulphur oxides (SO_x) and particulate matter (dust), compounds that contribute to air pollution, by 12,400 tonnes.

For example, the few containers from Eastern and Central Quebec that will pass through the new terminal will alone reduce truck transport by 7 million km each year. Laurentia's environmental efficiency will make it possible to erase in four months of operation the GHG emissions generated by the entire 3-year construction period of the terminal.

GHG: Avoid-Minimize-Compensate

Although the commissioning of the Laurentia terminal will result in an overall reduction in greenhouse gases, the Port wishes to put forward an ambitious action plan to reduce and offset its local GHG emissions.

This action plan, guided by the "avoid-minimize-compensate" approach, will include various measures and initiatives both during the construction phase and during the operation of the terminal. During the works, for example, the use of alternative fuels (biodiesel) and materials will be promoted, local purchasing will be favoured and the use of anti-pollution systems for mobile equipment will be required.

Local carbon neutrality in the exploitation phase

The Port's goal is to make the Laurentia terminal carbon neutral for its local GHG emissions when it goes into operation, and to do so in a sustainable and permanent manner.

The modern equipment of the future terminal, which will operate either exclusively on electricity or bi-energy, will already make it possible to make significant gains in this direction. Other initiatives will be put forward, including the installation of a power supply system for ships at the wharf, the implementation of incentive programs for low-emission trucks and trains operating within the Port's territory, and measures to reduce truck waiting times.

In addition, the Port is considering deploying a programme of greening and massive tree planting in certain areas of the Port (as recommended by the Public Health Department to improve air quality in Limoilou).

Human Health

The Laurentia project will not affect the human health of the residents of the neighbourhoods bordering the port area, including Cité-Limoilou...

...includes:

- the statement by Dr. Isabelle Goupil-Sormany (Direction de la santé publique) in response to a citizen concerned about the situation in Vieux-Limoilou "that she would advise a family to settle there".
- the results of the modelling studies carried out, concluding that the project will not lead to a deterioration of air quality in the community surrounding the Laurentia project site.

Assumption of extreme conditions

The study by Englobe looked at so-called "contaminants of potential concern" (COPCs), which include fine particulate matter (PM_{2.5} and PM₁₀), total particulate matter (TPM), nitrogen dioxide (NO₂), and formaldehyde. These are the air contaminants that are most likely to cause harm to human health.

Englobe's work, in keeping with best practices, was conducted under the assumption of extreme conditions, which do not reflect the actual conditions that will prevail during the construction and commissioning of the Laurentia project.

Limited impacts during construction

During the construction period, assuming maximum conditions during the entire duration of the work (which will not occur), the Laurentia project would have a negligible impact on the presence of contaminants in the air, with the exception of PM_T, nitrogen dioxide (NO₂) and formaldehyde. Concentrations of these three compounds could exceed standards on the construction site itself and in the Baie de Beauport recreational sector during peak periods, i.e., 6 to 10 days per year. For these three contaminants, the Port plans to install stations to measure their concentration in the air on a continuous basis. This will allow the Port to suspend work, if necessary, if acceptable thresholds are exceeded. However, this risk seems unlikely, since the work will rarely reach the maximum intensity level, an assumption on which the Englobe study was based.

Negligible impact on the start-up of operations

Once in operation, the Laurentia project will have little impact on the presence of atmospheric contaminants in neighbourhoods bordering the Port. The only compound that could represent a potential risk is nitrogen dioxide (NO₂), but this contaminant, which mainly comes from the operation of diesel-powered engines, will be subject to monitoring and control measures to prevent any emissions that exceed standards. At full capacity, in 2035, there will be 90 trucks entering and leaving Laurentia per day, compared to an average of 1,100 trucks per day for terminals of comparable size in North America.

NO₂ and NO_x emissions to be reduced

The Englobe study does not take into account changes in transport modes, which will result in the accelerated abandonment of diesel, which is the source of NO₂ and NO_x (nitrogen oxide) emissions. New-generation trains, which are subject to the Locomotive Emission Regulations, will see their NO_x emissions decrease by 80% compared to today. In addition, the gradual electrification of trucks will also contribute to lowering NO_x emissions over the next few years.

Fish and its habitat

In light of the latest knowledge, the impacts of the Laurentia project on fish and fish habitat will be limited and fully compensable.

These findings are the result of scientific studies conducted by the Port according to protocols and methodologies recognized by the authorities and the scientific community.

In total, no less than 35,000 working hours have been devoted by the Port to the study of fish and fish habitat over the past seven years.

Striped bass: several spawning areas upstream from Québec City

In October 2020, based on the most recent data, the Québec Ministry of Forests, Wildlife and Parks (MFFP) described the reintroduction of the new striped bass population into the St. Lawrence River in the early 2000s as a "resounding success". As a result, in 2019, the MFFP stopped the striped bass stocking program in the river and is now considering authorizing sport fishing for this species as soon as its status is reviewed by the Committee on the Status of Endangered Wildlife in Canada. The MFFP also estimates that there are at least two striped bass spawning grounds in the river, if not more.

These findings are also confirmed by studies conducted by the Port, which suggest that there are probably several striped bass spawning areas located upstream from Québec City as far as the Richelieu River (egg and larval catches in 2020). Furthermore, in the Baie de Beauport, it has been established that the striped bass use area is much larger - 280 hectares - than the area that will be occupied by the terminal.

Little impact on American shad and sturgeon

As for American shad, the latest work carried out by the MFFP in 2020 revealed the probable presence of multiple spawning grounds for this fish species, which should lead to a review of its status, currently defined as "vulnerable species" by Québec authorities. Moreover, the field work carried out by the MFFP over several years has not established the existence of a spawning area in Baie de Beauport (but rather that of nursery areas). According to the data collected, a tasty shad spawning area would be more likely to be found at the western tip of Île d'Orléans. The Nation huronne wendat proposed to conduct a research project to verify this hypothesis, based on the work of the MFFP.

On the other hand, telemetry analyses in recent years have confirmed that the sturgeon (lake and lake sturgeon) is mainly present in the St. Charles River estuary, its feeding area, and that it rarely visits the port tip where the Laurentia terminal will be built. Only dredging activities are planned in this area, which will result in habitat modification, but not loss.

Mitigation and compensation measures

Despite the limited and temporary impacts of the Laurentia project on fish and fish habitat, the Port is prepared to put forward several mitigation and compensation measures, in collaboration with the Department of Fisheries and Oceans, including:

- Further reduce the dredging area of the river (40% reduction in 2019);
- Reduce suspended solids during the work;
- Create new nursery areas for striped bass and shad;
- Add a new sturgeon habitat (St-Charles River).

Social acceptability

The Laurentia project is developed in close collaboration with the community, through a continuous and structured dialogue with all stakeholders involved.

These exchanges with the community, through a large number of committees and discussion tables, have enabled the Port to integrate various changes into the terminal project in order to better respond to the expectations and concerns expressed. The Port intends to maintain this dialogue with the community for the next stages of the project as well as after the terminal is operational.

Numerous mechanisms for liaison and exchange with the community

Community relations are a priority for the Port of Québec. Thus, the Port has an Environment and Citizen Responsibility vice-presidency within its senior management team, which includes a Citizen Responsibility Department (DRC). In 2012, the Port set up a Port-Community Cohabitation Committee (CCPC) to ensure that the interests of the various stakeholders are represented and heard: citizens; environmental, social and economic groups; the municipal world; and Indigenous communities. The topics dealt with by the CCPC relate to the Laurentia project and other Port activities. A total of 17 groups and organizations are members of the CCPC.

In addition, DRC participates in some 15 external committees and working tables where a large number of community stakeholders are represented. These committees include the Comité de vigilance des activités portuaires du Port de Québec and the Comité intersectoriel sur la contamination environnementale et la qualité de l'air dans l'arrondissement de la Cité-Limoilou. At several of these 15 committees and working tables, the Laurentia project is a regular item on the agenda of statutory meetings. This approach has allowed the Port to listen to the community and gather many comments and suggestions, many of which have been retained for the development of the Laurentia project.

New Laurentia Monitoring Committee

In the same spirit, and with a view to overseeing the next stages of the Laurentia project, the Port plans to create a committee entirely dedicated to the future terminal. This committee, which will be made up of citizens and organizations, will support the Laurentia Project Office during the engineering and construction phases, as well as at the beginning of the terminal's operation.

Different initiatives to increase the social acceptability of the project

Several initiatives have already been identified to improve the social acceptability of the project, including the implementation, in collaboration with the authorities concerned, of a bypass road to the main truck routes that will access the terminal, as well as the creation by the Port of an urban park located near the Baie de Beauport, as part of a program to green 4 hectares of its territory. Finally, the Port will continue the work begun in co-creation mode with the Baie de Beauport Users' Forum to improve the development of the recreational and tourist area in this sector.

Strong support for the Laurentia project

In a survey conducted by the firm Léger from December 4 to 8, 2020 in the Greater Québec City area, it was noted that 62% of people who had an opinion on the Laurentia project were in favour of its implementation. Within the same group of respondents, 70% believe that this project is important for the region's economic recovery, in the current pandemic context.

First Nations

The Port of Québec has established an open and constructive dialogue with the First Nations involved in the Laurentia project.

These discussions focused on the concerns and subjects of interest to these communities in relation to Laurentia, including fish and its habitat, including striped bass.

These discussions could lead to the implementation of compensation projects and the conclusion of various collaborative agreements, particularly in the areas of research and the advancement of knowledge.

Discussions on several fronts

Over the past few months, despite the pandemic, discussions have been actively pursued with First Nations (FN) on various aspects of the Laurentia project, notably through workshops in which representatives of the Department of Fisheries and Oceans (DFO) also participated at times. These exchanges focused mainly on the implementation of various compensation projects, in addition to sharing information with FN representatives on technical aspects of the Laurentia project and the environmental assessment process.

The FNs involved in these talks are the Huron-Wendat Nation; the Innu First Nations; the Waban-Aki Nation; the Wolastoqiyik Washipekuk First Nation; the Mohwak First Nations of Kahnawake, Kanasatake and Akwasasne. The Port intends to maintain this framework of discussions with the FN during the construction phase of the terminal as well as after it becomes operational.

Compensation projects under consideration

FNs share a common interest in the issue of fish and fish habitat. Discussions between the Port and the FNs have resulted in the consideration of certain compensation projects, including striped bass and sturgeon, to the extent that they meet DFO requirements. Discussions were also held with some FNs on the possibility of joint research projects to increase knowledge of fish and fish habitat.

Other topics are also being discussed with First Nations, including access to the river, monitoring the evolution of maritime traffic, treatment and discharge of ballast water from ships (subject to the International Convention for the Control and Management of Ships' Ballast Water and Sediments), dredging of the St. Lawrence maritime corridor and the economic benefits of the project (including job creation).

Continuing discussions on common objectives

In keeping with its commitment to maintain dialogue with the First Nations involved during the consultation, construction and operation phase of the Laurentia Terminal, the QPA is committed to continuing and developing the relationship established with these FNs over the past few years. The First Nations have all shown an interest in continuing this relationship with the QPA and a majority of them are considering the possibility of working together on certain projects and research related to fish and fish habitat as part of the Laurentia project.

In 2018, the Port concluded a framework agreement with the Huron-Wendat Nation to foster greater collaboration and partnerships in the future, which are not exclusively limited to the Laurentia project.