



# The Jacques Cartier and Champlain Bridges Incorporated

## 2020 to 2023 Sustainable Development Strategy



[September 2020]

Updated on January 13<sup>th</sup> 2021

**Canada**

## Executive summary

The Jacques Cartier and Champlain Bridges Incorporated (JCCBI) was added to the Schedule to the *Federal Sustainable Development Act* by virtue of the “Order Amending the Schedule to the Federal Sustainable Development Act: SOR/2019-177”. Since this order will not come into force until December 1, 2020, this Sustainable development strategy (SDS) 2020 to 2023 is being tabled on a voluntary basis.

JCCBI adopted its first sustainable development strategy in 2015 and put in place the governance and internal monitoring and reporting processes required to integrate the concept into its operational and administrative activities.

Within the framework of the Federal Sustainable Development Strategy (FSDS), JCCBI can contribute to 5 of the 13 sustainable development themes, through actions that are already supported by its efforts in the areas of responsible procurement, environmental responsibility, sustainable design and socio-economic contribution. More specifically, this SDS 2020 to 2023 comprises actions on climate change mitigation and adaptation, protecting and enhancing knowledge of terrestrial and aquatic biodiversity, increasing synergies between communities and ecosystems, and managing contaminated sites, thereby contributing to the health and well-being of Canadians.

## Section 1: Introduction for the Sustainable Development Strategy

The 2019 to 2022 FSDS sets out the Government of Canada's sustainable development goals and targets as required by the *Federal Sustainable Development Act*. JCCBI adheres the principles of the FSDS and, while not bound formely by the Act, JCCBI has developed this SDS.

## Section 2: Vision and Context of Sustainable Development within JCCBI

A major infrastructures manager, JCCBI is a federal Crown corporation established in 1978 and responsible for the Jacques Cartier Bridge, the original Champlain Bridge, the Champlain Bridge Estacade, the Île des Sœurs Bypass Bridge, the federal sections of the Bonaventure Expressway and of the Honoré-Mercier Bridge, as well as the Melocheville Tunnel. JCCBI's mission is to ensure the mobility of users, the safety and the longevity of infrastructure using a systemic management approach based on sustainable development. JCCBI's vision is to become a leader in major infrastructure management as an innovative expert, a mobility leader and a social and urban contributor.

JCCBI recognizes the importance of a sustainable development approach in the management of the assets under its management and their operation. As such, JCCBI deployed its first multi-year sustainable development strategy as early as 2015 with the objective of positioning itself as a leader in the responsible and sustainable management of its infrastructures. Over the years, JCCBI has integrated the concept of sustainable development into the conduct of its activities and gradually positioned itself among the public leaders in this field. JCCBI's sustainable development approach is a broad one and aims as much at the ethical and responsible business management and at the creation of social and economic values as at the sustainability of infrastructures. To these elements are added respect for the environment and the protection of the biodiversity present on its territory.

Of the 13 long-term goals set out in the 2019 to 2022 FSDS, JCCBI contributes to the following 5:

- Greening Government;
- Effective Action on Climate Change;
- Pristine Lakes and Rivers;
- Connecting Canadians with Nature;
- Safe and Healthy Communities.

While JCCBI's sustainable development actions concurrently contribute to several goals of the FSDS, they are presented only once in this SDS to avoid duplication.

## **FSDS Goal: Greening Government**

The Government of Canada is engaged in an ecological transition that focuses on controlling greenhouse gas (GHG) emissions, managing waste efficiently, using clean energy and technology, green procurement, reducing the environmental footprint and adapting to climate change. JCCBI contributes in its own way to most of these goals. The organization has set itself the goal of developing a comprehensive system for monitoring and managing waste resulting from the operations on its construction sites. In addition, through the inclusion of specific obligations in its contracts where applicable, JCCBI wants to influence the construction (and deconstruction) industry by encouraging its partners to reduce, reuse and recycle materials. JCCBI is also in the process of analyzing the resilience of the assets under its management through the development of a climate change adaptation plan, the conduct of analyses of the life cycle of its operations and the publication of a responsible procurement approach that includes employee training. Finally, JCCBI is working on a life cycle assessment to reduce the environmental footprint of its purchases and operations. GHG from its administrative operations are relatively low, as its real estate portfolio and vehicle fleet are not significant.

## **FSDS Goal: Effective Action on Climate Change**

Canada has engaged in this goal through 2 pillars: reducing GHG emissions and adapting to climate change. Due to the nature of its activities and assets, JCCBI is primarily targeted by the second pillar. JCCBI is making significant efforts in this area. JCCBI has initiated a series of collaborations with research centres, government agencies, project authorities and universities to stimulate reflection on both the impact of climate change on its infrastructures and the best ways to respond to it. These efforts will produce a solid knowledge base on which to base JCCBI's future adaptation strategy as well as its internal training program. JCCBI also contributes indirectly to the first pillar of reducing GHG emissions through its contracts, by encouraging and by impelling its partners and suppliers to take this goal into account, when it is possible do so, as well as through reductions at source and contractually-imposed GHG offset programs.

## **FSDS Goal: Pristine Lakes and Rivers**

Lakes and rivers are one of Canada's greatest assets. They are home to a rich and diverse ecosystem and provide multiple ecosystem services. Their conservation is therefore essential for the economic and social well-being of society as a whole. JCCBI is directly targeted by this goal because its infrastructures either span or are located along the St. Lawrence River. JCCBI works with government agencies and departments to protect the biodiversity of the St. Lawrence River. Currently, one of JCCBI's flagship projects is designated "Solution Bonaventure". This project has 2 components, the first being the construction and operation of a hydraulic barrier along the river in the West Sector of the Bonaventure Expressway that captures contaminated groundwater to prevent it from migrating to the river. The water is treated and then discharged into the river. The second component of the project consists in the construction of a containment wall in the East Sector of the Bonaventure Expressway to capture contaminated groundwater and pump out the hydrocarbons. The Solution Bonaventure project, which is in its operation phase, is the main measure adopted by JCCBI to contribute to the health and cleanliness of rivers, in addition, of course, to the specific mitigation measures put in place during construction work in or near water.

### **FSDS Goal: Connecting Canadians with Nature**

It is recognized that contact with nature promotes mental and physical health and raises awareness of the need for its conservation. Canada has a great natural heritage and any action undertaken to bring Canadians closer to nature has a positive impact on the government's other environmental and sustainable development goals. Citizens who are close to nature are citizens potentially committed to its conservation and more aware of the ecological transition initiated by the government. JCCBI works to develop partnerships with community organizations, notably by providing them with plots of land that are subsequently transformed into welcoming and inclusive natural areas. A recent successful experience encourages JCCBI to move forward and extend this type of partnership to other organizations. The Champlain Bridge deconstruction project and its Héritage Champlain program are also an opportunity to give back to citizens some of the spaces freed up following the deconstruction to turn them into places that combine nature and culture. This will be achieved through the development of species observation sites and the construction of commemorative works of art. JCCBI is confident that this innovative project will help attract more of its fellow citizens to come into contact with the rich natural ecosystems bordering its assets.

### **FSDS Goal: Safe and Healthy Communities**

JCCBI contributes to the collective activities aimed at ensuring that Canadians live in clean and safe environments that contribute to their health and well-being. The main action contributing to this goal through JCCBI's activities is the management of the federal contaminated sites under its responsibility. To this end, JCCBI plans to carry out an inventory of all its contaminated sites and use the resources made available under the Federal Contaminated Sites Action Plan (FCSAP). JCCBI is also committed to reducing the nuisances resulting from the worksite operations of both its contractors and its operations and maintenance teams by limiting dust and contaminant discharges as well as the resulting noise pollution.

## Section 3: JCCBI's Commitments



### **Greening Government: The Government of Canada will transition to low-carbon, climate-resilient and green operations.**

Responsible Ministers: All Ministers

This goal captures commitments from the Greening Government Strategy, as well as reporting requirements under the Policy on Green Procurement.

<b>Greening Government FSDS targets</b>	<b>FSDS contributing actions</b>	Corresponding <b>actions</b>	<b>Contribution</b> by each action to the FSDS goal and target	<b>Starting points Performance indicators Targets</b>	<b>Programs</b> in which the actions will occur
Reduce GHG emissions from federal government facilities and vehicle fleets by 40% by 2030 (with an aspiration to achieve this target by 2025) and 80% below 2005 levels by 2050 (with an aspiration to be carbon neutral)	The vehicle fleet management will be optimized, notably by promoting the use of vehicles that emit less GHG	<ul style="list-style-type: none"> <li>- Develop a carbon emissions reduction target in relation to the vehicle fleet</li> <li>- Deploy an internal awareness guide for responsible automobile driving</li> <li>- Explore opportunities to improve sustainable transportation options for users (e.g. pedestrians, cyclists, micro-mobility) on the structures</li> </ul>	<p><b>FSDS:</b> Electric vehicles eliminate Scope 1 emissions and hybrid vehicles increase efficiency and reduce fuel consumption, hence Scope 1 GHG emissions</p> <p><b>SDG:</b> 11.2 and 13.2</p>	<p><b>Starting point:</b> Quantification of the annual emissions generated by the vehicle fleet</p> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>• Vehicle fleet fuel consumption</li> <li>• Establishment of the baseline emissions for 2016-2017</li> <li>• % of reduction in total GHG emissions for the vehicle fleet</li> <li>• % of employees who were aware of the Responsible Driving Awareness Guide</li> </ul>	ESD (Environnement Sustainable Development) Procurement Communications Operations and Maintenance

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
				<ul style="list-style-type: none"> <li>• Number of preliminary studies pertaining to the increase in the level of service in active transportation on the structures</li> </ul> <p><b>Target:</b></p> <p>March 2022: Establishment of the first GHG reduction targets, based on the inventories carried out in 2020 and 2021</p>	

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
Our administrative fleet will be comprised of at least 80% zero-emission vehicles by 2030	Fleet management will be optimized by applying telematics to collect and analyzing vehicle usage data on vehicles scheduled to be replaced	<ul style="list-style-type: none"> <li>- Give preference to the purchase of electric and hybrid vehicles for fleet renewal over conventional vehicles when deemed appropriate for the intended use, i.e. when the equipment is less polluting without performance being impaired</li> </ul>	<p>The progressive purchase of zero-emission or hybrid vehicles to replace combustion vehicles will contribute directly to the greening of the vehicle fleet and a reduction in GHG emissions from JCCBI's vehicle fleet</p> <p><b>SDG: 13.2</b></p>	<p><b>Starting points:</b></p> <ul style="list-style-type: none"> <li>• Number of conventional vehicles in the fleet as at March 31, 2020: 21</li> <li>• Number of hybrid vehicles in the fleet as at March 31, 2020: 3</li> <li>• Number of electric vehicles in the fleet as at March 31, 2020: 0</li> </ul> <p><b>Performance indicator:</b> % of electric and hybrid vehicles purchased annually</p> <p><b>Target:</b> By 2030, the administrative vehicle fleet must consist of at least 80% of electric and hybrid vehicles</p>	ESD Procurement Operations and Maintenance
Divert at least 90% (by weight) of all construction and demolition waste from landfills (striving to achieve 100% by 2030)	Other	<ul style="list-style-type: none"> <li>- Develop a construction and deconstruction (CD) waste tracking system that makes it possible to quantify the production and nature of the waste</li> <li>- Integrate contractual clauses with the concept of circular economy including reduction, reuse and recycling.</li> </ul>	<p><b>FSDS:</b> The integration of clauses regarding circularity including reduction, reuse and recycling of materials will promote the adoption of good practices by our partners and will result in the reduced production of waste and in its diversion from landfill sites and reuse</p> <p><b>SDG: 12.4 – Responsible Consumption and Production</b></p>	<p><b>Starting point:</b> Knowledge of CD waste generated by JCCBI operations</p> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>- % of materials recovered in relevant projects</li> <li>- % of projects including reducing, reuse and recycling clauses</li> </ul>	ESD Project Team Construction (Work supervision)

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
				<p><b>Targets:</b>  March 2022: In function of the development of a system for monitoring the nature and amounts of waste generated by the administrative and worksite operations. Development of guidelines for the management of residual materials from the worksites</p> <p>March 2023: Establishment of the first targets for the diversion of the CD waste from landfill sites</p>	

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
By 2022, departments have developed measures to reduce climate change risks to assets, services and operations	Increase training and support on assessing climate change impacts, undertaking climate change risk assessments and developing adaptation actions to public service employees, and facilitate sharing of best practices and lessons learned	- Develop a climate change adaptation plan to increase the resilience of the infrastructures and reduce the associated risks	<p><b>FSDS:</b> The report on the vulnerability of JCCBI's assets will be the first step in addressing the consequences of climate change. The second step will be the development of an adaptation plan. This plan will help develop recommendations and concrete measures to reduce the identified risks and increase the resilience of JCCBI's assets</p> <p><b>SDG:</b> 13.1, 13.2 and 13.3</p>	<p><b>Starting point:</b> 2020: Report on the vulnerability of JCCBI's assets in relation to climate change</p> <p><b>Performance indicator:</b> Number of studies and reports on climate change adaptation</p> <p><b>Targets:</b> 2021-2022: Undertake additional studies with the support of Transport Canada's <i>Transportation Assets Risk Assessment (TARA)</i> program to clarify the climate change adaptation plan</p> <p>2022: Deployment of in-house training on climate change adaptation</p> <p>2023: Beginning of integration of the climate change adaptation plan into future JCCBI projects</p>	ESD Planning/Asset Management Engineering Projects

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
Actions supporting the goal: Greening Government	Minimizing intrinsic embodied carbon and the use of harmful materials in construction and renovation	<ul style="list-style-type: none"> <li>- Contribute to the reduction of the partners' embodied carbon through specific obligations in future JCCBI contracts where applicable</li> <li>- Contribute to the reduction of embodied carbon through the reuse and recycling of materials from deconstruction projects</li> </ul>	<p><b>FSDS:</b> With its planned deconstruction projects, JCCBI will contractually impel its contractors to recover the materials from the deconstruction in order to give them a second life. Promoting the concept of circular economy, JCCBI will contribute to the reduction of the environmental impacts associated with the life cycle of commonly used construction materials (asphalt concrete, steel)</p> <p><b>SDG:</b> 9.4</p>	<p><b>Starting point:</b> As at March 31, 2020, no specific obligations in relation to embodied carbon in the construction contracts</p> <p><b>Performance indicator:</b> Number of projects specifying the reduction of embodied carbon in materials</p> <p><b>Targets:</b> 2020: Launch of a contest for the reuse of the Champlain Bridge parts</p> <p>2023: Definition of material reuse targets in the relevant projects</p>	ESD Asset Management Projects

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
	<p>Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions</p>	<ul style="list-style-type: none"> <li>- Launch a comprehensive analysis of the impacts of the life cycle of JCCBI's operations</li> </ul>	<p><b>FSDS:</b> The completion of an overall and comprehensive picture of the environmental impacts on the life cycle of JCCBI's operations will make it possible to identify the main levers for action in procurement. The action plan that will follow will encourage or impel suppliers to improve their practices and reduce the environmental impacts of the goods and services thereby provided</p> <p><b>SDG:</b> 12.6 and 12.7</p>	<p><b>Starting point:</b> No analysis of the life cycle of operations, including suppliers' products and services</p> <p><b>Performance indicator:</b> Quantity of GHG emitted by JCCBI's operations and annual portrait of the life cycle impacts</p> <p><b>Targets:</b> March 31, 2021: First portrait with recommendations to reduce impacts and adoption of a program to implement the recommendations</p> <p>March 31, 2022: Second portrait of the life cycle with new recommendations</p> <p>March 31, 2023: Second review of the impact reduction program and third portrait of the life cycle with the final recommendations</p>	<p>EDD</p>

Greening Government FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
	Support for green procurement will be strengthened, including guidance, tools and training for employees	<ul style="list-style-type: none"> <li>- Publish tools to help internal teams make responsible procurement choices (e.g., responsible procurement guide, supplier code of conduct)</li> <li>- Train employees in the practice of sustainable procurement</li> </ul>	<p><b>FSDS:</b> The development of the Responsible Procurement Guide is an essential step undertaken by JCCBI. The development of a supplier code of conduct will then be used to reinforce responsible procurement guidelines with its external partners</p> <p><b>SDG:</b> 12.6 and 12.7</p>	<p><b>Starting points:</b> Procurement advisors with specific training in this area</p> <p>Preparation of the Responsible Procurement Guide</p> <p><b>Performance indicators:</b> Number of tools made available to employees to encourage sustainable procurement</p> <p>% of employees trained in sustainable procurement</p> <p><b>Targets:</b> 2021: 100% of employees trained in sustainable procurement 2022: Publication of the Responsible Procurement Guide 2022: Adoption of the Supplier Code of Conduct</p>	ESD Procurement



**Effective Action on Climate Change: A low-carbon economy contributes to limiting global average temperature rise to well below 2 degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius**

Responsible Minister: Minister of Environment and Climate Change, supported by a whole-of-government approach for implementation

<b>Effective Action on Climate Change FSDS targets</b>	<b>FSDS contributing actions</b>	<b>Corresponding actions</b>	<b>Contribution</b> by each action to the FSDS goal and target	<b>Starting points Performance indicators Targets</b>	<b>Programs</b> in which the actions will occur
By 2030, reduce Canada's total GHG emissions by 30%, relative to 2005 emission levels	Use legislation and regulations to limit GHG emissions	<ul style="list-style-type: none"> <li>- Where applicable, incorporate specific GHG emission reduction programs into contracts and purchase carbon credits to offset residual GHG emissions</li> </ul>	<p><b>FSDS:</b> The proposed measures will help JCCBI to move towards a carbon neutrality goal and will encourage stakeholders to also reduce their GHG emissions through specific contractually-imposed programs. These measures will contribute directly to Canada's reduction target</p> <p><b>SDG:</b> 13.2</p>	<p><b>Starting point:</b> No offsetting through the purchase of carbon credits</p> <p><b>Performance indicator:</b> Number of carbon credits purchased</p> <p><b>Target:</b> <b>2023:</b> JCCBI could target carbon neutrality through source reduction programs and offset credits. This target will be analyzed after the first 2 years (2021-2022) of footprint quantification in order to understand the implications of such a goal</p>	ESD

	<p>Work with partners on climate change</p>	<ul style="list-style-type: none"> <li>- Collaborate with professional services firms specializing in climate change</li> <li>- Collaborate with universities and research groups (e.g. Ouranos, LIRIDE (Université de Sherbrooke), CIRAIG (Polytechnique Montréal), National Research Council Canada (NRC), Harvard University, McGill University, Polytechnique Montréal)</li> <li>- Collaborate with municipal, provincial and federal project authorities and asset managers (e.g.: <i>Ministère des transports du Québec, Société de transport de Montréal, Montreal Port Authority, TransLink, Metrolinx, ViaRail Canada, Transport Canada</i>)</li> </ul>	<p><b>FSDS:</b> JCCBI collaborates with many players in the field through the creation of programs that contribute to the reflection and research on climate change. The multiple programs enable JCCBI to better understand the latest practices and trends and to adapt thereto as effectively as possible through a variety of studies and analyses</p> <p><b>SDG:</b> 17.17</p>	<p><b>Starting point:</b> Conduct of an initial risk analysis of vulnerability to climate change</p> <p><b>Performance indicator:</b> Number of informational and/or decision-making documents specific to JCCBI's activities produced in relation to climate change (e.g. case studies, reports, minutes of meetings, etc.) through these collaborations</p> <p><b>Targets:</b> 2023: To have produced a minimum of 10 informational and/or decision-making documents related to climate change mitigation or adaptation</p> <p>Maintain collaborations in order to generate knowledge and promising, value-generating actions in the fight against climate change</p>	<p>ESD Research and Application Division</p>
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# Pristine Lakes and Rivers: Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians

Responsible Minister: Minister of Environment and Climate Change

Pristine Lakes and Rivers FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
<p>Actions supporting the goal: Pristine Lakes and Rivers</p>	<p>Work with partners on water quality and ecosystem health</p>	<p>Continue current collaboration with Fisheries and Oceans Canada to share information and knowledge relevant to the execution of work in the water</p>	<p><b>FSDS:</b> When planning in-water work, JCCBI collaborates with Fisheries and Oceans Canada to exchange relevant and up-to-date information in relation to the ecosystems present in the work areas. The goal is notably to ensure the implementation and monitoring of environmental mitigation measures in compliance with applicable laws and standards. Aquatic habitat compensation and enhancement projects are also developed through cooperation with this department</p> <p><b>SDG:</b> 6.6, 14.1 and 14.2</p>	<p><b>Starting point:</b> Ad hoc collaboration with Fisheries and Oceans Canada on a project-by-project basis</p> <p><b>Performance indicator:</b> Number of projects analyzed by Fisheries and Oceans Canada</p> <p><b>Target:</b> 100% of the projects carried out in an aquatic environment have been analyzed by Fisheries and Oceans Canada</p>	<p>ESD Asset Management Projects Team</p>
	<p>Better understand lake and river ecosystems</p>	<ul style="list-style-type: none"> <li>- Carry out analyses of the biodiversity present on JCCBI's territory</li> <li>- Carry out regular water quality analyses near JCCBI's contractors' worksites</li> </ul>	<p><b>FSDS:</b> The biodiversity analyses carried out make it possible to increase knowledge of the functioning of the ecosystems, as well as their needs and the actions to be taken to maintain their balance</p> <p><b>SDG:</b> 6.6, 14.1 and 14.2</p>	<p><b>Starting point:</b> Scientific analyses carried out on an ad hoc project basis and periodically to update JCCBI's relevant databases</p> <p><b>Performance indicators:</b> Periodic updating (every 5 years) of the databases on</p>	<p>ESD Asset Management Projects Team</p>

Pristine Lakes and Rivers FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
				<p>the biodiversity present on JCCBI's territory</p> <p>Number of projects having undergone specific biodiversity analysis</p> <p>Number of projects with water quality analyses annually</p> <p><b>Target:</b> 100% of projects carried out in naturalized ecosystems (aquatic or terrestrial) must be analyzed</p>	
	Use legislation and regulations to protect lake and river ecosystems	Put in place an audit system to ensure compliance, during the work, with applicable laws and regulations, including the <i>Species at Risk Act</i> and the <i>Fisheries Act</i> , in order to safeguard the fauna and flora of the St. Lawrence River	<p><b>FSDS:</b> When planning in-water work, JCCBI collaborates with Fisheries and Oceans Canada to exchange relevant and up-to-date information in relation to the work areas. The goal is notably to ensure the implementation and monitoring of environmental mitigation measures in compliance with applicable laws and standards. Aquatic habitat compensation and enhancement projects are also developed through cooperation with this department</p> <p><b>SDG:</b> 14.1 and 14.2</p>	<p><b>Starting point:</b> Implementation of an audit system to ensure compliance with the applicable laws and regulations</p> <p><b>Performance indicator:</b> % of progress in the implementation of an audit system</p> <p><b>Target:</b> April 2022: Put in place an audit mechanism to ensure compliance with the applicable laws and regulations</p>	ESD Asset Management Projects Team

Pristine Lakes and Rivers FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
	Pristine lakes and rivers	<ul style="list-style-type: none"> <li>- Contain and pump PCB-contaminated hydrocarbons in the East Sector of the Bonaventure Expressway between the Champlain and Victoria Bridges</li> <li>- Contain and treat contaminated groundwater in the West Sector of the Bonaventure Expressway (in partnership with the <i>ministère de l'Environnement et de la lutte aux changements climatiques du Québec</i>)</li> </ul>	<p><b>FSDS:</b> These 2 projects contribute directly to the preservation of the St. Lawrence River ecosystem by acting on the flow of contaminated groundwater present in the area</p> <p><b>SDG:</b> 14: Life below Water Targets 6.6, 14.1 and 14.2</p>	<p><b>Starting point:</b> Existing containing and pumping system with opportunities for improvement</p> <p><b>Performance indicator:</b> The indicators related to this section will be available for presentation in 2022, when the studies on the possible improvement of the hydrocarbon management process are completed</p> <p><b>Target:</b> Continue the containment, pumping and treatment of contaminated water migrating to the St. Lawrence River</p>	ESD



**Connecting Canadians with Nature: Canadians are informed about the value of nature, experience nature first hand, and actively engage in its stewardship**

<b>Connecting Canadians with Nature FSDS targets</b>	<b>FSDS contributing actions</b>	<b>Corresponding actions</b>	<b>Contribution</b> by each action to the FSDS goal and target	<b>Starting points Performance indicators Targets</b>	<b>Programs</b> in which the actions will occur
<p>By 2020, maintain or increase the number of Canadians that get out into nature—for example, by visiting parks and green spaces—and increase participation in biodiversity conservation activities relative to a 2010 baseline</p>	<p>Promote public participation</p>	<p>Organize information sessions and public consultations as part of the planning of development projects for urban and/or natural community sites when relevant</p>	<p><b>FSDS:</b> JCCBI encourages public involvement and participation in the planning of natural and/or recreational development projects. These activities provide an opportunity to present the framework for reflection, receive the comments and ideas from the public, and identify issues of concern to the public. JCCBI evaluates these comments and issues during the design of its projects whenever possible</p> <p><b>SDG:</b> N/A</p>	<p><b>Starting point:</b> Because of their nature, few projects allowed public participation in the planning stage</p> <p><b>Performance indicator:</b> Number of JCCBI projects with a public consultation process</p> <p><b>Targets:</b> 100% of public space development projects deemed significant by JCCBI are subject to a stakeholder engagement process</p> <p>2022: Develop a stakeholder engagement and management system</p>	<p>ESD Asset Management Projects Team</p>

Connecting Canadians with Nature FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
	Conserve Canada's biodiversity	<ul style="list-style-type: none"> <li>- Work with biologists to monitor special-status avian and herpetofauna species nesting on the structures and on the ground and install and maintain their habitats (e.g., nesting boxes for peregrine falcons, manmade nesting girders for cliff swallows, hibernacula for the brown snake)</li> </ul>	<p><b>FSDS:</b> Each of the measures listed contributes to supporting and conserving the biodiversity on JCCBI's territory. Biodiversity inventories provide information on the health of ecosystems and allow monitoring of the situation. The collaboration with biologists increases JCCBI's teams' understanding of the species present on its territory and informs them of the best way to protect them. The installation of nesting boxes and manmade nesting girders provides species with space to breed and rest. Compensation measures also contribute to safeguarding biodiversity</p> <p><b>SDG:</b> 14.2, 15.1 and 15.5</p>	<p><b>Starting point:</b> The only performance indicator that is systematically monitored is the annual nesting of peregrine falcons and cliff swallows (e.g. number of inhabited nesting sites)</p> <p><b>Performance indicator:</b> Number of nesting sites of avian and herpetofauna species recorded on assets managed by JCCBI</p> <p><b>Targets:</b></p> <ul style="list-style-type: none"> <li>- 2023: Develop specific indicators for biodiversity on JCCBI's territory</li> <li>- Publish studies to follow up on research into the behaviour of the cliff swallows on the structures</li> <li>- Continue the installation and/or maintenance of the nesting boxes and manmade nesting girders on the structures for the</li> </ul>	ESD

Connecting Canadians with Nature FSDS targets	FSDS contributing actions	Corresponding actions	Contribution by each action to the FSDS goal and target	Starting points Performance indicators Targets	Programs in which the actions will occur
				<p>needs of migratory species</p> <ul style="list-style-type: none"> <li>- Continue the research partnerships on special-status species</li> </ul>	
<p>Actions supporting the goal: Connecting Canadians with nature</p>	<p>Connecting Canadians with Nature</p>	<ul style="list-style-type: none"> <li>- Develop and put in place a greening plan for the undeveloped natural areas on JCCBI's territory in order to promote the creation of a green network</li> <li>- Explore partnership options with park development and enhancement agencies</li> <li>- Continue the collaboration notably with <i>Sentier Urbain</i>, whose mission is to promote social greening in the city. JCCBI is making a parcel of land available to that organization so that it can create a natural living space in the city through the installation</li> </ul>	<p><b>FSDS:</b> JCCBI encourages the appropriation by citizens of the green spaces that JCCBI makes available to them. The successful partnership that JCCBI has established with <i>Sentier urbain</i> encourages it to multiply these types of collaborations, which allow for the optimization of the use of our public spaces. As such, the Héritage Champlain program will allow the development of certain sites freed up following the deconstruction of the Champlain Bridge. These actions contribute to bringing citizens closer to nature</p> <p><b>SDG:</b> 11.3, 11.4 and 11.7</p>	<p><b>Starting point:</b> Existing partnership programs with community organizations</p> <p><b>Performance indicator:</b> Number of naturalized public spaces maintained and created by JCCBI and/or in collaboration with our partners</p> <p><b>Targets:</b> Ongoing: Continue current programs and seek to develop new ones in areas deemed appropriate</p> <p>2021: Explore partnership options with park</p>	<p>ESD Asset Management Projects Team</p>

<b>Connecting Canadians with Nature FSDS targets</b>	<b>FSDS contributing actions</b>	<b>Corresponding actions</b>	<b>Contribution</b> by each action to the FSDS goal and target	<b>Starting points Performance indicators Targets</b>	<b>Programs</b> in which the actions will occur
		and maintenance of a pollinator garden		development and enhancement agencies  2023: Design studies for new spaces to access the banks of the St. Lawrence River as part of the H�ritage Champlain program  2023: Plan for the greening of the undeveloped natural areas on JCCBI's territory	



**Safe and Healthy Communities: All Canadians live in clean, sustainable communities that contribute to their health and well-being**

<p><b>Safe and Healthy Communities FSDS targets</b></p>	<p><b>FSDS contributing actions</b></p>	<p>Corresponding <b>actions</b></p>	<p><b>Contribution</b> by each action to the FSDS goal and target</p>	<p><b>Starting points Performance indicators Targets</b></p>	<p><b>Programs</b> in which the actions will occur</p>
<p>By 2022, take risk management actions in a timely manner for 100% of substances found to be a risk to the environment or human health</p>	<p>Use legislation and regulations to address outdoor air pollutant emissions and harmful substances</p> <p>Other</p>	<p>Develop an action plan to implement an environmental management system based on the best practices in the field</p>	<p><b>FSDS:</b> The development and deployment of an environmental management system will enable JCCBI to systemically identify and mitigate the environmental and human risks associated with its activities</p> <p><b>SDG:</b> N/A</p>	<p><b>Starting point:</b> Integration of operational practices within an existing environmental management system</p> <p><b>Performance indicator:</b> % of progress in implementing an environmental management system</p> <p><b>Target:</b> April 2022: Start of deployment of an environmental management system</p>	<p>ESD</p>

<b>Safe and Healthy Communities FSDS targets</b>	<b>FSDS contributing actions</b>	<b>Corresponding actions</b>	<b>Contribution</b> by each action to the FSDS goal and target	<b>Starting points Performance indicators Targets</b>	<b>Programs</b> in which the actions will occur
Safe and healthy communities	Demonstrate leadership on assessing and remediating contaminated sites	Through the action plan for the management of contaminated sites, develop a strategy for the sustainable remediation of the contaminated sites on JCCBI's territory	<p><b>FSDS:</b> For more than a year, JCCBI has been taking sustained and coordinated actions with all its teams to identify and classify the contaminated sites under its responsibility. This exercise is still in its early stages; the development of a register that comprises the location of the contaminated sites as well as the nature and degree of contaminants present on the land under its responsibility is underway. JCCBI receives funding from the FCSAP for the implementation of measures related to the contaminated sites. The environmental assessment of most contaminated sites will be carried out over the next 3 years. Thereafter, a customized action plan for each site will be developed over the medium term.</p> <p>In so doing, JCCBI contributes to the FSDS's "Safe and Healthy Communities" goal and intends to position itself as a leader through the development of a comprehensive and coherent strategy for the management of its contaminated sites</p> <p><b>SDG:</b> 6.3</p>	<p><b>Starting point:</b> Number of sites registered on the Federal Contaminated Sites Inventory (FCSI): 21</p> <p><b>Performance indicators:</b> Number of sites having undergone an environmental assessment and having been removed from the FCSI</p> <p><b>Targets:</b> March 2020: Creation of an internal register of contaminated sites</p> <p>March 31, 2020: Registration of the contaminated sites on the FCSI</p> <p>By 2023: Produce the environmental assessment reports for the majority of contaminated sites</p>	ESD

## Section 4: Integration of Sustainable Development

JCCBI conducts its daily activities actively taking into account, at the planning stages of its projects, the potential impacts and benefits of sustainable development.

### *Sustainable Planning of Assets*

For each asset under its management, an analysis of the sustainable development opportunities is carried out at the stage of the master plans development and specific sustainable development programs are subsequently integrated into the project sheets that define the scope of the work to be carried out. For example, the design of the new Operations and Maintenance building is based on the LEED principles, to the extent possible and where the design meets the technical needs of the team. This initiative reduces ecological footprint compared to conventional building design.

In addition, sustainable development decision-making and design tools are used to support the analyses of the professionals selected to study and design the rehabilitation, repair, development of the assets. These tools include lists of criteria that are used to assess the environmental, social and economic performance of the various project design scenarios.

### *A Sustainable Development Culture among Employees*

JCCBI aims at gradually integrating a culture of sustainable development within its teams. Raising awareness primarily involves developing a training program, notably with workshops on climate change adaptation, responsible procurement, etc.

In addition, the Corporation wants to encourage sustainable mobility among its employees by implementing incentives such as a program governing teleworking. JCCBI is also continuing its efforts in responsible residual materials management for its administrative offices by promoting recycling programs for computer products and office supplies.

### *Environmental Protection*

In terms of environmental protection, JCCBI aims at minimizing the environmental impacts of its activities and seizing opportunities for improvement of its practices. JCCBI conducts an assessment of the environmental effects of its projects at the planning stage and has developed and updated its processes that take into account, among others, the developments in this area and the requirements of the *Impact Assessment Act* that came into force in August 2019.