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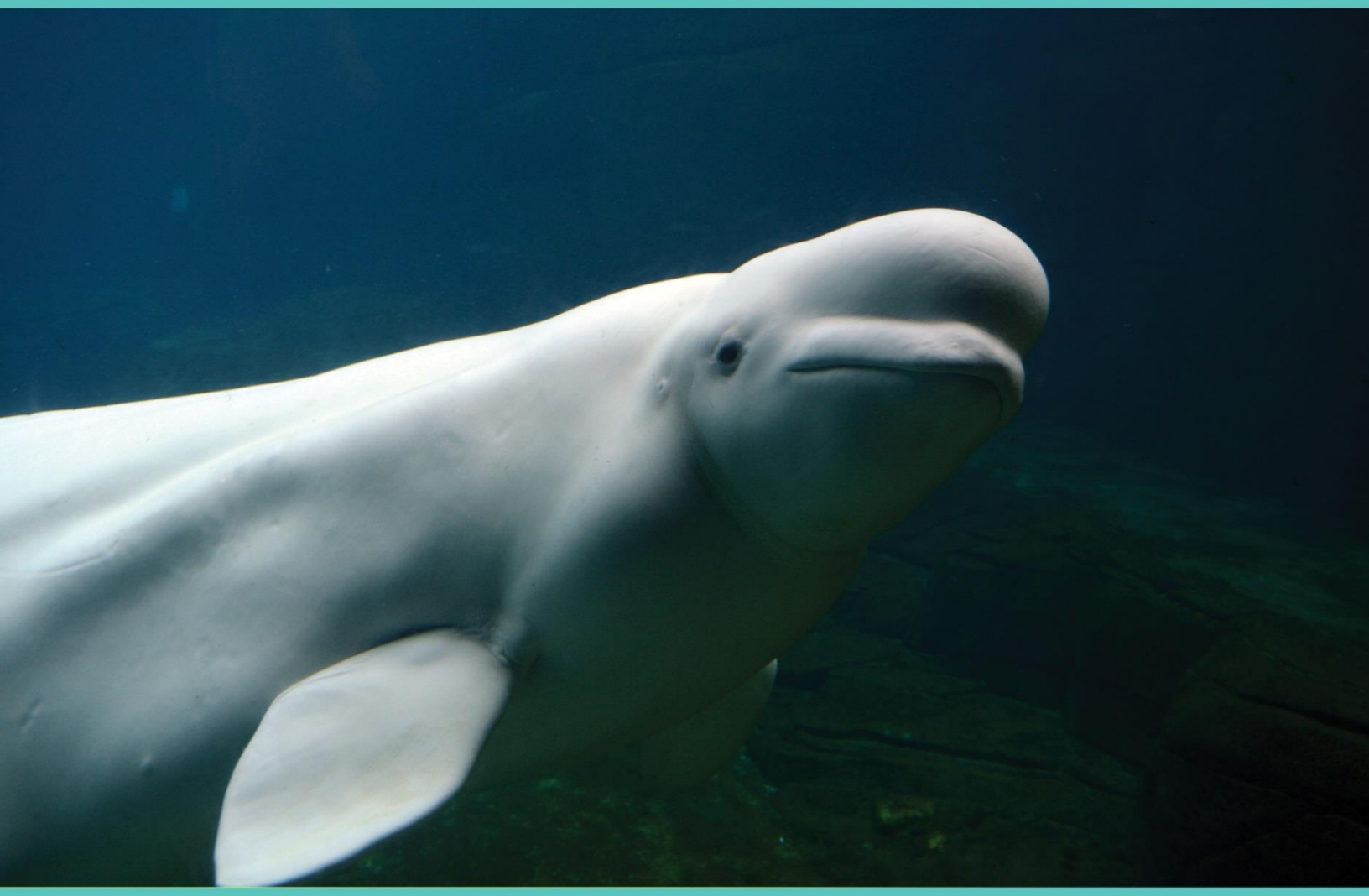
# ST. LAWRENCE ESTUARY BELUGA

## A science based review of recovery actions for three at-risk whale populations



## SUMMARY REPORT

Canada

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## A science based review of recovery actions for three at-risk whale populations – a commitment under the Government of Canada's Oceans Protection Plan

In November 2016, the Government of Canada announced its Oceans Protection Plan (OPP), which outlined several new initiatives aimed at addressing threats to populations of marine mammals in Canadian waters. Fisheries and Oceans Canada (DFO) was asked to conduct a science based review of the effectiveness of the current management and recovery actions for three at-risk whale populations: the Southern Resident Killer Whale (SRKW), the North Atlantic Right Whale (NARW) and the St. Lawrence Estuary Beluga (SLE Beluga).

As the first step in this review, DFO scientists assessed the overall effectiveness of the recovery actions undertaken to date at reducing the key threats to these whales. They also identified areas for immediate improvement in recovery efforts and priorities for new or enhanced efforts, most of which could be initiated within five years. These two elements make up the scientific assessment of recovery actions for each whale.

Now, we are engaging the Canadian public, Indigenous communities, government agencies, environmental groups, industry representatives and other key partners and stakeholders to hear their views and gather support for the priority actions identified by scientists. The scientific assessment, in addition to the feedback we receive during this engagement, will inform recommendations to the Minister of Fisheries and Oceans Canada for enhanced recovery efforts for these whales.

## Priority management actions for the Saint Lawrence Estuary Beluga (SLE Beluga)

This document summarizes key findings of the scientific assessment of the effectiveness[1] of recovery measures undertaken to date to support recovery of the Beluga Whale (St. Lawrence Estuary population) (SLE Beluga) and the identified priority management actions. The complete scientific assessment report on the SLE Beluga can be found online and contains background information on history of recovery measures completed to date, the threats affecting the population, and prioritized recovery actions.

The scientific assessment is distinct from the recovery planning and reporting processes outlined in the *Species at Risk Act (SARA)* (2002); however it similarly focused on the threats to the population as identified in the Committee on the Status of Endangered Wildlife in Canada's (COSEWIC) status report (2015), and it builds on the recovery measures identified in the *Recovery Strategy for the Beluga Whale (Delphinapterus leucas), St. Lawrence Estuary Population in Canada (2012)* (the Recovery Strategy). To this foundation, it adds an assessment of the effectiveness of the actions implemented to date at abating threats, the most recent scientific knowledge, and a description

[1] The effectiveness of an activity is considered in terms of its ability to reduce the threat(s) to the population.

of the latest population trajectory for the population in order to identify priorities for immediate action. The science based review under the OPP is an opportunity for the federal government and its partners to enhance recovery effort for the SLE Beluga.

## The Current State

The St. Lawrence Estuary Beluga is found in the St. Lawrence Estuary, the Saguenay River and the Gulf of St. Lawrence. The most recent population estimate indicates that there are approximately 900 individuals and that the population has been declining by about 1% per year since the early 2000s. It is currently listed under SARA as Endangered.

Recovery of the population is considered feasible and the recovery goal is:
*"..Increase population size to 7,070 individuals, or 70% of the population historical size, to maintain a minimum population growth rate of 2%, and to reach a distribution corresponding to 70% of its historical extent."*

Multiple human induced threats are impeding the SLE Beluga recovery. These include: high chemical contamination of Beluga, their prey and habitat; noise and disturbance associated with marine development projects, shipping and whale watching activities; reduction in abundance, quality and availability of prey; and other habitat degradation (e.g. from construction of docks, marinas, and hydroelectric dams, expanding tourism industry, dredging operations, introduction of exotic population).

## The Way Forward

In order to promote the growth of the population and support recovery, multiple human induced threats must be abated. The scientific assessment confirmed contaminants, anthropogenic noise and disturbance, inadequate food supplies, and other habitat degradation as key threats to the population. Toxic spills, vessel collision, entanglement, harmful algal blooms, and epizootic disease outbreaks are also threats affecting the SLE Beluga population.

The scientific assessment identifies priority management actions that are anticipated to help reduce human pressures on this population. Priority actions are organized by threat and by their ability to directly or indirectly abate that threat, in no order of priority. The complete scientific assessment report on the SLE Beluga also contains recommendations for priority research based actions to support the management actions, and provides further context for the management based actions presented here.

## Priority actions to directly reduce the threat of contaminants

(*In no particular order*)

A. Continue to reduce toxic chemical compound discharges at the source by new regulations, or expansion of existing regulations.

B. Continue pollution reduction efforts in the Great Lakes system and other areas located upstream or within the Beluga habitat, through inter-provincial, national and international initiatives (particularly USA and Ontario).

C. Ensure adequate enforcement of existing regulations related to toxic chemical compound discharges in Canada.

D. Determine the areas outside of Beluga habitat where the deposition, discharge, or immersion of chemical substances can eventually alter the quality of Beluga habitat and prohibit the deposition, discharge or immersion of chemical substances in those areas.

E. Continue the clean-up of the top priority terrestrial and aquatic sites identified for Beluga.

## Priority actions to indirectly reduce the threat of contaminants

*(In no particular order)*

F. Reduce the number and scope of accidental and illegal discharges and pollutants.

G. Make stakeholders (municipalities, Priority Intervention Zone committee, etc.) aware of the concerns related to pollutant inputs from agricultural and other activities, wastewater treatment, waste storage sites, landfills, etc.

## Priority actions to directly reduce the threat of anthropogenic noise disturbances

*(In no particular order)*

H. Identify candidate acoustic refuge areas and undertake actions for their creation.

I. Increase the distance between shipping lanes and areas important to SLE Beluga (e.g. moving shipping lanes, pilot station).

J. Increase distance between pleasure crafts and whale-watching vessels by revisiting the Saguenay-St. Lawrence Marine Park (SSLMP) zoning plan and implementing exclusion zones.

K. Reduce acoustic footprint of vessels that generate a large amount of traffic in the Beluga habitat (ferries, merchant ships), by replacing some ferry traffic with road infrastructure, or by using quieting technologies on vessels contributing the most to traffic.

L. Enhance enforcement of the SSLMP Regulations and of the Marine Mammals Regulations outside of the SSLMP, especially in important habitats of the upper estuary.

M. Extend the no-boat 400 m zone for Beluga observations to areas outside of the SSLMP.

N. Develop and promote incentives to reduce noise output from vessels, and to eliminate the noisiest vessels.

O. Make mitigation of noise and monitoring of the effects of the mitigation mandatory in Beluga habitat.

## Priority actions to indirectly reduce the threat of anthropogenic noise disturbances

*(In no particular order)*

P. Proceed with a strategic review of activities and development projects that have, or could, contribute to noise and vessel traffic in Beluga habitat, in order to set management objectives, and be able to account for cumulative effects and current and new development initiatives occurring both inside and outside SLE Beluga habitat.

Q. Enhance awareness of merchant ship captains about how changing their behaviour can effect change in Beluga habitat acoustic quality, with the aim of increasing compliance with voluntary measures.

## Priority actions to directly abate the threat of inadequate and inaccessible food

*(In no particular order)*

R. Review fisheries allocations and make changes if needed to protect, and enhance standing stocks for key prey species and availability to Beluga.

S. Implement more stringent measures or a ban for some fisheries targeting forage species (e.g. capelin, herring, sandlance), or the food on which the forage species rely (e.g. krill and copepods) in the Gulf of St. Lawrence, and/or SLE, to ensure that all species associated with Beluga food requirements are maintained in a healthy state.

T. Acknowledging that prey origin may not be just the SLE, systematically implement measures to protect Beluga prey and their habitat when assessing environmental impacts of inshore and offshore projects.

U. Enhance protection of spawning and rearing sites and migration corridors of key Beluga prey species.

V. Explicitly consider the Beluga's food requirements when assessing new fisheries.

W. Formalize the prohibition of trawl nets from the upper St. Lawrence Estuary to protect Beluga prey habitat.

## Priority actions to directly enhance the protection of Beluga habitat

*(In no particular order)*

X. Set up the St. Lawrence Estuary Marine Protected Area Project and the Manicouagan Aquatic Reserve, and use them as a framework for instating additional protective measures directed toward SLE Beluga as needed.

Y. Enact zoning regulations in the SSLMP to protect high-use areas, and enhance enforcement.

## Priority action to indirectly enhance the protection of Beluga habitat

Z. Publish the Critical Habitat[2] Order in Canada Gazette II to formalize the legal protection of the critical habitat that is currently identified for SLE Beluga.

## Priority actions to directly reduce other threats to population recovery

*(In no particular order)*

AA. Reduce the likelihood of toxic spill (e.g. by lowering tanker traffic, improving ship hull resistance, handling methods, etc.).

BB. Incorporate information on collision risks in the awareness campaigns targeting captains of tourist vessels and pleasure craft and aiming primarily at reducing disturbance.

CC. Maintain an intervention capacity for events such as entanglements, toxic spills, diseases, and collisions through the continued operation of the Marine Mammal Emergency Response Network to increase odds of saving Beluga in distress.

DD. Develop and apply a formal directive on rehabilitation of ill marine mammals and reintroduction into the wild that accounts for the risks of epidemic diseases in the SLE Beluga.

## Priority actions to indirectly reduce other threats to population recovery

*(In no particular order)*

EE. Reduce eutrophication by implementing regulations to reduce industrial, agricultural, and atmospheric inputs of nitrogen, particularly urea, a nutrient that promotes harmful algal blooms in the marine environment.

[2] Under the federal Species at Risk Act (SARA), critical habitat (CH) is the habitat that is necessary for the survival or recovery of listed extirpated, endangered, or threatened species, and that is identified as CH in a recovery strategy or action plan.

FF. Update the environmental emergency plan for the St. Lawrence Estuary to include specific measures for SLE Beluga with clear roles and responsibilities in case of accidental spill of oil or other toxic substances.