

Minister of Energy
and Natural Resources



Ministre de l'Énergie et
des Ressources naturelles

Ottawa, Canada K1A 0E4

July 9, 2024

Dyna Tuytel
Ecojustice Canada
1810-801 6th Avenue SW
Calgary, Alberta T2P 3W2
dtuytel@ecojustice.ca

Dear Dyna Tuytel:

Pursuant to section 22 of the *Auditor General Act*, I am writing in response to your Environmental Petition number 0496, received on March 12, 2024, and sent on behalf of Raincoast Conservation Foundation and Living Oceans Society, concerning the status of implementation of the Canada Energy Regulator's 16 recommendations to the Governor in Council on the Trans Mountain Expansion Project.

Natural Resources Canada has been the lead coordinating department for the Trans Mountain Expansion Project since the early stages of project assessment, engagement, and consultation, and it is in this capacity that my department coordinated the response to your petition among the implicated federal departments.

The implicated departments reviewed your petition in light of their respective mandates and legislative responsibilities. The responses to the questions in your petition have been developed collaboratively by the departments that lead on the implementation of the recommendation to which each of your questions referred. Specifically:

- Question 1 – Status of a regional cumulative effects management plan (Recommendation 1): Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), and Transport Canada (TC);
- Question 2 – Consideration of a regional study (Recommendation 1): ECCC, DFO, and TC;
- Question 3 – Publicly reporting in relation to cumulative effects and the health of the Salish Sea (Recommendation 2): ECCC, DFO, and TC;
- Question 4 – Publicly reporting on the status of implementation of all 16 recommendations: Natural Resources Canada;

Canada

- Question 5 – Feasibility study for the Southern Strait of Georgia National Marine Conservation Area Reserve (Recommendation 4): Parks Canada;
- Question 6 – Status of an offset program to offset underwater noise and increased strike risk for marine mammal and fish species (Recommendation 5): DFO and TC; and
- Question 7 – Review and update of federal marine shipping oil spill response requirements (Recommendation 7): DFO, ECCC, and TC.

Attached you will find the joint response to your petition on behalf of my colleagues, the Honourable Steven Guilbeault, Minister of Environment and Climate Change, the Honourable Diane LeBouthillier, Minister of Fisheries, Oceans and the Canadian Coast Guard, the Honourable Pablo Rodriguez, Minister of Transport, and myself. I understand that you will receive letters from my colleagues to highlight their contributions to the joint response.

I appreciate having had the opportunity to review the petition, and I trust you will find the information provided helpful.

Thank you for raising this important matter.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Jonathan Wilkinson', written in a cursive style.

The Honourable Jonathan Wilkinson, P.C., M.P.
(he/him/il)

Attachment: (1)

c.c.: Distribution

Distribution

The Honourable Diane Lebouthillier, P.C., M.P.
Minister of Fisheries, Oceans and the Canadian Coast Guard
dfo.minister-ministre.mpo@dfo-mpo.gc.ca

The Honourable Pablo Rodriguez, P.C., M.P.
Minister of Transport
tc.ministeroftransport-ministredetransports.tc@tc.gc.ca

The Honourable Steven Guilbeault, P.C., M.P.
Minister of Environment and Climate Change
ministre-minister@ec.gc.ca

Jerry V. DeMarco
Commissioner of the Environment and Sustainable Development
petitions@oag-bvg.gc.ca

Ministre de l'Énergie et
des Ressources naturelles



Minister of Energy
and Natural Resources

Ottawa, Canada K1A 0E4

9 juillet 2024

Dyna Tuytel
Écojustice Canada
1810-801 6th Avenue SW
Calgary (Alberta) T2P 3W2
dtuytel@ecojustice.ca

Dyna Tuytel,

Conformément à l'article 22 de la *Loi sur le vérificateur général*, je vous écris en réponse à votre pétition environnementale numéro 0496, reçue le 12 mars 2024, et envoyée au nom de Raincoast Conservation Foundation et Living Oceans Society, concernant l'état de la mise en œuvre des 16 recommandations de la Régie de l'énergie du Canada au gouverneur en conseil sur le projet d'agrandissement du réseau de Trans Mountain.

Ressources naturelles Canada est le ministère responsable de la coordination pour le projet d'agrandissement du réseau de Trans Mountain depuis les premières étapes de l'évaluation, de l'engagement et de la consultation des projets, et c'est en cette qualité que mon ministère a coordonné la réponse à votre pétition parmi les ministères fédéraux concernés.

Les ministères concernés ont examiné votre pétition à la lumière de leurs mandats respectifs et de leurs responsabilités législatives. Les réponses aux questions de votre pétition ont été élaborées en collaboration par les ministères responsables de la mise en œuvre de la recommandation à laquelle chacune de vos questions a fait référence. Plus particulièrement :

- Question 1 – État d'un plan régional de gestion des effets cumulatifs (recommandation 1) : Environnement et Changement climatique Canada (ECCC), Pêches et des Océans Canada (MPO) et Transports Canada (TC);
- Question 2 – Examen d'une étude régionale (recommandation 1) : ECCC, MPO et TC;
- Question 3 – Rapports publics sur les effets cumulatifs et la santé de la mer des Salish (recommandation 2) : ECCC, MPO et TC;

Canada

- Question 4 – Rapport public sur l'état d'avancement de la mise en œuvre des 16 recommandations : Ressources naturelles Canada;
- Question 5 – Étude de faisabilité pour la réserve de l'Aire marine nationale de conservation du sud du détroit de Géorgie (recommandation 4) : Parcs Canada;
- Question 6 – État d'un programme de compensation visant à neutraliser le bruit sous-marin et l'augmentation du risque de collision pour les mammifères marins et les espèces de poissons (recommandation 5) : MPO et TC;
- Question 7 – Examen et mise à jour des exigences fédérales en matière d'intervention en cas de déversement d'hydrocarbures par les navires maritimes (recommandation 7) : MPO, ECCC et TC.

Vous trouverez ci-joint la réponse conjointe à votre pétition au nom de mes collègues, l'honorable Steven Guilbeault, ministre de l'Environnement et du Changement climatique, l'honorable Diane Lebouthillier, ministre des Pêches, des Océans et de la Garde côtière canadienne, l'honorable Pablo Rodriguez, ministre des Transports, ainsi que moi-même. Je crois savoir que vous recevrez des lettres de mes collègues pour souligner leur contribution à la réponse conjointe.

Je suis heureux d'avoir eu l'occasion d'examiner la pétition. Je suis sûr que les renseignements fournis pourront vous être utiles.

Je vous remercie d'avoir abordé ce sujet important.

Je vous prie d'agréer l'assurance de mes meilleurs sentiments.



L'honorable Jonathan Wilkinson, C.P., député
(il/he/him)

Pièce jointe : (1)

c. c. : Distribution

Distribution

L'honorable Diane Lebouthillier, C.P., députée
Ministre des Pêches, des Océans et de la Garde côtière canadienne
dfo.minister-ministre.mpo@dfo-mpo.gc.ca

L'honorable Pablo Rodriguez, C.P., député.
Ministre des Transports
tc.ministeroftransport-ministredestransports.tc@tc.gc.ca

L'honorable Steven Guilbeault, C.P., député
Ministre de l'Environnement et du Changement climatique
ministre-minister@ec.gc.ca

Jerry V. DeMarco
Commissaire à l'environnement et au développement durable
petitions@oag-bvg.gc.ca

Petition 496

Question 1:

What is the status of the Governor in Council's development and implementation of the regional cumulative effects management plan recommended in **Recommendation 1**?

What progress has been made to date, and what is the timeline for the remainder of the plan's development and implementation?

Implicated Departments: Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Transport Canada (TC), Natural Resources Canada (NRCan)

Lead Departments: ECCC, DFO, TC

Response:

Since 2019, the Government of Canada has been working with Indigenous partners engaged in the Salish Sea Initiative to advance knowledge in support of managing cumulative effects in the Salish Sea.

Progress has been realized in several ways:

- The current state of federal knowledge has been inventoried and shared with Indigenous partners.
- Gaps in understanding ecosystem components of value and concern have been identified by Indigenous and federal partners.
- Federal partners are enhancing research and monitoring of water quality, air quality, and air emissions. Similarly, Indigenous partners are leveraging funding through the Salish Sea Initiative to monitor and assess cumulative effects of human activities.
- Indigenous and federal partners have co-developed collaborative tools and spaces to share data and knowledge, such as the Salish Sea Interactive Map. The map is being co-developed with, and is currently accessible only to, Salish Sea Indigenous partners. It enhances capacity to participate in cumulative effects related activities.

The planned work to implement Recommendation 1, with respect to advancing knowledge to support the management of cumulative effects in the Salish Sea will be complete by March 31, 2025, when the Salish Sea Initiative ends; however, several tools will endure, and continue to improve access to knowledge:

- The [Open Science and Data Platform](#) (OSDP) improves access to data and publications to inform decisions relating to cumulative effects of human activities.
- The [Salish Sea Marine Emissions Tool](#) (SSMET) visualizes information on air pollutants and greenhouse gases (GHG) that are emitted from existing and proposed marine vessel activity in the Salish Sea.
- The [Canada Marine Planning Atlas](#) improves access to information about ecological processes, bioregional features and human activities in Canada's marine spatial planning areas.
- The co-developed [Enhanced Maritime Situational Awareness](#) (EMSA) program provides maritime information and data including near real-time vessel activity and other marine environmental

information in local waters. EMSA can be used to improve marine safety and support environmental monitoring, and protection.

Beyond 2025, First Nations participating in the Salish Sea Initiative will also have access to additional funding through the Indigenous Coastal Waters Stewardship Fund to continue advancing the understanding of cumulative effects in their traditional waters.

Question 2:

Has the Governor in Council considered whether a regional study should be undertaken as part of the cumulative effects management plan, as recommended in **Recommendation 1**?

If not, when will it do so? When will it report its decision?

Implicated departments: Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Transport Canada (TC), Natural Resources Canada (NRCan)

Lead departments: ECCC, DFO, TC

Response:

As part of its [decision](#) to support the expansion of the TMX project, the Governor in Council considered Recommendation 1, including whether a regional study should be undertaken. The Government of Canada committed to advancing knowledge in support of managing cumulative effects in the Salish Sea, including knowledge from Indigenous partners.

As described in the [Government of Canada's response](#), various initiatives that are already underway will contribute to regional understanding of cumulative effects and will inform future potential management in the Salish Sea:

- Regional and sub-regional assessments of marine shipping are taking place through the [Cumulative Effects of Marine Shipping Initiative](#).
- The [Cumulative Effects in the Salish Sea Website](#) and [Open Science and Data Platform](#) (OSDP) increase access to data and science to support cumulative effects assessments.
- DFO has been leading [Marine Spatial Planning](#), a collaborative process that brings relevant authorities, partners and stakeholders together to coordinate human uses across marine spaces achieve economic, ecological, cultural and social objectives. A first-generation marine spatial plan will contribute towards future planning in BC's South Coast.

Given the collaborative nature of a number of these initiatives to understand cumulative effects and coordinate activities in the Salish Sea, a regional study is not currently being contemplated.

The Minister of Environment and Climate Change Canada also considered a request for a regional assessment in the Salish Sea under the *Impact Assessment Act*. In acknowledgement of the range of existing and planned activities focused on establishing an environmental baseline and identifying environmental and cumulative effects in the Salish Sea, the Minister decided not to conduct a regional assessment.

Question 3:

When will the Governor in Council begin reporting publicly, on an annual basis, on the oversight, progress, and status of initiatives and measures to address cumulative effects on, and to support the health of, the Salish Sea, as recommended in **Recommendation 2**? Where and how will it report this information?

Implicated departments: Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Transport Canada (TC), Natural Resources Canada (NRCan)

Lead departments: ECCC, DFO, TC

Response:

A [report on the health of the Salish Sea Ecosystem](#) has been published through a long-standing partnership between Environment and Climate Change Canada (ECCC), the US Environmental Protection Agency, and other authoritative interests leading initiatives to support the health of the Salish Sea.

In response to Recommendation 2, the Government of Canada undertook an assessment of the need for additional reporting related to the health of the Salish Sea and identified potential gaps.

As a first step towards addressing these gaps, a [Cumulative Effects in the Salish Sea website](#) was created featuring links to initiatives, data and publications which inform measures to address cumulative effects and support the health of the Salish Sea.

The Government of Canada will continue work to close reporting gaps through March 31, 2025. This will include the linking of additional results that are published through Recommendations 1 and 3, to the website referenced above, the [Open Science Data Portal](#) and the Salish Sea Interactive Map where relevant.

In addition to the information sources mentioned above, the Government of Canada commits to publicly report on its progress toward the implementation of the 16 Recommendations on the Trans Mountain Expansion project on its public-facing website (see the response to Question 4).

Question 4:

Will the Governor in Council commit to reporting publicly on its progress towards the 16 Recommendations in a centralized location, similar to how the Canada Energy Regulator publicly tracks progress on the Project conditions, so that Raincoast Conservation Foundation and Living Oceans Society, and other interested parties, do not have to submit further petitions, or make *Access to Information* requests, to access this information? If not, why not?

Implicated departments: Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada (DFO), Transport Canada (TC), Parks Canada (PC), Natural Resources Canada (NRCan)

Lead department: NRCan

Response:

The Government of Canada recognizes the importance of the recommendations that the National Energy Board (now the Canada Energy Regulator (CER)) made in its 2019 Reconsideration Report on the Trans Mountain Expansion Project (the Project) to mitigate, avoid, or lessen potential effects associated with the Project and related marine shipping. Federal departments that were implicated in the Project have been working over the past five years on the implementation of the 16 Recommendations, in some cases building on existing federal initiatives such as the [Oceans Protection Plan](#) and [Whales Initiative](#).

In line with the Government of Canada's guiding principles of openness, transparency and accountability, the Government of Canada, through collaboration among all the implicated federal departments, commits to publicly report on its progress toward the implementation of the 16 Recommendations on the Project. The Government of Canada will continue to ensure that the information available through its public-facing website is as up to date as possible.

Question 5:

The feasibility study for the Southern Strait of Georgia National Marine Conservation Area Reserve was initiated 20 years ago, in 2004, and updates on the Government of Canada website appear to be over 10 years out of date.

Is the Governor in Council expediting work to complete the feasibility study for establishing a Southern Strait of Georgia National Marine Conservation Area Reserve, as recommended in **Recommendation 4**? What is the timeline for this work? When will the Governor in Council publicly report on the outcomes of that study, and (if considered feasible) proceed to establish it, as recommended in Recommendation 4?

Implicated department: Parks Canada (PC)

Lead department: PC

Response:

The feasibility assessment for the proposed Southern Strait of Georgia National Marine Conservation Area Reserve (NMCAR) is ongoing, with work advancing collaboratively between 11 First Nations, the Province of BC, and Parks Canada.

At this time, there is no fixed timeline for the completion of the feasibility assessment; Parks Canada is committed to co-developing the process with Indigenous partners and the province of BC. Parks Canada can confirm that while the project activity has been limited to date, renewed attention has been provided to the process through increased engagement with Indigenous partners and the province, who are actively collaborating to determine the feasibility of the protected area.

A public report will be available when the feasibility assessment is completed. If an NMCAR is determined to be feasible, the Indigenous, federal and provincial governments would enter into negotiations about establishment details and co-operative management.

Question 6:

What is the status of work by the Governor in Council to develop an Offset Program to offset both the increased underwater noise and the increased strike risk posed to *Species at Risk Act*-listed marine mammal and fish species, including the Southern Residents, by Project-related marine shipping, as recommended in **Recommendation 5**? What is the timeline for completion and implementation of the Offset Program?

Implicated departments: Fisheries and Oceans Canada (DFO), Canadian Coast Guard (CCG), Transport Canada (TC)

Lead departments: DFO, CCG

Response:

In 2019, the Canada Energy Regulator (CER) recommended that the Governor in Council (GIC) develop an offset program to offset increases in underwater noise and strike risk from marine shipping associated with the Trans Mountain Expansion project (TMX or Project) and reduce adverse effects on at-risk marine species, including the Southern Resident Killer Whale (SRKW) (Recommendation 5). In response to this recommendation, Canada reiterated its commitment to continue to support and implement noise management measures, including measures to mitigate, avoid or lessen the effects of the Project, that would also help address effects on the SRKW, and to monitor and adaptively manage these measures in a manner consistent with relevant recovery strategies and action plans.

Canada has put in place a suite of measures, outlined below, through the [Oceans Protection Plan](#) and the [Whales Initiative](#) which aim to address the three main threats to SRKW (i.e., reduced prey availability, acoustic and physical disturbance, and environmental contaminants) which include specific measures related to reducing underwater noise and vessel strikes, and are intended to contribute, directly or indirectly, to address the impacts of project-related traffic.

More recently, Budget 2023 provided \$151.9 million over three years, beginning in 2023-24, to DFO, TC, ECCC, and Parks Canada (PC) to continue to protect endangered whales and their habitats, including SRKW.

Canada's response to Recommendation 5 builds on the work of these existing federal initiatives to mitigate underwater noise from marine shipping and support the protection and recovery of SRKW. Work to date has focused on underwater noise and SRKW, primarily due to the significant effects determination by the CER, the cultural significance of the species, and imminent threat determination in 2018. A program of work is also underway to further the knowledge on the distribution, and feeding areas, as well as habitat use of other at-risk cetacean species.

As part of the response to Recommendation 5, the Government of Canada is developing, implementing, and adaptively managing multiple components of an offset program, such as measures intended to offset TMX-related impacts, quantification of underwater noise, an evaluation framework/methodology, and a monitoring program. Specifically, the Government of Canada has been conducting acoustic monitoring and collecting underwater acoustic data (24 hours a day, seven days a week) since 2018 to establish an underwater noise baseline; modelling noise contributions from TMX related vessels as well

as noise reductions from management measures; and working to evaluate the extent to which TMX-related increases in underwater noise are offset by management actions.

Government of Canada efforts to implement an offset program in response to Recommendation 5 fall into five categories:

1. Implementation of measures to address impacts to SRKW;
2. Evaluation of Project effects and offsetting;
3. Monitoring of the effectiveness of measures;
4. Complementary research, engagement and management activities; and
5. Reporting and adaptive management.

1. Implementation of measures to address impacts to SRKW

The Government of Canada has been working to support the survival and recovery of SRKW since they were listed under the *Species at Risk Act* (SARA) in 2003. DFO, TC, PC and ECCC each have specific responsibilities in the protection of SRKWs. Since 2018, annual interim management [measures](#) have been implemented to support SRKW recovery.

Specifically, the Government of Canada has:

- worked with the Vancouver Fraser Port Authority's (VFPA) Enhancing Cetacean Habitat and Observation (ECHO) Program and its membership, (TC provided the VFPA with \$5.3 million under the Whales Initiative 1.0) to help establish voluntary slowdowns in Haro Strait, Boundary Pass, and Swiftsure Bank for large commercial vessels and a displacement of tug traffic away from important foraging locations in the Strait of Juan de Fuca;
- amended the Marine Mammal Regulations to define disturbance and implement approach distances for whales, dolphins and porpoises, including SRKW;
- imposed, since 2019, and implemented, by way of annual ministerial orders a 400-metre approach distance requirement for vessels with respect to all killer whales off the coast of Southern British Columbia;
- established, since 2019, Interim Sanctuary Zones off the southwest coast of North Pender Island and the eastern tip of Saturna Island by way of annual ministerial orders;
- put in place Seasonal Slowdown Areas in the waters off Swiftsure Bank, in collaboration with Pacheedaht First Nation by way of ministerial orders since 2019;
- prohibited, by way of annual interim orders, vessels from impeding the path of a killer whale in all Southern British Columbia waters;
- implemented area-based fishing closures in key foraging areas within SRKW critical habitat; and,
- worked with other regional stakeholders to develop and promote voluntary measures to reduce vessel impacts such as;
 - stopping fishing within 1000 meters of killer whales;
 - reducing speed to less than 7 knots when within 1000 meters of killer whales;
 - turning off echo sounders and fish finders when safe to do so; and,
 - placing engines in neutral idle when close to a whale and allowing them to pass.

The measures are intended to support SRKW recovery by addressing key threats, such as vessel noise and ship strike risk, and contribute to addressing the impacts of Project-related traffic, including vessel noise and ship strikes. The Government of Canada will continue to build on its existing investments to address the impacts of the Project and consider additional measures as new information becomes available through adaptive management.

2. Evaluation of Project effects and offsetting

DFO developed a draft noise offset framework that seeks to apply an evidence-based, scientifically robust, quantitative method to determine the extent to which noise contributions associated with Project-related shipping could be offset through management measures. The draft framework builds on previous science advice that recommended aiming for a no net increase in noise from project-related shipping (DFO 2017, 2018).

DFO continues to develop and refine a multi-frequency vessel noise model to predict underwater noise changes resulting from Project-related shipping and management measures. Specifically, DFO has used the model to: (i) establish an underwater noise baseline, (ii) predict underwater noise increases relative to the baseline from Project-related vessel traffic (e.g., Vagle et al. 2021a), and (iii) predict underwater noise changes relative to the baseline under various underwater noise management scenarios.

DFO has identified patterns of seasonal distribution for SRKW within their critical habitat and has identified foraging areas within this distribution (e.g., Thornton et al. 2022a,b, Stredulinsky 2023). DFO is considering the use of an offset ratio, and/or multiplier, as part of the draft noise offset framework to reflect habitat equivalency, including differences in how SRKW use and move in the Salish Sea, and to address uncertainty (e.g., related to the effects determination, measurement of effectiveness, gaps in scientific knowledge).

Given that the application of offsetting in the context of underwater noise effects from marine shipping is a novel concept, DFO hosted a three-day Canadian Science Advisory Secretariat (CSAS) National Scientific Peer Review meeting to review and evaluate the draft framework for a noise offset program. (Government of Canada 2024). Participants included experts from DFO and TC, as well as experts outside of Government from Canada, the United States, and the United Kingdom. The [Terms of Reference](#) set out the objective of the CSAS meeting which was two-fold: (i) evaluate the components that make up the draft framework, including risks and uncertainties of using the framework generally, and (ii) evaluate the application of the framework (including risks and uncertainties and alternative approaches where applicable) in the context of offsetting increases in underwater noise from Project-related vessels and its potential impact on the SRKW. The resulting Science advice will inform next steps in the development of the framework and its adaptive management as new information becomes available. This work, combined with analysis of passive acoustic recordings of Project-related vessels transiting the Salish Sea, will inform the effectiveness of management measures to offset Project impacts, as well as their adaptive management.

3. Monitoring of the effectiveness of measures

DFO has established a network of passive acoustic monitoring stations in the Salish Sea to support monitoring commitments as part of the response to Recommendation 5. There are currently 11 continuously recording monitoring stations in the Salish Sea at the following locations: La Perouse Bank (1); Juan de Fuca Strait entrance at Swiftsure Bank (1); Juan de Fuca Strait (Port Renfrew [1], Jordan River [1], Sooke [1]); Haro Strait (1); Boundary Pass (1); Swanson Channel (1) and Strait of Georgia (3). DFO also undertakes frequent maintenance of the moorings, to retrieve data and service the equipment.

Using these passive acoustic recordings, DFO scientists have described current ambient noise conditions in the Salish Sea, including spatial and temporal patterns of natural and anthropogenic noise (e.g., Burnham et al. 2021a, Vagle et al. 2021b). These passive acoustic recordings have also allowed DFO to monitor and report on the effectiveness of various management measures in reducing noise

levels along the Project marine shipping route (e.g., Vagle and Neves 2019, Vagle 2020, Burnham et al. 2021b, Burnham and Vagle 2023). Additionally, DFO has identified areas of elevated risk for vessel-related physical and acoustic impacts in SRKW critical habitat (e.g., Vagle et al. 2021a, Thornton et al. 2022a,b, Stredulinsky 2023).

DFO currently evaluates the effectiveness of management measures in place annually, as well as using modelling to predict noise from anticipated Project-related vessels, which is validated and monitored through the use of the existing DFO acoustic recorders. It is expected that, once finalized, the underwater noise offset framework would integrate observations from both field data and modelled results.

4. Complementary research, engagement and management activities

Co-occurrence analyses (Thornton et al. 2022b, Burnham et al. 2023) were used to identify areas within critical habitat where SRKW are at a higher risk for physical and acoustic disturbance. These analyses inform management measures aimed at reducing acoustic impacts on SRKW in critical habitat.

In conjunction with the approval of TMX, the Government of Canada signaled its intention to address data gaps for other at-risk species in the TMX shipping corridor. Since 2019, DFO has been conducting transect based surveys to determine the seasonal abundance and distribution of different *Species at Risk Act* (SARA)-listed marine mammals in the TMX shipping corridor (McMillan et al. 2022).

In fiscal year 2024/25, a CSAS review will be conducted to assess the abundance and seasonal distribution of other SARA-listed cetaceans in the southern Salish Sea and on Swiftsure Bank. This review will also inform the analysis of a ship strike risk threat assessment to be conducted in fiscal year 2025/26.

DFO assists marine mammals and sea turtles in distress. In collaboration with conservation groups and non-governmental organizations, the department supports marine mammal incident response networks in all regions under the umbrella of the Marine Mammal Response Program nationally, and the British Columbia Marine Mammal Response Network regionally. The Marine Mammal Response Program works with partners to: track and respond to marine mammal entanglements, strandings (dead and live), ship strikes, and other threats; quantify threats affecting marine mammal species, with a special focus on species assessed as at risk; and provide data and information to support Species at Risk recovery planning initiatives, mitigation options, and policy development.

As part of the [Oceans Protection Plan](#) (OPP), the Government of Canada is developing an Ocean Noise Strategy. The purpose of the pending draft strategy is to develop a coordinated approach to better understand the complex threat of ocean noise, build on existing work while maximizing the use of knowledge and resources, coordinate actions, and guide future partnerships and initiatives to minimize impacts on marine life. DFO is leading the development of Canada's Ocean Noise Strategy, which includes recommendations intended to guide and support improved coordination of federal efforts on all ocean noise sources in the areas of science, knowledge gathering, and innovation; assessment and management; and communication, coordination and engagement. The draft release of Canada's Ocean Noise Strategy is anticipated in 2024 with an associated period of public engagement to immediately follow. The publication of the final Strategy is expected to follow in 2025.

To further ensure that management measures to protect marine mammals, including SRKWs, are being upheld, the CCG has taken action through the Marine Mammal Desk (MMD). The MMD is located in

Victoria, British Columbia (BC), at the CCG's Marine Communications and Traffic Services centre and is staffed 24/7 year-round. Among other things, the MMD monitors vessel traffic and shares reports with the other federal enforcement agencies, including TC, DFO and PC, regarding vessels seen to be in contravention of SRKW-related protection measures in place. These reports may also be shared with non-governmental organizations such as the BC Marine Mammal Response Network and BC Cetacean Sighting Network. Working with these local organizations increases local awareness of marine mammals and supports their protection.

The Government of Canada has taken action through the [Quiet Vessel Initiative](#) (QVI), to fund projects to test and evaluate the most promising technologies, vessel designs, retrofits, and operational practices to reduce underwater vessel noise at the source. It aims to protect the marine environment and vulnerable marine mammals – including SRKW. Through the QVI 61 research, development and demonstration projects have been funded since 2018 to test and evaluate the most promising technologies, vessel designs, retrofits, and operational practices to reduce underwater vessel noise with Canadian and international industry and academia.

This work is further advanced through the QVI Indigenous Stream, with \$2.5 million in funding announced in September 2020 for Project funding available to 29 Indigenous groups located along the TMX marine shipping corridor to support engagement, community capacity building activities, underwater noise monitoring in traditional territories, and research projects to evaluate quiet vessel technologies. A further \$2.3 million in QVI funding was announced for indigenous groups, under the Whales Initiative 2.0, in 2023.

Canada has renewed support for the Vancouver Fraser Port Authority-led ECHO Program to support research to better understand the threats to whales associated with commercial vessel activities (with acoustic disturbance identified as a key focus). This work includes better understanding noise signatures from vessel classes that operate in the Salish Sea and advancing knowledge on technical and operational mitigations of underwater vessel noise.

TC is also providing funding to Ocean Wise Coastal Ocean Research to support their Whale Report Alert System, which notifies large commercial vessels when they may be near whales, via an online app, allowing vessels to take appropriate actions, including monitoring for whale presence and/or slowing the vessel down to reduce disturbance.

TC has taken a leadership role at the International Maritime Organization (IMO), working with like-minded member states to update and implement the Revised Guidelines for the Reduction of Underwater Radiated Noise from Shipping to Address Adverse Impacts on Marine Life. This revised guidance includes promoting incentives, establishing underwater vessel noise management plans, and exploring the relationship between technologies that support energy efficiency to reduce greenhouse gases while at the same time working to reduce underwater vessel noise. These efforts are being supported by a 3-year Experience Building Phase during which member states report on progress they have made at addressing underwater vessel noise.

TC commissioned a [study](#) of technological measures known to both increase energy efficiency and reduce greenhouse gases and to analyze their impact on vessel underwater radiated noise, in support of work being conducted at the international level through the IMO for quieter and more efficient vessel design. A results matrix outlines technical and operational measures that have the potential to increase energy efficiency and reduce greenhouse gas emissions from ships, and/or mitigate vessel underwater

radiated noise. The matrix can be used by ship owners and operators, as well as ship builders, to help inform their design decisions to build more efficient, and quieter vessels.

TC supported research via Innovative Solutions Canada challenges in two categories: Development of Quiet Depth Finder Technology, and Protecting the SRKW: Reducing Underwater Noise from Escort Tugs. This research aims to help develop new technologies to make ships quieter, particularly when they pass through the critical habitat of whales, including the SRKW.

TC has also initiated work on the development of meaningful and practical underwater vessel noise reduction targets to inform future policies on underwater noise vessel management plans. The ultimate intention with these plans is to work with industry to help them monitor and address their own underwater noise contributions.

Canada continues to deploy hydrophones in Canadian waters to monitor underwater noise from marine vessels, the overall soundscape, and marine mammal behaviors. This information and the analysis of it helps us to better understand underwater noise and its potential impacts on marine life. Additionally, some of these hydrophones are being used to:

- Measure underwater noise radiated from different vessel types;
- Monitor the overall acoustic environment in the Salish Sea in near-real time;
- Enable near real time detection of marine mammals in the region and generate data now included in the Whales Report Alert System that can alert mariners of whale presence (and potentially reduce the potential for vessel strikes and vessel noise); and,
- Develop an extensive research database of vessel noise contributors to support modelling and analysis of management measures in the Salish Sea.

5. Reporting and adaptive management

The Government of Canada has committed to reporting on the offset program. The reporting will draw upon DFO acoustic modelling and monitoring of underwater noise levels to help validate modelled results and verify the effectiveness of implemented measures. The reporting aims to provide insight into the effectiveness of measures to offset incremental Project-related shipping noise and address Project impacts on SRKW. Results are intended to inform refinements to measures as new information becomes available as part of an iterative adaptive management process. This approach complements the recovery goals and intent of the SARA, thereby supporting SRKW survival and recovery.

Reference List:

- Burnham, R.E. and S. Vagle. 2023. Changes in sound field levels of the Salish Sea resulting from trials of vessel slowdown, lateral displacement and exclusion from Interim Sanctuary Zones in 2021. Canadian Technical Report of Fisheries and Aquatic Sciences 3528: v + 72 p. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41105576.pdf>.
- Burnham, R.E., S. Vagle, and C. O'Neill. 2021a. Spatiotemporal patterns in the natural and anthropogenic additions to the soundscape in parts of the Salish Sea, British Columbia, 2018–2020. *Marine Pollution Bulletin* 170:112647–112647.
- Burnham, R.E., S. Vagle, C. O'Neill, and K. Trounce. 2021b. The efficacy of management measures to reduce vessel noise in critical habitat of Southern Resident Killer Whales in the Salish Sea. *Frontiers in Marine Science* 8:664691.
- Burnham, R.E., S. Vagle, P. Thupaki, and S.J. Thornton. 2023. Implications of wind and vessel noise on the sound fields experienced by southern resident killer whales *Orcinus orca* in the Salish Sea. *Endangered Species Research* 50:31–46.

- DFO. 2017. Technical Review of Roberts Bank Terminal 2 Environmental Impact Statement and Marine Shipping Supplemental Report: Effects on Marine Mammals. DFO Canadian Science Advisory Secretariat, Science Response 2017/001. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/40622861.pdf>.
- DFO. 2018. Potential Effects of the Construction of Marine Terminals in the Saguenay Fjord on the St. Lawrence Beluga Whale and its Habitat. DFO Canadian Science Advisory Secretariat, Science Response 2018/025. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/40946551.pdf>.
- Government of Canada. 2024. Terms of Reference: Evaluation of a framework for offsetting increases in underwater noise from marine shipping associated with major development projects: A case study applying a noise offset framework to the TMX Project and its impact on the Southern Resident Killer Whale. Available at: https://www.dfo-mpo.gc.ca/csas-sccs/Schedule-Horraire/2024/03_12-14-eng.html.
- McMillan, C.J., E.A. Keppel, L.D. Spaven, and T. Doniol-Valcroze. 2022. Preliminary report on the seasonal abundance and distribution of cetaceans in the southern Salish Sea in response to TMX Recommendations 5 and 6 (Year 1). Can. Tech. Rep. Fish. Aquat. Sci. 3474: vi + 33 p. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/4105149x.pdf>.
- Stredulinsky, E.H., S. Toews, J. Watson, D.P. Noren, M.M. Holt, and S.J. Thornton. 2023. Delineating important killer whale foraging areas using a spatiotemporal logistic model. Global Ecology and Conservation 48(3–4):e02726.
- Thornton S.J., S. Toews, E. Stredulinsky, K. Gavrilchuk, C. Konrad, R. Burnham, D.P. Noren, M.M. Holt, and S. Vagle. 2022a. Southern resident killer whale (*Orcinus orca*) summer distribution and habitat use in the southern Salish Sea and the Swiftsure Bank area (2009 to 2020). DFO Can. Sci. Advis. Sec. Res. Doc. 2022/037: v + 56 p. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41072340.pdf>.
- Thornton S.J., S. Toews, R. Burnham, C.M. Konrad, E. Stredulinsky, K. Gavrilchuk, P. Thupaki, and S. Vagle. 2022b. Areas of elevated risk for vessel-related physical and acoustic impacts in southern resident killer whale (*Orcinus orca*) critical habitat. DFO Can. Sci. Advis. Sec. Res. Doc. 2022/058: vi + 47 p. Available at: <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41072698.pdf>.

Question 7:

What is the status of the Governor in Council's work to review and update federal marine shipping oil spill response requirements, including response planning for Species at Risk Act-listed species, such as the Southern Resident Killer Whales, as recommended in **Recommendation 7**? What is the timeline to complete this work? When will updated response planning for the Southern Resident Killer Whales be in place?

Implicated departments: Fisheries and Oceans Canada (DFO), Canadian Coast Guard (CCG), Transport Canada (TC), Environment and Climate Change Canada (ECCC)

Lead department(s): CCG, TC

Response:

The CCG collaborates with DFO, other government agencies at all levels, and coastal and Indigenous communities to develop marine pollution and hazards response plans focused on minimizing the impact of marine pollution and hazards on public safety, the economy and the environment including marine

life which includes Northern and Southern Resident Killer Whales (SRKW). Specifically, the CCG regional response plans are being updated in 2024 to incorporate information on marine mammal response including the DFO Pacific Region Marine Mammal Rescue Team leading the operational on-water spill response preventive mitigation measures for Killer Whales. Information on tactics, equipment and capacity are maintained and documented internally within DFO to be used during an incident response.

CCG regional response plans are activated during responses to marine pollution and hazardous vessel incidents and provide a range of information to be used by responders to mitigate the risks that marine pollution spills or hazards can have on marine mammal populations. Response plans include key information on the activation and alerting process, including establishment of unified command as required, as well as sensitive habitats and species at risk, and the locations of response equipment. More detailed information and protection strategies for Northern and Southern Resident Killer Whales would be incident specific and would be provided by the Environmental Unit supported by ECCC, DFO and other key partners.

DFO developed an internal Pacific Marine Mammal Spill Response Plan (2023) that: (1) provides region-specific information about marine mammal spill response; (2) documents DFO's roles and responsibilities; (3) provides guidance on marine mammal response training and exercises; and (4) outlines operational aspects and internal communication pathways involved with responding to an incident. SRKW, as a SARA listed species, are prioritized in the plan.

DFO has put the Pacific Marine Mammal Response Plan into practice by conducting drills and exercises annually, training a variety of personnel (e.g., Indigenous groups, CCG, DFO's Conservation & Protection (C&P) unit, Parks Canada, response organizations) in acoustic deterrence annually, and strategically distributing marine mammal response equipment at local C&P detachments and caches along the coast.

DFO further prepared for spills through:

- investing in response equipment (e.g. boat engine, acoustic gear);
- drafting a Standard Operating Procedure (SOP) for Fishery Officers (FO) to follow during a spill;
- performing in-field and on-water training in marine mammal deterrence (using acoustic devices such as underwater speakers and oikomi pipes), necropsy, live strandings and disentanglement;
- investing in personal protective equipment and other marine mammal-oriented equipment to provide to officers during a spill; and,
- developing a series of online videos on marine mammal response during a spill in conjunction with University of California Davis.

While DFO is the lead federal department for aquatic Species at Risk in Canada's waters, TC is taking broader action to strengthen preparedness and response to ship-source oil spills. TC is proposing amendments to the national regulations governing oil spill preparedness requirements for TC-certified response organizations and oil handling facility operators. The proposed amendments would require response organizations to subdivide their geographic area of responsibility into smaller sub-regional areas, and identify areas of environmental sensitivity within those subregions, such as areas containing threatened, vulnerable or endangered species. Response organizations would also need to demonstrate

that they have the necessary strategies and appropriate personnel and equipment to respond to spills of all types of oil in these subregions.