Georgia Strait Alliance submission regarding Fisheries and Oceans Canada's Scientific Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales

Introduction

We would like to thank Fisheries and Oceans Canada (DFO) for the opportunity to provide feedback on the scientific review of recovery measures for the southern resident killer whales.

The Georgia Strait Alliance (GSA) was formed in 1990 and over the subsequent years we have worked on a number of fronts to increase public understanding and win public policy change on threats to the Strait of Georgia from pulp and sewage pollution, oil spill risks, loss of critical estuary habitat and salmon streams, open-net cage salmon farming impacts and the need for protection of marine habitat. The focus of many of our programs and initiatives is working toward the protection and recovery of species at risk using a variety of tools including education and outreach, as well as advocacy. This includes providing information to the public so they can take action to protect vulnerable species and efforts to protect critical habitat through marine planning.

While we have an interest in the areas of prey availability and disturbance, Georgia Strait Alliance is focusing this submission on the threat from toxic contaminants to the southern resident killer whales. We are aware of submissions being made to the review by Raincoast Conservation Foundation, World Wildlife Fund, National Resources Defence Council and the David Suzuki Foundation, and we fully support their recommendations.

Georgia Strait Alliance supports many of the actions proposed in the Scientific Review, and we are pleased that DFO is consulting with stakeholders, First Nations, other experts and the public on how to prioritize and initiate these actions. However, we have some concerns and recommendations which you can find in this submission. We would be happy to discuss these further if you require more information.

Governance and Accountability

With the closure of DFO's Ocean Contaminants and Marine Toxicology Program in 2012, there has been a significant gap in both government led research and leadership in the assessment of contaminant impacts on our oceans and wildlife. It is now unclear who holds primary responsibility – and therefore who is accountable – for assessing pollution impacts and ensuring that contaminants of concern no longer find their way into our oceans. The lack of defined leadership may lead to a situation where no one is responsible, and pollution impacts on our waters worsen. Assumptions that non-profits, academic institutions or agencies of the US government will pick up the slack is unacceptable as the government of Canada is the steward

of our oceans. In lieu of re-opening the contaminants program, we recommend the following actions be taken:

- **Restructure and expand actions for clarity:**
    - The details of the actions being implemented should be structured to include where the action will geographically take place, point of contact (name, department, email and phone number), partners, proposed start date, expected completion date, current status of the actions, and a list of resources including funding amounts and source. This makes responsibility and accountability clear, and will highlight gaps where they exist. An example of how to do this can be found in NOAA's Species in the Spotlight Priority Actions: 2016-2020 Southern Resident Killer Whale DPS
    - As part of this increase in clarity, DFO must still play a leadership role so that it can work with partners to ensure research is focusing on urgent areas of concern and that the result of the research is shared with the public and become the basis for public policy. Though DFO is not necessarily doing the research, they can no longer abrogate their role as stewards of the public good when it comes to contaminants. They must lead in ensure contaminants are kept out of our waters and the habitat of at risk species such as the southern resident killer whale.

- **Funding for contaminant research outside of federal government:**
    - As DFO's contaminants program has closed, out of necessity~~,~~ other agencies and organizations have undertaken research and monitoring of contaminants in our oceans. GSA understands that DFO supports and works with some of these agencies, however, to ensure continuity and strength of data collection and monitoring, we recommend DFO commit to long-term and ongoing financial support of this work. If DFO eventually plans to re-commit to contaminants ocean research, this would prevent replicating research that has already been done by other organizations while also avoiding detrimental gaps in research and monitoring. GSA supports DFO providing funding to programs such as the Vancouver Aquarium Pollution Tracker Program and encourage the agency to broaden support to other research programs as well. Data collected through this program could be provided to DFO so that it can be used to make informed decisions on what is needed to address contaminant issues and implement new and effective contaminant policies, which would improve the quality of southern resident killer whale habitat.

Development of a Transboundary Working Group

GSA supports the formation of this working group, as the success of protecting and recovering the southern resident killer whale population hinges on joint efforts between our two countries. We recognize the tremendous value of sharing information, research and field experience, as this will allow us to implement action measures quickly and more effectively, while leveraging shared capacity. Its effectiveness will be improved if the following recommendations are implemented:

- Complete Terms of Reference in the next six months. This would clearly and quickly establish the responsibilities and power that the working group would hold.
- The group should be established and have an initial meeting within the next six months with sub-groups created to address each of the three threats. The creation of sub-groups would increase efficiency and narrow the focus of individual members to their field of expertise.

Contaminants Research, Monitoring & Enforcement

In addition to research, what is also important to ocean health is that contaminants of concern are monitored and laws restricting use and disposal of these chemicals are enforced. GSA supports improving enforcement of Canadian regulations to reduce toxic chemical discharges at the source, and strengthening those law to reduce point and non-point sourcedischarge. We recommend the following:

- Currently, the action plan specifies research goals that have already been undertaken by other organizations. DFO should be clearer on this fact, both to avoid redundancies and so that updates on action plan activities are clear on what research was done post action plan release and which had been completed prior to its publication. For e.g., some research has already been done on contaminants in Chinook Salmon; research has been done on impacts of oil spills on marine mammals, and contaminants of concern in southern residents have been identified, however monitoring has not been effectively implemented. NOAA and the Vancouver Aquarium's Pollution Tracker Program are two examples of organizations that have collected data on contaminants, and could provide information on many of the research goals listed in the action plan, if they haven't already.
- We support the recovery measure to conduct a pathway-based risk assessment to quantify the risk of biological pollutants from various pathways of introduction, such as agricultural runoff, sewage effluent, and wildlife rehabilitation facilities. If these sources are found to be a risk to the health of southern resident killer whales, regulations need to be put in place immediately to eliminate or treat effluent to prevent the pollutants from making their way into the marine environment.
- We must gain clarity on the risks to southern residents and their prey of point and non-point source pollution, therefore research in this area must be prioritized. This needed

research must also include cumulative impacts of multiple point source and non-point source pollution, as evaluating discharges in isolation does not effectively assess impacts nor provide the essential information to create plans to restrict discharge.

The monitoring stations that have been put in place along the coast in the receiving environment should be maintained for the long term to gather useful information and this data must be used to finalize a list of the contaminants that exist in the marine environment, and pose a threat to the health of the orcas and other marine mammals. When these contaminants are identified, more immediate action must be taken to ban their use rather than simply asking for more research to be done. Impacts on ocean wildlife, in particular at risk species such as southern residents, must be considered when approving and removing chemicals from use in our communities.

Wastewater Management

Municipal wastewater is a major source of pollution of our waterways that include critical habitat of the southern resident killer whales. Current regulations fall short in testing and monitoring for persistent organic pollutants, which are known to be causing negative impacts on reproduction, development, and immune system function in orcas. Regulations also do not effectively monitor and address the issue of emerging chemicals or pharmaceuticals. Our recommendations are as follows:

- **More effective cradle to grave management of chemicals:**
    - The current system of approving a myriad of new chemicals for public use each year then asking regional governments to resolve the problem of discharge into the environment through advanced sewage treatment is an unfair and ineffective way to manage chemicals from cradle to grave. Chemicals should not be approved for use without extensive research into their impacts in the receiving environment and without a clear means to effectively ensure that they are not discharged freely. One way to address this is by creating a feedback loop between wastewater treatment managers and regulators who approve chemicals at the federal level. Management of chemicals at the end-of-life stage needs to be integrated into the chemical approval process.

- **Shortened timeline for upgrades to secondary treatment:**
    - As we have long stated and laid out publicly during the consultations on the creation of national wastewater regulations, we support accelerated timelines for compliance with national wastewater treatment standards, and that it should include appropriate funding from all levels of government. In particular, the upgrade to Metro Vancouver's Iona WWTP should be advanced from 2030, in particular as the regions' own Liquid Resource Management Plan indicates a recognition and commitment to upgrading this plant sooner, if funding is available.

- **Broaden criteria for assessment wastewater effluent:**
    - The current regulations for wastewater monitoring only focus on biological measures such as Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) as a measure of 'secondary treatment' and water quality. Policy needs to be created and regulations need to be implemented to test for and monitor a large range of chemicals negatively affecting the health of southern resident killer whales and other marine life, including but not limited to PCBs, PCBDEs, dioxins and furans. To ignore these chemicals limits our ability to effectively assess what chemicals are making their way through our wastewater systems and limits our ability to remove them from the waste stream. As always, source control is the most effective way to reduce chemicals making their way into our environment, however, source control is never 100% effective and must work hand in hand with more effective wastewater treatment monitoring and technologies.

- **Include microplastics in monitoring efforts**:
    - The province of Ontario is currently drafting water quality standards related to micro-plastics, another growing marine pollution concern. Though the impacts of microplastics on the health of the southern resident killer whales is unclear, they do impact their prey and it is a risk that we can reduce. Canada should be following suit with national regulations. Research and standards could be taken from the work already done in Ontario and used to inform policies in our own province and across the country.

Disposal at Sea

- **Expansion of monitoring criteria:**
    - Current regulations only test sediment for a small number of chemicals and this needs to be expanded to include testing for other chemicals, especially PCBs, PCBDEs, dioxins and furans, in order to more effectively assess the potential negative impacts they could be having on the health of southern resident killer whales.

Derelict Vessels

Small chronic spills is a major contributor of contamination to our oceans, in particular in localized areas. GSA is pleased to see that the Ocean Protection Plan includes preliminary funding for the removal of derelict vessels on the coast and is beginning to address this growing threat to our coast. Abandoned vessels have the potential to release harmful chemicals such as fuels, oils, and paints into the marine environment, threatening the health of southern resident killer whales who can either inhale the fumes from the chemicals, or ingest them as they make their way through the food chain. We support the continued efforts to assess where derelict vessels are located and prioritizing their removal. In addition to these efforts, we also

recommend the following actions be taken to prevent vessels from being abandoned in the future and shifting the costs of removal to the vessel owners and away from taxpayers:

- Vessel registration regulations must be strengthened and enforced so that vessel ownership can be better tracked. If a vessel can be traced back to its owner, the cost of removing a derelict boat can be charged to the owner and not taxpayers.
- The government needs to implement legislation that would allow fine to be issued for any pollution resulting from the abandonment of a vessel. The vessel owner would be held accountable, which would likely reduce the number and frequency of abandoned vessels.
- There must be greater financial investment in ongoing efforts to address current derelict vessels but also to create a program which prevents boats from becoming derelict in the first place.

Oil Spills and Bitumen

GSA is very concerned about the risk and impacts of an oil spill, especially diluted bitumen, on our coastline as it would threaten the survival of the southern resident killer whales. We applaud the efforts made by DFO to develop and fund improved emergency response preparedness within coastal communities in BC, including First Nations, but there are still issues that have not been addressed. Our concerns and recommendations are below.

Conventional Oil Spills:

- GSA is pleased that regional emergency response biologists are being hired and will be an active part of the oil spill response process. However, these positions must be permanent, they need to have the appropriate skill sets, and they must play more than an advisory role. They must be engaged in ensuring that actions are built on prioritizing biological consequences of the spill and not solely economic impacts.
- There is a need for an increase in leadership of the spill response office during a spill. The current state of multi jurisdiction participation without clear leadership from one agency cannot continue. We saw the impacts during the spill of the MV Marathassa in Vancouver 2 years ago. Delays in response time and disorganized response measures increase the negative effects of spills on wildlife and the environment, which has been seen in recent spill events.
- Current response practices place too much emphasis on industry self-regulation, which includes the responsibility of the industry to self-report when a spill happens. Government should be regularly monitoring industry to ensure compliance with the regulations is happening.
- Stronger enforcement of the polluter pays principle as stated in the OPP is a positive improvement as it creates unlimited liability, but is focused more on funding the spill response and does not explicitly lay out a process for damage compensation for environmental, fiscal and/or social impacts. The polluter needs to be held fully liable for

environmental, fiscal and social damages resulting from a spill and the process of compensation needs to be clearly stated within the regulations.

- Current response protocols due not address the impacts or respond effectively to low probability-high consequence oil spill events in current response protocols. There is also the narrowness of spill response planning that could result in long term impacts not being addressed. The response plans are only looking at the initial 30-day impacts of a spill. The Exxon Valdez oil spill is a prime example of the long-term (decades) negative effects that oil spills have on the health of the environment, wildlife, and human health. There are no listed plans for looking at the health impacts on humans and other wildlife, and the plans ignore several spill risks such as rail cars or trucks discharging into the marine environment. Each of these shortcomings need to be addressed in spill response planning documents in order to mitigate impacts on wildlife habitat, including southern resident killer whales.
- The government needs to require escorts to accompany large vessels in addition to oil laden tankers in high-risk operating areas. This is a concern that is not addressed in the OPP.
- We would like to see the Western Canada Marine Response Corporation (WCMRC) area plans made publicly available and increase, enhance, and test them, as appropriate, with input from stakeholders. Geographic Response Plans (GRP) for areas of the coast not currently covered by WCMRC area plans need to be developed. GRPs should be incorporated into planning documents and made publicly available, which is not addressed by the OPP.

Diluted Bitumen Spills:

- **Moratorium on diluted bitumen transport:**
    - There is currently no sufficient technology to clean up spilled diluted bitumen (dilbit) once it sinks in our ocean, and research shows that it can sink. Studies show that the chemicals used to dilute bitumen evaporate approximately 24 hours after exposure to air, therefore a dilbit spill would see the sinking of bitumen take place approximately 24 hours after a spill. With initial spill response times ranging from 6-72 hours and taking into consideration the difficult conditions posed by the area the spill occurs in (e.g. strong currents, high winds, narrow channels), the success of recovering any dilbit is extremely low. The transportation of diluted bitumen should not be allowed until there is sufficient technology to recover it from the marine environment once it spills.
    - We do not support the development or expansion of fossil fuel projects and increased tanker traffic within the critical habitat of southern resident killer whales. The National Energy Board stated in it's Summary of Recommendation on the Kinder Morgan Trans Mountain Expansion Project that, "the Board finds that the operation of Project-related marine vessels would likely result in significant adverse effects to the Southern resident killer whales". Any project

proposing to transport diluted bitumen should not go ahead if it is deemed to threaten this already critically Endangered population of orcas.

Thank you once again for the opportunity to comment on the Scientific Review of the Effectiveness of Recovery Measures for Southern Resident Killer Whales. We look forward to hearing your response and look forward to working with you to protect this important species in the Salish Sea.

Regards,

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