

April 12, 2017

The Right Honorable Prime Minister Justin Trudeau  
The Honorable Dominic LeBlanc, Minister of Fisheries and Oceans  
The Honorable Catherine McKenna, Minister of Environment and Climate Change  
The Honorable Marc Garneau, Minister of Transport

Subject: Reducing underwater noise in the Salish Sea

Dear Prime Minister and Honorable Ministers LeBlanc, McKenna, and Garneau:

We, the undersigned, are marine scientists with specific expertise in the biology of the endangered southern resident population of killer whales and/or in anthropogenic ocean noise in the Salish Sea.

In several recent announcements and press statements, the Canadian government has committed to ensuring that new industrial developments do not increase underwater noise within the critical habitat of southern resident killer whales. We commend you for acknowledging the increased threat that noise from these projects presents to this critically endangered population. At the same time, we urge you to produce a concrete, funded, science-based plan and a schedule for reducing the already excessive levels of underwater noise pollution in the Salish Sea from all sources, to help enable the population's recovery and substantially improve its acoustic habitat. It is essential that any new developments be consistent with these broader goals.

The southern residents are a distinct and iconic population of killer whales, which live much of the year in the Salish Sea off the west coast of Canada and the United States. This population has failed to recover since live-captures for aquaria stopped in the late 1970s; as of January 2017, it had only 78 members with fewer than 30 reproductive females. Numerous threats—including, most prominently, periodic prey shortages, physical and acoustic disturbance, and toxic contamination—are undermining the population's ability to successfully recruit new calves, and are threatening its long-term survival. For these reasons, the southern resident population is listed as endangered under Canada's Species at Risk Act and the U.S. Endangered Species Act. Virtually the entirety of the Salish Sea is recognized as critical habitat by both countries under these statutes.

The acoustic environment of the Salish Sea is already highly degraded relative to pre-industrial conditions. As a result, the southern residents are exposed to vessel noise the majority of the time they spend in their designated critical habitat, during which their communication space is significantly reduced. Vessel presence and noise exposure are associated in resident killer whales with a substantial reduction in foraging activity, limiting their food acquisition abilities. In what is already a food-compromised environment, we believe that this foraging impairment is not sustainable. Vessel noise is also likely to adversely affect the southern residents in other material ways, such as by masking and altering calls that are vital to their communication and by inducing chronic stress.

Both the Canadian and U.S. governments have recognized that acoustic disturbance of the southern resident killer whale population must be reduced. Canada's Resident Killer Whale Recovery Strategy and subsequent Action Plan require actions to ensure that anthropogenic

disturbance does not prevent the recovery of southern and northern resident killer whales, and call for regulations and other measures to “reduce or eliminate” their physical and acoustic disturbance. Similarly, the Recovery Plan formulated by the U.S. government requires management actions to reduce vessel disturbance and auditory masking as a criterion for recovery and delisting.

Both governments consider vessel presence and vessel noise among the principal threats to the survival and recovery of the southern resident population. Increasingly, however, continuous low-frequency noise from commercial shipping and other sources is also associated with a range of adverse impacts on fish and invertebrate species. Given current levels of commercial and industrial activity, chronic anthropogenic noise represents a serious threat to the Salish Sea ecosystem, of which the southern residents are an important component.

The Scientific Committee of the International Whaling Commission has repeatedly recommended an initial global target for the reduction of shipping noise of 3 dB (decibels) within 10 years and 10 dB within 30 years, relative to current levels. The goal is to reverse the upward trend (+3 dB/ decade) in deep-water ambient noise pollution during the second half of the 20th century, largely attributable to commercial shipping. We believe that an even more precautionary target is necessary and appropriate in areas, such as the Salish Sea, that are more acoustically degraded and that constitute critical habitat for a noise-sensitive endangered species. As part of its management plan for the region, the Canadian government should include design and engineering solutions, mandatory ship speed limits, and other tangible noise-quieting measures, with a schedule for their implementation; and, to ensure that the noise reduction target is met, it should periodically assess the effectiveness of its plan against pre-established criteria. The government should consider every means available, including regulation, to achieve quantifiable improvements in the whales’ acoustic habitat.

Along with increasing food availability and minimizing the risk of contaminants, which includes petroleum spills, reducing acoustic disturbance from large vessels and other noise sources is essential to the recovery of the southern resident killer whale population. Once again, we are greatly encouraged by the Canadian government’s promise to ensure that new developments do not increase ocean noise in the region. We also urge you to adopt a concrete, funded, science-based plan and timetable for noise reductions that will substantially improve and restore the acoustic environment of the Salish Sea.

Respectfully yours,

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