The Right Hon. Justin Trudeau, P.C., M.P.
Prime Minister of Canada
80 Wellington St.
Ottawa, ON K1A 0A2
pm@pm.gc.ca

The Hon. Jonathan Wilkinson, P.C., M.P.
Minister, Fisheries and Oceans Canada
200 Kent St., Station 15N100
Ottawa, ON K1A0E6
min@dfo-mpo.gc.ca

The Hon. Marc Garneau, P.C., M.P.
Minister, Transport Canada
330 Sparks St.
Ottawa, ON K1A 0N5
c/o jean-philippe.arseneau@tc.gc.ca

Via email and U.S. mail

July 3, 2019

Dear Sirs:

On behalf of the undersigned organizations and our millions of members and supporters in Canada and the United States, we write to urge your Government to take immediate action to implement additional measures to protect critically endangered North Atlantic right whales in Canadian waters. As of today, six right whales are known to have been killed in the Gulf of St. Lawrence in June 2019, with four mortalities detected in a single 48-hour period. These animals constituted 1.5% of the surviving right whale population. Without decisive action to expand and make permanent protections in the Gulf of St. Lawrence, the North Atlantic right whale will continue to face imminent threats to its survival and recovery from ship strikes and fishing gear entanglements in Canadian waters.

Of the four necropsies completed to date, the results of one (Wolverine) remain pending while three (Punctuation, Comet, and Clipper) have shown injuries and trauma consistent with ship strikes. Compounding this disaster, four of the six dead whales were reproductive or potentially reproductive females. With their deaths, their future calves are lost to the species as well, decreasing the odds of survival and recovery even further. Additionally, on June 28, a right whale was sighted northeast of Miscou Island entangled in heavy fishing gear. The North Atlantic right whale cannot withstand these continuing—and preventable—losses.

Recently published data confirms that adult right whales do not live long enough to die from old age because they are killed prematurely by vessel strikes and fishing gear entanglements.[1] Another recent paper confirms that ship strikes and entanglements are by far the leading cause of mortality and serious injury for the species.[2]

Since 2017, documented right whale deaths in the Gulf of St. Lawrence alone have been nearly double the number of documented new births in the same period. Further, not all whales injured or killed by activities in Canadian waters necessarily die in Canadian waters. For example, in January 2017, an injured male whale with raw wounds was disentangled from Canadian snow crab gear off the coast of Florida, while a dead female whale killed by Canadian snow crab gear was detected off the coast of Virginia in January 2018. Both whales had dragged gear over 1,000 miles.

We recognize the Government's efforts since 2017 to decrease the risks of right whales being killed and injured by ship strikes and entanglements. We also commend the Government's investment of resources into the development and testing of buoyless fishing technologies that represent the only feasible long-term solution for protecting right whales from the sublethal and lethal impacts of fishing gear entanglements while supporting economically important fisheries. Despite these efforts, however, the six recent deaths and the observed entanglement underscore that these measures have not been sufficiently protective. The Government must do more to meet its legal obligations to protect the right whale from anthropogenic threats in Canadian waters.

We urge the Government to respond vigorously to this crisis by implementing both immediate and longer-term measures. Specifically, the Government should:

1) extend and permanently implement static seasonal mandatory speed limits in the Gulf of St. Lawrence, including its shipping lanes;

2) adequately regulate fisheries to prevent additional entanglement-related injuries and mortalities; and

3) significantly expand visual and acoustic survey efforts to detect right whales (both living and dead) throughout the Gulf.

Recognizing that the North Atlantic right whale is a transboundary species, we also urge the Government—as we have urged and will continue to urge the Government of the United States—to redouble bilateral efforts to protect this species from the existential threats posed by ship strikes and entanglements on both sides of the border.

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[1] Corkeron, P. et al. The recovery of North Atlantic right whales, *Eubalaena glacialis*, has been constrained by human-caused mortality. *R Soc Open Sci.* 2018; 5(11):180892. Published 2018 Nov 7. doi:10.1098/rsos.180892.

[2] Sharp, S. et al. Gross and histopathological diagnoses from North Atlantic right whale (*Eubalaena glacialis*) mortalities between 2003 and 2018. *Diseases of Aquatic Organisms* 2019; 135(1), pp. 1–31. doi:10.3354/dao03376.

I. Extend and permanently implement static seasonal mandatory speed limits in the Gulf of St. Lawrence

While Transport Canada recently implemented a 10 knot speed restriction within an additional portion of the shipping lanes in the Gulf, it did so only after five right whales had already been killed, underscoring the inherent weaknesses of a surveillance-triggered dynamic closure mechanism and the need for more proactive and permanent seasonal restrictions over a larger area. Under Transport Canada's current scheme for vessel management, "temporary speed restrictions are implemented in designated areas within the shipping lanes when a right whale is spotted in or near the shipping lane. These are identified as dynamic shipping sectors A, B, C, and D on the map [in green below]"[3] (emphasis added) (Figure One).

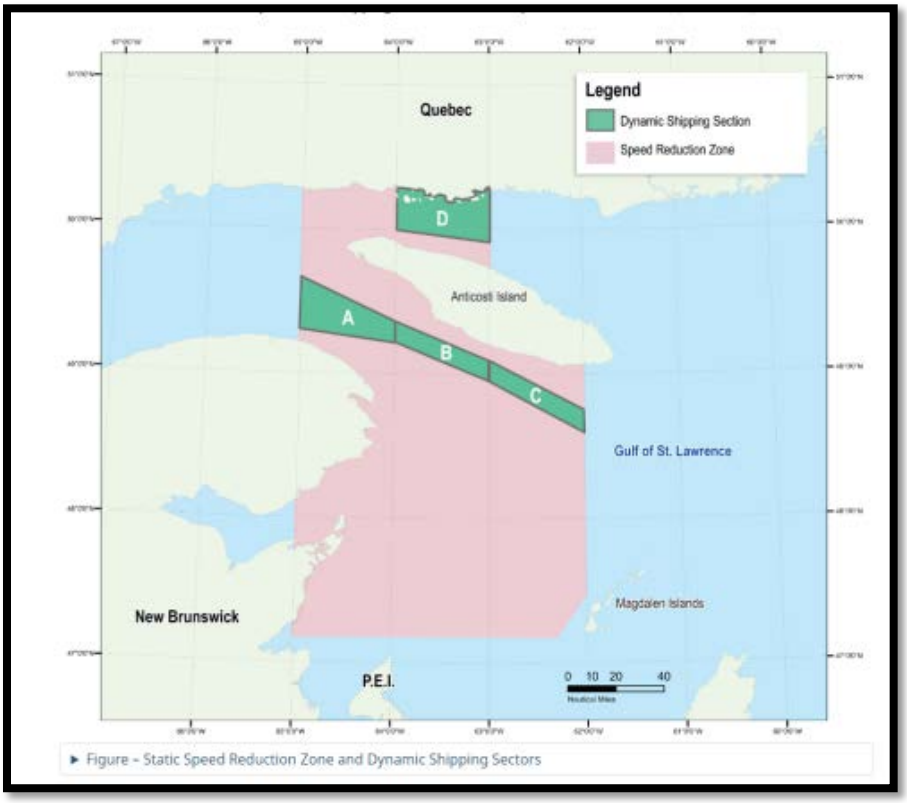

Figure One. The static seasonal speed restriction (pink), and the dynamic speed zones (green).

Under this scheme, a visual detection is required to trigger any of the dynamic zones and survey effort of the shipping lanes has been significantly limited. Given the limited survey effort of only one flight per week, this made it difficult to impossible for one of these zones to be triggered. As a result, inadequate surveillance efforts undermined this scheme's effectiveness. Based on survey data

[3] *See* https://www.tc.gc.ca/en/services/marine/navigation-marine-conditions/protecting-north-atlantic-right-whales-collisions-ships-gulf-st-lawrence.html

available on Whalemap.ocean.dal.ca, surveys of the shipping lanes south of Anticosti were conducted on only six occasions in June while the dynamic area north of Anticosti was only surveyed on four occasions (Figure Two). Even if one assumes that a survey of these areas is 12 hours in duration, that means that there was only a 10% chance of dynamic areas A, B, or C being triggered in June and less than a 7% chance of area D being triggered. We question why Transport Canada did not implement passive acoustic monitoring in the dynamic zones to complement aerial surveillance efforts, when research has demonstrated that passive acoustic monitoring can provide a two- to ten-fold increase in days right whale are detected over visual methodologies.[4] This is particularly important during times of bad weather or at night when visual surveys cannot be conducted.

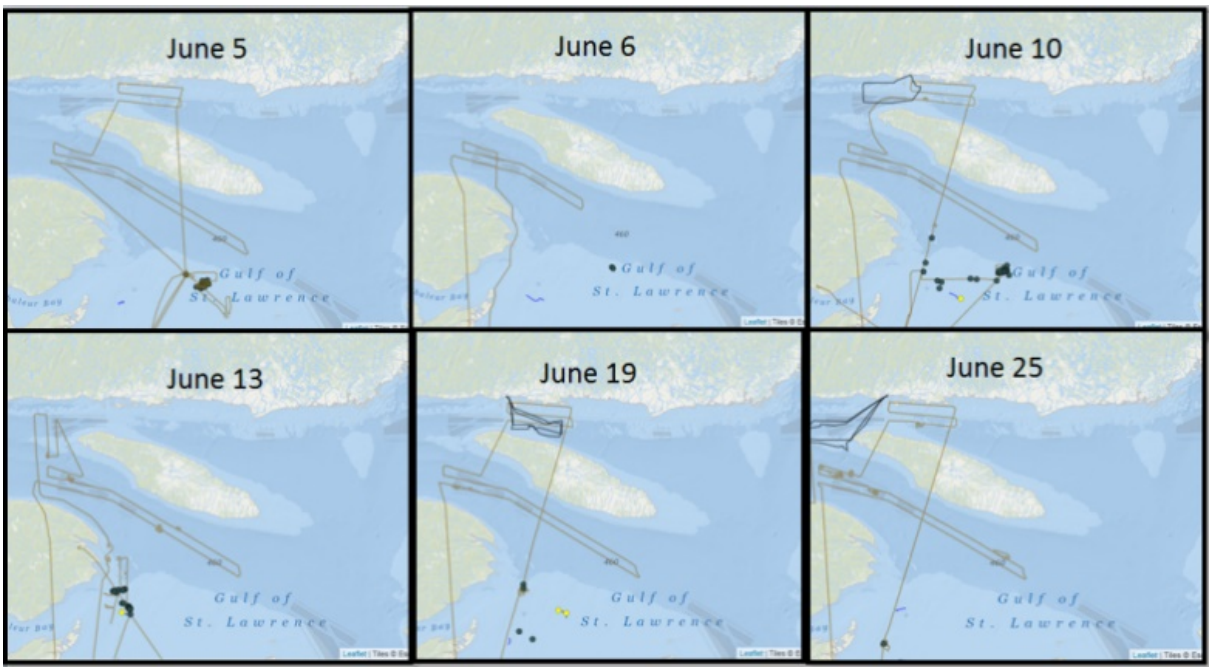

Figure Two. Between June 1- July 1, dynamic shipping areas were only surveyed by planes on 6 days according to https://whalemap.ocean.dal.ca/WhaleMap/

However, the larger issue illustrated by this year's mortalities is that ship speed restrictions must be extended beyond the originally-designated static and dynamic areas. Even Transport Canada's recent expansion of that speed restriction into the western portion of the Gulf's primary shipping lane is not sufficiently protective. A more precautionary approach would include the eastern portion of the Traffic Separation Scheme, including the area near the Îles de la Madeleine where the whale identified as #2 on Figure Three (Punctuation) was detected.

[4] Soldevilla, M.S. et al. Passive acoustic monitoring on the North Atlantic right whale calving grounds. Endanger. Species Res. 25, 115–140 (2014).

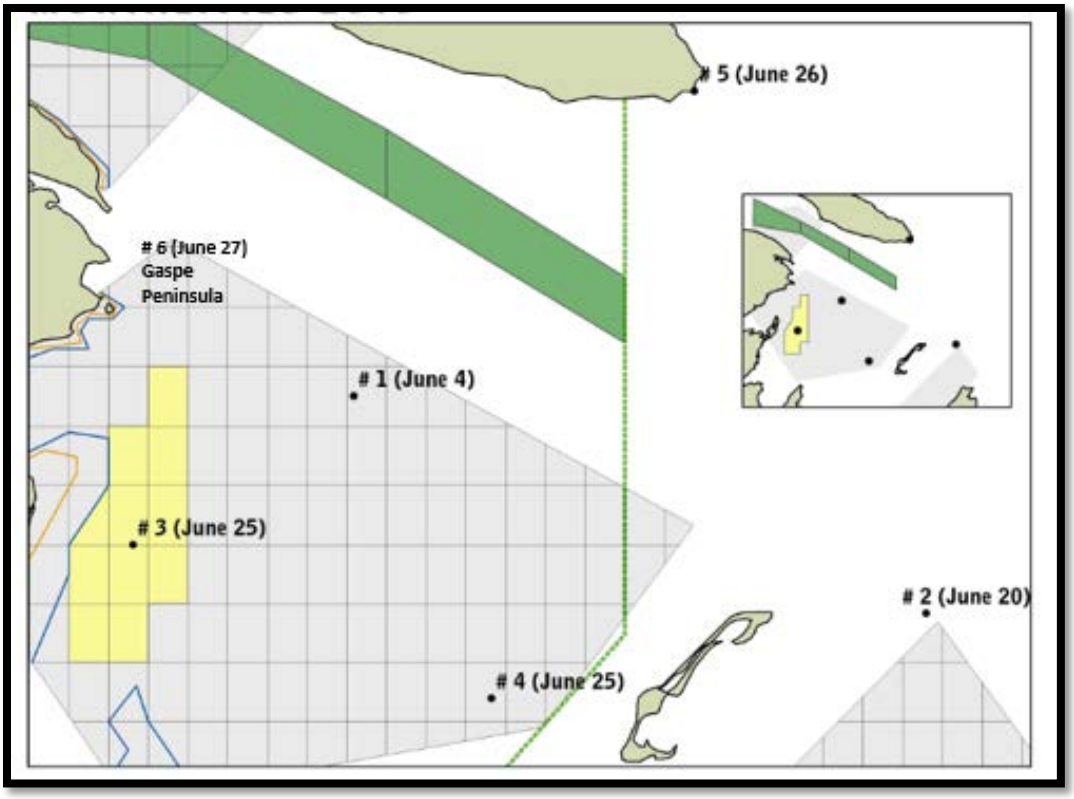

Figure Three. Location of five mortalities in the Gulf of St. Lawrence from https://baleinesendirect.org/six-baleines-noires-retrouvees-mortes-dans-le-golfe-du-saint-laurent/ with the additional sixth mortality included as an approximate location

We are especially concerned that the Government relied on a principle of protecting right whale aggregations demonstrated by data since 2016 to establish its current ship speed restriction scheme. Because right whales do not typically travel in groups and only temporarily aggregate for socializing, this principle is not grounded in the best available science on the species' behavior. Moreover, in a population registering barely above 400, where each whale matters to the species' survival, this focus on aggregations is insufficiently conservative to protect individual whales. Moving forward, we urge the Government to reconsider this approach.

Moreover, vessels under 20 m also pose risks of injuring and killing right whales. The National Marine Fisheries Service (NMFS) within the U.S. Department of Commerce has acknowledged "that vessels less than 65 ft (19.8 m) may pose a threat to right whales."[5] NMFS's Large Whale Ship Strike Database reveals that blood was seen in the water in at least half of the cases where a vessel known

[5] National Marine Fisheries Service, "Final Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales," 73 Fed. Reg. 60,173, 60,180 (Oct. 10, 2008). *See also id.* at 60,176 ("In waters off Cumberland Island, Georgia in March 2005, a 43-ft (13.1-m) vessel struck a right whale and severely injured the animal by nearly completely severing one lobe of its tail flukes. The boat was traveling at 20 knots and based on the whale's poor condition when last seen in summer 2005, it is presumed that the whale died.").

to be less than 65 ft long struck a whale.[6] We therefore recommend that the ship speed restrictions be expanded to cover all vessel class sizes.

We urge the Government to implement the following recommendations regarding the imposition of a 10 knot speed restriction: (1) extend the shipping management zone to at least the entrance of the Cabot Strait and along the northern portion of Anticosti as marked in yellow in Figure Four; (2) implement mandatory speed restrictions in all areas highlighted in Figure Four as a permanent, static seasonal speed limit to recur, at a minimum, between April 1 and November 30 of each year to ensure right whales receive adequate protection when entering and exiting, the Gulf of St. Lawrence; and (3) apply these restrictions to all vessels transiting these zones, not only those over 20m in length.

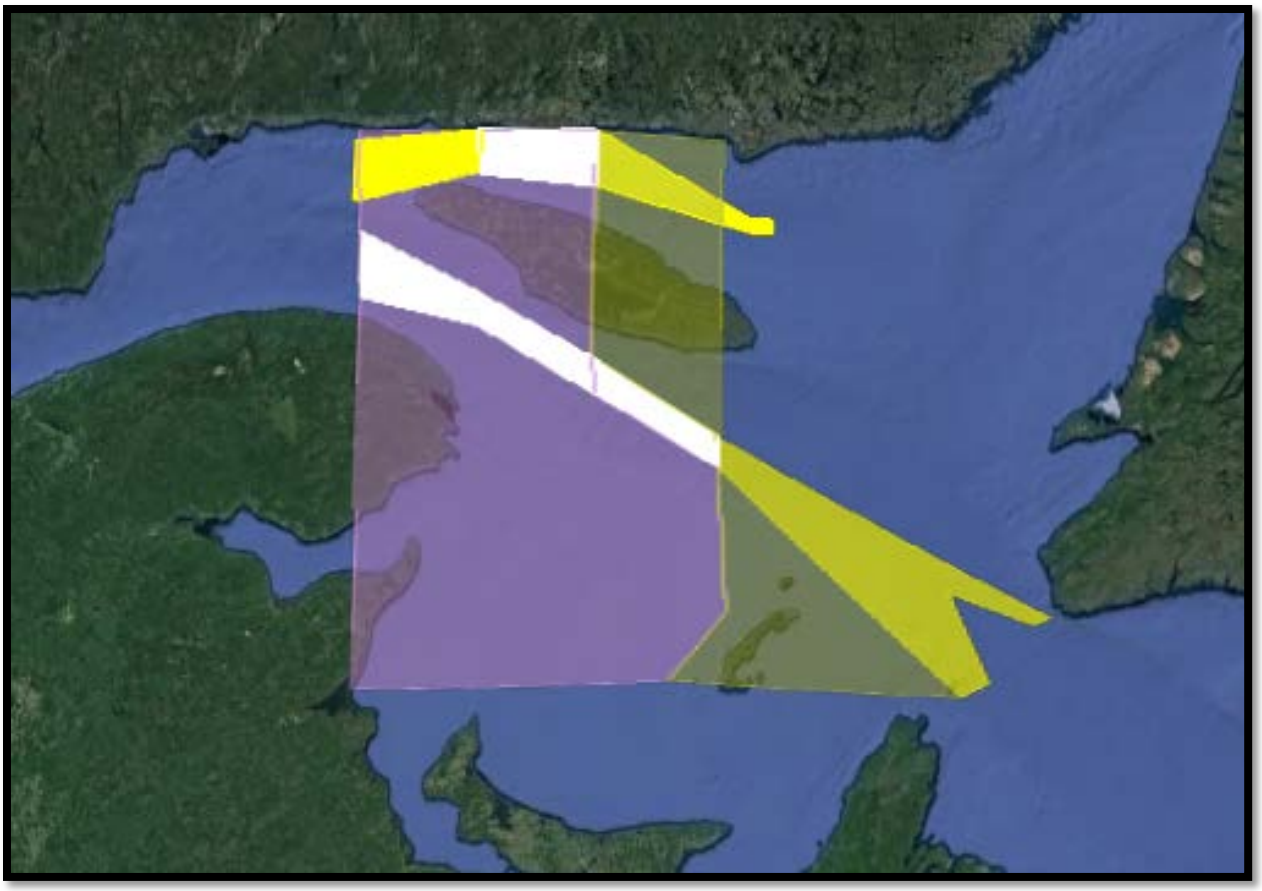

Figure Four. The static seasonal speed restriction (pink), the current speed restriction (white), with the proposed extension (yellow). At a minimum, current and proposed areas should be included as a permanent seasonal 10 knot speed restricted area from April 1 through November 30.

The justification for the additional protections provided by the proposed expansions is illustrated by regular detections of right whales in these areas between 2016–2019 (Figure Five). These expansions

[6] Jensen, A.S. and G.K. Silber. 2003. Large Whale Ship Strike Database. U.S. Department of Commerce, NOAA Technical Memorandum.

provide a minimum of additional protections and may need to be revised as additional data provide more insight into right whale habitat use as noted by Whalemap.ocean.dal.ca, which states: "Please note that much of these data are preliminary and subject to change, and that few or no observations may reflect a lack of effort rather than a lack of whales."

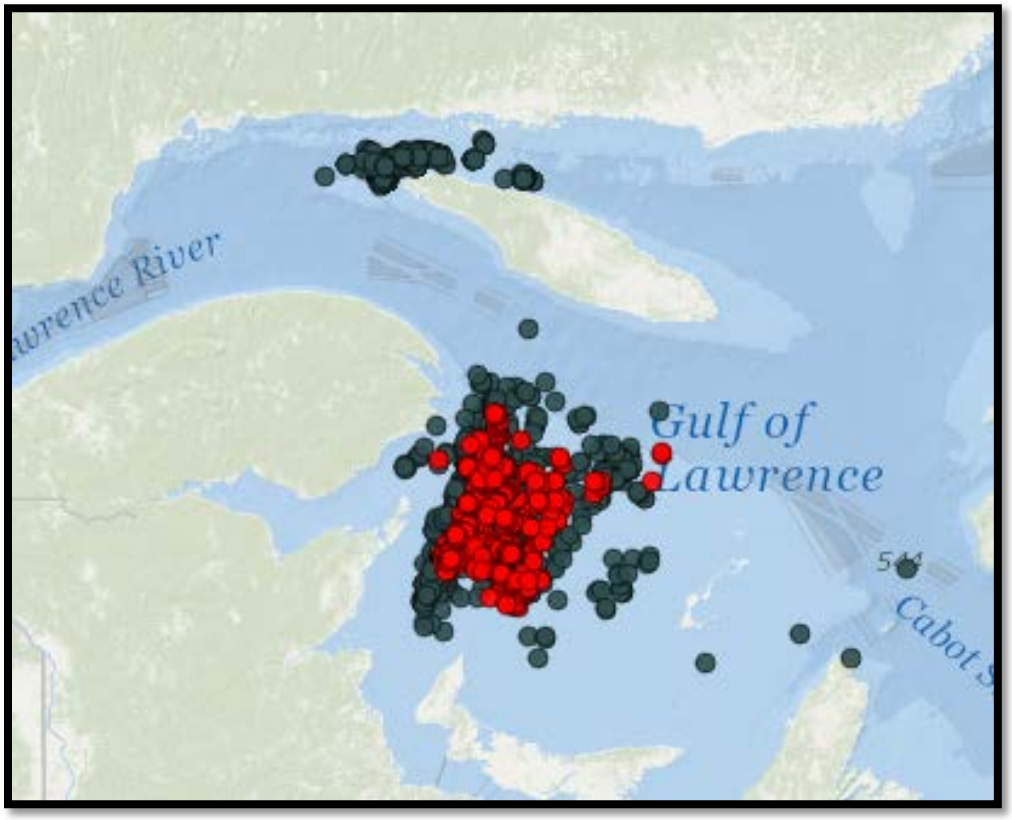

Figure Five. Detected right whales 2016-2019 as reported on WhaleMap.Ocean.dal.ca.

It is also appropriate to implement wider-ranging, more expansive, and permanent speed restrictions because of the increased vulnerability of female right whales to ship strike mortalities. As NMFS has stated, the "effect of vessel-related deaths on right whale recovery is especially significant because a disproportionate number of ship strike victims are female right whales."[7] Although the reasons for this are unclear, NMFS has surmised that it may be due, at least in part, to the fact that pregnant females and females with nursing calves spend more time at the surface of the water, where they are more vulnerable to being struck.

II. Expand efforts to prevent entanglements

Along with ship strikes, entanglements in fishing gear, particularly in fixed gear fisheries, pose a significant threat to right whale survival and recovery. Between 2003 and 2018, the majority of

[7] 73 Fed. Reg. at 60,174.

diagnosed right whale mortalities were caused by entanglements.[8] From 2012 to 2016, 90 percent of diagnosed right whale deaths were entanglement-related.[9] During this period, 27 entanglement-related serious injuries or mortalities were reported. Three of these entanglements were in Canadian snow crab gear and 11 of the other whales were found in Canadian waters.[10] In 2017, an additional nine right whales were found entangled, two of whom died.[11] Seven of these whales (including both dead whales) were confirmed to have been entangled in Canadian snow crab gear.[12] While official entanglement statistics for 2018 have not yet been released, three dead right whales were found in U.S. waters: one in January 2018, confirmed in Canadian snow crab gear, as well as one each in August and October 2018 that bore injuries consistent with entanglement.[13] We are aware of four additional entangled whales sighted in Canadian waters in 2018 and 2019: one in July 2018 and one in August 2018 in the Gulf, one in August 2018 in the Bay of Fundy, and one in June 2019 northeast of Miscou Island in the Gulf.

Compounding this grim situation, many right whale entanglements and mortalities are undocumented; known mortality rates substantially underrepresent actual mortality. A study of scarification data estimated that nearly 83 percent of right whales have suffered entanglements and that 59 percent of right whales have been entangled more than once.[14] In addition to causing immediate death by drowning, entanglement can cause severe, long-lasting, and painful injuries and impede feeding, movement, and reproduction.[15]

On June 28, 2019 DFO reported a sighting of an entangled right whale #4440 in the western Gulf, northeast of Miscou Island. Heavy line was noted as wrapped around the tail stock, penetrating the tissue and causing a significant wound. Based on previous cases, similar wrapping entanglement configurations have led to amputation of appendages and death. For example, whale #3893 was found dead off Virginia on January 24, 2018 entangled in Canadian snow crab gear. According to Sharp et al. 2019, the wrapping of gear in other entanglement mortalities caused "wounds associated with deep lacerations and abrasions of the blubber and partial amputation of the right pectoral flipper."

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8 Sharp et al. (*supra* n.2).

9 Hayes, S.A. et al. 2018. Draft US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2017. Woods Hole, MA; NOAA Northeast Fisheries Science Center. NOAA Tech Memo NMFS NE-245.

10 *Id.* (documenting two Canadian-gear right whale deaths in 2016 and 11 others found in Canadian waters). Subsequent gear analysis revealed that right whale #3694 found in 2016 in U.S. waters was also entangled in Canadian snow crab gear. Email from David Morin of NMFS to Atlantic Large Whale Take Reduction Team (Apr.18, 2018). During this period, two whales were entangled in confirmed U.S. gear, while 11 were found in U.S. waters. Hayes (2018).

11 Presentation of David Morin of NMFS to the Atlantic Large Whale Take Reduction Team (Nov. 2017), available at: https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/trt/meetings/2017%20Nov/morin_2017_trt_update.pdf

12 *Id.*; *see also* email from David Morin of NMFS to TRT (Apr. 18, 2018) (confirming additional 2017 entanglement in snow crab gear) (available from lead author).

13 *Supra* n.11.

14 Knowlton, A.R. et al. 2012. Monitoring North Atlantic right whale *Eubalaena glacialis* entanglement rates: a 30-year retrospective. Mar. Ecol. Prog. Ser. 466:293-302.

15 Moore, M.J. and J.M. van der Hoop. 2012. The Painful Side of Trap and Fixed Net Fisheries: Chronic Entanglement of Large Whales. Journal of Marine Biol. June 2012; *see* NMFS Right Whale Tech Memo 2018.

It is our understanding that the snow crab season in Area 19 will open shortly. We urge the Government to commit significant surveillance efforts to this fishery and any other open trap/pot fisheries in Canadian waters that overlap with right whale habitat to implement dynamic area closures immediately upon sighting of any right whale. Longer-term, the species cannot withstand any further sublethal and lethal effects of entanglements if it is to survive. We commend the Government's supporting research into buoyless fishing technologies to reduce and eliminate entanglements altogether. We strongly encourage the Government to move as quickly as possible to develop the technologies and regulations necessary to be able to require buoyless fishing as the only viable option in high-risk fisheries, including the Gulf of St. Lawrence snow crab fishery, between April 1 and November 30 of each year. The Government must also expand its regulatory efforts to cover other trap/pot fisheries targeting different species besides snow crab, though, wherever those fisheries overlap with right whale distribution, to address all right whale entanglement risk in Canadian waters.

Finally, we implore the Government to commit significant additional funding to its disentanglement, stranding response, and survey teams. While the presence of right whales may be detected using both acoustical and visual methods, the detection of entangled whales relies solely on visual methodologies. Disentanglement is not a long-term solution, but it can rescue individual whales from suffering serious injuries and mortalities, helping to stave off the extinction of the species until alternative fishing gear solutions are fully implemented. Necropsy efforts such as those heroically undertaken in the Gulf over the past week by dedicated teams must also receive all possible financial and logistical support from the Government to learn as much as possible about each dead whale to inform future conservation efforts.

III. Expand and combine visual and acoustic survey efforts

Currently, dynamic restrictions of fishing and shipping are only implemented in the Gulf if right whales are detected. However, it appears that survey effort in 2019 has focused primarily on areas in which right whales were sighted in previous years, despite the observed shift of habitat use to the east in 2019 (Figure Six).

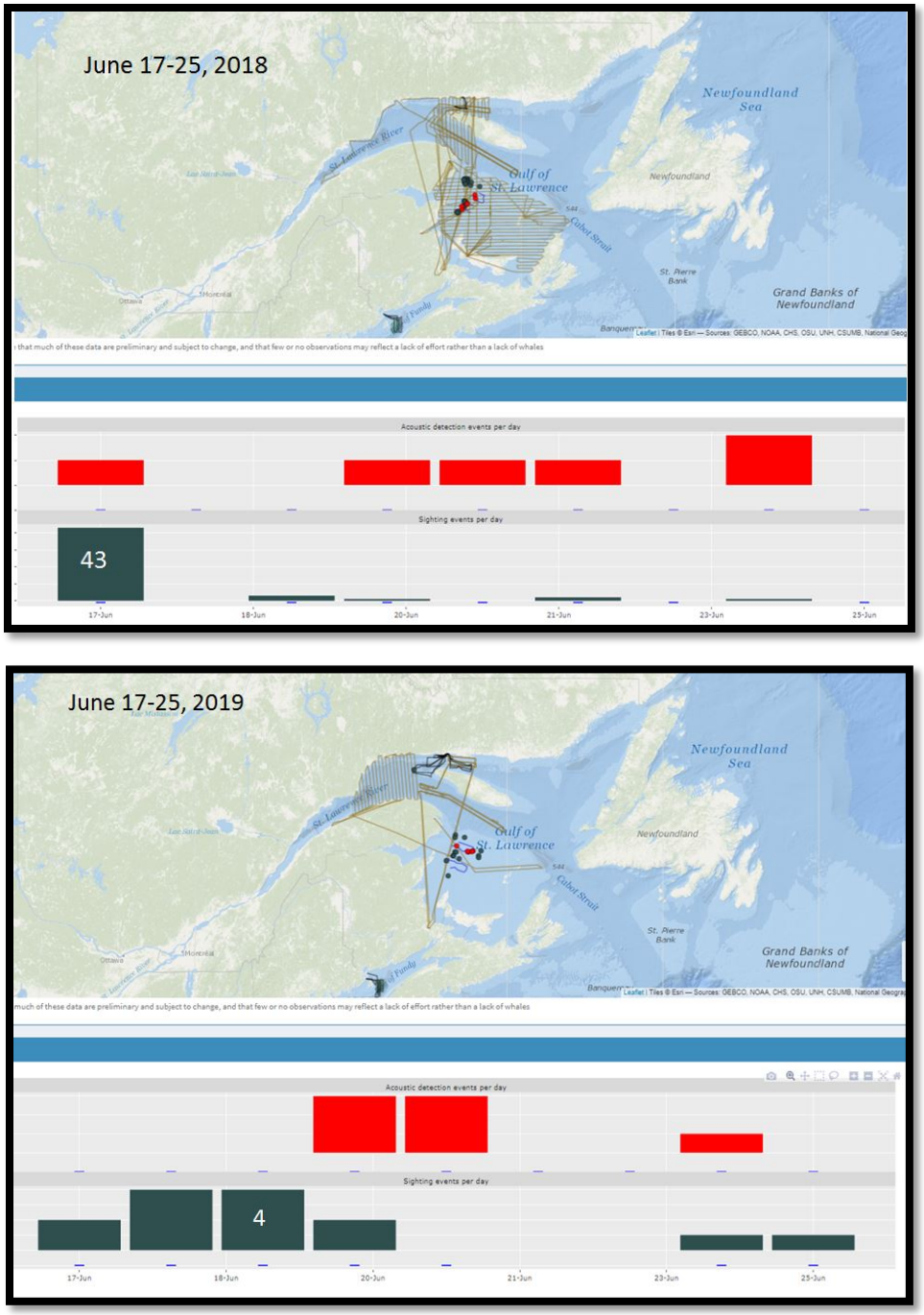


Figure Six. Plane survey tracks and right whale sightings in 2018 compared to 2019.

The observed deaths and entanglement demonstrate in hindsight that this year's surveillance efforts were insufficient to trigger ship speed and fishing restrictions based solely on detections. Because right whales are difficult to detect either visually or acoustically in a wide range of environmental and behavioral situations, dynamic management strategies based on surveillance efforts are insufficiently protective for a species numbering barely above 400 animals where the survival of every individual

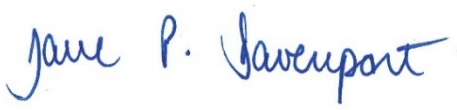
right whale matters. Thus, ship speed restrictions should be implemented permanently and widely rather than relying on surveillance to trigger protections in a limited portion of the shipping zones, a scheme that so tragically and demonstrably failed to protect right whales this year. Moreover, the only viable long-term solution to entanglements is to remove rope from the water rather than rely on surveillance efforts to detect right whales before triggering closures.

More immediately, to understand the full scope of the current mortality event, survey efforts should be expanded to cover other areas in the Gulf where undetected right whale carcasses may be found. We note in this respect that, in 2017, the detections of six dead right whales in June and two in July in the Gulf were followed by the detection in July of three substantially decomposed right whale carcasses on Newfoundland's western shores. Although we are encouraged to hear that the Government will be devoting resources to glider and drone surveillance research in August, we ask that the Government make every effort to increase surveillance for both live and dead whales in July as well. Finally, we encourage collaboration with experts in both Canada and the United States to develop drift analyses for the six observed mortalities to date as well as for any additional detected mortalities.

Conclusion

The North Atlantic right whale cannot withstand further injuries and mortalities from ship strikes and entanglements in either Canadian or U.S. waters on the scale experienced this year. The six detected right whale mortalities in Gulf waters in June 2019 raise alarming echoes of the scope and pace of the 2017 catastrophe. We urge the Government to use all available statutory authorities and financial resources to respond effectively to declining right whale abundance and the increasing risks to the survival and recovery of the right whale posed by human activities in Canadian waters, and to redouble its bilateral efforts with the United States to protect this critically imperiled transboundary species.

Very truly yours,



Jane P. Davenport
Senior Attorney
Defenders of Wildlife

Susan Millward
Director, Marine Animal Program
Animal Welfare Institute

Sarah Uhlemann
Senior Attorney &
International Program Director
Kristen Monsell
Litigation Director,
Oceans Program
Center for Biological Diversity

Erica A. Fuller
Senior Attorney
Conservation Law Foundation

Steve Mashuda
Managing Attorney, Oceans Program
Earthjustice

Tara Thornton
Program Director & Northeast Representative
Endangered Species Coalition

Sharon B. Young
Field Director, Marine Issues
Humane Society of the United States

Rebecca Aldworth
Executive Director
Humane Society International/Canada

Keisha Sedlacek
Director of Regulatory Affairs, Federal Affairs
Humane Society Legislative Fund

Patrick Ramage
Director, Marine Conservation
International Fund for Animal Welfare

Scott Leonard
Marine Mammal Alliance Nantucket

Michael Jasny
Director, Marine Mammal Protection Project
Natural Resources Defense Council

William Rossiter
Vice President
NY4WHALES

Courtney S. Vail
Strategic Campaigns
Oceanic Preservation Society

Regina Asmutis-Silvia
Executive Director
Whale and Dolphin Conservation – North America