## Dear Minister of the Environment,

I am writing in concern regarding the Northern Pulp Replacement Effluent Treatment Facility Project. I am a property owner on Caribou Island and have spent a lot of time over the past 30+ years exploring the area; whether it be swimming, canoeing, windsurfing or combing the beaches and tidal flats. I am very familiar with Caribou Island and surrounding areas, and feel that I can offer some insight into this assessment that may be of use.

On a personal level and on behalf of my fellow members of the Nova Scotia Windsurfing Association, I would like to address the risk of direct human contact with the effluent in the vicinity of the proposed outfall location CH-B. While this proposed outfall location is stated to be 4km from shore, it is in fact roughly 2km from both Caribou Island and Munroe's Island, both of which contain provincial parks (see attached map). I have been windsurfing off Caribou Point for over 20 years and it just so happens that this proposed outfall location is a typical gybe (turning) point when sailing in this area under common wind directions. High speed turning on a windsurf board can commonly lead to spectacular crashes and sometime force unwanted ingestion of water. As a result, this sea water can be trapped within the ear canal or sinus cavity for an extended period of time. As hilarious as this may sound, it happens frequently during a day of sailing. For this reason, I would like this project's assessments to not discredit the human exposure factor at this location simply due to assumed remoteness. I insist that a more complete assessment be required in order to address the human health risks as a result of direct and prolonged exposure to effluent laden seawater.

I would also like to see specific studies regarding the potential intrusion and accumulation of effluent-borne contaminants affecting the water quality in Caribou Harbour, Caribou Rivers and other nearby tributaries. Given my experiences within these waterways, I can attest to the significant incoming tidal currents passing the proposed outfall boundary, pushing water into Caribou Harbour many kilometers upriver of Big and Little Caribou River and into various lagoons and saltwater marshes. I worry that the constant ebb and flow in this area could lead to long term accumulation of pollutants, which could be detrimental to the health of these sensitive and important ecological areas that are home to a diverse range of aquatic and avian life.

It should be noted that this proposed outfall site was chosen late in 2018, and appears to have not undergone any detailed analysis of a baseline water quality analysis the area. As stated in section 8.2.1, the Pictou Harbour water quality data is being used as "a proxy for Caribou Harbour with respect to water quality, in the absence of available water quality data for Caribou Harbour)" Using Pictou Harbour as a baseline is contradicted in 9.2.1 stating that Pictou Harbour and other surrounding areas are prohibited from local shellfish harvesting due to water quality issues whereas in Caribou area "there are several active recreational and commercial fisheries in the area and there are also currently four provincially licensed marine shellfish aquaculture operations (all for American Oyster) in the vicinity of Caribou and Munroes Island, which are located relatively near to the location of the proposed effluent diffuser (CH-B)." The fact that a commercial bi-valve fisheries exists in this area and are prohibited in the "proxy"

reference area is evidence enough of the dissimilarities that should warrant that specific baseline measurements are performed in the new outfall location.

I general the most glaring gaps within this proposal are the constant omissions of studies, which are cited to be due to the lack of time to perform studies or having current information available. Within this proposal there is consistent language of uncertainty and broad assumptions made using far reaching parallels or outdated data. Given the level of concern, it is only fair that more rigour and certainty be included within this assessment up front. It is clearly stated within section 2.0 of the proposal that the only biological field studies completed were on Northern Pulp Nova Scotia premises and have not considered the pipe corridor or marine environment whatsoever. It is obvious that the proposed route and outfall location chosen in the fall of 2018, could not be properly assessed for reasons beyond the cited "seasonal constraints and by physical opposition and obstruction". This is no excuse for omissions of proper studies, in regards to the most vulnerable and largest impacted areas of the project. Follow-up studies are promised, however, according to a recent Auditor General report, our provincial regulator's current track record indicates poor enforcement and monitoring of these projects as they progress. We simply need more detail upfront given what is at stake here.

I strongly urge you to delay your decision on the approval of this project and demand a more thorough Environmental Assessment Report to be completed by NPNS. Within this report I would expect to see a complete and relevant HHRA, updated environmental studies and more opportunity/time for input from the local communities, First Nations, concerned citizens, and the collective Maritime Fisheries from all neighbouring provinces.

Regards,

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