



May 17, 2014

Raincoast Conservation Foundation  
PO Box 2429  
Sidney BC V8L 3Y3

Director  
SARA Directorate  
Department of Fisheries and Oceans  
200 Kent St.  
Ottawa, ON K1A 0E6  
VIA email: [SARA\\_LEP@dfo-mpo.gc.ca](mailto:SARA_LEP@dfo-mpo.gc.ca)

**RE: Comments on the proposed down-listing of the North Pacific  
humpback whale**

Dear SARA Directorates,

Please accept the following comments on behalf of the Raincoast Conservation Foundation regarding the proposed down-listing of the BC population(s) of the North Pacific humpback whale. We believe there are outstanding questions around the scientific reliability and sufficiency of the information that COSEWIC used to make this determination, and that this proposal is premature. The following are our concerns.

***Reliance on entire North Pacific Ocean population numbers***

The 2011 COSEWIC review relies heavily on a population estimate for the entire North Pacific humpback population (18, 302 with a 4.9-6.8% growth rate, Calambokidis et al. 2008). While these numbers are encouraging for the population as a whole, they do not necessarily reflect the status of population(s) in British Columbia. The COSEWIC assessment is based upon the assumption that these whales will recolonize habitat from which the BC population has been extirpated. Yet both the assessment itself and the 2013 Recovery Strategy both indicate that the high maternally directed site fidelity shown in North Pacific humpbacks will be a major constraint to the pattern and rate of

habitat reoccupation (COSEWIC 2011, DFO 2013). When assessing the status of humpback whales in British Columbia, it does not make sense to include whales that never enter the 200m EEZ of Canada.

***Population and growth rate estimates inadequate for British Columbia humpbacks***

Population abundance estimates for the BC population are inadequate. No large scale, systematic census of the BC humpback population has been conducted. The 2011 COSEWIC assessment, in terms of the BC population size, was largely based upon modeling performed by Rambeau (2008), who applied different models to the photo-identification database. While this is an interesting exercise in modeling, abundance estimates and population trends derived from mark-recapture techniques that violate a number of key assumptions (i.e. closed population, non-systematic and biased effort) are not robust enough to determine an accurate growth rate with confidence intervals for the BC humpback population.

The assessment was also based on information gathered up until 2006, which is now nearly 10 years old. There were no estimates of abundance or population growth rates post 2006. Further, the assessment did not include a technical report that found no significant population trends in humpback whales surveyed using a systematic survey design in Queen Charlotte Basin (Best and Halpin 2009).

***Omission of evidence for two populations***

Since the original COSEWIC assessment of the North Pacific humpback whale in 2003, there has been considerable evidence of population segregation within BC waters (Baird 2003). A recent study found that the genetic structure of the North Pacific humpback population is influenced by maternal fidelity to feeding grounds and natal philopatry to breeding grounds (Baker et al. 2013). In BC waters, these findings divide humpback whales into two populations (northern and southern), which are genetically distinct from each other, as well as from other North Pacific populations (Baker et al. 2013). Despite this evidence and recommendations to consider these populations separate for management purposes (Baker et al. 2013), the COSEWIC assessment still considers the entire North Pacific humpback population on unit when assessing the status of British Columbia humpback whales.

We note that evidence from photo-id surveys of spatial overlap between the two BC humpback populations does not provide evidence of genetic interchange between populations or gradual population genetic differentiation over space. Rather, genetically different wildlife populations are known to co-occur within the same area and management should be responsive to emergent information on population structure. The United States differentiates the humpback population within their borders into three separate populations (California/Oregon/Washington, Central North Pacific, and Western North Pacific) and manages them as discrete units (NMFS 2014). Mitochondrial DNA analysis has provided evidence for the significance of genetic management units within the larger oceanic population of humpback whales (Baker et al. 1998).

***Failure to acknowledge the importance of site fidelity and critical habitat to continued survival***

Maternally directed feeding site fidelity is well documented for BC humpbacks (Calambokidis et al. 2001; Calambokidis et al. 2008; Ford et al. 2009) with mothers bringing calves to the same feeding grounds and the calves later returning on their own. Knowing where to return to feed to ensure adequate sustenance for winter months is essential to humpback survival. Four areas within BC have been identified as critical for such survival - Langara Island, Southeast Moresby Island, Gil Island, and Southwest Vancouver Island (Nichol et al. 2009). These known, important areas were not accounted for during the assessment, and down-listing removes any protection they once had. The Recovery Strategy states that each area supports different parts of the BC humpback population and suggests that factors influencing these areas would in turn affect different parts of the humpback whale population (Fisheries 2013). This reason alone is justification enough to maintain the protection of critical habitat.

***Failed to acknowledge and consider the potential drastic increase in threats from proposed oil projects***

With the Northern Gateway Pipeline Project poised to significantly increase shipping traffic through (formerly) designated Critical Habitat, humpbacks will face an increase in known threats to their survival including noise, displacement, ship strikes, and exposure to oil spill. Increased vessel noise in narrow areas, such as the fjords and channels enroute to Kitimat, where sound cannot dissipate can lead to acoustic disturbance (DFO 2013). In areas designated critical to humpback survival, disruption in their feeding can

have deleterious population level effects. The Recovery Strategy states that intensive vessel traffic is likely to degrade Critical Habitat and increase the risk of toxic spills and ship strikes (DFO 2013). Both Northern Gateway and Kinder Morgan's projects will increase shipping traffic through Critical Habitat areas and increase the risk of both ship strikes and exposure to oil spills. Even though these risks were known and are potentially imminent, they were not considered in the decision to down-list the species. The down-listing will leave BC humpbacks at risk to these threats and without adequate monitoring the impact may not be realized.

### ***Recovering, but not Recovered***

The Recovery Strategy states that its objectives will have been met once the BC humpback population undergoes a 5 year period of sustained abundance at or above the current best estimate of 2,145 (CI 95% 1,970-2,331) and that longer term abundance estimates will show increasing trends (DFO 2013). This has not been proven to be the case as abundance estimates for the last 5 years are not available, nor will they be if the humpback is down-listed as monitoring and research funding will be drastically reduced.

Pre-whaling estimates have put the BC humpback population at a *minimum* of 4000 individuals (Ford et al. 2009). If this is indeed the case, which is really a very large unknown and potentially much larger, the BC humpback population has not even returned to pre-whaling levels. Both COSEWIC assessments and the Recovery Strategy identify whaling as the predominate threat the BC humpbacks are recovering from (Baird 2003, COSEWIC 2011, DFO 2013) and yet the population estimates indicate that the BC population has not 'recovered' to pre-whaling levels.

### ***Prey Species Decline***

Humpbacks are found in BC waters primarily for feeding to sustain them during both migration and time spent in tropical breeding areas, it is therefore essential that during this time they are able to procure enough food (DFO 2013). In BC, Pacific herring have been experiencing substantial population declines for several decades (Schweigert et al. 2010) and although modest signs of recovery have been forecast for herring in 2014 (DFO 2014), it remains to be seen whether this recovery will be sustained over time. Another major prey source for humpback whales is the Pacific sardine, which ranges from BC to Baja California. Pacific sardines have also experienced substantial

population declines since 2007 (Hill et al. 2014). In 2013, the BC sardine fishery, which is reliant on the opportunistic migration of sardines from southern waters, failed completely. The health of other forage fish not targeted by commercial fisheries remains highly uncertain, but warrants consideration with respect to humpback conservation. In general, the decline and considerable uncertainty with regard to forage fish availability to humpback whales now and in the future is a substantial concern for humpback whales, including whales on the BC coast. The health of forage fish populations was not adequately considered in the decision to down list humpback whales.

Thank you for your consideration of these concerns.

Sincerely,

Adrienne Jarvela Rosenberger  
Raincoast Conservation Foundation

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