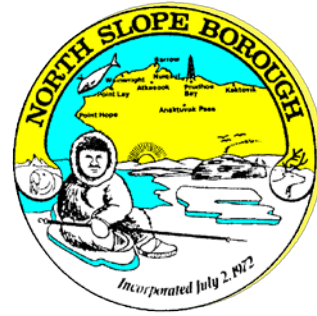


# **NORTH SLOPE BOROUGH**

## **Department of Wildlife Management**

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*Raynita "Taqulik" Hepa, Director*

March 7, 2014

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### **RE: Comments on U.S. Fish and Wildlife Service's (USFWS) Draft Species Status Assessment Report on Yellow-billed Loon (*Gavia adamsii*)**

Dear Mr. Haskett and Ms. Matz,

Thank you for the opportunity to participate in the Peer Review of the Draft Species Status Assessment Report: Yellow-billed Loon (SSA), dated February 13, 2014. The cooperative effort to manage migratory bird species, including yellow-billed loons (YBLOs), on the North Slope is important to the North Slope Borough (NSB) and our communities. The NSB has reviewed the SSA and has concerns regarding the evaluation of the "biological status of the species" as discussed below.

The NSB maintains the position that listing decisions should be based on current and reliable information and that this information be appropriately analyzed in an equitable manner. We recognize that USFWS has taken many of our previous comments into account. We are particularly pleased to note that USFWS now agrees that subsistence harvest "does not rise to population or species-level effects." (SSA 57.)<sup>1</sup> We also agree with USFWS's conclusion

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<sup>1</sup> However, we note with some concern that the same conclusion on page 49 of the SSA is worded with unwarranted ambiguity: there, it says that USFWS does not have "sufficient information to identify subsistence harvest as a threat . . ." However, the data immediately preceding that statement is to the

that “the Alaska-ACP breeding population is reasonably representative of the status of other breeding populations” and thus can be used as a basis for assuming that “yellow-billed loon populations rangewide are currently healthy and thus have sufficient resiliency to withstand stochastic events.” (SSA 59; SSA 24-25.)

We remain concerned that some necessary information may be missing and in some cases that the conclusions are not supported by the data, which could lead the agency to issue an unsound listing determination under the Endangered Species Act<sup>2</sup> in September 2014.

### **Overall Challenges with the Document**

It is difficult to assess whether some of the “biological conclusions are supported by the text” (USFWS letter to Taqulik Hepa, 13 Feb 2014) of this document because of the use of contrary statements, anecdotal evidence, and unclear logic in particular statements. In some instances, the wording may obfuscate rather than clarify the issue being discussed. The heavy use of uncritical, qualitative terms such as “possible,” “suspect<sup>3</sup>,” and “suggest” and the use of the term “representation<sup>4</sup>” tend to create a document whereby possible explanations are used as facts to support a conclusion, when they should instead be treated as hypotheses to be tested.

One exception where a hypothesis was tested relates to the presence of PCBs in yellow-billed loon eggs (SSA § 4.11), which the USFWS felt “compelled” (SSA 52) to test. The plausible explanation is as follows: Since some YBLOs overwinter in areas that are reported to be polluted (“ocean ecosystems with the greatest human impacts, and therefore degradation, of any in the world (Halpern et al. 2008, p. 949) (SSA 52), and where other birds (red-throated loon) in the same area were found to have PCBs, then YBLOs should have these pollutants at equal or greater concentrations. The conclusion was the following:

The Service found that although PCBs were present in yellow-billed loon eggs (n = 45, collected over 3 years), preliminary data show the most toxic individual PCB congeners (PCBs 77 and 81) found in red-throated loon eggs were not present in yellow-billed loon eggs, and yellow-billed loon eggs had lower total Toxic Equivalents (a combined measure of toxicity for all 209 PCBs), and lower than published thresholds for embryonic toxicity in other avian species such as great blue herons (*Ardea herodias*) (Hoffman et al. 1996, p. 191).

(SSA 52.) Here, this plausible form of reasoning is taken as a hypothesis and tested before any conclusion is reached. Given the results, the hypothesis that YBLOs are contaminated with PCBs should be rejected, which provides important scientific results. This thoughtful and appropriate method is lacking in some other parts of the SSA.

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contrary. We respectfully urge USFWS to restate—before making a determination—the last sentence of § 4.9.1 to clarify that while there is no evidence that subsistence harvest poses a population-level threat, there is in fact substantial evidence that subsistence harvest is not a population-level threat.

<sup>2</sup> Endangered Species Act, 16 U.S.C. § 1531 et. seq. The determination should be based on § 1533.

<sup>3</sup> See page three of the Executive Summary.

<sup>4</sup> The word “representation” as used in the SSA seems to be synonymous with evolution. Representation is defined in the Draft Species Status Assessment Report Yellow-billed Loon (*Gavia adamsii*) (SSA 2014) as the “ability of a species to adapt to changing environmental conditions. Representation can be measured through the breadth of genetic diversity within and among populations and the ecological diversity (also called environmental variation or diversity) of populations across the species’ range.” If “representation” is indeed synonymous with evolution, we request that USFWS use the accepted scientific term.

A second instance where actual data have been generated addresses potential genetic diversity (Talbot et al. 2014); however, because of its preliminary nature and small sample size, little can be concluded except to note the preliminary results, enumerate the constraints within this study, and recommend follow-up projects. This is done in the “Extended Abstract” (Talbot, et. al. 2014) but is not done sufficiently in the SSA 2014 document. The USFWS explains the results (Section 2.6 Resources Needed for Individuals, Populations, and the Species) in a way that illustrates the overuse of uncritical, qualitative terms by which evaluative status cannot be determined:

Possible low genetic diversity, as shown in very preliminary results reported by Talbot et. al. (2014), possibly resulting in low adaptability, constrained by life history traits such as monogamy and nesting site fidelity resulting in low ability to add genetic diversity, plus low ecological diversity (limited, specific breeding habitats), leads us to conclude that yellow-billed loons likely require a stable, unchanging environment to maintain long-term species viability. (SSA 15 emphasis added).

With the repetitive use of the word “possible” and the USFWS emphasis on “very preliminary,” the conclusion is not supportable. The USFWS’s conclusion that “yellow-billed loons likely require a stable, unchanging environment to maintain long-term species viability” is not supportable by the study results. The results may suggest that yellow-billed loons may require a stable, unchanging environment, but that conclusion is different from the one stated by USFWS.

### **Questions Regarding Time Frame**

Another difficulty for the reviewer is the lack of specifying a time frame. Early in this document (p. 3), it is noted that the USFWS “consider the YBLO to be viable for the short term (< 25 years) but sees reduced viability in the long term (> 25 years). But the choice of 25 years as the demarcation between the short term and the long term seems arbitrary. There is neither discussion about the relevance of a 25-year time frame or supporting documentation, and it is not clear whether there is any data available regarding the reduced viability of yellow-billed loons beyond 25 years. Nowhere does the SSA provide supporting evidence or reasoning regarding the importance of a 25-year time frame for the conservation of yellow-billed loons.

The issue of a time frame is most difficult when the USFWS discusses potential effects of climate change: “The northward migration of shrubs and trees may result in unsuitable shoreline nesting vegetation (Prowse et al. 2006, p. 348); yellow-billed loons do not currently breed in boreal taiga or forest regions, so may be unable to adapt to a woody-stemmed vegetative shoreline environment” (SSA 2014 p. 27). Does the YBLO determination rest on long-term issues: > 25 years, or is the peer reviewer to assume the 50-100 years that is apparently the time frame in the climate change models they cite (p. 27)?

We respectfully urge USFWS to specify before determination the relationship between “short term” and “long term” as related to the YBLO and climate change models.

### **Questions Regarding § 2.4: Range**

The section that outlines the range of the YBLOs also presents many questions. To help the reader, we suggest that USFWS define, map, and cite “historical range” vs. present range in the following: “Yellow-billed loons have not been thoroughly surveyed throughout their known historical range, so it is difficult to identify changes in range and distribution.” In this

SSA 2014 document, it appears that only two “historical” locations—Russia and St. Lawrence Island—are noted as not being “thoroughly surveyed.” USFWS may wish to clarify whether this is accurate.

The status review states “[y]ellow-billed loons occur in at least four geographically distinct breeding populations, distributed across two continents, with a potential range contraction suggested by sparse historical observations only in the Russian breeding population” (p. 15).

This sentence needs clarification. It is unclear how “sparse historical observations” exclusively “suggest” “potential range contraction.” In fact, sparse historical observations may “suggest” a number of things: low numbers of individuals in an area, a large area to observe (without clear visibility correction factors), and very few attempts to observe and record. By not providing other explanations, a reader could be misled into thinking that “potential range contraction” is the only suggestion to account for “sparse historical observations.”

We suggest that this section be clarified to better reflect the available data before a determination is issued.

### **Reproductive Strategies**

Page fifteen of the SSA is a written account of evolution and ecology in general, addressing topics such as stress and K-selected species, multiple resilience in populations, and genetic diversity and the risk of extinction. The NSB is concerned by the lack of cited references specifically to YBLO, although it is noted that YBLOs are a “K-selected” species. The blind application of generic principles to the specific case of YBLOs does not constitute scientific analysis or well-articulated reasoning.

Therefore, one cannot reasonably use these accounts to make a determination since no evidence is provided. Or one could say that these accounts merely juxtapose general science, without adequately informing the review whether there is a direct relationship or evidence to support its use. One cannot assess whether “biological conclusions are supported by the text” with this form of reason. Therefore, it would not be advisable to base a determination on these accounts.

### **Genetic Diversity**

We thank the USFWS for providing an “Extended Abstract” of the report entitled “Preliminary results of the development of polymorphic microsatellite loci for the Yellow-Billed Loon (*Gavia adamsii*), Talbot et al. (2014).” The NSB recommends that the following from this report be incorporated into the genetic diversity sections:

- Low allelic diversity at polymorphic microsatellite loci in other species has been attributed, among other factors, to founder events and small effective population size, population decline, relatively slow mutation rate at the markers examined (Talbot et al. 2014). To ascertain whether genetic diversity in Yellow-billed Loon populations are suggestive of historical population bottlenecks (heterozygote deficiency relative to the number of alleles expected at mutation-drift equilibrium) failed to uncover any signature of recent population fluctuations – either population decline or expansion – in either population.

Further analyses are necessary to determine the likely cause of comparatively lower levels of genetic diversity relative to congeners and whether the low level of genetic diversity at these neutral microsatellite markers reflect low levels of genetic diversity in functional genes.

These points are helpful in understanding the results of this study as well as its limitations.

### **Request for Additional Information in SSA Chapter 3: Current Species Conditions**

USFWS states that “[i]n this chapter we review current conditions of yellow-billed loons using the information we have on population status, trends, range, and distribution” (p. 17). Conspicuous by its absence in this chapter is the USFWS population growth rate estimate for YBLOs on the North Slope. This information has been presented on numerous occasions to both public and private groups. The presentations note current population indices for many species, including the Yellow-billed loon. Here is one reference: Eric J. Taylor, U.S. Fish and Wildlife Service [presenting to the] North Slope Borough Fish and Game Management Committee September 10, 2013.

In this particular presentation, it was noted that for the YBLOs on the Alaska Arctic Coastal Plain, the USFWS estimates “3-year (2011-13) average population index = 2,359, Average (2004-13) annual population growth rate = + 6%/year.” The notes for this presentation state: “There is little comprehensive scientific data on worldwide populations of yellow-billed loons. In Alaska, where studies have been conducted, population estimates range from 3,000 to 4,000. There have been no systematic surveys of the Canadian or Russian breeding populations. A rough estimate puts the world yellow-billed loon population 20,000-32,000.” At the very least the “[a]verage (2004-13) annual population growth rate = + 6%/year” should have been noted and commented on in this chapter.

### **Concerns Regarding SSA § 4.9.2: Subsistence Fishing Bycatch**

The Borough also has some concerns about the section that discusses the effects of bycatch from subsistence fishing. As we have previously pointed out, keeping loons that have been inadvertently caught in subsistence fishing nets is authorized by the USFWS. Further, despite the bycatch, the population of yellow-billed loons nesting on the North Slope has increased.

The position of the USFWS concerning bycatch is the following:

However, recent reports from the North Slope and anecdotal evidence from other parts of rural Alaska suggest that subsistence fishing bycatch of yellow-billed loons may be higher than previously suspected. We recognize that lethal entanglement of yellow-billed loons during subsistence fishing kills an unknown number of birds annually. (SSA 51.)

The NSB recommends that more detail on how specifically the “recent reports from the North Slope” (such as Sformo et al. 2011; 2012) “suggest” that bycatch “may be higher than previously suspected” so that the NSB may provide useful comments on how biological conclusions are supported by the text. In fact, the reports indicate that the levels of bycatch are within the regulation (50 CFR Part 92), as noted within the SSA: “an exception for the North Slope region was incorporated into the regulations allowing possession for subsistence use of up to 20 (total for the region each year) yellow-billed loons inadvertently caught in subsistence nets (50 CFR Part 92).”

Also, the reader may associate the North Slope reports with “anecdotal evidence” and the dearth of information “from other parts of rural Alaska.” Readers unfamiliar with the NSB’s scientifically defensible method and reports could be misled into believing that the NSB reports have the same reliability and weight as anecdotal data. We recommend that the USFWS amend this section of the document to address this concern.

Secondly, the NSB is concerned because the SSA notes that in other older NSB reports not all fishermen were contacted (NSB-DWM 2008) (SSA 50-51). However, the USFWS fails to note that in the most recent reports that the best scientifically defensible data shows a 96.6% response rate (Sformo et al. 2011; 2012). The ability of the NSB to contact nearly all fishermen should be highlighted to show the robustness of the recent data. The USFWS should reach a conclusion that the level of information for bycatch on the North Slope is sufficient for management purposes.

While the level of impact from bycatch is minimal, we also want to make USFWS aware that the NSB is working to devise methods to further decrease bycatch through the use of decoy.

### **Conclusion**

Thank you for the opportunity to comment on the Draft SSA for YBLOs and allowing participation in the peer-review process. Again, we recommend that the document be clarified for better analysis of the biological conclusions supported by the text rather than conjectures. These clarifications will help to ensure that the USFWS reaches the right decision.

We believe that the biological information, particularly the knowledge that the North Slope population is increasing, supports a decision that listing is not warranted. Yellow-billed loons can continue to be protected through regulations not associated with the Endangered Species Act.

Sincerely,



Taqulik Hepa  
Director, NSB Department of Wildlife Management

cc: Charlotte Brower, Mayor, North Slope Borough  
Rex A. Rock, Sr., President & CEO, Arctic Slope Regional Corporation  
George Olemaun, President, Iñupiat Community of the Arctic Slope