

MEMORANDUM FOR RECORD

TO: Public/Agencies

CC:

FROM: Frank Veraldi, GLMRIS Natural Resources Team

DATE: 16 September 2011

SUBJECT: Response to Public/Agency Review Comments

This memorandum is in response to the public and agency review comments generated from the ANS White Paper roll out conference call. USACE thanks all parties for their review and suggestions for improvement of the White Paper and High Risk Species designations for GLMRIS. Pertinent comments were incorporated and an updated version of the White Paper was reposted.

Marte Thabes Kitson
AIS Assistant Education Specialist
National Park Service Liaison
Minnesota Sea Grant College Program

Comment 1– We question whether there are reproducing populations in the Great Lakes of the following species and suggest that the Great Lakes not be included in the "Basin" column. These species are not listed in the NOAA Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS).

1. white catfish
2. shortnose gar
3. striped bass
4. kokanee (not in Great Lakes, but listed in GLANSIS)
5. zander

Response 1 –USACE developed fish species distributions primarily through the US Geological Survey's Non-Indigenous Species Web site and the Peterson's Field Guide to Freshwater Fishes (Page & Burr 1991).

1. white catfish – This species was widely introduced nationwide by fisheries managers. There are occurrences quite clearly documented from Lake Erie and other Great Lake's tributaries.
2. shortnose gar – This species is native to the Great Lakes and occurs in rivers confluent to Lake Michigan in Wisconsin (Page & Burr 1991) or it may be possible that this species dispersed already to the Great Lakes through the Fox River connection.
3. striped bass – This species is stocked nationwide by state DNRs.
4. kokanee (not in Great Lakes, but listed in GLANSIS) – The Pacific Salmonids are not of major concern since natural recruitment is minimal and require massive stocking efforts by resource agencies to keep their numbers abundant enough to maintain a recreational sport fishery. The Pacific Salmonids are too heavily stocked and managed to be a target for GLMRIS to prevent their movement.
5. zander – concur, the only known record of occurrence, which is probably not an established population according to the USGS is for North Dakota. The Appendices and White Paper have been changed to reflect this.

Comment 2– Are smelt (*Osmerus mordax*) native to Pacific drainages?

Response 2 – Yes, smelt are, as defined in Appendix I. The Atlantic and Pacific morphs are sub specifically defined: *Osmerus mordax mordax* east of North America and *Osmerus mordax dentex* west of North America. Some suggest study to determine if these are actually distinct species.

Comment 3 – Should Viral Hemorrhagic Septicemia be included? It is found in both basins.

Response 3 – VHS will be added to Appendix I, but move no further.

Comment 3 - Spiny waterfleas are present in Mille Lacs Lake, MN. Mille Lacs flows into the Mississippi. Spiny waterfleas are also found in many inland lakes in Minn, including Lake Saganaga, and Island Lake Reservoir (St. Louis Co). They are also present in Gile Flowage, WI, and Lake Michigamme, MI. I do not have citations for all of this, but I did conduct presence/absence surveys for them in the Boundary Waters Canoe Area Wilderness and/or collected them from the above lakes for my masters' project. Spiny waterflea - because they are in both basins, they could now be removed per your protocol. Likely dispersal mechanisms for both spiny and fish-hook waterflea should be the same: ballast/recreational boating (mostly catching on fishing line, anchor, rope, downrigger cable...any line that moves through the water and passes through a swarm of them). Sediment transport is unlikely. Resting eggs do settle to the bottom of the lake, but they are pelagic species. Someone would need to be intentionally collecting sediment in order to capture resting eggs.

Response 3 – Although we do not have hard evidence (i.e. citations) for their presence in the MS Basin, we do not discredit in any way that your assessments are valid. With that said, the fish-hook waterflea will remain a High Risk Species and any control mechanisms recommended based on its characteristics will also target the spiny waterflea. Because these two species are so similar, we do not believe removing one will alter the way we assess barriers for their effectiveness toward microscopic, pelagic species.

Comment 4 - Based on a question during the call, the column labeled "threat" could be called "dispersal threat" to avoid any confusion with other threat types (i.e. ecological, economic).

Response 4 – Concur, changed to Dispersal Threat in Appendix II.

Comment 5 - Fish-hook waterfleas are not found in Lake Superior. Although they are not found in the Mississippi River Basin, dispersal threat could be reduced to medium or low. Though they may be dispersed into the MRB, establishment is unlikely for two reasons: 1) as with any zooplankton, they are weak swimmers and would not be able to persist in a river 2) If they were introduced into a lake from another pathway, current distribution suggests an incompatibility with most MRB lake types. They "like" deep, clear, cold lakes, though they have been able to establish in some reservoirs.

Response 5 – Natural history information will be considered in further assessing the High Risk Species.

Comment 6 - Eurasian Ruffe are not found in Lake Erie or Ontario to our knowledge.

Response 6 – Comment noted.

Comment 7 - Kokanee - we question whether or not there is a reproducing population in Lake Huron.

Response 7 – Comment noted.

Michael Murray, Ph.D.
Staff Scientist
National Wildlife Federation
Great Lakes Regional Center

Comment 1 – Thank you for hosting the call today on the ANS White Paper. Following up on the comment from the Minnesota Sea Grant representative on the species list in Appendix I, I assume you will be doing this, but it would be helpful to specify more clearly the status of species in that list – i.e.,

species that have been recorded in one basin or the other (or both), vs. species that have become established (at least to the best of our knowledge). The narrative text refers to species “already established” in both basins (e.g. p. 6), whereas the footnote to Appendix I indicates that species listed for one basin or the other (or both) have been “recorded”. As I believe was referenced on the call, there would still be value in addressing high risk species that have been recorded in one basin or the other, but without reproducing populations, before the latter occurs.

Response 1 –USACE has created a list of High Risk Species based on the available information and coordination with Federal, state and regional agencies. The main goal of this High Risk Species list is to have a set of taxa to evaluate dispersal prevention/reduction technologies for the CAWS aquatic pathway. If there is specific concern about a species listed as a High Risk Species, or a species not identified as so, please bring this to our attention. To the best of our knowledge based on published and publicly available information, USACE has determined whether a species population is established in one basin or the other, or both. We thank you for your provided information.

Adrian Lightstone
HDR Decision Economics
Economist

Comment 1 – 120 species are listed as being assessed, yet there are only 119 in the Appendix II list.

Response 1 – Concur, changed to 119.

Comment 2 – Appendix II ‘adverse affects/effects’ column for Eurasian ruffe is cut off, cannot see all text.

Response 2 – Concur, will readjust columns.

Comment 3 – What are your plans for the risk assessment evaluation analysis? Do you have a specific model in mind that you will use for the risk assessment?

Response 3 –USACE is currently working with Argonne National Laboratories to provide detailed information on the High Risk Species that will be input into a risk model once the evaluation of dispersal prevention/reduction technologies begins. The risk model will be a modified version of the following:

Orr, Richard L., Susan D. Cohen, and Robert L. Griffin. 1993. Generic non-indigenous pest risk assessment process: the generic process: for estimating pest risk associated with the introduction of non-indigenous organisms. Unpublished in-house document: United States Department of Agriculture.

GMRIS Natural Resources Team
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