

**APPENDIX E**

*Research Priorities*

December 11, 2022

### Appendix E – Research Priorities

- A. Lake Trout Rehabilitation. The Parties shall undertake an evaluation of the factors impeding successful Lake Trout rehabilitation, with frequent consultation and cooperation throughout the process. The research subjects shall include, but not be limited to, the following:
1. The effects of abiotic and biotic factors on survival of Lake Trout early life stages.
  2. The effects of genetic diversity of Lake Trout on reproductive success, spawning site preference, and biotic interactions. Stocking strategies (and stocking experiments) need to be designed to determine the mechanisms for maximizing phenotypic diversity in Lake Trout strains.
  3. Thiamine deficiency syndrome (TDS) and other health concerns, to understand how these may impact Lake Trout rehabilitation.
  4. Early life predation.
- B. Lake Whitefish. The Parties shall undertake an evaluation of the factors impeding successful Lake Whitefish recruitment, with frequent consultation and cooperation throughout the process. The research subjects shall include, but not be limited to, the following:
1. The effects of abiotic and biotic factors on survival of Lake Whitefish early life stages.
  2. Lake Whitefish aquaculture techniques.
  3. Pre-recruit habitat occupancy.
  4. Lake Whitefish-specific health concerns (e.g., immunology).
  5. Habitat degradation (and rehabilitation strategies).
- C. Dreissenid Mussels. The Parties shall undertake an evaluation of options for the control and mitigation of the impacts of Dreissenid mussels on the 1836 Treaty fishery, with frequent consultation and cooperation throughout the process. The research subjects shall include, but not be limited to, the following:
1. Targeted treatment or physical removal in northern lakes Michigan and Huron.
  2. Encourage, support and actively implement new biological, chemical, and physical control techniques.
  3. Continued active engagement with the Invasive Mussel Collaborative.
- D. Sea Lamprey. The Parties shall support the establishment and refinement of sea lamprey wounding targets for important commercial species, including Lake Whitefish.