EXECUTIVE SUMMARY – Recovery Strategy for Lake Sturgeon (*Acipenser fulvescens*) Great Lakes-Upper St. Lawrence River, Northwestern Ontario and Southern Hudson Bay-James Bay populations in Ontario

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Lake Sturgeon (*Acipenser fulvescens*), also known as Name (Ojibwe), Namay Namaeu (Cree) and Nme (Ottawa and Ojibwe), are Ontario's largest and longest-lived fish species. The origin of this species can be traced back over 200 million years, and they have maintained many of the physical characteristics of their ancestral form. Over a period of less than 200 years, over-exploitation and habitat alteration resulted in dramatic declines in sturgeon stocks throughout much of their historical range. The species has historically been and continues to be significant to Aboriginal people as a source of food and as an integral part of their spiritual and cultural identity. Lake Sturgeon currently inhabit at least 229 waters (128 lakes and reservoirs and 101 rivers) in Ontario. The Committee on the Status of Species at Risk in Ontario (COSSARO) has assigned population status in three regions of Ontario. The Northwestern Ontario population and the Great Lakes-Upper St. Lawrence River population of Lake Sturgeon are classified as threatened. The Hudson Bay-James Bay population is classified as special concern.

The recovery goal for Lake Sturgeon in Ontario is to maintain existing Lake Sturgeon populations throughout their current range and where feasible, to restore, rehabilitate or reestablish, self-sustaining Lake Sturgeon populations which are viable in the long term within their current habitat and/or within habitats they have historically occupied, in a manner consistent with maintaining ecosystem integrity and function. The main objectives to achieving protection and recovery are to:

1. protect or increase extant Lake Sturgeon populations at an abundance commensurate with the capacity of their habitat to support them and the existing fish community;
2. maintain, enhance and, where feasible, restore habitat in order to support Lake Sturgeon;
3. restore Lake Sturgeon populations in locations where they have become extirpated, where feasible and where functional habitat exists;
4. develop local scale Lake Sturgeon management strategies;
5. increase public awareness of the cultural and ecological significance and uniqueness of Lake Sturgeon and the importance of maintaining, enhancing and restoring Lake Sturgeon populations; and
6. address knowledge gaps to enable and enhance protection, conservation and recovery efforts.

It is recommended that the area prescribed as habitat in the habitat regulation protect important habitat features for the Northwestern Ontario and the Great Lakes-Upper St. Lawrence River populations of Lake Sturgeon. Important habitat features include spawning areas, nursery areas, overwintering areas, staging areas and the migration corridors connecting them. In formulating this recommendation, consideration was given to Lake Sturgeon ecology including their long generation times, spawning periodicity, ability and tendency to migrate long distances and the requirement of distinct habitat types for various life history stages (e.g., eggs, larvae, juveniles, subadults, adults).

Habitat suitability can be constrained by water levels, river flows, sedimentation and water quality which may also affect food availability for Lake Sturgeon. As such, Lake Sturgeon are vulnerable to altered river conditions and habitat fragmentation. Habitat management, from both protection and restoration perspectives, should attempt to maintain high quality habitat throughout river and lake environments and ensure linkages among important habitats upon which Lake Sturgeon depend to carry out their life processes. A clear understanding of the locations of important habitats and linkages between them are key considerations in managing habitat. Important habitats should be identified within the river and lake systems currently occupied by Lake Sturgeon and afforded protection.

The area for consideration in developing a habitat regulation should extend from important habitat features to the high water mark on rivers. It is not practical to identify discrete areas within lake systems that represent important habitat features (e.g., overwintering areas). In lakes the area for consideration in developing a habitat regulation should extend from the high water mark to a depth of 20 metres. Local knowledge should be used to determine if refinements in particular lakes are necessary.