White Sturgeon (*Acipenser transmontanus*) in British Columbia. Frequently Asked Questions on the status and consequences of listing.

In November 2003, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), determined that White Sturgeon in Canada should be considered an endangered species. The government of British Columbia remains committed to protecting this important fish species. However, questions have been raised by a number of groups regarding the consequences of such a listing. The following information is meant to provide a more complete explanation of the evaluation process and what it means to British Columbians.

1. Where are White Sturgeon found?

The White Sturgeon, *Acipenser transmontanus*, is endemic to the west coast of North America and is only known to spawn in three major river systems- the Sacramento, the Columbia and the Fraser. The only other sturgeon species found on the west coast of North America is the Green Sturgeon, *A. medirostris*, which migrates more widely along the Pacific coast but does not penetrate as far into river systems as White Sturgeon.

In British Columbia, White Sturgeon are found throughout the Fraser River and some of its major tributaries including the Nechako River. Genetic studies have demonstrated that there are at least four distinct stock groups in the Fraser system. White sturgeon are also found in the Columbia River (primarily downstream of Revelstoke) and in Kootenay Lake and River (which flow into the Columbia River but support a genetically distinct stock).

2. What is the status of White Sturgeon in BC? How is it determined?

At a national level, the status of species is determined by an independent scientific panel known as the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The processes and criteria used by COSEWIC in evaluating the status of a given species are available through the Committee's web site at: http://www.cosewic.gc.ca/index.htm

COSEWIC first evaluated White Sturgeon in 1991 and, based on the information available at that time, White Sturgeon were listed as a "species of special concern". A considerable amount of new data was collected over the last decade and in 2003 an updated status report was completed. [It is standard practice for COSEWIC to re-evaluate listed species on a 10-year interval]. In November 2003, COSEWIC evaluated the updated status report and concluded that White Sturgeon are endangered in Canada.

Provincially, the BC Conservation Data Centre tracks the status of species at the provincial level using criteria similar to that of COSEWIC (see http://srmwww.gov.bc.ca/cdc/index.htm and http://wlapwww.gov.bc.ca/wld/documents/ranking.pdf). The CDC re-evaluated available data in 1994 and determined that the White Sturgeon was ranked as S2 or "imperilled". Further, the CDC ranked 3 populations (the Columbia, Kootenay and Nechako) as S1 or "critically imperilled"; the most endangered ranking available, based on available information relating to poor reproductive success. These CDC rankings put White Sturgeon on the BC 'Red List'.

3. **What information was considered? Have White Sturgeon numbers dropped significantly in recent years?**

   COSEWIC received a summary of all of the available data relative to White Sturgeon in the form of a status report. This included, for example, the results of stock assessments, life history studies, population estimates and trends, geographic distribution and an evaluation of threats to sturgeon well-being.

   Genetic studies have demonstrated that there are distinct population units or stocks of White Sturgeon in British Columbia. In the Fraser watershed there are four stock groups recognized (including the Nechako stock) while the Kootenay and Columbia populations represent two additional stock groups.

   Each of these six groups were evaluated separately. The Nechako, Kootenay and Columbia stocks are all experiencing 'recruitment failure', meaning that the fish are either failing to spawn or that most juveniles are not surviving to adulthood. Scientists studying these stocks consider the recruitment failure to be related (either directly or indirectly) to the construction and operation of dams on these systems and possibly to other habitat modifications. These populations range in size from a few hundred to 1500 fish.

   Upper Fraser stock seems to be naturally very small (a few hundred sub-adults and adults) and are therefore very susceptible to over-harvest or habitat loss.

   The lower Fraser River population is the most robust in terms of population size, at around 50,000 sub-adult and adult fish. However, this stock was severely over-fished during the late 1800s and early 1900s. The stock has not recovered from that event and has faced a variety of new pressures over the last century. Importantly, COSEWIC considers population trends over the last three generations as part of their evaluation. For the long-lived sturgeon, a generation is considered to be in the order of 35 years, meaning that events of a century ago are still very relevant to the current status of this species.

   So, while there are distinct differences between these stocks, it is possible for COSEWIC to conclude that they are all endangered — but for different reasons.

4. **Does the listing of White Sturgeon by COSEWIC mean that they are now protected under the federal Species At Risk Act (SARA)?**

   No. The COSEWIC assessment is delivered to the federal Minister of Environment, who forwards it to the Governor in Council / federal Cabinet for decision. The Cabinet, once in receipt of this assessment, has 9 months to accept or reject the assessment or to send the assessment back to COSEWIC for more information. During that time, consultation with interested or affected parties will be undertaken to consider, among other things, the socio-economic impacts of listing under SARA. The status report is made publicly available through the federal SARA registry (http://www.sararegistry.gc.ca/default_e.cfm).

5. **What is the consequence of a species being legally listed under SARA?**

   When a species is listed as threatened or endangered under SARA, there are specific prohibitions that automatically come into force. These include a prohibition against killing, harming, harassing, capturing, taking or possessing an individual of the listed

species and a prohibition against damaging or destroying the residence of one or more individuals. What constitutes the residence for a fish has not yet been clearly defined, but it is not intended to be synonymous with 'habitat'.

In addition, when a species is listed as endangered, a recovery strategy for that species must be developed within one year. The recovery strategy must address the threats to the survival of the species and must identify the species' critical habitat- to the extent possible.

6. Does this mean that sturgeon habitat will be protected?

Sturgeon habitat is already protected under the federal *Fisheries Act* which requires an authorization for any activity that would result in a harmful alteration, disturbance or destruction of fish habitat. Any additional protection that may be offered under SARA will be dependent on how critical habitat is defined within the context of the recovery strategy (or recovery action plan). Further, the socio-economic costs of implementing proposed recovery actions must be evaluated before a recovery action plan is approved.

7. How will this affect existing fisheries where sturgeon are caught?

In 1994, the provincial and federal fisheries agencies acted jointly to eliminate the harvest of sturgeon in all commercial and recreational fisheries (in both fresh and salt water). Many First Nations have voluntarily imposed harvest restrictions on their own fisheries. Subsequently, the province has closed the recreational 'catch and release' fishery on all sturgeon populations ranked as S1 by the CDC.

While the harvest restrictions noted above apply, sturgeon are still captured as 'by-catch' in commercial and First Nation net fisheries targeting other species (primarily salmon). There is an active 'catch-and-release' recreational fishery in the Fraser River which supports commercial guiding operations and sturgeon are sometimes captured as by-catch by anglers fishing for other species in areas where sturgeon angling is closed (in the upper Columbia River, for example). There are also White Sturgeon monitoring and assessment programs being conducted by Recovery Teams, First Nations and by the Fraser River Sturgeon Society that capture and tag White Sturgeon throughout their range.

Under SARA, the federal Minister can issue permits for activities such as scientific research related to the conservation of the species, activities that benefit the species or activities where the effect on the species is incidental- providing that the activity will not jeopardize the survival or recovery of that species. Additional activities may be identified as appropriate or permissible in the context of an approved recovery strategy. As such, there are opportunities to consider and potentially permit the range of fisheries that currently encounter sturgeon. The way in which those fisheries are conducted may have to be modified to ensure that the impact to White Sturgeon is minimized.

8. How are recovery plans developed?

The provincial and federal governments share responsibility for the conservation and management of freshwater fish and fish habitat in BC and are cooperating on the development of recovery strategies. Recovery Strategies and Recovery Action Plans are usually developed by teams of individuals who have expertise, knowledge or an

interest relevant to the recovery of the species under consideration. Details on the recovery planning process can be obtained through the RENEW (Recovery of Nationally Endangered Wildlife) website: http://www.speciesatrisk.gc.ca/recovery/ . Before being approved by the federal Minister, Recovery Strategies and Recovery Action Plans are posted on the public registry for public comment.

Recovery initiatives are underway for sturgeon populations in BC:

- The Kootenay watershed sturgeon are a transboundary population (with Idaho) that are listed as endangered under the *U.S. Endangered Species Act*. Biologists from B.C. and Canada participated in recovery plan development in a process led by the U.S. Fish and Wildlife Service. The plan was completed in 1999 and B.C. is a partner in the implementation of the plan. See http://www.efw.bpa.gov/Environment/TMT/1996/sturgeon/sturgeon.html .
- Recovery planning was initiated in the Nechako and the Upper Columbia watersheds in 2000. Committees supporting these processes include representation from all levels of government, First Nations, academia, industry, stakeholders and the public. As the Columbia population is transboundary with Washington state, American agencies and tribes have also been involved. Information on these processes can be found at: http://wlapwww.gov.bc.ca/wld/fishhabitats/sturgeon/index.html and http://www.uppercolumbiasturgeon.org .
- In the Fraser watershed, a planning process was initiated in 2003. The development of this plan is being led by the Fraser River Sturgeon Conservation Society (http://www.rickhansen.com/fraser/fraser.html) with the support of provincial and federal agencies.

These programs were all initiated in response to conservation concerns, prior to the November 2003 decision by COSEWIC to list White Sturgeon as endangered in Canada. If the COSEWIC assessment is accepted by the Governor in Council and White Sturgeon are listed as endangered under SARA, then a unifying recovery strategy that incorporates all of the work to date will have to be developed.

The provincial government has taken a significant leadership role in support of sturgeon assessment and recovery, through the efforts of professional staff and by providing financial resources. However, the success of the programs to date have depended on a partnership approach where all orders of government, First Nations, industry, academia and stakeholders come together to find solutions. Funding provided by organizations such as the Habitat Conservation Trust Fund, federal agencies, BC Hydro and a host of others has been vital.

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