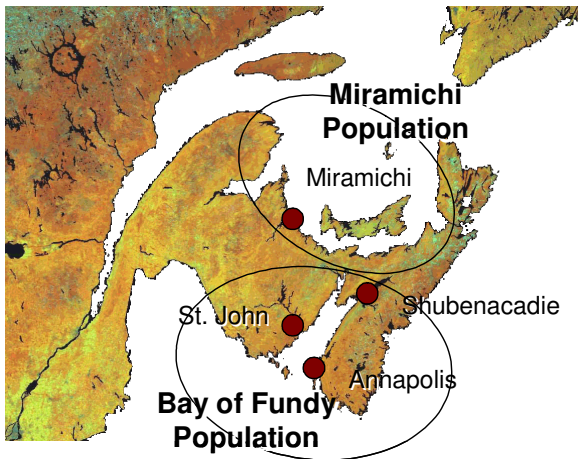
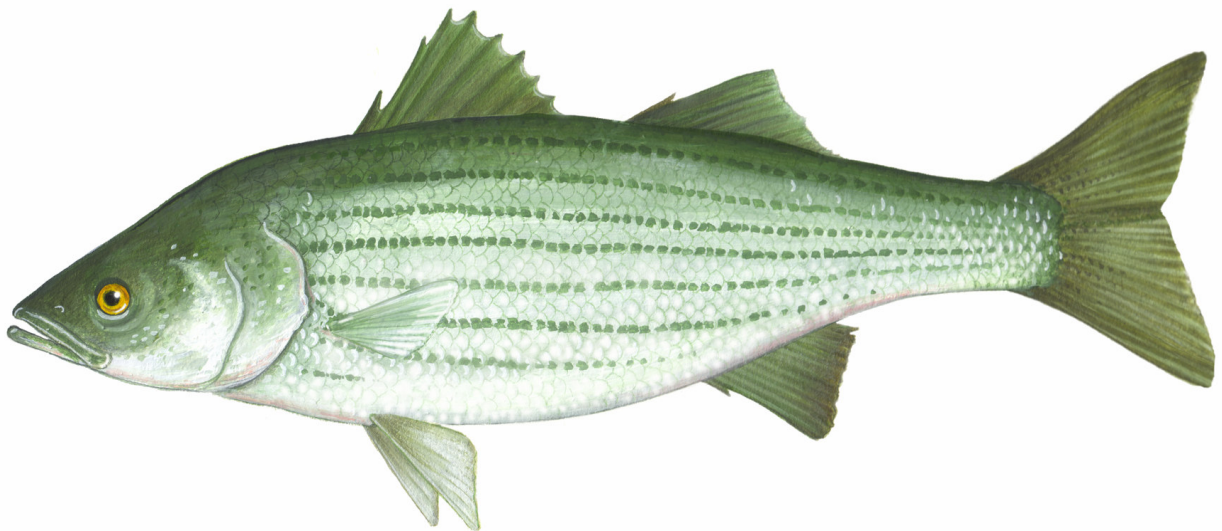




SPECIES AT RISK ACT

Legal listing consultation workbook



Striped Bass

Bay of Fundy Population and
Miramichi Population

(Morone saxatilis)

Aussi disponible en français



Addition of species to the Species at Risk Act

Introductory Information

Species at Risk and You

Scientists estimate that the world's species are becoming extinct at a rate that is as much as 10,000 times higher than it should naturally be. It's a staggering statistic and a source of concern for all humans. Although many Canadians understand that species have intrinsic worth, sometimes we forget why the disappearance of a species matters. At the most basic level, species diversity, often referred to as "biodiversity," is crucial to ensure that life continues on earth. From a human standpoint, biodiversity also supports people's livelihoods, enables sustainable development and encourages cooperation among nations.

In 2003, the Government of Canada took a major step toward protecting species at risk and their habitats in Canada when it proclaimed the Species at Risk Act (SARA). SARA was designed as a key tool for the conservation and protection of biodiversity in Canada. It provides a framework for action across the country to ensure the survival and recovery of wildlife species at risk and the protection of our natural heritage. The law protects those plants and animals that are included on the "List of Wildlife Species at Risk," sometimes referred to as "Schedule 1" or the "SARA List." (For more information on SARA, visit the SARA Registry at www.sararegistry.gc.ca)

In order to determine which species should be "listed," or added to the SARA list of protected species, the Government of Canada consults the

general public, with special emphasis on those groups either directly involved with or particularly interested in the species under review. The government makes its decision only after carefully considering the outcome of consultations as well as the potential social and economic implications of listing the species. This consultation workbook is part of the government's effort to obtain feedback on whether or not the **Striped Bass** should be added to the List of Wildlife Species at Risk.

Your thoughts on this issue are important and play a crucial role in the listing process. They will be carefully reviewed and considered. Please answer all of the questions in this book to the best of your ability. If you have additional comments, space has been provided for them as well. To ensure that your responses are considered, please return your completed workbook or any other comments you may have to the address below by **April 1, 2006**. Thank you for your help.

Mail

Species at Risk Coordination Office
Bedford Institute of Oceanography
Box 1006
1 Challenger Drive
Dartmouth, N.S. B2Y 4A2

Email

xmarsara@mar.dfo-mpo.gc.ca

For More Information on Species at Risk in Canada

www.aquaticspeciesatrisk.gc.ca
www.cosewic.gc.ca
www.sararegistry.gc.ca
www.speciesatrisk.gc.ca



Terms You Should Know

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assigns a “status” to each species it considers. The status indicates the degree to which a species is at risk. Considered here are:

- Extirpated:** A species that no longer exists in the wild in Canada, but exists elsewhere in the world
- Endangered:** A species facing imminent extinction or extirpation
- Threatened:** A species that is likely to become endangered if certain factors affecting it are not addressed
- Special Concern:** A species with biological characteristics that make it particularly vulnerable to human activity or certain natural phenomena

Other Information You Should Know

How is a Species Listed?

1. The species is assessed and assigned a status by the COSEWIC. This committee is comprised of specialists working in a variety of relevant fields, such as biology, ecology, and traditional ecological knowledge. They come from government, universities, aboriginal organizations, and non-governmental organizations, and they are appointed according to their expertise. However they do not represent the agency, group or region from which they are drawn, but must provide impartial scientific recommendations about the species they are considering.

2. The COSEWIC provides the status report to the Minister of the Environment and the Canadian Endangered Species Conservation Council, which is comprised of provincial and territorial ministers responsible for the conservation and management of wildlife, in addition to the federal ministers responsible for the administration of SARA (the Minister of the Environment, and the Minister of Fisheries and Oceans). A copy is also posted on the SARA Public Registry.
3. The Minister of the Environment indicates how he or she will respond to a COSEWIC assessment in a “Response Statement”. This Response Statement indicates the nature and timing of consultations and is posted on the SARA Public Registry within 90 days of receiving the COSEWIC Assessment.
4. Consultations are undertaken by the lead federal departments, Environment Canada and the Department of Fisheries and Oceans, and the information brought forward is analyzed.
5. Based on advice from the Minister of Fisheries and Oceans, the Minister of the Environment must provide the Governor in Council (the Governor General of Canada acting on the advice of Cabinet) with a recommendation to add or not add the species to the List of Wildlife Species at Risk. In order to make his or her decision, the Minister will take into consideration the COSEWIC’s scientific assessment of the species, the information provided by Canadians obtained through initiatives like this consultation workbook, and the anticipated socio-economic impacts of adding the



species to the SARA List. The Minister can offer three possible responses to the COSEWIC assessment.

- a. Accept the COSEWIC assessment and, as it advises, either add the species, reclassify it, or remove it from the SARA List
- b. Determine that the species should not be added to the SARA List
- c. Determine that there is insufficient information to make a decision, and refer the species back to COSEWIC for further consideration

How Does SARA Protect a Species?

Immediately upon a species being added to the SARA List as extirpated, endangered, or threatened, it receives protection under SARA. It is then an offence to:

- kill, harm, harass, capture or take an individual of these listed species
- possess, collect, buy, sell or trade an individual, part or derivative of these listed species
- damage or destroy the residence of one or more individuals of these listed species

The only exceptions to these rules occur when the government issues specific authorizations for: scientific research about the conservation of the species done by a qualified person; an activity that benefits the species or enhances its chances of survival in the wild; or an activity whose effect on the listed species is incidental. In all cases, the activity must not jeopardize survival or recovery.

For species listed as special concern, prohibitions do not apply.

What Happens Next?

After a species is listed, the recovery process begins in an effort to reduce the causes of a species' decline and to improve the status of the species. There are two parts to the process for extirpated, endangered or threatened species: a recovery strategy, which identifies threats to the species and describes recovery objectives, and an action plan, which details the activities that must be carried out to promote the species' recovery. The process for species of special concern requires a management plan, which lists appropriate conservation measures for a species and its habitat. All of these documents are developed through extensive consultation with scientists, community members, aboriginal groups and community stakeholders. Then, the strategies and plans are published in the SARA Public Registry, and the public has 60 days to comment on them. Five years after the plans come into effect, the responsible government minister must report on their implementation and the progress that has been made in meeting the objectives they outlined.

Species specific information

Striped bass

The striped bass, *Morone saxatilis* is an anadromous species - meaning that it spawns in fresh water before moving downstream to brackish and salt water to feed and mature. It is dark olive green on the back with paler silvery sides and white on the belly. Running horizontally down the side, are 7 or 8 dark stripes.



It is found in estuaries and coastal waters along the east coast of North America from Florida to the St. Lawrence River where it reaches the northern extent of its range. Historically, spawning populations were found in 5 eastern Canadian rivers: the St. Lawrence Estuary, the Miramichi River in the southern Gulf of St. Lawrence and the Saint John, Shubenacadie, and Annapolis rivers in the Bay of Fundy. The only 2 rivers currently supporting spawning are the Miramichi and Shubenacadie where the two populations appear to be isolated and genetically distinct from one other.

Increasing water temperatures in the spring trigger the movement of striped bass to their spawning grounds in fresh or slightly brackish waters. Spawning (which can last up to 3 to 4 weeks for large spawning aggregations) takes place at twilight when temperatures rise above 10° C. Temperature, dissolved oxygen and a moderate current are critical components for survival of the eggs, which are suspended in the water column for 2 to 3 days before hatching. For larvae however, a further requirement of an abundant supply of zooplankton (minute organisms that live in the water column) is directly related to their survival rate. Striped bass remain at the larval stage for 35 to 50 days before they undergo a metamorphosis to their adult form at which point they are approximately 20 mm long.

Young-of-the-year move downstream over the summer where they continue to feed and grow in estuaries and coastal bays. Older fish migrate along the coast in search of prey, consisting largely of small fishes such as juvenile herring, smelt and tomcod. In the fall, striped

bass move back upstream where they overwinter in brackish or fresh water, likely to avoid low ocean temperatures.

Striped bass are long lived reaching up to 30 years of age. Although they have been recorded at lengths up to 1.8 m, they rarely reach 1 m in Canadian waters. Males reach maturity sooner than females at roughly 3 years of age. Females mature at anywhere from 4 to 6 years of age. Adults are repeat spawners, with females producing between 50,000 and 1.5 million eggs.

COSEWIC assessment

COSEWIC provides the following rationale for designating a) the Bay of Fundy population of striped bass as ***threatened***:

Repeated spawning failures led to the disappearance of the Annapolis and Saint John River populations. These disappearances are thought to be due to changes in flow regime and poor water quality. In the Shubenacadie River population, the presence of the introduced chain pickerel in overwintering sites may constitute a threat. Another threat to the population is bycatch from various commercial fisheries. The Bay of Fundy is also used by striped bass breeding in rivers in the United States. These fish were not assessed.

b) the Miramichi population as ***threatened***:

This fish was once commercially important and is still highly prized by anglers. Threats include bycatch in various fisheries such as gaspereau, and rainbow smelt. Illegal take, particularly



during ice fishing, is also believed to be a threat.

Threats to Striped Bass

The COSEWIC status report identifies overfishing and habitat alteration as contributing to the decline of striped bass populations. Although not fully understood, fishing appears to limit successive spawnings along with reducing the number of mature individuals. Congregations of striped bass overwintering in fresh water can also become vulnerable to poaching. Aquatic habitat changes through pollution and flow modifications at dams and barriers can increase mortality particularly at the egg and larval stages.

Bay of Fundy Population

The Annapolis River has shown no evidence of spawning or recruitment since 1976. Concerns are that agricultural pollution, pesticides or changes in pH have affected egg and larval survival. The construction of the Royal Annapolis Dam near the mouth of the river may also have altered incubation and rearing habitat, further affecting recruitment. A recreational fishery for striped bass is concentrated at the base of the dam in summer and fall.

The Saint John River has supported both a recreational and commercial fishery. The sport fishery is conducted all summer but mainly at Reversing Falls where abundance is influenced by migrants from US waters. A commercial fishery in Belleisle Bay was conducted in winter from 1930 to 1978 when it was determined that there was an absence of recruitment and the population was in decline. The last evidence of spawning was in 1979. Like the Annapolis River, alterations in rearing habitat due to dam

construction (Mactaquac Dam built in 1967) and pollution may also have inhibited the survival of eggs and larvae.

The Shubenacadie River supports a relatively stable population of striped bass with spawning occurring in the Stewiacke River, a tributary of the Shubenacadie. Abundance estimates from a recreational fishery which takes place from April to June indicate a decline between 1950 and 1975. Early estimates from more recent tagging programs and beach seine surveys don't indicate a further decline although these programs have not been in practise long enough to confirm the stability of the population. However, striped bass migrate to Grand Lake in winter where there is potential for them to be illegally taken in the ice fishery for smelt.

Miramichi Population

The only known spawning location for southern Gulf of St. Lawrence striped bass is the Northwest Miramichi River. Estimates of returning adults to the Northwest Miramichi have ranged between 3,400 and 50,000 between 1993 and 2002. Efforts to reduce mortality on this population were put into effect in 1996 with the closure of the commercial fishery, and again in 2000 with the closures of the aboriginal and recreational fisheries. Spawner estimates in the Northwest Miramichi have increased modestly since 2000 to an average of over 21,000 each year.

It is believed that mortality from illegal fishing, incidental captures in other fisheries, and a higher susceptibility to the environment at the northern limit of their range are limiting the rebuilding of this population.



Protecting Striped bass

Striped bass currently receive protection through section 32 of the federal Fisheries Act which prohibits the killing of fish by any means other than fishing and sections 34 to 42 which provide protection against the harmful alteration, disruption or destruction of fish habitat and the pollution of waters frequented by fish.

There are no commercial fisheries for striped bass in Maritime waters but they can be taken as bycatch in other commercial fisheries such as gaspereau and eel on inland waters or gillnet and trap/ weir fisheries along the coast. Management of the recreational fishery is through *The Maritime Provinces Fishery Regulations* (SOR/2001-452, s.28) under the *Fisheries Act* which provides for daily bag limits, gear and minimum length restrictions and seasonal closures. Recreational angling is permitted year round in the tidal waters of the Bay of Fundy and along the Atlantic Coast of Nova Scotia. For inland waters, angling is permitted from April 15 to Sept. 30th in Nova Scotia and from May 1 to September 15 in New Brunswick except for those waters draining into the Gulf of St. Lawrence and Northumberland Strait where angling for striped bass is not permitted.

Potential Impacts on Stakeholders

Once added to the List of Wildlife Species at Risk, striped bass will be protected under SARA. If particular activities are assessed to be a threat to the survival and recovery of a listed species, management measures will be put in place to restrict those activities and ensure the protection of species at risk.

These measures may lead to a variety of impacts on stakeholders, including additional costs. The following list is not exhaustive; please use this consultation as an opportunity to list omissions.

Aboriginal

Management strategies that could affect aboriginal people fishing for commercial species in areas inhabited by porbeagle may be considered.

Fishers (recreational/commercial)

It is important to fully determine the extent of potential threat to striped bass by any fishing activities. Once this species is listed, prohibitions will apply to fishing activities identified to be a threat to the survival and recovery of striped bass. Some level of bycatch may be allowed for fishing activities that take striped bass incidentally, but only if measures are taken to minimize the impact of the activity on this species and the bycatch level will not impede its recovery.

Industrial Users/ Land Owners

Development restrictions and other planning and management measures may be imposed on activities that could impair water quality or destroy habitat in striped bass spawning and rearing areas.

Recreational Users

Restrictions and management measures may be imposed to limit recreational activities that may affect the survival and recovery of striped bass or the water quality of its habitat.

Research Activity

Those wishing to carry out research on striped bass or in areas of their habitat



may be required to comply with strict guidelines. This may limit the types and/or durations of research permitted on striped bass and may lengthen the preparation time required for planning research projects.

Reference

COSEWIC 2004. COSEWIC assessment and status report on the striped bass *Morone saxatilis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 43 pp.



Consultation Workbook Survey – Striped bass

The government's decision on whether or not to list a species under the Species at Risk Act (SARA) will be based on a full description and understanding of the costs and benefits of the impacts of protection and recovery on individuals, organizations, Aboriginal groups, industries, and Canadian society in general.

This survey form can be used to provide your opinions about listing striped bass under SARA. Comments are welcome from individuals of all backgrounds, whether you are engaged in activities that may be affected by striped bass conservation efforts or are a citizen with an interest in striped bass.

You should read the consultation workbook before completing these questions.

About the Consultation Workbook Survey

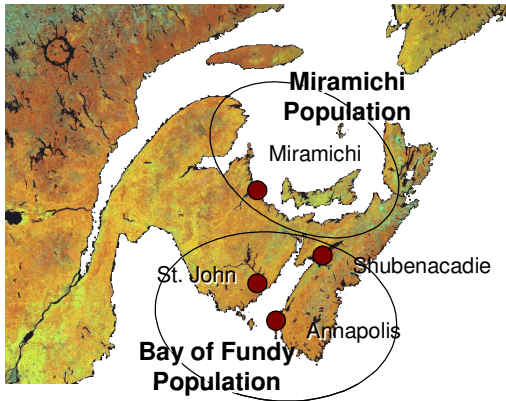
The consultation workbook survey asks you to answer a series of questions that require reflection about your views relating to the conservation and recovery of striped bass. There are a variety of question formats in this survey. There are also numerous opportunities for personal responses to further explain your views. If you would like to keep the introductory sections of this workbook, please feel free to detach this section and return only the survey.

Please return your workbook by April 1, 2006 to:

Species at Risk Coordination Office
Bedford Institute of Oceanography
P.O. Box 1006
1 Challenger Drive
Dartmouth, NS B2Y 4A2

Alternatively, you may email comments to XMARSARA@mar.dfo-mpo.gc.ca

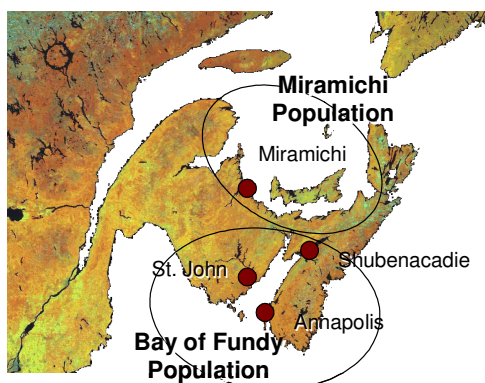
The information that you provide is important! We very much appreciate the time and effort you take to complete this survey!



Your opinions about threats to striped bass for each population. *You can provide your opinion for the population of your choice or for which you are more familiar.*

Please indicate your opinion about how significant a threat this factor is to the striped bass population in Canadian waters.

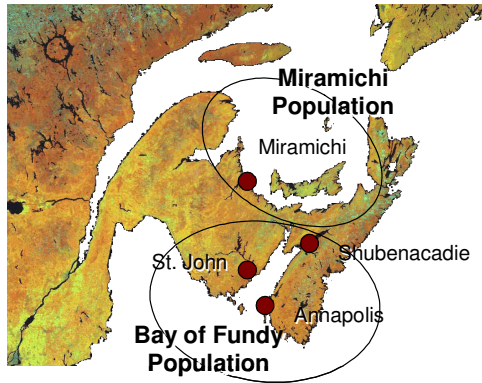
	Bay of Fundy Population						Miramichi Population					
	Very Low	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor	Very Low	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor
Directed fishing by recreational fishers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bycatch in commercial fisheries for other anadromous species i.e. eel, gaspereau	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waterway alterations affecting spawning, incubation and rearing i.e. dam operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Habitat changes affecting egg and larval survival eg. agricultural runoff, pesticides, pulp and paper activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction in adult spawners through illegal fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Your opinions about possible interventions to help striped bass conservation and recovery for each population. *You can provide your opinion for the population of your choice or for which you are more familiar.*

For each factor, please indicate what level of impact you think this measure will have on striped bass recovery.

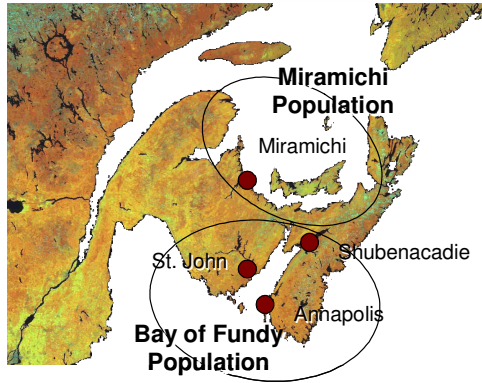
	Bay of Fundy Population						Miramichi Population					
	Very Low	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor	Very Low	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor
Close recreational fisheries for striped bass.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conduct scientific research to better understand striped bass behaviour and distribution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close other fisheries when a specified amount of striped bass is landed as bycatch.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase awareness among recreational, commercial, and Aboriginal fishers about striped bass conservation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify fishing gear in other fisheries so that less striped bass are caught.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close identified striped bass spawning and rearing areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit illegal fishing with increased patrols from fishery officers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Modify seasons in other fisheries to reduce striped bass bycatch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitor water management practices to limit potential for destruction of spawning habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Your opinion about the potential direct or indirect costs of striped bass conservation and recovery. *You can provide your opinion for the population of your choice or for which you are more familiar.*

Please choose an option that reflects your rating of the likely economic impacts (direct and indirect) of striped bass survival and recovery to this industry or group.

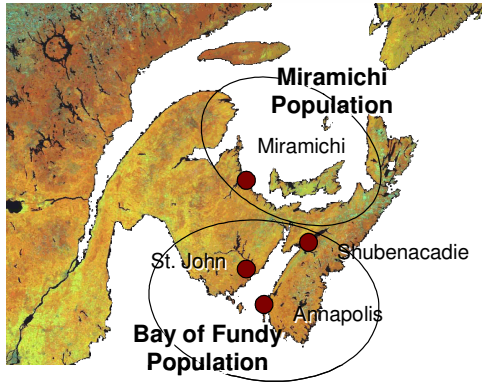
	Bay of Fundy Population						Miramichi Population					
	Negligible	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor	Negligible	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor
Costs to recreational fishers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to commercial fishers directing for other anadromous species.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to aboriginal fishers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to land owners/ industrial users i.e. forestry, agriculture, hydroelectric power	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to my personal household.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Costs to scientific researchers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Your opinion about the potential benefits of striped bass conservation and recovery to Canadian society. *You can provide your opinion for the population of your choice or for which you are more familiar.*

Please choose an option that reflects your rating of the likely benefits (economic or social) of striped bass conservation and recovery to this industry or segment of society.

	Bay of Fundy Population						Miramichi Population					
	Negligible	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor	Negligible	Somewhat Low	Moderate	Somewhat High	Very High	I have no opinion on this factor
Benefits to Communities adjacent to waterways where striped bass are found	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits to Canadian Society as a Whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits to Aboriginal Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benefits to the Scientific Community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Your opinion about other potential benefits of striped bass conservation and recovery.
You can provide your opinion for the population of your choice or for which you are more familiar.

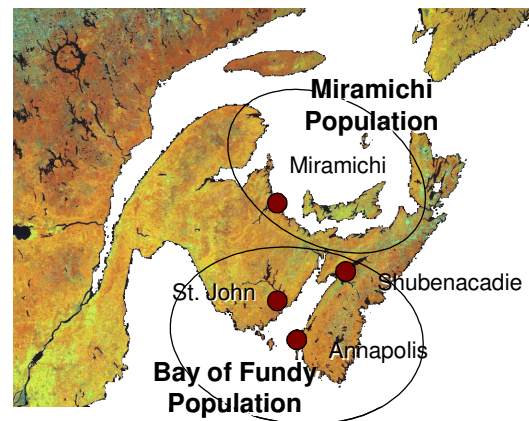
Please choose an option that reflects your level of agreement or disagreement with the following statements.

	Bay of Fundy Population						Miramichi Population					
	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree	I have no opinion on this impact	Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree	I have no opinion on this impact
I think that striped bass are valuable because they play an important role in maintaining healthy freshwater/marine ecosystems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that striped bass will be valuable to future generations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think that many people in Canada value striped bass even though they may never personally see one.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Comments about the proposed listing status of striped bass

	YES	NO
Have you read the COSEWIC status report for striped bass?	<input type="checkbox"/>	<input type="checkbox"/>



Please choose an option that reflects your level of support for the Government of Canada listing striped bass as a threatened species under the *Species at Risk Act*.

	Bay of Fundy Population	Miramichi Population
I Strongly Disagree with listing striped bass as a threatened species	<input type="checkbox"/>	<input type="checkbox"/>
I Somewhat Disagree with listing striped bass as a threatened species	<input type="checkbox"/>	<input type="checkbox"/>
I Neither Agree nor Disagree with listing striped bass as a threatened species	<input type="checkbox"/>	<input type="checkbox"/>
I Somewhat Agree with listing striped bass as a threatened species	<input type="checkbox"/>	<input type="checkbox"/>
I Strongly Agree with listing striped bass as a threatened species	<input type="checkbox"/>	<input type="checkbox"/>

If you disagree with listing striped bass as a threatened species, could you please tell us why?



General Questions

1. If a legal listing will affect your activities, do you see these effects as a cost or benefit to you? In what way? Please consider the social costs and benefits as well as economic costs and benefits.

2. In the event that the species is listed, how can you as an individual, or your industry or organization as a group, participate in the recovery of this species? Give examples of particular activities, if you can.



Background information about you

What is Your Age Category?		What is Your Gender?		In which sector are you employed?	
< 20 Years		Female		Retired	
20-29 Years		Male		Full-Time Homemaker	
30-39 Years				Student	
40-49 Years				Commercial Fishing/Processing	
50-59 Years				Farming	
60-69 Years				Forestry	
> 70 Years				Hydroelectric Power	
Where do you live?				Professional Services	
Nova Scotia				Private Sector – Other	
New Brunswick				Academic	
Prince Edward Island				Federal Government	
Newfoundland and Labrador				Provincial Government	
Quebec				Municipal Government	
Ontario				Non-Governmental Organization	
Western Canada or Territories				I am Between Jobs	
Outside Canada but I am a Canadian Citizen or Permanent Resident				I am Employed in another Field	
Outside Canada - I am not a Canadian Citizen or Permanent Resident					



If you participate in a recreational fishery for striped bass, please indicate in which area you fish

Bay of Fundy (Saint John, Annapolis, Shubenacadie Rivers)

Southern Gulf of St. Lawrence (Miramichi River)

If you are completing this workbook as a representative of an organization, please indicate your name, the name of your organization and a contact address.

You've now finished the survey – thank you very much for your help