



# Fisheries Self-Assessment Tool

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September 26, 2016

Why it exists

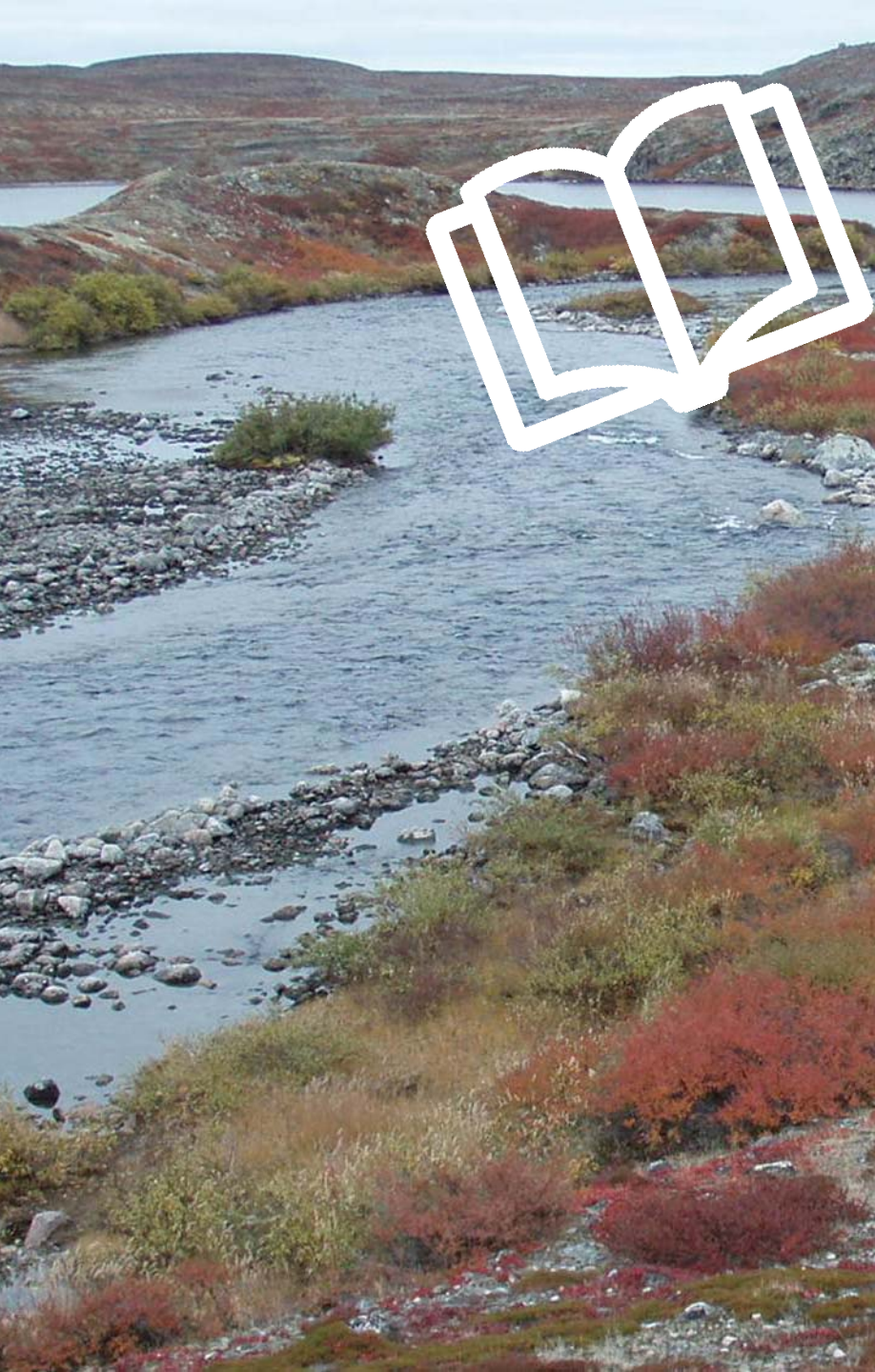


How it works



How it helps you





## Pipeline Associated Watercourse Crossings (PAWC)

- First edition developed in early 1990s
- *Fisheries Act* amended in November 2013
- MOU between DFO and NEB in December 2013
- PAWC 5<sup>th</sup> Edition – development began in February 2014
  - CEPA, CGA, and CAPP Partnership
  - Steering Committee includes DFO and NEB
  - Technical workshop, online survey, multiple reviews



## Self-assessment Guidance Framework

Assess the likelihood of pipeline and associated temporary vehicle crossings to cause serious harm to fish under the *Fisheries Act* and meet the requirements of the *Species at Risk Act*.

- **New** and **existing** crossings
- **Data** entry template
- **Automated reporting**





## Framework Objectives

- Align with the amendments to the *Fisheries Act* and the new Fisheries Protection Program, as well as SARA
- Defensible science/ evidence-based
  - Updated scientific literature and industry experience & advancements
  - Accepted & proven methodology
- French and English formats
- DFO endorsement



## Schedule

- DFO CSAS review process
- Finalize online tool and supporting manual
- French translation

Target completion:  
**December 2016**



A close-up photograph of water splashing from a faucet. The water is clear and creates many bubbles and droplets. The background is slightly blurred, showing the metallic surface of the faucet and some greenish-brown residue.

Self-Assessment  
≠  
Self-Regulation





# Mandate of the Fisheries Act

Provide for the **sustainability** and **ongoing productivity** of commercial, recreational, and Aboriginal (**CRA**) fisheries.





# Serious Harm to Fish

Works occurring in or near water bodies that support CRA fisheries must avoid causing *serious harm to fish*.

- Death of Fish
- Permanent Alteration
- Destruction



# DFO Review

Criteria for review:

- If project or activity cannot avoid *serious harm to fish* and is not included in either of the criteria
- Focus is on the *likelihood* to cause *serious harm to fish*, not simply being listed or meeting the criteria provided.







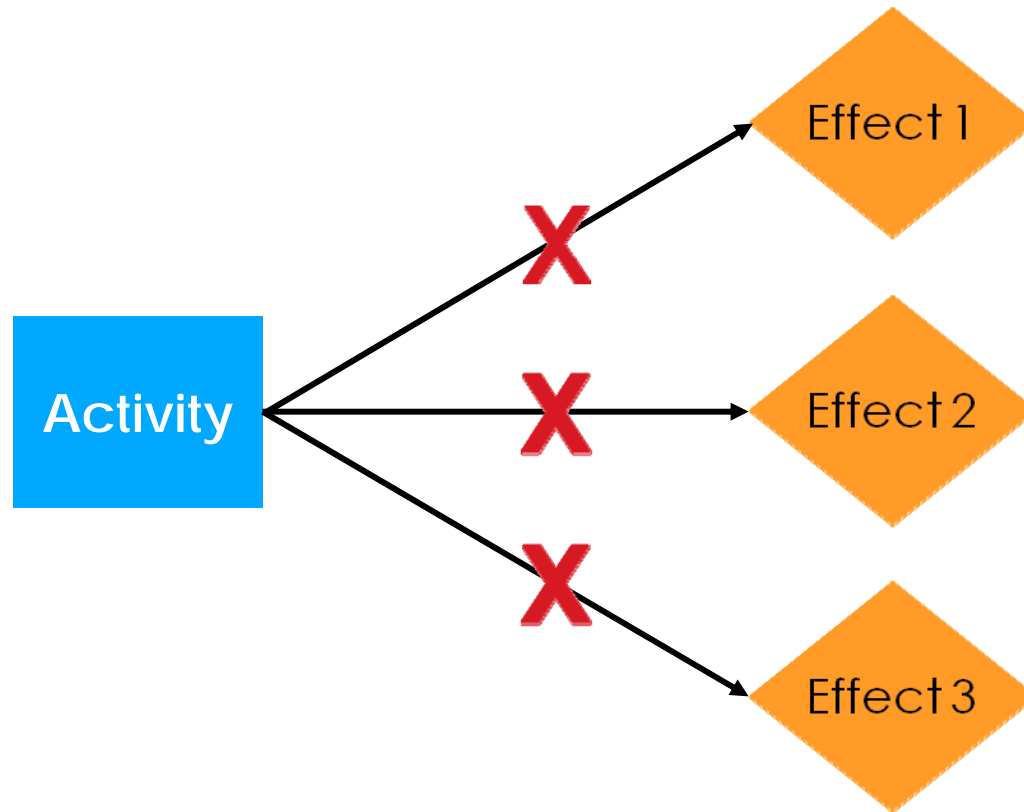
# National Energy Board (NEB) Projects

The NEB and DFO have an MOU for administration of the *Fisheries Act* and *Species at Risk Act*, related to regulating energy infrastructure in Canada.

Through this MOU, the NEB:

- Reviews projects for the potential to cause *serious harm to fish*
- Notifies DFO when an *Authorization* is likely required
- Coordinates *offsetting* requirements
- NEB Filing Manual (page 97) outlines filing requirements for Fish and Fish Habitat

# How it Works?





# How it Works?

## Activity: Pipeline Watercourse Crossing

Potential mortality of  
fish/eggs/ova from  
equipment

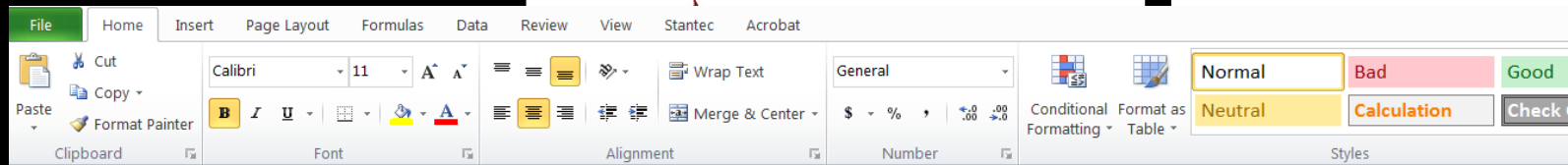
Change in  
sediment  
concentrations

Change in  
contaminant  
concentrations

Change in  
sediment  
concentrations

# How it Works?

## Data Entry



	A	B	C	D	E	F
1	<b>Crossing ID</b>	<b>Watercourse Name</b>	<b>Longitude</b>	<b>Latitude</b>	<b>Fish Habitat</b>	<b>Fish Habitat Description</b>
2						
3						
4						
5						
6						
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[Click here to download the FSAT template](#)

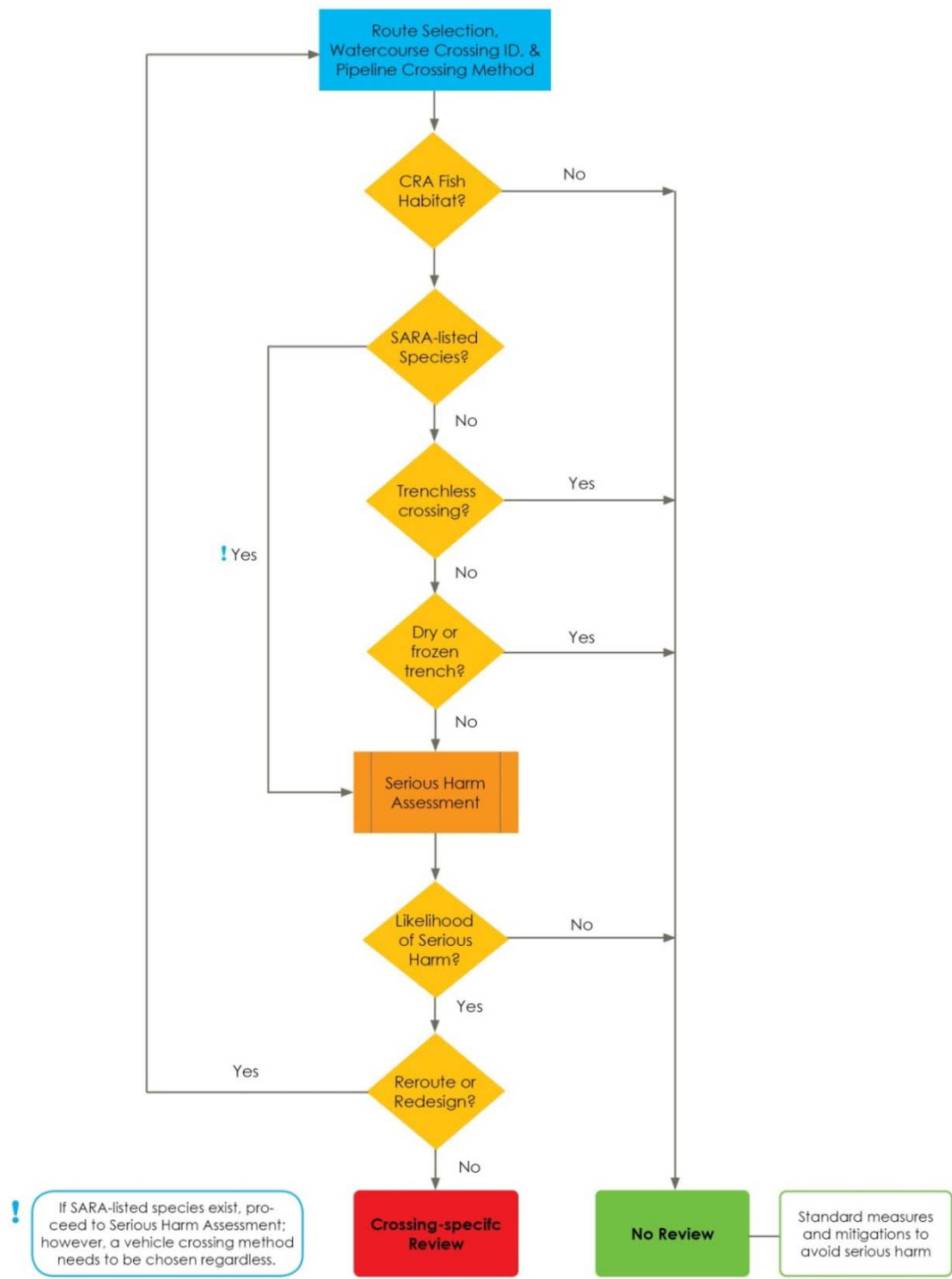
DFO Report »



# How i

## Prelimina

Crossing Methods		
Primary (?)	Primary Rationale	Contingency (?)
Trenchless - Direct Pipe	Trenchless crossing	Trenchless Clear-Span Aerial
Trenched - Non-Isolated Trench	Best option for crossing	Trenchless Horizontal Punch or Bore



# How it Works?

Crossing ID: XC-2

Primary Pipeline Crossing   Contingency Pipeline Crossing   Clearing Vehicle Crossing   **Construction Vehicle Crossing**

**Crossing Type: Trenched - Non-Isolated Trench**

Have the pathways (i.e., PoEs) that can lead to the following effects been effectively broken?

Criteria	Y/N	Rationale
Sediment Concentration:	Yes ▾	Rationale
Habitat Structure and Cover:	Yes ▾	Habitat
Food and Nutrient Concentration:	Yes ▾	F & N
Direct Mortality:	Yes ▾	Rationale
Temperature:	Yes ▾	Rationale
Access to Habitat:	Yes ▾	Rationale
Baseflow and Hydro Dynamics:	Yes ▾	Rationale
Contaminant Concentrations:	Yes ▾	Rationale

**Additional Mitigation:**

Construction activity during low flow season

**Mitigation Feasibility:**

Can the mitigation as outlined above be executed for this Watercourse Crossing? If No state why not:

Yes ▾

**DFO Required: No**

Save Details

Record Saved



# How

## Reporting

**Watercourse Crossing Assessment**

Use current session or load a new

<input type="checkbox"/>	ID	Watercourse
<input type="checkbox"/>		
<input type="checkbox"/>	XC-1	Bow River
<input type="checkbox"/>	XC-2	Bow River

Page 1 of 1 (2 items)

### Project

The Site  
for you  
from y

Screen

### DFO

Summ  
review

DFO

### Appendix A GENERAL MITIGATION MEASURES

The following standard measures and mitigations apply for works around water, including riparian areas, and have been adapted from best management practices, including DFO's Measures to Avoid Serious Harm to Fish and Fish Habitat, as well as those accepted and employed in the jurisdiction that the crossing will occur.

#### A.1 GENERAL CONSTRUCTION MEASURES

##### A.1.1 Timing

- Time works in water with respect to the timing windows to protect fish during sensitive time periods.
- Minimize the duration of in-water work.
- Conduct instream work during periods of low flow, to further reduce the risk to fish and their habitat or to allow work in water to be isolated from flows.
- Schedule work to avoid wet, windy and rainy periods that may increase erosion and sedimentation.

##### A.1.2 Operation of Machinery

- Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
- Develop and implement a Containment and Spill Management Plan that minimizes risk of accidental spills or releases from entering a watercourse or water body during all phases of the project.
- Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of the waterbody.
- Use temporary crossing structures or other practices to cross watercourses with steep and/or highly erodible (e.g., dominated by organic materials and silts) banks and beds.
- Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.
- Remove all construction materials from site upon crossing completion.
- Limit machinery fording of the watercourse to a one-time event (i.e., over and back), and only if no alternative crossing method is available. If repeated crossings of the watercourse are required, construct a temporary crossing structure.

##### A.1.3 Erosion and Sediment Control

- Installation of effective erosion and sediment control measures before starting work to prevent sediment from entering the water body.
  - Regular inspection and maintenance of erosion and sediment control measures and structures during the course of construction.
  - Repairs to erosion and sediment control measures and structures, if damage occurs.
  - Removal of non-biodegradable erosion and sediment control materials (e.g., silt fence) once site is stabilized.
- Avoid the use of non-biodegradable materials in remote or difficult to access locations.
- Measures for managing water flowing onto the site, as well as water being pumped or diverted from the site, such that sediment is filtered out prior to the water entering a waterbody.
- Measures for site isolation (e.g., silt boom or silt curtain) for containing suspended sediment, if in water work is required.
- Measures for containing and stabilizing waste material (e.g., dredging spoils, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the HWM of nearby watercourses and/or water bodies to prevent re-entry.
- Implement subsurface drainage controls, where appropriate, to maintain groundwater and surface water interactions and to maintain the stability of reclaimed land. The type and location of subsurface drainage controls

	Construction Vehicle
Log Fill	Log Fill
	Fording



## Functionality

- Individual crossings
- Large developments with multiple crossings
- Route comparison
- Costing





## What can it do for stream restoration projects?

- Regulatory compliance for the Fisheries Act and SARA
- Compliance with other regulatory requirements or legislation:
  - Federal;
  - Provincial; or
  - Municipal
- Design comparison
- Costing

# Online Demo

[Self-assessment tool](#)



# Contacts

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