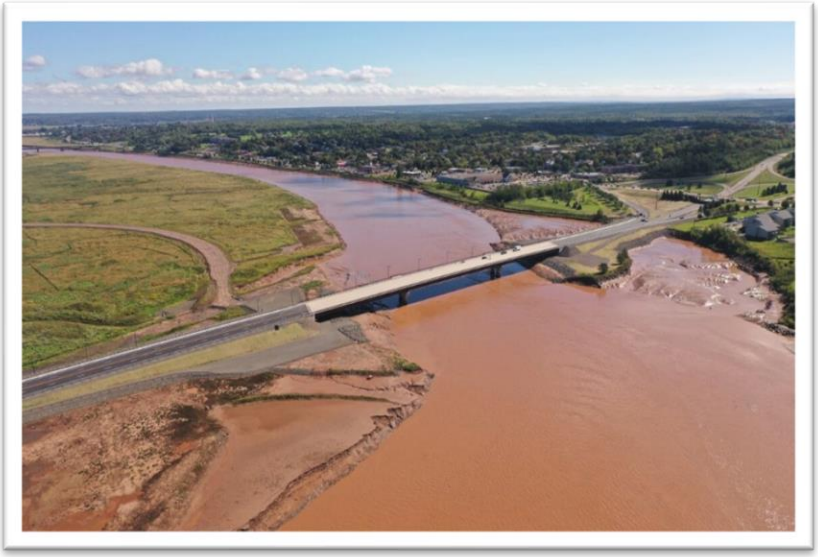
MODIFICATIONS TO THE PETITCODIAC CAUSEWAY PROJECT

Completion of Commercial Fisheries Follow-up Program



The primary objective of the Modifications to the Petitcodiac Causeway Project (the Project) was the restoration of fish passage at the causeway. A Province of New Brunswick Comprehensive Environmental Impact Assessment (EIA) and Federal Screening were conducted and granted approval in 2006. The Project commenced in 2008 and bridge construction began in 2017 and was completed in fall 2022.

A requirement of the EIA included a 3 Stage Follow-up Program, with subcomponents related to sensitive environmental and physical features, including commercial fisheries and physical characteristics of the Petitcodiac River.

The 3 Stages of the Project Follow-up Program are:

Stage 1: 2008 to 2010: Preparatory works and baseline development

Stage 2: 2010 to 2021: Permanent opening of tidal gates

Stage 3: Ongoing from 2022: Opening of new river channel and monitoring of environmental conditions

COMMERICAL FISHERIES FOLLOW UP PROGRAM

The EIA concluded that residual adverse environmental effects were not likely to occur on the commercial fisheries as a result of the Project. During the EIA, and prior to construction, local commercial fishers voiced concerns about movement of sediment from the Petitcodiac River into the Inner Bay of Fundy following the replacement of the causeway with the bridge. As a result, a Follow-up Monitoring Program component was developed to assess effects to commercial fisheries from the Project. The objective of the Commercial Fisheries Follow-up Program was to assess whether the Project resulted in a decrease in commercial fisheries landings.

The program was created to establish baseline data (Stage 1) on sediment characteristics in the Inner Bay of Fundy and commercial fisheries landings in the area, and to monitor these aspects following construction. Follow-up monitoring of lobster originally included three components: Catch-per Unit Effort (CPUE) monitoring of commercial lobster catches, a juvenile trapping survey, and fishery-independent out-of-season sampling. Sampling was under the day-to-day supervision of The Fishermen Scientists Research Society (FSRS) and was conducted in “Control” and “Exposure” areas in LFA 35 of the Upper Bay of Fundy before and after the opening of the causeway gates.

Following extensive data review and discussions with DFO and stakeholders, the commercial lobster catches and juvenile trapping surveys conducted from 2003 to 2017 were discontinued in preference of utilizing commercial fisher’s logbook data. Logbook data from the control area was then compared to data from the exposure locations from 2013 to 2015 and 2016 to 2021. A summary of the commercial catch data is provided on the subsequent page.

September 2023

COMMERCIAL LOBSTER CATCH FINDINGS

Between 2008 and 2021, key findings included:

- Sediment accumulation predominantly in the Middle Grounds outside of LFA35 (Figure, below left).
- Increases in CPUE were observed in both control and exposure zones with the greatest increases occurring in the exposure zone during the spring season (graphs below right)
- Annual CUPE fluctuations in the Exposure and Control areas consistently correlate with each other.
- The 11-year monitoring period following gate opening in 2010 covers the time required for a lobster to grow to the legal size to harvest.

Collectively, these results suggest that there is no evidence the opening of the gates nor the removal of the Petitcodiac River causeway has influenced legal lobster catch rates in the Upper Bay of Fundy and that there is no reason to anticipate that the Project will result in adverse environmental effects on lobster landings as a result of sediment redistribution.

As a result, further monitoring of commercial catches is not recommended, and the Commercial Fisheries Follow-up Program is proposed to be **discontinued**. As a result, there would no longer be analysis and reporting of commercial lobster logbook data associated with The Modifications to the Petitcodiac Causeway Project.

If you have feedback on this information or other thoughts or concerns, you are encouraged to reach out to Shannon Scott-Tibbetts at info@fsrs.ns.ca by January 20 2024. FSRS will collect any comments and report back to the study team with any feedback.

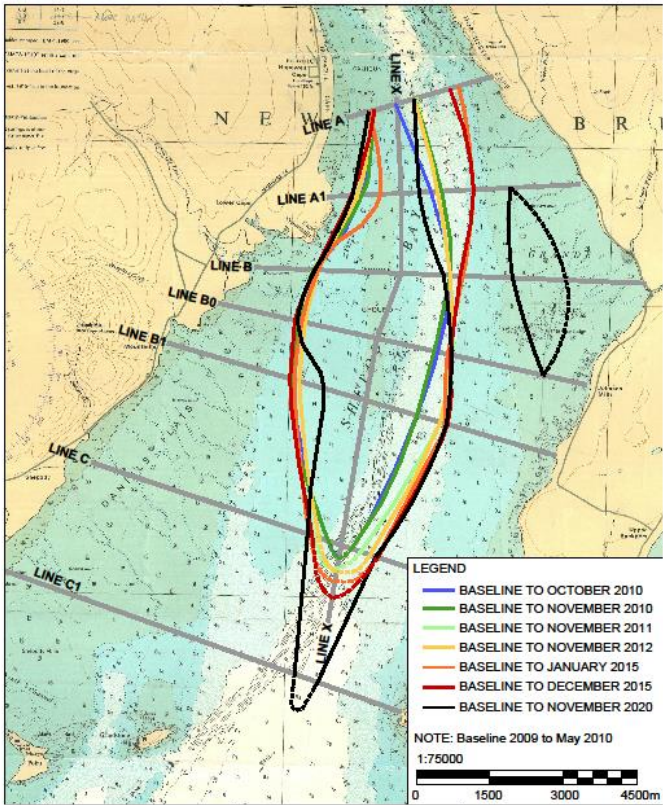
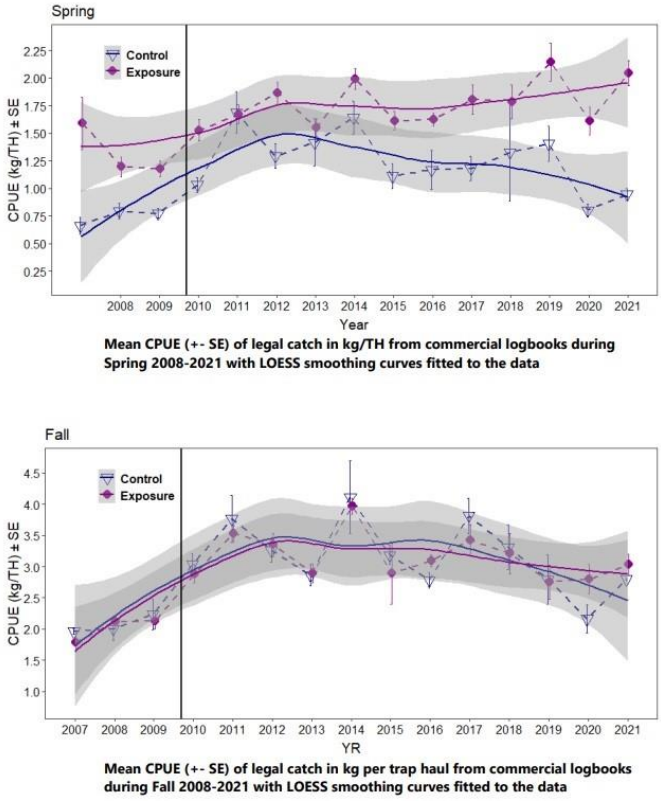


Figure – Sediment deposition in the Upper Bay of Fundy



Graphs – CPUE in Spring (Top) and Fall (Bottom) Fishery