



Maliseet Nation Conservation Council

Dedicated to the conservation & co-management
Of our Traditional Resources in the St John Watershed/ Bay of Fundy

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A Quarterly Newsletter

Nipon/Summer 2021

Treaty
Day
2021

Water Quality
In the
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WOLASTOQ TREATY DAY 2021



WOLASTOQ CONNECTS US ALL: VIRTUAL ROAD TRIP

Friday, June 4th, 10am - 3pm

HOSTED BY *POSSESOM PAUL*

FEATURING

JEREMY DUTCHER | MAGGIE PAUL | IVANIE AUBIN MALO | M3D14
JULIAN MOULTON | BEV SAPIER | AUTUMN SAPIER PAUL
HALEY POLCHIES | ELIZABETH POLCHIES | FAITH POLCHIES
GLENN BERNARD | ABBY BROOKS | CHAROLETTE THURBER
DYAMOND SABATTIS | DAKOTA VERNER
DYAN RICHARDS | SHAWN FRANCIS
RUSS LETICA

PRESENTED BY





Present status of the water quality in the Wolastoq



MNCC has conducted a study from 2018 - 2021 to evaluate the water quality in the Wolastoq from Edmundston to St. John. This study was funded by the Atlantic Ecosystems Initiative (AEI) of the Environment and Climate Change Canada (ECCC). As a part of the assessment, MTK study was conducted in Wolastoqey communities (New Brunswick) to understand the views of Wolastoqey people about the current health of the river. We also have planned to conduct open houses in major townships in the watershed to educate people about current water quality and environmental health of the Wolastoq.

Water quality in the river was tested at approximately 73 sampling locations along the river from Edmundston to St. John. The YSI Professional Plus water quality meter was used to test water quality in the river and the water quality parameters measured were temperature, dissolved oxygen (DO), conductivity, salinity, pH and Oxidation Reduction Potential (ORP). The water samples collected were analyzed at the Research and Productivity Council (RPC) laboratory in Fredericton to estimate the level of nutrients (Nitrates, Nitrites and Phosphates), bacteria (coliforms, *E. coli* and fecal coliforms) and metals in the water. The water samples were collected approximately 30 cm below the surface to measure different water quality parameters.

The study area was divided into six sub areas (Edmundston - Grand Falls, Grand Falls - Beechwood Dam, Beechwood Dam - Hartland, Hartland - Nackawic, Nackawic - Mactaquac Dam, Mactaquac Dam - Jemseg Bridge and Jemseg Bridge - Grand Bay) to present the data based on various factors including intensity of activities, similarity of the riverine habitat, population density in the watershed etc. It is assumed that the estimated mean water quality parameters for the sub area represents the water quality in the Wolastoq within the sub area.

The estimated water quality parameters for the river were compared with a set of standards or benchmarks. The Canadian Council of Ministers of the Environment (CCME) has developed a set of guidelines to protect human health (drinking water or recreational use) and aquatic life. When guidelines were not provided by the CCME, estimated values for certain water quality parameters were compared with the guidelines found in the literature.

The study indicated that except temperature, conductivity and ORP the other water quality parameters estimated for the Wolastoq were within the CCME standards for protection of aquatic life. The estimated mean total phosphorus for the river was slightly higher from Edmundston to Nackawic in 2020 and Edmundston to Grand Falls in 2019. In general other water quality parameters estimated for the river stayed within the CCME standards throughout the study area. In particular the water quality parameters such as nutrients, bacteria and metals estimated for the river have been within the CCME standards for protection of aquatic life.

It was noted that the temperature in the river was reasonably high when compared to the CCME standards throughout the study area. As this study was undertaken during the warmest period in the summer (July - August), estimated high water temperature for the river could probably be due to the timing of sampling.

For the most part the estimated conductivity for the Wolastoq has been outside the recommended range for protection of aquatic life (150-500 $\mu\text{s}/\text{cm}$) except for the sub area from Beechwood - Hartland. The estimated conductivity was comparatively higher for the area from Jemseg Bridge - Grand Bay could probably be due to the tidal influence.

The Oxidation Reduction Potential (ORP) estimated for all sub areas were lower than optimal range indicates that lack of potential of the Wolastoq to cleanse itself or break down waste products, such as contaminants, dead plants/animals etc. In spite of moderate to high dissolved oxygen, reason for the low ORP estimated for the Wolastoq is not clearly understood.

The MTK study conducted during the present survey indicated that the Wolastoq has been historically important to Maliseet people as a trade route, source of food and to perform cultural and social activities. Most of the elders and knowledge keepers interviewed during the study were not happy about the current environmental health of the river. In accordance with them the river was warmer and polluted at present and the fish they caught in the river were different from what they caught back in the day. There is plenty of warm water fish such as striped bass, smallmouth bass and musky in the river at present. The water quality was better in the past and currently the river was polluted due to various reasons including anthropogenic activities. The elders and knowledge keepers interviewed during the present study indicated that their cultural and social activities were affected due to current status of the Wolastoq.

Initially MNCC has planned to conduct three open houses (Edmundston, Woodstock and St. John) and a few community meetings to educate leadership and the membership of Maliseet First Nations on the outcome of the study. However, we only could conduct one open house in the Madawaska First Nation due to covid 19 pandemic. The Open House conducted in Madawaska was well attended by the people in the community.

CFOLC Summer Update 2021

By Roger Sark

Below is the latest DFO commercial fishery landings and values from 2019 for the Southwest New Brunswick Lobster Fishing Areas (LFA) 36 and 38. This is for information purposes only and it is to provide the entirety of the commercial fishery in this area for 2019.

DFO Statistics for 2019 Landings, Values and # License Holders in New Brunswick Maritimes Region				
Species	2019 Landed Pounds Lbs	2019 Dollar \$	# License holders	
Groundfish				
Atlantic Cod	8,818	10,000		204
Halibut (Atlantic)	88,184	500,000		
Other	x	x		
Total groundfish	103,617	\$ 522,000		
Pelagic & other finfish				
Herring	33,596,271	13,258,000		399
Mackerel	x	x		73
Swordfish	0	-		10
Tuna	0	-		4
Alewife	1,695,351	1,152,839		51
Eel	13,227	33,000		13
Other (Elver ?)	6,613	3,103,000		1
Total pelagics	34,251,044	\$ 16,849,000		
Shellfish				
Clams / quahaug	716,502	1,105,000		328
Scallop (2)	8,977,230	10,536,000		463
Lobster	17,952,256	147,688,000		436
Crab, Other	407,855	353,000		12
(Sea cucumber)	1,900,000	3,064,516		
(Sea urchin)	911,000	1,469,355		
Other	0	-		410
Total shellfish	30,864,741	\$164,198,000		
Subtotal	65,221,608	\$181,569,000		
Other				
Marine plants	27,604,102	625,000		
Total other	27,604,102	625,000		
Grand total (4)	92,825,711	\$182,194,000		2,419
Marine worm				2
Pickrel				2
Shad				45
Sturgeon				2
Suckers				3
x Suppressed to meet confidentiality requirements				
Source: Department of Fisheries and Oceans (2019). Zonal Interchange File [database]. Ottawa				

Fun Facts about the Right Whale!

- More Than a Little Teste. The right whale may not be as large as the blue whale, but it may just hold another record for size.
- Built of Blubber. The right whale is very large and robust, growing nearly as big as bowhead whales and much larger than other species that normally visit shallow waters.
- Skin Prints. All species of right whales have a pattern of uncommon rough patches of skin on their heads known as callosities.

Class: Mammalia

Order: Artiodactyla

Phylum: Chordata

Reference: biologydictionary.net/right-whale/

