First Nations Liaison/Field Monitor Report

Completed by: Austin Paul

Report covering the period from: September 20th-29th, 2016

Date: September 20th, 2016

Activities Conducted:

Assisted in the retrieval of fish tracking receivers in the Lower St. John River Valley. This work was carried out by the Canadian Rivers Institute in support of the Mactaquac Aquatic Ecosystem Study.

Pertinent Tasks:

- Fish tracking receivers have been placed throughout the Wolastoq River, the data contained therein cannot be accessed until the receiver is brought to the surface and plugged into a computer. As such, our team was tasked with retrieving receivers in the Grand Bay area, as well as Swan creek.
- GPS coordinates have been taken for all of the receivers throughout the river. Our team would navigate to the targeted coordinates and pull the receivers using a grapple.
- After all of the receivers had been pulled, we would deliver them safely to UNB for analysis.

Interests and Potential Concerns from a First Nations Perspective

The retrieval of receivers is relatively non-invasive and does not pose a threat to traditional resource or occupation sites.

Photograph

Below: Receiver retrieval near the mouth of Swan Creek, note: the receiver is the black colored apparatus which is attached to a concrete post block. (photo taken from Vemco.com)

Date: September 29th, 2016

Activities conducted

Fish community studies are being conducted in the Mactaquac head pond. This work is being carried out by the Canadian Rivers Institute in support of the Mactaquac Aquatic Ecosystem study.

Pertinent Tasks

Fyke nets

Four fyke nets were used in the study. The nets are left out over-night, near Kelly's Creek and subsequently removed from the area. Fyke nets generally have 2 wings and a lead line which guide the fish into a series of cages. Once inside the cages the fish cannot find their way out. The Fyke nets held a variety of fish species: bull head (catfish), pumpkin seed, gaspereau and small mouthed bass.

Interests and Potential Concerns from a First Nations Perspective

The fieldwork associated with this study is relatively non-invasive and does not pose a threat to traditional resource procurement areas and/or archaeological sites. All of the fish samples acquired through the study are released back into the river.

Photographs

Below: A beautiful day on the head pond

Date: September 26th , 2016

Activities Conducted:

Migratory bird surveys were carried out near the Mactaquac Generating Station. The work is being conducted by Stantec Consulting in support of the Mactaquac Aquatic Ecosystem Study.

Pertinent Tasks

Point counts were conducted near the tailrace of the Mactaquac Generating Station. We would observe migratory birds for 3 hour intervals, recording the species and number of specimens. Once the point

counts were completed, we would travel to areas that we had assessed as stop-over areas (Duplesis' farm and Jewett's mill). At the stop over areas, we would once again observe and record the different species and the number of specimens per species present. Species of birds identified during the study include: common gulls, ring gulls, mergansers, cormorants, eagles, ospreys, kingfishers, American crows and common pigeons.

Interests and Potential Concerns from a First Nations Perspective

While conducting a pedestrian survey of the back-channels of the Keswick Stream, a European trade pipe was found on a sandy bar. The GPS coordinates for the find spot are: 45° 59' 32.27N 66° 49' 45.68W. The artifact is now in the custody of Archaeological Services New Brunswick

Photographs

Below: Clay pipe found near the mouth of the Keswick Stream

Dates: September 22nd and 23rd , 2016

Activities Conducted:

Participated in river channel substrate mapping near the mouth of the Keswick Stream and the mouth of the Nashwaaksis Stream. This work was carried out by the Canadian Rivers Institute in support of the Mactaquac Aquatic Ecosystem Study.

Pertinent Tasks

- This aspect of fieldwork involved a 2 person team. One person used a Samsung Tablet with Geographical Information Software.
- This tablet was used to map and describe the grain size of materials present (ex: fine silt, sand, gravel, pebble, cobble and boulder)
- The other team member took GPS waypoint of the banks and channels using a differential GPS. The differential GPS not only records GPS coordinates but elevation as well.

- This information will be used to create a computerized model that is capable of running many different environmental scenarios. The overall goal of the study is to draw correlations with sediment size/ depth of river channels to preferred fish habitat and to better understand how flow rates affect the health and behavior of different fish species.

Interests and Potential Concerns from a First Nations Perspective

While conducting fieldwork near the mouth of the Nashwaaksis Stream, pre-contact artifacts were found on the shoreline. I collected the artifacts that had eroded out of the river bank and delivered them to Archaeological Services New Brunswick. The artifacts found consisted of 2 pieces of Dentate Stamped Pottery. The term dentate stamp refers to a toothed tool used to create the design patterns which are featured on the outer walls of the pottery vessel. These vessels are generally attributed to the Middle Woodland period (2200-1500 years before present).

Photographs

Below: Dentate stamped pottery shards.

Date: September 26th, 2016

Activities Conducted:

A striped bass feeding study was conducted by the Canadian Rivers Institute near the Mactaquac Generating Station.

Pertinent Tasks

- Active angling was carried out from the shore.
- When fish were hooked and landed, they were placed in a tank filled with fresh water.
- The fish would be weighed, measured and fitted with an identification tag below the dorsal fin. A clipping of the caudal fin and scale samples were taken for genetic studies.
- We analyzed the stomach contents of the striped bass using a specially designed stomach pump before returning the fish to the river.
- The stomach contents of the predatory fish consisted of mainly gaspereau.

Interests and Potential Concerns from a First Nations Perspective

The striped bass work is non-invasive and does not pose a threat to any archaeological and/or traditional land use sites.

Upcoming work

The fieldwork that has been tentatively schedule for the next few weeks involves fish community studies, striped bass feeding studies and receiver retrieval.