

DEHCHO FIRST NATIONS



Dehcho Annual General Assembly – AAROM Report on 2013-14 Fiscal Year Activities – June, 2014

Once again, we had a busy and productive year with the highlight being the second annual “Return to Country Food” workshop hosted by the Ka’a’gee Tu First Nation.



Dehcho Watershed Ecological Advisory Committee, 2013.

Highlights;

Water Quality and Contaminant Monitoring; The Dehcho AAROM partnership with ENR, Water Resources Division continues to grow. Last summer, Mike Low, our Technical Advisor was kept busy deploying, maintaining and retrieving water quality and contaminant measuring instruments in Dehcho waters. YSI Sondes, which monitor water quality throughout the summer, were deployed in Trout Lake and Island River, the Hay River upstream of the East and West Channel confluence and the Hay River mouth area, Kakisa River near the community, the Mackenzie River near Fort Providence, Fort Simpson and Wrigley and the Liard River near its outflow to the Mackenzie River. We are also deploying two other monitoring devices which detect PAH's (Petroleum products) and metals. ENR, Water Resources Division are responsible for the analysis of the data collected and reporting to the communities. ENR held a year end meeting for the Dehcho leadership in Hay River in March, 2014.

Aurora College student, Kyle Nault was hired by AAROM this spring as an intern summer student for the Water Quality monitoring program. He also assisted the Habitat Restoration program on Providence Creek. Funding for his position was provided by ENR, Water Resources Division and GNWT, Transportation.

Healthy Country Food; The Dehcho AAROM and their community partners are documenting low risk sources and species of fish for use by the Dehcho communities. GNWT, Health and Social Services emphasised the importance of fish and other country food in the diet at both of the "Return to Country Food" workshops.

In 2013-14, Dehcho AAROM was able to test fish for mercury levels from the Mackenzie River near Jean Marie River and from Kakisa and Tathlina Lake and from Trout Lake. Environment Canada are analysing the data and results will be available at our "Country Food Workshop" at the end of August, 2014. The purpose of these continued studies is to find lakes and fish species which are low risk for mercury. We are working at finding safe sources of fish for all Dehcho communities. Already we recommend whitefish, suckers and coney as low risk fish species. We also have identified Great Slave Lake, the Mackenzie River, Willow Lake, Big Island Lake and Mustard Lake as low risk locations to fish.

We are organizing the third annual "Return to Country Food" workshop which will be held the last week of August. It is important that Dehcho Chiefs or their delegates attend this meeting as well as Environmental staff from the First Nations and Metis organizations. Letters of invitation will be out soon.

New proposed project; The Dehcho AAROM in partnership with the University of Waterloo and major funding from the AANDC, Northern Contaminants Program (NCP) will be consulting the Dehcho leadership on the need for a *Human Biomonitoring Study* of people in the Dehcho. The main objective of the study is to test a few strands of participant's hair for mercury on a voluntary basis. The Sahtu completed a similar study and I believe it put peoples' minds at ease regarding accumulated mercury levels in the body.

Grayling Spawning Habitat Rehabilitation; Dehcho AAROM in cooperation with the Deh Gah Gotie First Nation has completed the second year of a multi-year project funded by the GNWT, Department of Transportation as a "no net loss" project designed to compensate for fish habitat disrupted by the construction of the Dehcho Bridge. DFO, Habitat Management arranged a multi-year "No Net Loss" agreement for AAROM and Deh Gah Gotie Dene Band to restore Grayling spawning habitat in Providence Creek.

Last season the team removed two abandoned beaver dams and spread 25 cubic yards of clean stone on the dry creek bed to restore spawning habitat silted over by the presence of beaver dam impoundments. (The beaver have since moved on). Arctic grayling were observed spawning on these restored areas.

This spring the team built a fish weir and counted the grayling run to determine its present strength. The run was much diminished from a similar weir count in 1979. It is hoped that our efforts will restore the run back to former levels. This fall we will be spreading rock on a second area of the stream which was previously spawning habitat.



Arctic grayling spawning in Providence Creek.

Community Projects summary;

1. Katlodeeche First Nation (KFN) and West Point First Nation (WPFN) were once again contracted to collect data useful in the management of Great Slave Lake fisheries. They provided two captains and two field assistants and two fishing vessels to set and lift nets to provide information on Great Slave Lake fish stocks; particularly coney.

KFN field workers also travelled to Buffalo Lake during the winter to collect coney from the Yates River spawning stock for a broader DNA study DFO is conducting for Great Slave Lake stocks. The work should eventually tell fisheries managers which coney stocks are being harvested by the Great Slave Lake fisheries.

KFN and WPFN have been contracted to conduct similar work this summer.

2. The Deh Gah Gotie First Nation through the Fort Providence Resource Management Board monitored the Fort Providence area sports fishery to assess the effects of reduced catch and possession limits regulated by DFO on the advice of the Band. Unfortunately (or fortunately depending on your point of view) anglers from northern Alberta, who are mostly associated with farming, left in droves when the media announced anthrax in the bison herd. Fishing was light during the summer and it was difficult to attribute this reduced harvest to the new regulations DFO put in place in response to Deh Gah Gotie recommendations or to the anthrax scare.

DGGFN continues with this monitoring project again this summer

The First Nation also provided two strong field workers to spread clean stone on traditional spawning areas of Providence Creek. Two more field assistants worked on the fish weir project this spring.

3. The Sambaa K'e Dene Band continued their long term research and monitoring program on Sambaa K'e (Trout Lake). They monitored the sports fishery which has been dropping off recently. Less anglers are using the Band lodge facilities due to the recession. The Community Monitors are also setting out instruments to measure water quality as well as contaminants.

There is a concern that warmer longer summers due to "*Climate Change*" are warming Trout Lake to the very bottom. Lake Trout need cold water near the bottom of the lake to survive. A string of temperature loggers set in one meter

intervals collected data on water temperature for the past three years. Data on dissolved oxygen, pH, chlorophyll and conductivity were also recorded.

There is also concern with the presence of skinny fish and the loss of the spring sucker spawning run in the Island River. *Climate Change* is very much showing its effects in this traditional community.

Jessica Jumbo, Environmental Coordinator conducted a community harvest survey last fall and winter. The results of these studies and those in the other communities will be discussed at the *Country Food Workshop* in August.

The monitors also assisted Heidi Swanson with her research project.

SKDB is conducting their monitoring project again this summer as well as assisting the AAROM technicians with the deployment and maintenance of water quality instruments.

4. Melaine Simba, the Ka'a'gee Tu First Nation is once again monitoring the sports fishery on the Kakisa River. They will also be involved with a stock assessment study of the Tathlina Lake walleye this winter. Multi-mesh nets will be set in December and the catch will be sampled for size and age data, catch per unit effort etc. and will be forwarded to DFO, Stock Assessment in Winnipeg.

Sir Wilfrid Laurier University will be continuing their study of energetics in the walleye with funding from ENR, CIMP.

Heidi Swanson of the University of Waterloo will be including Tathlina Lake in her study of bio-accumulation and bio-magnification of mercury in the aquatic food web this August.

5. The Jean Marie First Nation for the fifth year monitored activity on their stretch of the Mackenzie as well as collecting DO, pH, conductivity and temperature data.

The monitors also fished the Mackenzie in the fall for samples to be tested for mercury levels. Fish from the Mackenzie River are usually low in mercury.

The FMR First Nation is also involved in establishing a "Protected Area Strategy" (PAS) Lue Túé Sulái Candidate Area. AAROM cooperated in the study by providing and working with a contracted ecologist to produce an Ecological Assessment report for the PAS. The report is available on the DFN website at www.dehcho.org (see the AAROM page)

Angus and Laura Sanguéz and Earnest Hardisty assisted Heidi Swanson on her bio-accumulation study on Ekali and Sanguéz lakes. This year we will be focusing on McGill and Gargan lakes

6. The Nahanni Butte Dene Band got off to a great start working with DFO researcher Neil Mochnacz on Prairie Creek. Neil who has been studying Bull Trout in the NWT is now including a new method of assessing Arctic Grayling stocks in NWT streams.

The community AAROM monitor continued to monitor activity on the Nahanni and Liard rivers in their area. This summer the monitors will be assisting the AAROM technicians to deploy *Water Quality measuring sondes* and devises which measure oil contamination and metal levels. This is an important study site considering mine development in the watershed.

7. The Liidlii Kue First Nation completed their fourth season of monitoring on the Mackenzie River. They are getting a handle on the usages of the resources in their area through monitoring and traditional knowledge information.

A partners in the ENR, Water Resources Division water quality study, the Liidlii Kue monitors assist the AAROM technicians to deploy and maintain sondes and contaminant measuring devises on the Mackenzie and Liard rivers.

8. Pehdzeh Ki First Nation; Charlie Tale and helper Earnest Moses were hired to get the AAROM monitoring program back on track. In addition to monitoring activity on the Mackenzie River the assisted the AAROM technicians deploying the water quality instruments and devises. They reported that the usual chum salmon run was very poor in 2013. Charlie attended the Return to Country Food workshop in Kakisa last August.

Progress on AAROM Items arising from community issues and concerns;

1. **Concern about mercury levels in predatory fish.** Levels of mercury in fish from some inland lakes in the Mackenzie Valley have been found to be increasing. It is necessary to collect fish samples from fishing lakes to check on the present levels of mercury. AAROM has been partnering with the AANDC, Northern Contaminant Program to update mercury testing of fish in Dehcho lakes which are used by the communities. GNWT, Health and Social Services has issued consumption advisories on some lakes for some species. Other lakes and species were found to be good sources of fish for the dinner table.

AAROM organized the second annual “Return to Country Food” workshop hosted by the Ka’a’gee Tu First Nation to provide a forum for researchers, government and the leadership and resource managers from the Dehcho communities to discuss the risks and benefits of including traditional foods in the diet. Water issues were also discussed.

A recommendation of the previous workshop was for AAROM to communicate with the Dehcho membership to gather information on country food in the diet as well as concerns about contaminants and water. This survey was completed in six Dehcho communities; Sambaa K’e, K’a’agee Tu, Jean Marie River, Liidlii Kue, Fort Providence and Wrigley since these are the communities most affected by consumption advisories. Community members were surveyed to gather information on their perception of the safety of country food and water in the Dehcho. In regards to mercury levels in fish we are developing, in cooperation with GNWT, Health and Social Services, a list of low risk sources of fish for Dehcho communities. All First Nations including KFN, West Point and Nahanni Butte were invited to the workshop.

2. Dehcho AAROM assisted travel to conferences;

- Dehcho AAROM assisted with travel costs for Dehcho Grand Chief Herb Norwegian and Deh Gah Gotie’s Sam Gargan and Soloman Gargan to travel to the “The Keepers of the Waters” conference in Mayo, Yukon, last summer.
- Dehcho AAROM continues to support travel to this important forum, however our budget is limited.

3. Youth Activities;

- Dehcho AAROM provided support for the annual “Youth Ecology Camp” hosted by the North Nahanni Naturalist Lodge at Cli Lake. Report is found on the AAROM page at www.dehcho.org
- This summer’s Ecology Camp will be a canoe trip from Fort Providence to Jean Marie River. Contact Dahti Tsetso at DFN.
- Dehcho AAROM also organized a youth ecology day with the teachers and students in Sambaa K’e.
- Dehcho AAROM and Ka’a’gee Tu FN organized a youth ecology and traditional knowledge day
- Mahsi Cho to all involved with the youth program; our future



4. Partnerships;

- Our major partner, the Department of fisheries and Oceans (DFO) provided core funding to run the AAROM program and provided Aboriginal Fisheries Strategy (AFS) funding for community research and monitoring projects.
- The DFO, AFS program provided funding for fisheries related community-based projects in the Dehcho in 2013-14.

- GNWT, ENR, Water Resources; Agreement with Dehcho AAROM to assist with the collection of water quality data in the Dehcho. ENR provided funding for the Dehcho AAROM water quality project
- GNWT, Transportation provided multi-year funding for the Grayling Habitat Rehabilitation project at Providence Creek.
- Aboriginal Affairs and Northern Development Canada (AANDC), Northern Contaminants Program (NCP), Environment Canada (EC) and GNWT, Health and Social Services; NCP funding to obtain and analyse fish samples for mercury levels; EC analysed the samples and GNWT, Health provided consumption advisories when necessary. NCP provides funding of the “Return to Country Food” workshops. AANDC, Northern Contaminants Program provided funding for Dehcho mercury projects and funding for the Country Food workshop in Kakisa.
- Health Canada funded the community surveys on use levels of country food in the communities. Health Canada provided funding for the “Country Food” surveys and funding of the Return to Country Food workshop.
- GNWT, ENR; Cumulative Impacts Monitoring Program (CIMP) is providing multi-year funding for a mercury bioaccumulation and biomagnification study in Dehcho lakes by Dr. Heidi Swanson of the University of Waterloo. Samba K’e and JMR were partners in the study in 2013. Ka’a’gee Tu and JMR will be assisting with the study this year. GNWT, ENR, CIMP provided funding for the the University of Waterloo bio-accumulation study.

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