



Report of the Dinjii Zhuh Water Summit Inuvik (Midnight Sun Recreation Complex)

February 15 - 17, 2011

Summit Overview

The Dinjii Zhuh Water Summit was organized by the Gwich'in Tribal Council to bring together key individuals from Gwich'in communities, Gwich'in public government agencies and federal and territorial government agencies to discuss water stewardship concerns and issues in the Gwich'in Settlement Area and in upstream jurisdictions. The Summit was intended to define concrete actions that the parties, especially the Gwich'in, should take to improve water stewardship in the Gwich'in Settlement Area.

The key objectives of the Summit were to:

- develop a common understanding of the broad policy, legal and environmental context for water stewardship in the GSA;
- identify Gwich'in concerns regarding the issues affecting water stewardship in the GSA;
- identify the steps that should be taken by all parties and particularly the Gwich'in to improve water stewardship in the GSA, including improved water management guidelines, principles and concrete actions (including research and monitoring, especially community-based monitoring)

The expected outcomes included:

- a common understanding of the context, challenges and opportunities for improved water stewardship in the GSA, and
- commitments to take concrete action in key areas

Participants at the Summit included

- from the GSA: members of the Designated Gwich'in Organizations, Renewable Resource Committees, Gwich'in Social and Cultural Institute
- from federal and public government agencies: INAC, DFO, GLWB, GLUPB, GRRB
- from the GNWT: ENR
- from Yukon resource management boards: Yukon Planning Commission, Yukon Environmental and Socio Economic Assessment Board
- from transboundary and overlap areas: Vuntut Gwich'in First Nation

Others were invited but were unable to attend and sent their regrets.

The key issues discussed at the Summit included:

- **Water quality:** observations and concerns regarding contamination from long range transport of contaminants (by air or water), from nearby sources (including mineral exploration and oil and gas developments in the Peel River basin), from local sources (e.g., municipal waste) and from the cumulative effects of all stressors
- **Water quantity:** observed and predicted changes in flow rates and volumes, implications of future change and the cumulative effects from all stressors including natural variability
- **Transboundary concerns:** status of and concerns related to: the Peel River basin; the NWT - Yukon transboundary agreement; upcoming NWT - Alberta and NWT - BC transboundary negotiations; the Peel River basin land use planning process; and the Gwich'in Land Use Plan
- **Policy:** policy issues and concerns related to the NWT Water Stewardship Strategy and the Action Plan; water stewardship components of the Gwich'in Comprehensive Land Claim Agreement; and community and organizational capacity
- **Climate change:** concerns and issues related to the effects of climate change on the environment including water resources, permafrost and the landscape; the need for research and monitoring; and the development of community - based monitoring programs

The key themes of the Summit were:

- landscape change
- transboundary negotiations
- Gwich'in issues and objectives regarding water stewardship, including water management and water policies

The Summit spanned three days:

- the first day consisted primarily of a series of presentations by various participants and follow up discussions;
- the second day consisted of break-out group discussions focussed on the three themes listed above;
- and the third day focussed on mapping resource use in the area with a sub-theme of finding the most suitable locations for community-based environmental monitoring programs.

Photos by Lawrence Norbert – GTC Communications



Day 1 - Tuesday, February 15, 2011

Mardy Semmler, Director – Lands and Resources, Gwich'in Tribal Council, opened the meeting at 09:00 Tuesday, February 15, 2011 in the community lounge meeting room at the Midnight Sun Recreation Complex, welcomed the participants and outlined the purpose and agenda for the next three days. She then introduced Richard Nerysoo, President - Gwich'in Tribal Council and invited him to make the opening remarks.

Richard welcomed everyone to the meeting and emphasized the importance of the next three days of discussion and planning. Given that much of the water flowing through the GSA originates upstream in other jurisdictions of the NWT and the Yukon, transboundary issues are of primary concern but one could not ignore the need for Gwich'in to do a better job of managing and stewarding their water resources, including dealing better with municipal waste. Richard urged everyone at the meeting to gain as much information as possible about the NWT Water Stewardship Strategy, land use planning, climate change, upstream and local developments, etc. and apply that knowledge to their own activities. He emphasized the need for Gwich'in to take better care when they use water and dispose of waste into or near water and reminded the delegates that they are upstream of someone else. Downstream users need to be protected as well.

Gwich'in need to set high standards for themselves, to change their attitudes about water, and to act accordingly before they can expect others to do the same. **With better understanding and information provided will come better decisions.**

Richard closed by indicating that this meeting was just a first step in developing a collective NWT - YT Gwich'in water strategy and that he would like the next step to be a NWT - Yukon Water Summit, involving all NWT and Yukon Gwich'in communities. The results of the Inuvik meeting would be very important in setting the stage for the larger summit.

Mardy then asked people to introduce themselves and to identify their key issues as they did so. Some of the issues raised included water quality in Airport Lake, sewage treatment in Inuvik and the other communities, the adequacy of INAC's enforcement of water licences, the implications of the Mackenzie Gas Project on community infrastructure (particularly sewage facilities), the need for improved sewage treatment facilities generally (moving away from lagoons and into more advanced treatment technologies such as those used at drill rig camps, mining camps, etc) and transboundary issues, especially with respect to the Peel River basin.

The agenda then moved into the more formal presentations (see attached agenda).

Mardy reviewed the sections in the Gwich'in Final Agreement which refer to water stewardship, including the exclusive right of Gwich'in to use water on Gwich'in lands; Gwich'in responsibilities with respect to the Peel River basin; conservation land water stewardship and management; Gwich'in legal rights with respect to water quality, quantity and rates of flow; the definition of "substantial"; and the need for improved water quality and quantity baseline information to support better decisions by the regulatory agencies.

Erin Kelly (ENR) overviewed existing and proposed NWT transboundary agreements including: NWT - Yukon transboundary agreement (in place, pursuant to the Mackenzie River Basin master agreement); NWT-Alberta Peace/Athabasca/Slave River basin transboundary agreement (proposed, pursuant to the Mackenzie River Basin master agreement); NWT-Alberta Hay River Basin transboundary agreement (proposed, pursuant to the Mackenzie River Basin master agreement); and NWT-BC Liard River Basin transboundary agreement (proposed, pursuant to the Mackenzie River Basin master agreement). One of the unresolved issues is Aboriginal government representation on the transboundary negotiations teams and Erin indicated that a letter from the GNWT to the NWT Aboriginal governments is en route, requesting suggestions as to who might represent Aboriginal governments at the negotiating table, how many, roles, etc. She noted that the information gathering process for the upcoming NWT-Alberta Peace/Athabasca/Slave negotiations has been underway for some time and would continue through 2011 with formal negotiations to start in 2012.



People agreed that we need to know much more about our water resources, particularly with respect to the Slave River system, that the NWT-Yukon agreement was unsatisfactory and should be revised (with direct Gwich'in representation at the negotiating table), and that governments (particularly YTG) did not seem to be sufficiently concerned about the need to protect the Peel River basin. Erin committed to bring these issues and others that arose during the workshop back to ENR.

Sue Mackenzie (Gwich'in Land Use Planning Board) overviewed the Gwich'in Land Use Plan, its authority and scope, Plan development and review/amendment processes, zoning considerations, the application of the Plan in the regulatory process, its role in the overarching environmental stewardship framework, linkages to the NWT Cumulative Impact Monitoring Program and the NWT Water Stewardship Strategy, and the current five-year review. It's expected that the revised Plan will be complete by the end of March 2011 at which time it will be taken to communities for another round of consultation before it is referred to the GTC, GNWT and the federal government for approval. Sue noted that water management is a very important component of the Plan, that the Peel River basin and the Arctic Red River basin both feature prominently in the Plan and that there is strong interest in working with the Inuvialuit and others to address the Mackenzie Delta as a whole.

David Keenan of the Yukon Environmental and Socio-economic Assessment Board spoke next. David outlined the mandate of the YESAB, noted that it had completed about 1200 assessments since 2005, that there had been only one (1) court challenge in that time (and that directed at the YTG, not YESAB), that most of the assessments to date had taken place at the Designated Office (DO) level, the balance at the Executive

Committee level and that none had proceeded to panel. The YESAB is advisory only, not decision-making. At the DO level, YESAB recommendations can be altered by the YTG in any way it sees fit, without consultation with YESAB. At the Executive Committee level, the YTG must explain any changes it makes. David indicated that only once (and that recently) had a project that had been approved by YESAB been subsequently rejected by the Yukon Water Board. Not many projects in the Peel River basin have been considered by YESAB to date but YESAB recognized the sensitivity of the area and is anticipating that the Peel River Watershed land use plan will provide important guidance when it is approved. David noted that TK and western science have equal weight in the YESAB process, that YESAB findings are only as good as the information provided to them, that cumulative effects assessment is a major challenge, that YESAB does not deal with policy/land use planning issues and that the staking moratorium in the Peel River basin had been extended for another year.

Mardy Semmler (GTC) then overviewed the development process for the Peel Watershed Regional Land Use Plan. She noted that the draft Plan had been returned to the Planning Commission for further revisions following review by the YTG and that the YTG's major concern was the amount of protection in the draft Plan. The Gwich'in want 100% protection; the YTG (and industry) wants much less land protected, leaving more open for potential mineral and oil and gas development. Mardy indicated that the revised draft would be discussed at community meetings scheduled for summer 2011 and that it will be very important that Gwich'in engage forcefully and effectively in those discussions if the goal to achieve 100% protection has any chance of success.

Robert Alexie Jr. of the Gwich'in Land and Water Board overviewed the mandate and procedures of the GLWB and noted that the Board has never referred a project to review nor rejected an application and that only once has it requested a security deposit. In 2010 it reviewed and approved 9 land use permits, 2 water licences, 1 extension to a land use permit and 2 water licence renewals. It held a technical workshop to update communities on the regulatory processes and is participating in the Mackenzie Valley Land and Water Board regulatory improvement working groups.

Claire Marchildon of the Department of Indian Affairs and Northern Development overviewed the NWT Cumulative Impact Monitoring Program, noting that the mission of the program is "to watch and understand the land and use it responsibly forever". She described the monitoring process, overviewed the monitoring framework and the role of communities, described the "dead zone" in the outer Mackenzie delta, vegetation plots and permafrost monitoring programs and discussed community-based monitoring initiatives. The latter included a youth/elder camp where participants were equipped with cameras and GPS to record observations and link them with stories of the land. She also talked about a TK camp that was held in the "dead zone". The camps provided very important learning experiences and opportunities for all participants.



Steve Kokelj, also from DIAND, talked about water quality and water quantity monitoring programs lead by Andrea Czarnecki (DIAND) that were conducted in the Peel River basin and about the landscape changes that are occurring in the Peel River basin. He noted that water quality in the Peel River basin is very good overall. Steve showed a dramatic video of extensive and rapid permafrost melt and resulting landscape change and heavily sediment-laden creeks that were previously clear. Steve observed that the extent of current landscape change is unprecedented in recent geologic history (as is the “dead zone” occurrence) and very likely a consequence of climate change, including warmer summers and heavier than normal rains. He is very interested in continuing to work with Gwich’in communities to develop monitoring programs in the Gwich’in area to further track and understand these changes and asked for feedback and direction from the group over the next few days.

David Livingstone overviewed some of the effects of climate change in the Mackenzie Delta and nearby area, summarizing recent studies by Steve Kokelj and others showing significant warming of permafrost throughout the region, the “dead zone” phenomenon and the effect of permafrost melt on lakes and the broader landscape of the region.

Amanda Joynt of the Department of Fisheries and Oceans spoke about the mandate of DFO, its’ “no net loss” policy and other relevant water and fish stewardship policies, DFO’s operational statements, licence compliance and effects monitoring and some of

its research and monitoring programs. Amanda overviewed DFO's Dolly Varden habitat assessment and population monitoring program and its Ft McPherson slump studies (with Steve Kokelj). She noted that Dolly Varden recruitment suffered in 2010 as a consequence of habitat change related to heavy sedimentation of creeks caused by slumping.

Day 1 concluded with a presentation by Sevn Bohnet (DIAND) and Erin Kelly (ENR) about the NWT Water Stewardship Strategy. Sevn overviewed the development of the Strategy and its current status, noting the Action Plan was nearing completion. He circulated copies of the draft Action Plan and asked that any comments or concerns be forwarded to him or Erin as soon as possible so that they can be addressed. It's expected that the Action Plan will be finalized and released in late March or early April 2011.

Erin Kelly talked about source water protection programs and planning. Source water protection is a community priority everywhere, a key element of the Water Strategy and is an area where community-based monitoring could be very effective. The first steps are updating community catchment area maps, the identification of risks to source water and the development of mitigation plans. To help with this, ENR is working with Robert Patrick to develop a model "source water protection plan". Dr Patrick will soon be visiting communities in the NWT to develop "made in the NWT" plans.

Delegates then spent some time reviewing the day's presentations and discussions. The issue of climate change came up several times with speakers noting that it is important that not everything that is changing or that is harmful be attributed to climate change. Upstream contamination is causing concern and natural cycles are also resulting in changes that are not beneficial. Others emphasized the importance of keeping everyone informed and engaged in the implementation of the NWT Water Stewardship Strategy and particularly the Action Plan. Emerging from this discussion was the suggestion that region-specific action plans be developed, including one for the Gwich'in, e.g., a Gwich'in Water Stewardship Strategy, pursuant to the broader and more general NWT Strategy.

Day 2 - Wednesday, February 16, 2011

Day 2 involved the participants breaking into three working groups. Each group dealt with three themes over the day:

- transboundary issues;
- water policy and stewardship issues;
- and community-based monitoring and landscape change.

The key issues and findings from the discussions are summarized here. The detailed flip-chart notes are available from the GTC.

Theme 1: Transboundary Issues

At the start of each of the three working group sessions, Erin overviewed the current situation with respect to transboundary agreements, notably the NWT-Yukon transboundary agreement and the upcoming negotiations with Alberta on the Peace/Athabasca/Slave transboundary agreement. While each group discussion was different, common themes emerged. These are summarized below.

Peel River Basin transboundary agreement

The Gwich'in, particularly the Tetlit Gwich'in of Fort McPherson, have very strong ties to the Peel River basin. Ft McPherson wants no development in the Peel River basin and this position is supported by other Gwich'in communities, including those in Yukon. The challenge, as with the Peel River Watershed land use plan, is to get the YTG to understand and respect Gwich'in views about the Peel basin and to recognize Gwich'in needs

None of the participants were satisfied with the current NWT-Yukon transboundary agreement and noted the following concerns, among others:

- there is no Gwich'in signatory to the present agreement
- there was no Gwich'in involvement in the negotiations that lead to the agreement



- there is little or no communication regarding the implementation of the agreement, including the outcome of the bi-annual Yukon-NWT meetings and follow-up actions
- the agreement itself has little real substance. Key sections are left unfinished or are little more than “guidelines”
- the agreement does not support Ft McPherson’s position that there should be no industrial development in the Peel basin and does not reflect a vision of a strong traditional economy for the region

- the agreement does not address current development pressures in the region and does not incorporate the elements modern transboundary water management agreements should contain (as described in the NWT Water Stewardship Strategy)
- the agreement does not adequately support the intent of the Gwich'in Final Agreement
- the agreement does not define "substantial" or provide any measure or process for doing so
- meetings should be annual rather than bi-annual and the results should be directly communicated to the communities

All agreed that the NWT/Yukon agreement must be carefully reviewed clause by clause and re-negotiated to address the above shortcomings. Gwich'in must be directly represented at any re-negotiations, elders should inform the negotiations, and the negotiators themselves must be informed, knowledgeable and support Fort McPherson in its position regarding development in the basin. The new agreement should follow the principles of the Gwich'in Comprehensive Land Claim Agreement and the NWT Water Stewardship Strategy, including the need to approach negotiations from an ecosystem and water basin basis. Source water protection should be incorporated in the agreement. Any revised agreement must be effective and meaningful, e.g., water quality and water quantity objectives must be clear, measurable and protective of the natural environment; the agreement itself must be in plain language and it should incorporate the objective of entirely eliminating harmful contaminants in water. Communities should be able to send delegates to meetings and there must be a process set out in the agreement to ensure effective reporting back to communities.

The revised agreement needs to include effective monitoring and research programs to identify and track changes to the environment and enable the determination of cause, effect and significance. These programs should incorporate scientific, community and TK-based monitoring and observations to measure change. The agreement should establish benchmarks and define what a "substantial" deviation from those benchmarks would be. The agreement should also be consistent with other environmental stewardship policies and plans, including the land use plan and any subsequent management plans.

Finally, many participants felt that re-negotiation of the current NWT-Yukon transboundary water management plan should begin immediately.



Peel Watershed Regional Land Use Plan

The Tetlit Gwich'in of Ft McPherson are “the people of the headwaters” and the Peel watershed is their traditional territory. It is a nearly pristine land and the Gwich'in want to keep it that way. The people of Ft McPherson are the first to be affected by development in the Peel River watershed and they want it entirely protected. That position is supported by other Gwich'in communities, including Mayo, Dawson and Old Crow in the Yukon.

However, the basin falls into two jurisdictions - the NWT and the Yukon - and when it comes to the regional land use planning process within Yukon it is the YTG that makes the final decision. This jurisdictional split raises many issues, particularly when the views of the YTG and the Gwich'in do not coincide. The Gwich'in feel that the YTG is not listening to them, doesn't use the area but makes the final decision in its own (economic development) interests. While there are overlap provisions in the Gwich'in Comprehensive Land Claim Agreement, which includes the Yukon Transboundary Agreement, Gwich'in are disappointed in its implementation. They feel the spirit and intent of the agreement are not respected, interpretation is inconsistent, that the benefits to flow from the agreement are not going to the people and that there is simply “too much politics” at the leadership level.

The delegates felt strongly that a number of things need to happen before they can be confident that their message of 100% protection of the watershed is going to be heard

clearly by the Yukon Planning Commission and the YTG. Among them are the following:

- the GTC needs to get more fully and effectively engaged in the land use planning process and to support Ft McPherson's position;
- the GTC representative must be knowledgeable, familiar with issues and represent the views of the Gwich'in constituents;
- the GTC needs to speak directly with YTG and lobby for protection and when it does it then must report back to communities for further advice and direction;
- CYFN and GTC need to work and lobby together;
- relationships among communities need to be strengthened so that there is a strong unified Gwich'in voice speaking on this matter (and others);
- in Ft McPherson info needs to be shared more effectively and elders need to be more involved;
- and the Yukon Planning Commission needs to do a better job of explaining the plan and allowing for solid engagement by the Gwich'in Participants.

Ft McPherson is ready for the summer hearings on the re-drafted land use plan and in addition to 100% protection the community wants a co-operative Peel basin management plan, a cooperation protocol with YTG, a source water protection plan, strong monitoring and research programs, stronger enforcement and a focus on traditional uses (trapping, cabins, tourism, country foods and medicines). Gwich'in recognize that they must use the land more because if not, industry will. Industry and government believe that the "old way of life is gone; it's time to develop". The adage "*use it or lose it*" applies.

Participants felt strongly that the land use plan, the management plan and the transboundary water agreement must all fall under the umbrella of the GCLCA.

Peace/Athabasca/Slave Transboundary Waters Agreement

All participants agreed that there must be Aboriginal representation at the negotiating table, as part of the NWT negotiating team. While many felt that it might be possible to have one Aboriginal representative for all NWT Aboriginal governments and an Aboriginal Governments Working Group to provide direction to that individual, there was not unanimity on this point. There was consensus that any agreement must include real, effective monitoring, that the environment must come first and that it must be consistent with land claims agreements and Treaty and Aboriginal rights.

There was agreement that there should be at least one representative per region to the Aboriginal governments working group, that the working group should include harvesters, that traditional uses must continue on the river ("*use it or lose it*"), that developers must consider acceptable technologies (small scale, alternative energy) and that while they recognized that there would likely be no Aboriginal representation on the Alberta team, some preferred that each region have its own representative at the negotiating table.

Arctic Red River Basin

The Arctic Red River watershed is also important to Gwich'in. While the level of activity is currently low (some mineral claims staking but no development so far) environmental monitoring and research programs and traditional use programs need to be emphasized and increased. The need to study and monitor very carefully prior to any potential development is high here, recognizing that there are pressures and that contaminants are already present through long range air and water transport.

Communication and Leadership

All participants emphasized the need for more and better internal communication and engagement on all issues. People need to know what's happening in order to prevent issues from occurring, not just react to them. Representatives need to seek advice, make a decision and then report back - and that loop needs to continue as often as necessary.



Participants recognized that their actions send messages to others. For example, Gwich'in private lands are being considered for oil development, including the private lands within conservation zones. People recognized that caution was required here, that a positive example must be set. It is important to use water more efficiently, to educate one another and to work together, recognizing that each person is responsible individually and collectively, and that there are people and ecosystems downstream of the GSA. The Gwich'in have both the responsibility and opportunity to educate the world, not just local NWT and Yukon. FaceBook is one tool that can be a powerful aid in getting messages out to not just youth but to the rest of the world.

Communication needs to be 2-way, effective, frequent, early and in clear, simple language. It needs to be clear and effective within communities, among communities, with GTC, with government and with all other parties (including other regions, industry,

etc). Aboriginal governments must speak out, be clear and forceful and educate others about their land claims and rights. Good, effective spokespersons are badly needed.

Participants were clear that they need the GTC to be more active, to promote and defend their interests (e.g., to support research and monitoring and to speak directly with the YTG regarding the Peel River Watershed land use plan), to report back to communities and get further advice/direction. GTC representatives need to be knowledgeable, familiar with the issues and represent the views of Gwich'in constituents.

Participants emphasized the need for accountability and coordination. They felt that the GTC was not communicating well enough, that they needed better updates at the Annual General Assembly, and that the RRCs could be used more effectively as a communication vehicle. They want more clarity with respect to funding issues, as it is not obvious or transparent why certain decisions were or are made.

Ultimately, there is a strong feeling that people are divided and divided further, from territory to region to community to individuals and that they need to re-connect. All still need fresh, clean water, caribou, moose and must work together to protect the land. People need to share perspectives and develop a common view through understanding and respecting each other. It isn't just about money but about values and vision.

Research and monitoring

All participants agreed on the urgent need for more and better research and monitoring programs to address issues of concern to communities. Communities need to be involved throughout the design, implementation, interpretation and reporting of research and monitoring programs. While participants certainly appreciate and value the work of all researchers, they were less trusting of the results of government or industry-lead programs than they are of university studies. In any case, Gwich'in must be more involved at all levels. When it comes to water in particular, Gwich'in feel strongly that an independent regulatory group is needed to set the best standards for water quality, and to undertake rigorous and reliable monitoring.

Participants are well aware that the landscape is changing rapidly, that there are fewer spring birds, that other changes are occurring. It's unclear why this is happening but the change is unmistakable and all must work together to understand the causes and effects, to take better care of the land, to make better decisions. Research needs to take into account the watershed as a whole; the broad landscape; the cumulative effects of all pressures in a holistic fashion. They are concerned that good science and TK are being ignored or superseded by politics. Overall, people emphasized that there is little value in research and monitoring if the information is not well managed and made readily available to people, particularly communities.

Theme 2: Water Stewardship and Water Policy

Participants were clear and unequivocal throughout the workshop about several key messages, among them:

- “We are serious about our water.”
- “It’s up to us to make the changes.”
- “Water stewardship starts in the home.”
- “We are seeing the changes from other regions.”
- “They are fighting for their livelihoods.”
- “We have to protect our land now.”
- “We need to be proactive not reactive”.

Participants recognized that to be most effective the Gwich’in need to work together and speak with one voice. They need to build partnerships among individuals, organizations and communities first within the NWT, then with Gwich’in in Yukon and then more broadly with others. At the same time many said, “*enough meetings, workshops and conferences: get it done!*”

Information, communication and engagement

“Communication is key” was a message repeated many times during the workshop. It begins in the community among organizations (including schools) and extends to other communities and organizations, including the GTC. Communication tools range from regular meetings, school programs, videos of meetings and other significant events, local radio announcements, newspapers, websites, Facebook, etc.

Participants recommended that Gwich’in develop a regional water stewardship program which engage communities in the Water Stewardship Strategy and would address:

- the definition of “substantially unaltered”;
- the need for increased enforcement;
- community best practices with respect to water use and waste disposal practices;
- involvement of elders and youth;
- community clean-up programs;
- schools programs;
- community-based monitoring programs;
- coordination, information management and communication protocols;
- capacity building and training of fieldworkers and environmental monitors in the community and on the job; etc.

Participants recommended that additional attention be paid to enabling people to gain a better understanding as to how water is used in industrial developments, the long-term impacts of those developments, the respective roles and needs of individuals and

organizations involved in water stewardship, how their community can be involved and have a positive effect, and developing a central location in each community where people could get information on water and the Water Strategy.

Leadership

Participants emphasized the need for passionate people to spread the word at the community level, to demonstrate leadership and to provide a role model and catalyst for others. Perhaps the most effective way of showing leadership is by demonstrating best practices. The example of an elder in one community who quietly goes about cleaning up local trails was seen as particularly instructive. Another approach would be to bring elders to schools to explain how they had to live before all the modern technology made life easier: getting water and wood, thawing out food for themselves and for cooking dog food, made people appreciate the value of water so much more.

At higher levels, participants are looking for much more engagement by the GTC in all aspects of the NWT and Gwich'in water stewardship strategies and related programs.

Partnerships and capacity

Participants underscored the importance of everyone working together and joining together with their neighbours and other FNs to get a common understanding of one another's needs in the context of water stewardship. Hunters, trappers, elders and youth are key participants and partners in each community; building on existing organizations (e.g., RRCs) will make the job easier. Outside partners include industry, government, scientists and researchers, non-government organizations and others. In the case of governments, participants were clear that the responsible agencies must commit to implementing the NWT Water Stewardship Action Plan, including providing the necessary capacity to the GTC, RRCs and communities so that they can be part of the implementation of the Water Strategy and lead the development of a Gwich'in water strategy.

Participants endorsed a larger forum to bring more people together (including media) to show the rest of Canada and the world what they are doing. The forum could include other regions of the NWT, other affected FNs in YT, N Alberta and BC, industry, non-government organizations and academia. Impacts in other regions affect Gwich'in interests and vice versa, so it is important that people understand and support each other.



Theme 3: Community-based monitoring and landscape change

The break-out groups discussed a range of concerns, observations and opportunities related to landscape change and community-based monitoring programs. They shared their concepts and definitions of “community-based monitoring”, reviewed the process of developing, implementing and reporting on monitoring programs, and the many challenges of community-based monitoring. The latter include issues of capacity, training, resources, logistics, clear definition of roles and responsibilities, protocols to ensure that monitors can collect good, comparable information, information management, communication plans, etc. Participants then discussed potential monitoring themes and possible locations for wide-ranging monitoring studies.

Community-based monitoring

A key challenge in community-based monitoring, as it is almost everywhere else, is **communication**. Participants discussed the need for excellent communications and potential tools to ensure everyone knows what is going on. Good interagency relationships to facilitate information exchange, quarterly newsletters, websites (the Arctic Borderlands Co-op website was cited as a good example), solid information management and documentation, data storage, etc. are all important aspects of communication.

Monitoring information materials should be interesting, written in plain language and easy to understand by all, supported by visual aids (video, photos, maps) wherever possible and presented by good communicators. Workshops can be good “if the right people come”.

Roles and responsibilities need to be clear to avoid confusion and to maximize efficiencies. RRCs, the LWB, land users, government agencies - all need to know who is doing what on the land and to be able to share that information readily. All need to understand their respective roles and the roles of the others to be able to work together effectively and efficiently.

Training and education is critical. Monitors need training in scientific methods and scientists need training on how to operate safely on the land, to observe change and to understand local protocols. Training needs to be continuous and dynamic. Local involvement is central to the success of community-based monitoring programs and while more Gwich'in are becoming involved in science, more science needs to be taught in the schools, at youth centres and at day camps. “Nature days” such as DFO’s Oceans Day are important in getting the messages out. It is also important to have some formal certification for environmental or local monitors such as standard first aid, wilderness first aid, firearm’s safety, boat safety, etc. This can be coordinated at the community level.

Youth need to be involved but they don’t have the necessary land skills and need training and guidance. However, as in Old Crow where youth are involved in research and do the work, one can see positive changes over a single summer. Yukon College, Aurora College and other learning institutions provide environmental monitor training; RRCs are pushing to incorporate traditional skills in school; community schools can help by incorporating field work into the curriculum and supporting field studies and traditional knowledge programs. Finally, safety training is very important for both community people and outside researchers.

Research and monitoring programs

Participants discussed various aspects of research and monitoring programs:

- collection of baseline information;
- climate change phenomena and related landscape change;
- year-round vs seasonal programs;
- data accessibility;
- field workers and monitors;
- and the importance of place names.

Landscape change monitoring and research opportunities abound in the GSA and include areas with bluff slides, permafrost exposures, overflow and icing, draining lakes, associated impacts on fish, ducks, animals, and the possibility of working with other researchers already active in the area.

The **Arctic Red River basin** is very important to residents and lacks both baseline information and ongoing monitoring in all fields.

The **ferry crossings** offer the opportunity to monitor the effects of vessel traffic, truck traffic, effects of imported seeds, mud disturbance, increase in sediment loading from ferry landings, calcium from roadbeds, etc.

Airport Lake experiences effects from inappropriate sewage and waste disposal, including depletion of dissolved oxygen.

Rat River char research is ongoing and offers the opportunity for add-on research and monitoring programs with reduced logistical burden.

Dempster Highway icing and overflow is a relatively new phenomena at the scales now being seen and may be related to shallower freezing of the active layer and upwelling ground water. Caribou Creek is one site of particular significance.

Day 3: Traditional Knowledge and Mapping Workshop

Day 3 involved the large group breaking into two small working groups and mapping out traditional land use areas, important habitat, areas of interesting landscape change and areas where community-based monitoring projects might be established. Maps are available from the GTC.

The Inuvik/Aklavik mapping group noted numerous areas of slumping (Willow River, Black Mountain Creek, Semple Creek, Jimmy Creek) and agreed that the Black Mountain Creek area would be a good site for a community-based monitoring program. Canoe Lake would also be a good monitoring area.

Much of the information discussed on the morning of day 3 was consistent with headings identified above. Areas of icings and overflow were identified along the Dempster Highway between Inuvik and Tsiigehtchic, just south of Caribou Creek and between Tsiigehtchic and Fort McPherson; also this phenomena had displaced a long time resident George Niditchi from his home and property half way up the Dempster Hill on the McPherson side of the Mackenzie River Crossing.

These icings have always happened along the highway, but seem to be more frequent now. George Niditchi had lived on the McPherson side of the Mackenzie River since the construction of the Dempster Highway, but the icing just started forming there in the last five years or so and ultimately flooded him out approximately three years ago. His only recourse was to relocate his house to the top of the hill. It is thought that a small lake on top the hill and inland eventually drained over the course of four or five years to cause the overflow that flooded his house and sheds during the fall freeze up and spring thaw.

Many spoke very passionately about Gwich'in involvement in monitoring and felt they should be the ones monitoring change on the landscape, and in areas of concern – the issue of the Ferry Crossings was raised and it was felt that samples could be taken upstream and downstream of the Ferry at Eight miles (at the Peel River Crossing) by community members.

There was also interest in sampling outflows of streams from the Peel Plateau, in particular those which have Dolly Varden Char species.

Several participants suggested that the video medium was an effective way to convey landscape change and scientific information to communities; it was suggested that cameras could be an effective way of tracking changes or areas of interest and/or concern.

Several travel routes were discussed and it was suggested that scientific studies could refer to Gwich'in place names so that locals better understood where scientists were working.

Training of community members was felt to be important. This included both improving the capacity to conduct scientific data collection, but also with respect to gaining safety and first aid training.

Field based discussions were thought to also be an effective way of sharing knowledge – it's hard to talk about some of this stuff in a meeting and the better venues to collect relevant information may be close to the area of discussions.

Conclusions

Participants agreed that the three-day workshop had been very useful and a good building block for a Gwich'in based water stewardship program. They felt the workshop achieved all its objectives. Participants stressed the importance of the NWT Water Stewardship Strategy Action Plan being workable, practical, effective and beneficial at the individual, organization, community and regional levels as well as the territorial level. They agreed that the Gwich'in should move forward on their own strategy and work with other Gwich'in communities in setting a positive example for other jurisdictions in the NWT and elsewhere. The next step may be a Gwich'in Water Summit involving Gwich'in from both the NWT and Yukon.

Attachments

- ***Workshop Agenda***
- ***Participant List***
- ***Workshop Evaluation***
- ***Presentations***



ATTACHMENTS

1. Workshop Agenda

Dinjii Zhuh Water and TK Mapping Workshop 2011

Gwich'in Settlement Region

Peel River, Mackenzie River Watersheds

February 15 – 17, 2011 – Inuvik Community Lounge (Old Curling Club) - MSRC

Agenda

February 15 – Day 1 - Water Workshop

Opening remarks, introductions and agenda review

Objectives

- a common understanding of the broad policy, legal and environmental context for water stewardship in the Gwich'in Settlement Region (GSR);
- identify Gwich'in concerns regarding the issues affecting water stewardship in the GSR; and
- identify the steps that should be taken by all parties to improve water stewardship in the GSR, including improved water management guidelines, principles and concrete actions.

09:00: Welcome and Opening Remarks – Gwich'in Tribal Council President Richard Nerysoo (15 minutes)

Introductions (round table) (10 minutes)

Overview of purpose and objectives of the workshop – Workshop Chair Mardy Semmler (15 minutes)

Comments and discussion (15 minutes)

Policy Context

1000: Water stewardship provisions in the Gwich'in Final Agreement (GTC)

1020: Transboundary issues and negotiations (ENR) – Erin Kelly

1040-1100: Break

1100: Gwich'in land use plan (GLUPB) – Sue Mackenzie

1120 Regulatory Process and Development activities in the Peel River basin (YESAB) – Dave Keenan

1145: Peel River basin land use plan next steps (GTC) – Mardy Semmler

1200-1330: Lunch

Biophysical context

1330: Gwich'in Land and Water Board – roles and responsibilities - Robert Alexie Jr.

1400: NWT Cumulative Impact Monitoring Program (INAC) – Claire Marchildon

1415: Community-based monitoring programs (UBC, INAC) – Claire Marchildon

1430: Water quality and water quantity monitoring programs in the Peel River basin (INAC) – Steve Kokelj

1450: Landscape change in the GSA (INAC) – Steve Kokelj

1500: Climate change and implications for the GSA - David Livingstone

1515-1530: break

1530: Regulatory aspects of DFO and water management – Amanda Joynt

1550: NWT Water Stewardship Strategy (INAC, ENR) –Sevn Bohnet/Erin Kelly

1610 – 1645: facilitated round-table discussion about what people heard during the day, their concerns and observations, and an outline of what will happen on day 2.

1645: wrap up of day 1 (chair)

February 16 – Day 2 - Water Workshop continued

0900: Summary of day 1 (key observations, issues) and outline of day 2 activities (chair)

0920:

0945: break-out groups

- **Transboundary issues and Negotiations**
- **Water stewardship policy issues – action plan**
- **Landscape change and community-based monitoring**

The three break-out groups will be tasked to discuss various elements related to the three themes and to develop recommendations as to how to best address the challenges/capture the opportunities arising.

1045 - 1100: break

1100: resume break-out sessions

1130: plenary

1200-1330: lunch

1330: resume break-out sessions

1515 - 1530: break

1530 - 1600: resume break-out sessions

1600: plenary and wrap-up (facilitator)

1645: concluding remarks (chair)

February 17 - Day 3 – TK Mapping Workshop – Gwich'in Participants, Facilitator, INAC staff

9:00 – 12:00

Break Out groups to discuss each

- traditional/cultural use areas for harvesting of fish, wildlife, berries, plants, fresh water lakes etc;
- traditional trails and routes into the mountains and to lakes, rivers and the ocean;
- information with regard to seasons ie: temperatures, precipitation including both snow and rain, duration; and
- permafrost degradation areas and additional information that may support climate change.
- add observed changes in streams

1:30 – 4:00

- **Mapping sessions to identify areas of interest**

2. Participant list

Name	Organization
Mardy Semmler	GTC
David Livingstone	GTC Facilitator
Ian McLeod	EGC
John Carmichael	EGC
Richard Ross Sr	EGRRC
Burt Bullock	NGRRC
Barry Greenland	NGRRC
William Francis	NGC
John Jerome	NGC
Allen Firth	NGRRC
Georgina Vaneltsi	TGRRC
Wanda Pascal	TGC
Diane Koe	TGC
Richard Wilson	TGRRC
Johnny Peterson	TGRRC
Annie Jane Modeste	GSCI
John Norbert	GGRRC
Peter Ross	GGRRC
Phillip Blake	GGC
Jason McLeod	GGC

Carl Charlie	VGFN
Robert Alexie Jr	GLWB
Helga Harlander	GLWB
Leonard Debastien	GLWB
Johnny Edwards	GLWB
Fred Koe	GLUPB
Sue Mackenzie	GLUPB
Charlie Snowshoe	GLUPB
Fanny Greenland	GLUPB
Julie Ann Andre	GLUPB
Sevn Bohnet	INAC
Erin Kelly	ENR
Amanda Joynt	DFO
Steve Kokelj	INAC
Claire Marchildon	INAC
Bobbie Milnes	YESAB
Dave Keenan	YESAB
Gerry Kisoun	GLWB
William Koe	GLWB
Kris Maeir	GRRB
Amy Thompson	GRRB
James Firth	GRRB
Michelle Culhane	INAC
Gina Firth	GTC

3. Summary of Participant Comments – Workshop Evaluation

Was the information provided adequate for the workshop?

- Yes X 5
- All of them concerning water
- Yes – presentations should have sufficient time based on what they are presenting
- Yes, the pamphlets were good and all the presenters had valuable information
- Yes – lots of information
- The information provided was very useful and informative
- Very well coordinated

Would you like additional information provided and if yes, what information would you like provided?

- More information on water strategy plans and in plain language
- More about the oil sands and dams in Alberta
- Information at this workshop was good enough

- Yes, all information relating to workshop
- Yes, most of what was discussed in a small book form
- No, I am ok for information
- Seems like more from MACA would be good.
- A copy of the end result, even electronically
- More actual photos/videos like the one shown on “slumps” – the actual photos/videos were an eye opener
- Yes
- Good information at this time

Do you think more participants should be provided this information, if yes, who?

- Yes – community members, youth , elders
- People from Fort Chip and Ft McKay, Alberta
- Proper resource persons who are capable of bringing information back to the communities
- Yes, maybe promote before and after on CBC and local radio stations
- Elders or middle age people who are strong speakers, Also Youth, so they can learn
- Who ever is interested in this issue should make an effort to get this information. NRTP students should have a class on this info.
- Yes, through community open houses, schools.
- All water users.
- More Participants like: our MLA’s, Students, Harvesters, Government
- MACA
- Yes, school students 7 – 12 grades

Would you attend another workshop of this kind?

- Yes X 5
- More about how we are going to work on the transboundary area
- Yes good information sharing
- Good communication within all communities
- Yes, it is very informative
- Yes, definitely invite me
- Maybe
- Yes, most definitely, Personally, I will give out information in my own community.

Do you have any suggestions to make this kind of workshop better?

- More videos, pictures, things that are actually happening on the land
- Have more aboriginal people coming in from along the Mackenzie River
- I feel that it was rushed and more time should have been allotted
- Yes, the more information given is good, also people who are for or against.
- No X 2
- Focus the breakout groups on specific questions
- Ensure that what came of this meeting is usable and beneficial
- First of all, a BIGGER meeting place, more representatives from the Yukon.
- More parties involved: Inuit, up river Sahtu, Dehcho, students

4. Presentations

(see GTC or authors for copies of Powerpoint presentations)