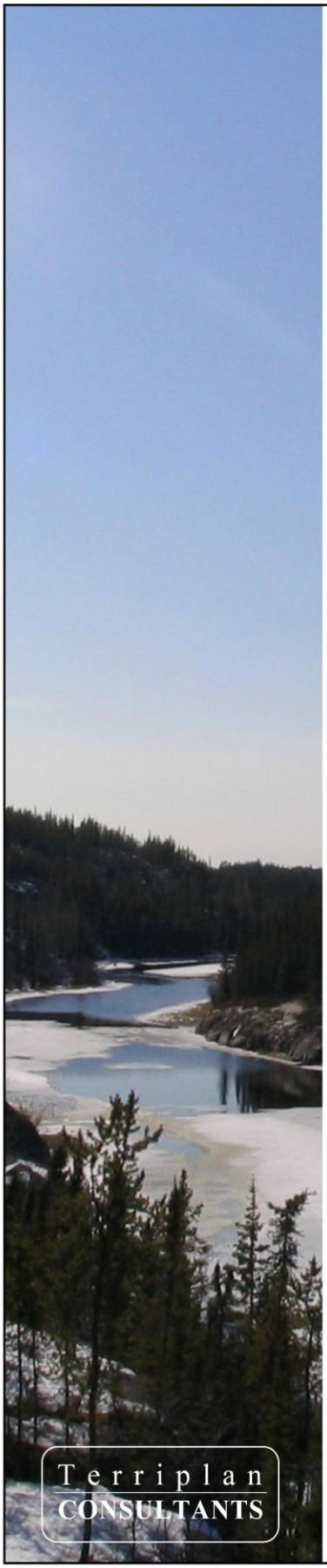

NWT

Water Resource Management Strategy

January 28th, 2009
Copper Room, YK Inn
Yellowknife, NT

DRAFT
Summary Report

Terriplan CONSULTANTS

Northwest Territories

Indian and Northern Affairs Canada

Affaires indiennes et du Nord Canada

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NWT Water Resources Management Strategy
Workshop #1: *Vision and Principles*

January 28, 2009
8:30 a.m. – 4:30 p.m.

1.0 INTRODUCTION

On January 28, 2009, Terriplan Consultants assisted with the first of several workshops planned to engage stakeholders on aspects of a proposed NWT Water Resources Management Strategy. This initiative is directed in partnership by GNWT, Environment and Natural Resources, and Indian and Northern Affairs Canada. The first workshop was attended by over forty participants representing government, industry, Aboriginal organizations and ENGOs, who assembled to discuss the first components of a proposed strategy: vision and principles.

The workshop was preceded by a pair of meetings on January 27, 2009. The first of these was the inaugural meeting of an Aboriginal Steering Committee which is assisting in the development of the strategy. The second meeting was an informational briefing made to representatives of various Northern boards with decision making responsibilities and interests potentially affected by the development of a strategy. Most participants of the January 27th meetings also participated in the workshop on January 28th.

Participants	
Deborah Archibald	GNWT, Industry Investment and Tourism (ITI)
Richard Binder	Inuvialuit Regional Corporation (IRC)
Gary Bohnet	GNWT, Environment and Natural Resources (ENR)
Sevn Bohnet	INAC, Water Resources Division
Christian Bucher	Parks Canada
Mark Cliffe-Phillips	Wek'èezhìi Land and Water Board (WLWB)
Lani Cooke	Canadian Parks and Wilderness Society (CPAWS)
Vice-Chief Don Deranger	Mackenzie River Basin Board, Saskatchewan Aboriginal Representative (MRBB)
Doris Eggers	GNWT, Environment and Natural Resources (ENR)
Samuel Gargan	Dene First Nations
Ray Griffith	World Wildlife Fund Canada (WWF)
Anita Gue	Environment Canada, Water Quality (EC)
Bruce Hanna	Fisheries and Oceans Canada (DFO)
Helga Harlander	Gwich'in Land and Water Board (GLWB)
Joel Holder	GNWT, Environment and Natural Resources (ENR)
Peggy Holroyd	Pembina Institute
Renita Jenkins	Mackenzie Valley Environmental Impact Assessment Board (MVEIRB)

Doug Johnson	Mackenzie River Basin Board, Saskatchewan Aboriginal Representative (MRBB)
Robert Kelly	Sahtu Secretariat Inc. (SSI)
Aiyana Lajeunesse	GNWT, Environment and Natural Resources (ENR)
David Livingstone	INAC, Renewable Resources
Gord Macdonald	Rio Tinto
Sonny MacDonald	Mackenzie River Basin Board, NWT Aboriginal Representative (MRBB)
Jane McMullen	GNWT, Environment and Natural Resources (ENR)
Paul Mercredi	Mackenzie Valley Environmental Impact Assessment Board (MVEIRB)
Trish Merrithew-Mercredi	INAC NWT Regional Directorate
Tyree Mullaney	Mackenzie Valley Land and Water Board (MVLWB)
Tara Naugler	GNWT Executive
Zabey Nevitt	Wek'èezhìi Land and Water Board (WLWB)
Mike Peters	Canadian Association of Petroleum Producers (CAPP)
Angela Plautz	Mackenzie Valley Land and Water Board (MVLWB)
Kathy Racher	Wek'èezhìi Land and Water Board (WLWB)
Bob Reid	INAC, Water Resources Division
Hugh Richardson	GNWT Executive
Shannon Ripley	Ecology North
Chief Edward Sangris	Yellowknives Dene First Nation
Jennifer Skelton	GNWT, Environment and Natural Resources (ENR)
Vincent Tam	GNWT, Public Works and Services (PWS)
Rick Walbourne	Fisheries and Oceans Canada (DFO)
Mark Warren	GNWT, Environment and Natural Resources (ENR)
Randy Wedel	EC, Water Survey (EC)
Josie Weninger	NWT Métis First Nation
Observers	
Chief Fred Sangris	Yellowknives Dene First Nation
Consultants	
Ricki Hurst	Terriplan
Ed Hanna	Terriplan
Andy Swiderski	Terriplan
David Milburn	Terriplan
David Finch	Terriplan
Nathan Towsley	Terriplan

2.0 PLENARY SESSION

Following an opening prayer by Josie Weninger, participants were addressed by Michael Miltenberger, GNWT Minister of Environment and Natural Resources and Finance.

Referring to recent legislative motions and the outcomes of water gatherings, Mr. Miltenberger expressed how the 16th Assembly viewed water as a high priority and access to water as a fundamental right. Acknowledging support from Indian and Northern Affairs Canada (INAC), he stated that limits to capacity could be overcome by sharing resources and sharing a common vision. He stated that the NWT was among few jurisdictions in Canada to undertake comprehensive watershed-level management and accounting of its water resources, an approach that would assist with preparation for transboundary water negotiations associated with the Mackenzie River Basin Board (MRBB). He emphasized the importance of the NWT getting its own water management approach in order as well as being prepared for transboundary negotiations.

Following the address by Mr. Miltenberger, Gary Bohnet (ENR) and David Livingstone (INAC) provided the context for developing a strategy governing NWT water resources and welcomed participants to the first of a series of workshop to get their input on its development.

Presentations

Over the course of the day Terriplan Consultants made four presentations that outlined the need for a territorial water strategy, the proposed approach to assessing water needs and measuring outcomes, and factors which could influence water resources. These presentations were made in plenary with opportunity for comment by participants.

Presentation 1: *Overview of the Proposed Strategy*
Presentation 2: *Integrated Water Management*
Presentation 3: *Forces of Change*
Presentation 4: *Moving Forward – Working Together*

2.1 KEY MESSAGES

Presentation 1: *Overview of the Proposed Strategy*
Terriplan reported on the approach to develop a water resources management strategy, including a need to be consistent with other initiatives in the NWT. Partnership between stakeholders and governments – federal, territorial, and Aboriginal – was seen as key to developing a strategy. A strategy must support the lands, resources and self-government agreements and water boards, and must be seen to be allowing good stewardship of territorial resources. Above all else, the strategy must reflect the needs and voices of the NWT. In this way, a strategy can add to certainty and ensure the greatest net benefit to territorial residents.

Terriplan outlined the background to the initiative including events within the MRBB as well as INAC and GNWT. The approach to the strategy, as presented in the Discussion Paper *Northern Voices, Northern Waters,* was discussed, including watershed-level stewardship, natural capital accounting, and a description of the vision and principles required to create a strategy. Other key points included making the best use of information available; providing guidance and support for water stewardship; ensuring sustainable use of water resources and ecological integrity; identifying emerging issues that could affect Northern water resources; collaboration with water partners; and engagement with Northern communities to build the idea of a

strategy. It was emphasized that this workshop is the beginning of a dialogue. Following are some quotes from workshop participants:

What Was Heard

- "We have to get our back yard in order first, and have to look at the entire ecosystem. Improve our own situation and say, look, it can be done." *(Mike Peters)*
- "We have to do our homework before we get involved in negotiations." *(David Livingstone)*
- "Your work here will help us [provide certainty]. I don't hold out a lot of hope for a national water strategy. " *(Don Deranger)*
- "There should be a principle for accountability…we have to figure out who is responsible. We will have to set much higher standards." *(Hugh Richardson)*
- "We need to work together. Everybody here supports the need to protect our water. I ask everyone to put aside their respective organizational hats today to come together." *(Josie Weninger)*

Presentation 2: *Integrated Water Management*

The second presentation outlined the concept of Integrated Water Management (IWM), a foundation of the proposed strategy. IWM involves cooperative and coordinated stewardship of shared water resources. Decisions are not made in isolation and are made for the greatest collective benefit. IWM strives first to achieve sustainability and second to ensure optimum benefit from the resource. Citing past examples (e.g. 1909 Boundary Waters Treaty, 1987 Federal Water Policy), speakers described the IWM decision-making process and the role of Traditional Knowledge in providing information by which decisions can be made. Once information regarding water resources is assessed, decision-makers need to talk first about how to manage it and then about how to share it.

What Was Heard

- Governance should be included on the list of challenges. *(Mike Peters)*

Presentation 3: Forces of Change

The third presentation described factors that will drive water management in the NWT, both currently and in the future. It also explored connections between the proposed water strategy and the bilateral negotiations conducted under the MRBB. Forces of change included development (both within and outside of the NWT), land claims, MRBB & bilateral agreements, global economics, and regulatory reform. Risks and opportunities from these factors must be considered in resource management decisions. Given that geopolitical boundaries cut across watersheds and cultural areas, the structure of the NWT itself presents a challenge to achieving economies of scale. The key to ensuring accessible, adequate and affordable water will be to manage the resource within the context of existing rights, and not simply superimposing a new process atop current ones.

What Was Heard

- *(re: role of MRBB negotiations in developing a strategy)* There has been a major paradigm shift in how we view water. It's led to a shift in policy across governments and political pressure from the public and others. Ultimately, Alberta realizes that they are responsible to their constituents and need to ensure that they have enough water for

their citizens. Political pressure will ensure their involvement. *(Trish Merrithew-Mercredi)*

- We would still be doing this even if the MRBB wasn't involved. *(Trish Merrithew-Mercredi)*
- Aboriginal and treaty rights on water should be considered. *(Sam Gargan)*
- Think bigger than the oil sands. Industry isn't the biggest user [of water resources] -- agriculture and municipalities are the biggest users. It will be about all upstream users. *(Mike Peters)*
- We will have to mention pollution and our effects on downstream users. (Sam Gargan)
- This is of concern for more than water managers. Learning and educational programs are needed to reach out to students and the general public. It helps to change attitudes. *(Shannon Ripley)*
- DFO and Environment Canada could help provide a strong regulatory regime. *(Josie Weninger)*

Presentation 4: *Moving Forward – Working Together*

The Strategy is being developed to assist governments, boards, industry, ENGOs, other jurisdictions and the public. To this end, workshop participants were invited to provide advice and guidance in developing the content and nature of the unfolding strategy. Terriplan identified several areas where the need for assistance was immediate, including confirmation of priority issues, compiling Traditional Knowledge and conventional knowledge bases, and developing preliminary relative importance measures for water values. This workshop and those to follow are intended to obtain the feedback required.

3.0 Breakout Groups

Participants were divided into three breakout groups to allow for a facilitated discussion of two critical building blocks of a water strategy. These were the vision and principles that would guide its development and operation. Groups were presented with an example of a vision statement and asked to comment upon it and modify it to reflect their collective voice as regards water management in the NWT. Likewise they were asked to generate a list of principles that could help drive the development and implementation of such a strategy.

3.1 Vision

The Vision Statement in the Discussion Paper[1] currently reads as follows:

> *To sustainably manage the water resources of the NWT to provide for optimum benefits for current and future generations.*

[1] *Northern Voices, Northern Waters: Towards an NWT Water Resources Management Strategy* (ENR & INAC, 2008).

Group One felt that the vision statement should be one that readers can immediately grasp. It should be a motivator that portrays what the residents of the NWT want for the future. Water is a sacred gift that continues to sustain all life and this feeling should be reflected in the vision.

The existing vision statement only considers management of water resources; whereas the vision should also consider conservation and stewardship of the resources. Moreover, the resources should not be limited to only water, but should also consider aquatic ecosystems.

It was acknowledged by this group that any water strategy must consider sharing stewardship of the resource - whether it is decision-making, accountability or overall responsibility. There is a need to work collaboratively for a healthy environment and healthy people. Finally, it was felt that the vision must capture the fact that water in the future must be as good as it is now or, through stewardship, even better for the environment, the economy and the community.

Group Two felt the vision statement should reflect the priority that water should be safe, clean and abundant. The group also added that the vision statement should reflect the view that water is a fundamental human right and is essential to the environment, community and human health for the present and the future.

A new vision should be forward-looking. To achieve this vision, there is a need for partners to work collectively and cooperatively for northern interests. Such a vision should also include the ability to adapt over time.

Finally, the vision should be a showcase for others. In this context, the NWT should hear from others, such as Alberta and British Columbia managers and their water strategies, and ensure the territorial strategy is "connected."

Group Three felt the current vision doesn't truly reflect the northern voice. Water must be plentiful, clean and safe for present and future generations. In addition, it must be affordable. The vision statement includes the provision of "optimum benefits" and the question was raised "who benefits?" It was felt that benefits should be for people and the aquatic environment and that there must be an acknowledgement of the special values and cultural significance that Aboriginal people place on water.

The vision should be based on stewardship and not solely on management, and the strategy must acknowledge other users of water within the NWT and outside of it. There is a need for accountability and responsibility. An important question was raised about whether a water strategy can presume to manage water or rather, manage the human use of water.

Because of evolving policies, practices and attitudes, the strategy and vision must reflect conditions not only today but also future changes. There may be sufficient data and information to make informed decisions today, but decisions must be based on both science and traditional knowledge.

3.2 PRINCIPLES

Group One felt the principles should drive actions to accomplish the vision. Advice was that there the principles presented should be fewer, shorter and simpler. It is necessary to understand who the audience for the strategy is such as current and future generations of northerners. The principles need to include concepts of fairness and equity, adaptive management, stewardship, values and decision-making and the responsibility to hold each other accountable.

The group reviewed the principles in the discussion paper[2] and offered the following comments:

- principles 3 (sustainability), 4 (Renewability) and 12 (Natural Capital Accounting for Water) are more like definitions, not principles;
- principles 6 (Joint Production of Benefits) and 11 (Integrated Watershed Management) are similar and could be combined;
- principle 6 (Joint Production of Benefits) is more of a concept and is not a real principle;
- principle 14 (Adaptive Management) is too lengthy and should be shortened to make it more effective.

In terms of information for decision-making, traditional knowledge must be considered and incorporated into collaborative decision-making.

Group Two's initial comment was there seems to be too many principles and a number of them could be combined and worded in much simpler language. Based on the discussion about a new vision for the strategy, a main principle should be that water is a source of health and not illness, and clean water is a human right. The principles should also recognize that water is shared among many users and there is a need for fairness and equity. Inter-jurisdictional and legislated water rights must be respected. There are other strategies such as land use and energy and the water strategy should be integrated or harmonized with other strategies.

Water use by others should not be denied. While decisions may be based on optimal benefits for all users, shared benefits may not be optimal. A question was raised about how benefits can be optimized if there are significant gaps in data or information. It was recognized, however, that there will be evolved learning and understanding over time and decision-making must use the best knowledge and information available.

The principles should recognize the interconnections among surface and groundwater, plants, animals and humans and the fact there are "overlap," not transboundary issues; that is, caribou, fish and people cross over many artificial political boundaries.

Questions were raised about natural capital being a principle or a tool, how to incorporate climate change in an implementation program (adaptive management) and how to quantify commercial, tangible and intangible benefits.

[2] These proposed principles were provided to participants attached to the meeting agenda. See *Discussion Paper Northern Voices, Northern Waters* or Appendix 1 for details.

Group Three felt that some principles (2 and 4) are a given and others (5 and 7) could be combined. Plain language should be used in the principles. The principles should focus on cooperation, accountability and education and awareness.

The strategy should be based on the best use of available information but recognize that more information must be obtained over time. There is also a need for consistency with other standards (water quality) and procedures.

4.0 NEXT STEPS

Participants were told that a summary report of the workshop would be written and circulated in the weeks following it. GNWT-ENR and INAC planned to organize and hold several additional workshops, each addressing different components of the proposed Water Management Strategy. One or more of these workshops might be held in conjunction with the *Science in the Changing North* conference, tentatively scheduled for May, 2008. In the interim, participants could make additional comments to the workshop organizers or to GNWT-ENR and its communications office. Feedback from the workshops would continue to inform the developing water resources management strategy and to ensure that these Northern voices are heard in the final product. The Strategy is scheduled for completion by Spring 2009 and the ongoing engagement of leaders and water managers is intended throughout its development.

APPENDIX A: FLIPCHART NOTES ON VISION AND PRINCIPLES

The following are the flip chart notes recorded by the facilitators of the three breakout groups on November 27, 2009. The charge to each group was a NWT Water Management Strategy Vision and Principles.

BREAKOUT GROUP #1

WHAT SHOULD A VISION BE?
- something anyone can grasp
- a motivator

VISION
Comments on Draft Vision in Discussion Paper

- needs more emphasis on "stuff of life, cultural, intrinsic"
- draft vision captures people but not really the ecosystem
- could use water or aquatic resources – latter more inclusive (i.e. Let there be fish!)
- vision should have a temporal aspect (e.g. for all time or for current and future generations)
- vision should be what the NWT wants in the future
- vision should capture that water should remain as good as it is now or better (environment/economy/community) if we do it right

Concepts to Capture in a Water Strategy Vision

- Keep water resources clean and bountiful for all time (example used from the Great Bear Lake Management Plan titled *Water Heart*)
- We manage human activities – we do not manage water
- Water is a sacred gift – reflect this in Water Strategy vision
- The sacred gift of water continues to sustain all life
- Collaborating or working together
- Accountability and Responsibility
- The Strategy is grater than the NWT (NWT is not an island)
- Our water - (our fish) - our responsibility
- Healthy environment and Healthy people
- Collaborating or Working Together
- Water basin
- "the land"

- Manage
- Conserve
- Steward

do you need a verb in Vision?

PRINCIPLES

General Comments

Before developing principles must decide who is the audience and whose strategy it is.

WHO IS AUDIENCE?
- When it is the NWT public
- Should be simple and direct

Whose STRATEGY IS IT?
- When it is the NWT public
- Should be simple and direct

- Principles should drive actions to accomplish the vision
- Good to start with "we will be guided by the following principles"
- Using terms like we may help build ownership of the Strategy
- Could be considered as fundamental or general truths to make decisions
- It would help to combine some of the draft principles and reduce total
- Include fundamental principle of fairness and equity

Specific Draft Principles from Discussion Paper

- 3&4 – are more definitions than principles
- 6 – is more of a concept than a principle but last sentence is useful
- Principles 6 and 11 are similar and could be combined
- 13 - rather than a principle, we could agree to apply the approach
- Principle 14 is too much (half the words = more effective)

Group Advice

FEWER
SHORTER
SIMPLER

Concepts to Capture in Principles:

- Traditional knowledge (TK)
- Consultation and engagement
- Collaborative decision making
- Transparency in decision making
- Principles must stand the test of time (e.g. careful with jargon)

- Values
- Decision making
- We all have responsibility and will hold each other accountable
- Look at watershed level
- Consider up and downstream neighbours

BREAKOUT GROUP #2

VISION

"To sustainably manage the water resources of the NWT to provide for optimum benefits (moveable target) for current and future generations

First, this vision doesn't recognize the ecosystem needs

Concepts to Capture in Water Strategy Vision

SAFE
CLEAN
ABUNDANT

- Clean water – fundamental human right – is essential for environment, community, and human health
- Water in the future (e.g. 10 years) - forward looking
- Water that is able to sustain life
- Work collectively and cooperatively
- Healthy today and in the future
- Create and implement the Strategy
- Need something forward thinking
- Collective stewardship for the planet
- Reflect northern interest
- A change from current thinking - A new approach
- Working together
- Consider the whole watershed
- A Partnership
- Ability to adopt over time
- A showcase for others
- Enable ourselves and others
- We are hearing other voices – there are connections (e.g. Water is Life – Keepers of Water)
- "Thirst" – is something very personal

PRINCIPLES

Some of the existing principles could be combined

Concepts to Capture in Principles:

- Watershed unit – how we are changing our approach
- Accountability
- Governance
- Water is a source of health not illness
- Water is a human right
- Shared responsibilities – fairness and equity
    - How water is used → on whose terms?
    - Not deny others
    - Positive views
    - Integration with other strategies: e.g. Energy, land use
- Respect for Aboriginal spirituality
- Better define integrated management
- Decision on best available knowledge, including precautionary principle
- Optimum benefit for whom (accepted with claims)
- Shared benefits not optimum benefits
- Many types of "information"
- Connections – surface & groundwater, plants & animals
- Respect for Rights
- Shared benefits
- Health
- Responsibility/accountability
- Best knowledge and information available
- Values – commercial, tangible vs. intangible
- Evolved learning and understanding

New Concepts:

- Transboundary/inter-jurisdictional
- Overlap issues for the Basin – instead of Territorial Boundaries
  (e.g. caribou, fish and people migrate and don't respect a boundary)
- Live up to our expectations of others
- Lead by example
- Overlap and connectivity
- Four elements: E. A. F. W.
- Climate change is a central reason for why Water Strategy
  Implementation is needed (adaptive management)
- Use Natural Capital Accounting as a tool
- Recognize the Global context: "The Haves and Have nots"

BREAKOUT GROUP 3

VISION

"VISION" (VOICE)
"Redundant"

"TO SUSTAINABLY MANAGE THE WATER RESOURCES OF THE NWT
to provide the optimum benefits for current and future generations"

Concepts to Capture in a Vision:

- partners have plentiful and safe water (that Canada respects)
- Safe, clean, plentiful water for present and future generations
  - + affordable
- optimum benefits: For whom? What?
  - people
  - aquatic environment
- clear acknowledgement of Aboriginal people
- Aboriginal cultures and values
- "stewardship" and not just "management" (e.g. *Keepers of the Water*)
- The notion of balance (acknowledgment of other users of the water)
  - internal to NWT
- recognize external jurisdiction including other Canadians
- How much do we want to share?
- Water quality, quantity and flow
- Recognize strong spiritual connection
- Notion of accountability and responsibility BY MANY PARTIES
- NWT needs to take control of its own accountability
- Working collectively for the benefit of the resource
- "Evolving " policies, practices & attitudes (Vision and principles must allow for adaptability)

- Equal (equitable) access for all (public)
- Sufficient data (for making informed decisions)
  - science and TK
- Are we managing the human water use or "water"?

PRINCIPLES

1. **√**
2. **√** (a given)
3. **√**
4. **√** (a given)
5. **√** (consumption)
6. **√**
7. **√** (trade off)
8. **√**

Combine

* Numbering is from the Water Strategy Discussion Paper

Concepts to Capture in Principles

- Cooperative (set aside positions to manage the resources)
- Make the best use of available information BUT seek more over time "data" needs to be understood in context
- Standards (i.e. consistent water quality standards AND procedures)
- Link to accountability
- Use plain language for principles in a public document

- Education and awareness (for the public)

APPENDIX B: NWT WATER MANAGEMENT STRATEGY WORKSHOP #1: PRINCIPLES AND VISION

BACKGROUND TO WORKSHOP

The NWT Water Resources Management Strategy requires a vision to guide the development and implementation of the Strategy, and to outline the rationale for the Strategy itself. The Strategy will be governed and guided by a set of principles. Draft principles were developed for further discussion based on input from the NWT Water Strategy Working Group, the outcome of the Water Wise Conference (2007), Water is Life (2006), the Keepers of the Water gatherings (2006, 2007, 2008), the Sahtu water gathering (2008), Dene Nation water gathering (2008) and through advice from select external reviewers. These were presented in *Northern Voices, Northern Waters: A Discussion Paper on Strategy Development* (June 2008). To reflect the inclusive nature of the strategy, the draft vision statement and draft principles will be presented to Aboriginal organizations, government, industry, non-government organizations and others at a workshop tentatively scheduled for January 2009.

There will be three other workshops following this one which will focus on water resource management and Traditional Knowledge, defining the roles of NWT water partners, and approaches to monitoring and sustainability accounting.

PURPOSE, OBJECTIVES AND OUTCOMES

Purpose

The purpose of the workshop will be to seek broader NWT input into the existing draft vision and principles (as they have emerged from recent discussions and events from the broad range of partners and interests) to help guide the preparation and implementation of an NWT Water Resources Management Strategy.

Objectives

The objectives of the workshop will be:

- to reach a common understanding of the purpose and evolution of the NWT Water Strategy;
- to reach a common understanding of the fourteen (14) draft fundamental principles outlined in the framework document *Northern Voices, Northern Waters;*
- to identify any changes or additions to those draft principles; and
- to discuss practical implementation challenges associated with the principles.

Outcome

A set of guiding principles that can be used throughout the drafting of an NWT Water Strategy and during the implementation of that Strategy.

Initial direction on implementation needs.

Workshop Agenda January 28, 2009 Copper Room, Yellowknife Inn		
TIME	**TOPIC**	**LEAD**
8:30 – 9:00	Refreshments	
9:00 - 9:15	Opening Remarks	INAC & GNWT (Gary Bohnet DM)
9:15 – 9:20	Introductions	Facilitator
9:20 – 9:40	Purpose of Workshop	Facilitator
Theme: Northern Voices		
9:40 – 10:00	Background to NWT Water Resources Management Strategy Why is a Water Strategy needed? Evolution of the Strategy	Presentation and questions
10:00 -10:30	*Vision, & Principles of the NWT Water Strategy*	Presentation and questions
10:30 – 10:45	*Break*	
10:45 -11:45	*Vision, & Principles of the NWT Water Strategy*	Facilitated Discussion in breakout groups
11:45 – 12:15	*Vision, & Principles of the NWT Water Strategy*	Report Back to Plenary
12:15 – 1:15	*Lunch (provided)*	
Theme: Integrated Watershed Management		
1:15 – 2:00	*The history, and evolution of Integrated Watershed Management*	Presentation
2:00 – 2:30	Relationship of IWM to NWT Water Strategy	Plenary discussion
2:30 – 2:45	*Break*	
2:45 – 3:15	Forces of Change Influencing Implementation of the NWT Water Strategy	Presentation and Discussion
4:15 – 4:30	*Moving Forward – Next Steps*	Presentation and Discussion
4:30	Closing Remarks	

ATTACHMENT #1: DRAFT OF FUNDAMENTAL PRINCIPLES

A preliminary set of fourteen fundamental principles was identified and included in the *Discussion Paper on Strategy Development entitled Northern Voices, Northern Waters* as follows:

1. Watersheds – The Essential Unit
2. Surface and Groundwater Connections
3. Sustainability
4. Renewability
5. Multiple Uses/Values
6. Joint Production of Benefits
7. Values and Valuation
8. Treaty & Aboriginal Rights, Land Claims, Water Rights and Ownership
9. Maximization of Social Well-being
10. Fairness and Equity
11. Integrated Management
12. Natural Capital Accounting for Water
13. Risk and Uncertainty
14. Adaptive Management

These draft principles were developed for discussion with all water partners and, when finalized, will guide the implementation of an NWT Water Resources Management Strategy. Like the entire strategy, these guiding principles are to be finalized only after engagement with a full range of NWT water partners.

Principle #1: Watersheds – The Essential Unit

Watersheds are essential hydrological and ecological units, and include surface and groundwater flow systems. Watersheds are hierarchically organised with the smallest watershed areas combining to comprise elements of increasingly larger systems. Surface and groundwater flows are largely regulated by the configuration and nature of the watershed. The quantity and quality of surface and groundwater are strongly influenced by watershed characteristics. Changes in watersheds affect, both directly and indirectly, the quantity and quality of surface and groundwater. For these reasons, water resources management should be organized according to natural watershed units in an interconnected network of sub-watersheds/tributaries sequentially aggregated into larger watershed units.

Principle #2: Surface and Groundwater Connections

Surface and groundwater flow systems are inter-connected (i.e., surface water feeds groundwater systems, and flows in many surface water systems are supported in part by groundwater). Watershed management should address surface and groundwater issues as part of an interconnected and interdependent system.

Principle #3: Sustainability

Sustainability[3] of water resources means:

- Ensuring that the fundamental elements of the water system, including the healthy functioning of aquatic ecosystems, are conserved;
- Using water resources to sustain current and future social well-being;

[3] Conservation is not included as a specific principle. The essential elements of conservation are included through Principles #3, #4, #5, #6, #9 and #10. As well the fundamentals of conservation are reflected through all of the other

- More specifically, providing on a sustained basis sufficient quantity of water of appropriate quality to meet current and future needs including:
    - Human sustenance needs (i.e., drinking water);
    - Terrestrial and aquatic ecosystem needs;
    - Human cultural and traditional needs; and
    - Economic activity needs.

Principle #4: Renewability

Renewability of water resources means:

- Recognizing that the hydrological cycle is continuous; and driven by climate and weather;
- Accepting that the flow of water follows basic physical laws (e.g., the law of gravity);
- Understanding that water itself is neither created nor destroyed, but changes in form and quality throughout the hydrological cycle due to natural and human influences; and
- Addressing the sequential use of water and the associated impacts of prior uses on subsequent uses.

Principle #5: Multiple Uses/Values

Water supports multiple uses/values; some uses involve interruption or transformation of water flows and others do not. Active "consumption" involves removing water from the natural flow cycle (e.g., extraction for water supplies). Consumed water is returned after use often in a different form and/or quality. Some uses involve a specific location and transformation of the natural flow pattern (e.g., hydro electric power production). Other uses involve no direct consumption, transformation or a fixed location (e.g., transportation, recreation, aquatic ecosystem support). Some water values involve no physical consumption or transformation of any sort (e.g., traditional spiritual/cultural values). Watershed management decisions should address these multiple, diverse and sequential uses of water; many of which are provided at the same time by the same water body.

Principle #6: Joint Production of Benefits

The principle of joint production relates to the simultaneous production of water uses/values by a water body. Watershed management decisions relating to one use/value invariably affect other water uses/values associated with a water body. Consequently, altering a water system affects all water uses/values associated with that water system. The management of water uses/values cannot be separated and addressed independently, one at a time; instead, they should be addressed simultaneously and systematically.

Principle #7: Values and Valuation

Watershed management involves making difficult trade-offs influencing many interests. These trade-offs require balancing multiple and often conflicting interests and multiple water uses/values. Watershed management decisions should respect and reflect these diverse interests. Doing so requires application of a systematic and transparent process for assessing and evaluating watershed management alternatives. A central element of this process is the estimation of the value assigned to different water uses/values by different interests. Formal valuation of water uses/values is a primary tool for guiding trade-off decisions, ensuring fairness and equity, and should reflect operating environment and input costs.

Principle #8: Treaty and Aboriginal Rights, Land Claims, Water Rights and Ownership

Cooperative management of water demands a clear and full recognition, understanding and respect for all water rights. Water rights and ownership, however, are complicated by the fundamental natural laws that govern the dynamics of water systems and immutable physical limits of water resources. Water rights play a pivotal role in resolving issues of fairness and equity and in sustaining a collective commitment to integrated watershed management. Land claims, self-government agreements and water rights are essential to recognize, respect and understand so that watershed management decisions fully address and reconcile these important considerations.

Principle #9: Maximization of Social Well-being

The ultimate objective of watershed management is to increase the social well-being of all who are dependent on the water resources of the system. Social well-being includes all water uses/values that diverse interests derive from water resources. In general, the greater the overall collective well being is the better. This collective well-being includes not only immediate benefits enjoyed by the current generation, but also includes future benefits that will be enjoyed by future generations. In short, watershed management decisions should strive to maximise the social well-being enjoyed by current and future generations from the water resources, in full recognition of water as a fundamental human right.

Principle #10: Fairness and Equity

Watershed management, particularly when dealing with large watersheds, involves diverse interests, rights and expectations. As well, the distribution of benefits, disbenefits and costs of management are rarely evenly distributed throughout a watershed. The greatest challenge in watershed management is to arrive at a fair and equitable distribution of benefits, disbenefits and costs among diverse interests. Arriving at reasonable determinations of fairness must be guided by existing rights and obligations, principles of environmental justice and open and respectful dialogue among diverse affected interests.

Once a fair distribution is decided, effective means to redistribute benefits, disbenefits and costs must be applied. Over the short and long term, the success of this agreement will hinge not only on consistently and fairly redistributing benefits, disbenefits and costs but of equal importance will be this being seen as having been done by affected interests. Integrated watershed management depends ultimately on a collective commitment to work together. This commitment will only endure if all interests see the process as being fair and respecting their rights and perspectives.

Principle #11: Integrated Watershed Management

Water serves multiple purposes in multiple locations as it moves through a watershed system. Watershed management decisions at one location may affect downstream and upstream users – therefore the interests of all water users in a watershed are interrelated. For this reason, integrated watershed management is essential. Integrated watershed management requires individual local water resources management decisions to be evaluated and made as part of an overall set of coordinated watershed management decisions throughout a watershed. Given that integrated watershed management decisions are based on a systematic consideration of all water uses/values throughout a watershed, securing and sustaining grassroots understanding, participation and commitment in the management process is vital.

Principle #12: Natural Capital Accounting

Integrated watershed management should strive to ensure that the ecological goods and services supplied by a watershed are sustained such that the overall natural capital asset of the watershed is maintained and preferably increased over time. *Natural capital* are 'natural assets' given their role of providing natural resource inputs and ecological goods and services for economic production. A clear and consistent accounting of watershed natural capital is essential to ensure continual maintenance or even enhancement of this asset. Trends over time in watershed natural capital should be a primary performance measures for the success of integrated watershed management.

Principle #13: Risk and Uncertainty – Applying the Precautionary Principle

Management of any natural system including watersheds is inherently uncertain and risky. Management decisions invariably are based on imperfect information and understanding. Additionally, all systems involve stochastic elements (i.e. weather variability) that result in somewhat random variation over time. Integrated watershed management decisions should systematically address and account for risk and uncertainty. Forecasts and the evaluation of management alternatives must include consideration of uncertainty, and both the upside and downside risks associated with each alternative. Sensitivity analysis should be used regularly to understand the implications of imperfect information and understanding and stochastic system elements. Watershed management decisions should explicitly employ the Precautionary Principle.

Principle #14: Adaptive Management

Successful long-term integrated watershed management involves innovation, testing and continual improvement. Integrated watershed management should be guided by the rigorous "learn-by-doing" process on which adaptive management is based. This process involves evaluating management results and adjusting future management actions based upon what has been learned, effectively allowing policy to grow and adapt to uncertain situations. This will be increasingly important in the context of adapting to an evolving climate.

A detailed draft Plan for Action might identify the specific tasks that could be undertaken to carry out this part of the development of an NWT Water Resources Management Strategy. In particular, the following action item could involve the confirmation of these principles with NWT water partners.