APPENDIX B: FLIPCHART NOTES

The following are the flip chart notes recorded by the facilitators of the three breakout groups on March 12 and 13, 2009.

March 12, 2009
Session 1, Breakout Group 1

p.1

Gaps?
- lack of consistent SNP via WL
    - community level
- "It's all a gap, isn't it?"
    - Info for decisions not available
    - No baseline
- Data collection is by nature reactive

p.2
- reactive decisions may not be as good as could be
- data is there but not accessible for LWBs
- proponent provided info is only a snapshot
- what is good data?
    - Thresholds?

p.3
- data should match thresholds
- a "northern" CCME?
- Community driven system based on local values
- Who is responsible for gathering data?
    - To what standard?
    - Coordination between agencies
        - Consistency
        - Cost reduction

p.4
- WSC – good availability and usability
- Lots of info but hard to 'get'
    - Central location?
    - Who manages?
- how to inter-relate TK? Must be collaborative
    - trends? Ongoing?
- How does the NWT Waters Strategy keep track of changing values and thresholds?

p.5
- WKSS – how could it apply to NWT WS?

  - Lessons learned
- how to make data useful vs. just 'info' ?
  - ask "why?"
- NWT WS is broad but need to narrow monitoring and research scope
- Piecemeal monitoring = a snapshot
  - Is it useful?

p.6

- Data gaps should be identified by public, not agencies
  - "what are your concerns?"
- Info needs to be understandable to the general public
  - E.g. tarsands in Delta
- NWT Strat Plan, then resource strategies
- How to best get buy-in for the NWT WS?

p.7

- WS is a good 'driver'
  - LUP/WUP need to be pushed too
- LUP include water related issues
- What does government mean by 'traditional/cultural use'?
  - It's a way of life

March 12, 2009
Session 1, Breakout Group 2

p.1

maps/geospatial
1) Distribution SCOPE
2) temporal
   └ 3,5 years contam.
   Multi /year

Tk → TRADITIONAL CULTURE
Collection/use
Copyright/ownership issues

p.2

- different views on sharing info (TK)
- risks/misuse

Scientific data
Don't like to share raw data

NWT CHALLENGES
- big space SCOPE
- few people
- cost : benefit

RISK ASSM'T

p.3

LACK OF COORDINATION
- who is doing what?
- Big picture understanding

Communication
Existing mechanisms ↔

Risk: DUPLICATION
LACK ACCOUNTABILITY

A lot done informally
Relies on corporate knowledge; personal

Database/sharing

p.4

ECOSYSTEMS
- not enough focus
- more baseline/monitoring

-communities need to see value of participating

-education

2 way street
Agency ↔ community

BASIN is a big thing
- coordination TB scope

p.5

Gaps? - examine on basis of programs
- in programs - inside org. - between
- by category

GAP ANALYSIS

Eg. TK
- program by itself
- gap within programs
- gap between programs

- Policy Gaps

TK has to be there from beginning
Policy/implementation

p.6

DETERMINING LINKAGES BETWEEN PROGRAMS
- continue talking

e.g. WATER QUALITY
- set standards
- identify who's involved
- identify process
- implementation plan

→ ACTIONS FOR EACH

MVLWB – WG's
b/t LWB's
→ sharing/policy

p.7

(regional) e.g. Wek'eezhii Forum
→ Regional Forum
→ communications
Issues/priorities

Step Back – look at what we need to make decision
- guidelines
- data available
- steps

→ not everyone knows who's doing what

p.8

WHO'S RESPONSIBLE?
- ind. Orgs?
- KEEP CURRENT

→ requires resources
→ requires consistent focus
→ set priorities

-orientation
-mentorship
} keeping knowledge

Formalize communication
- who's doing what
- allows standardizing

p.9

STANDARDIZED APPROACH
e.g. CABIN

→ requires money
→ building capacity regionally

- management $$ eat resources
  → communication/sharing
- funding too short term
  → funding incentive to retention
  → strategic funding

p.10

TK

- copyright
- CONTINUED DIALOGUE
  → build trust
  → POLICY
    → recognize overlap
    Groups/areas

ARCHAEOLOGY / different but
TK complementary

Hard to include TK without knowing what it is

→ different perspectives
→ define relationship or what is available

p.11

WKSS
One model --- - not perfect, but includes industry, communities, TK/science

March 12, 2009
Session 1, Breakout Group 3

p.1

1. GAPS
Knowledge = all types, TK, Science

→ how many communities H2O from river/lake (surface)
- 29
- 2 shallow (Ft Liard) Wrigley

→ groundwater is a gap
→ local knowledge – abnormalities
e.g. 2 mouthed fish
→ is this captured in any formal way?
e.g. soft flesh, cysts

p.2

*TK is a large gap (vs. local)
- little real work
- e.g. not written, orally is passed generation to generation
→ e.g. Δg ice conditions in a river with volume
- science o| ecology the closest to TK → holistic approach
e.g. forest ecologist ~ views
e.g. communication "science" to people
- need established/consistent TK research protocols
- * gathering vs. dissemination

p.3

→ need respect and trust in order for effective TK collection
Ex. Homer wrote the Illiad, but it was an oral tradition that was 1000 years old
→ similar for TK
→ go to the "TK Specialists" for certain subject areas
→ are some of the TK research protocols/models out there
→ social science/anthropology relate more readily to TK than 'biophysical science'
→ aquatic ecosystem indicators
→ in (?) stream flow needs assessments
→ relationships H2O levels, flows, biota complex and expensive

p.4

→ geographic Δ's in areas
Eg. Looking at air photos to see Δ's

Bottom sediments – coring
(there are studies/grabs – 1x, not ongoing)

Coordination → INAC } with devolution
EC } will be territorial

→ don't duplicate, but different mandates

→ can coordination be improved?
- industry
- intergovernmental
- lessons learned

e.g. issues with CABIN

p.5

→ doesn't work in terms of:
- long term/subtle Δ's impacts

→ need coordination of future research and planning – "forum", e.g. SCN
WS → collecting moniroting site info – DFO, EC, LWBs, etc.

Why is monitoring info hard to get? E.g. DFO

Non-point sources of pollution -air
not understood -land/runoff

Impact of communities

Understanding thawing permafrost contaminants

p.6

→ academic research → is it well-captured?
- ARI → increase database
(not unlicensed research, gov't)

H2O as habitat → baseline inventory
- biological and physical
- in all geographic areas

→ metrics H2O quality/quantity and biology
↓
Measured models

Fisheries, aquatic furbearers → opportunity to link science and TK, e.g. EMAB fish study

p.7

talking to communities/schools in H2O
→ report results, and involving in monitoring
→ increase number of sites |/ communities
"what are the success stories?"
Learn from them
e.g. new MR AESoE
→ TK/Sci report
→ Riasa Smith/BC EnviroCor

Take a basin approach, especially Alberta is monitoring coordinating
e.g. SAG-D groundwater

p.8

e.g. Mackenzie River Basin
SofAE being updated – 2010
Now → addressing discrepancies in TK/Sci
→ oil sands, hydro, climΔ + TK

Northern River Basin Study → good TK and local knowledge
→ Athabasca/Peace Delta
e.g. 3200 muskrat in 3 weeks
→ now "look in dictionary"
Filled reservoir during drought too quick
→ impacts downstream
→ can't use reservoir

→ people move too – "directly affected (parties)??" - Sonny MacDonald
may before away
What is relationship of WS marine/beaufort

March 13, 2009
Session 2, Breakout Group 1

p.1

- people know what they don't know
- TK. Perhaps mistrust?
    - What do you need and why?
- not all knowledge can be public
    - contacts can be shared
- ownership – stays with knowledge holders not governments, etc.

p.2

- availability versus protection (ownership)
- reduce reg. to re-visit ind. For specific TK
- LWB hard to 'find' projects
- MVLWB, NWTWB, LUDS → making process
    - Educate
    - Improve functionality

p.3

- WLWB – mapping capability
    - Not perfect but improving
    - LUDS
- people like maps
- scale of portals can be too large
    - start small and move up
- organizational culture and capacity

p.4

- Formatting of reports
    - Separate raw data
- need commitments to provide data in a certain format by a certain time
    - cultural shift
    - education, time… force?
- NWT WS – concurrent with other efforts
- Need data collection rules and standards

p.5

- Bathymetry
- Infrastructure to hold and make data available
    - Needs 'why' and consensus
- talk… but usually becomes an off loading exercise
    - liability
- Need understanding of why data is being shared
    - Dehcho LUP

p.6

- portals may be built and empty
    - need to work commitments to provide data
    - link IM to performance reviews
- Rethink project deliverables
    - Department policies
- coercive cooperation
    - foster change via partnership
    - limits liability

p.7

- political commitments to recognize IM
- NWT information management and sharing strategy
- Consultants – are they needed?
    - Orphaned applications
    - Who is driving a project?

March 13, 2009
Session 2, Breakout Group 2

p.1

Group 2 — DATABASE AND IM LIMITATIONS

- data management CIDM (INAC)
  - → clunky
  - → limited exports
  - Esp. inter-agency

- don't know what we have
  - → redundancy

INFO

- all accessible?
- Limits to access?
  - Privacy (who determines?)
  - Copyright
  - Hoarding
  - Misinterpretation risk

→ problematic for checking accuracy
→ info on contact/avail

p.2

Building bigger and better silos

→ need focus on communicating

e.g. WS ←//→ existing data initiatives

better communication

- analysis may be duplicated
- helps to know someone's looking for data
- education
  - public | Need to know
  - govt emp. | what's out there

→ formalize

p.3

Protocols for

- queries
- storage
- management

STANDARDS

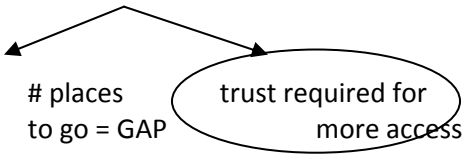
data sharing → long term
→ lots of best practices already out there

- get it right the first time → standards
Protocols
Sources/metadata

Author/Source info
→ available?
→ hard for orgs to understand

p.4

TK
--- limited



- may be available but not widely known
→ e.g. LUP links not active

Technology changes
→ need options to ensure continued access

p.5

- software versions
- "link rot"

DATA MANAGEMENT

- data may not be digital
Need $$ to digitize

NEED TO KNOW IF IT EXISTS

- prioritize
- digitize

e.g. watershed boundaries
→ need to be correct, check/update D.M.

p.6

- incompatible info

→ different standards
→ different times/levels

ESTABLISH PROTOCOLS FIRST

- e.g. lab reporting
  → detection limits
  → parameters

1. research/lab
2. publication
3. data management

p.7

- keep reinventing the wheel
  → in-house management
  Vs.
  External
  → portals/access

People see data as they want; data is publicly there but collecting it takes time
→ requires evaluation
→ has to be "fixed-up"
Portals can't help this

COMMUNICATION Up Front

p.8

- competing systems / approaches
→ momentum switch means lack of support for current systems

- learn from mistakes
→ GIS distribution List
→ GIS Consultant?
- challenge of internal communications

WS INFO
- who maintains It? | Take a fresh
- who manages? | look at J.M.

p.9

- always collecting data for specific purposes (IM)
→ utility in future?

- data should be useful forever
  (applications vary)
  (handle new questions)

- WKSS, IPY done but research continues

+ GWEX
→ where does it go?

p.10

- regular SOK reports
  - more regular

- e.g. water quality, annual
→ CIMP should assist

SOK can provide road map

- different researchers/processes
- variety of SOK's, SOE's

→ GNWT SOK has 20+ parameters
→ MRBB every 5 years - too long for some
Scope can be unwieldy

p.11

- regular basis | SOK's
- needs protocols |

→ need to be compatible

- using old tools, old thinking
  Build with IM at start of project

→ needs standards protocols

- outline questions
- similar language

p.11a

- "IM" misnomer?

→ "environmental management"
→ " information stewardship"
  → everyone responsible

p.12

- knowing data is there
- knowing who to contact

Discussion among managers not necessarily researchers
→ researchers have vested interest in data
→ managers have enough on their plates → this is separate
→ Stewardship of info
  → better flow of information vertically

p.13

- what is intent of data?
  → can be used for other purposes

EULA

PROTOCOLS + appropriate referencing

"Be Careful Out There"

- shared responsibilities
- collective
  → haven't been thinking this way

March 13, 2009
Session 2, Breakout Group 3

p.1

Q1. What info is not accessible and why?

DFO → yesterday's presentation
→ regulators don't share info in court context – "sensitive"
→ but DFO has lots of info → and do provide some
→ maybe greater ocean info than inland/freshwater? Inland doesn't exist
→ East and West coast more adversarial but good in Delta/North

p.2

→ Salt River claims negotiations → many organizations over 4 years
→ Bison domestic in Alberta, wild in Park…
→ format → may exist, but not consistent and don't have tools to use
→ need to know people, places, "connections", and be clear on use
→ academic information → can't access without student ID
→ consulting companies vs. public sector

p.3

→ academic "silo"
→ data from EC, INAC research not publicly
→ "misuse"?
→ cost
→ time
→ TK
→ e.g. proposed dam on Slave
→ consultants came, collected info but received only minimal compensation and then community can't access results
→ need up front agreements → re. confidentiality/availability and use

p.4

→ caution → if too restrictive, researchers may go elsewhere?
→ NRBasin study → TK info available to all → a lot of upfront work
→ many maps/pictures/visuals
→ differences:
Monitoring – ongoing, compare, trends
Research – "one-time"/snapshot
Does the same rigorous protocol apply?
→ CIMP → Delta
→ a WGP/SC → common protocols for several VCs

p.5

→ youth
→ community members doing science at number of sites

The amount of info is vast – how to wade through it?
- and often highly specialized
- public can't deal with it

→ the geomatics/IT "units" could be better integrated with "data providers" and with "users"
→ but resourcing issues
→ but monitoring itself decreses
→ e.g. CIMP coordination with other monitoring
→ resources to do so, progs

p.6

→ in terms of gaps → need to prioritize needs
→ if info/monitoring not standardized it is not useful
→ mines collect a lot of data but probably only a few that are relevant to "off-site"/external users
e.g. 5 of 55 sites

2. → communication - science/policy interfaces – portals/IMSS
→ Automation - contribute – use – awareness
→ standardization
Make new projects utilize metadata/IMS

p.7

→ still need interpretation/reporting of info for specific use:
e.g. trends
→ Automation
→ ensure info is digital/standardized e.g. LWBs
→ e.g. pilots/linking amongst boards
→ also more collaboration at staff level amongst regional boards
→ increased retention
→ Is there an organizations charged with standardization
e.g. CIMP – INAC lead with many others – GNWT, DFO, etc.

p.8

e.g. caribou - mines/ENR and three monitoring agencies
- while recognizing unique needs in different areas

→ also a question of individuals
→ MRBB → all info available to public
→ "prior notification"
→ pre-EA
→ there are annual reports each jurisdiction
→ MRBB website out of date
→ emerg

p.9

bilateral → emergency notifications
→ should this issue be MRBB-wide/level?
→ e.g. sewage spill at Suncor into Athabasca → all but one charge dropped

→ MRBB needs to be more active:
→ leaders? Followers? *see note
→ in Territories – expectation is for MRBB to lead about water
e.g. downstream, "rural smaller", and exped
→ e.g. presentation to ARI
→ funding for MRBB by jurisdictions

p.10

PAS → one criteria = baseline reference sites
→ land, water, animals, plants
→ if baseline → need standard protocols

e.g. Parks Canada networks of monitoring and this is part of plg + operation
→ but other types of PAs as well
e.g. wildlife areas