



UNIVERSITY OF ALBERTA
ALBERTA CENTRE FOR SUSTAINABLE
RURAL COMMUNITIES

Integrating Water Innovation Forum



Lars K. Hallstrom and Naomi Finseth

ACSRC Report Series #14-12

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Abstract

On August 9-10, 2012, the Alberta Centre for Sustainable Rural Communities (ACSRC) presented the “Integrating Water Innovation Forum” at the Norsemen Inn, in Camrose Alberta. This two day event brought together researchers, policy actors and representatives from watersheds across Canada to help bring greater clarity and collaborative capacity to those engaged in watershed management and policy in light of the ever increasingly challenges and complexities they face in their work. Over the course of the forum participants discussed multiple themes (integration, policy, scale, resilience, & intersecotral action) of water policy and watershed management.

Both days were structured around a series of consecutive plenary sessions modelled on “dialogue circles.” The purpose of these circles was to foster connectivity, sharing and form inter-personal, inter-organizational, and inter-regional integration itself. Each theme’s discussion began with two complementary presentations. The first was from the academic or research community. This was then followed by a presentation from representatives speaking on behalf of a watershed organization. Following these presentations, facilitated dialogue circles encouraged participants to have open and deliberative engagement with the questions, issues and practices raised by the presentations. This event was both provincial and national in scope as it brought together participants from across the province of Alberta and presenters from across Canada.

The forum was supported by a steering committee of faculty and staff from the Augustana campus of the University of Alberta and the University of Northern British Columbia. Financial support was provided by a 2012 Social Sciences and Humanities Research Council (SSHRC) grant, as well by the ACSRC and University of Alberta.

There are various deliverables that will be made (including video recordings) affiliated with this event. If you would like to request more information or the DVD, please contact the ACSRC at (780) 679-1672 or acsrc@ualberta.ca

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Integrating Water Innovation Forum Report

1. Integration

a. Integrating Water, Policy and Intersectoral Action

Lars Hallstrom (University of Alberta)

As researchers and those working on “sustainable policy” more broadly have started to realize, there is a dearth of perspective on the integration of both policy-making, and policy analyses. This is particularly true when considering the domain of environmental policy, where despite a recognition at provincial, national and international levels (see *Water for Life* or the WHO Commission on the Social Determinants of Health) there has been little theoretical and applied work that explicitly presents a model for integration of public policy in both vertical (i.e. across multiple levels of government and governance) and horizontal (across domains or “policy silos”). In contrast to this, the European Union (EU) and its predecessor agreements (such as the European Community) have explicitly identified policy integration and harmonization as a key element in the development of not just the European Union, but also the efficacy and efficiency of public programming and decision-making across the member-states. This has been further supported in practice by different theoretical and explanatory models (such as neo-functionalism and intergovernmentalism) that have yet to show a counterpart in Canada. As a result, this paper will outline the absence and calls for integration within the water and water policy domain, the theoretical and applied perspectives available to inform the Canadian case, and both the challenges and opportunities presented by related approaches, such as intersectoral action.

b. The Practice of Integrated Watershed Planning and Stewardship

Reg Whiten (Dawson Creek)

This presentation highlights the experience of achieving integrated watershed stewardship in the Upper Kiskatinaw River Watershed - a 2800 square kilometer area in north-east BC which has served as the drinking water supply for the City of Dawson Creek since the mid 1940's. Given extensive resource development which has occurred, the City undertook the development of an Integrated Watershed Management Plan in 1991. The IWMP was subsequently updated in 2003 to reflect land-use changes during that period. In its role as a water purveyor in supplying drinking water to its service population of approximately 20,000 in Dawson Creek, Pouce Coupe and adjacent rural area, a Source Water Protection Plan was also prepared in 2007 to meet requirements of the Drinking Water Protection Act. With the creation of a Watershed Stewardship Program and Watershed Steward position in 2009, the City is providing leadership as a local government in overseeing implementation of these Plans, and fostering innovation in community-based resource management. Given that water supply interests are primarily derived from Crown and private lands which lie outside municipal boundaries, considerable effort is aimed at facilitating interest-based solutions which support the role of provincial regulatory

authorities, while respecting the business realities of various affected resource industries and sectors.

There are numerous economic, political, technological and social/cultural driving forces that affect resource management decision-making in the watershed and ultimately, the maintenance of both water quality and supply. External factors such as commodity prices, regional economic policy and potential climate change combine to influence the pace and extent of land-use change and water-use demand. Within the internal environment, there are key issues affecting available municipal water supply. Such watershed management challenges being addressed relate to increasing variability of the hydrological regime, sediment source control, groundwater recharge, and contaminant risk mitigation. Through research partnerships with industry, government and academic institutions, the City and its partners are gaining a better understanding of the watershed and effective management options through hydrometric monitoring, land-use change and hydrological modelling. Other extension efforts to engage the general public and stakeholders are also being undertaken to promote stewardship best-practices, improved collaboration and adoption of water conservation measures. Together these actions are being taken with a total systems framework to achieve the City's vision for long-term water security.

c. Dialogue Circle

What does integration mean?

- Common goal, fostering understanding from many perspective, and working together;
- Connection between government and community, connection between natural and human;
- Cooperation, communication and education;
- Bringing “it” together (whatever “it” might be);
- Weave, scale and integration – recognize we are affect by other larger sources;

What is the largest, greatest to most important challenge you face with regards to integration?

- Lack of credibility and common language. Need to have all sectors and people represented;
- Need a common goal, common values, common method, common understanding to foster collaboration;
- Need to create links between different sectors, backgrounds, cultures, regions, and silos. Need to integrate economic and environment;
- We have a reactionary way of looking at watershed management;
- The problem is we work in such a way that we think the human and natural systems aren't integrated;

- Water itself is integrative;
- Hierarchy of needs - how do you prioritize who gets what when you have multiple users;

2. Scale

a. Scale(s) of Interest

Martin Bunch (York University)

Watersheds, defined at a variety of spatial scales are natural “settings” for human health and well-being, and often implies a coupling of natural and human systems. Both are organized as holarchically nested sets of systems. They are characterized by interactions that influence one another, often strongly enough to be understood as co-evolving systems. Finding appropriate scales at which to understand and intervene is critical to address environmental and non-environmental relationships. Understanding the “across-scale” inputs and constraints imposed by wider systems and the operation of subsystems is necessary. Within-scale interactions also occur with neighboring systems at the same scale. Questions to pursue in managing watersheds for integration include: What is the appropriate scale of focus for relevant natural and human systems? What is the nature of coupling of human and natural systems at the scale of interest? At larger scales? At smaller scales? What across scale interactions drive the system? Do important within scale interactions exist?

b. Fraser River Basin

Lindsay Gardner (Fraser Basin Council)

Protecting water resources and watershed health through sound planning and management is an important means of strengthening community resilience and sustainability in a rapidly changing world. The Fraser Basin Council has recently published “Rethinking Our Water Ways- A Guide to Water and Watershed Planning for BC Communities”. This guide is designed to help communities learn about and build capacity for water and watershed planning for healthy communities and watersheds. The presentation shared highlights and lessons learned from the Guide and also from regional workshops throughout BC. The workshops, being held from September 2011 through June 2012 are providing opportunities to learn about watershed planning, to share experiences from local and regional initiatives, and to discuss water and watershed issues and priorities in different regions of BC.

c. Linking Land Use and Cover Change

Hussien Oumer (Dalhousie University)

A decline in resources base and a need to feed the growing population are key challenges in Ethiopian highlands. Establishing link between land use and land cover change and livelihood of small-holder farmers is instrumental to facilitate integrative watershed management and planning. Here we examined trends in the natural resource from two contrasting sites using a combined use of satellite image analysis, field and socio-economic surveys. Outputs of the study

reveal a landscape level increase of cultivated land in the sub-humid watershed, while a decline is found for semi-arid one. This study found large differences in development of agriculture since the 1970s: intensification of agriculture is possible in the water-sufficient sub-humid climate by displacing animal husbandry with high value cash crops that need irrigation during the dry monsoon season. However, in the semi-arid watershed, agriculture is rain-fed requiring larger holdings and high uncertainty due to drought and low yields. This study suggests that without sufficient water, the shift from subsistence to commercial market-driven agriculture cannot be achieved. Furthermore, non-farm activities need to be established to respond to the growing landlessness among rural youths.

d. Dialogue Circle

What is the best level or most appropriate scale at which to integrate within watershed management?

- Regardless of the size of scale, the important thing is to transfer knowledge and education;
- Investigation needs to be done on a case by case to determine the right scale;
- Most effective integration happens are the point when it is still personal, Grassroots;
- Different scales means different plans for watersheds;
- Need integration along side scales and implementation;
- Too large or too small of scale can be problematic;
- A challenge to water management is knowing what is happening up and down stream;
- We talk and work across different scales but we often don't think of the different scales we are talking across;

3. Policy

a. Policy Interventions that Leverage Co-benefits

Karen Morrison (Guelph University)

Social-ecological systems theory provides a useful framework for identifying courses or methods of action for particular groups of individuals. When applied to the concept of watersheds as settings (at a variety of spatio-temporal scales) this theoretical perspective helps identify points of intervention that can change the trajectory of watershed governance systems to leverage co-benefits of more resilient, and healthier, social-ecological systems. This includes not only the direct impact of water-related disasters, such as flooding and drought, but also more subtle issues, such as upstream and downstream equity, contaminant transfer (e.g. pesticide, nutrient), and biodiversity loss, among other topics. In addition, it will draw attention to the potential co-benefits of healthy sustainable watershed governance (e.g. recreational, aesthetic, social). This presentation will explore the Canadian context pertaining to the theme of watershed and wellness. It will present examples from a range of Canadian provinces at a variety of scales to

illustrate, suggest and explore the potential for policy interventions that create win-win opportunities for community and watershed sustainability and well-being in Canada.

b. Watershed Report Cards

Meredith Carter (Otonabee Region Conservation Authority)

The Otonabee Region Conservation Authority (ORCA) has been involved in watershed management, including environmental monitoring and stewardship for over 50 years. Environmental monitoring programs include assessing water quality and quantity and identifying changes to environmental conditions and wildlife populations, particularly amphibians, birds and fish. Stewardship programs include shoreline restoration, habitat enhancement, invasive species removal and tree planting.

Data collected through environmental monitoring programs is used for a variety of purposes, including the identification of environmental change, assessment of impacts from development and the identification of potential stewardship projects. The presentation delivered at the Water Innovation Forum highlighted two success stories where environmental monitoring data was used to implement stewardship activities. Data collected at Riverview Creek identified a need to restore the watercourse to improve water quality and habitat, and to secure funding to undertake the restoration project. Data collected through the Loggerhead Marsh Monitoring Program identified the need to enhance the vegetated buffer adjacent to the wetland. The buffer enhancement has since been initiated in partnership with the municipality and community partners.

ORCA is currently in the process of producing a Watershed Report Card for use as a communications tool to inform municipalities, community partners and the general public about the state of the local watershed environment. The Watershed Report Card will also be used to motivate landowners and other watershed residents to undertake stewardship projects, as a way to improve the state of the watershed, and recognize the benefits of completed projects for improving water quality and enhancing habitat. The Watershed Report Card is based on the guidance document developed by Conservation Ontario and includes indicators for water quality (surface and groundwater) and forest health. Standardized methods for calculating grades and indicators will make it possible to compare watersheds and indicators at a landscape scale. ORCA's Watershed Report Card will be posted at www.otonabee.com in the fall of 2012. Completed Watershed Report Cards from other Conservation Authorities and guidance documents can be downloaded at <http://www.conservation-ontario.on.ca>.

c. Water Monitoring Credibility

Ashley Shelton (St. Mary's University)

Increasingly, community volunteers have been collecting data on water quality to provide information of local watershed ecosystem health. Recently, their ability to collect water quality

data has been improved by new technological advances in water quality probes and sondes. This project compares water quality data collected by community-based environmental monitoring volunteers and trained water professionals using standard water quality sonde kits and identifies the conditions are necessary for community based monitoring data to be considered credible. From this research, further support can be given towards the use of community based monitoring data in integrated watershed management. This project is supported by CURA grant from the Social Sciences and Humanities Research Council of Canada (SSHRC).

d. Dialogue Circle

What kind of knowledge to you use and what kind do you need?

- Need both traditions, local, community knowledge and scientific knowledge;
- Need complete, accessible, standardized, comparable, historical and monitoring data;
- Lived experience, grassroots knowledge;
- Public health being involved in watershed health;
- Need connections between reporting and analysis;
- There are data gaps that create problems for accessing knowledge;
- Need to develop community and local research areas;

Wrap-Up Dialogue Circle

What have and what haven't we learned today?

- Haven't learned how to get people to value water as much as other things;
- Need best practices for water management;
- Need science and policy- closing the gap between data and policy;
- Need better networking and innovation;
- Integrate people, get your community involved;
- Integrate public health and watersheds;
- Enforcement- who enforces and who has regulatory powers;
- Need better networking and sharing of knowledge;
- Need innovation- specifically in relation to the have not provinces;
- Need to identify the needs and identify the opportunities to close the gap between the two;

4. Resilience

a. Building Resilience in Canadian Watersheds

Martin Bunch and Karla Zubrycki (York University and International Institute for Sustainable Development)

When watersheds are understood as “settings” for social, ecological, economic and human health and well-being dimensions of sustainability, challenges arise for watershed managers to

find concepts and frameworks that facilitate integrating multiple and competing objectives. Resilience, defined as a process of change, which combines increasing a system's ability to absorb change, its ability to self-organize, and its ability to innovate, experiment and learn, can provide a grounding framework for such watershed management. This presentation defines the concept of resilience from a theoretical perspective and then provides an illustration of resilience theory in action through the history of a community-based watershed management project in Manitoba (South Tobacco Creek). Finally, it describes how improving and maintaining watershed integrity can mitigate risks associated with floods and droughts, thereby improving resilience within social systems and improving the social and environmental determinants of human health.

b. The Battle River Watershed Alliance

David Samm (Battle River Watershed Alliance)

David Samm, of the Battle River Watershed Alliance, presented on relating the academic presentation of resiliency to practical application. Key words from the academic presentation included: tipping point, system reorganization, domain of behaviour, attractor, hot enough fire, and whole different system. David used a personal story to express domain of behaviour and the concept of resiliency. In June, a group from the BRWA hiked up Mount Butte. During their hike in this natural preserve, they came across a grandfather, his son and grandchildren building a bridge for ATV's. This was a disappointing sight because ATV's are not supposed to be used on Mount Butte. This scene represents the domain of behaviour David would like to change in their watershed. You cannot approach these situations defeated or compressed, you need to have a hot enough fire to go up to this people and show them another way to look at things. If we can train people to pick up their own dog s*&t, imagine the change in social behaviour that can still occur - because of that, we have hope. We have hope that maybe one day this grandfather will walk up Mount Butte with his grandkids and appreciate the need to preserve it.

c. Dialogue Circle (Created two physical circles)

What resonated with you regarding resiliency?

Circle one

- Cross sectoral collaboration- need to bring Albertans together. Bring agriculture industry, government and NGOs together to learn. Need to work together to educate people;
- Disconnect between people and land. Managing the environment is about managing ourselves. Citizen to citizen and neighbour to neighbour engagement;
- Academic and community blend. Oil and gas, agriculture, municipalities, forestry, etc. need to be brought together;
- Need to convince people that they want to make the change, have a better life for themselves and their children. It's in everyones best interests to want to keep the land

healthy. Need to educate young people, try different approaches and teach sustainable practices. Need to stop trying to change belief, need to start by changing behaviors;

- Need compromise, how to work with everyone and understand what they do. Need to start with a conversation then build a relationship to continue the dialogue;
- Need to develop a whole new paradigm to manage our relationships, one that opens the door for alternative methods and ideas;
- Lowering peak day demand for water- more resilient water management;
- Resilience is a more realistic approach to the environment. Yes the environment can bounce back but not forever;
- Ground water sometimes takes a back seat to surface water, but it is just as important;
- We are embedded in the natural system, yet, humans are disconnected from nature;

Circle Two

- How do we come to a common place, with common vision and values? Through common ancestors, recognize that we are connected as a community;
- How can you impact people's behavior? Encourage kids to use social media and outdoors, do nature trips with students to teach them about watersheds and their ethical responsibility;
- Start an organic/permaculture movement, create communities that want to jump on board new ideas, build a community of best practice;
- Build connections with farmers, watershed stewards, government agencies, etc. Teach people to see the value in their watersheds;
- Need a clear vision of our values to achieve our goals;
- Need to talk with people about why we do what we do and connect with them on a deeper level with the work that we do;
- Sometimes people need a story to connect them to their watershed;
- It is important to protect values and still protect the health of the watershed;

5. Intersectoral Action

a. Getting our Hands Wet and Dirty

Margot Parkes (University of Northern British Columbia)

When we look 'upstream' and 'downstream' to consider what determines health and wellbeing we are confronted by the need for new types of intersectoral action. In the context of water and land use management, all sectors are challenged to get their hands 'wet and dirty' in a new generation of intersectoral conversations with unlikely allies ranging from agriculture, health, forestry and environmental sectors, through to watershed and land stewardship initiatives. This presentation will share insights from the formative period of a 'Knowledge to Action' project in Northern BC focused on intersectoral water governance as a vehicle to improve social and

environmental determinants of health, and raise general questions about how to develop skills and capacities for a new generation of intersectoral action.

b. Watershed Assessment in Nova Scotia

Shannon Stirling (Dalhousie University)

In order to address knowledge gaps on the current state of watersheds in Nova Scotia, we created a Nova Scotia Watershed Assessment Project (NSWAP) in late 2010, to address objectives of the new Nova Scotia Water Strategy. We recently completed the first phase of the NSWAP, a province-wide assessment conducted in a GIS that mobilizes existing province-wide map information to 1) characterize of the state of watersheds in Nova Scotia; 2) identify priority watersheds; 3) identify of watersheds most vulnerable to future climate and direct human changes; and 4) create a standardized Provincial-scale GIS database, accessible to stakeholders in water resource management.

The assessments are conducted for all major watersheds in Nova Scotia. Our results display for the first time Province-wide assessments of watershed impacts to water quality, available water, surface erosion, and fish habitat. The outputs first-phase NSWAP inform key components of the Nova Scotia Water Strategy and Climate Change Action Plan, including: 1) identification of the priority watersheds in Nova Scotia, ranking watersheds by impact; 2) completion of a vulnerability assessment of our water resources: identification of areas with increased likelihood of risks for erosion and sedimentation, and fish habitat loss, and 3) identification of watersheds that are the suitable candidates for restoration projects such as salmon habitat restoration and liming.

c. Cowichan Watershed Board Planning

Rodger Hunter and Lorna Medd (Cowichan Watershed Board)

The Cowichan watershed is approximately 1000 km² and is located on Vancouver Island 75 km north of Victoria British Columbia (BC). The Cowichan Water Basin Management Plan was developed between 2004 and 2007 in response to a water supply crisis that occurred in this federally and provincially designated heritage watershed in 2003. The Plan is more comprehensive than most watershed plans. It includes six goals, 23 objectives and 89 recommended actions that address water demand/conservation, water supply, biodiversity and fisheries, flood management, communications and governance. For three years after the Plan was completed there was little progress in implementing the plan. This was because no one body was responsible for implementing the Plan which stems from the fact that authority regarding water and water management in British Columbia is diverse and diffuse. To address this leadership vacuum the Cowichan Valley Regional District partnered with Cowichan Tribes to create the Cowichan Watershed Board (CWB). The presentation addresses:

- ✓ context within which the CWB was created (both macro and local);
- ✓ the make up of the Board and the thinking behind it;

- ✓ the Board's purpose and operating principles;
- ✓ its authority/lack of authority;
- ✓ its early successes;
- ✓ specific themes for which it has established targets;
- ✓ factors responsible for its success to date; and,
- ✓ the challenges that it faces.

The CWB represents a unique governance model that attempts to take an integrated (whole of watershed thinking) approach to watershed management at a watershed scale. It was developed in attempt to address water policy silos in BC. It can be viewed as a governance experiment that is attempting to implement a collaborative (intersectoral) approach to the management of a watershed. Through good science, traditional knowledge and inclusive processes the CWB hopes to enhance the resilience of the Cowichan watershed.

d. Dialogue Circle (*Created two physical circles*)

What might you do differently, what might need to be done differently, in what area is there need for change?

Circle One

- Need to explore common values and interests with the “unconverted”, talk in real language to try and create linkages. Get people involved and interested to act, to create the same goals and vision. Reach out to a vast group of people, look for new connections, let people see themselves in it to become a part of it, and we can't reduce others ideas. Define relationship on more than one common idea or goal;
- Reach out to communities we tend to avoid, create partnerships with community groups, agriculture and environment, Aboriginal peoples;
- Need to set big juicy targets, with bold language and messaging. Take more risks, be more assertive, and acknowledge the role of arts and culture;
- Help people develop a long term connection with nature, show people why watersheds are relevant to them;
- Using watersheds as a setting for health and well being. Try thinking in terms of complex and whole things;
- Need to spend more time with community groups that struggle to access information;

Circle Two

- Use grassroots groups, engage people and think of different ways to engage people. Get youth involved, engage people by getting them into the field, on the ground learning. Build connects with small communities, farmer, watershed people, community groups, governments, researchers, businesses;
- Educate youth; help them get informed through youth programing, girl guides, etc;

- Bringing together public health and watersheds, create that link, look beyond water quality to health and well being of nature and humans;
- Need to establish relationships with unlikely allies, need collaboration and compromise;
- Need to build relationships between the province and watershed if we want to effectively manage water;
- Need less planning and more engagement;
- When dealing with water we need to look at not just social, but also health and other things that get lost in those bigger categories;

Wrap-Up Dialogue Circle

What might we need or what can we do differently as a collective? What might best serve the collective in terms of innovation? Where do we begin?

- Continue the dialogue;
- Network: Twitter, Facebook, Blogs, Newsletters, News piece, etc;
- Engage decision makers, get politicians emotionally engaged;
- Consolidate what is being done;
- Network for Ecosystem Sustainability and Health (NESH) can be a resource;
- Communication within the WPACs- look at how to work together differently;
- Connect Public Health and Watersheds;
- Case studies;
- Stop trying to do everything, too many groups work at the wrong scale, instead use a multilateral approach to problems;
- Better communication between water councils, water stewardship and WPACs;
- Move from words to actions;

6. Evaluation

1. Would you describe yourself as:

Organization	Number of Participants
Non-Profit Organization	14
Environment	3
Public Health	1
Student	1
Non-Profit Organization and Student	1
Community Organization and Non-Profit Organization	1
Non-Profit Organization and Environment	1
First Nations and Non-Profit Organization	1
Total	23

2. Do you work as:

Position	Number of Participants
Manager/Director	3
Researcher/Evaluator	5
Front Line Practitioner	3
Policy/Program Developer	2
Administration	1
Researcher/Evaluator and Advisor to City Council	1
Front Line Practitioner, manager/director, policy/program developer	1
Project Assistant	1
Board Member- Industry rep	1
Research and Policy/Program Developer	1
Front-line Practitioner/ research/evaluator	1
Program Coordinator	1
Board Member	1
No Response	1
Total	23

3. On a continuous scale of 1 to 5, with 1 being not at all and 5 being very much so, please indicate the extent to which the workshop met the following objectives:

a) Discussed the multiple dynamics and functions that complicate watershed-level analyses, programing and public policy.

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	0
4	7
(very much) 5	16
Mean	4.695

b) Discussed the need to work within watersheds in a fashion that acknowledges integrative watershed management and planning

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	0
4	6
(very much) 5	17
Mean	4.739

c) Discuss the need to better and more clearly address a core issue of both horizontal (across policy domains) and vertical (across levels of authority or governance) Integration.

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	3
4	10
(very much) 5	10
Mean	4.304

4. What did you like best about the workshop?

- The workshop held in a very friendly environment and very interactive;
- What I enjoyed most is that the format was informal but well organized;
- The format was great. Loved the academic presentations- very useful and relevant knowledge. A whole new network of people for me to explore and investigate. Excellent lineup;
- Time for discussion, Lars humour;
- Individual discussion, theoretical to practical approach;
- Great mix and sharing among academics and practitioners/ stakeholders;
- Networking;
- Lots of discussion and interaction;
- Interesting mix of academics and practitioners, presentations and dialogue circles were good;
- Dialogue circles, the diverse background of participants and issues entertained;
- Examples tying theory to reality;
- The pace was great. A perfect balance of presentations and discussion. You also used some very innovative ways of making participants talk to each other and listen. Well done;
- There was a good balance of participation and discussion. Space to have conversations around the various topics;
- Good mix of presentation types, information, data and anecdote;
- Meeting and discussing issues with conference participants;
- The global presentations and sharing circles;
- Discussion circles;
- Format of short presentations followed by discussion;
- The various information about different parts of Canada;
- The mix of participants;

5. How would you assess the facilitation and implementation of the event?

- Excellent event;
- Well done. Good flow and transition between speakers;
- I liked it. I didn't feel rushed. I didn't get bored. Listened and learned. It didn't feel phoney or forced but was casual and efficient;
- Good;
- Excellent;
- Excellent. I particularly appreciated hearing the perspective from different parts of Canada and Africa. Mix of academic (made accessible) and practical was great;

- Really enjoyable;
- Well organized, smoothly run, clear expectations;
- Excellent but we could do with energy monitors;
- Good to moderately excellent. First time to experience a dialogue circle (I have been involved in facilitation, knowledge cafes);
- It was well organized and a wonderful facilitation;
- Good;
- The facilitation, time keeping and overall organization were excellent. Thank you as well for all the per conference coordination and assistance;
- Facilitation was good, very well organized forum;
- Quiet excellent, well done;
- Excellent;
- Good;
- Good;
- Very good;
- Excellent, only criticism is that some of the questions to spark conversation in dialogue circles were too complicated, I spent too much time deciphering them;
- Should be more to the audience not over our heads, some very technical;
- Very well organized, well done;

6. Please Indicate the extent of your agreement with each of the following statement

a) I had sufficient opportunity to participate in discussion.

Rating between 1-5	Number of responses
(not at all) 1	0
2	1
3	0
4	5
(very much) 5	16
Mean	4

b) I felt I could make a contribution to the issues being discussed.

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	1
4	7
(very much) 5	15
Mean	4.608

c) My work was valued during the workshop.

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	4
4	4
(very much) 5	15
Mean	4.4787

d) The presentations were appropriate and relevant to the event.

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	0
4	4
(very much) 5	15
Mean	3.956

7. Do you feel the number of people in this workshop was:

	Number of responses
Too few	4
Just right	19
Too many	0

8. Are there other groups/organizations/ practitioners you feel should have been represented, or included in the future?

Rating between 1-5	Number of responses
Yes	14
No	5
No response	4

a) If yes who?¹

- Industry and other stakeholders;
- More watershed groups and policy folks;
- Polis;
- Government ministries;
- AB environment and water. Water for life strategy;
- Business, industry, the less converted;

¹ Over 150 people were invited to this event and 46 people attended.

- North Saskatchewan watershed Alliance, Bow River Council, A selection of leading municipalities or municipal planning folks;
- Lack of government and industry reps;
- Industry and first nations;
- Government, especially municipal governments that have the potential to be key partners in land management and watersheds;
- More first nations, farmers and social scientists;
- Community based stewardship groups could really benefit and add on the ground application;
- Aboriginal people;

9. Overall, how satisfied were you with this event?

Rating between 1-5	Number of responses
(not at all) 1	0
2	0
3	0
4	9
(very much) 5	14
Mean	

10. What are your suggestions for improving the event?

- More inclusive in terms of participants and inviting all stakeholders;
- Expand the circle a bit. Great event, very thought provoking and stimulating with a practical, applied perspective;
- 1.5 hours for lunch especially since leaving the hotel;
- I wish more could be enlightened/ mind awake;
- It would be good to have a field component;
- Energy monitors, more movement through the day, especially in pm;
- Methodology for developing integrated water management plan and plan implementation;
- The process of discussion the second day allowed more people to participate and share their views. The first day had a few key people who were sharing. Discussion of innovation. Received the invite very late (a few weeks ago) would like to receive invite earlier (to the AB watershed groups);
- A field trip to a local watershed site of interest/ relevance would be a great addition;
- for discussion round, it's nice to have "question sheets" at each table, both to have the question at your fingertips and be able to jot down notes for each question-either individual notes or notes from the group;
- A bit less theoretical would be helpful, although battle river presentation did this quiet well;

- More time for discussion within tables/subgroups. Longer lunch breaks. Access to PowerPoint presentations (post conference);
- Some of the presentations were so academic- over my practitioner head;
- The hotel was a bit unclean (room), but the salon was a good space;
- Talk to your audience this is not a university class 101;
- Hot breakfast at least one of the days. Muffins and bagels are a killer for energy levels;

7. Participating Organizations

- Might Peace Watershed Alliance
- Beaver River Watershed Alliance
- Closer to Home Initiative
- Red Deer River Watershed Alliance
- Alberta Agriculture and Rural Development
- South East Alberta Watershed Alliance
- AI-EES Water Resources
- Government of Alberta
- Agri-Environmental Partnership of Alberta
- Sustainable Resource Development
- Tribal Chiefs Ventures Inc.
- Lesser Slave Watershed Council
- Land stewardship Centre
- Battle River Watershed Alliance
- Alberta Land-use Knowledge Network
- Alberta Ecotrust Foundation
- Athabasca Watershed Alliance
- South Saskatchewan River Watershed Stewards
- Battle River Watershed Alliance
- University of Calgary
- Saint Mary's University
- Dalhousie University
- University of Guelph
- International Institute for Sustainable Development
- Alberta Centre For Sustainable Rural Communities
- Fraser River Basin
- Cowichan Watershed Board
- University of Northern British Columbia
- York University
- Otonabee Region Conservation Authority
- Interra Plan Inc.