

Water Conservation in BC

How Do We Move Forward From Here?

Focus Group Findings

Prepared For:

BC Ministry of Water, Land & Air Protection

In partnership with

Water Sustainability Committee of the BC Water & Waste Association

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Table of Contents

Executive Summary	3
Water Conservation Challenges/Solutions <i>Detailed Findings of Break-Out #1</i>	8
Water Sustainability Action Plan <i>Detailed Findings of Break-Out #2</i>	15
Water \$ave Tool Kit <i>Detailed Findings of Break-Out #3</i>	24
Water Conservation Considerations <i>Detailed Findings of Break-Out #4</i>	31
Agriculture	
Allocation/Water Rights	
Education	
Land-Use Planning	
Legislation/Regulation	
Metering	
Pricing	
Source-to-Tap Protection	
Water Supply Planning	
Focus Group Participants	40
Break-Out Groups	41

Executive Summary

In November of 2003, the BC Ministry of Water, Land & Air Protection, in partnership with the Water Sustainability Committee (WSC) of the BC Water & Waste Association, initiated development of a Water \$ave Tool Kit for British Columbia that:

- re-evaluates water conservation efforts in BC;
- highlights success stories;
- identifies gaps, barriers and opportunities, and
- identifies further steps that need to be taken by public, private and voluntary sectors to protect and conserve water supplies.

In its scope, the Tool Kit will consider the 1998 Water Conservation Strategy, the 2002 Drinking Water Action Plan and other related initiatives. It will also help guide:

- the development and implementation of the Water Sustainability Action Plan (WSAP), a partnership involving MWLAP, the WSC and others; and
- implementation of the Drought Management Action Plan (DMAP), a recent initiative spearheaded by the BC Ministry of Sustainable Resource Management.

The relationship between the WSAP and the Tool Kit is cascading—the WSAP will provide a strategic framework, while the Tool Kit will offer a range of on-the-ground measures and approaches that will enable individuals and communities to achieve water conservation and water-use efficiency objectives. Ultimately, it is envisioned that the Tool Kit will evolve into a web-based “living document” that tracks progress and trends in BC.

To guarantee the Tool Kit’s success—that it: 1) meets the information-gathering and -dissemination needs of the province and stakeholders throughout BC, and 2) provides meaningful input to the development and implementation of the WSAP and the DMAP—a focus group was conducted with representatives from various sectors within the water industry and the broader community. More than 40 people participated in the day-long session November 25th, the primary objective of which was to answer the following questions:

- Where have we come from?
- Why is conservation critical?
- How do we move forward?
- What must we consider and why?

More specific objectives, as outlined in the following categories, were addressed during consecutive break-out sessions throughout the focus group, which was entitled *Water Conservation in BC: How Do We Move Forward From Here?*

Water Conservation Challenges and Solutions

- To brainstorm challenges and solutions to help drive and support the WSAP and the Tool Kit.

Water Sustainability Action Plan

- To launch the plan;
- To share and validate the vision for “pilots informing provincial policy through the shared responsibility model;” and
- To identify “pilots” and “partnerships” that may come under the WSAP umbrella.

Water \$ave Tool Kit

- To identify how to maximize participation in the reevaluation (survey) of conservation efforts in BC; and
- To identify how to present findings and other information (e.g. success stories, future actions) in a meaningful way that will be useful to all stakeholders.

Water Conservation Considerations

- To brainstorm benefits, barriers, tools, and support mechanisms in the following areas:
 - Agriculture
 - Allocation/Water Rights
 - Education
 - Land-Use Planning
 - Legislation/Regulation
 - Metering
 - Pricing
 - Source-to-Tap Protection
 - Water Supply Planning

Water Conservation Challenges and Solutions

During Break-Out #1, participants in each of six groups were asked to identify and rank key concerns prompting them to consider water conservation measures. Participants were grouped to guarantee a cross-section of industry expertise and experience in each group. Concerns were ranked accordingly:

1. Limited source quantity
2. Public apathy and lack of awareness
3. Increasing infrastructure and treatment costs
4. Impacts on water quality
5. Agricultural demands
6. Lack integrated water management
7. Urban growth
8. Lack of commitment to demand management
9. Public health concerns
10. Impacts on fish habitat/flows
11. Conflict among resource users
12. Impacts on social and economic factors
13. Climate change
14. Impacts on ecosystems
15. Aging infrastructure

Participants were then asked to identify barriers preventing them from addressing each concern. Common barriers included:

- lack of education and/or communication;
- lack of political will;
- cost;
- lack of data;
- lack of coordination/cooperation among stakeholders;
- competing priorities;
- lack of planning;
- legislative inadequacies; and
- jurisdictional complexities.

Participants then identified the tools and/or support they require to address each concern. Noted frequently were the need to:

- improve communication among all stakeholders;
- educate all stakeholders, especially the public and elected officials;
- promote demand management (e.g. meters, user-pay pricing);
- develop and enforce appropriate water conservation and planning legislation at all government levels;
- enable and promote coordination and cooperation among all stakeholders;
- enable and promote grass-roots stewardship;
- identify and promote the use of improved technologies;
- collect and distribute appropriate water conservation and related data (e.g. climate change);
- develop and implement integrated planning and management systems;
- allocate the water resource to reflect current needs and conditions; and
- provide adequate funding for water conservation initiatives.

For detailed findings see page 8.

Water Sustainability Action Plan

During Break-Out #2, each of the six groups was asked to answer a number of questions relating to the WSAP. In summary:

1. **The WSAP is a process intended to achieve a more holistic approach to water management in BC. How do you define “holistic?”**

Participants agreed that a “holistic” approach:

- ensures water is at the heart of all decision making;
- ensures watershed/ecosystem-based planning;
- includes all players; and
- guarantees “balance” by giving equal consideration to social, economic, and environment factors.

Participants suggested that this could be achieved by:

- recognizing the impacts of all planning and management decisions;
- integrating support from all agencies and stakeholders;
- adjusting behaviors;
- changing cultures;
- demanding accountability; and
- recognizing that holistic approaches are continuous and require ongoing support.

For detailed findings see page 15.

2. The WSAP will promote conservation at four scales: region, watershed, neighbourhood and site. How can this best be accomplished?

Participants agreed that BC needs a unified yet tiered approach to water management with dynamic provincial conservation and licencing policies setting the stage for standardized resource values at all levels. To be effective, this approach must be supported by grass-roots input, adequate funding, improved communication and ongoing education. Strong leadership at all levels is key.

For detailed findings see page 16.

3. The WSAP will promote technological and cultural changes, including professional, organizational and societal changes. How can this be achieved?

Consensus was that these changes will be best driven by improved communication and education followed by regulation and related cost incentives. To be effective, these changes must be supported financially and reflect solutions to the challenges of all users.

For detailed findings see page 17.

4. The WSAP will provide an umbrella for on-the-ground conservation “pilots.” Are you aware of any existing or potential projects that would qualify?

Numerous existing and potential pilots were listed, with focuses ranging from land-use planning to technology.

For detailed findings see page 18.

5. How can these pilots be supported to ensure maximum effectiveness?

Key factors were identified as:

- awareness through education and information sharing (e.g. website);
- buy-in from decision-makers and public;
- partnerships between province and purveyors;
- a “champion” to spearhead program; and
- adequate funding from all stakeholders.

For detailed findings see page 19.

6. The WSAP promotes partnerships through a shared responsibility model. What existing and potential partnerships could help the WSAP achieve its objectives?

Numerous existing and potential partnerships were listed.

For detailed findings see page 20.

7. How can these partnerships be supported to ensure maximum effectiveness?

Again, key factors were identified as:

- awareness through education and information sharing (e.g. website);
- buy-in from decision-makers and public;
- a “champion” to spearhead the program; and
- adequate funding from all stakeholders.

For detailed findings see page 21.

8. What are the best ways to educate people about the WSAP?

Participants agreed that awareness and, ultimately, social conscience could be raised via communication tools such

as newsletters, brochures, bill stuffers, public service announcements, and community events. Successful models are Power Smart and Water Smart. To ensure success, each audience must be targeted with age- and interest-specific information.

For detailed findings see page 21.

9. What is the best way to encourage involvement in the implementation of WSAP conservation initiatives?

Participants suggested:

- financial incentives (e.g. rebate programs);
- competitions (e.g. between communities or neighbourhoods);
- Water \$ave Tool Kit;
- “painless” programs; and
- success stories that are well publicized.

For detailed findings see page 22.

Water \$ave Tool Kit

During Break-Out #3, each of the six groups was asked to answer a number of questions relating to the Tool Kit. In summary:

1. One mandate of the Tool Kit is to reevaluate local, regional and provincial conservation efforts in BC. Similar information was first gathered in 1998 via a mail-in survey for use in *the Water-Use Efficiency Catalogue*. Subsequent mail-in surveys have invited feedback from many of the same organizations. Is a mail-in survey still the best survey tool, or should we consider other options (e.g. telephone survey, online survey)?

The preferred tool is an online survey with email or telephone follow-up to slow responders.

For detailed findings see page 24.

2. What is the best way to promote full survey participation?

Participants agreed that to be effective, the survey must:

- be designed with input from all sectors to ensure all appropriate information is being gathered;
- be pre-tested to ensure flow, readability and pertinence;
- be well publicized in advance (e.g. by province and through professional associations);
- be supported throughout the survey period (e.g. by local health authorities);
- offer incentives for participation (e.g. prizes);
- guarantee findings are publicized;
- guarantee findings are used to initiate action-based solutions.

For detailed findings see page 25.

3. Another mandate of the Tool Kit is to present survey findings back to all respondents in a way that’s user-friendly and useful. How can this best be achieved?

Participants suggested findings be presented on a centralized website that allows for quick and easy reference and cross-reference. Information should be presented by region and sector and include an executive summary and visuals such as charts and graphs.

For detailed findings see page 25.

4. The Tool Kit is also intended to promote conservation by sharing BC success stories. How can this best be achieved?

Again, participants suggested using a centralized website to publicize conservation success stories. Other recommended tools include press releases, newsletters, and workshops. Awarding successes was also suggested.

For detailed findings see page 26.

5. **Another mandate of the Tool Kit is to identify conservation gaps, barriers and opportunities. How can this information be presented back to other organizations in a way that's user-friendly and useful?**

Yet again, participants recommended a centralized website. To be effective, the website must:

- be continuously maintained and updated to provide fresh information;
- provide opportunities for dialogue (e.g. discussion groups devoted to specific topics);
- provide opportunities for quick and easy referencing (e.g. FAQs, bulletin boards);
- provide references and links to written material (e.g. studies, reports);
- present information by sector; and
- include useable data bases;

For detailed findings see page 27.

6. **The final mandate of the Tool Kit is to identify further steps that need to be taken by public, private and voluntary sectors to conserve water supplies. What would be the best way to gather and share that information?**

Participants suggested that information could be gathered via surveys, open houses and workshops with community groups, and shared through the centralized website. They warned that “one size does not fit all,” and that programs would have to be tailored to fit the wants and needs of specific interest groups.

For detailed findings see page 28.

7. **In what format(s) should the Tool Kit be presented?**

Every group identified a centralized website as its primary preference, with CDs and binders being available on request. Although not referred to on the break-out worksheet, information order and flow were also discussed. Participants agreed that what they saw as tool

kit information (e.g. conservation how-to's, success stories, pilot projects) should appear at the front of the document, while supporting survey information should be presented as an appendix.

For detailed findings see page 29.

8. **What is the best way to ensure people know about the Tool Kit and actually use it?**

Participants recommended a PR strategy that would:

- promote the Tool Kit to all stakeholders via a centralized website, the media (e.g. press releases), libraries, universities, government agencies (e.g. government publications list), professional agencies (e.g. BCWWA, Water Supply Association of BC), and other organizational and electronic links.

For detailed findings see page 29.

Water Conservation Considerations

During Break-Out #4, participants were group according to their areas of expertise and experience. Each group brainstormed the benefits, barriers, tools, and support mechanisms for one of the following considerations. Detailed findings, which will be reflected in the Tool Kit, are available as follows:

- | | |
|----------------------------|---------|
| ○ Agriculture | Page 31 |
| ○ Allocation/Water Rights | Page 32 |
| ○ Education | Page 33 |
| ○ Land-Use Planning | Page 34 |
| ○ Legislation/Regulation | Page 35 |
| ○ Metering | Page 36 |
| ○ Pricing | Page 37 |
| ○ Source-to-Tap Protection | Page 38 |
| ○ Water Supply Planning | Page 39 |

Break-Out #1: Water Conservation Challenges and Potential Solutions

PRIORITY #1			
What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
Priority #1 Group 1: Poor Public Awareness	<ul style="list-style-type: none"> ▪ Disconnect with natural systems ▪ Lack of public knowledge ▪ Competing priorities ▪ Understanding the true cost of the resource ▪ Political will 	<ul style="list-style-type: none"> ▪ Public education campaign ▪ Understanding of system operation ▪ Completing cost of service review ▪ Political 	<ul style="list-style-type: none"> ▪
Priority #1 Group 2: Reliability of Supply for Domestic/Irrigation/Humans/Fish	<ul style="list-style-type: none"> ▪ Don't know enough about supply ▪ Climate change ▪ Overlicencing ▪ Fragmentation of responsibilities for water management 	<ul style="list-style-type: none"> ▪ Allocation by sector ▪ More support from provincial government experts 	<ul style="list-style-type: none"> ▪ Agreements between governments and related groups ▪ Opportunity to re-allocate licences ▪ Create single agency for water
Priority #1 Group 3: Agricultural Demands Difficult to Meet in Drought Summers Which Require Maximum Irrigation	<ul style="list-style-type: none"> ▪ Few innovative leaders ▪ Tradition 	<ul style="list-style-type: none"> ▪ Education ▪ Meters ▪ Scheduling tools based on climate and soil moisture deficits 	<ul style="list-style-type: none"> ▪
Priority #1 Group 4: Limited Source Water Quantity	<ul style="list-style-type: none"> ▪ Not 'God' ▪ Cost of development ▪ Jurisdictional coordination ▪ Perception of water availability 	<ul style="list-style-type: none"> ▪ Education/stewardship ▪ Protection of existing source water <ul style="list-style-type: none"> ○ Policy and enforcement ▪ Use of existing tools ▪ Technology improvements (reuse) 	<ul style="list-style-type: none"> ▪ Funds ▪ People
Priority #1 Group 5: Integrated Water Management	<ul style="list-style-type: none"> ▪ Multitude of stakeholders ▪ Cross-purpose jurisdictions 	<ul style="list-style-type: none"> ▪ Roundtabling <ul style="list-style-type: none"> ○ Inter- and intra-watershed discussions ▪ Two-way accountability 	<ul style="list-style-type: none"> ▪ Interagency cooperation
Priority #1 Group 6: Replenishment/Limited Capacity of Resource	<ul style="list-style-type: none"> ▪ Lack of data/accuracy ▪ Spatial and temporal variability and changes to same 	<ul style="list-style-type: none"> ▪ More data collection ▪ Better analysis and application of data ▪ Coordination of diverse data (e.g. climate/precipitation/evaporation) 	<ul style="list-style-type: none"> ▪ Planning using better data ▪ Publicize data to educate public ▪ Set trend for future management ▪ Coordinate resource understanding and application of data

PRIORITY #2

What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
<p>Priority #2 Group 1: Impacts on Water Quality</p>	<ul style="list-style-type: none"> ▪ Diversified land use ▪ Number of regulatory bodies ▪ Significant climate change ▪ Cost: lack of funds ▪ Lack of public education 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
<p>Priority #2 Group 2: Need for Demand Management</p>	<ul style="list-style-type: none"> ▪ Unpopular politically ▪ Intangible ▪ Public resistance 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
<p>Priority #2 Group 3: New Demand: Development-Driven Residential Growth</p>	<ul style="list-style-type: none"> ▪ Difficult to limit growth ▪ Lack of political will 	<ul style="list-style-type: none"> ▪ Water-based land-use planning ▪ Watershed-based governance ▪ Fire protection as a basis for supply designs (limits expansion of margins) 	<ul style="list-style-type: none"> ▪ Political will
<p>Priority #2 Group 4: Water Quality</p>	<ul style="list-style-type: none"> ▪ Increase demand: volume treated or protected ▪ Methods vs. risks ▪ Cost ▪ Protecting tap vs. protecting source ▪ Agency coordination, data sharing ▪ Education/stewardship/enforcement 	<ul style="list-style-type: none"> ▪ Education/stewardship ▪ Watershed/source protection 	<ul style="list-style-type: none"> ▪ Planning
<p>Priority #2 Group 5: Public Apathy/Education & Awareness</p>	<ul style="list-style-type: none"> ▪ Funding ▪ Personnel ▪ Political will ▪ Training ▪ Lack of coordination 	<ul style="list-style-type: none"> ▪ Interest ▪ Pilot projects ▪ Interagency cooperation ▪ Working with grassroots organizations 	<ul style="list-style-type: none"> ▪ Funding stewardship ▪ Leadership
<p>Priority #2 Group 6: Conflict Among Resource Users</p>	<ul style="list-style-type: none"> ▪ Acceptable value application of different resources ▪ Order of value of different users (e.g. fish, agriculture, tourism) 	<ul style="list-style-type: none"> ▪ Exploring an acceptable balance of resource use ▪ Built-in flexibility of resource use based on circumstances 	<ul style="list-style-type: none"> ▪ Community willingness and adoption of long-range goals ▪ Accepting current circumstances and being adaptable

PRIORITY #3

What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
<p>Priority #3 Group 1: Public Health Concerns</p>	<ul style="list-style-type: none"> ▪ Disconnects between regulating authorities ▪ Mixed messages ▪ Different end users ▪ Lack of education 	<ul style="list-style-type: none"> ▪ Clarification of responsibilities 	<ul style="list-style-type: none"> ▪
<p>Priority #3 Group 3: Treatment Costs Increasing as Facility Standards Become More Stringent</p>	<ul style="list-style-type: none"> ▪ Integrated supply systems (treating agricultural and industrial supply to domestic standards) 	<ul style="list-style-type: none"> ▪ Split water systems for domestic vs. non-domestic use 	<ul style="list-style-type: none"> ▪ Affordable solution ▪ Public acceptance of higher costs
<p>Priority #3 Group 4: Fish Habitat/Fish Flows</p> <p>Social/Economic Implications</p>	<ul style="list-style-type: none"> ▪ Competing demands ▪ How much is needed? ▪ Legislation/agency coordination ▪ Groundwater recharge ▪ Education ▪ Public perception ▪ Lack of education ▪ Lack of facing the issue ▪ Marketing of bottled water ▪ Lack of trust 	<ul style="list-style-type: none"> ▪ Stewardship/education ▪ Enforcement of legislation ▪ Technological improvements ▪ Education/stewardship ▪ Environmental ethic 	<ul style="list-style-type: none"> ▪ Funds ▪ People/community groups
<p>Priority #3 Group 5: Urban Growth</p>	<ul style="list-style-type: none"> ▪ Political will/need ▪ Human rights/freedom of mobility 	<ul style="list-style-type: none"> ▪ Census data/forecasting ▪ Bylaws ▪ Planning ▪ Education and awareness ▪ Meters ▪ Rate structure 	<ul style="list-style-type: none"> ▪ Bylaw template ▪ Education ▪ Enforcement ▪ Political will
<p>Priority #3 Group 6: Infrastructure Costs, Expansion of Water Supplies, Wastewater Treatment</p>	<ul style="list-style-type: none"> ▪ Lack of financial creativity and flexibility ▪ Legislative barriers ▪ Jurisdictional management ▪ Effective communication ▪ Political support ▪ Licencing of resources 	<ul style="list-style-type: none"> ▪ Metering, pricing ▪ Infrastructure funding ▪ Focus on end result/long-term ▪ Cooperation 	<ul style="list-style-type: none"> ▪ Cost savings for some/higher costs to wasters ▪ Fair costs allocation ▪ Long-term planning ▪ Communication leading to results ▪ Longer budgeting cycle ▪ Improvement District funding restrictions should be investigated

PRIORITY #4

What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
<p>Priority #4 Group 1: Supply Side/Demand Side Management</p> <p>Lack of Understanding of Climate Change</p>	<ul style="list-style-type: none"> ▪ Climate change ▪ Lack of knowledge of resource (e.g. total supply) ▪ Allocation of resource (e.g. equitability) ▪ 	<ul style="list-style-type: none"> ▪ True value of water ▪ Educate decision makers ▪ Promote linkages 	<ul style="list-style-type: none"> ▪ Compiling information ▪ Clarifying interrelationships
<p>Priority #4 Group 5: Agriculture</p>	<ul style="list-style-type: none"> ▪ Cost of return ▪ Lack of knowledge ▪ Lack of data 	<ul style="list-style-type: none"> ▪ Meters ▪ Education and awareness ▪ Allocation ▪ Policy framework ▪ Technology 	<ul style="list-style-type: none"> ▪ Grants ▪ Education/extension
<p>Priority #4 Group 6: Evaporation/Global Warming and Natural Occurrences</p>	<ul style="list-style-type: none"> ▪ Education/knowledge 	<ul style="list-style-type: none"> ▪ Recognition of problem ▪ Adapting our habits to reality ▪ Water management 	<ul style="list-style-type: none"> ▪ Understanding an acceptable impact ▪ Changing our planning to match acceptable impacts

PRIORITY #5

What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
<p>Priority #5 Group 1: Impacts on Ecosystem</p>	<ul style="list-style-type: none"> ▪ Development ▪ Land-use ▪ Understanding cumulative effects ▪ Competing priorities 	<ul style="list-style-type: none"> ▪ Placing a value on ecosystems 	<ul style="list-style-type: none"> ▪
<p>Priority #5 Group 5: Aging Infrastructure</p>	<ul style="list-style-type: none"> ▪ Lack of money ▪ Status of infrastructure ▪ Political will ▪ Planning 	<ul style="list-style-type: none"> ▪ Grants/funding ▪ Management systems 	<ul style="list-style-type: none"> ▪ Lobbying that's effective and coordinated

PRIORITY #6			
What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
Priority #6 Group 1: Capital Cost of Storage (New Dams) Operating & Maintenance Costs	<ul style="list-style-type: none"> ▪ Value of water (pricing) ▪ Public perception ▪ Land-use (development) ▪ Finding space 	<ul style="list-style-type: none"> ▪ True value of water ▪ Educating decision-makers ▪ Land-use supply and demand link 	<ul style="list-style-type: none"> ▪
Priority #6 Group 5: Climate Change	<ul style="list-style-type: none"> ▪ Education/awareness ▪ Monitoring 	<ul style="list-style-type: none"> ▪ Roundtabling <ul style="list-style-type: none"> ○ Inter- and intra-watershed discussions ▪ Two-way accountability 	<ul style="list-style-type: none"> ▪ Interagency cooperation ▪ Education

PRIORITY #7			
What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
Priority #7 Group 5: Treatment/Health	<ul style="list-style-type: none"> ▪ Apathy ▪ Cost ▪ Misinformation ▪ Training and manpower 	<ul style="list-style-type: none"> ▪ Drinking water protection officers ▪ Education ▪ Funding ▪ Creative planning 	<ul style="list-style-type: none"> ▪ Long-term political will

PRIORITY #8			
What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
Priority #8 Group 5: Flows for Fish	<ul style="list-style-type: none"> ▪ Over allocation ▪ Historical data ▪ Past management decisions ▪ Based on poor science 	<ul style="list-style-type: none"> ▪ Stream flow monitoring ▪ Information gaps ▪ Intra-ministry cooperation 	<ul style="list-style-type: none"> ▪ Funding ▪ Political will ▪ Continuous and meaningful communication

Unnumbered Priorities

What concerns are causing you to consider conservation/water-use efficiency measures?	What is preventing you from addressing each of these concerns?	What tools and/or support would help you address each of these concerns?	What would ensure the effectiveness of these tools and/or support was maximized?
<i>Group 2</i>			
Climate Change, Lower Snow Packs, Increased Uncertainty	<ul style="list-style-type: none"> ▪ Lack of basic data ▪ Uncertainty of who is collecting data 	<ul style="list-style-type: none"> ▪ Information from the province 	<ul style="list-style-type: none"> ▪
Cost of Infrastructure (Supply) to Keep up with Demand	<ul style="list-style-type: none"> ▪ Political uncertainty ▪ Developers will pay 	<ul style="list-style-type: none"> ▪ Incentives/grants/funding ▪ Metering: user pay ▪ Education 	<ul style="list-style-type: none"> ▪ Bylaws ▪ Governance ▪ Create single agency for water
Environmental Uncertainty: Fish Flows	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Water Quality: Cost of Treatment	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Sewage Treatment Costs	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Economic Impacts: Lack of Supply Prevents Economic/Regional Growth	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
<i>Group 3</i>			
Financing New Infrastructure	<ul style="list-style-type: none"> ▪ Funding formula for Ids 	<ul style="list-style-type: none"> ▪ Development Cost Charges where developers pay 	<ul style="list-style-type: none"> ▪ Governance system that integrates land use with supply and demand management ▪ Public education
Quality Concerns Relating to Supply Drawdown	<ul style="list-style-type: none"> ▪ Demand management ▪ Infrastructure limitations 	<ul style="list-style-type: none"> ▪ Meters ▪ Exponential rate structure 	<ul style="list-style-type: none"> ▪
Maintaining Flows for Fish	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Cross-Border Supply	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

Group 4			▪
Infrastructure Costs (Treatment, Storage and Efficiency)	<ul style="list-style-type: none"> ▪ Increased taxes (people will have to pay for it somehow) ▪ Conflicting pressures for dollars 	<ul style="list-style-type: none"> ▪ Source protection ▪ Technology improvements ▪ Community scale vs. individual 	
Limited Data	<ul style="list-style-type: none"> ▪ Cost ▪ Unless immediate case for data collection, it's not one ▪ Coordination and availability of data 	<ul style="list-style-type: none"> ▪ Sharing information ▪ Communication of availability ▪ Quality of collection 	<ul style="list-style-type: none"> ▪ Central data library (e.g. universities, Internet)
Population Growth	<ul style="list-style-type: none"> ▪ Lack of knowledge of issue ▪ Control: freedom of movement ▪ Government regulations (e.g. zoning) 	<ul style="list-style-type: none"> ▪ Zoning ▪ Population/use demand ▪ Education 	<ul style="list-style-type: none"> ▪ Planning
Legislation	<ul style="list-style-type: none"> ▪ Lack of groundwater legislation ▪ Water for fish legislation ▪ Enforcement of existing legislation (e.g. Health and Water Acts) ▪ International issues 	<ul style="list-style-type: none"> ▪ Demand side management (e.g. showerheads, toilets) ▪ Enforcement ▪ Education/stewardship ▪ Use priority/planning 	<ul style="list-style-type: none"> ▪ Incentives ▪ Public needs to be proactive (grass roots level)

Group 6			
Water Quality Costs & Affects	<ul style="list-style-type: none"> ▪ Costs of energy and control of same 		
Rights of Others, Conflicts			
Maintaining Natural Ecological Structures			
Cost of Producing Water, Deeper Wells, Pumping Costs, Land Costs, Infrastructure Costs, Etc.			

Break-Out #2: Water Sustainability Action Plan

1. The WSAP is a process intended to achieve a more holistic approach to water conservation/ water-use efficiency in B.C. How do you define “holistic,” and how can this be achieved?

Group #1

- Water at the heart of all decision-making
 - Land-use planning
 - Agriculture
 - Public health
- Adjusting behaviors
- Changing cultures
- Integrating agency support
- Action at the local level
- Watershed planning

Group #2

- Holistic = all inclusive
 - Ecosystem-based
 - Hydrological cycle
 - Social values
- Regional Growth Strategies
- Elevate decision-making to regional (natural) level

Group #3

- Uses, stakeholders, treatment
- Complete cross-section of players, including politicians

Group #4

- All encompassing, all aspects are considered
- Representatives from all parties/groups
- “Social/economic/environmental” are all given equal consideration to come to “balance”

Group #5

- watershed/ecosystem based
- two-way accountability
- communication/coordination
- continuous/ongoing

Group #6

- resource users planning as a group, recognizing the many different demands for the resource

	<ul style="list-style-type: none"> ▪ Long-range planning and decisions for now and in the future ▪ Integrated resource use input ▪ Recognizing impacts of decisions and planning
<p>2. The WSAP will promote conservation/water-use efficiency at four scales: region, watershed, neighbourhood and site. How can this best be accomplished?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Unified approach toward water management ▪ Promoting “good news” stories ▪ Clearly presenting the true cost of H2O ▪ Communication (e.g. websites, schools) ▪ Demonstration projects ▪ Customer incentives (e.g. events, assistance) ▪ Social marketing <p>Group #2</p> <ul style="list-style-type: none"> ▪ Provincial government setting public policy ▪ Province →basin →region → local government ▪ Standardize resource values province wide ▪ Link provincial and regional strategies with respect to Crown Land ▪ Require that high-level planning process imposes regulations and enables local support <p>Group #3</p> <ul style="list-style-type: none"> ▪ Communication, real issues, tailoring the message ▪ Support risk-taking ▪ Build on successes ▪ Provide financial support ▪ Promote ownership/accountability <p>Group #4</p> <ul style="list-style-type: none"> ▪ Community roundtables ▪ Leadership in all scales ▪ Communication <p>Group #5</p> <ul style="list-style-type: none"> ▪ Overcome jurisdictional boundaries ▪ Templates for each level ▪ Need two-way communication between levels ▪ Need regulations at highest level ▪ Grass-roots driven

	<p>Group #6</p> <ul style="list-style-type: none"> ▪ Region <ul style="list-style-type: none"> ○ Dynamic licencing and water use ○ Realistic goals and expectations ▪ Watershed <ul style="list-style-type: none"> ○ Forest practice implementation ○ Education and buy-in by all watershed users ▪ Neighbourhood <ul style="list-style-type: none"> ○ Land-use planning, stormwater management ○ Education on a local basis ▪ Site <ul style="list-style-type: none"> ○ Bylaws <p>▪ All require education that leads to social conscience</p>
<p>3. The WSAP will promote technological and cultural changes, including professional, organizational and societal changes. How can this be achieved?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Increased awareness of need for water conservation ▪ Provide clear and objective information on water conservation alternatives (e.g. toilets) ▪ Work with community groups and associations to share alternatives ▪ Plumbing codes for household and irrigation systems <p>Group #2</p> <ul style="list-style-type: none"> ▪ Social modeling in agriculture/ICI/etc. ▪ Pilot studies at provincial level ▪ Regulations and cost incentives ▪ Educate first→ then regulate ▪ Need measurable data <p>Group #3</p> <ul style="list-style-type: none"> ▪ Networking ▪ More strategic focus ▪ Draw input from end users <p>Group #4</p> <ul style="list-style-type: none"> ▪ Start young and continue throughout education ▪ Ease jurisdictional conflicts <p>Group #5</p> <ul style="list-style-type: none"> ▪ Continuous education ▪ Funding ▪ Website (SEX=sustainable, education, extension)

	<p>Group #6</p> <ul style="list-style-type: none"> ▪ Plumbing changes, implementation planning ▪ Understanding the problem, understanding the issues of all user groups ▪ Getting professionals into the momentum and promotion of change ▪ Promote changes based on use of water and the real “impact of use” vs. “sustainability”
<p>4. The WSAP will provide an umbrella for on-the-ground conservation/ water-use efficiency “pilots” (demonstration projects). Are you aware of any existing or potential projects that would qualify?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ City of Kelowna (e.g. Peak Water Reduction Customer Incentive Program) ▪ Public shaming (e.g. advising customers of their high consumption) ▪ South East Kelowna Agriculture Customer Metering Program <p>Group #2</p> <ul style="list-style-type: none"> ▪ Study existing pilots (e.g. no more low-flow studies) ▪ Show the decision-makers the results of studies ▪ Conduct critical assessments on existing pilots <p>Group #3</p> <ul style="list-style-type: none"> ▪ Summer student to evaluate agriculture use ▪ Study of existing orchards using drip technology and the end-use results ▪ Building Code incentive study (low-flow fixtures) ▪ Meters (Are they effective? Why aren’t they universally accepted?) <p>Group #4</p> <ul style="list-style-type: none"> ▪ Salmon River Roundtable ▪ Coldwater ▪ Sun Peaks ▪ Trepanier ▪ Stormwater Plan ▪ Pacific Salmon Endowment Fund ▪ Watershed Fish Sustainability Planning <p>Group #5</p> <ul style="list-style-type: none"> ▪ Best Western Hotel in Kelowna using solar panels ▪ Vernon water reclamation project ▪ Irrigation technology-sprinkler heads ▪ Port Edward water conservation (3-6 litre dual flush toilets) ▪ www.buildsmart.ca (examples) ▪ White Rock, B.C.

	<p>Group #6</p> <ul style="list-style-type: none"> ▪ Quantify existing use and potential waste then identify high-impact changes and the effects of those changes ▪ Toilet rebate programs and measuring effects ▪ Municipal water coordinator funding
<p>5. How can these pilots be supported to ensure maximum effectiveness?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Awareness---tell people! ▪ Media interest ▪ Website ▪ Show benefits and connect to cause (cost benefit) ▪ Partnerships between provincial agencies and water purveyors <p>Group #2</p> <ul style="list-style-type: none"> ▪ Have decision-makers on board at beginning of pilot ▪ Make sure values of decision-makers are included <p>Group #3</p> <ul style="list-style-type: none"> ▪ Public education process/exposure ▪ Utilize basin-wide conservation ▪ Education messages/jointed funded <p>Group #4</p> <ul style="list-style-type: none"> ▪ Endowment funds ▪ User funded ▪ Local buy-in <p>Group #5</p> <ul style="list-style-type: none"> ▪ Templates <ul style="list-style-type: none"> ○ Social, environmental, economic = triple bottom line <p>Group #6</p> <ul style="list-style-type: none"> ▪ Have a champion for the program ▪ Have government spearhead programs ▪ Have pilot information widely available to gain momentum and set examples ▪ Less fractured initiatives

6. The WSAP promotes partnerships through a shared responsibility model? What existing and potential partnerships could help the WSAP achieve its objectives?

Group #1

- Partnerships with industry
 - Communities in Bloom
 - Purveyors
 - communities
- Collaborate on public messages
- Newsletter (Interior Health and water purveyors)

Group #2

- Look at models in energy industry
- Landscapers
- Builders

Group #3

- KJWC/local water committees
- Okanagan Basin Water Board
 - Refine internal mandate
 - Need for more political will
- Agricultural body
- NGOs

Group #4

- Industrial/commercial/agriculture/forestry groups
- Government
- Local community groups
- Community buy-in (e.g. Sun Peaks with low-flow toilets)

Group #5

- Interagency cooperation
- Professional associations
- Water Supply Association of BC
- Community Energy Association
- Canada Green Building Council
- BCFGA
- BCWF

Group #6

- More coordination or organized group efforts (e.g. Aquila, BCWWA, WSABC, municipalities, service groups, etc.)

<p>7. How can these partnerships be supported to ensure maximum effectiveness?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Regular public service announcements ▪ Provincial/regional/industry funding initiatives ▪ Communicate economic benefits ▪ Gain buy-in from local decision-makers ▪ Local recognition <p>Group #2</p> <ul style="list-style-type: none"> ▪ Effective communication strategy ▪ Bylaw regulation ▪ Education <p>Group #3</p> <ul style="list-style-type: none"> ▪ Funds ▪ Share information base ▪ Facilitator/group keep information front and centre <p>Group #4</p> <ul style="list-style-type: none"> ▪ Has to have benefit to the individual and the community (lower utility costs, community cohesion) ▪ Celebrate successes (awards) <p>Group #5</p> <ul style="list-style-type: none"> ▪ Website ▪ Email <p>Group #6</p> <ul style="list-style-type: none"> ▪ Identify goals and measurable results ▪ Communication horizontally and vertically in government and business agencies ▪ Philosophy adoption by all agencies ▪ Maintain a champion (e.g. David Suzuki look-alike)
<p>8. What are the best ways to educate people about the WSAP (e.g. website)?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Public service announcements ▪ Brochures, billing notices ▪ Community tents, events ▪ Newsletters ▪ Maintain a high profile with a consistent message ▪ School systems

	<p>Group #2</p> <ul style="list-style-type: none"> ▪ What people? Industry or citizenry? Different messages for each ▪ Very specific, not generic <p>Group #3</p> <ul style="list-style-type: none"> ▪ Newsletters from water purveyors ▪ Effective PR <p>Group #4</p> <ul style="list-style-type: none"> ▪ Media (e.g. newspapers, radio) ▪ Tap into existing successful tools (e.g. WaterSmart or roundtables/clubs) ▪ Look at demographics of key interest in the area (e.g. seniors in Okanagan) <p>Group #5</p> <ul style="list-style-type: none"> ▪ Show them, show them, show them ▪ Educate media ▪ Ensure two-way communication <p>Group #6</p> <ul style="list-style-type: none"> ▪ Pricing incentives ▪ Customer impacts ▪ Social conscience ▪ Adapting conservation province-wide and recognizing local implementation challenges
<p>9. What is the best way to encourage involvement in the implementation of WSAP conservation/ water-use efficiency initiatives?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Incentives ▪ Competitions (e.g. best use, neighbourhood) ▪ Show excellent examples ▪ Continued culture change ▪ Report Card <p>Group #2</p> <ul style="list-style-type: none"> ▪ <p>Group #3</p> <ul style="list-style-type: none"> ▪ Financial incentives ▪ Develop a water “ethic” to lay foundation for overall general thinking toward water and our sociological attitude

Group #4

- Painless for users
- Rebate programs

Group #5

- Win-win scenarios/lose-lose scenarios
- Financial incentives

Group #6

- Relate to local issues, make it real to local people
- Make it a social issue
- Promote local awareness

Break-Out #3: Water \$ave Tool Kit

1. One mandate of the Water \$ave Tool Kit is to reevaluate local, regional and provincial conservation and water-use efficiency efforts in BC. Similar information was first gathered in 1998 via a mail-in survey for use in the Water-Use Efficiency Catalogue. Subsequent mail-in surveys have invited feedback from many of the same organizations. Is a mail-in survey still the best survey tool, or should we consider other options (e.g. telephone survey, on-line survey)?

Group #1

- Identify the stakeholders and talk to them to gain feedback on indicators
- Use a staged approach
 1. Make initial contact, explain intentions, gain support
 2. Survey at that time or ask person's preference (e.g. email, fax, or phone at another date. In email option provide contact person and FAQs plus phone #)
- Evaluate responses midway; consider changing method (e.g. email to phone) to increase participation

Group #2

- Most agencies are online, particularly the major agencies, therefore online survey may be most effective
- Selective follow-up by phone
- Must be easy to complete

Group #3

- Surveys get set aside, not always meaningful
- Workshops a good way to get feedback as they allow more depth and provide subjective material
- A telephone survey works if the person is willing and able
- Combine survey with phone calls and have workshops

Group #4

- 65% is good return assuming the people who responded were a cross-section of those surveyed
- Recommend web-based survey, follow-up with phone and/or mail

Group #5

- Website with phone prompt or mail-in option

Group #6

- Designate one person to respond to survey
- Provide incentive to participate
- Phone survey should be maximum 15 minutes and by appointment
- Provide option on how to respond
- Provide opportunity to respond/comment beyond specific questions
- Test the survey

<p>2. Whatever the chosen survey tool, what is the best way to promote full participation in the survey?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Work with local health authorities to assist in promoting local participation ▪ Work with water purveyors re: newsletters <p>Group #2</p> <ul style="list-style-type: none"> ▪ Prizes ▪ Follow-up ▪ Well publicized in advance <p>Group #3</p> <ul style="list-style-type: none"> ▪ Make it mandatory (tie to “licence”) ▪ Need assurance that survey will be used for action based on findings ▪ Provide rewards/prizes <p>Group #4</p> <ul style="list-style-type: none"> ▪ Deadline with prize draw ▪ Cater/design it for various sectors <p>Group #5</p> <ul style="list-style-type: none"> ▪ Ask closed-ended questions ▪ Use follow-up prompts ▪ Design survey into sections that reflect multiple respondents <p>Group #6</p> <ul style="list-style-type: none"> ▪ Provide incentive ▪ Provide choices of how to respond (multi-media) ▪ Provide contact # for additional response
<p>3. Another mandate of the Tool Kit is to present these survey findings back to all respondents in a way that’s user-friendly and useful. How can this best be achieved?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Interactive CD, online report ▪ Identify method of drilling down to responses and information (e.g. ‘who else is interested in specific subject) ▪ Create synergies between users <p>Group #2</p> <ul style="list-style-type: none"> ▪ Website must be maintained ▪ Searchable database with downloadable results ▪ List of key contacts ▪ Links to other websites

	<p>Group #3</p> <ul style="list-style-type: none"> ▪ Must be concise and readable and allow for quick reference on a website with headings and cross references ▪ Conduct follow-up workshops with cross-section of users ▪ Influence politicians (with reference to their perspectives) ▪ Focus on actions and actors' roles/responsibilities and accountabilities and resources (\$\$\$) <p>Group #4</p> <ul style="list-style-type: none"> ▪ Online for long-term reference ▪ Preliminary summary as hardcopy with details on web (include some key success stories or key items in hard copy) ▪ Need benefit in end result for those surveyed ▪ Provide sector-specific feedback ▪ Cole's Notes version <p>Group #5</p> <ul style="list-style-type: none"> ▪ Searchable website ▪ Mail back to mail-in ▪ Review of questions/questionnaire before it's sent out <p>Group #6</p> <ul style="list-style-type: none"> ▪ Provide timely feedback on survey results ▪ Tailor report to audience (e.g. politicians) ▪ Provide executive summary ▪ Use visuals (e.g. charts, diagrams, posters) ▪ Show results by region and sector
<p>4. The Tool Kit is also intended to promote conservation by sharing BC success stories. How can this best be achieved?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Post success stories with contacts at central location ▪ Ensure information is relevant (e.g. goal going in with measurable outcome) ▪ Ensure there is a "champion" to set up annual information-sharing sessions and to promote participation ▪ Develop usable products (e.g. PowerPoint presentation, worksheets for schools) <p>Group #2</p> <ul style="list-style-type: none"> ▪ Website done by MWLAP staff ▪ Databases ▪ Awards ▪ Press releases ▪ Newsletter

	<p>Group #3</p> <ul style="list-style-type: none"> ▪ Write and present information directly to interested parties (e.g. SE Kelowna Irrigation District metering) ▪ Tailor writing to audience and focus on results you are looking for <p>Group #4</p> <ul style="list-style-type: none"> ▪ Awards ▪ Cole's notes version <p>Group #5</p> <ul style="list-style-type: none"> ▪ Field tours ▪ Publicize central website ▪ Provide links to/from local websites <p>Group #6</p> <ul style="list-style-type: none"> ▪ Share case studies in the report with successes and failures ▪ Ensure people know what can be learned from these stories ▪ Be creative!
<p>5. This focus group is helping to achieve another mandate of the Tool Kit: to identify conservation gaps, barriers and opportunities. How can this information be presented back to purveyors and other organizations in a way that's user-friendly and useful?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Use the website. Promote it and keep it updated. Use it as a clearinghouse of information. ▪ Interactive chat line on website ▪ Provide the tool to allow for information-sharing and synergy (e.g. FAQs...who has something to share...who has something to ask.) All information flows through the site. ▪ Promote discussion groups <p>Group #2</p> <ul style="list-style-type: none"> ▪ Website with search functions (bulletin boards, email address for comments) <p>Group #3</p> <ul style="list-style-type: none"> ▪ Must be clear and concise ▪ Provide follow-up person for details/resources ▪ Provide references to written material ▪ Provide BMP guides for water users by sector ▪ All information accessible on website ▪ Provide presentation templates (PowerPoint) ▪ Do by issue (e.g. lesson plans)

	<p>Group #4</p> <ul style="list-style-type: none"> ▪ Hardcopy summary with details on web (Cole’s Notes version) ▪ Presenter with PowerPoint at workshops of applicable organizations ▪ Sector specific <p>Group #5</p> <ul style="list-style-type: none"> ▪ Support people’s preferred way to communicate ▪ Ensure searchable data bases ▪ Have a hierarchy in the website (simple to progressively more detailed) <p>Group #6</p> <ul style="list-style-type: none"> ▪ Tailor report to audience (e.g. politicians) ▪ Provide executive summary ▪ Use visuals (e.g. charts, diagrams, posters) ▪ Show results by region and sector
<p>6. The final mandate of the Tool Kit is to identify further steps that need to be taken by public, private and voluntary sectors to protect and conserve water supplies. What would be the best way to gather and share that information?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ <p>Group #2</p> <ul style="list-style-type: none"> ▪ Offer incentives <p>Group #3</p> <ul style="list-style-type: none"> ▪ A massive website with a “local issues focus” ▪ Telephone surveys ▪ Online questionnaires-advertised ▪ Open houses (localized) ▪ Public crisis/relations approaches ▪ Use creative approach to attract attention ▪ Talk it up!! <p>Group #4</p> <ul style="list-style-type: none"> ▪ Hardcopy to community groups ▪ Information sessions with community groups ▪ Electronic versions for industry/government ▪ One size does not fit all <p>Group #5</p> <ul style="list-style-type: none"> ▪ Two-way communication (use a variety of tools) ▪ Multi-stakeholder dialogue (consolidate results of various independent multi-stakeholder consultation processes...e.g. GVRD Drinking Water Management Plan)

	<p>Group #6</p> <ul style="list-style-type: none"> ▪ Conduct annual survey with report update ▪ Include success stories ▪ Pilot projects
<p>7. In what format(s) should be the Tool Kit be presented (e.g. binder, website)?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ <p>Group #2</p> <ul style="list-style-type: none"> ▪ Website primarily ▪ Binder on request <p>Group #3</p> <ul style="list-style-type: none"> ▪ Website with “clickable” items for details and search function ▪ Need to cover issue of out-of-date information (each page dated) and flagged ▪ Use list serve to inform about updates and to keep the topic in front of people <p>Group #4</p> <ul style="list-style-type: none"> ▪ Option for receiving hardcopy to CD ▪ Available as PDF online <p>Group #5</p> <ul style="list-style-type: none"> ▪ Website with email prompt ▪ whussap@wsap.ca <p>Group #6</p> <ul style="list-style-type: none"> ▪ CD ▪ Website ▪ 5 minute PowerPoint presentation
<p>8. What is the best way to ensure people know about the Tool Kit and actually use it?</p>	<p>Group #1</p> <ul style="list-style-type: none"> ▪ Work with industry associations to ensure their mail-outs, hand-outs, etc. contain information ▪ Ensure the general public is aware and goes to the website ▪ Conduct an advertising campaign that makes people aware they can ask their water purveyors about their water conservation plans, programs <p>Group #2</p> <ul style="list-style-type: none"> ▪ Website with links from other established sites

Group #3

- Advertise-multimedia
- Press releases

Group #4

- Email summary could be provided quarterly
- Need a reason/value for this to be used (e.g. cost savings)
- Available for libraries/universities
- Tap into other programs (e.g. Project Wet)

Group #5

- Website with email prompt

Group #6

- Notify all water purveyors
- Make cover/title catchy
- Link to other websites
- Make available in libraries
- Include on government publication list
- Use non-technical language

Break-Out #4: Agriculture

What are the major benefits of agricultural conservation/water-use efficiency to society and the environment in general, and to the agriculture industry and growers in particular?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Decreased Cost of Infrastructure and Operating Costs	<ul style="list-style-type: none"> ▪ IDs afraid of political spin ▪ Misunderstanding of BMPs 	<ul style="list-style-type: none"> ▪ Education ▪ Measurement capacity ▪ Accurate water requirements 	<ul style="list-style-type: none"> ▪ Irrigation scheduling program ▪ Monitor, comply, enforce
Long-term Water Availability	<ul style="list-style-type: none"> ▪ Fear of loss to other sectors ▪ Reviewed and revised water licences 	<ul style="list-style-type: none"> ▪ Shift from water allocation to water management ▪ Inter-jurisdictional developments of legislation and standards 	<ul style="list-style-type: none"> ▪ Lead agency for water ▪ Public awareness
Drought Management Planning	<ul style="list-style-type: none"> ▪ Political will ▪ Funding ▪ Technology ▪ No confirmed weather trend 	<ul style="list-style-type: none"> ▪ Education ▪ Reservoir management ▪ Technology 	<ul style="list-style-type: none"> ▪ Willingness to invest
Best Management Practices Allow Other Users Access to the Water Resource	<ul style="list-style-type: none"> ▪ Accurate understanding of supply ▪ Accurate understanding of demand requirements 	<ul style="list-style-type: none"> ▪ In-stream flow meters ▪ On-farm meters 	<ul style="list-style-type: none"> ▪ Funding ▪ Political will

Break-Out #4: Allocation/Water Rights

What are the major benefits—to society and the environment in general, and to purveyors and users in particular—of conserving water through appropriate allocation for all uses and users?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Ecosystem Preservation	<ul style="list-style-type: none"> ▪ Lack of awareness ▪ Licences don't recognize ▪ Underpriced ▪ No central authority 	<ul style="list-style-type: none"> ▪ Education ▪ Reclamation ▪ Appropriate pricing 	<ul style="list-style-type: none"> ▪ Public opinion ▪ Workshops ▪ Political will ▪ Historical knowledge ▪ Accurate data monitoring
Quality of Living	<ul style="list-style-type: none"> ▪ Lack of planning ▪ Urban sprawl ▪ Financial ▪ Lack of communication 	<ul style="list-style-type: none"> ▪ Full-cost pricing ▪ Inter-agency funding ▪ Education (e.g. water cycle, not linear) 	<ul style="list-style-type: none"> ▪
Recreation	<ul style="list-style-type: none"> ▪ Lack of understanding of benefits ▪ No direct consequences ▪ No costs reflected in activity ▪ Lack of scientific info 	<ul style="list-style-type: none"> ▪ Full-cost pricing ▪ Inter-agency funding ▪ Education (e.g. water cycle, not linear) 	<ul style="list-style-type: none"> ▪
Economic Benefits	<ul style="list-style-type: none"> ▪ Pricing ▪ Lack of budget flexibility ▪ Resistance to government control ▪ Lack of trust 	<ul style="list-style-type: none"> ▪ Education ▪ Pricing ▪ Metering 	<ul style="list-style-type: none"> ▪
Inexpensive Water Supply	<ul style="list-style-type: none"> ▪ Under pricing ▪ Public opinion 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Ensuring Water Supply	<ul style="list-style-type: none"> ▪ Attitude ▪ Old water licences 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Put Off Expansion Plans to Later Date (e.g. more users, same infrastructure)	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

Break-Out #4: Education

What are the major benefits—to society and the environment in general, and to purveyors and users in particular—of educating consumers about conservation/water-use efficiency?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Users: <ul style="list-style-type: none"> ▪ Ensures short- and long-term availability ▪ Saves money ▪ Protects environment 	<ul style="list-style-type: none"> ▪ Cost structure ▪ Perceived ubiquity ▪ Other priorities for saving money ▪ “My little bit doesn’t make a difference” ▪ Changing paradigms/attitudes about fashionable lawns 	<ul style="list-style-type: none"> ▪ Bylaws (e.g. sprinkling times) ▪ Follow lead of energy companies (e.g. special rates for non-peak hours) ▪ Metered rate, not flat rate ▪ Market value of water ▪ Water audits ▪ Education (cumulative impact) ▪ Influences in behavior change 	<ul style="list-style-type: none"> ▪ Good communication/public education ▪ Direct/personal (one-on-one) contact ▪ Recognition (e.g. awards, success stories)
Purveyors: <ul style="list-style-type: none"> ▪ Reduces infrastructure costs ▪ Defers capital expenditures ▪ Reduces need to look for new sources ▪ Requires customer service & leadership 	<ul style="list-style-type: none"> ▪ Political will ▪ Money ▪ Overcoming resistance to new ideas ▪ Staffing ▪ Mandate is to sell water/not conserve (mindset) ▪ Managing leakage 	<ul style="list-style-type: none"> ▪ Modeling with other utilities ▪ Partnering with other levels of government ▪ Supporting legislation ▪ Master Water Supply Plans ▪ Improved water delivery technology 	<ul style="list-style-type: none"> ▪ Grants ▪ Education ▪ Certification ▪ User support
Environment: <ul style="list-style-type: none"> ▪ Saves water for fish habitat and other biota ▪ Safeguards all species, including people 	<ul style="list-style-type: none"> ▪ Conflicting uses with other sectors ▪ Lack of understanding ▪ Human behavior ▪ Finger pointing 	<ul style="list-style-type: none"> ▪ More knowledge about supply/regional hydrology ▪ Better use of water licences ▪ Education/social marketing ▪ Interagency sharing of information and needs (e.g. fisheries and agriculture) 	<ul style="list-style-type: none"> ▪ Clearing house for information with support staff at provincial level ▪ Publicize success stories
Society: <ul style="list-style-type: none"> ▪ Economic sustainability ▪ Quality of air/water/land 	<ul style="list-style-type: none"> ▪ Tend to think short-term ▪ Corporate climate is short-term ▪ Privatization ▪ Water taken for granted (e.g. low priority after mortgage) 	<ul style="list-style-type: none"> ▪ Fear factor (e.g. more summers like 2003) ▪ Peer pressure and sharing (e.g. Water Hog) 	<ul style="list-style-type: none"> ▪ Universal marketing campaign on water conservation paid for by customer (e.g. \$1/connection) ▪ Purveyor/political will

Break-Out #4: Land-Use Planning

What are the major benefits—to society and the environment in general, and to purveyors and users in particular—of land-use planning and zoning that conserve water by protecting water supplies?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Help to ensure availability of water to sustain communities.	<ul style="list-style-type: none"> ▪ Political will to use water as a land-use planning constraint 	<ul style="list-style-type: none"> ▪ Proof of water 	<ul style="list-style-type: none"> ▪ Need regulations/requirements to: <ul style="list-style-type: none"> ○ show proof of availability
	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ Assess impacts of new allocation 	<ul style="list-style-type: none"> ▪ Need regulations/requirements to: <ul style="list-style-type: none"> ○ assess impacts
	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ Performance targets 	<ul style="list-style-type: none"> ▪ Need regulations/requirements to: <ul style="list-style-type: none"> ○ use water efficiently ○ monitor and adapt
Tailor appropriate approach to sub-regional settings.	<ul style="list-style-type: none"> ▪ Lack of knowledge or lack of use of available knowledge about place-based conditions (this leads to imposition of inappropriate and ineffective approaches) 	<ul style="list-style-type: none"> ▪ Inventories ▪ Assessments ▪ Monitoring ▪ Adaptive/risk management 	<ul style="list-style-type: none"> ▪ Governance challenge, need strategy to ensure water is a front-end and ongoing planning and implementation priority
Provide community basis for regulations, approvals, licences and permits.	<ul style="list-style-type: none"> ▪ Lack of community-based approach means enforcement is deferred by administrative costs and legal and political exposures. 	<ul style="list-style-type: none"> ▪ Self-assessment ▪ Peer pressure ▪ Regulatory back-up 	<ul style="list-style-type: none"> ▪ Regulatory back-up ▪ Provide user/developer guides for facilitator compliance
Provide basis for risk management framework.	<ul style="list-style-type: none"> ▪ Lack of focus on water 	<ul style="list-style-type: none"> ▪ Adaptive/risk management 	<ul style="list-style-type: none"> ▪
Ensure more comprehensive land-use planning and the regulation and approval of development.	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

Break-Out #4: Legislation/Regulation

What are the major benefits—to society and the environment in general, and to purveyors and users in particular—of using local, regional and provincial legislation and regulations to ensure water-use efficiency?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Balance needs of stakeholders	<ul style="list-style-type: none"> ▪ Narrow focus/lack of big-picture thinking ▪ Lack of political will ▪ Lack of education ▪ Risks/liabilities 	<ul style="list-style-type: none"> ▪ Education (adults and children) ▪ Public awareness ▪ Groundwater legislation (allocation) 	<ul style="list-style-type: none"> ▪ Living with resources ▪ Integrated approaches
Defer capital costs	<ul style="list-style-type: none"> ▪ Lack of knowledge (e.g. cost/benefit analysis) ▪ Lack of strategic planning ▪ Jurisdictional/funding eligibility 	<ul style="list-style-type: none"> ▪ Political buy-in ▪ Financial incentives (e.g. low-flow fixtures) 	<ul style="list-style-type: none"> ▪ Incentives ▪ Funding
Sustainability	<ul style="list-style-type: none"> ▪ Lack of lead agency ▪ Template for monitoring/evaluating ▪ Lack of knowledge ▪ Myths (e.g. water is abundant) ▪ Financial approach 	<ul style="list-style-type: none"> ▪ Lead agency ▪ Tool kit 	<ul style="list-style-type: none"> ▪ Monitoring and follow-up
Improved water quality	<ul style="list-style-type: none"> ▪ No linkage between quantity/quality ▪ Financial ▪ Lack of standards 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Integrated water management	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Improved hydrological function/recognition/awareness	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Water ethic/cultural change	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

Break-Out #4: Metering

What are the major benefits of water metering to society and the environment in general, and purveyors and users in particular?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
System Demand Management Tool	<ul style="list-style-type: none"> ▪ Public attitude ▪ Difficult topic ▪ Paradigm (20cent) shift 	<ul style="list-style-type: none"> ▪ Grant incentives ▪ Development credits ▪ Licence credits 	<ul style="list-style-type: none"> ▪ Basin utilization strategy ▪ Provincial leadership
Cost Allocation	<ul style="list-style-type: none"> ▪ Public attitude ▪ Only partial use for billing ▪ Lack of reward to penalization if not costed 	<ul style="list-style-type: none"> ▪ Metered rate bylaws ▪ Guides on implementation ▪ Business template 	<ul style="list-style-type: none"> ▪ Public education ▪ Grant funding from senior government
Regulation	<ul style="list-style-type: none"> ▪ Public attitude ▪ Installation costs ▪ O&M costs 	<ul style="list-style-type: none"> ▪ Hot, dry year ▪ Another hot, dry year combined with a water shortage 	<ul style="list-style-type: none"> ▪ Public education ▪ Grant funding from senior government
Information	<ul style="list-style-type: none"> ▪ No public awareness 	<ul style="list-style-type: none"> ▪ Decision-maker information ▪ Templates and reports from successful metering programs ▪ Sample bylaw 	<ul style="list-style-type: none"> ▪ Public education ▪ Regulation (e.g. bylaws, building code)
User Leak Detection (self examination, manage water use)	<ul style="list-style-type: none"> ▪ The user 	<ul style="list-style-type: none"> ▪ Education 	<ul style="list-style-type: none"> ▪ Water audit ▪ Higher user fee
System Leakage	<ul style="list-style-type: none"> ▪ Detection ▪ Council buy-in ▪ Water model 	<ul style="list-style-type: none"> ▪ Template for leak survey ▪ Grants to fix leaks 	<ul style="list-style-type: none"> ▪ Bulk meters at strategic locations ▪ Provincial grants

Break-Out #4: Pricing

What are the major benefits—to society and the environment in general, and to purveyors and users in particular— of water being priced appropriately and users paying for what they consume?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Conservation	<ul style="list-style-type: none"> ▪ Lack of metering ▪ Public perception/lack of education ▪ Political will/lack of understanding ▪ Same water for non-potable uses 	<ul style="list-style-type: none"> ▪ Install meters ▪ Educate benefits to customers ▪ Promote xeriscaping ▪ Bylaw restrictions on gardens 	<ul style="list-style-type: none"> ▪ Political support ▪ Engage public with information ▪ Communication ▪ Planning ▪ Education for growers
Capital: <ul style="list-style-type: none"> ▪ Deferral of Capital/Operating Costs ▪ Sustainability of Infrastructure 	<ul style="list-style-type: none"> ▪ Public perception/misinformation ▪ Non-conformance ▪ Lack of understanding by politicians ▪ Lack of vision 	<ul style="list-style-type: none"> ▪ Cost/benefit analysis ▪ Sharing information from others 	<ul style="list-style-type: none"> ▪ Reliable infrastructure
Environmental: <ul style="list-style-type: none"> ▪ Source and Receiving Streams 	<ul style="list-style-type: none"> ▪ Multi-jurisdictional issues ▪ Public attitude to watersheds ▪ Competing priorities 	<ul style="list-style-type: none"> ▪ Public information/communication ▪ Obtaining jurisdiction ▪ Understanding by stakeholders 	<ul style="list-style-type: none"> ▪ Social marketing
Public Awareness of Resource Value	<ul style="list-style-type: none"> ▪ Water is cheap/free ▪ Water is a right 	<ul style="list-style-type: none"> ▪ Public education ▪ Pricing/user-pay ▪ Metering 	<ul style="list-style-type: none"> ▪ Use of consumption data for planning ▪ Rate structures
Removes inequities	<ul style="list-style-type: none"> ▪ Water is a right ▪ Public perception ▪ Customer class perception 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

Break-Out #4: Source-to-Tap Protection

What are the major benefits—to society and the environment in general, and to purveyors and users in particular—of ensuring source to tap protection of supplies and quality?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Reduced Costs	<ul style="list-style-type: none"> ▪ Government attitude to source protection ▪ WLAP cut-backs (nobody available in various ministries) 	<ul style="list-style-type: none"> ▪ One voice for H2O needed ▪ New legislation very subjective and can be enforced entirely differently between areas 	<ul style="list-style-type: none"> ▪ Auditor General's recommendations should be followed ▪ Re-price water
Reduced Health Care (better health for society as a whole)	<ul style="list-style-type: none"> ▪ General attitude of public and persuasion by bottled water companies ▪ Other demands on staff time ▪ Purveyors not properly trained/certified 	<ul style="list-style-type: none"> ▪ Support funding for water suppliers so that water quality standards can be met 	<ul style="list-style-type: none"> ▪ Scrutiny by a water professional of achievable goals and measuring risk and effect ▪ More public awareness of health issues and their risks
Improved Environmental Quality (ecosystem, stream, fish, land, etc.)	<ul style="list-style-type: none"> ▪ Current government structure ▪ H2O coverage by government is fragmented across agencies 	<ul style="list-style-type: none"> ▪ Better coordination of government agencies ▪ One government agency responsible for overall water issues 	<ul style="list-style-type: none"> ▪ Laws and enforcement for watershed polluters
Potentially Reduced Level of Required Treatment, Also Less Monitoring	<ul style="list-style-type: none"> ▪ Lack of adequate resources across various agencies 	<ul style="list-style-type: none"> ▪ Government has to take lead role in informing public that water pricing is out of whack 	<ul style="list-style-type: none"> ▪ Government needs to set out strategy on how water should be priced then turn over to purveyor

Break-Out #4: Water Supply Planning

What are the major benefits—to society and the environment in general, and to purveyors and users in particular—of local, regional and provincial water supply planning?	What barriers (e.g. attitudinal, technological, financial) prevent us from realizing each benefit?	What tools and/or support would help us realize each benefit?	What would ensure the effectiveness of these tools and/or support was maximized?
Efficiency & Reliability of Supply (Cost goes down)	<ul style="list-style-type: none"> ▪ Lack of information/knowledge in decision-making process ▪ Sensitivity to climate change 	<ul style="list-style-type: none"> ▪ Ensure multi-interest participation ▪ Updating information (e.g. OK Lake) 	<ul style="list-style-type: none"> ▪ Re-implementation of H2O stations ▪ “Future-proofing”- plan/build to be more efficient (business case)
Future Proofing	<ul style="list-style-type: none"> ▪ Higher initial capital costs 	<ul style="list-style-type: none"> ▪ Lower ongoing costs 	<ul style="list-style-type: none"> ▪
Better Understanding of Vulnerabilities and Needs (e.g. Liquid Waste Volumes)	<ul style="list-style-type: none"> ▪ Lack of information (e.g. crop selection) ▪ Misperceptions of source quality variations ▪ Lack of integration between supply and demand 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ Drinking Water Management Plan (mandated and standardized)
All Interests and Needs Represented	<ul style="list-style-type: none"> ▪ Legislation (<i>Fisheries Act, H2O Act</i>) 	<ul style="list-style-type: none"> ▪ Resources ▪ Political will to deal with violators 	<ul style="list-style-type: none"> ▪
Reduce Infrastructure Costs (Allows Prioritization of Projects)	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪
Integrate Sources	<ul style="list-style-type: none"> ▪ Lack of information ▪ Lack of legislation ▪ Health issues 	<ul style="list-style-type: none"> ▪ Groundwater legislation ▪ Treatment ▪ Regulation change 	<ul style="list-style-type: none"> ▪ Permitting/Licensing
Quality of Life	<ul style="list-style-type: none"> ▪ Competition for limited resource ▪ Single purpose focus (value of environment vs. industry) ▪ Current licence system 	<ul style="list-style-type: none"> ▪ 	<ul style="list-style-type: none"> ▪

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Break-Out Groups

Participants: Break-Outs 1-3

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Lynn Kriwoken	John Arber	Eric Karlsen	Ron Smith	Kim Stephens	Jack Hull
Don Degen	Andrew Reeder	Rob Hein	Ron Taylor	Carl Withler	Jack Allingham
Brian Jamieson	Toby Pike	Bob McCoubrey	Todd Cashin	Al Cotsworth	Bruce Wilson
James Moller	Neil MacLennan	Eugene Lalonde	Pat Miller	Peter Waterman	Renee Clark
Remi Allard	Neal Klassen	Phil Epp	Trisha Carlson	Glen Brown	Gary Thompson
Sarah Kipp	Don Dobson	Pat Hickerson		Andrew Marr	Brian Symonds
Gundie Volk	Robert Hobson	Greg Baytalan		Lorne Davies	Joe Sardinha
	Bruce Runciman				

Participants: Break-Out 4

Agriculture	Allocation/ Water Rights	Education	Land-Use Planning	Legislation/ Regulations	Metering	Pricing	Source- to- Tap Protection	Water Supply Planning
Carl Withler	Neil MacLennan	Neal Klassen	Eric Karlsen	John Arber	Jack Allingham	Don Degen	Bruce Wilson	Lynn Kriwoken
Toby Pike	Ron Taylor	Renee Clark	Todd Cashin	Brian Jamieson	Andrew Reeder	James Moller	Gundie Volk	Brian Symonds
Peter Waterman	Phil Epp	Eugene Lalonde	Kim Stephens	Pat Hickerson	Rob Hein	Jack Hull	Don Dobson	Andrew Marr
Joe Sardinha	Gary Thompson	Sarah Kipp	Jack Hull	Remi Allard	Al Cotsworth	Pat Miller	Grey Baytalan	Trisha Carlson
	Lorne Davies		Bruce Runciman	Glen Brown		Bob McCoubrey	Ron Smith	