

Final Meeting Summary

Athabasca River Basin (ARB) Initiative



Supplementary Working Group

Date January 17, 2017
Time 9:00am to 4:00pm
Location Radisson Hotel, Fort McMurray

Attendees

Dan Stuckless, McMurray Métis (Wood Buffalo Metis Locals)	Rick Guerin, Regional Municipality of Wood Buffalo (RMWB)
Eber Araujo, Fort McKay First Nation	Tony Boschmann, Fort McMurray First Nation #468
Janice Linehan, Suncor and AWC-WPAC	Tracy McKim, Repsol Oil and Gas
Karla Buffalo, Fort McKay First Nation	Travis Kendel, RMWB
Len Savoy, Suncor	Claire Jackson, Alberta WaterSMART
Linda Jefferson, ATCO	Mike Nemeth, Alberta WaterSMART
Martin Van Olst, Environment and Climate Change Canada (ECCC)	Ryan MacDonald, Alberta WaterSMART
	Denise Di Santo, Alberta WaterSMART

Meeting objectives

1. Updated overview of the ARB Initiative
2. Recap what we heard and key points from Working Group meetings #1 and #2
3. Build a common understanding of the basin, understand the linkages and the differences across the basin
4. Provide an update on the working list of basin issues and opportunities as gathered and heard to date
5. Dialogue and discussion to update basin issues and opportunities
6. Provide an overview of how the model will be used in future meetings

Current action items

Action	Responsible	Due	Status
1 Address decision making and governance models clearly outlining them in the TOR, and circulate to Working Group.	WaterSMART	End of Feb	New
2 Work with GoA on clarifying how and when the GoA will be consulting on various water management policies.	WaterSMART	ASAP	New
3 Work with GoA on clarifying how this work will or can link with other water discussion (e.g., tailings management framework).	WaterSMART	ASAP	New
4 Work with GoA on clarifying that GoA is not using this as their consultation mechanism in the basin, and if they are not, where this consultation is	WaterSMART	ASAP	New

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5	Work with GoA on clarifying how this may 'inform' updates to the LARP and what consultation will be undertaken with the 'opportunities' identified in this report.	WaterSMART	ASAP	New
6	Follow up with GoA in general to look for economic type datasets that could be incorporated into ALCES.	WaterSMART	End of Feb	New
7	Follow up with Rick (RMWB) on his knowledge of what community water sources are and RMWB use	WaterSMART	End of Jan	Complete
8	Contact AER to look at addressing tenure system issue with Department of Energy and others as needed.	WaterSMART	End of Feb	New
9	Personally provide an update regarding discussions with the government to interested parties from today's meeting.	Mike	ASAP	New
10	Draft and distribute meeting summary to today's participants.	WaterSMART	Jan 24	Complete
11	Distribute meeting summary to remainder of the Working Group with January 26 th meeting summary package.	WaterSMART	Feb 3	New

Discussion points

1 Opening remarks

Mike Nemeth convened the meeting at 9:05 a.m., welcomed everyone. Participants introduced themselves, noting their name, affiliation, and interest in the basin. Mike reviewed the objectives of today and the agenda. He reminded the group of who WaterSMART is (independent engineering and consulting company based in Calgary, with a focus on management and technologies to support sustainable water management from a basin perspective).

Q: Can you touch on who started it and who funded it?

- This is a WaterSMART driven initiative, it was scoped by WaterSMART and informed in conversations with participants. It is currently funded by AI-EES (\$750K), ATCO (\$200K), AEP (\$250K), Suncor (\$25), Repsol (\$25K), potential funding being discussed with AER and Westmorland Coal.

Q: Is this funded through the not for profit side of WaterSMART?

- This is funded through and managed by the for profit side of WaterSMART.
- The full cost of the project is \$1.5 million, and runs from May 2016 to May 2018.

Q: Who is the government rep on this Working Group? Who is the decision maker?

- Andy Ridge and Thorsten Hebben are our main contacts/leads from AEP Policy on this.
- Once the work includes the Slave and the Peace and there are boundaries crossed the federal government may be interested in contributing funds and will be participating to a greater extent. At the moment, DFO, Parks Canada, and ECCC are involved, and when we start crossing boundaries these groups will be more involved.

The ARB Initiative is a basin-wide collaborative effort to inform decision making and create a common understanding of the issues and opportunities across the ARB for proactive water management. The Initiative will build on existing data, tools, capacity, and knowledge to:

- Provide an integrated modelling tool to inform water and natural resource management plans, approaches, and decision making.
- Provide accessible and transparent information on basin water management.
- Build a common understanding and trust across the basin.
- Identify strategies for adapting to future water challenges.
- Identify critical gaps in data, science, processes and policy for effective water management.

The Athabasca River Basin (ARB) Initiative will be developing a Roadmap for sustainable water management throughout the ARB—the ARB Roadmap. The model will be used to reach the goal of building a roadmap for the ARB. A “roadmap” for this work is defined as a set of strategies and implementable actions, developed by an inclusive basin-wide Working Group using collaborative modelling and dialogue that provide a recommended path toward sustainable water management in a basin. Roadmaps help inform future planning and management efforts as they relate to water. Mike explained that the ARB Initiative will be expanded to the Athabasca-Peace-Slave River Basin (APSRB) Initiative hopefully this year. This will extend the work on a surface water quantity Roadmap from the NWT/Alberta border and the entire watershed upstream from there.

Q: Are you integrating existing entities and Working Groups into this work?

- Yes, as entities or individuals, any public groups have been invited to participate and are welcome to be involved. These groups are also welcome to contribute any information or data that they have to support the Initiative.

Q: How are the decisions made around the table?

- There are no decisions made, there are a set of recommendations made that outlines what sustainable water management should look like in the ARB from the Working Group (i.e., a Roadmap). At the end of the day these recommendations reflect what the Working Group has worked through. So, it is less about specific recommendations, and presenting what the group has done, and from that the opportunities that identified as the most promising, along with commentary on tradeoffs.
- Previously we’ve documented recommendations that make sense to the group – “yes, that makes sense”, “yes that should be considered”. These have been documented if one group wants to make a recommendation or if the full group wants to make the recommendation, sort of a general consensus. Objections and trade-offs are noted and discussed.
- All of the recommendations put forward are documented; these recommendations are meant as decision support.

Q: Are the decision making and governance models written down?

- There is a TOR for this project that is in draft form at the moment. This document was sent out as a pre-read and is open to comments and feedback. If these two pieces need to be made clearer the project team can take that as an action item and address it and sent it back to the group for comments.
- The comments that have been received by the Working Group at the past Working Group meetings have been documented and are included in the draft.

There was a concern expressed from the group regarding working in multi-stakeholder environments. There is a feeling that participants, particularly First Nation and Métis participants are “damned if you do, damned if you don’t”. The group suggested that the decision making processes and governance be clearly outlined to have assurance. It is important for everyone to understand how decision making and governance will be addressed going forward.

ACTION: Address decision making and governance models clearly outlining them in the TOR, and circulate to Working Group. Discuss the representation of consultation in the TOR with the working group as this is an ongoing concern.

Comment: It has been challenging to get First Nation and Métis participation; there has been a lot of feedback stating that this project is consultation. Is this something that the project team could take back and address to alleviate this concern?

- If First Nation and Métis participate in this process there is concern that the GoA will get a report that notes that First Nation and Métis groups participated in the work and will view it as consultation. There is concern that GoA will assume that this is consultation; however, there is no accountability from the GoA. There is concern that the GoA is passing on the duty to consult; this may legally be viewed as an opportunity to engage, and in the past, multi-stake holder groups have been construed as consultations. First Nations and Métis groups have heard “it is documented that you had an opportunity to participate and you’ve provided recommendations”.
- There is concern that this process is distancing the GoA from the conversation.
- There is additional concern that the GoA will say that they are part of the process and will not follow through; they have been part of many processes in the past and have not followed through in the end. There is a missing link in a perceived lack of connection with the GoA.

Comment: There is a need to acknowledge that there will be no impacts to treaty rights from project outcomes.

- In order to address these concerns can this be made really clear in the TOR?
 - Making this clear in the TOR will not be adequate.
- There are additional concerns with only making this clear in the TOR.
- There is a perception that the regulator doesn’t have to consult. (Note: clarification will be sought from the project team as noted in ACTION below.)
- What is a possible solution to these concerns?
- Ideally, there is a commitment to produce a water management plan and sustainable water system that all of the stakeholders will agree too.
 - This process is one of the tools to get there.
 - From a First Nations stand point, this needs to start with a direct conversation with the GoA. This conversation doesn’t start with this Working Group, it is a direct conversation

between the First Nations and the GoA. This conversation could be facilitated through WaterSMART and needs to create a clear line of sight to final outcomes from this project.

- Infringement on Treaty rights is an important issue and will not be able to be addressed by a multi-stakeholder table. However, clarification is needed on how and when the GoA will be consulting on various water management policies. GoA and AER have a number of consultation or engagement processes on water policies, tailings management, etc. and there are no clear linkages on how these discussions tie together. GoA has also dismantled the multi-stakeholder agencies in this region that were built to offer a process to engage stakeholders and come up with recommendations for GoA on various policies.
- It is also unclear if GoA is using this as their consultation mechanism in the basin but not deeming it in that light. If it is not, clarity is needed on where this consultation is anticipated to occur. It would also be helpful in understanding how this will 'inform' the LARP and what consultation will be undertaken with the 'opportunities' identified in this report.

ACTION: WaterSMART to work with GoA on clarifying how and when the GoA will be consulting on various water management policies.

ACTION: WaterSMART to work with GoA on clarifying how this work will or can link with other water discussion (e.g., tailings management framework).

ACTION: WaterSMART to work with GoA on clarifying that GoA is not using this as their consultation mechanism in the basin, and if they are not, where this consultation is anticipated to occur.

ACTION: WaterSMART to work with GoA on clarifying how this may 'inform' updates to the LARP and what consultation will be undertaken with the 'opportunities' identified in this report.

The Initiative is trying to provide a link with other tables discussing aspects of water in the basin. The process followed in the ARB Initiative can bring opportunities that are identified at other tables into this process.

- In the past, some participants have gone through CEMA and the Phase 2 Framework Committee (P2FC) process. Participants participated in these processes, spent money and time on the processes and arrived at the best possible outcomes that western science could produce with very little acknowledgement or inclusion of TEK. The outcomes were unsatisfying; other nations didn't participate but got the same outcome. Perhaps the success factor may be "if we start to go down the path of figuring that out we can admit gaps and infringements and then First Nations and Métis groups can take that away and address it with government".
- This group and process may not be capable to understand and fully address the infringements; however, this is an opportunity to support the dialogue needed to address infringements, and to recommend that the infringements are addressed.
- We want to make sure that if something is flagged as a gap and that it is properly noted in the report. In the report, it could be noted that "in order to have a solid water management plan, these gaps need to be addressed".

There is concern that this is a process for a process, a process where gaps and infringements are noted so that these same gaps and infringements can be addressed in another process. The information that this process is trying to compile already exists as an outcome from other multi-stakeholder processes.

Recognizing gaps and infringements on treaty rights is not a new outcome; it is not an undocumented outcome. As in other multi-stakeholder processes, GoA may wait two years for recommendations while the process is taking place and then recognise that there are gaps, infringements. There should be a commitment from GoA addressing how and when they are going to sit down and address the impacts on First Nation and Métis communities as part of this process.

- Is there an opportunity to use this to force the conversation with the GoA?
- This issue is complicated by the federal government; there is no process in Alberta to engage the Métis.

Q: With regard to the challenges of getting First Nation and Métis to the table, acknowledging that this meeting is being held to try and increase First Nations and Métis involvement, are the Working Group members who are here today here as representatives from the Working Group? Who was invited today? Does the lack of government here today interfere with the desired outcomes?

- Yes, we acknowledge that we are missing critical voices at the table, which is why we wanted to have this meeting here today. Many folks here today are from the Working Group. The full Working Group did have the invite extended to them to participate today. As today was planned to be activities from the first two Working Group meetings, attendance is more limited to participants from this region.
- The whole working group was invited, there were special invites to First Nations and Métis communities
- No, not having GoA here today doesn't impact the outcomes of the work. It would have been good to have GoA participants here today, as they are supportive of this work.

Q: While you were talking you mentioned making the watershed and water management better – make it “better” for whom? It is important to remember that this is a relative term.

- We hope to make the water management more sustainable– water for the people, water for the ecosystem, water for the economy, following the Water for Life Strategy.
- It should be noted that the government thinks that if they address the environment they've taken care of the people; remember that this may still infringe on treaty rights, and a good water management plan shouldn't infringe on treaty rights. Treaty rights need to be addressed through an individual conversation that needs to take place group by group.

We are always striving to ensure we have the fullest representation possible for this work. Not everyone is able to make every meeting because of other commitments. If there is a group currently not represented, which you feel would meaningfully contribute and should be here, please let one of us know. Additionally, Sharing Sessions are being planned for interested First Nation and Métis communities over the next ~6 months where the project team will go to interested communities and provide an overview of the work, and offer to discuss or model opportunities/issues to provide a chance to participate.

Q: How many people have been attending meetings in Edmonton?

- About 45 people. There has been participation from GoA at both of the Working Group meetings. At the first meeting there were about 12 people there from GoA, and at the second meeting, there was one representative from each participating branch within AEP. AER has also been attending those meetings in Edmonton.

Q: How much does WaterSMART need to know about process and about what the water is used for in this basin? If you're going to be talking about quantity, is the use of the water considered?

- Yes, the model has all the licences for the ARB built in, and if there are return flows, these are built into the model. If the water is reused, then the water is taken from the return flows and not returned to the system.

Q: You noted that you use the best available data; how do you double check these data? How are you proving that what people say is happening is actually happening? How do we know that what we're hearing is the truth?

- For the water use data we retrieved all the licence and allocation data for licences in the basin. Where possible we have retrieved reported actual use data. All that information has come from AEP. The actual use numbers are reported for large volume users. These users account for around 93% of the allocation in the basin, so we have the bulk of the actual water use information for the watershed. For most of these users we have confirmed with them the numbers we have in the model, and in some cases we have been able to get updated data. We have no way of fact checking this data, as we receive what we can, and believe it is reflective of the water withdrawals in the system.
- All of this data is available to be looked at in the model, if participants want to look at the data they can look at it and question it, but that is not WaterSMART's role to question the validity of data. We ask for best available data and assume that when people provide it, that's what it is.

Comment: It seems like the use data from Oil Sands mines are often incorrect.

- All industrial users have to report data and have their own site water balance that is updated constantly.
- Note that the water balance for different mining sites will look very different. The water balance will be affected by many things (quality of the ore, age of the operation and amount of water on site recycle rates, etc.)
- A participant offered to provide additional information regarding oil sands water balances, this offer is either through this process or otherwise. Other participants can contact the project team in order to follow up on this.

Q: Is this a static model that is capable of doing dynamic evaluations?

- It is dynamic, the model responds to changes in parameters, including changes in land use, meteorological conditions.

Q: Is this project linked to groundwater in any way?

- This project is ongoing and iterative, at the moment we are accounting for groundwater as it contributes to streamflow, it is right now treated as a 'bucket', so water flows in and out of that bucket. There is no 3D groundwater modelling in this scope of work.

Q: I noticed that you're not discussing water quality, just quantity.

- Water quality is not in the current project scope, in terms of contaminants and detailed water quality monitoring; however, there will be flow related water quality Performance Measures (PMs) related to water temperature and dissolved oxygen. The modelling platform that is used for this work allows for water quality modelling to be integrated at a later time from groups such as JOSM or the government.

Mike reviewed the Chatham House Rule, which is designed to increase openness of discussion and will be used throughout this process to ensure participants feel they can speak openly. The Chatham House Rule reads: “When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.”

Mike reviewed the strong link between climate variability and water, and the direct, significant impact on water resources that climate change could have. He underscored the importance of focusing early on adaptation, which will require understanding the converging demands in watersheds like the ARB, and devising strategies to balance the demands in the face of climate and environmental change.

The key differences between the work of Phase 2 Framework Committee (P2FC) and the ARB Initiative were reviewed in the slides. The link to the SWQMF, that was based on work from the P2FC, and how it fits into this Initiative were also outlined. It was highlighted the ARB Initiative is being informed from the outcomes of the Framework and the Initiative does recognize other work in the basin.

Q: If participants are too busy to keep up to date on all of the opportunities that are presented in this group and to read into all of the specifics how do participants take part meaningfully? How do participants make sense of all of the information, do they rely on the WaterSMART team to brief them and help them?

- We want participants to come and talk about things that are of interest to them. It is important for participants to be aware of the big picture and to take into consideration what they’re interested in. We work to summarize and present the information at Working Group meetings so that the group is familiar with the bigger picture, and can focus their time and effort on opportunities or interests important to them.
- To a certain extent it will be up to participants to review material provided and follow up on any of their own interests or opportunities/issues they have heard in Working Group meetings.

Comment: Another issue with the government is that they often implement policies / actions in one place that have been successful elsewhere ‘we did this over there so we’re going to do it here’. This makes it more necessary for participants to be up to date on what is happening elsewhere in the basin and what other opportunities are noted elsewhere in the basin because they may soon be implemented in their area of the basin. For example, if there is a grayling restoration program in the headwaters, it may show up near Fort McMurray.

- It is important to note that in working groups like this the uptake is not always consistent throughout. It is important to be aware of this and recognise the support that needs to go with this type of initiative.
- This has been flagged for the project team and we will make sure to keep an eye on this over the course of the work.

The current scope of the ARB Initiative reflects the approach to examine the Slave River system in “manageable chunks”. The scope of this work does not include the entire extent of the ARB in Saskatchewan, and does not explicitly consider the Peace–Athabasca Delta (PAD) in Alberta. The long-term scope, however, integrates the Athabasca–Peace–Slave systems, spanning British Columbia, Alberta and Saskatchewan, including the PAD.

A roadmap is not a plan, it is an informed, science and dialogue-based set of recommendations or strategies that anyone can use. Roadmap components can include general basin-wide examples as well as site specific opportunities. Examples of current activities in the basin that could potentially be components of an ARB Roadmap include: conservation of park land in the headwaters, reuse of treated effluent for industrial reuse, 'recovery rest period' approach to bring back arctic grayling, 2009 Lesser Slave Lake Watershed Management Plan, recently implemented Surface Water Quality Management Framework (SWQMF), and technologies to reduce water use in the oil sands.

Q: Can you talk about the transboundary agreements, how that will be dealt with?

- British Columbia, the Northwest Territories and Saskatchewan will be involved as we get to the bigger picture (the APSRB Initiative). All transboundary agreements will be a basis for setting up the model as it is 'today'. The McKenzie River Basin Board (MRBB) has been made aware of this work and is kept up to date. They have a government and indigenous representative from each province/territory on the Board.
- As we are scoping for the larger project going forward –we will take learnings and understanding from this process, and this group could help inform that scoping. Could we have an integrated team look at a scope of the broader study?
- This is one of the reasons Environment Canada is at the table for this project; as soon as it becomes transboundary it becomes part of their mandate.

Q: How do you plan to deal with not just multiple jurisdictions, but also multiple regulatory bodies?

- That has not been worked out yet, so there is no clear path as to how that works. The current plan though is to bring them all to the table and have the same open/fact-based discussions where everyone is hearing everyone else. We believe that even though there are different jurisdictions and regulatory bodies, that when it comes down to management of water, interests of the different jurisdictions and regulatory bodies will work well together in this process.

Q: The project team comes to the table with an environmental background and environmental interest; however, you're hoping to balance environment, people, and economy. Who will be representing the economy?

- We are hoping that the stakeholders can represent the economic interest as they participate in the project. When we say we are hoping to balance environment, people, and economy, each opportunity will have social and economic considerations that will be discussed and captured as part of the commentary. Detailed cost estimates or economic change is outside the scope of this work. If the group feel an opportunity identified over the course of the process needs to have a specific economic piece done on it (e.g., cost estimate or job creations), those numbers could be looked at maybe through an academic partner, but would need to be outside of this work.

Q: When we get into hard economic comparisons, for example comparing the environmental benefits of removing the Bennett Dam versus the economic impact of doing so, how will that work?

- The details that would follow that would be outside of the scope of work. The pros and cons will be documented. There will be no detailed economic comparisons, much like EIAs or detailed engineering of opportunities. If a comparison is needed, that would be part of further exploring that opportunity if the group felt it was a promising strategy. This work should be thought of as a screening level work for future water management opportunities, which will form a Roadmap on what people in the basin feel should be done to manage water in the future sustainably.

- When we want to have the trade-off discussions as a group, and if the goal is to have the best bang for your buck in a comparison of environmental benefits versus economic benefits, you will need social and economic person in the project team.
 - Again, there will be no detailed economic comparisons, or other studies like EIAs or detailed engineering of opportunities. If these are needed as part of an opportunity they will be noted alongside to opportunity as part of the next steps.
 - This work should be thought of as a screening level work for future water management opportunities.

Q: How do you acknowledge the lack of participation from the AER?

- Mike explained that the slide listing support, letters of support were provided in the application for funding over a year ago to Alberta Innovates. Discussions with AER in participation and funding took place after that. They are now actively participating, and as of the day of this meeting, their financial support was confirmed.

Q: How did industry decide to be involved with this?

- The project started with conversations with oil sands many years ago, oil sands companies saw the value in understanding what happened upstream and downstream. These conversations were within OSLI. When COSIA formed the project was taken outside of COSIA because there were too many mixed perspectives within COSIA on what the project should be (e.g., just the Lower Athabasca vs. the whole basin).
- Oil and gas, forestry, coal, and utility companies have also seen value in this approach and work as it relates to their operations or potential future development and operations.

Q: Has there been any thoughts about engaging academics?

- Yes. The people from the following academic institutions are involved: Athabasca University, Universities of Lethbridge, Alberta, and Waterloo.

Mike explained there is lots of information being presented and the slides will be distributed with the meeting summary. Some of the material will be reviewed in future meetings and this process is designed to be iterative.

2 Common context: tour of the Athabasca River Basin

Ryan used ALCES Online (part of the integrated modelling tool) to go through a tour of the Athabasca River Basin. This tour showed coverages of the model, including agriculture, transportation, water infrastructure, etc. The tour aimed to provide an overview of the basin geography and current human activity on the landscape. This helps build a common understanding of the basin in terms of its natural features and human land use, and of the similarities and differences in water resources across the basin. This overview highlighted human-based activity and it was noted that it was concentrated geographically in the central portion of the watershed.

Looking at the maps, this basin is a very large basin (over 160,000 km²) and stretches from the Rockies, into the boreal plain, and almost into the boreal shield.

Some key points:

- Headwaters are where the bulk of the water comes from in this snowmelt-dominated watershed.

- Basin is topographically diverse. Scale is very important when looking at the watershed.
- Glaciated landscape in the headwaters. Glacier contribution to the Athabasca is not huge, but there are some very large glaciers.
- A lot of rivers and a lot of lakes cover this system.
- There is lots of snow and ice—the Columbia Icefield is at the very top of the headwaters.
- Wetlands (boreal plain)—the landscape is very wet, lots of bogs and different types of wetlands, it's a very wetland driven system. This means there are a lot of interesting hydrologic features that are important to consider.
- Forests—a lot of forest in the foothills and headwaters, not a lot in the central portion, and then there is a lot in the lower portion of the basin.
- Natural sub-regions—climatic and topographic regions that represents different ecosystems (different parts of the basin that behave differently).
- Jurisdictional—many Métis and First Nation communities, cities, towns, counties and municipal districts, as well as provincial and national parks. These are important jurisdictional considerations.
- Energy—one resource development sector; there is also a lot of agriculture in the central portion of the basin. As things like climate change take place we may expect more agriculture in this part of the world, and
- Transportation—a lot of road networks, primarily focused where people live, there are important to consider when we think about runoff and water management. Linear development and effect of this disturbance on the hydrology and other impacts can be modelled.

Q: Are you relying on publicly available data for forest cover?

- Yes. All of our datasets are publically available. The forest data are from the 2014 ABMI dataset. Where available, we can easily include more detailed datasets like AVI; however, do not have access to those at the moment.

Q: Regarding the layering of jurisdictions: Do you see any need to include traditional territories?

- Yes, we can include traditional territories with permission from the First Nations and Métis groups. If those data are available and provided we are happy to add those into the model.

Q: Are the assumptions behind ALCES public?

- Yes, the assumptions behind the ALCES model are public; however, what has been reviewed today is not a simulation, it is based on existing datasets. This is how the watershed is today. Simulations of future land use will be part of meeting #4 in Edmonton on March 14th.
- In the March 14th meeting we will be doing some live modeling where we can look at different land use modelling.

Q: In order to access the ALCES the datasets do you need a subscription?

- Yes, to access ALCES you need to have a subscription; however, for this work we will have this data set open and available to everyone.
- If you have access to ALCES, Ryan can add the working group data and information to your account.

Q: Are you going to add social data sets to ALCES? There would be great value in adding economic data sets.

- This would be useful in the economic discussion.
- One resource for this type of data may be CAPP.

ACTION: Follow up with GoA in general to look for economic type datasets that could be incorporated into ALCES.

- As part of the wetland policy, AEP did have an economic person there, it would be interesting to know how they incorporate that criteria/policy into policy discussions.
- Perhaps follow up with Deborah Hopkins of AEP on quality of life data?

3 Breakout Groups - Session 1: What opportunities need to be referenced or addressed in a Roadmap for Sustainable Water Management in the ARB?

Mike went through over what is meant by opportunities. In the context of this project, an opportunity is defined as a specific action that can be implemented. These can either be to address the issues identified in the basin, or to make improvements. Opportunities are strategies that will make up the Roadmap and as identified to date, have been grouped into four buckets:

- Supply and Demand
- Regulatory
- Lands and Ecosystem Use
- Data and Knowledge

If you had a roadmap that's already been written what would you want to see in that roadmap? The idea was to brainstorm opportunities that should be referenced in the Roadmap, and use the visual tool to "flag" ARB Roadmap contents.

Below is a summary reflecting discussions at the tables in the readouts as well as points from the flip charts. Opportunities are bolded.

1. **Accommodation of people affected by oil and gas development is needed**

- Issue: water quality and food (fish and terrestrial animals not consumable or nonexistent due to water and land impacts) supply impacted; recognize and address this situation through a food supply system: wherein food is supplied through a government run program.
- Note side issue: practice of dredging of the Athabasca was ended in 1998 by transport Canada (maybe changes related to Coast Guard needs?) so barges can no longer navigate to and from communities (for food supply).

2. **Understand the link between surface hydrology, the changes in groundwater, vegetation conditions, and forest fires**

- Gain understanding and explore the relationship between drying out of peatlands over the last 10-15 years and whether or not water use (groundwater and surface water) change is increasing the risk of forest fires? This is a data and knowledge gap.

3. **Recreational fishing and hunting declines**

- Seems over the last many years fishing and hunting tourism has decreased; is there something we do that could increase either the draw for hunters/fishers or the fish and hunted species

numbers (populations)? Observations of decline should be clarified if it is the numbers of hunters/fishers or the numbers of species. There is a gap in data around this issue.

4. Alternate methods of transportation on the river to access fishing and hunting areas

- Maybe a new barge or a hovercraft? To supplement winter road use. Maybe different boats to get access to traditional hunting/fishing grounds to address concerns with lower water levels. This could help address the navigation issue and help accommodation of aboriginal rights. This might even help address the issue of safe and healthy food to northern communities- good food and health availability. Design a barge for the river.

5. Need a specific policy/directive to enable oil sands to treat and release water

- Address treatment of process affected water (OSPW) for release. This conversation needs to be advanced to get water off site so reclamation can be done. This needs to tie into newly drafted Directive 85 (which addresses fluid tailings- the sludge after the other water has been recycled); it is not addressing when water can be released, and the water quality standard is not defined.
- Oil sands operations need a specific policy/directive with alignment from the federal and provincial governments to enable OSPW water release. A standard of water quality needs to be defined and agreed upon in terms of the level of treatment that is required for release. The Integrated Water Management Working Group is currently exploring recycle, reuse, return to release water safely, but it is going very slow. We need to return water to reclaim by mid-2020. There needs to be communication and a discussion between the two levels of government.

6. Create a threshold for groundwater withdrawals

- There is not a good understanding on what the effect of groundwater withdrawals is on water in the ARB –and the cumulative effects are unknown.
- The SWQMF has a limit for surface water withdrawals; however, there is no such limit or threshold in place for groundwater, and there isn't a mechanism to cumulatively manage it. (Comment: It might be better to pull from the river so that there can be more of an integrated understanding of the water used and impacts on the river system.)
- Where do communities get their water? Do we have a list of where water treatment plants, and wastewater treatment plants are? There is a 60m deep aquifer that FMFN 486 could use, but can't because of development- right now it is being use for oil sands production water. Concerns with previous experimental SAGD facilities and effects they had on the groundwater. This more comprehensive picture of groundwater should include water resources below ground.

ACTION: follow up with Rick (RMWB) on his knowledge of what community water sources are and RMWB use.

7. Map areas of hydrologic sensitivity in the basin that supply water to sub-basins and are locally important to communities.

- Example: Gregoire Lake and Surmont Creek are fed and recharged from a large fen upstream- in effect a headwater and glacier area for those water bodies and other (e.g., Hangingstone and Christina Rivers). Map the water volumes and track effects of climate change and development, to avoid or reclaim areas affected by linear disturbances and the disruption (lateral redirection, for example) of surface flows.

- This is an opportunity to enhance community based monitoring, and to identify water volumes in these systems (data gap) and how they are changing. Community based monitoring plan could be created and used including the integration of western science and Traditional Knowledge (TK) monitoring system to have a value-added product in the data and reporting.

8. Identify and conserve areas for source water protection.

- This may be accomplished through a land use plan. CPAWS have identified areas for conservation in the headwaters.
- May identify alternative sources for water users.

9. Recognize and address Infringements on Treaty Rights: Create trust and path forward through addressing underlying issues.

- Dialogue needed on “where do we go from here?” -needed as a step in the “Roadmap”: need a table to address these issues in order to move forward.
- With changes in conditions (e.g., government, policy, legislation reviews) and in water use technologies, there are new opportunities under current and predicted future conditions.
- Opportunity to provide a level playing field and dialogue regarding social license, and Treaty Rights. This is the difference between making a good water management plan and addressing Treaty Rights in this context. Need to involve Aboriginal people in getting development done sustainably in the context of Treaty Rights.

10. Run model to show environmental thresholds (hydrological and terrestrial) rather than production based thresholds in LARP

- Simulate an update to LARP- base thresholds on environmental thresholds rather than production thresholds as it was based on. The thresholds in LARP were done doing 2, 4, and 8M barrel scenarios. Instead, we should use environmental thresholds based on what we know now.
- Explore intensified development within lease areas rather than development over larger areas (current practice). Understand those trade-offs through this model. Concentration of development is a needed change in the mindset of development.
- From and unconventional oil and gas perspective, there was a look at reducing the development footprint from the play based regulation pilot. It is more cost effective to develop that way, but is tied to this is the current tenure system: consider changes to that system for outcomes that would include more sustainable development.
- Tenure system needs to change, so this needs to be changed within AE. This is a fundamental shift in how business is done. It needs to happen as this was a huge miss in LARP and is needed to develop the resource over the next 50-100 years. This would make management happen more sustainably.

ACTION: Contact AER to look at addressing tenure system issue with Department of Energy and others as needed.

11. Protection of more water bodies

- Identification of waters of cultural significance not only for water supply but also for navigation and access to Traditional Lands, as in accordance with Treaty Rights.
- Include more water bodies in Environmental Assessments (EAs) Protected water supplies more

probable prior to changes to Navigable Water Protection Act in 2012 through omnibus bill. Metis study shows waters no longer protected; these waters should be included again.

- It is more than a list of water bodies that need to be protected. First Nations need to be able to navigate in a meaningful way over traditional land. So it is more than protecting the key lakes and rivers, more of a system. We should be able to use the landscape and meaningful and safe access to traditional lands. This is the difference between making a good water management plan, and then addressing treaty rights in the context of this.

12. Explore temporal changes for withdrawals to limit stress on the aquatic system

- Explore limiting or changes to withdrawals until night time or change the temporal use of water to withdrawal more at night when it is cooler if possible to reduce stress on ecosystems in the summer during the day. This could maybe be linked to dissolved oxygen (DO) through flow and water levels. This could be explored in the context of seasonal changes as well through on or off-stream storage.

13. Measure impacts from surface water quantity changes to the ecosystem

- On the mainstem and tributaries, there is no system in place to measure impacts of changes in flow on the aquatic ecosystem. For example, if flows are X, how does this translate and link to fish species and habitats?
- Opportunity: to identify indicators/thresholds OR take the ones that were fleshed out in the P2FC, and incorporate the instream flow needs (IFN) discussions, and pull these together to measure impacts from surface water quantity to the ecosystem. Example of work done is Richardson Lake and River: what could be done as a critical fishery and part of the IFN work.

14. Different compensation mechanisms for fish compensation in the ARB

- Compensation for fish habitat loss: lakes have terrestrial and aquatic impacts and are a large undertaking. Are there opportunities to identify fish habitat compensations that don't include creating lakes over the landscape? The impact (i.e., incurred loss) of creating a lake to compensate for another doesn't make sense.
- A hatchery might be an opportunity for a different option for compensation or maybe be used to stock existing compensation lakes. Peoples' confidence in eating the fish is very low. One opportunity might be a fish hatchery off-stream and put them in natural lakes that could be used as a freshwater fishery/hatchery for food and support treaty rights. The other side to this is that rights to fish should not be limited to a certain area because other areas are too contaminated or are not a priority. The culture is tied to the land, so moving the fish wouldn't solve the problem.
- As an alternative, create a list of hanging culverts and other fish connectivity issues that industry could use these as "low hanging fruit" for fish compensation. Could also look at habitat enhancement. Trout unlimited may have a culvert rehabilitation program.
- Another opportunity could be to have the money for compensation lakes bankrolled into a fund to compensate and enhance fisheries (e.g., fish stocking, habitat restoration, fish population recovery plans) without taking out more land by flooding it. Currently, fisheries compensation is being done to satisfy a DFO requirement, rather than looking at an effective solution. Compensation lakes do nothing for people in terms of use or in recovering a population, or access to fish, and provide no value for people. When you further impact the land

(compensation lakes, changes in wetlands, etc.,) you make significant changes in the system and impact Treaty Rights and the culture.

4 Open Dialogue: How do you envision your participation in this Initiative?

Denise outlined the challenges with engagement for this work (Large basin, diverse perspectives, time line constraints of the Initiative) and the opportunities with engagement for this work (this process has been noted as being “different than other processes”, is open to find workable solutions for meaningful and inclusive participation which is reflected in outcomes). To date, we are using Working Group meetings, sharing sessions, email, phone calls and screen sharing to interact and engage people in this work. Are there other ways that we could make participation meaningful for you? How do you see your community or organization participating?

Q: The slide says “this process is different than other processes”. This question was addressed to industry representatives in the room: There have been multi stakeholder processes in the past, at the end of the day these groups and process have produced recommendations; why is there now an interest in forming opportunities instead of changing and implementing policies? Why do industry participants want to invest in this process?

- This will be a tool to help in discussions and recommendations to inform policies. Additionally the upper Athabasca regional plan will happen soon, this will be a useful tool to help influence that plan, and even provide updates to LARP.
- WaterSMART has worked to have a different process; something that may be markedly different from other Working Groups is that when the project lifetime is done WaterSMART doesn’t, we keep pushing for change, we keep working with government. We believe in making change, and change takes time. Change is a journey, and this process is a step in that journey to making change in a basin.
- Part of the benefit is the process is building relationships. Taking time to build relationships and work together to improve or make water management sustainable in the basin is part of this process and adds great value. A large common voice also helps to push for change as it is hard for GoA to not hear it.
- One participant is interested in hydro and another mentioned interest in trying to get licences for hydraulic fracturing. It is likely that the desire to invest in this project came from the results in the South Saskatchewan River Basin coupled with the interest in hydro.
- A participant mentioned having participated in many multi-stakeholder processes through AER, who is trying to take a cumulative effects management perspective, but have felt frustration with the lack of follow through; this participant wants to be involved in the ARB Initiative because it’s not a government initiative and they feel that there will be more follow through.

Comment: A participant noted that they are struggling to understand why to invest in this process instead of driving towards solutions at the end of the day.

Perhaps some insight into what took place with the work in the South Saskatchewan River Basin would help with this.

- It is important to understand that this process has evolved, and it can evolve. The Bow River Working Group has come out of the work in the South Saskatchewan River Basin. The SSRB Working Group is a working group that was mandated by the GoA that has very specific objectives; the government is asking the working group to come up with solutions to specific

problems.

- This will be able to inform frameworks and changes to frameworks. This may be a model that could be followed for this work. It could be driven and led by WaterSMART, but more of a commitment from GoA for use or uptake of outcomes.

Participants expressed worry that this is a process for a process. Concern was expressed that this initiative represents the government passing the buck. This sort of work is the government's responsibility; however, they have no responsibility or accountability in this initiative. This initiative is not driven by government; they are hopeful in the outcomes but can't guarantee follow through.

Q: What can we do as a project team to make participation meaningful?

- For First Nation communities, it is hard to advocate to chief and council for something that has no guarantee, and it is hard to define the benefit of participating if there is no guarantee.
- A participant who has attended the first two Working Group sessions noted that they had struggled with a desire to participate at the start of the Initiative; however, this initiative builds on the past frameworks and recommendations. This is an opportunity to integrate past thinking and work into a basin-wide initiative and to develop a common understanding and solutions for water management. This is an opportunity to improve on what has been done in the past.
- A participant noted that generally when groups meet there is a technical focus and the conversation needs to focus on one small issue, this initiative allows an opportunity to develop the bigger picture viewpoint that can allow everyone to make better, more conscious choices.

Q: What is the value of this exercise if none of the local First Nation and Métis communities are not at the table? How does industry feel if First nations and Metis are not participating? There is a gap in this process; the government needs to have some direct conversations with First Nations letting them know where this process fits in to the larger water management process. Industry indicated they have significant concern if Indigenous groups are not participating in the initiative.

- The concern is that there is a void of conversation and communication with the government and the lack of knowledge or commitment from the government regarding what is going to happen with the information coming out of this process.

No one from government is talking to the First Nation communities. It would be beneficial if CEO of WaterSMART came to talk to them and brought people from the government.

- There is no understanding of the bigger picture.
- There is a perspective that government is using this process, or will in the future, call this process engagement and benefit from it, however, they are not calling the process what it is.

ACTION: Mike to personally provide an update regarding discussions with the government to interested parties from today's meeting.

There is a need to know the decision making process and that government supports it; when CEMA existed the well-defined processes and governance structure was why a lot of First Nations and Métis communities supported CEMA.

- The participants need to see a mandate, a governance structure, and a decision making process.
- Participants noted an interest in developing a well thought out water management plan that does not infringe on treaty rights for this region.
- Participants noted that in order to participate there is a need to understand how this group plays

into the bigger water management picture.

- The Métis communities are not opposed to participating in this group but the above issues need to be clarified.

5 Next Steps and Close

Mike ended the day with some closing comments. Upcoming meetings:

January 26th- Edmonton

- Explore effects from climate scenarios on water in the ARB.
- Examine how effects from changes in climate impact issues and opportunities.
- Explore and discuss opportunities to address or adapt to changes in climate for an ARB Roadmap.

March 14th- Edmonton

- Explore effects from changes in the landscape on water in the ARB.
- Examine how effects from changes in the landscape impact issues and opportunities discussed in previous meetings.
- Explore and discuss opportunities to address or adapt to changes in the landscape for an ARB Roadmap.

Meeting Summary

Athabasca River Basin (ARB) Initiative

Final comments and reminders included:

- Mike made a few summary remarks, noting how valuable today's discussion was.
- Slides and meeting summary will be circulated to participants for information and comment, and the project team will follow up with individuals on specific discussion points.
- Participants were encouraged to contact the project team with ideas and suggestions for the project, model inputs, and data.
- We will be contacting those interested in the data and modelling committee.
- Mike will send out invites for the fourth Working Group meeting taking place in March, 2017.
- We look forward to seeing everyone at the January 26 meeting if they wish to attend.

Mike acknowledged today's excellent contributions and thanked everyone for their support, enthusiasm and input, and adjourned the meeting at 4:00pm.