

## INTRODUCTION

On November 17, the Athabasca Watershed Council (AWC) hosted a one-day Municipal Forum in Westlock, Alberta. The purpose of the forum was to share information, build relationships, and explore how municipalities and the AWC can collaborate on water initiatives in the future.

After hearing several morning presentations showcasing watershed collaborations (e.g. Sturgeon River Watershed Alliance, Camrose Source Protection Plan), forum participants were engaged in a discussion about the work of the AWC Technical Committee in developing an Athabasca Integrated Watershed Management Plan (IWMP).

As the session facilitator, Petra Rowell first presented an overview to forum participants, providing background and context, starting with the Government of Alberta's *Water for Life* strategy, the mandate given to Watershed Planning and Advisory Councils, and the work of the AWC's Technical Committee on an IWMP to date. In particular, she identified a number of proposed key themes to potentially be included in the IWMP. Petra then invited discussion and input on the key themes, by using a 'World Café' exercise. Members rotated through five tables and eight key themes over the 90-minute period.

At the conclusion (plenary) of the World Café, Petra first asked if anyone had disagreed with any of the key theme statements. Although no one disagreed, it was noted that some definitions needed exploring. For example, what do we mean by 'groundwater is managed sustainably'. Petra then invited each table facilitator to summarize their discussions. Theme feedback is summarized below.

## KEY THEMES FEEDBACK

### THEME 1: EVERYONE IN THE ATHABASCA WATERSHED HAS SAFE, SECURE DRINKING WATER.

*Does your municipality have any drinking water challenges? If yes, what are they?*

- Well water quality is affected by issues with rust (iron) and calcium (hardness) which is hard on water infrastructure, even when treated, and worse certain times of the year.
- Had capacity issues due to power loss (due to a fire); no firefighting capacity.
- Intake issues – divers had to go in to clear the intake of debris, sediment, etc.
- Low water flow during drought (lake and rivers) especially on tributaries/creeks/lakes. Tributaries are muddy. Some lakes dried right up / used to take days to fill up the lake/ now takes hours with heavy rains.
- Some wells are drying up.
- The cost of operating drinking water treatment plants is challenging, particularly for smaller municipalities.

- Risk of invasive species in source waters / potential cost of removing.
- Lagoons are expensive to treat the water; need a more efficient and effective means of treating wastewater, particularly for smaller municipalities
- Need a better abandoned well policy to reduce the risk of contamination.
- Need ongoing operator competency tests / staff education
- Need better wastewater treatment; more cost-effective; need better stormwater treatment, oil separators / willow filter beds, etc.

*How can the AWC help you ensure everyone has safe, secure drinking water?*

- Learn more about the groundwater resource as a backup supply.
- Ensure a system of checks and balances to ensure good quality coming out of the taps.
- Investigate the use settling ponds to let solids settle prior to treatment and other treatment innovations.
- Education (e.g. invasive species prevention); promote water conservation
- Help municipalities understand the true cost of water / cost of treating water so they can charge the full price / fines for not conserving / raise fees to reflect the true cost
- Assist municipalities with developing source water protection plans (sooner rather than later)
- Look at water storage capability to tide over periods of drought
- Work with agricultural producers to keep cattle out of water sources / encourage the Government of Alberta (GOA) to enforce Public Lands regulations / provide education about best practices / provide support for installing off stream watering systems / assist farmers with developing Environmental Farm Plans and applying for grants to implement beneficial practices
- Bring more education programs like Cows and Fish, Mad about Science, Science Outreach, Pond Days, etc. to the Athabasca
- Encourage the use of both disincentives (enforcement, fines) and incentives (financial support) to improve systems

THEME 2. SURFACE AND GROUNDWATER RESOURCES ARE UNDERSTOOD AND MANAGED SUSTAINABLY.

*Does your municipality rely on surface water or groundwater?*

- A variety of sources were identified:
  - Town of Athabasca and other Lower Athabasca communities source waters are the Athabasca River mainstem;
  - Many summer villages and rural areas / Towns (Edson)/Woodlands/Athabasca county rely on groundwater;
  - Municipalities around Lesser Slave draw from the lake.
  - Some municipalities collaborate with their neighbors: e.g. Barrhead Regional Water Commission supplies the town from the Paddle River (tributary to the Pembina) and the county with a transmission line out to Neerlandia.

*Are there information gaps that need filling about this source water? How can the AWC help you fill these information gaps?*

- We don't know enough about the resource to manage it well, particularly groundwater.
- Several communities on groundwater have issues with enough supply; communities on mainstem do not feel confident in water quality / quality is unknown or may vary seasonally.
- Groundwater wells: recharge rates may be slower than what is withdrawn (need the AWC to fill data gaps).
- Need to determine whose responsibility is it to monitor water quality and quantity and report back to stakeholders and partners?
- Advocate for an inventory of groundwater
- Find out how much water is needed for industry in the near future
- Infrastructure is expensive. Should water commissions be formed? Need to better understand who is using, how much, future needs, etc.
- The AWC can help municipalities promote water conservation / provide water conservation toolkit /grants for low flow toilets, etc.
- Help manage private wastewater systems by providing rural landowners information, workshops, etc.
- Provide educational programs for kids (Pond days; summer camps)
- Need to hear more from tourism/recreation: importance of sustainable waterbodies
- Investigate where grey water reuse makes sense

### THEME 3 AQUATIC ECOSYSTEMS ARE HEALTHY AND BIOLOGICAL DIVERSITY IS CONSERVED.

*What tools are you currently using to manage riparian areas, wetlands and other waterbodies?*

- Municipal development plan includes setbacks from water bodies (i.e. river, lakes)
- Use environmental and municipal reserve: cattle can cross reserves but cannot remain in a reserve for any length of time
- Emergency planning has a role (i.e. to stop contaminated or chlorinated water returning to the water source)

*What other tools, if any, are needed? How can the AWC help you ensure aquatic ecosystems are healthy?*

- Work with agricultural producers to stop letting cattle in the creek
  - Need tools/ outreach/ funding to help producers
  - Peer to peer approach (get one producer to talk to others)
- Build awareness about the risks of contamination and how to manage risks (bring in speakers, share information from other jurisdictions, etc.)
- Promote the use of wetlands and willow beds to slow and clean stormwater before it enters the river system

- Encourage regulators to enforce existing law (e.g. landowners changing the flow of water by ditching, altering streams, etc.)

THEME 4: INSTREAM FLOW NEEDS ARE MET AND RELIABLE QUALITY SUPPLIES ARE AVAILABLE FOR A SUSTAINABLE ECONOMY.

Due to time and number of participants, this theme was not included in the World Café exercise. However, comments at other tables suggested that more information is needed and the AWC has a role in filling information gaps about water quantity and source water sustainability.

THEME 5: NATURAL LAND COVER IS CONSERVED AND CUMULATIVE LAND USE PRESSURES ARE MITIGATED.

*Does your municipality have a Green Spaces, Environmental or other Master Plan to protect environmentally significant areas? Does your municipality use low impact development, storm water management, or other tools to mitigate land development impacts on water?*

- Several municipalities manage natural areas through Green Zones (parks, walking paths), Riparian zones (setbacks, matrix), environmental reserves, etc.
- Lac La Biche has a healthy lake strategy and is renewing its 2009 watershed management plan.
- Additional tools to mitigate land use include:
  - Education and enforcement (protection of Environmental and Municipal reserves)
  - Environmental Services Department
  - Bylaw Officers
  - Expanded Water and Sewer system lines, mandatory hook-up
  - Environmental Protection Plan for lakes and rivers
  - Highway 2 Conservation partnership
  - Municipal Development Plans, Land Use Bylaws, Environmental Constraints Overlay (waterbodies, slope, contaminants)
  - Floodplain policies / flood mapping
  - Setback policies
  - Gravel extraction policy (Industry, developer)
  - Letters from Municipality to Provincial resource management agencies (Crown managers) and referrals
  - Low pressure sewer system
  - Parks and protected areas
  - Installing grit / oil separators at stormwater outfalls
  - State of the art Biological Nutrient Removal plant

*How can the AWC help?*

- AWC can help by raising awareness, providing information, education on best practices, providing guidance on Intermunicipal Development Plans and Intermunicipal Collaboration Frameworks
- Provide opportunities (like today's forum) for municipalities doing good work to make presentations / share learnings and best practices with each other

THEME 6 POLICIES AND PLANS ARE ALIGNED AND INTEGRATED FOR WATERSHED HEALTH.

*In working on Inter-municipal Collaboration Frameworks (ICF) and Inter-municipal Development Plans (IDP) with your neighboring municipalities, do discussions about transboundary waters occur?*

- Yes, ICF/IDPs are used to co-manage transboundary waters, particularly for drinking water networks.
  - Town of Athabasca provides drinking water to Long Lake communities
  - Town of Barrhead and Barrhead County collaborate on water treatment and distribution
- In some cases, the neighboring jurisdiction is the Province i.e. Yellowhead County and the Green Areas boundary (hard to voice concerns, few mechanisms for joint management)

*How can the AWC help you work with your neighbors to managed a shared transboundary water?*

- Provide information and education on best practices / provide wording for governing documents (templates, model bylaws, decision trees, standards of practice, etc.)
- Provide technical expertise / links to experts / commission consultant reports
- Provide information about successful municipal collaborations and tools (e.g. setbacks, standards, etc.)
- Encourage municipalities who direct land use policies that indirectly affect water to commit to a watershed and partnership approach and reflect this in the development and review of their governing documents: help them consider population growth, new developments, impact on water supply, runoff management, wastewater discharge practices, etc.

THEME 7: WATERSHED RESEARCH AND MONITORING INFORMS DECISION-MAKING.

Although this topic was not introduced at the World Café tables, several points were made that are relevant as follows:

- We need a larger/better aquatic ecosystem monitoring network
- A lot of monitoring is done by industry, some by government. It is hard to get a hold of this information.
- The AWC can provide a link to all that is going on in the watershed.

THEME 8: CUMULATIVE EFFECTS AND CLIMATE CHANGE IN THE ATHABASCA WATERSHED IS UNDERSTOOD.

This topic was presented for discussion in the last few minutes of the World Café exercise.

*Has your municipality initiated any climate change mitigation programs including flood or drought preparedness? If yes, what are they?*

- Flood and drought preparedness programs
- Looking at the use of reservoirs / weirs to store water in times of drought as well as to prevent flooding during spring melt and major precipitation events
- Relocating water treatment plant intake, going deeper to improve water quality
- Working with the province to map floodplains; keep development outside floodplains
- Looking at farming practices: need more shelterbelts, wetlands and dugouts to support flood and drought prevention
- Identified the need for riparian restoration in some areas but its costly

*How can the AWC help you in this work?*

- Promote flood and drought preparedness including floodplain mapping, riparian and wetland health, agricultural beneficial practices, etc.

THEME 9: EDUCATION AND OUTREACH LEAD TO STEWARDSHIP ACTIONS.

While this theme was not discussed during the World Café exercise, several comments from other table discussions are relevant to it.

*Does your municipality currently do any education or outreach around water issues?*

- Lac La Biche uses its watershed management plan to raise awareness of the issues.

*What programs would you like to see the AWC provide?*

- Alberta Environment and Parks' Water Literacy program

THEME 10: SUB-WATERSHED AND LAKE PLANNING STEWARDSHIP INITIATIVES ARE SUPPORTED.

*Does your municipality currently collaborate with any watershed stewardship groups or sub-basin watershed planning initiatives? Examples of initiatives included:*

- Lac La Biche Watershed Management Plan (the 2009 plan is now being updated)
- Clearwater Heritage River Management Plan
- Athabasca County and six summer villages, via the Baptiste and Island Lakes Stewardship Society, are developing a Watershed Management Plan for Baptiste and Island Lakes

- Athabasca County and the Town of Athabasca collaborate on planning for riverfront green spaces
- Several municipalities collaborate on recreational trail systems such as:
  - Five municipalities participate in the Athabasca Landing Trail steering committee
  - Muskeg Creek Trail groups that organize a run/race, biking, skiing, etc.

*If no, would you like to see a group get started in your area? How can the AWC help with this initiative?*

- AWC can help by developing guidelines, providing financial, technical communications or administrative support for sub-watershed initiatives.
- The AWC could approach elected officials to explore stewardship group or initiatives (e.g. should start a Pembina River sub-group).

## CONCLUSION

Going forward, the comments collected at this municipal forum will inform the Technical Committee in its development of the Athabasca IWMP. Additionally, the Committee will continue to seek to understand municipal perspectives via its municipal members and at future engagement opportunities.

Before concluding this session, the facilitator asked participants, in going forward, what is the best way to engage them in future work on the IWMP. Most responded that an annual forum is a good method for sharing information and experiences. However, to engage elected officials, the AWC should continue to make presentations to municipal councils whenever possible. In between forums and presentations, providing updates directly through a municipal distribution list (caucus) and indirectly via the web or social media is an effective means of garnering municipal input to ensure the IWMP is relevant to this sector.

## ACKNOWLEDGEMENTS

On behalf of the AWC Technical committee, many thanks to all forum participants for openly and constructively sharing their input on future IWMP content. We also would like to thank the table facilitators who stimulated and captured table discussions.