Assiniboine River Basin Initiative
Qu'Appelle, Souris, Assiniboine

Water Topics Overview Committee

Wednesday, June 15, 2016

Minot, North Dakota

Water

- Water covers 71% of the Earth's surface. Of this only 2.5% is freshwater the remaining 97.5% is ocean or saline water.
- By 2025 more than half of the world's population will be facing water-based vulnerability.
- Over 1.4 Billion people currently live in river basins where the use of water exceeds minimum recharge levels.
- There are *276* transboundary river basins in the world (46 in America).

(Source UN Water)

Water & Agriculture

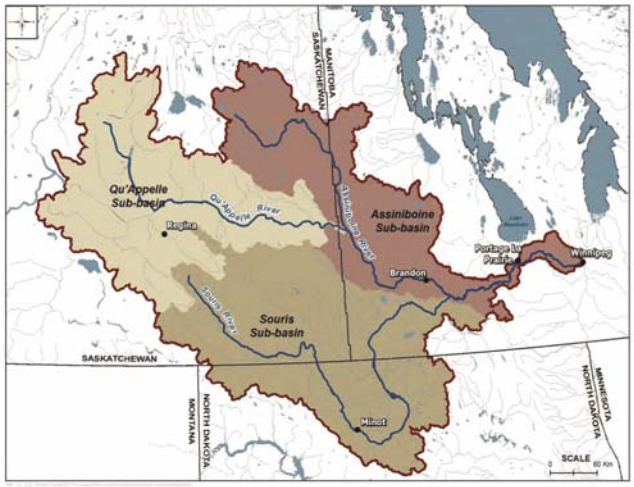
- Approximately 70% of the fresh water used by humans goes to agriculture/food production.
- On average of 792 US gals. of water is required to produce one person's daily food.
- Agricultural water consumption is expected to increase by 19% percent by 2050.
- (Source UN Water)

Lake Winnipeg Watershed

- Lake Winnipeg watershed is the second largest watershed in Canada and includes parts of four provinces and three U.S. states.
- The drainage basin is nearly 1,000,000 km^2 in size and is home to more than 7 million people.
- Its drainage is about 40 times larger than the actual lake surface, a ratio bigger than any other large lake in the world.

The Basin

- The Basin covers an area of 162,000 square kilometers. About the size of North Dakota.
- Roughly 1.5 million people live and work in the basin.
- The agricultural GDP is estimated to amount to over $10 billion. Natural resources such as oil, gas, potash and coal are also a major part of the basin economy.



ARBI History

- In 2008 the Province of Manitoba commissioned a study on the ARB through the Red River Basin Commission (RRBC).
- A basin-wide water management approach began again in late 2013 under the guidance of the Prairie Improvement Network.
- The goal – to facilitate and support a coordinated approach to water related issues in the basin.

Phases 1 and 2 & 2014 Conference

- Re-engaged original Steering Committee with representation from all 3 jurisdictions (ND, SK, MB).
- A multi-stakeholder workshop to revisit basin approach and gather consensus on next steps was held in March 2014 in Virden.
- Consensus building process – many miles, many meetings, large tent open to everyone.
- 1st Conference hosted in Regina on Nov. 12th to 14th, 2014.
- Broad political participation from municipal, provincial, state and federal governments.
- The Planning Committee become the first ARBI Board and Interim Executive continued as the ARBI Executive.

2015 Organizational Details

- Incorporated in all 3 jurisdictions.
- Board Structure finalized at a maximum of 51 members, with equal distribution from all three jurisdictions.
- Established Vision and Mission Statements.
- Guiding Principals, Short Term Goals, work plan goals, and objectives.
- By-Laws have been approved for Canada, under development in the US.
- Hosted the 2nd Annual Conference in Brandon, MB on Nov. 12th & 13th, 2015.

Vision Statement

- An Assiniboine River Basin where stakeholders work together to achieve basin-wide comprehensive watershed actions that will benefit current and future generations.

Mission Statement

- To achieve environmental, social and economic sustainability for all residents through collaborative actions across the Assiniboine River Basin.

Guiding Principles

- To seek fair and equitable solutions.
- To balance current and future needs.
- To acknowledge ongoing change and adaptation.
- To work across jurisdictional boundaries.
- To work collaboratively with all stakeholders.
- To recognize and complement existing statutory and regulatory responsibilities.

Short Term Goals

- To reduce water flows to match existing in-stream infrastructure capacity.
- To create multiple small water storage opportunities across the Basin.
- To reduce and manage drainage.
- To improve water quality.
- To drought-proof the watershed/basin.
- To address salinity impacts.
- To share water fairly and equitably.
- To complete LIDAR across the Basin.
- To conduct a Basin-wide hydrological analysis.

Board of Directors

- Board of 51 with equal representation from each jurisdiction. Members represent a broad cross-section of organizations and agencies.
- The Executive is made up of 7 members with 2 representatives elected by their peers in each jurisdiction and the Chair elected by the Board as a whole.

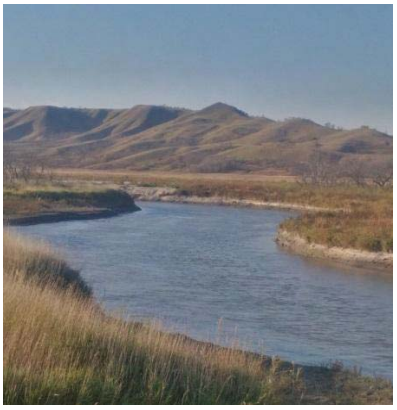
Partner Support/Communications

- ARBI supported the City of Minot on their HUD funding application.
- ARBI is working in partnership with AAFC & Manitoba Forage and Grassland Association on a basin wide hydrogeospheric modelling project.

- Supported project applications for LiDAR in Manitoba and basin wide water quality monitoring with IISD.
- Assisted the IJC (Canada) with public appointments to the Int. Souris River Board.
- Working with members at a local level on cross-border water concerns.
- Communication and working with grass roots partners will be a key item for ARBI.

Work Plan

- Pursue development of the ARBI Coordinated Action Plan (ARB-CAP).



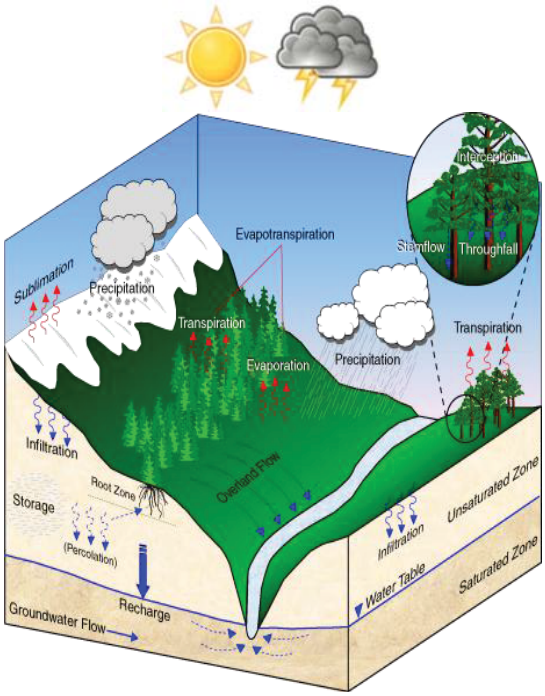
- Develop a "State of the Basin" report on water quality across the basin as well a listing of agencies operating on water files across the basin. An Economic Impact report is also in development.
- Will continue outreach work in order to solidify base funding and ensure all voices are heard.
- Host 3rd annual conference in Minot on Nov. 9th & 10th, 2016.

ARB-CAP

- Develop and utilize the ARB-CAP to direct and guide the annual work plan.
- Continual engagement of stakeholders across the basin in the process to ensure it is 'evergreen'.
- Present the first draft at the 2016 Conference with final document completed in the spring of 2017.

- Key areas identified to date include but are not limited to:
  - drainage related topics (urban and rural),
  - flooding,
  - water quality – both in-stream and
  - groundwater,
  - drought,
  - wetlands and riparian zones,
  - soil conservation,
  - fish, wildlife and outdoor recreation,
  - and other topics that may be identified by stakeholders.

ARB HGS Basin Modelling Project



- HGS is a physics-based model designed to model entire river basins that considers surface and soil moisture as well as ground water and the interactions between all three.
- The base model will contain over 3 mil data points, additional points can be added as available on a area by area bases.
- Primary partners: AAFC, MFGA , MAFRD & ARBI. Contractor: Aquanty Computer Contributor: IBM Canada

Conclusion

- ARBI as progressed from an idea to a concept to a full-blown organization in just two years.
- We thank those agencies and organizations that have been engaged to date and look forward to developing relationships and working with other stakeholders as we mature.

Thank You!

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