

ASSINIBOINE RIVER BASIN INITIATIVE

“FITTING THE PIECES TOGETHER” – MANITOBA PLANNING CONFERENCE



WATER



- *“Water is the driving force of all nature”*
- Leonardo da Vinci

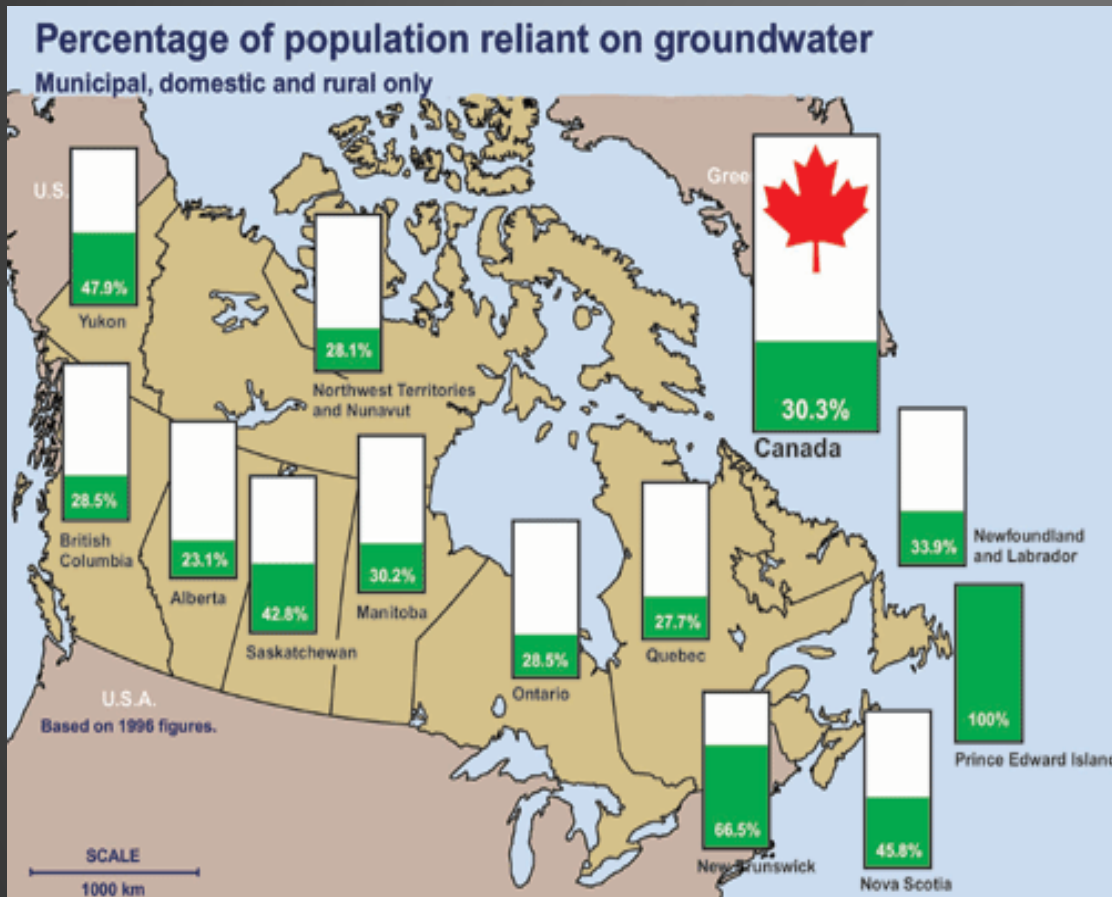
WATER

- **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.**
- **There are 276 transboundary river basins & 200 transboundary aquifers in the world.**

(Source UN Water)

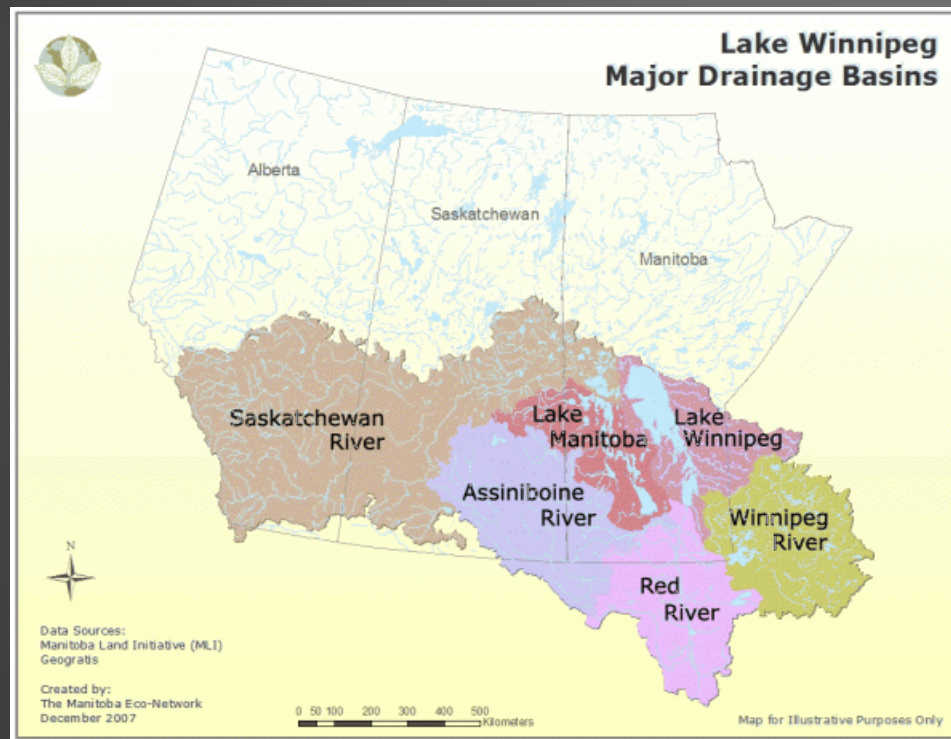


WATER



- One-third of Canadians depend on groundwater as their fresh water source.
- Approximately 70% of the fresh water used by humans goes to agriculture/food production.
- Groundwater is being depleted globally at a rate which exceeds recharge.

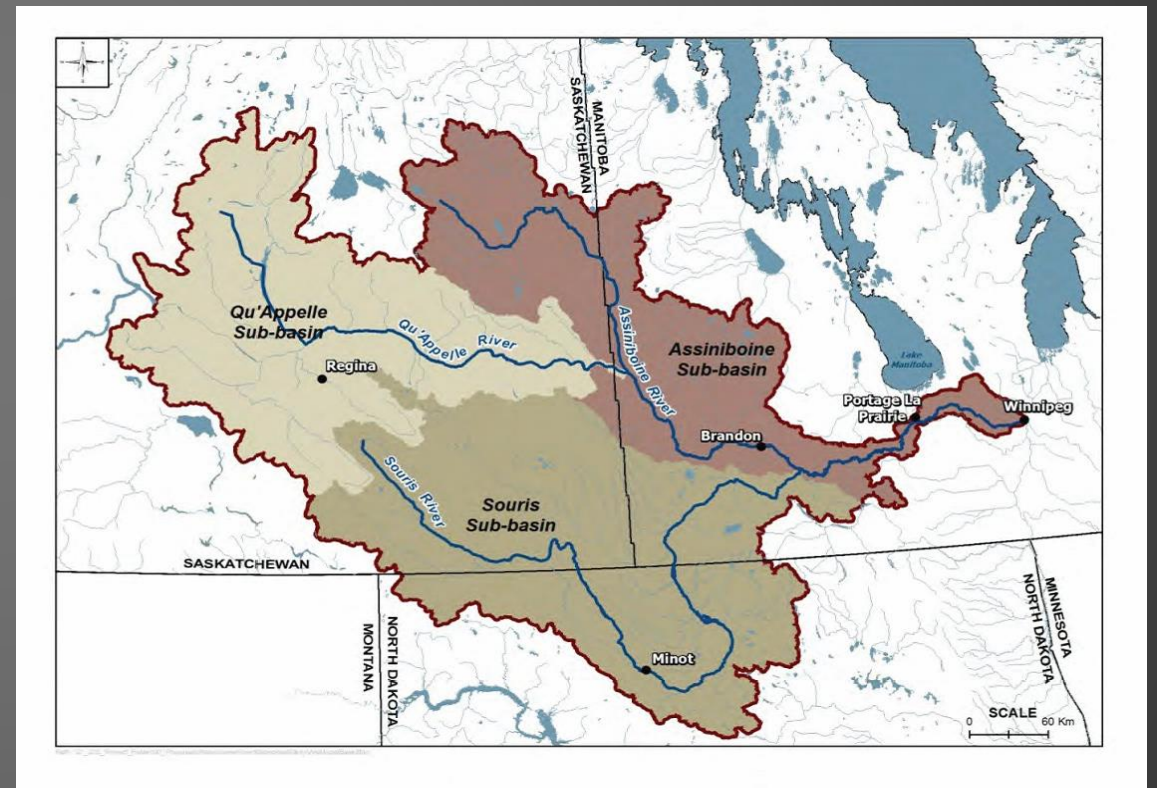
LAKE WINNIPEG WATERSHED



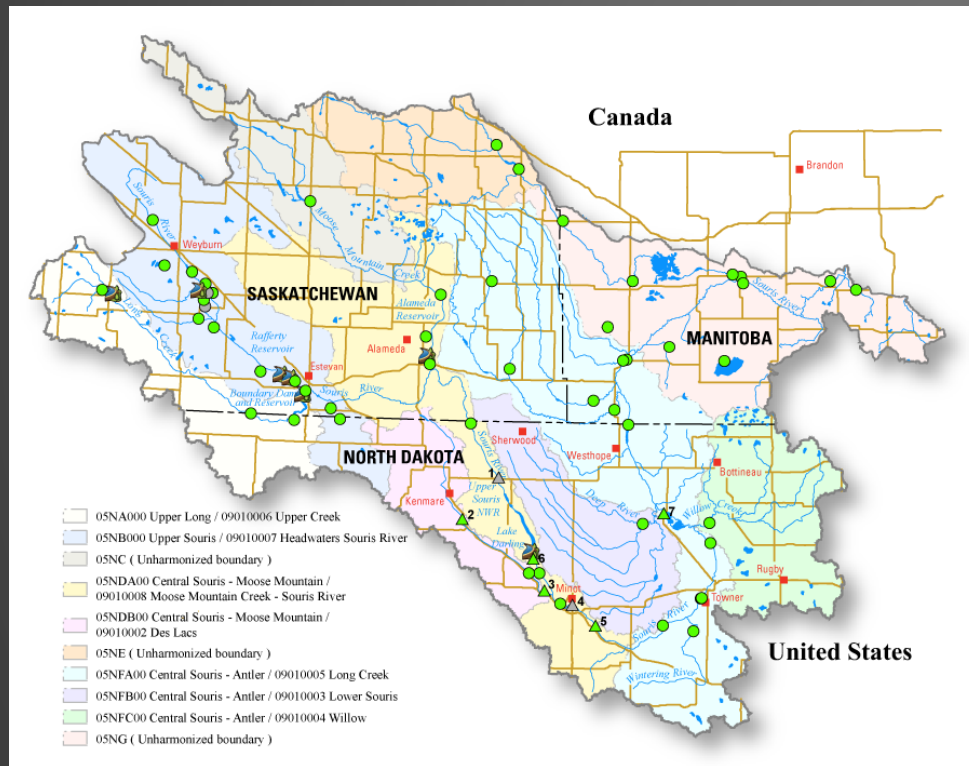
- Lake Winnipeg watershed is the second largest watershed in Canada and includes parts of four provinces and four U.S. states.
- The drainage basin is nearly 1,000,000 km² in size and is home to more than 7 million people.
- Its drainage is about 40 times larger than the actual lake surface, a ratio bigger than any other large lake in the world.

ASSINIBOINE RIVER BASIN

- ARB covers an area of 162,000 square kilometers. About the size of North Dakota.
- ARB is made up of 3 sub-basins: Souris, Qu'Appelle & Assiniboine
- Roughly 1.5 million people live and work in the basin.



ASSINIBOINE RIVER BASIN



- Each of the sub-basins – Qu’Appelle, Souris, Assiniboine are made up of smaller basins that define the larger basin.
- This example is the Souris River which has 10 sub-basins. They in turn would have smaller sub-basins.

AGENCIES THAT OPERATE IN THE ARB



- **Prairie Provinces Water Board – Fed. & Prov. Govts. – AB, SK & MB**
- **Int. Joint Souris River Board – Fed. & Prov. Govts. – ND, SK, MB & Public Members**
- **Prov. & State Govt. Depts.**
- **Local Govts.**
- **Conservation Agencies (Watershed, CDs, Water Boards)**
- **NGO's (MHHHC, DUC, KAP, APAS, others)**

AGENCIES THAT OPERATE IN THE ARB



ASSINIBOINE RIVER BASIN - STRUCTURES

- **Manitoba:**
 - Shellmouth Dam (Lake of the Prairies)
 - Portage Diversion
- **Saskatchewan:**
 - Rafferty Dam
 - Alameda Dam
- **North Dakota:**
 - Lake Darling



FLOOD & DROUGHT EVENTS

- **2011 Flood** – extreme flooding occurred across the entire basin with the City of Minot evacuating 11,000 residents.
- **2014 Flood** – rain event on July 1st that lead to severe flooding where rivers exceeded 2011 flooding.
- **2017** – Spring flooding, in particular the Souris Basin in Manitoba. Groundwater interchange was also a contributing factor.



ASSINIBOINE RIVER BASIN INITIATIVE 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.



ARBI HISTORY CONT'D



- **A multi-stakeholder workshop to revisit basin approach and gather consensus on next steps was held in March 2014 in Virden.**
- **November 2014 conference in Regina solidified approach and organizational development began.**
- **Board Structure finalized.**
- **Established Vision and Mission Statements.**
- **Hosted three conferences & projects underway.**

VISION STATEMENT

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



MISSION STATEMENT



- To create a resilient Assiniboine River Basin where all residents can adapt to change and achieve environmental, social and economic sustainability through collaborative actions across the 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.



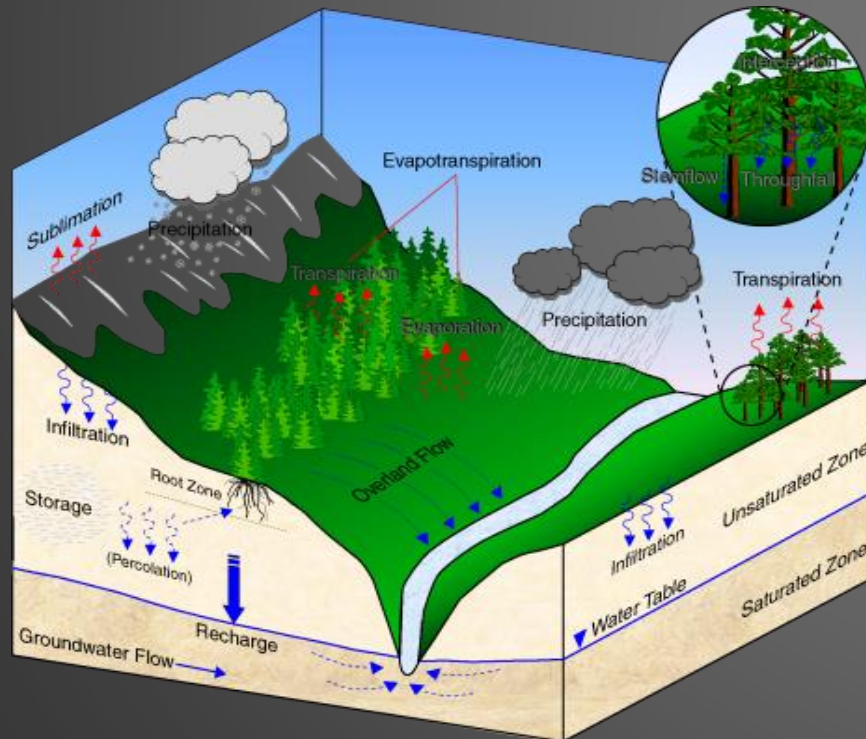
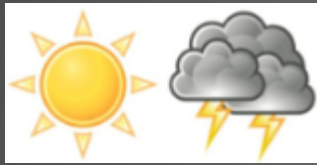
ARB FRAMEWORK PLAN

- The Framework Plan identifies key issues of importance to stakeholders across the basin.
- The Framework will direct and guide the annual work plan and be a resource to partners/stakeholders.
- Continual engagement of stakeholders across the basin in the process to ensure it is 'evergreen'.



- Key areas identified include:
 - 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.

PROJECTS



- **MFGA Aquanty Project:**

HGS 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.

Able to look at large & small scale scenarios.

Able to add in additional data points through dashboard technology to simulate events.

OTHER ACTIVITIES

- **Developing a State of the Basin report which will be comprised of a number of sections, including but not limited to: economic impact, water quality, drainage, etc.**
- **Presented a series of 4 tile drainage webinars with RRBC, Man.Ag., and 4 CD's.**
- **Working with government and local members on a number of cross-border water concerns.**



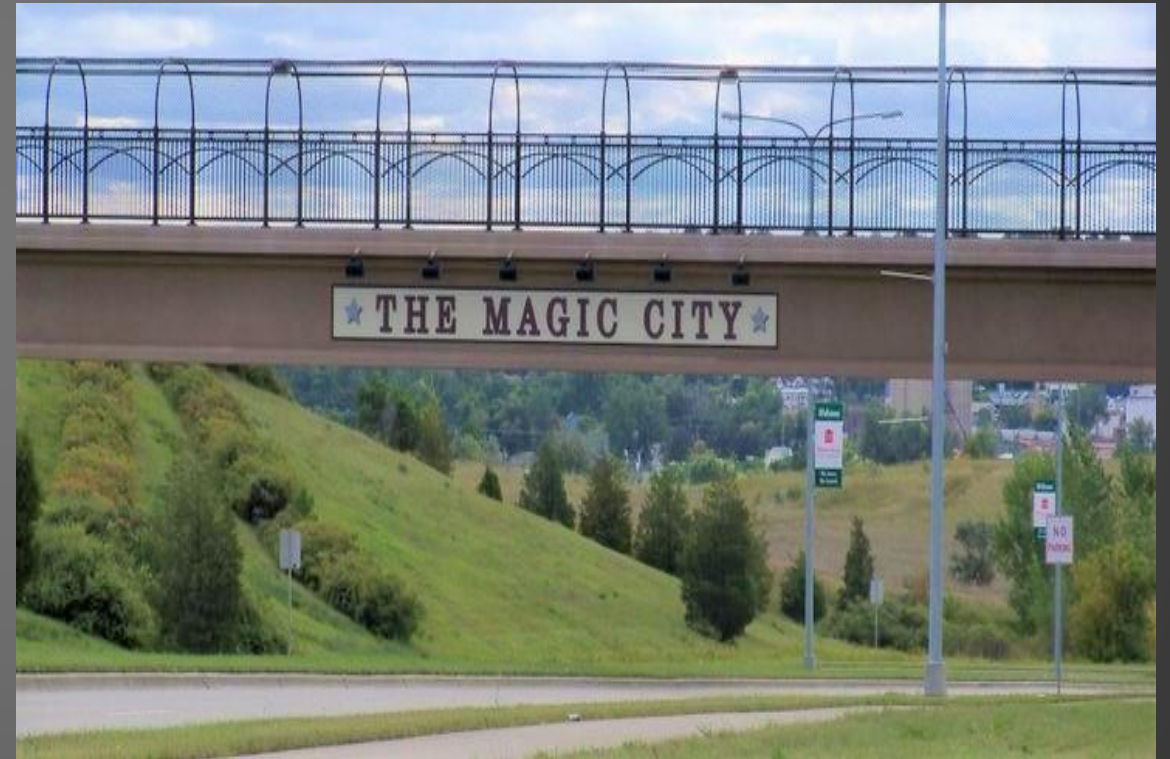
OTHER ACTIVITIES CONT'D

- **Manitoba-Saskatchewan MOU Respecting Water Management** was signed in the fall of 2015.
- **WSA** has recently introduced new agricultural drainage regulations in Saskatchewan.
- **MB Sustainable Development** is working towards updating the **Manitoba Surface Drainage** regulations.



PARTNER SUPPORT

- Supported City of Minot on their successful \$74.3 mil application to the National Disaster Resilience Competition.
- Supported project applications for LiDAR in Manitoba and basin wide water quality monitoring with IISD.
- Assisted the IJC with public appointments to the Int. Souris River Board.
- Partnered with MFGA on the Aquanty Project.



COMMUNICATIONS

- Website: <http://assiniboinerbi.weebly.com>



Assiniboine River Basin Initiative



@arbi_qsa



COMMENTS FOR THOUGHT



- **“We are going to have to work together on new technologies, new ways of cooperating between jurisdictions and new ways to become more efficient.”**
- **“This basin could very well be a leader in that revolution. There’s no reason that revolution can’t start here. The pieces are all here. The key may be to break the barriers to jurisdictional cooperation.”**

Bob Sandford

CONCLUSION

- **ARBI** as progressed from an idea to a concept to a full-blown organization in just three 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 continue to grow and mature.**



THANK YOU

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