



MFGA Executive Director: Duncan Morrison Speaking Notes

MFGA Aquanty Phase 2: AAFC Funding Announcement

June 15, 2021

- Thank you Larry and Parliamentary Secretary Duguid,
- I'd also like to echo our very sincere MFGA thanks – MERCI! - to The Honourable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food Canada for the funding for such an important MFGA and producer-benefiting project and also thank the Minister for leadership on key prairie producer-orientated files such as AAFC's Living Labs –which is showcased in Manitoba in four key locations – and for the continued opportunity to submit producer group consultation on the Next Policy Framework as MFGA is very appreciatively undertaking this month.
- And our very sincere thanks to the Parliamentary Secretary to the Minister of Environment and Climate Change (Canada Water Agency) Terry Duguid, for today's announcement over \$1.1M in AgriRisk funding for a MFGA project that will provide a new forecasting tool to help Manitoba farmers better manage extreme weather events.
- MFGA recently submitted our updated board-led Carbon position to Environment and Climate Change Canada on the Canada Gazette call for submissions, including a very detailed look at the importance of EGS –including carbon and water and on-farm research- and how forage-based and livestock production on the

prairies can work in-step on nature-based solutions that help healthy farms and healthy soils.

- Also, our MFGA congratulations to Parliamentary Secretary Duguid for the recent posting to the Canada Water Agency. As a Winnipeg MP, we have seen the passion and commitment from MP Duguid around water as exemplified in the Lake Winnipeg efforts he has led and been part of. This forecasting tool will be valuable across the ARB on all those fronts and we look forward to supporting producers and ensuring they have the opportunity.
- As well, many of the people on call here had a very important role in the MFGA Phase 1 project that was needed to successfully land this Phase 2.
- The combination of the two projects gives MFGA and our partners a very powerful tool to look at water movement across some of the world's most productive agricultural lands.
- Special thank you to Phase 1 contributors and leaders for helping today happen by previous great work and partners, including AAFC AgriRisk Initiatives, the Province of Manitoba, three MFGA chairs: Jim Lintott, Dave Koslowsky and Darren Chapman and also the MFGA Aquanty Phase 1 leadership team of Henry Nelson, Allan Preston, Wanda McFadyen and Chris Yuzdepski, a supporting team of excellent project advisory members and of course, Aquanty, led by Steven Frey and his awesome software and hydrogeosphere modelling team out of Waterloo.
- ONTO the Project, a brief snapshot of the abilities here: Start
- **Opening slide:** MFGA: Producer led, snapshot of MFGA, equation. Healthy grasslands, healthy soils can help abate weather extremes. There is a lot of interest among farmers producers and

ranchers in healthy soils, healthy farms. This forecast tool fits well with that land management ability and want by producers to manage water as Larry previously told us.

- **Slide 2:** The ARB is a 155,000 sq.-km Assiniboine River Basin that crosses Saskatchewan (Lake Dief) south to Minot and into the Forks in Winnipeg. Producers in this watershed will be able to obtain field scale soil moisture, groundwater, and surface water forecasts for a 7-day forward looking time interval.
- **Slide 3:** Tech now exists to leverage existing real time hydrologic data feeds, weather forecast information, and remote sensing, to provide hydrologic forecasts that inform all aspects of the terrestrial water cycle. The forecasting tool will be built by Aquanty, a software development firm out of Kitchener, Ont and housed on MFGA.net alongside Phase 1 of the MFGA Aquanty Model webpage.
- **Slide 4:** Photos on the water extreme side of life in the Assiniboine River Basin:
 - Flooding in the Assiniboine Basin flood plain west of Brandon in spring of 2017
 - Just last week: Spring 2021: shows a deluge of rainfall north of Brandon and the impact on traditional soil and land management
 - The MFGA Aquanty Forecasting Tool will give farmers, land managers and ranchers the ability to better manage their operations in the face of increasingly variable and extreme weather via a cloud computing-based, agriculture-focused, decision support tool.
 - The new interactive tool will also showcase how beneficial soil and landscape management practices could potentially influence soil moisture, groundwater, and surface water conditions over the seven-day interval.

- **Slide 5:** HOW will they do that:
- Building real-time forecasting models for the Assiniboine River basin broken down into 15 sub-watersheds
- Two versions of each sub-watershed will be modeled – one for current land conditions and another to represent natural or undisturbed conditions
- Each sub-watershed can be inspected to see forecasts and available data streams
- **SLIDE 6:** Template underway
- Using the existing Southern Ontario platform as an example:
- There will be 7 day forecasts for:
 - Groundwater discharge
 - Depth to groundwater table
 - Groundwater recharge
 - Soil moisture
 - Stream and river flow rates
- Once again, the main point is knowing the current state and future trend of key water sources for crop growth and livestock supply for planning. With planning then being able to be relayed into field ops, feed and water supply.
- **FINAL SLIDE:**
- MFGA will be developing project management and science advisory teams. With this project, there will be a heavy emphasis on working with producers to maximize the abilities of the tool as well as what the potential of the tool is for their interests.

- Development of the tool by Aquanty is underway, it will be housed on the MFGA website where a portal will connect to the real time platform.
- MFGA will also be working out a strategy to ensure that as many producers as possible can access the forecast tool.
- Thank you again to all here today, and a special thank you to AAFC's Oliver Anderson, Jan Cote and the AAFC comms team of Shanna and Holly for helping this day happen. And special thanks to William Ha from AAFC AgriRisk Initiatives for his guidance and leadership on our project.