Agricultural and Irrigation Water Management Strategy

Performance and Progress, Kevin France – VP Agricultural Services

Where are we now



New Regulations were enacted in 2015.

Regs empower us to address impacts of:

- ➤ Flooding
- > Water Quality
- > Habitat



We have operational and technical policies developed

Several drainage impact mitigation tools approved and are now in use Approach to wetlands is outstanding Mitigation Policy is not approved as yet



Current total compliance is ~5,000+ quarter sections

Approx 146,000 quarters not in compliance Continue to develop the approach

Key Statistics

	Number of Quarter Sections (April 1 2016 to Present)
Number of ¼ approved	3309
Average number/year	837
Number of RFAs received	1098 (392 on file at present)
Total quarters in progress (ADAM)	9,583
Total approved and in progress	12,893

How can SARM help?

- WSA is working to ensure that policies are being implemented consistently. SARM will keep us on track.
- WSA is grateful for SARM's assistance to help improve the process, including its participation in developing the AgH2Onward sessions.
- SARM members could assist with other key network projects, helping to build trust and support with area producers for real results.
- More Demonstration Projects and research opportunities.





Research and Demonstration Projects

Working with producers on a wide range of agrologists and industry partners

Partners	Summary Project Details
Saskatchewan	Manage contracts with Qualified Persons for Ag
Association of	Producer lead demonstration Projects
Watersheds (SAW)	
Saskatchewan	Manage contracts with Consultants for Ag
Irrigation Projects	Producer led irrigation demonstration Projects
Association (SIPA)	
Saskatchewan Heavy	Investigation of impacts of drainage on RM
Construction	Infrastructure and also development of tools for
Association (SHCA)	RMs to better develop crossing infrastructure







Working with producers on a wide range of agrologists and industry partners

Partners00	Summary Project Details
Prairie Agricultural Machinery Institute (PAMI)	Investigate economics and agronomics of the various Ag producer demonstration projects
Saskatchewan Wildlife Federation (SWF)	Investigate the impacts of drainage on wildlife habitat and expected species responses
Saskatchewan Research Council (SRC)	Investigate the hydrology and drainage impacts of ag producer demonstration projects





3. In-field demonstration site research

Partners	Summary Project Details
Sask. Soil Conservation	Investigate variable rate fertility
Association (SSCA)	management to reduce drainage impacts
Discovery Farms	Investigate residue and nutrient
(GVIC Communications)	management practices to reduce the
	impacts of drainage – working project
Saskatchewan Stock Growers	Investigation of the use of beneficial cover
Association (SSGA)	crop mixes to reduce drainage impacts











- The approach going forward for Approvals, RFAs, and WSA Service
 - Field citizen issues in a meaningful way
 - Enhance and improve the program to reduce concerns
 - o Help citizens in navigating the system with clear information
 - o Build trust, credibility and respect in rural communities
 - $\circ~$ Strong engagement with our key partners like SARM

Lake Diefenbaker Irrigation Expansion Projects

- 1. Westside Rehabilitation Project;
- 2. Westside Expansion Project; and
- 3. Qu'Appelle South Water Conveyance Project
- All design is presently at a high level completed on the desktop work.

History of Lake Diefenbaker

- Multi-purpose reservoir providing fresh source water to over 60% of SK population.
- Water supply for municipal, industrial, recreation, irrigation and hydroelectricity, as well as some flood control.
- Vision was for 500,000 acres of irrigation

Currently at 20% of envisioned irrigated acres

Lake Diefenbaker Water Supply

- Lake Diefenbaker is one of the largest and untapped sources of water in this country
- Analysis and studies show there is more than enough water to supply these two projects



- WSA reviewed 88 years of flow data and found that with no significant change in operating there is nearly 900,000 acre-feet/year of water available for irrigation
 - These projects will use less than 700,000 acre-feet/year.

Lake Diefenbaker Stats

9.4 million dam³ (7.6 million ac-ft) storage

Median annual inflow 5.5 million dam³ (4.5 million ac-ft)



225 km long

Surface area is ~110,000 acres

Project Map





What to Expect in the Future



340,000 irrigated acres at full development

Area stretching from Gardiner Dam north to Asquith

Nearly **400** km of canals, plus pipelines and 3 balancing reservoirs

Qu'Appelle South Water Conveyance Project



What to Expect in the Future

120,000 irrigated acres at full development

Area stretching from Qu'Appelle Dam to Buffalo Pound

Approximately **100 km** of canal and 1 balancing reservoir and outfall into Buffalo Pound



What is Next?

- Complete the Engineering Pre-Design for WIPs 1 and 2 (Sask First Team Clifton, Associated Engineering & Stantec)
- Initiate environmental and engagement processes (will be out again with RM's in the future for WIP)
- As part of Pre-Design, initial priorities include the collection of the following data:
 - Acquiring LiDAR
 - Conducting soils testing
 - Geotechnical testing
- Proceed with project planning and analysis, and secure funding partners

Questions/Discussion to follow