

Agricultural Water Management Strategy

Saskatchewan's Approach to Wetlands What wetland policy & legislation exists in Saskatchewan?:

- Water Security Agency 25 year Water Security Plan (2012):
 - Agricultural Water Management Strategy (aka drainage policy)
 - The Water Security Act, Conservation and Development Act, Watershed Association Act.
 - Responsibility for Aquatic Habitat
 - Environmental Management and Protection Act, 2010
 - Replace 1995 wetland policy
- Ministry of Environment Mitigation Principles and Standards for Fish & Wildlife Habitat (in development)

New Agricultural Water Management Strategy

- The Water Security Agency is implementing the Agricultural Water Management Strategy
- The Strategy seeks to balance the impacts with the benefits of drainage.
- The aim is not to close or shut down drainage, but allow it to continue in a responsible manner.



New Agricultural Water Management Strategy

Previous Saskatchewan approach



- Pre-1981 drainage works did not require permits
- To reduce workload focus was on resolving complaints about impacts
- Difficult Land Control requirements
- Very low permitting compliance (<5%)

New Approach

- All drainage works, including pre-1981, must be approved or closed
- Applies to all wetland sizes and classes
- Directs WSA to address the impacts of drainage (quantity, quality, habitat)
- Focus on agriculture







Why a New Approach?

- Drainage has been a key part of settling Saskatchewan. It has made land available for communities, roads, crops and resource development. However, poorly designed projects have negative impacts, including:
 - downstream flooding on a local or basin scale and infrastructure damage.
 - degraded water quality from erosion and increased nutrients.
 - negative impacts on wildlife habitat.
- Many of these problems can be avoided or mitigated.

Agriculture Water Management Strategy

The New Approach

The Agriculture Water Management Strategy will move Saskatchewan toward <u>Responsible Drainage by:</u>

- Rule of Law Approach requiring approvals
- Streamlining the regulatory system (eg. Land Control)
- Effectively addressing risk of drainage impacts in the approval process, and
 - Enabling development of sustainable drainage projects with more long-term certainty for producers.

Agricultural Water Management Strategy

- By the end of 2015, we had regulatory direction for the new approach but needed a way to achieve compliance.
- Questions remained:
 - How to get producers to engage with approval process?
 - How to coordinate drainage among producers?
 - Particularly if there is long standing conflict
 - How can landowners acquire-land control?
 - How to-mitigate drainage impacts?

Innovation: Network Approach

- What are drainage networks?
 - Networks are mini-watersheds.
 - Extensive systems of wetland drainage ditches crossing multiple parcels and landowners before emptying into a natural or modified water course (Adequate Outlet)
 - Regulation of individual parcels do not address potential impacts given upstream effects on downstream.
 - The network approach reviews all drainage by all landowners, and associated cumulative impacts, together at the same time.



Innovation: Network Approach







Innovation: Network Approach

- Projects succeed when local land owners:
 - Take ownership of the project and find ways to make it successful and work for everyone.
 - Groups are supported through administrative and technical processes of regulatory system

Network Approach

- Landowners work together to operate coordinated drainage projects that flow to an adequate outlet
- Submit a joint application for all drainage works
- Considers All existing and new works
 - Evaluation of Risk/Impact
 - Application of Mitigation on network scale
- Qualified Persons
 - Hired by landowner group to organize them, act as liaison with regulator and assist in preparing the application.

New Approach – Adequate Outlet

- Is the point downstream of the network at which there is no longer out of bank flooding caused by drainage.
- Upstream drainers require <u>Land Control</u> from downstream owners to move water across their lands where out of bank flooding occurs
- Provides the end point to network



New Approach – Land Control

What is Land Control?

- Approval for drainage works requires "proof of land control satisfactory to the WSA".
- Land control is the permission or right to use land for drainage purposes to the point of an adequate outlet.
- Various forms of land control include

Four types of land control options

- Ownership
- Registered Easement
- Joint Application
- Written Agreement

Most Secure

New Approach – Land Control

- Network approach allows landowners:
 - To coordinate drainage and acquire land control for all drainage downstream to point of adequate outlet.
 - To utilized joint application
 - Reduces need for registered easements previously required
 - Reduces redundancy of numerous written agreements
 - Registered to title



New Approach – Risk Assessment

- 1st step in Mitigation Approach
 - Provides criteria to evaluate flooding, water quality and habitat impacts at the Network Scale.
- Risk is potential for flooding, water quality and habitat impacts.
- To assess this risk, 2 elements are considered:
 - Where the project takes place (i.e. watershed)
 - Size/Permanence of the individual project



Higher Risk = More Mitigation Required

New Approach – Impact Mitigation

- Mitigation Objective is:
 - Flooding, Water quality, and Habitat impacts of drainage are mitigated
- What is an Impact?
 - Effects <u>due to drainage</u> that result in a change in the resource such that there is a <u>reduction in the ability to use the</u> <u>resource</u> or there is <u>unreasonable harm</u> to other landowners.



New Approach – Impact Mitigation

- Impact focuses on use of the resource.
 - Flooding Impact to people and infrastructure
 - WQ drinking water, recreation, irrigation etc.
 - Habitat support game species, fishing resources etc.
- The Network Approach allows:
 - Mitigation to be designed and applied at Network Scale
 - Thus, allowing the Regulatory process to move beyond a individual wetland approach to consider wetland complexes and cumulative impacts



Agricultural Water Management Strategy







- We have learned that producers engage in the approval process and succeed when support for:
 - organization, leadership and communication are provided
 - Ag Producers are particularly good at making decisions with respect to their own operations but at times ...
 - Need help coordinating actions among producers
 - the leadership needs people experienced in project development and communication
 - the project needs technical support

Agricultural Water Management Strategy Qualified Persons







- Assist landowners in development of high quality applications by providing:
 - Administrative support
 - Liaison for communication between:
 - Landowners
 - Landowners and Regulators
 - Landowners and RMs, NGOs other stakeholders
 - Coordination between landowners in a network
 - Technical support
 - Level of support dependent on project risk
 - How landowners hire QPs, average cost?



Dry Lake Approval Saskatchewan Approach in Action

Agricultural Water Management Strategy

- Dry Lake
 - Proactively identify networks with high risk
 - Historic conflict among farmers
 - Past unresolved drainage complaints
 - 113 Quarter Sections
 - 73 Landowners
 - Included all *Existing & New* drainage
 - Equality; most recent drainer not penalized



Agricultural Water Management Strategy

- Dry Lake
 - -Mitigation
 - High Vulnerability Watershed
 - Project Risk = High
 - Results in High Risk project
 - -High Risk = More Mitigation
 - -Mitigation
 - Land Control
 - Erosion Conditions
 - Flow Controls
 - Retention/Drainage





Figure 1: Identifying watershed vulnerability

Agricultural Water Management Strategy What was the process?

- All Landowners in network received a letter
 - Included NGOs, RMs, Producers
 - Element of equitability
- Compliance Plan developed
- Outlined timelines and expectations for compliance
 - Outcomes of approval or closure
- Network Landowner Meetings
 - Enforcement officer present
 - Introduce Qualified Person









Agricultural Water Management Strategy Initial Buy In?

- Initially 80% of individuals were interested
- 8% Maybe willing or 'On the Fence'
- 12% Not willing to cooperate

Tools to bring 100% into compliance?

- Develop & implement compliance plan
 - Included targeted phase-in closure of works
- Qualified Persons worked in networks for 14 mo:
 - Coordinated community members in the network
 - Provided leadership, coordination and support
 - Provided technical support
 - Communicated expectations and timelines

Agricultural Water Management Strategy

Did we achieve compliance?

- All 73 landowners signed application
 - Included producers, RMs and NGOs
- Approved 113 ¼ Sections



Agricultural Water Management Strategy

Did we achieve compliance?

- Approval Details:
 - 10 Year Term
 - Approved loss of:
 - 358 acres existing loss
 - 228 acres new loss
- Included Mitigation
 - 33.7 acres wetlands restored
 - 21.2 acres of wetland retained
 - 30 flow controls installed



Saskatchewan network Approach

- Illustrated that:
 - We can get producers into and through the regulatory process
 - Producers can coordinate and work together
 - Even in areas of high conflict
 - Develop & implement solutions
 - Impact mitigation, including wetland retention, is acceptable
 - Qualified persons are key supports for producers and WSA
 - Communication
 - Coordination
 - Administrative
 - Technical



Where are we now?

- Implementation is in early phases
 - WSA is 1 year in to implementation
 - Launched Implementation of the New Approach March 1 2017
 - 688 ¼ sections Meet Regulatory Requirements
 - Approval (635 ¼ sections)
 - Closures (53 ¼ sections)
 - QP Program Launched April 1 2017
 - 173 taken QP Training Workshop
 - 86 QPs currently listed by WSA
 - New application form and on-line portal

Where are we now?

- Additional 10 Priority Networks in approval process
 - 1,000 ¼ sections of approval early this year
 - Planning underway for next priority networks
- Policy development continues
 - Working towards approval to apply full suite of tools for mitigation
 - Agricultural and NGO Stakeholders engaged in development (AWMPAC)
 - Finalize compliance policy and procedures





Key Components of Achieving Compliance:

- Producers value and lead the shift to Responsible Drainage
- The regulatory process depends on engaging:
 - Producers/Landowners
 - Local Communities
 - Identifying Local Leaders
 - Identifying other Stakeholders







Key components of Achieving

Compliance – Areas for improvement

- Government, producers, stakeholders and citizens understand and endorse our approach
- Understand:
 - We need to develop more effective communication to ensure:
 - Landowners and stakeholders understand the approach
 - Effective education of compliance approach and requirements
- Endorse:
 - Further engage agricultural producers as partners in the shift
 - Seek feedback from key partners and stakeholders and adapt as necessary

Next Steps

• Education and Communication:

- We need to understand how to effectively communicate:
 - The downstream impacts of drainage and why producers should be concerned or and incorporated into their planning.
 - Messaging regarding wetlands and the regulatory process that meaningful to a producer?
 - Understanding producer values, including wetlands, so that our messaging and communication can be improved.
 - Understand the producer operational decision making processes so that mitigation and regulatory process can be tailored to be more effective.
 - Understand producer perception of mitigation.

Next Steps

Engage producers and stakeholders:

- Proactive compliance by WSA currently provides driver for clients;
 - Ultimately system needs producers to value approval and voluntarily seek approval. How do we successfully market, communicate and educate producers?
 - What are the most effective tools to engage clients or influence operational or network scale decisions? (Communication, Market Based etc.)

Questions

