

Agriculture's Water Future – Piloting a globally relevant model for water stewardship

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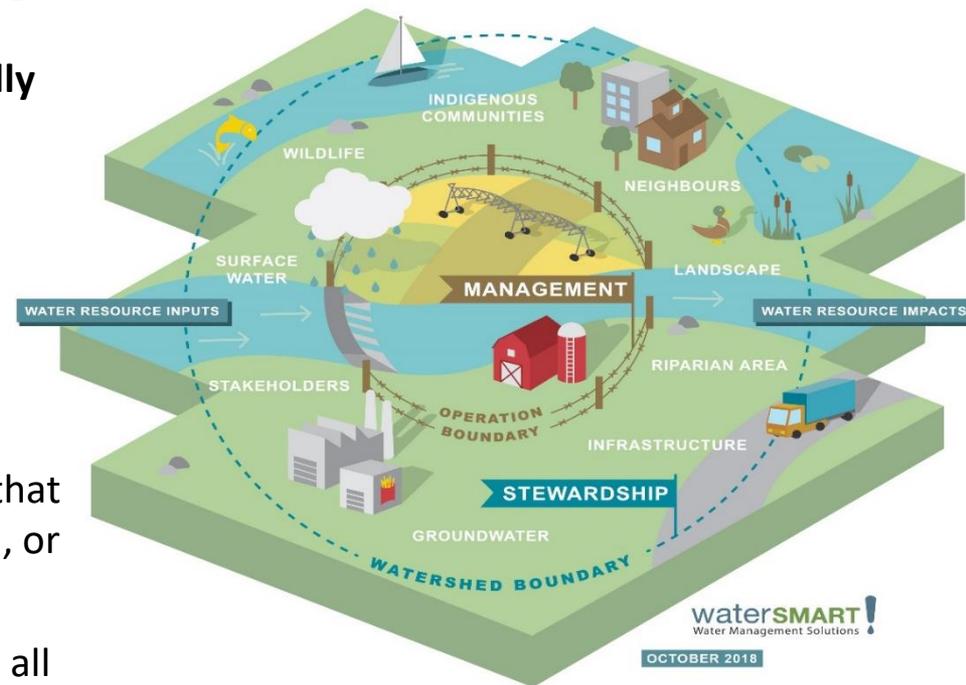
What is water stewardship?

Water stewardship is the use and safeguarding of fresh water that is socially equitable, environmentally sustainable, and economically beneficial.

It considers:

- Water governance
- Water balance
- Water quality
- Important water-related areas (areas that provide environmental, social, cultural, or economic value, e.g., wetlands)
- Safe water, sanitation, and hygiene for all (WASH)

Agricultural Water Stewardship



Water stewardship **includes, but is not limited to, water management**, which is the planning, developing, distributing and use of water for operational needs, typically within the operation's footprint.

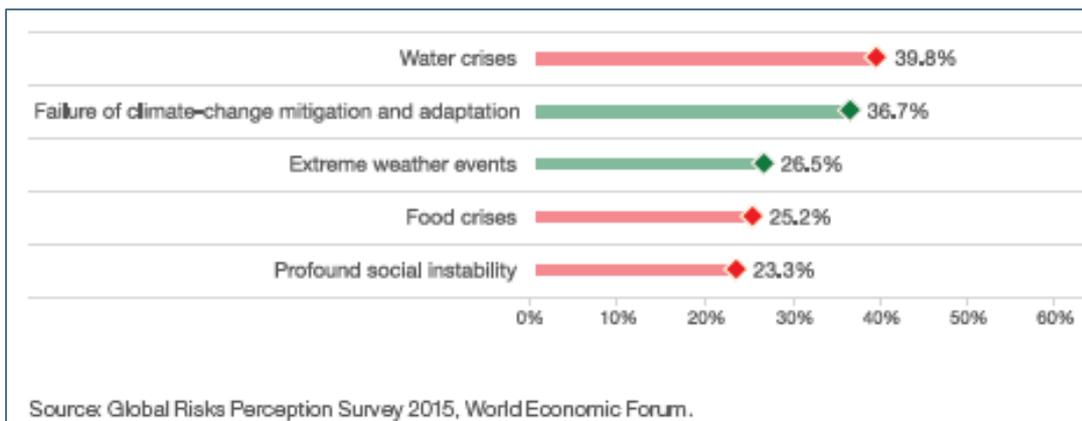
In comparison, **strong water stewards** must have an understanding of how they fit into the watershed as a whole ("beyond the fence-line") and engage in a stakeholder-inclusive process that involves both site- and watershed-based actions.

Water stewardship is relevant to current issues and work in the global agri-food supply chain

- World Economic Forum identified the top five global risks for 2015-2025 and nearly all relate to water risks
- Given these risks, agriculture can expect greater pressure for reallocation of water resources due to its high share of water use.
 - *“Agriculture - 70% of freshwater withdrawal globally, and higher consumptive use when evapotranspiration is considered.” – The World Bank*
- There is increasing competition for water resources between water users as municipal, industrial and agricultural water demands grow to support economic growth
- Global agri-food players are already engaging in water stewardship projects like the WWF/Ceres AgWater Challenge

Top 5 global risks for the next 10 years relate to water

World Economic Forum



Global players are already engaged (e.g., AgWater Challenge)

The AgWater Challenge commits companies to:

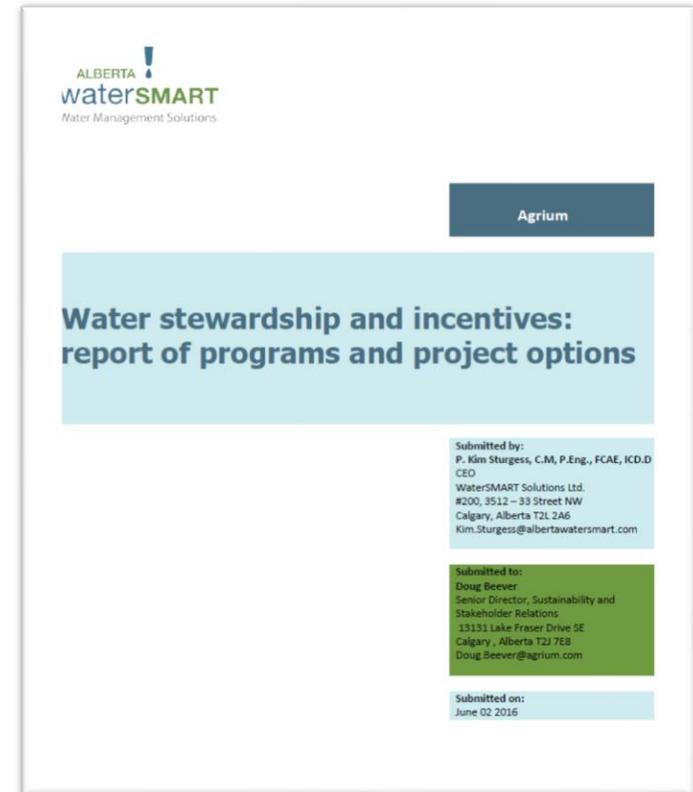
- Reduce water impacts associated with key agricultural commodities
- Implement locally-relevant strategies to mitigate risk in agricultural areas where water is scarce
- Support and incentivize farmers and other agricultural producers to strengthen water stewardship practices



Background: Agriculture's Water Future (AWF) project initially started in 2015

Phase 1 of AWF project started in 2015 and was funded by Nutrien, executed by WaterSMART

- Goal was to inform a trading system to provide water stewardship incentives in a way that is accommodating and relevant for each producer
- Examined the need for watershed action in the agricultural community
- Identified the range of water quality and water quantity trading programs that exist in other parts of the world, and some of the ways data technology could be harnessed to inform a trading system
- Envisioned a system that builds in incentives for producers, including ecosystem services valuation, effective monitoring, and credits management



Available online at
www.watersmartsolutions.ca

Background: In 2017, AWF phase 2 aimed to build a business case and framework for water stewardship

Focus on crop-based agri-food supply chain, defined as input supplier, crop producer, food processor, distributor, and seller, in the South Saskatchewan River Basin (SSRB).

Project outcomes

1. Developed a business case blueprint and water stewardship framework for implementing water stewardship in the agri-food supply chain
2. Created a process for identifying and realizing tangible benefits that can be applied by any implementer in the agri-food sector through common dialog between agri-food and other users of the watershed



Why the South Saskatchewan River Basin (SSRB)?

The SSRB covers the broad spectrum of water stewardship issues and opportunities in the agri-food supply chain irrigated and dryland cereal, oil seeds and speciality crops in the SSRB. Involved groups and individuals with diverse interests in the watershed all had the potential to contribute solutions to shared water challenges, and enjoy shared benefits.

We are utilizing the Alliance for Water Stewardship (AWS) International Water Stewardship Standard



AWS offers an international certification standard for water stewardship, used as a guide for how to do water stewardship.

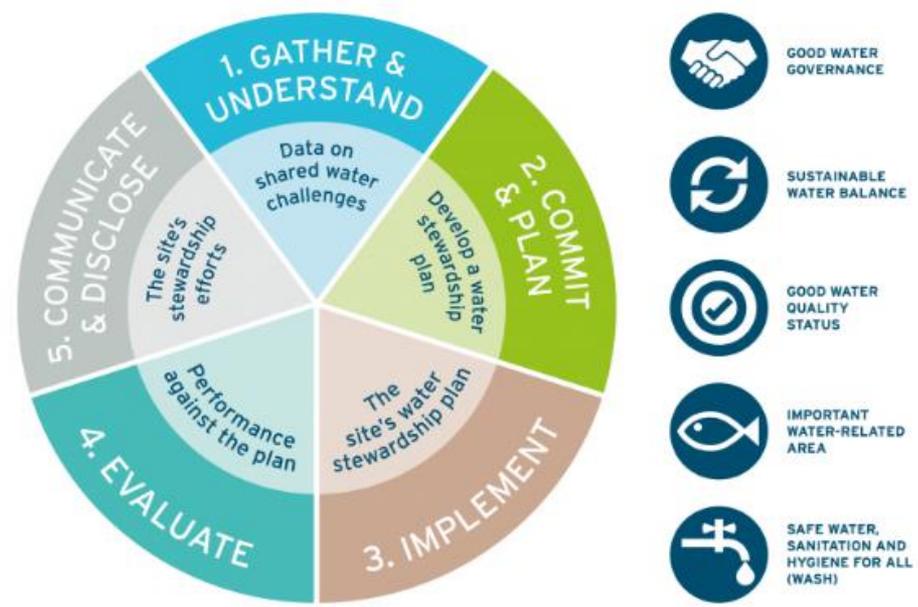
The model is scalable to the size of the company, plant or operation, and complimentary to existing initiatives in water sustainability, management and stewardship.

AWS is a partner in the AWF project, offering a logical framework to adapt and use for agri-food water stewardship:

- Framework is recognized globally
- Creates possible market advantage and access
- Can be used to work toward third party certification if desired
- A verifiable, transparent framework for water stewardship efforts - no global standard existed
- Highly adaptable for any type of water user, in any sector, anywhere in the world



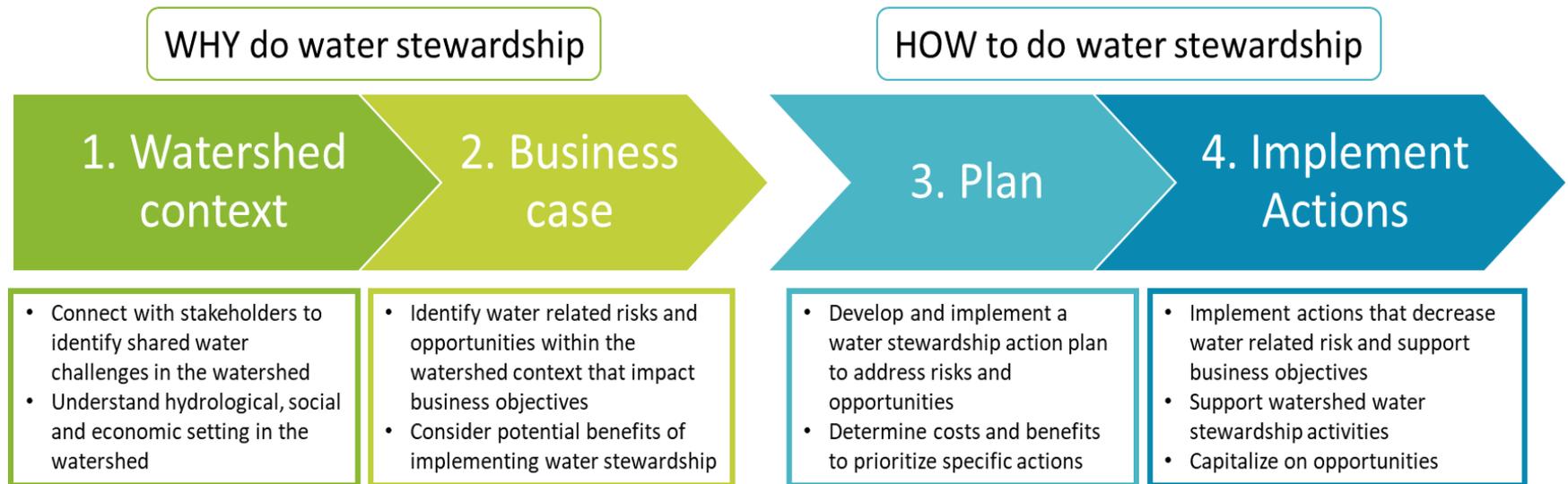
A global membership-based collaboration of businesses, NGOs and the public sector, working with credible national and regional partners



In phase 2, we defined a process to advance water stewardship in the agri-food supply chain

There are four key steps in a process to address WHY one would pursue water stewardship and HOW to do so. Steps 1-3 were the focus of Phase 2, while Step 4 is the focus of Phase 3 pilot projects

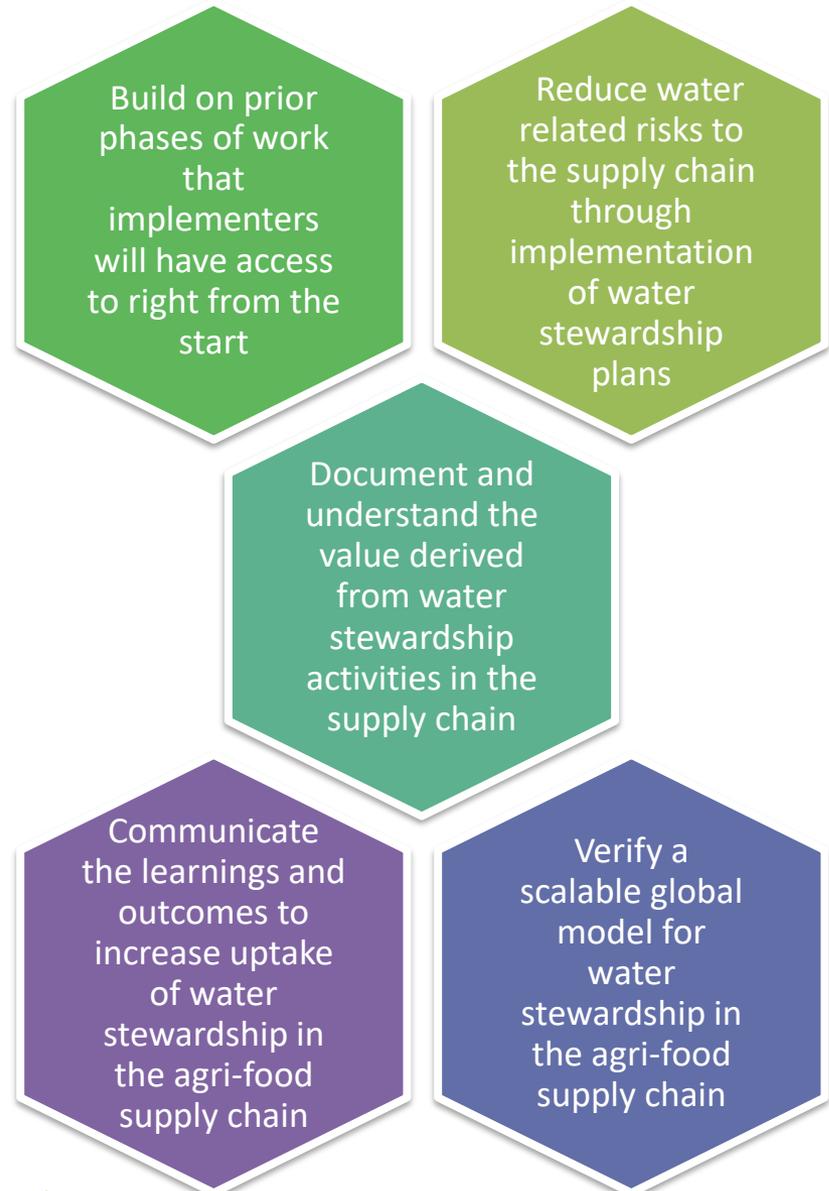
- Step 1. Set the watershed context
- Step 2. Build a business case for water stewardship
- Step 3. Develop a water stewardship plan (using the AWS Standard)
- Step 4. Implement the water stewardship plan



Objectives of piloting the water stewardship process

This proposed work includes two components that will:

- mix site-specific services with the added value of facilitating a process to capture lessons learned and creating a replicable model
- implement the water stewardship framework with partners, then evaluate and share the outcomes.



Proposed workplan for Phase 3

Concurrent streams of work

Pilot consultation support

Documenting value creation to verify a scalable global model to drive water stewardship uptake

Activities

Support implementers in business case, water stewardship plan development and implementation

- Develop the watershed context and engage promoters in the watershed as needed
- Present draft business case and solicit early feedback on water stewardship plans
- Support implementers to complete business case
- Collaboratively develop and advance water stewardship plans
- Support implementation of plan with implementers and promoters
- Work with implementers that wish to have a third-party audit for certification
- Hold workshop to capture overall successes and challenges, learnings from implementation, and the value created to implementer, within the supply chain, and within the watershed

Engaging stakeholders, Synthesizing project outcomes and communicate to facilitate stewardship uptake

- Development of all communication and engagement material and full communication roll out
- Connect with other stewardship initiatives to identify complementary and overlapping work that is being done by implementers (e.g., Environmental Farm Plans)
- Presentations targeting primary producers at relevant events, producer groups, social media posts, and extensions through project partners and their networks to create awareness of the outcomes and increase uptake of water stewardship in supply chains
- Document successes, challenges, and learnings from implementation, and the value created to implementer, the supply chain, and the watershed
- Document process and value of third-party certification process for implementers who proceed with certification

Outputs

- An engaged set of participants and promoters to support implementers
- Business cases for each of the implementers
- Water stewardship plans developed and implemented for each of the implementers

- Documented and transferable outcomes of water stewardship plan implementation
- Value documented from implementation and certification
- A verified and scalable global model demonstrating value in water stewardship to drive uptake in the agri-food supply chain

Opportunity overview

Theme	Rotational crops in the SSRB
Description	Project is the full farm system approach and would involve two producers and their rotation of crops (one crop either potatoes or sugar beets), with other rotational crops a combination of wheat, canola, pulses, or hay. This will provide a best overview of the interconnectedness of the farm to the producer, and the value of water stewardship.
Core stakeholders	<ul style="list-style-type: none"> • 3 producers with either sugar beets or potatoes and their other rotational crops, ideally from different major sub-basins in the SSRB • Input suppliers (e.g., crop input companies, irrigation district(s) and equipment providers) • 3 Processors (ideally three from different crop types) • 2 product end users/retailers • Promoters (watershed groups, municipalities, government, other industries, grower and industry associations, AWS, Indigenous groups/communities, other agriculture stewardship initiatives).
Key activities	<ul style="list-style-type: none"> • 8 pilots (3 farms, 3 processors, and 2 end users) • Documenting value creation (successes, learnings, and outcomes) to verify a scalable global model to drive uptake of water stewardship • Third-party certification to the AWS International Water Stewardship Standard • Communication and knowledge sharing to increase uptake of water stewardship to provide value in the supply chain
Estimated cost	<ul style="list-style-type: none"> • \$500,000

Phase 3 outcomes

While the benefits of water stewardship will vary between sites, sectors, and supply chains, **we aim to demonstrate a clear business case and proven process for water stewardship, through:**

Verifying a **scalable global model** to drive uptake of water stewardship in the agri-food supply chain

Enabling participants to **demonstrate tangible progress** in environmental and water stewardship

Identifying new business opportunities (e.g., grow market share by appealing to consumer interest in water stewardship)

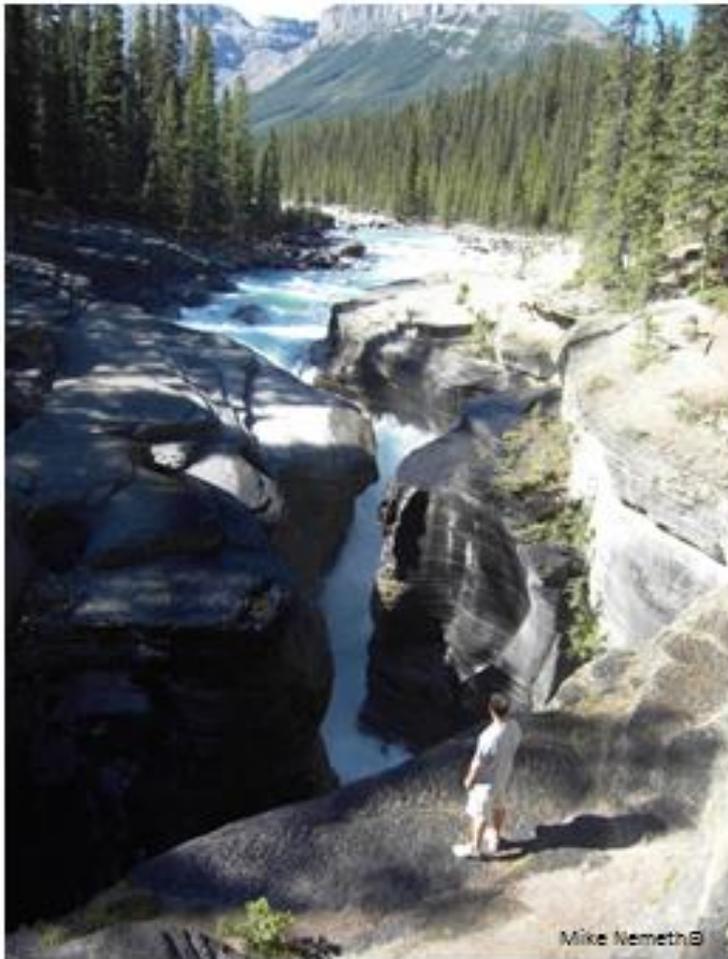
Improving efficiency through implementation of local best management practices

Making linkages between supply chain members to advance water stewardship and leverage existing work

Better managing operational, regulatory, reputational, and financial risk related to water

Water: The key to our sustainable future

Water is a shared opportunity for us all to benefit. Water is everyone's business.
Let us help you with yours.



waterSMART!
Water Management Solutions

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