



Agriculture & Nature Based Solutions

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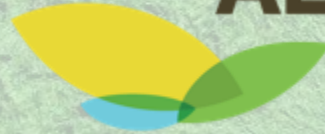
Climate West Forum

May 4th, 2023



Where **AGRICULTURE** & **NATURE** Meet

Delivered by
ALUS



Where agriculture and nature meet: ALUS empowers farmers and ranchers to establish and manage nature on their land one acre at a time.

ALUS focuses on:

- **Engaging farmers and ranchers** as solution providers in conservation activities to achieve carbon sequestration, watershed and biodiversity outcomes
- **Building community-level collaborations** as the basis for grassroots conservation programming
- **Developing research partnerships** to document and assess results to validate the outcomes of ALUS projects



An aerial photograph of a rural landscape. In the upper left, a blue tractor is parked on a grassy field. To its right is a circular pond. The middle ground is a mix of green grass and brown, dry-looking vegetation. On the right side, there is a dense forest of evergreen trees, with a stream or path winding through them. The overall scene is a mix of agriculture and natural spaces.

OUR VISION

Sustaining agriculture, wildlife
and natural spaces for communities and
future generations



OUR MISSION

ALUS helps farmers and ranchers build nature-based solutions on their land to sustain agriculture and biodiversity for the benefit of communities and future generations.

ALUS moves
beyond
conservation
to
production



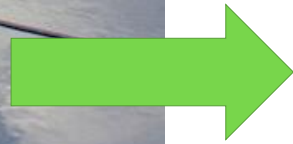






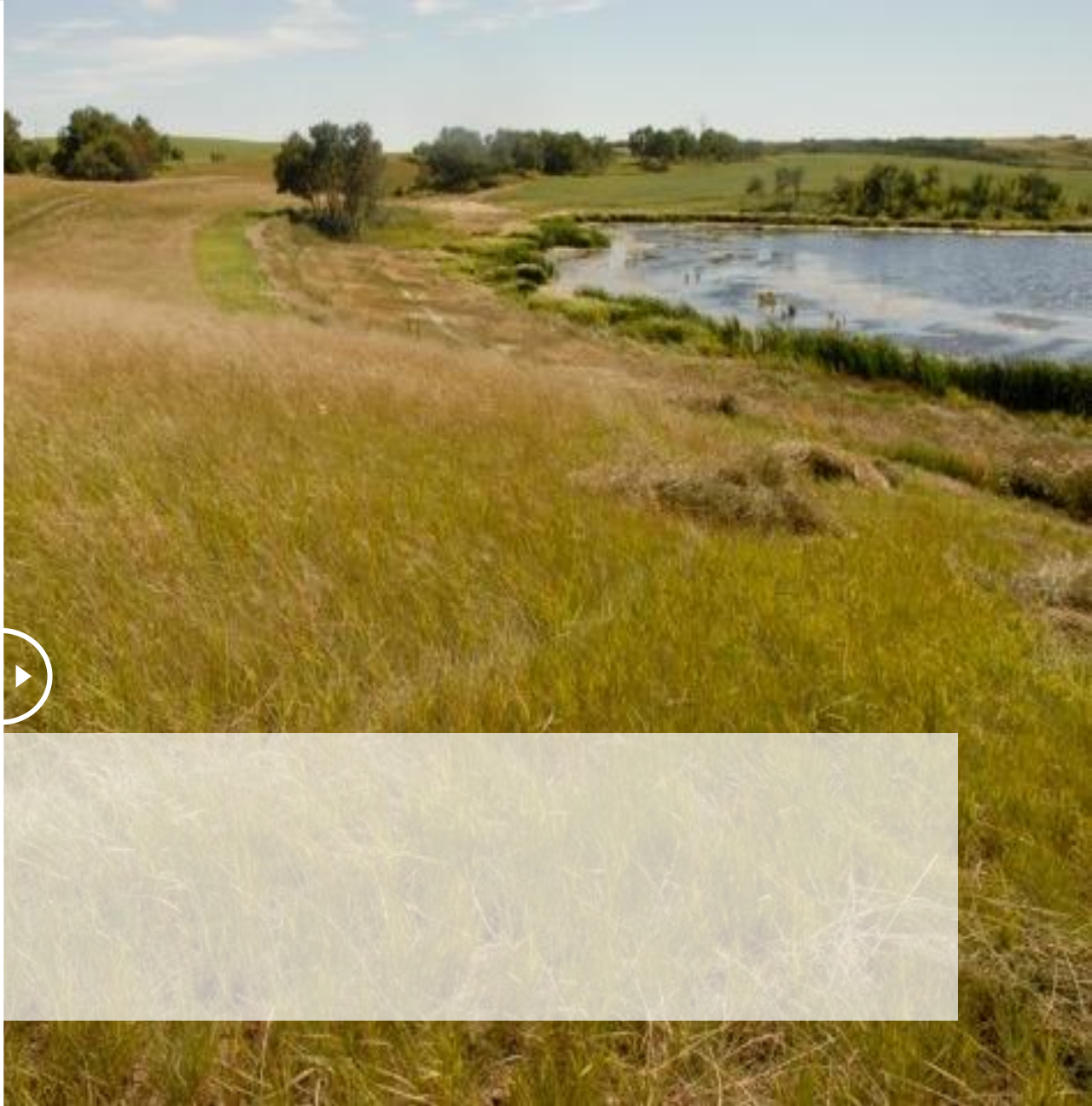
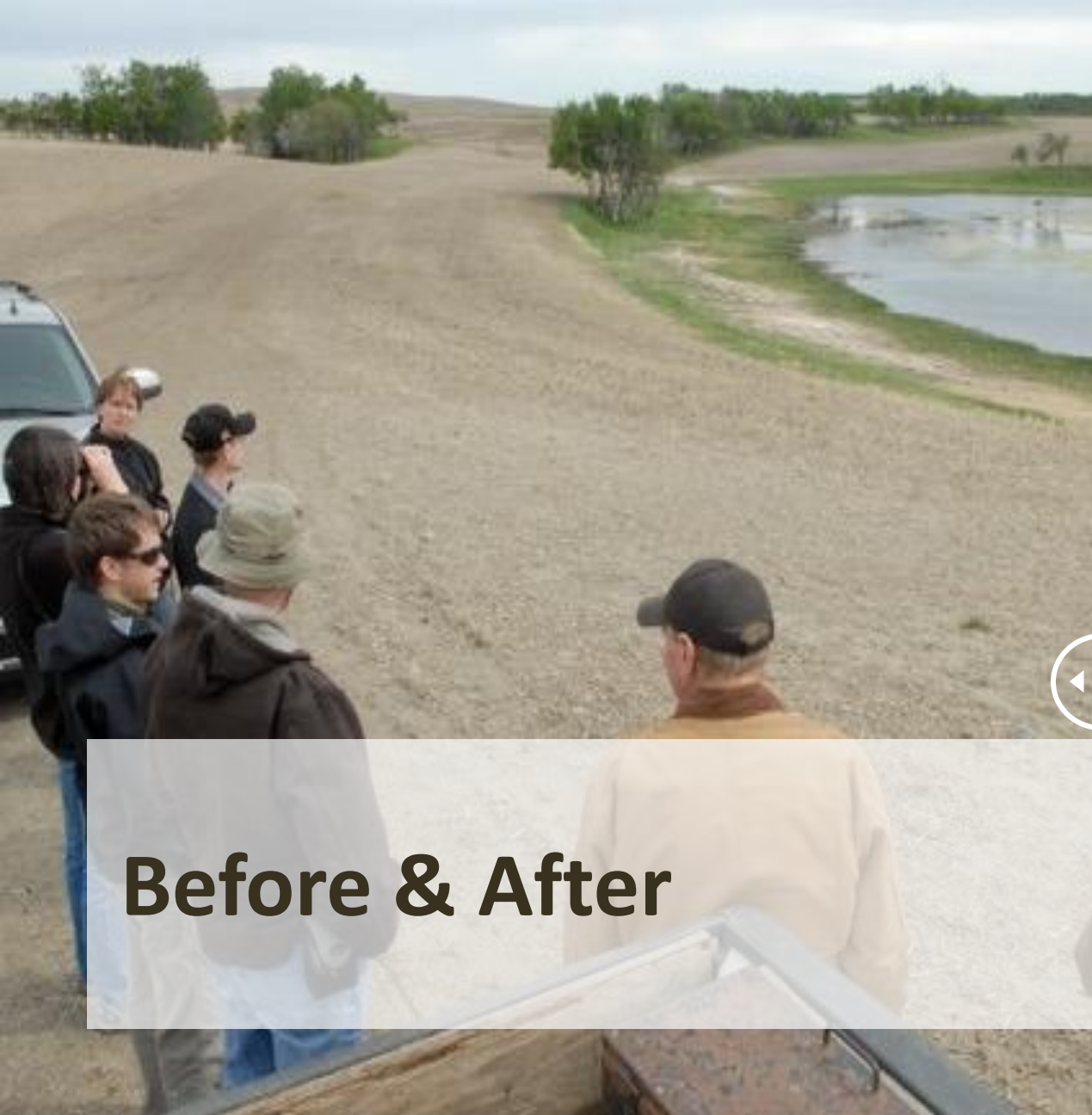


Harnessing the Power



Let's talk productivity





Before & After

Production of Ecosystem Services Using Nature Based Solutions



Wetlands



Grasslands



Exclusion Fencing



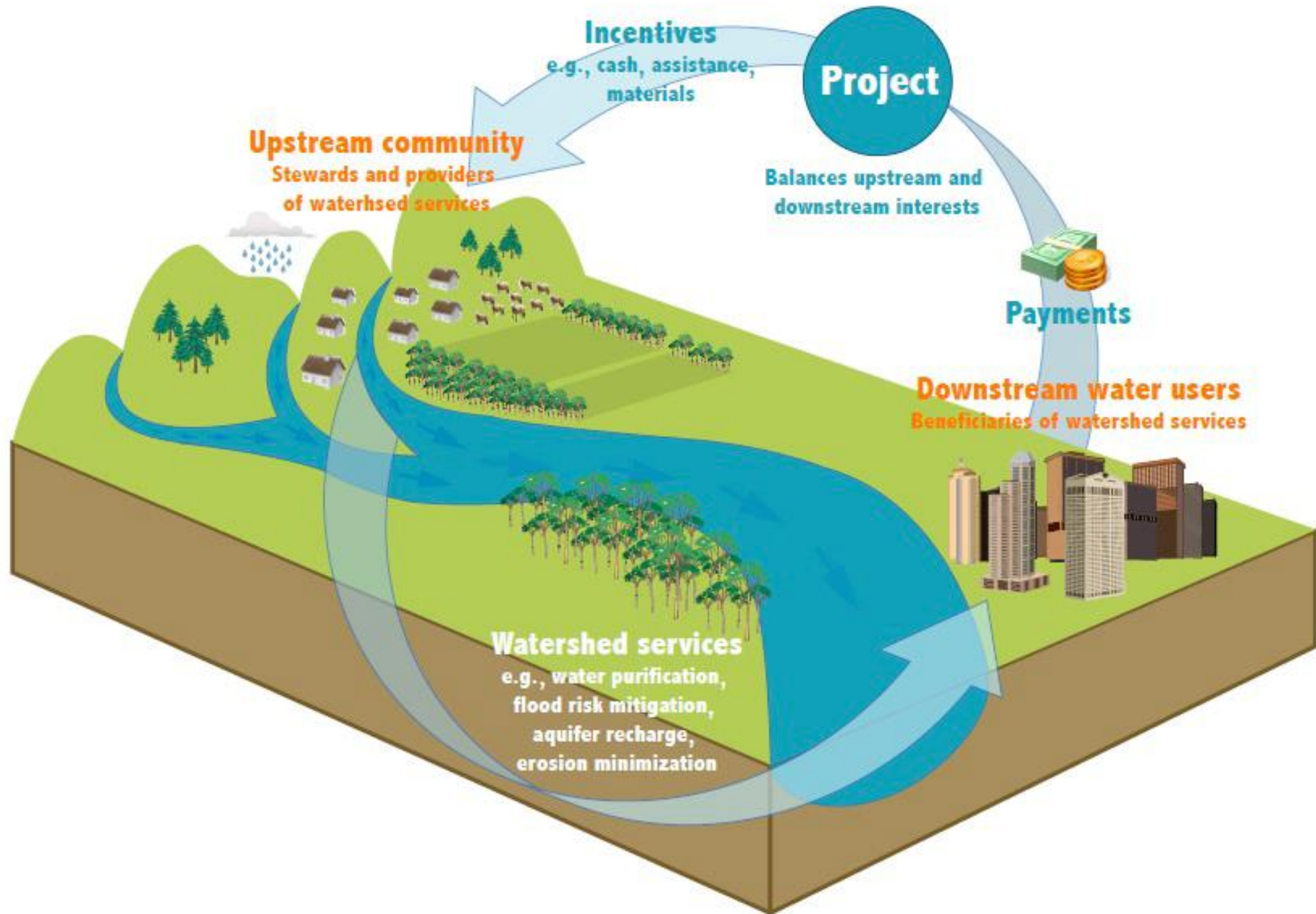
Trees & Shrubs



Riparian Buffers



Modified Ag



Project Example



Project Example



Natural Infrastructures Benefits



Mitigates floods and droughts by storing and slowing the release of water and reducing erosion



Extends life of built or “grey” infrastructure such as floodways, culverts, bridges, and water treatment plants



Retains and filters water after flooding, which replenishes groundwater and cleans drinking water



Sequesters carbon into wetland and riparian areas

Co-benefits of Natural Infrastructure



Improves biodiversity

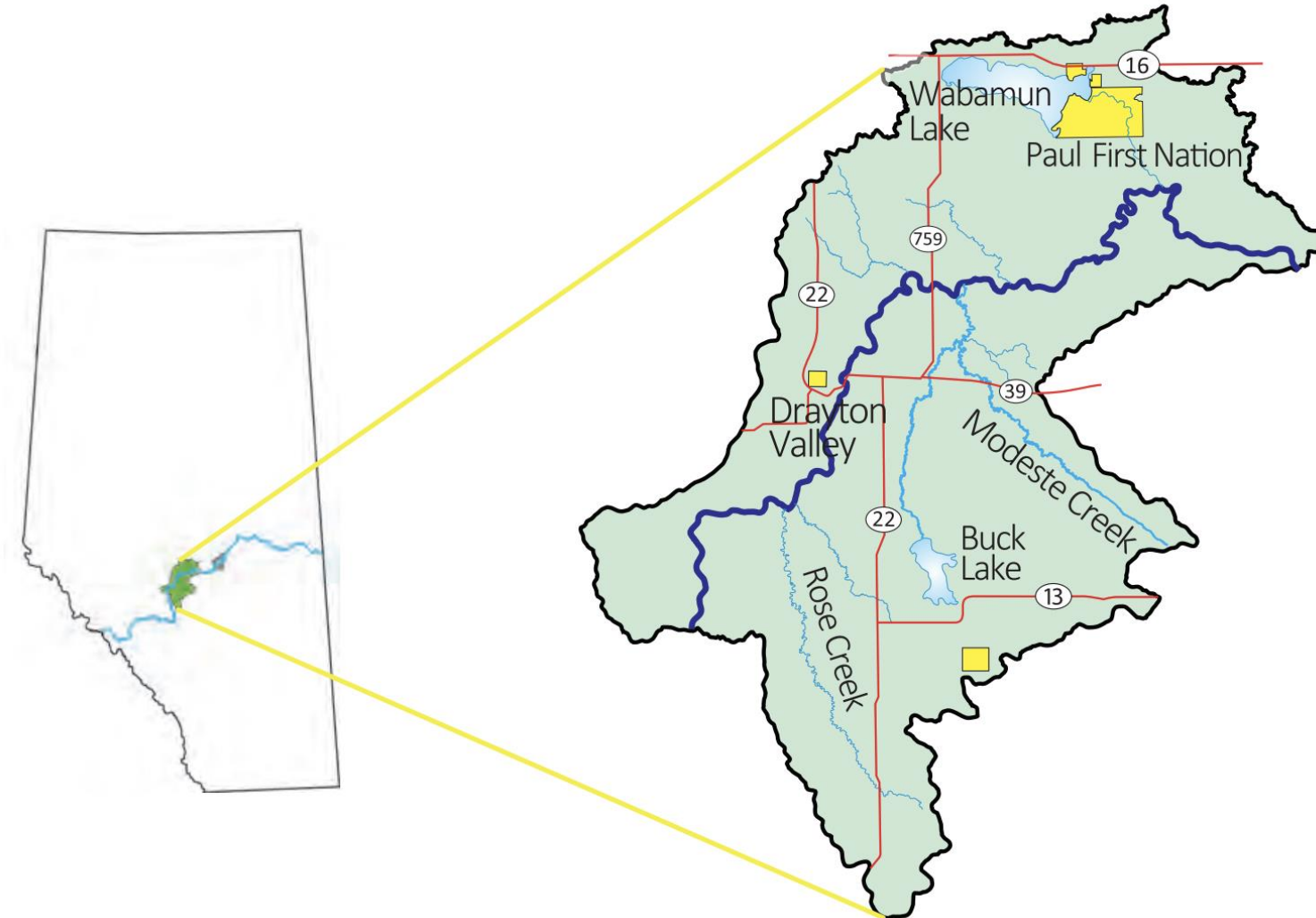


Community benefits



Adds economic value

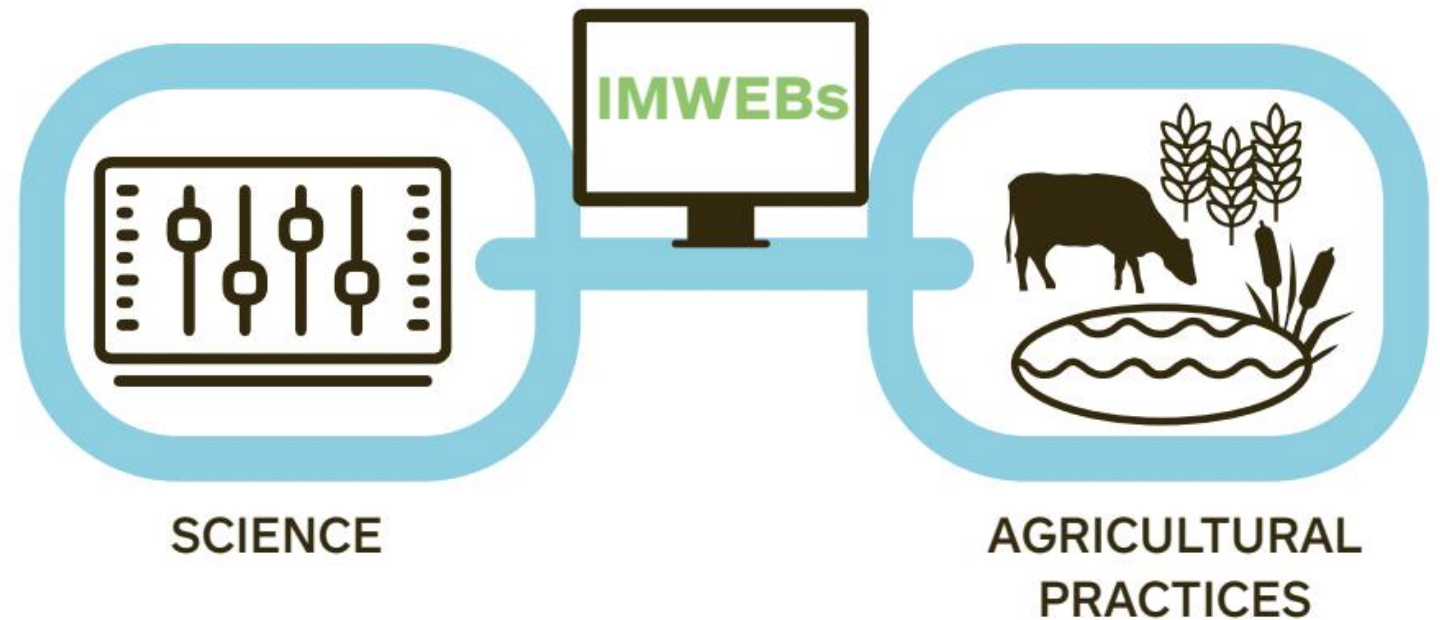
Modeste Watershed – Natural Infrastructure Project



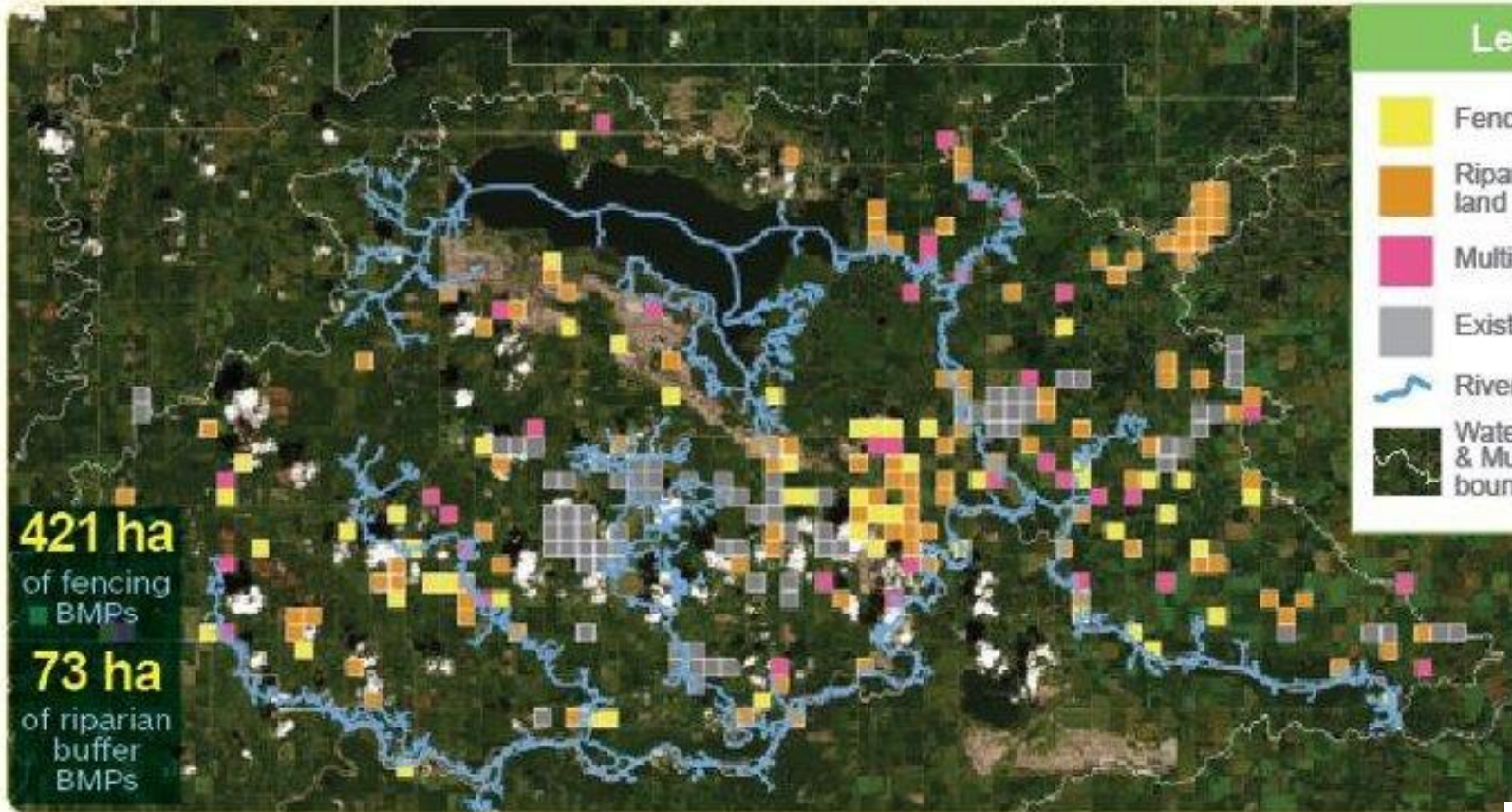
IMWEBs and ESAT: Bridging the gap between science and farming practices

What is IMWEBs?

- Integrated Modelling for Watershed Evaluation of BMPs
- A scientific model that examines the benefits of Nature-based Infrastructure



Ecosystem Service Assessment Tool (ESAT)



Legend

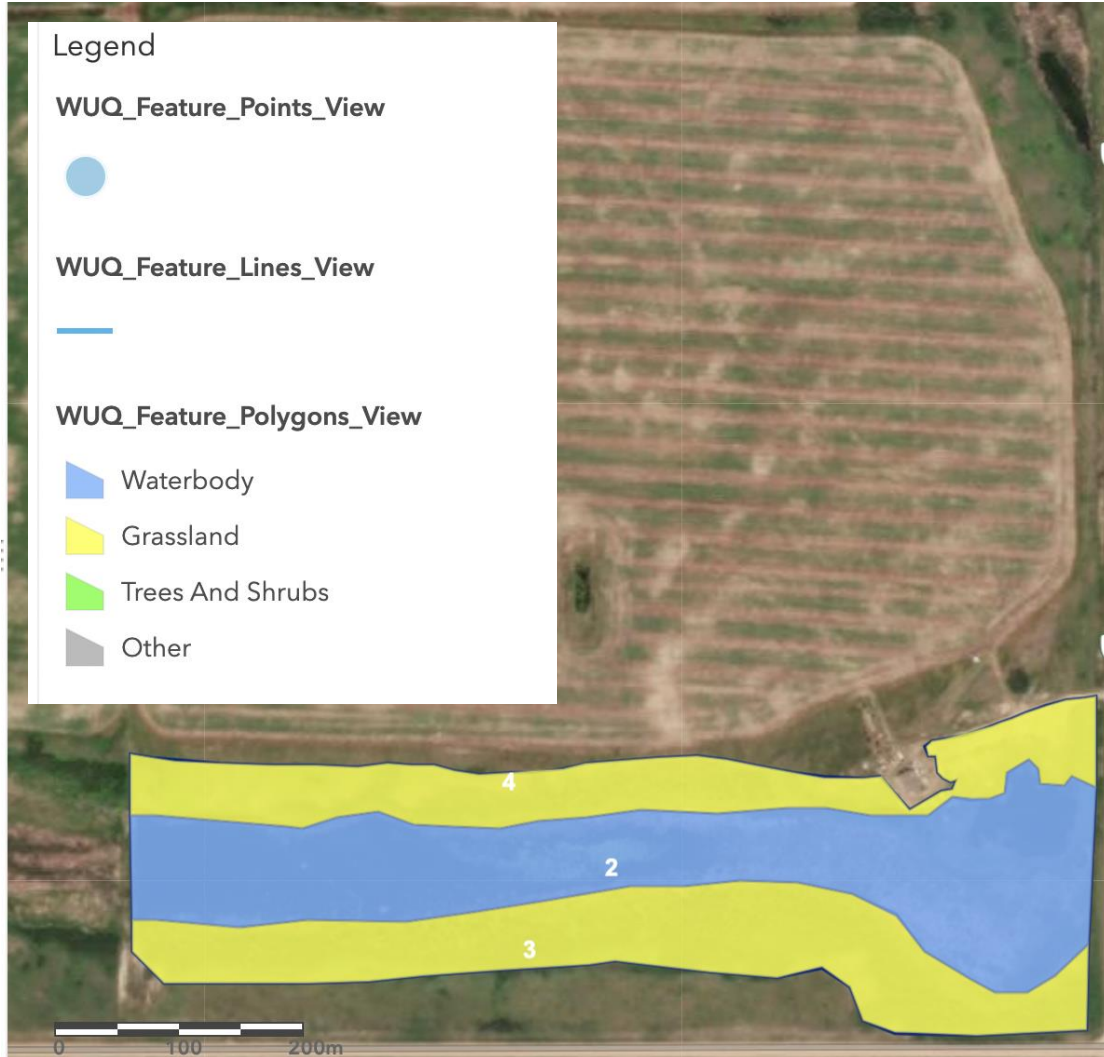
- Fencing land parcels
- Riparian buffer land parcels
- Multiple BMPs
- Existing BMPs
- Rivers & Creeks
- Watershed & Municipal boundaries

How does 'Smart Mode' determine optimal targets?

- Selects the most cost-effective parcels for each BMP,
- Shows how best to combine BMP strategies to get the best "bang for the buck."



Natural Infrastructure Execution with Farm Participants



Before / After



Farmers are Rewarded on a Fee-for-Service Basis

Annual payment for EG&S production including ongoing management and maintenance of projects to ensure the best project performance.



Outcomes of the Project

DELIVERABLES



- Improved water & ecosystem health
- Improved riparian health
- 1,116 hectares of enhanced or restored agricultural land

OPPORTUNITIES



- Stronger community partnerships
- Landowner-led projects
- Watershed health awareness
- Connection to bigger picture outcomes

CHALLENGES



- Creating and gaining community trust
- Natural infrastructure and restoration buy-in

Modeste Natural Infrastructure Project Partners



The primary funder of the project is Alberta Environment and Parks' Watershed Resiliency and Restoration Program (WRRP). This project is funded in part through Natural Resources Canada's Climate Change Adaptation Program. Additional funding is supplied by the City of Edmonton, EPCOR, and the McConnell Foundation.



Natural Resources
Canada

Ressources naturelles
Canada



“Conservation will ultimately boil down to rewarding the private landowner who conserves the public interest.”

Aldo Leopold, 1934



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Thank You!

