

Assessment of Strategic Water Management Projects in Southern Alberta

Alberta is facing economic challenges that require comprehensive and creative solutions. Water is a significant driver of opportunities in the Alberta economy; managed well, Alberta's water resources provide the potential to expand the province's economic base in agriculture while ensuring existing water allocations for people and the environment are protected. The impacts of climate change are already apparent and present an additional challenge when considering economic growth within the province. Understanding how water availability is likely to change in the future underpins Alberta's economic growth strategy.

The project will take the novel approach of combining the collaborative modelling methodology and tools used in past phases of work with a new climate change model which uses the Raven framework and scenarios adapted from Environment and Climate Change Canada to create a cutting-edge decision-making tool that will benefit watershed stakeholders.



RECIPIENT:

Alberta Irrigation Districts Association



PARTNERS:

WaterSMART, PrairiesCan, ATCO, Cavendish Farms, City of Calgary, Nutrien, Gov't of Alberta, City of Lethbridge, City of Medicine Hat



TOTAL BUDGET:

\$692,984



AI FUNDING:

\$250,000



PROJECT DATES:

AUG 2022 – SEP 2023



PROJECT TRL:

Start: N/A
End: N/A

APPLICATION

This new South Saskatchewan River Operational Model and Climate Impact tool will allow users to understand changes in water availability in the South Saskatchewan River Basin (SSRB) under projected climate change conditions and various water management strategies and development plans. The project will also identify and demonstrate future municipal and economic growth opportunities within the SSRB if water is managed strategically. Project outcomes will facilitate better-informed conversations on how the system responds to changes in flow resulting from increasing municipal demands and economic development in a changing climate.



ALBERTA INNOVATES CLEAN RESOURCES

ENVIRONMENTAL INNOVATION

WATER INNOVATION

PROJECT GOALS

The project will:

- Identify, understand, and inform on water supply risks today and under a changing climate.
- Identify and evaluate new opportunities for sustainable economic development in Alberta, including agricultural and agri-food sector growth.
- Understand and communicate the impacts of climate change on the system and water security.
- Update the 2016 SSRB Water Management Roadmap to develop a comprehensive water management strategy.
- Align perspectives and understand trade-offs with respect to water management opportunities and strategies.

BENEFITS TO ALBERTA

The project will:

Support Regional Investment and Growth

- Improve regional water management to leverage opportunities for further economic and municipal development within fully allocated basins.
- Identify opportunities from increasing efficiencies in water use that will enable new or expanded agriculture, agri-food, and irrigation projects.
- Provide confidence for investment in irrigation, which is shown to have a 3:1 return for each GoA dollar invested.
- Drive growth in agriculture, a principal sector in Alberta's Investment and Growth strategy.

Position Alberta as a Leader in Water Management

- Demonstrate Alberta's continued expertise and commitment to strategic water management and responsible watershed stewardship.

Align with National and Global Priorities

- Respond to increasing national focus on water.

CURRENT STATUS

APR 2023

The initial Working Group Kick-Off Meeting was held, where The Terms of Reference has been finalized and issued to the Working Group members.

Task #1 (establish, apply, and document future climate scenarios) is underway. The project is on track with the schedule.