



Watershed Planning and Implementation in Saskatchewan

**Tom Harrison
Saskatchewan Watershed Authority**

History

- **North Battleford Cryptosporidium outbreak, 2001, with 7,000 residents affected.**
- **Justice Robert Laing Commission of Inquiry**
- **Long-Term Safe Drinking Water Strategy 2002**
- **Creation of Saskatchewan Watershed Authority in October 2002**

Protecting source waters

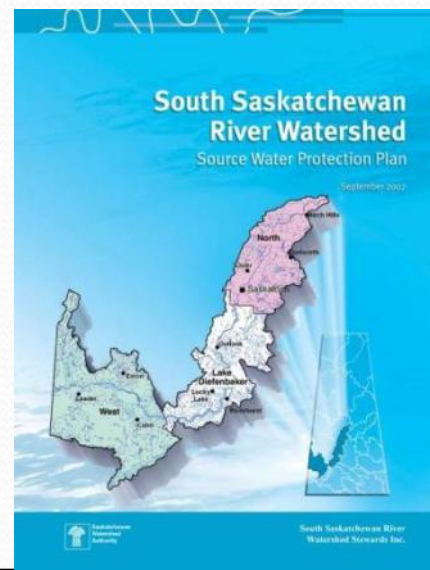
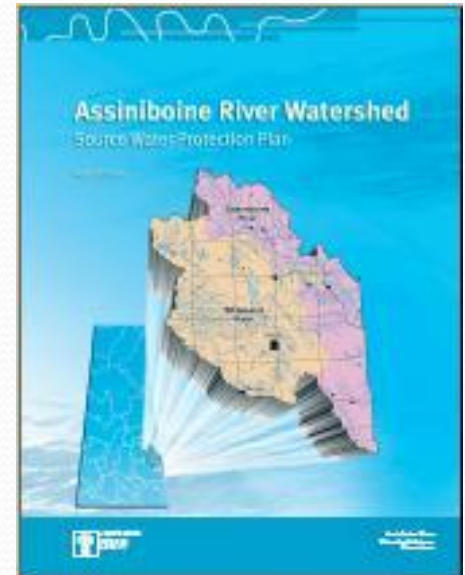
- Identify threats to water supplies
- Water quantity and quality
- Reduce or eliminate threats
- Prevention versus removal of contaminants
- Consensus-based decision-making
- Stakeholders participation

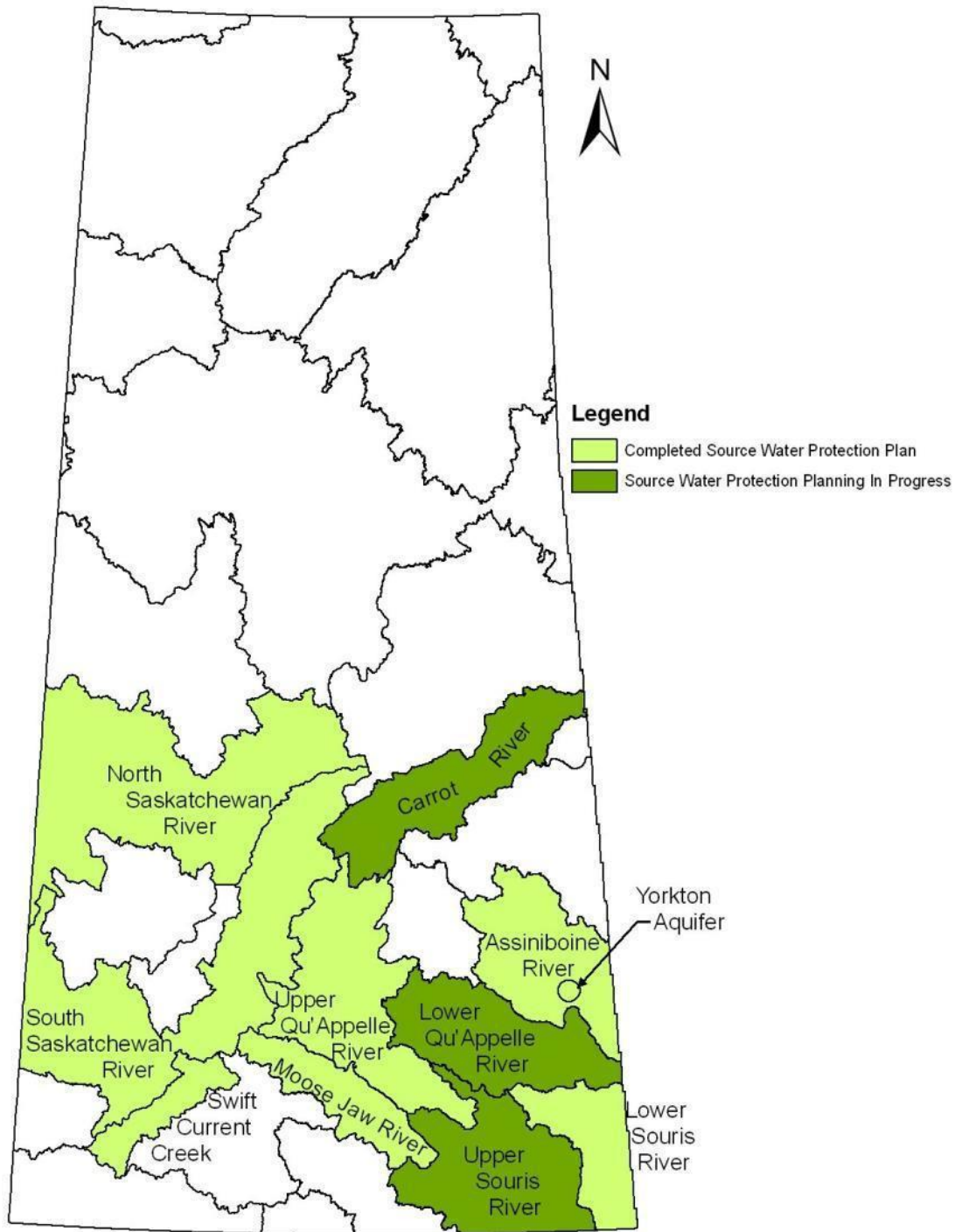


**Saskatchewan
Watershed
Authority**

Watershed and Aquifer Plans

- Includes
 - Background information
 - State of the Watershed Report
 - Issues and perceived threats
 - Objectives
 - Analysis
 - Recommendations





Watershed Planning Areas – Completed and Underway

Watershed Protection Organizations

Moose Jaw River Watershed Stewards Inc.

Lower Souris River Watershed Committee

Assiniboine Watershed Stewardship Association

South Saskatchewan River Watershed Stewards Inc.

North Saskatchewan River Basin Council Inc.

Wascana Upper Qu'Appelle Watersheds Association
Taking Responsibility Inc.

Swift Current Creek Watershed Stewards Inc.

Goal of Implementation

- Effective strategy of:
 - Taking action
 - Tracking progress
 - Evaluating
- Success measured by:
 - level of activity towards each key action
 - Identifying gaps (targeting and prioritization)
 - Increasing efficiencies
 - Resource sharing
 - Minimize duplication

Building Capacity for Implementation

- Staff
- Expenses
- Events
- Projects
- Education
- Communications
- Administration



Strong Partnerships

- Who are the partners in your plan
 - WAC members
 - NGOs
 - Government
 - Industry
 - Individuals



- Various but vested interests

Technical Support

- Government, NGOs, Industry, Consultants
- Recipe for success
 - Knowledgeable
 - Empowered
 - Practical
 - Respectful
 - Unbiased
 - Motivated
 - Enthusiastic
 - Passionate



Financial Support

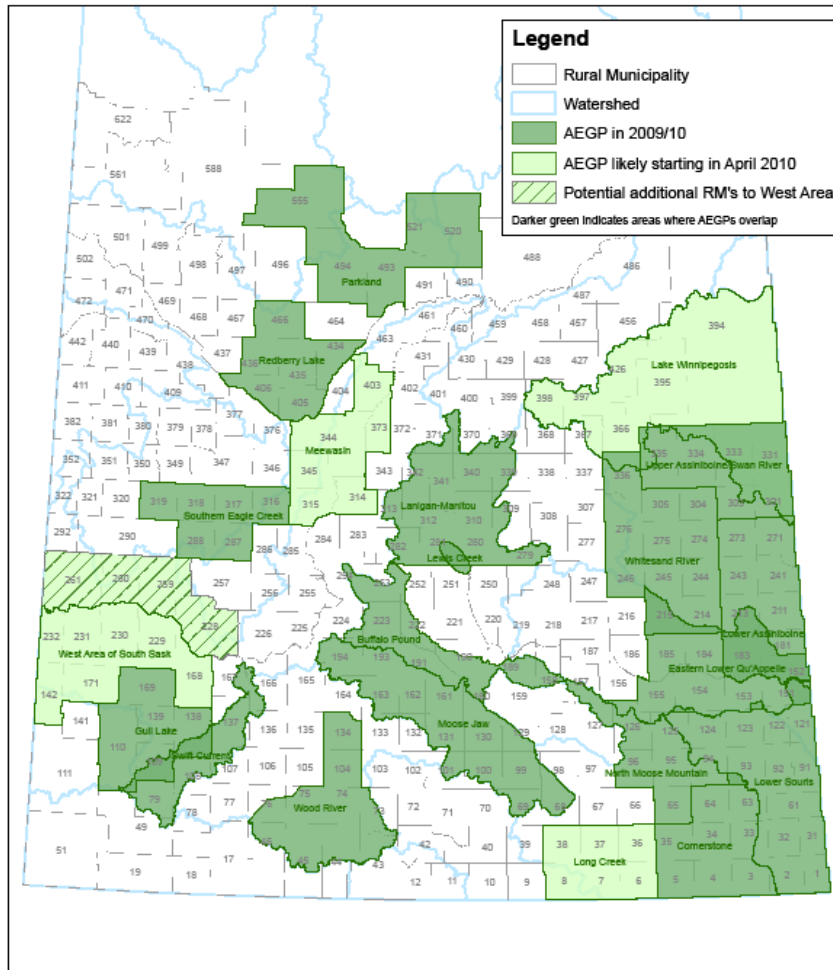
- Critical to success
- Stability and Flexibility
- Sources:
 - Core from SWA
 - Project Specific

Watershed Plan Implementation

- Lower Souris SWP (47% of Action Items directly involve Agri-Env Issues)
- Moose Jaw SWP (40% of Action Items directly involve Agri-Env Issues)

Agri-Environmental Group Planning


AEGP Boundaries - 2009/10



We all live in a watershed



The Saskatchewan Watershed Awareness Initiative

Producing a positive impact through agriculture.



WATERSHED AWARENESS INITIATIVE

1.866.298.7222 www.saskpcab.com

Canada  

Farm Stewardship Program

- Promotion of BMPs developed to protecting water from contamination and depletion

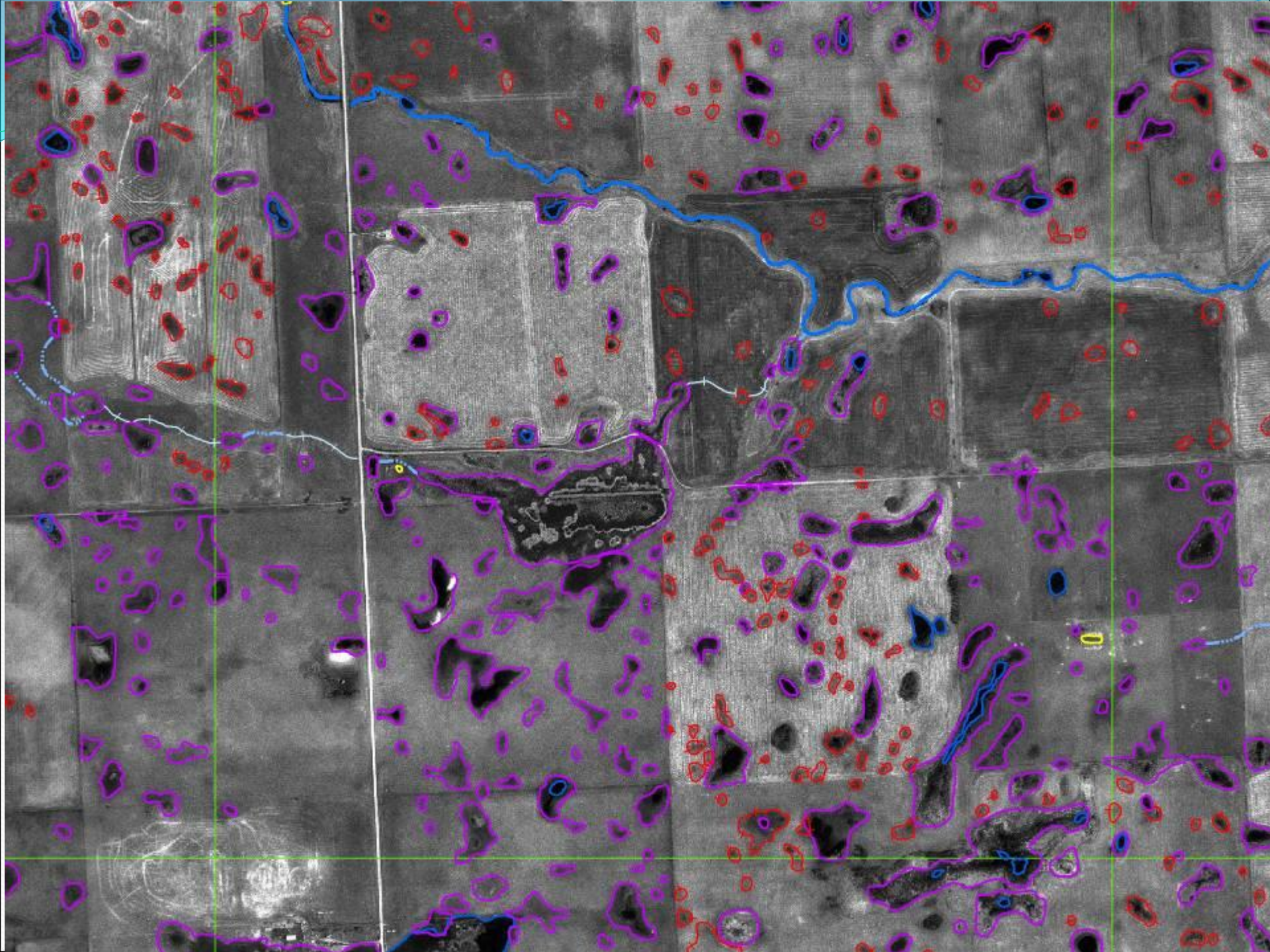


Lower Souris EG&S Pilot Project

Three part case study of an agricultural landscape:

- 1) Target setting of landscape quantity and quality
- 2) Determine the cost to provide wildlife habitat
- 3) Conduct an analysis of policy options and tools to meet the targeted quantity and quality of wildlife habitat





WEBS

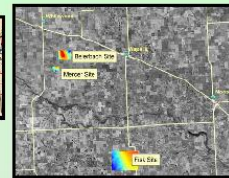
 Agriculture and Agri-Food Canada Agriculture and Agri-Food Canada

Watershed Evaluation of Beneficial Management Practices in the Prairie Pothole Region, within Pipestone Creek Watershed, Saskatchewan

Barbara J. Cade-Menun
Karen Benjaminson

Barbara.Cade-Menun@agr.gc.ca
Karen.Benjaminson@agr.gc.ca

This project will study four BMPs at a watershed scale, to understand the combined effects of BMP implementation, soils, topography, land cover, land use and climate on economic and water quality outcomes.



For the purpose of this study, beneficial management practices (BMPs) are defined as science-based farming activities designed to help minimize potential environmental impacts, such as sediment and nutrient runoff into water bodies.

The Pipestone Creek WEBS project objectives are:

- 1) To measure the effectiveness of selected agricultural BMPs common to Saskatchewan in reducing nutrient and sediment transfer from fields to receiving waters.
- 2) To measure interactions of BMPs and hydrology in a landscape dominated by "fill and spill" wetlands.
- 3) To model and predict the relative contribution of nutrients and sediments to a common outlet, Moosomin Reservoir, with and without BMP implementation.
- 4) To develop an economic evaluation for the implementation of BMPs within the Pipestone Creek Watershed.

The Four BMPs Under Study Are:



In-Field Winter Feeding on Pasture Bale grazing



Nutrient Management on Annual Cropland



Conversion of Annual Cropland to Perennial Forage



Wetland Restoration

Dr. Barbara Cade-Menun, a nutrient cycling scientist with AAFC's Semiarid Prairie Agricultural Research Centre (SPARC), is leading this new WEBS project, which is supported by the Lower Souris River Watershed Committee (LSRWC). The research covers the biophysical, economic and hydrological aspects of implementing BMPs in this region. The project also has support from the new AESB (Agri-Environment Services Branch, former PFRA), Saskatchewan Watershed Authority (SWA), Indian Head Agricultural Research Foundation (IHARF), Ducks Unlimited Canada, and the Universities of Saskatchewan, Regina, Alberta, and Guelph. The study will involve the expertise of agronomists, hydrologists, economists and research scientists, and will provide funding and training to M.Sc. and Ph. D. students.

© 2008



Engagement of First Nations

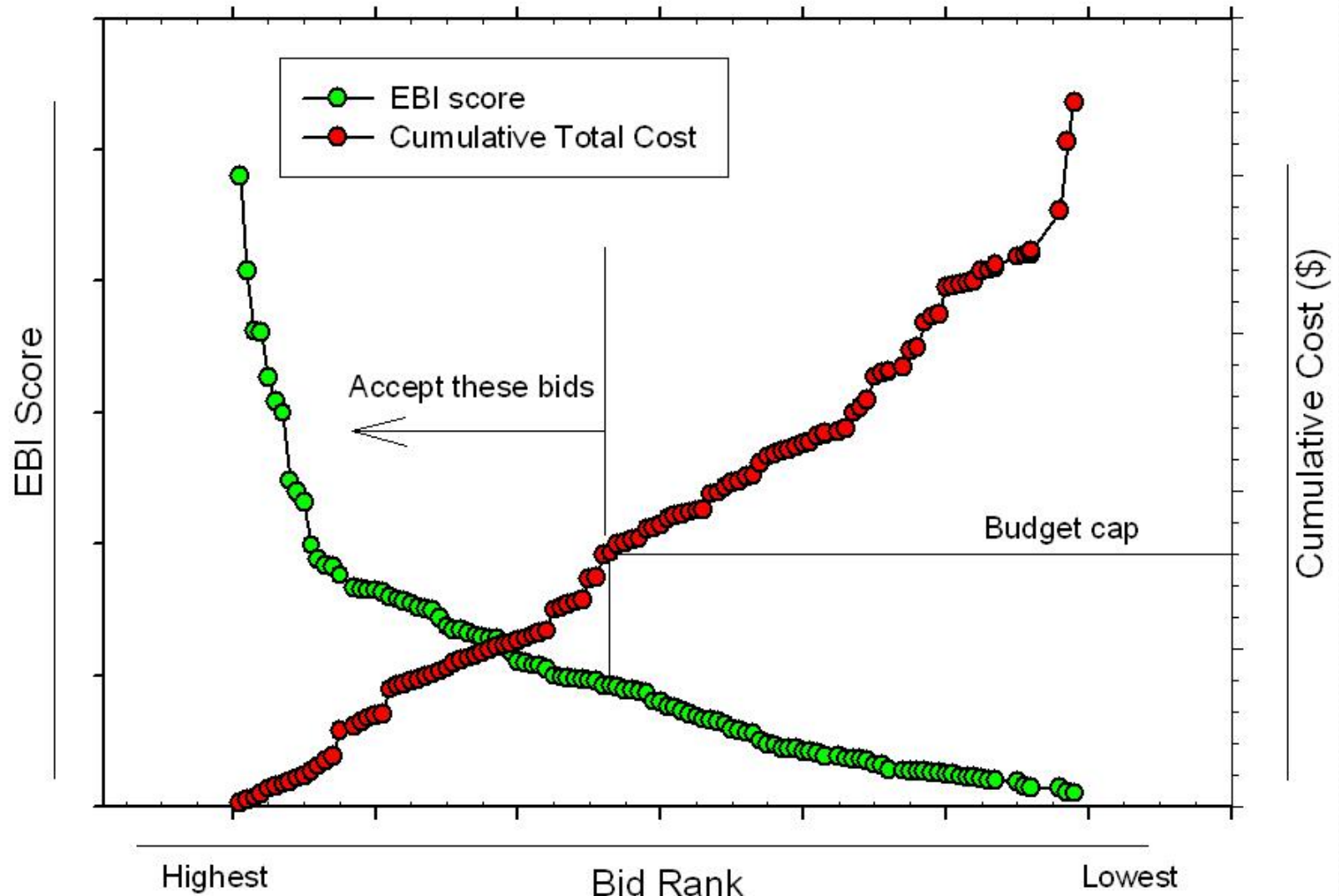
- FNACS
- APF/TAC
- HSP
- INAC/EC SWP
- North Sask River
- Carrot River



Zero Release: Avonlea Lagoon



Reverse Auction: Wetland Restoration

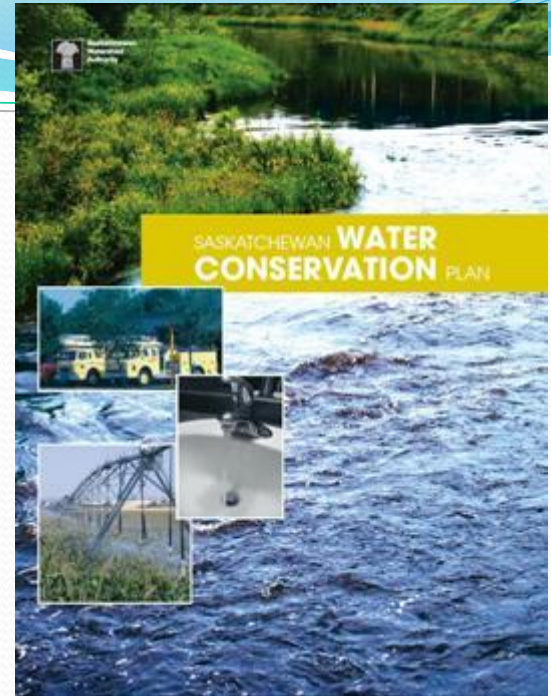


Fish Habitat Enhancement Activities



Drought Preparedness/ Water Conservation

- Integration with EFP workbook
- Develop Water Conservation BMPs
- Prairie Regional Adaptation Collaborative



Farm and Ranch

Infrastructure Program

- Promotion of province wide program
- Application of drought preparedness



Communication Products



Extension Events



Monitoring



The Future

Saskatchewan Watershed Authority committed to completing the three current plans.

No new watershed plans to be initiated (Wood River?).

Focus will be on review and updating current plans.

Inclusion of comprehensive water management in the plans.

Thank You

- Questions?
- Comments?