

WPAC Partnerships for Riparian Action



Presentation Overview

Riparian Health Priorities and Connections:

- NSW Riparian Health Action Plan
- BRWA Riparian Area Management and Restoration Programs

Joint Riparian Project

- Riparian Intactness Assessment and Watershed Pressure
- Riparian Web Portal





Headwaters Alliance

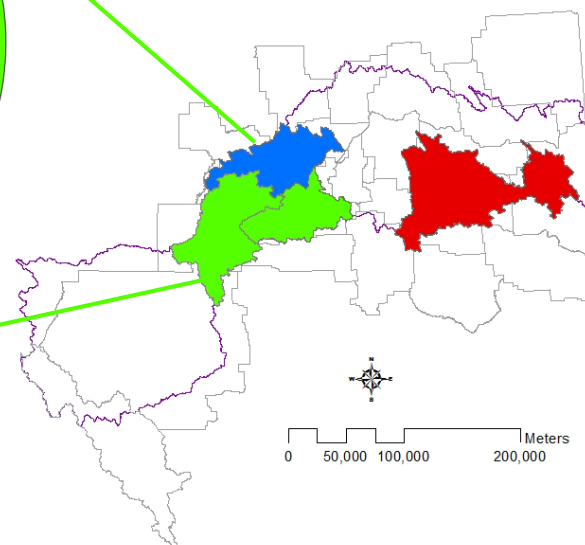


County

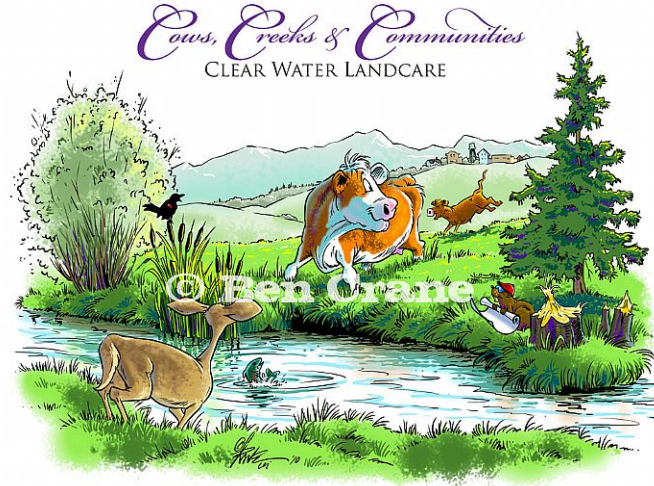
- Clearwater County
- Brazeau County
- Parkland County
- Leduc County
- Wetaskiwin County

Town

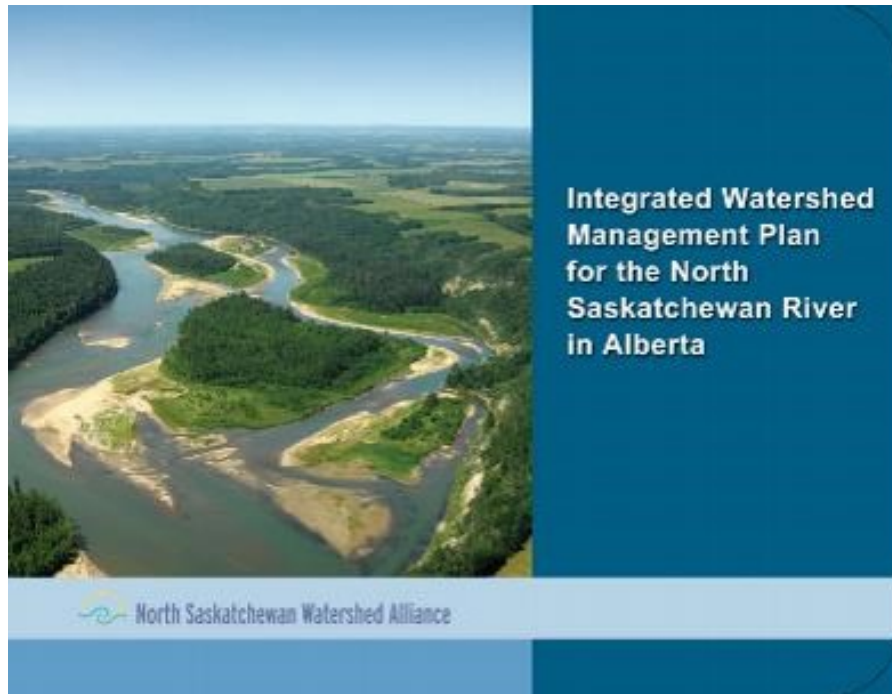
- Rocky Mountain House
- Drayton Valley
- Devon



Municipal Program Options



IWMP (2012)- Guiding Document



Watershed Management Direction 3.3: Maintain and restore riparian areas

Actions:

3.3.1

Complete an inventory and assess the condition of riparian areas in the NSR watershed.

3.3.2

Municipalities, in consultation with landowners groups and other stakeholders, are encouraged to develop riparian set-back guidelines which exceed provincial regulations.

3.3.3

Develop incentive and support programs (financial and expertise) to enable and assist landowners to retain naturally-occurring riparian areas, restore damaged riparian areas and replant riparian vegetation on their own land.



Riparian Health Action Plan

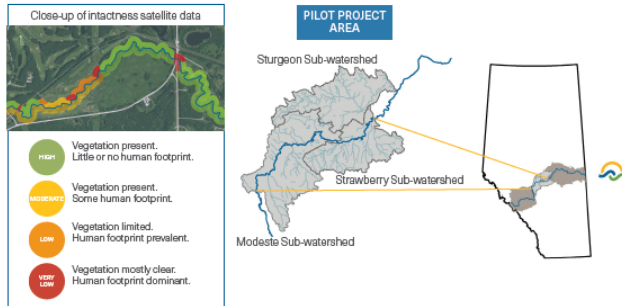
PHASE 1: COLLECTING AND ASSESSING THE DATA

THE 3 TYPES OF DATA COLLECTED WERE:

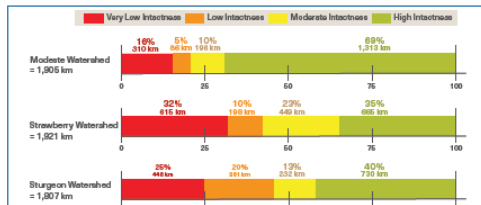
- Intactness** of the existing riparian areas
- Pressure** on riparian health from adjacent upland areas (human or natural)
- The combined **Intactness x Pressure** scores = **Conservation or Restoration** priorities

A RIPARIAN INTACTNESS SCORES

Intactness refers to the extent to which natural riparian habitat has been altered by human activity. Using satellite imagery, the assessment focused on how much natural and woody vegetation remain along shorelines of creeks and lakes.



In 2016, The NSWA piloted a project in which a new watershed-scale assessment method was developed by a consultant. This method uses high-resolution satellite data to evaluate condition. This method has now been evaluated by the Government of Alberta.



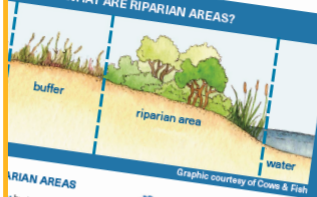
Many project partners and stakeholders helped fund the data collection:



Riparian Health Action Plan



WHAT ARE RIPARIAN AREAS?



RIPARIAN AREAS

by trapping
trients and pollutants,
that leads to increased
growth

oughts by storing and
water and reducing

Improve biodiversity by providing fish
and wildlife habitat and cooling water
temperatures

Provide aesthetically pleasing areas for
recreation or cultural activities

Add economic value by increasing property
values or providing areas for nature viewing.

THE ISSUE: Of the 100,000 km of riparian areas
throughout the North Saskatchewan River watershed,
less than 1% of its condition was known.

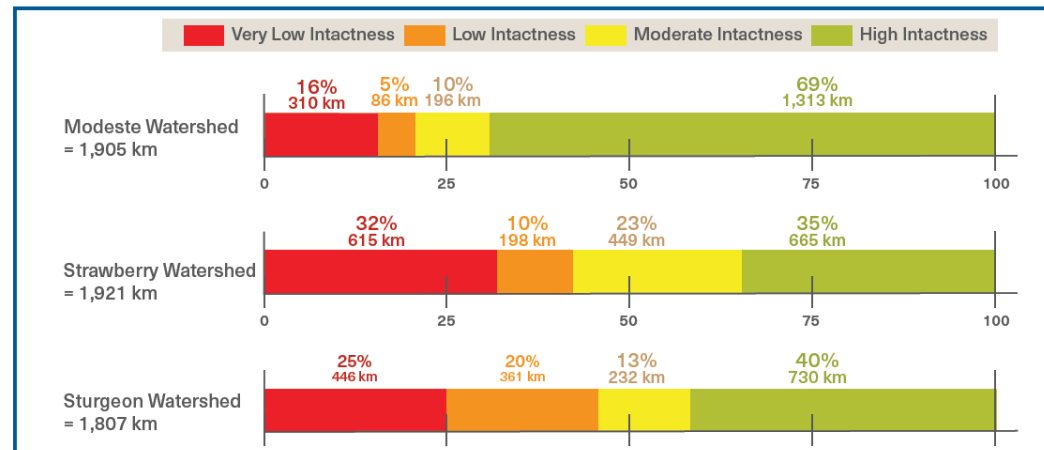
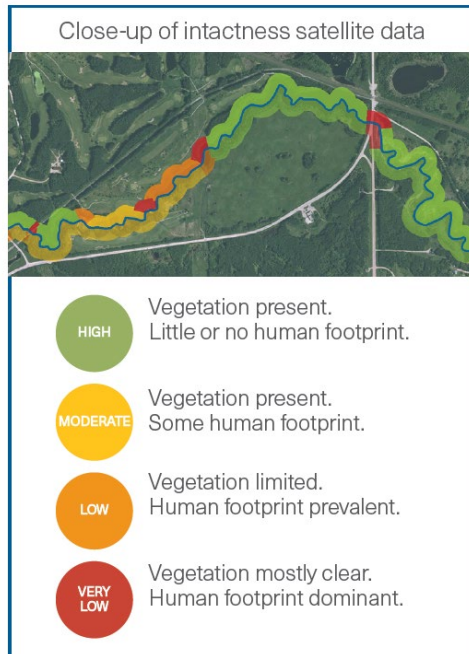
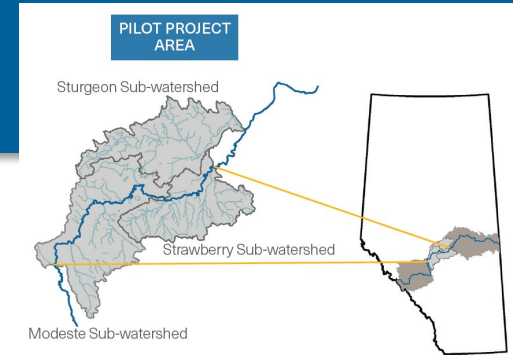
development progress, riparian areas play an increasingly important
ality and watershed health.
d* field research is critical and can never be replaced, the group
of remotely-sensed data for large-scale riparian area assessment.

THE RIPARIAN HEALTH ACTION PLAN

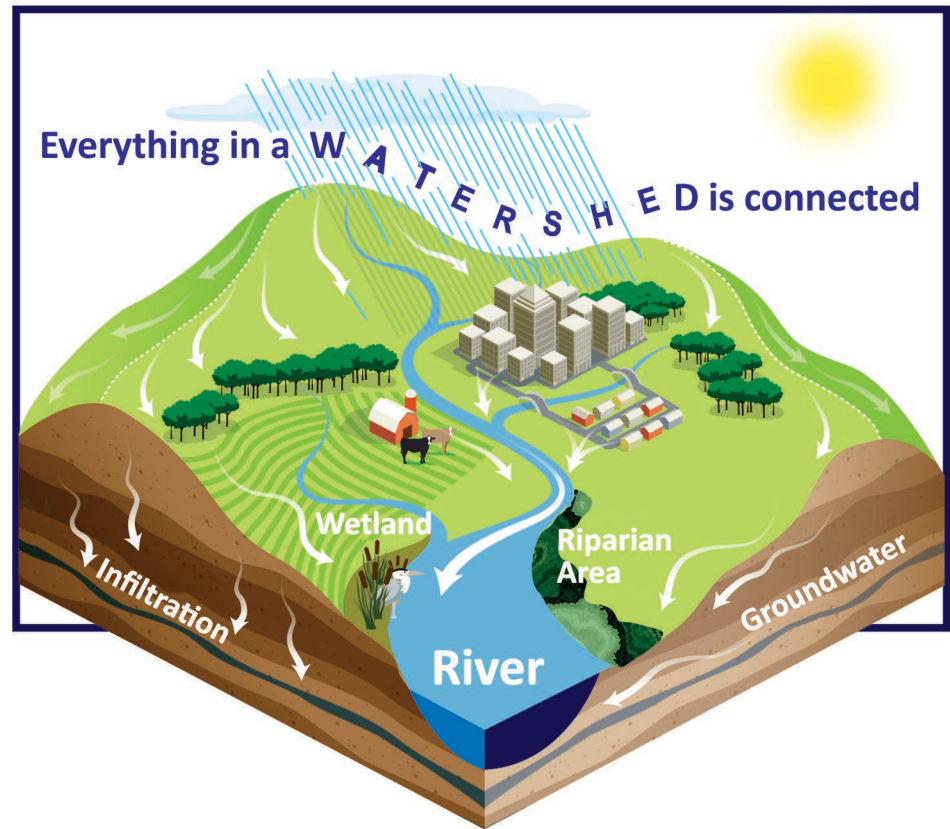
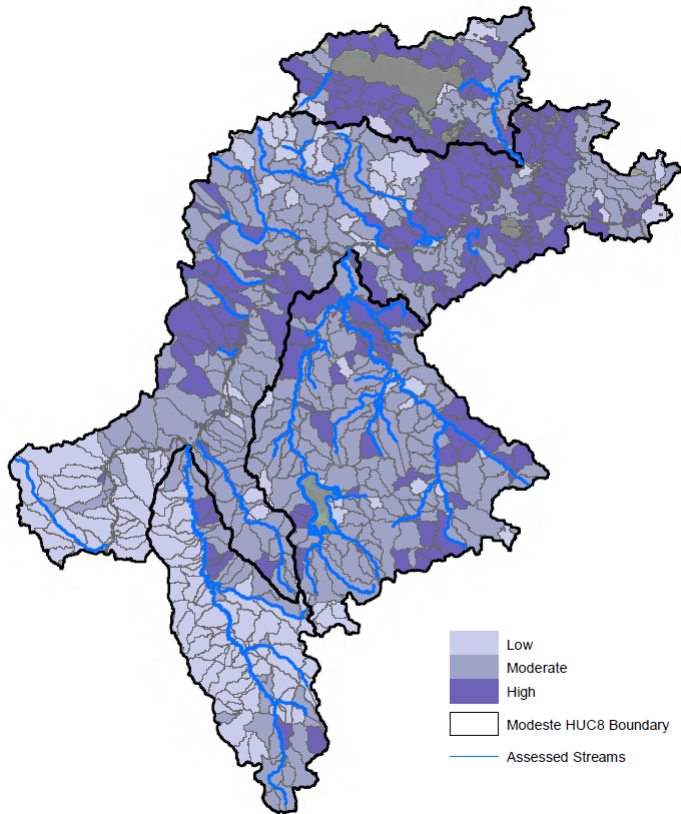
project to create maintain and restore riparian conditions.
ing satellite imagery that assesses the overall condition of
R watershed.
unicipalities and landowners to develop riparian bylaws and
ent provincial regulations.
nable and assist landowners to retain, restore and replant
ir own land.



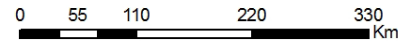
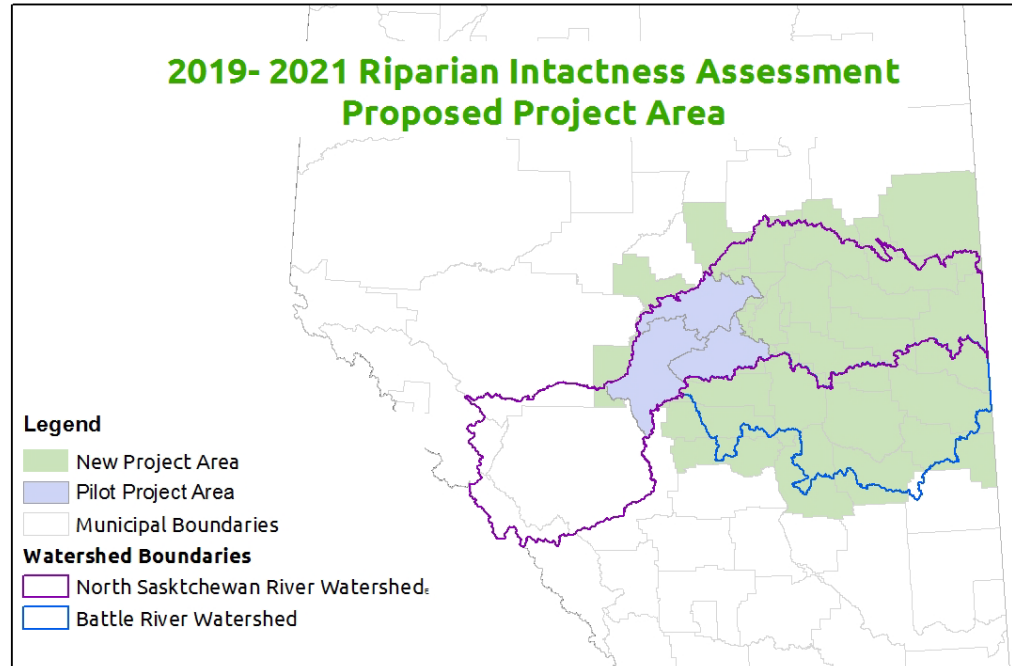
Intactness Pilot Project



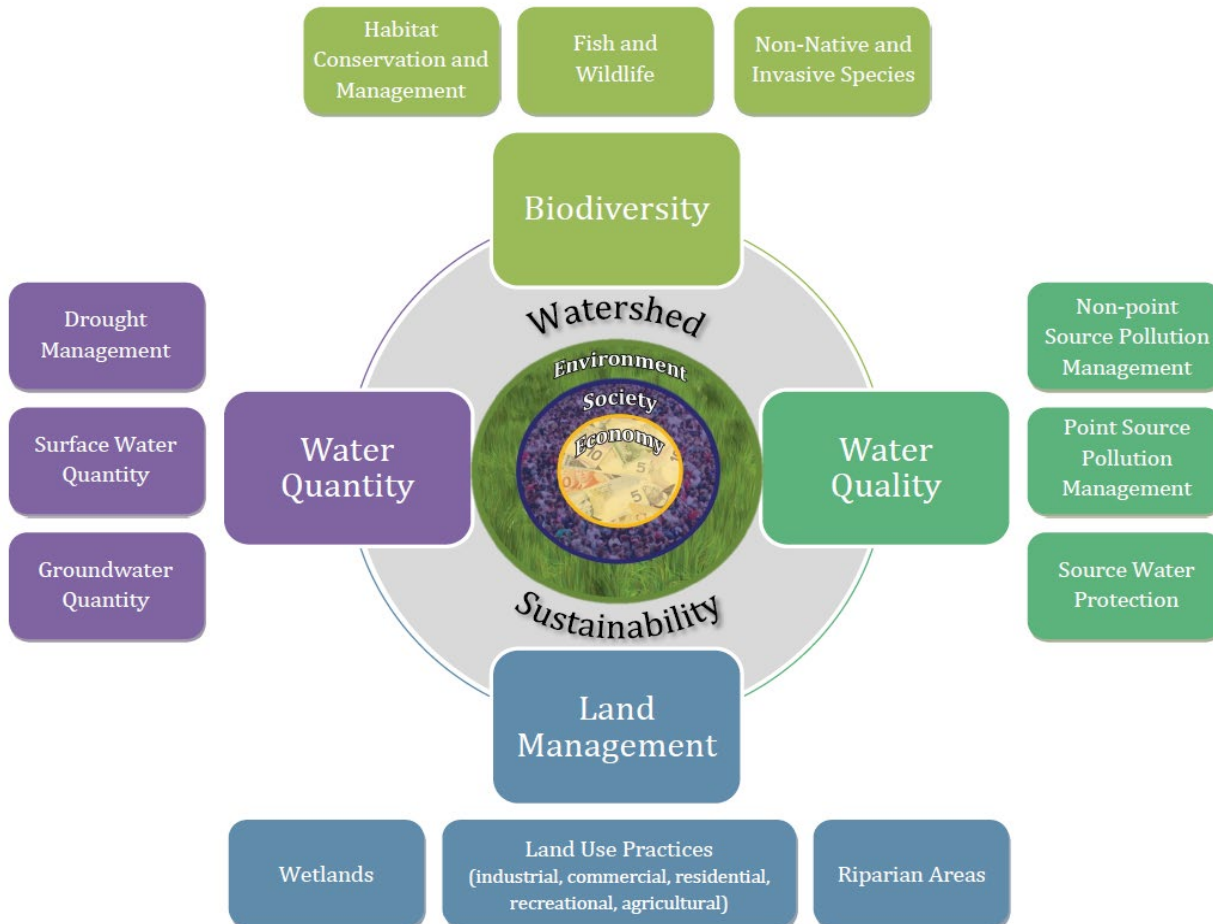
Catchment Pressure



Expansion of the Intactness Dataset



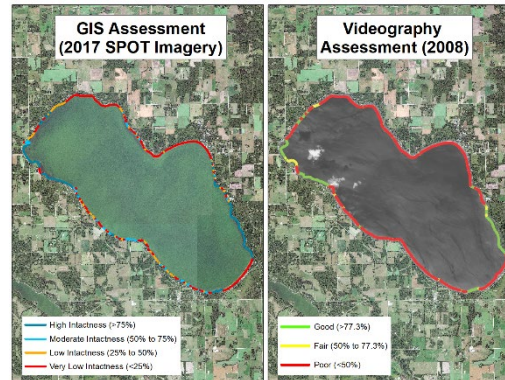
Riparian Area Management



- Complete riparian health assessments
- Set priorities and develop strategies to maintain or improve riparian health
- Undertake riparian conservation and restoration projects in priority areas

Past Riparian Assessments

- Over 200 Cows and Fish riparian health assessments completed
- Aerial videography completed for the mainstem of the Battle River (and select lakes) in 2007-2008
- Government of Alberta used the intactness methods to assess the Pigeon Lake watershed



BATTLE RIVER
WATERSHED ALLIANCE



Riparian Restoration Projects

GOAL: to work with local landowners and residents and provide financial support for projects that support the health of the Battle River, its tributary streams, and other water bodies



BATTLE RIVER
WATERSHED ALLIANCE

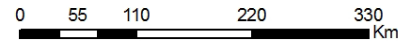
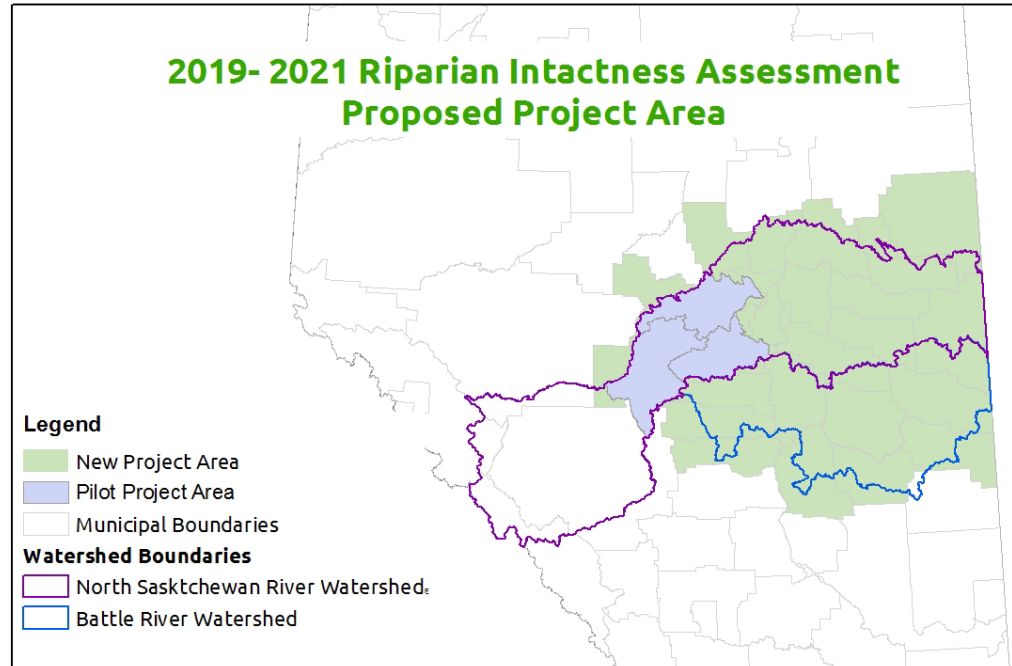


NSWA/BRWA Partnership Riparian Intactness Project

- Shared interest in:
 - increasing our understanding of riparian intactness
 - informing riparian conservation and restoration efforts
- Funding provided by the Canadian Agricultural Partnership (CAP)
- Project timeline: 2019-2021



Expansion of the Intactness Dataset



Education Tools

SHORELINE ASSESSMENT

Riparian areas are the biologically rich and productive shoreline areas at the edges of lakes, streams, wetlands and rivers. While these areas provide a wide range of benefits, the loss and impairment of riparian areas has been significant. Clearing vegetation, building structures, adding or removing rocks, using off-high-way vehicles or allowing heavy grazing by cattle all damage riparian areas and ultimately, the health of the lake.

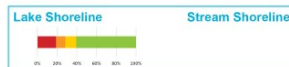
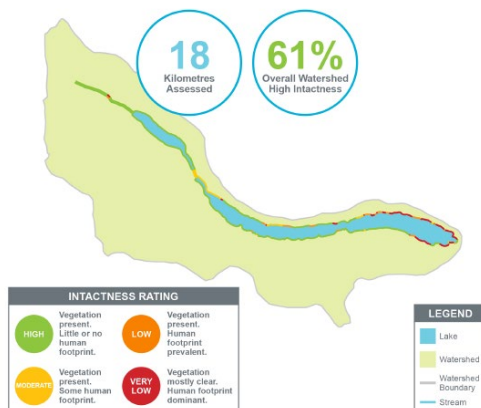
A GIS-based method and data set was created to assess riparian intactness (or condition) at a watershed scale, including lakeshores and streams. Riparian intactness refers to the extent to which natural habitat has been altered or impaired by human activity. The assessment was based on the cover of natural vegetation, woody vegetation and human impact and development visible from satellite imagery. The riparian area was assessed for 50 metres back from the water line, for the entire length of the lakeshore, as well as the right and left banks of the streams flowing into the lake.

Summary of Results:

Riparian areas in the Wizard Lake watershed were assessed across 18km of shoreline. Approximately 61% of the shoreline had a high intactness score, which is higher than the average for the Strawberry sub-watershed (34%). Approximately 11% was moderately intact and 28% of the shoreline was assessed at low or very low intactness. These low intactness areas were associated with land development.



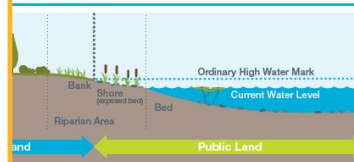
Wizard Lake



Why are riparian areas important?

- IMPROVE WATER QUALITY** by trapping sediments, filtering nutrients and pollutants, reducing enrichment that leads to increased aquatic plant and algal growth;
- MITIGATE FLOODS AND DROUGHTS** by storing and slowing the release of water and reducing erosion;
- IMPROVE BIODIVERSITY** by providing fish and wildlife habitat and cooling water temperatures;
- PROVIDE AESTHETICALLY PLEASING AREAS** for recreation or cultural activities; and
- ADD LOCAL ECONOMIC VALUE** by increasing property values or providing areas for nature viewing.

Riparian area?

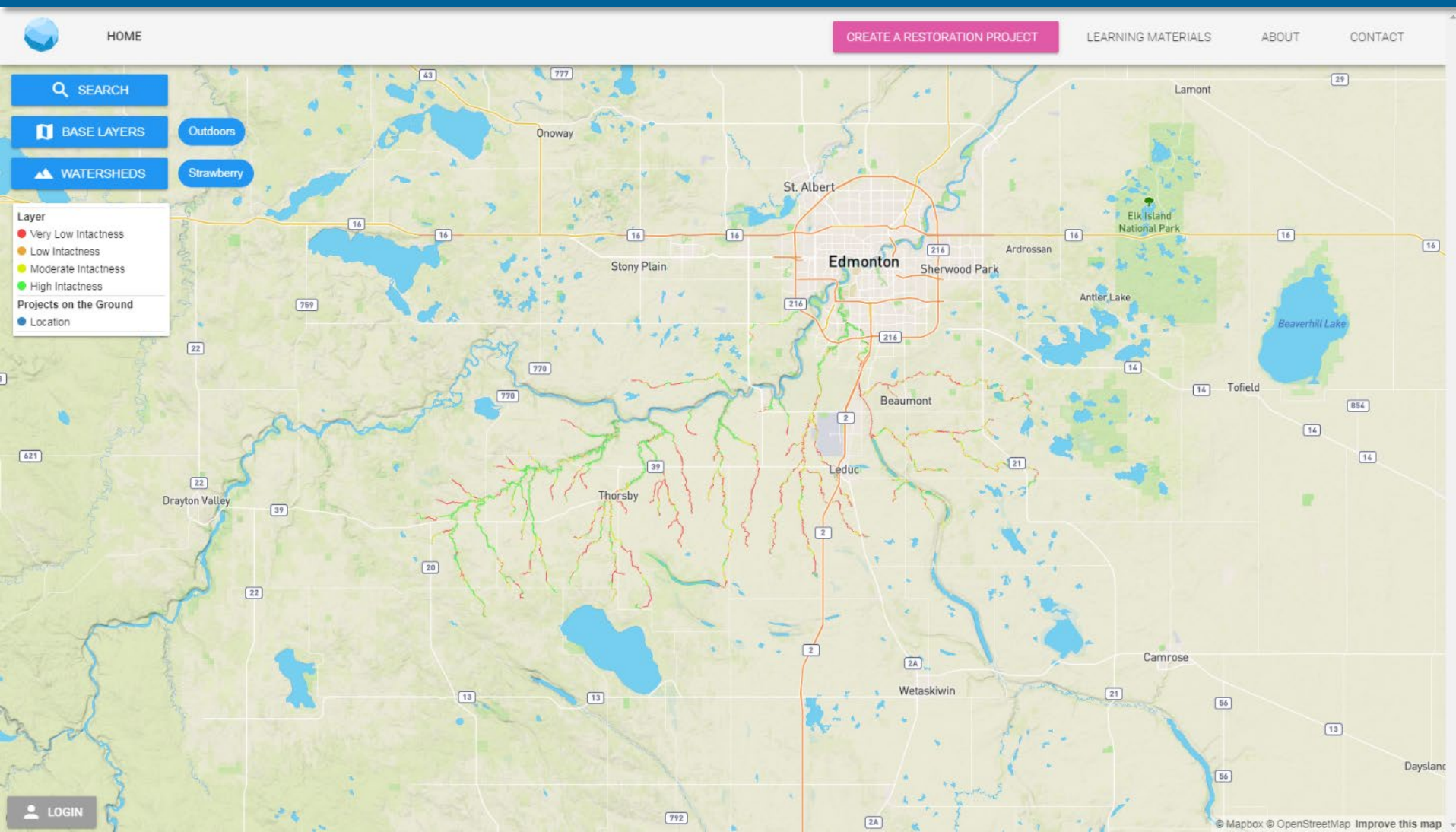


improve the health of your riparian area?

- Don't remove any plants, as they all play an important role in keeping our lake healthy.
- Learn more about the health of your riparian area.
- For larger areas, create a management plan to improve the intactness of the riparian area over time.
- More resources are available at alberta.ca/search/riparian



Riparian Web Portal



Riparian Web Portal



Sharing information and resources:

- What are riparian areas?
- Why are they important?
What functions and benefits do they provide?
- How is riparian health or intactness measured?
- What can you do to help maintain or improve the health of riparian areas?

BATTLE RIVER
WATERSHED ALLIANCE



Riparian Web Portal

Landowner connection (beta version summer 2020)

The screenshot displays the Riparian Web Portal interface. At the top, there is a navigation bar with links for HOME, CREATE A RESTORATION PROJECT, LEARNING MATERIALS, ABOUT, and CONTACT. Below the navigation bar is a map view showing a geographical area with various features. On the left side of the map, there is a sidebar with buttons for SEARCH, BASE LAYERS, WATERSHEDS, and LAYERS. The main content area shows a project titled "Fence (dcairns 1)". To the left of the project details is a large image of a wooden fence. To the right of the image, the project details are displayed, including the title "Conservation", a description of the project, a list of activities, and contact information for the private stakeholder.

HOME

CREATE A RESTORATION PROJECT

LEARNING MATERIALS

ABOUT

CONTACT

SEARCH

BASE LAYERS

WATERSHEDS

LAYERS

Streets

Vermilion

Intactness

Fence (dcairns 1)

TIMELINE

EXIT

Conservation

This project of 12 Hectares was created on Thu Sep 05 2019, is managed by Private stakeholders, and is expected to take 3 weeks.

Activities

- Fencing
- Cattle Exclusion
- Manure Management

No current partners

Private

devin@thecafrms.ca

4037974817

Added Thu Sep 05 2019 13:42:44

BATTLE RIVER
WATERSHED ALLIANCE



Questions?

