



Ghost River Watershed Riparian Health Inventory 2011 Highlights

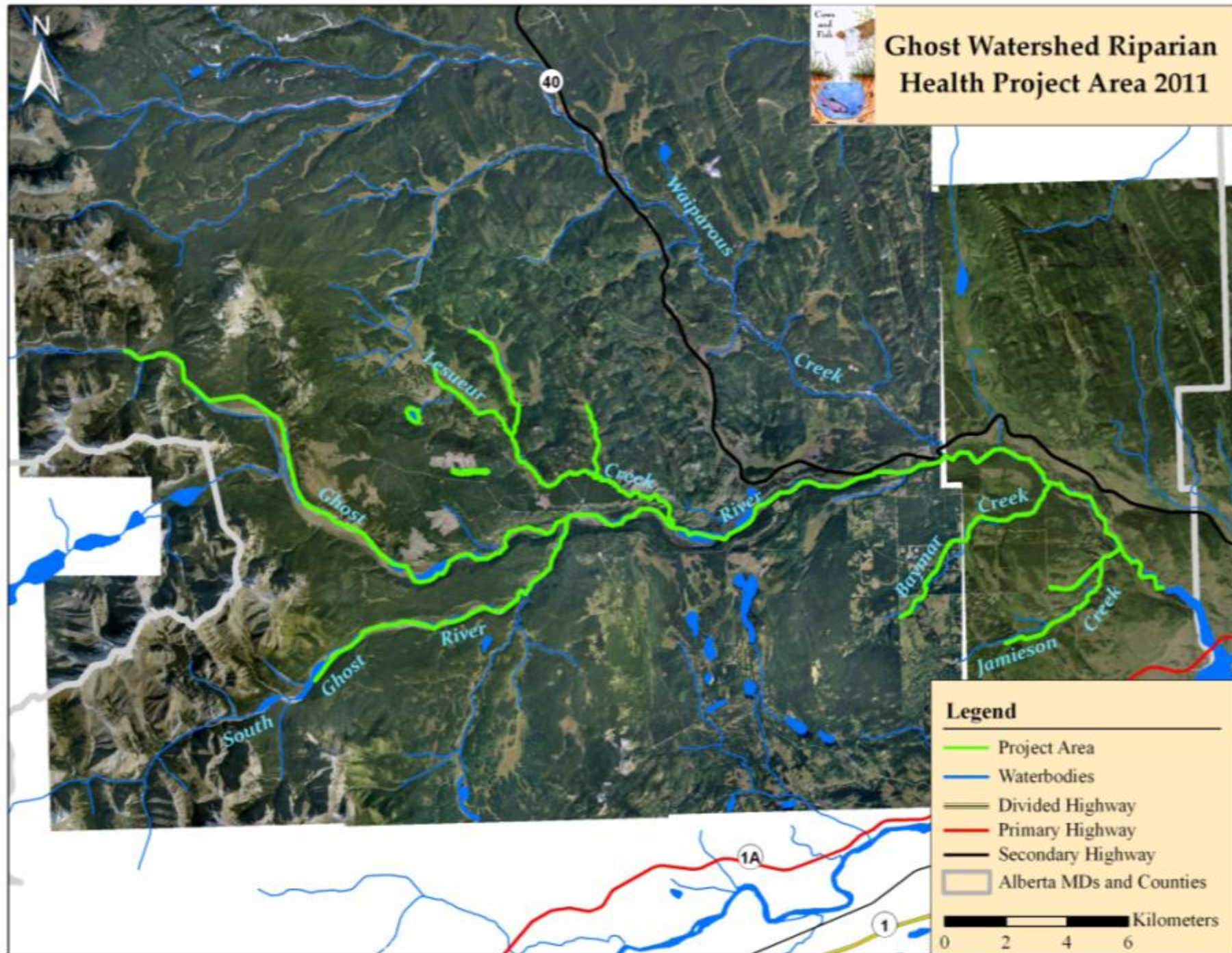
March 10, 2012
Benchlands, AB



Ghost River Watershed 2011

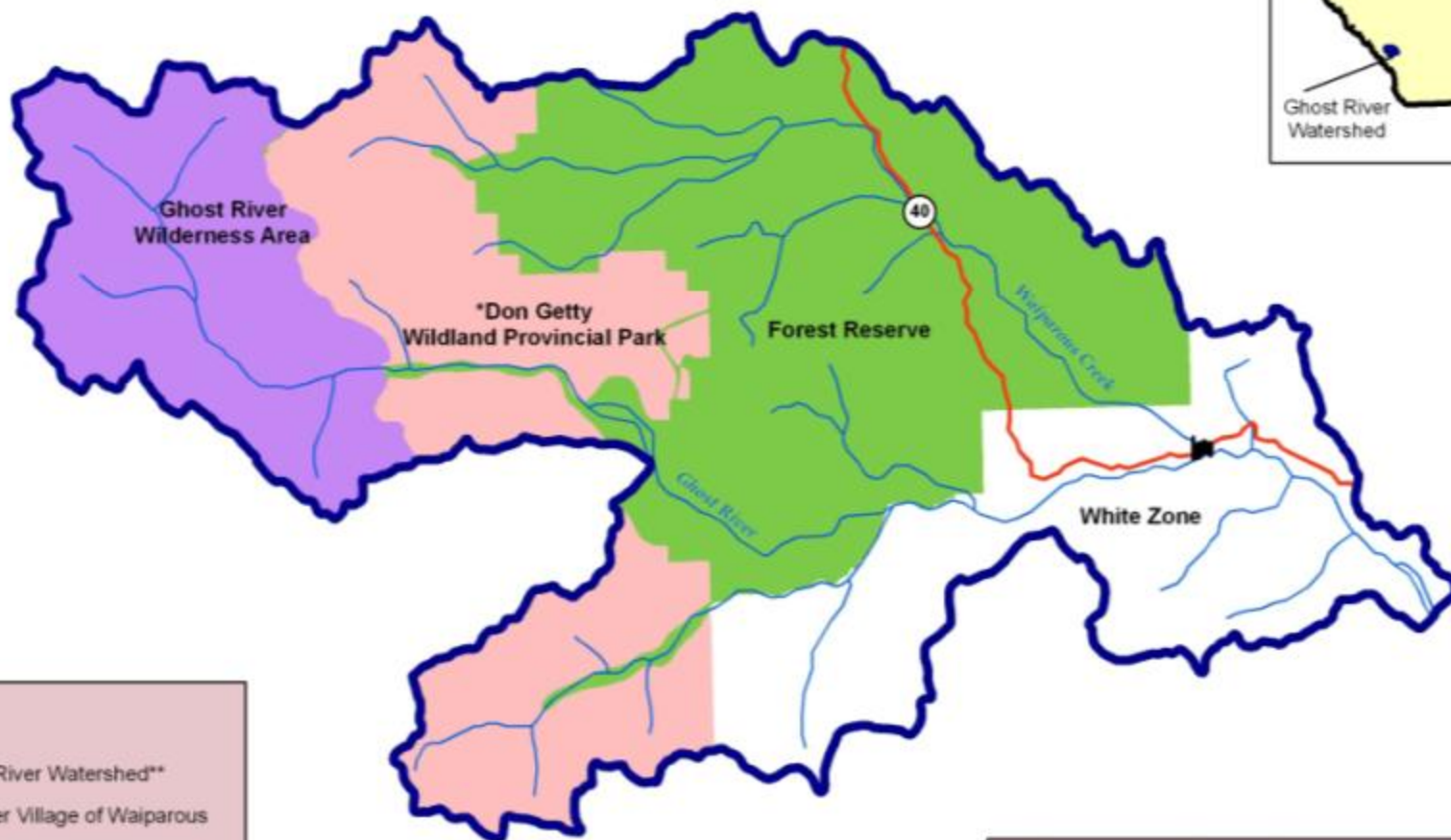
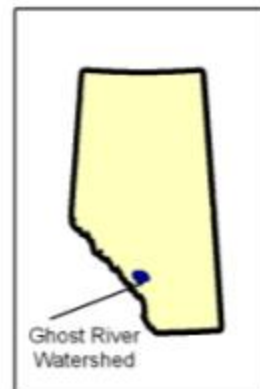


Ghost Watershed Riparian Health Project Area 2011





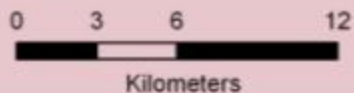
Ghost River Watershed



Legend

-  Ghost River Watershed**
-  Summer Village of Waiparous
-  Forestry Trunk Road
-  Hydrology

Scale:



Data Source: Agriculture and Agri-Food Canada
*Don Getty Wildland Provincial Park - Government of Alberta
**Ghost River Watershed - GeoBase

Created By: Cows and Fish - April 14, 2011

Disclaimer:
This map may contain errors and omissions. Cows and Fish makes no representations or warranties whatsoever as to the accuracy and contents of this map, and accepts no responsibility for any damages, claims of liability whether direct or indirect that may result from its use.

Ri·par·i·an

those “green zones” of
water-loving vegetation
along rivers, streams,
lakes and wetlands



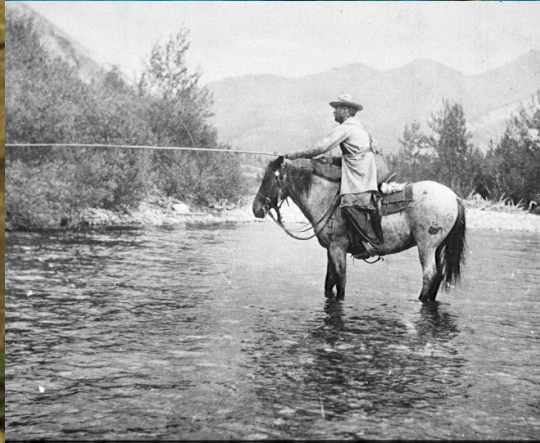
River vs. Stream vs. Wetland



*Influences
on Riparian
Health*



Recreational Activities



Natural Resource Extraction



Addition/Removal of Water



Grazing Animals



Beavers



Riparian Health Inventories



Stratified Site Selection





Ghost River

South Ghost River

Baymar Creek

Jamieson Creek

Tributary to Jamieson Creek



Lesueur Creek

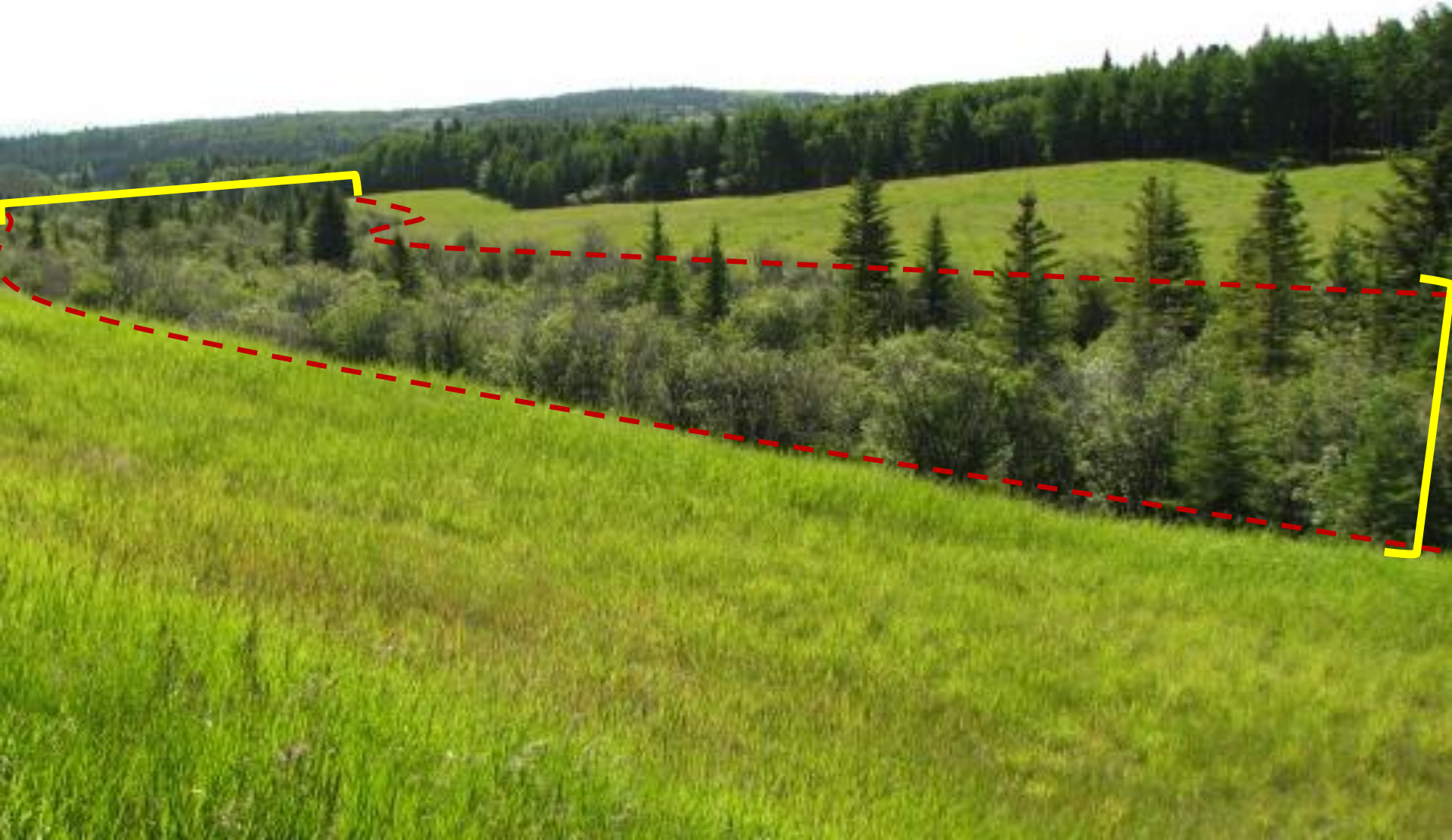
Tributaries to Lesueur Creek

Wetlands near Lesueur Creek

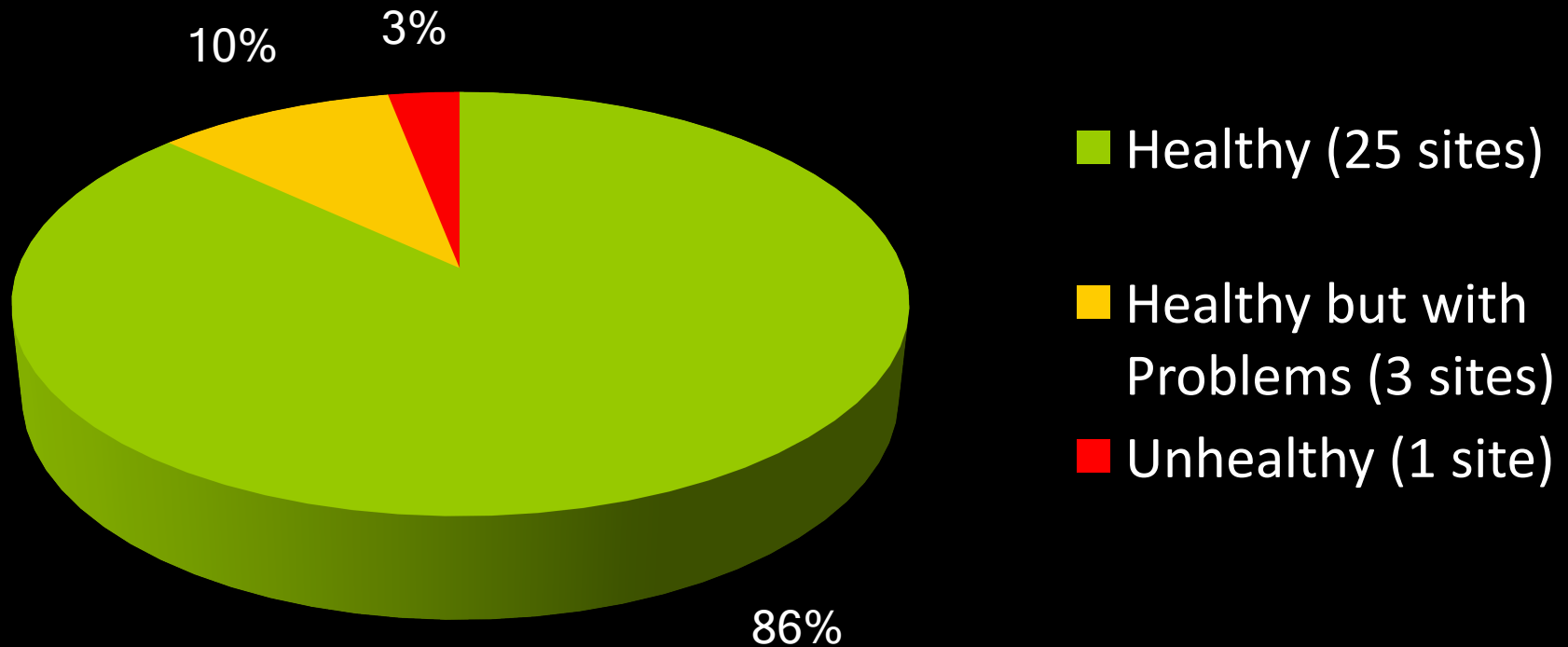
Wetland near Ghost River



Determining Riparian Width & Length

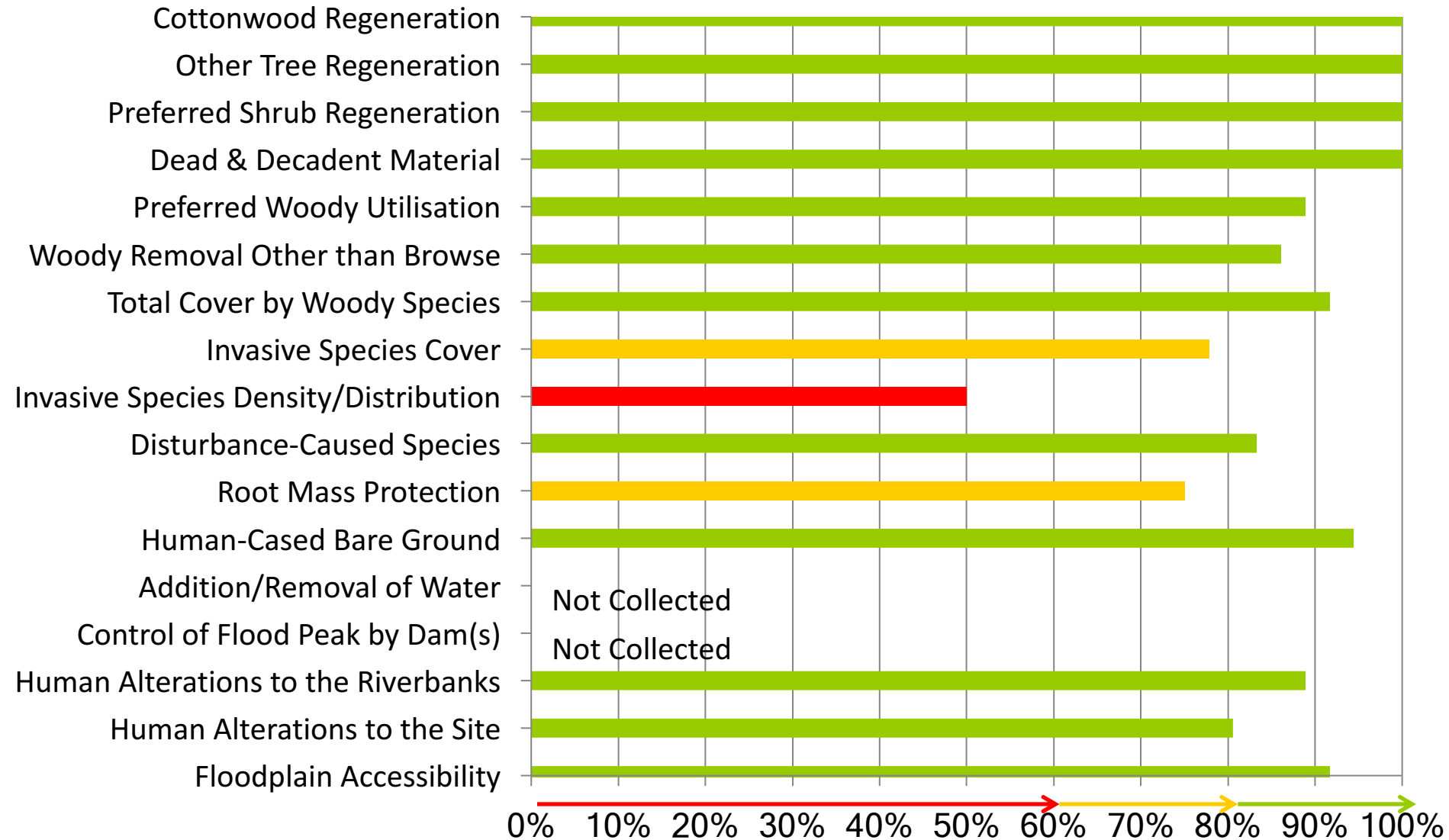


Ghost River Watershed: *Overall Health (29 sites)*



Ghost River

Evaluation of River Health Parameters (12 Sites)





88% Proper Functioning Condition (Healthy)

- 226 plant species identified, including ***5 invasive weeds*** and ***20 disturbance-caused plants***
- 66% covered by trees and shrubs
 - 7% of the riverbank physical altered, 88% due to construction
 - 2% exposed soil, 16% due to human-causes such as recreation



Alec McCay, Alberta Invasive Plants Council factsheet



Yellow clematis
Canada thistle
Perennial sow-thistle
Ox-eye daisy
Yellow toadflax

***A Few Patches Plus Several
Sporadically Occurring Plants***

66-88% of the Riverbank with
Deep Binding Roots



Plant community differs
immediately downstream of the
diversion

***<5% tree cover immediately
downstream of the diversion***

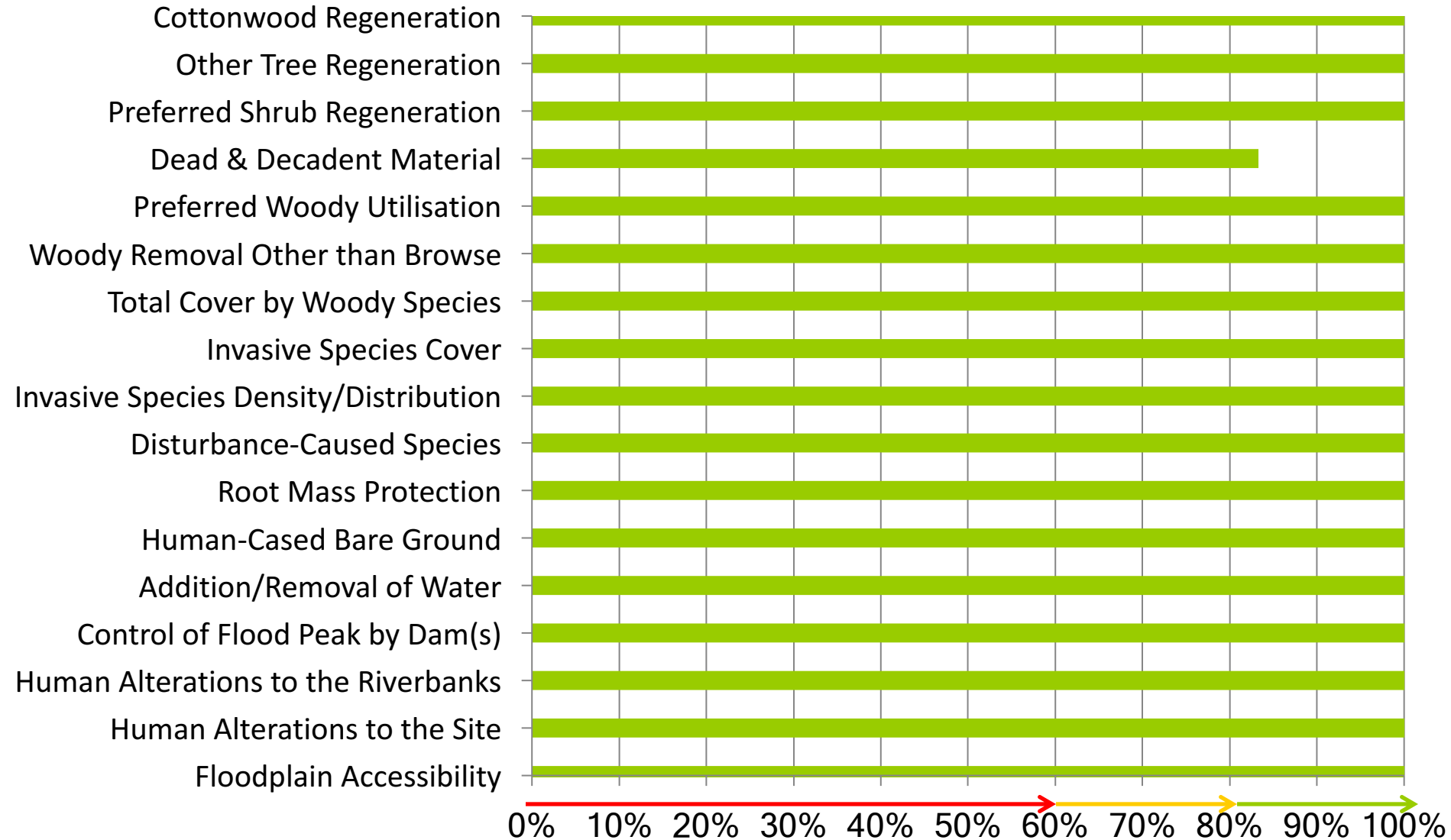


Typical white spruce and willow
community is missing

Increased sedimentation bare
ground upstream of the Ghost
River Dam

South Ghost River

Evaluation of River Health Parameters (2 Sites)



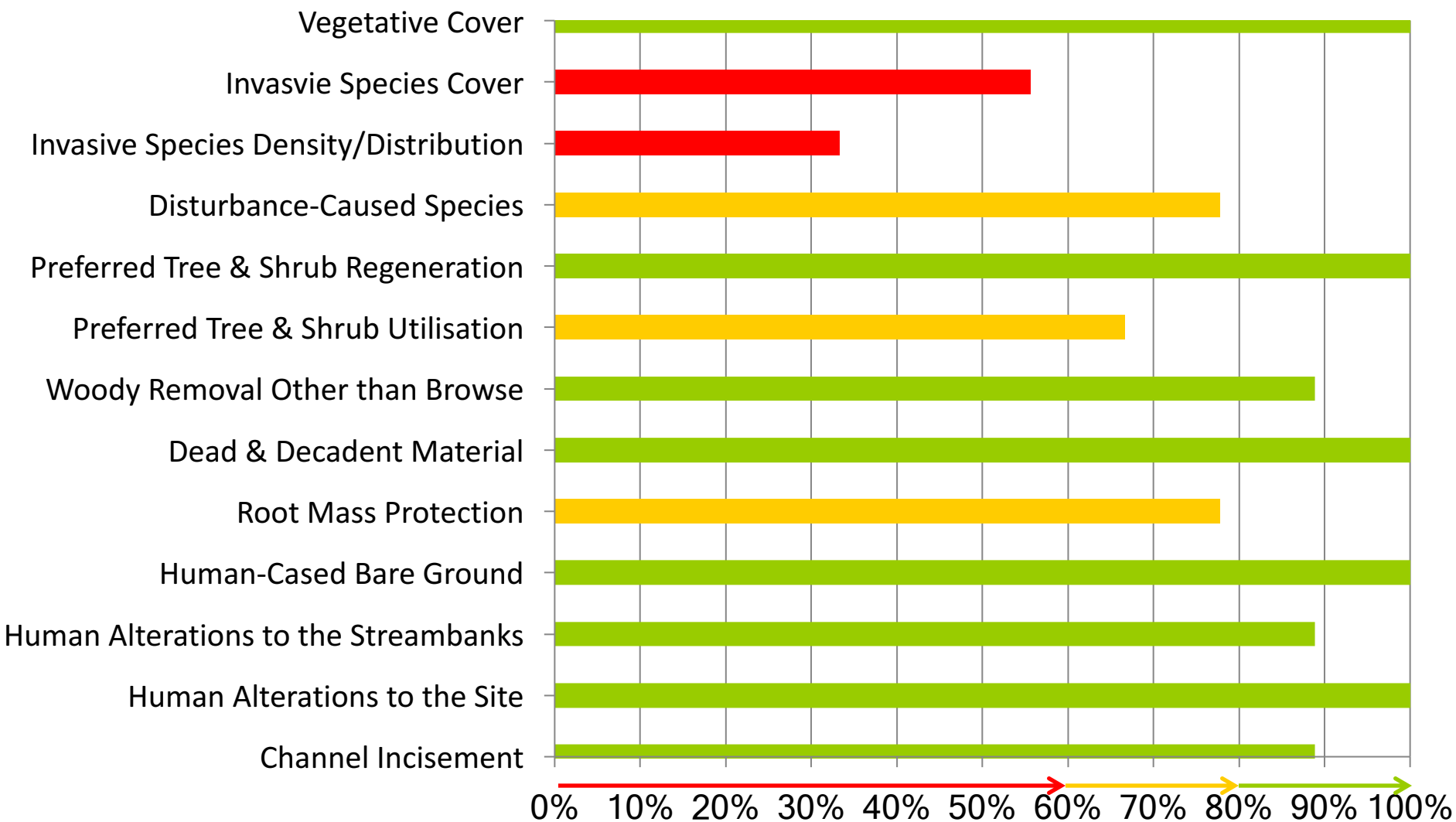


99.5% Proper Functioning Condition (Healthy)

- 86 plant species identified, including *only 4 disturbance-caused plants*
- 80% covered by trees and shrubs
- One site with >5% of the woody community dead and/or decadent
- No human-caused alterations were observed

Baymar Creek

Evaluation of Stream Health Parameters (3 Sites)





86% Proper Functioning Condition (Healthy)

- 116 plant species identified, including ***2 invasive species and 11 disturbance-caused plants***
- 52% covered by trees and shrubs
- 2% of the streambank physically altered due to livestock trampling
- Only a trace amount (<1%) of bare ground observed on one site



3% covered by invasive speices:
Canada thistle &
Perennial sow-thistle

***Scattered Individual Plants &
Several Well Spaced Patches***

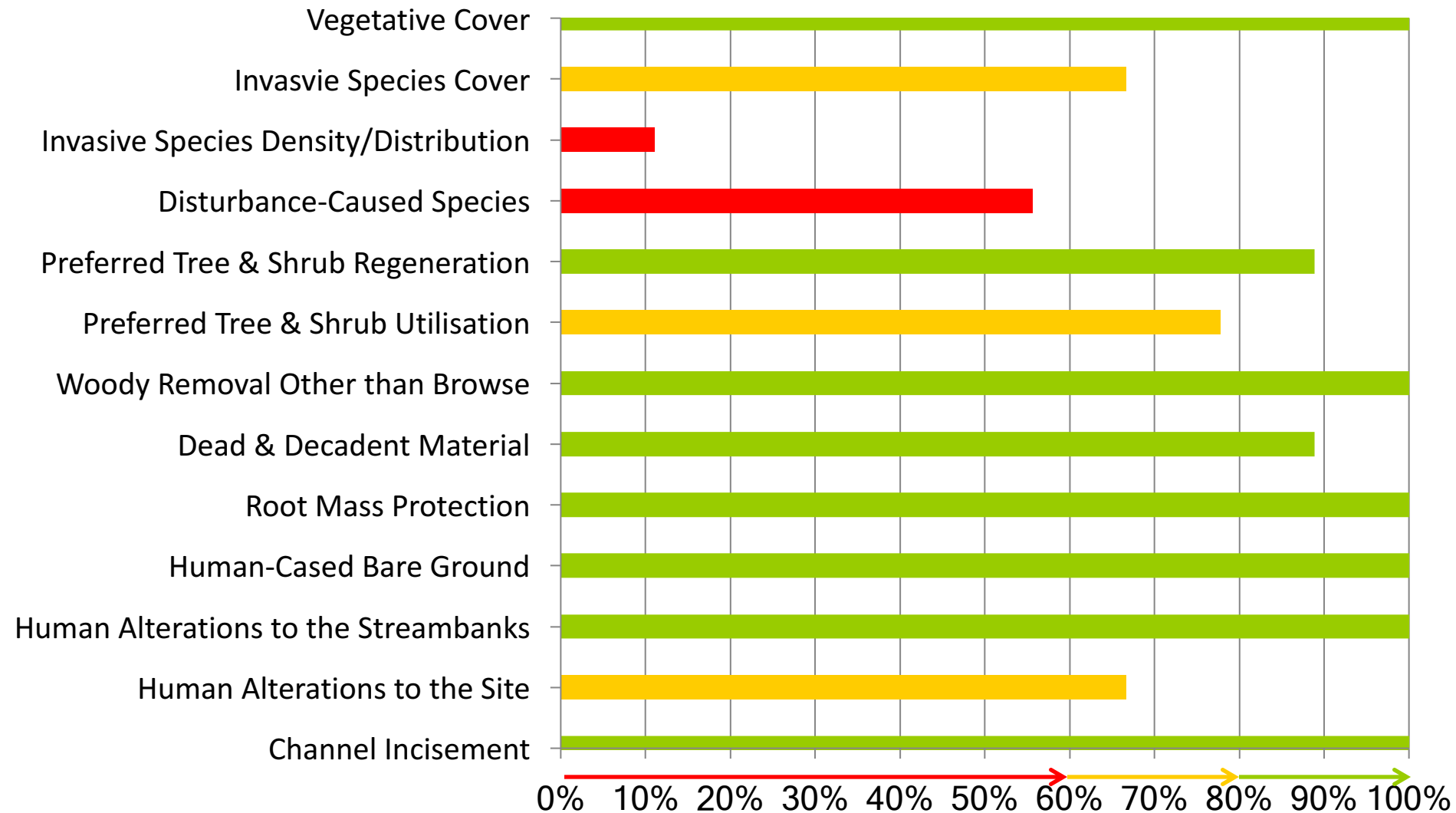


Disturbance-caused plants cover
8% of the riparian area

Browsing of preferred woody
species is light overall

Jamieson Creek & Tributary to Jamieson Creek

Evaluation of Stream Health Parameters (3 Sites)





87% Proper Functioning Condition (Healthy)

- 101 plant species identified, including ***2 invasive species and 13 disturbance-caused plants***
- 61% covered by trees and shrubs
 - **12% of the riparian area is physically altered by human activities**
- Only a trace amount of bare ground was observed



<1% covered by Canada thistle &
Perennial sow-thistle

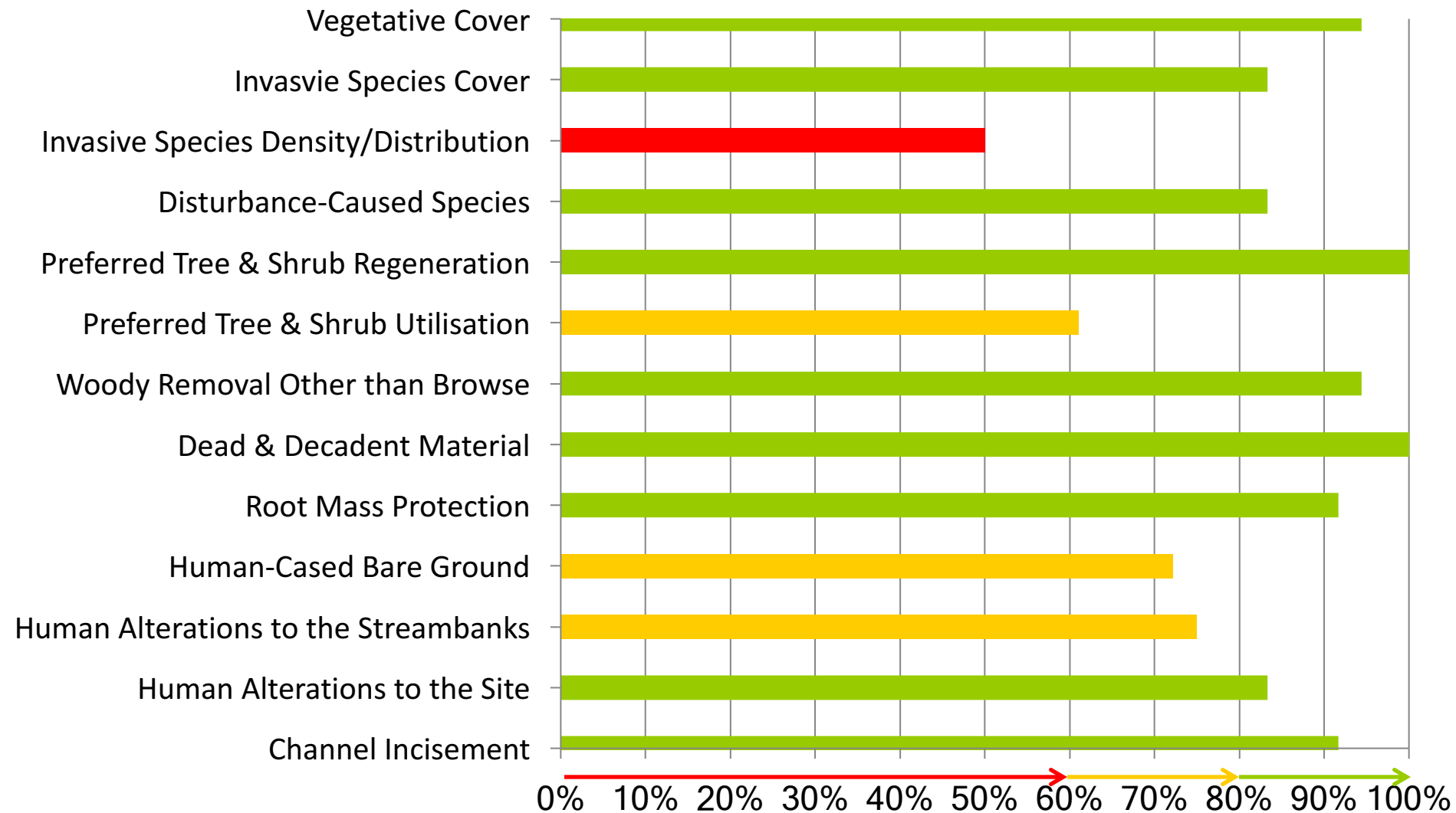
Invasive species found in a few
patches as well as several
scattered individuals

***Disturbance-caused plants
cover 27% of the riparian area***

Browsing of preferred woody
species is light overall

Lesueur Creek & Tributaries to Lesueur Creek

Evaluation of Stream Health Parameters (6 Sites)





85% Proper Functioning Condition (Healthy)

- 169 plant species identified, including *2 invasive species and 14 disturbance-caused plants*
- 53% covered by trees and shrubs
 - 6% of the riparian area is physically altered due to recreation
- 2% of the riparian area is bare ground



Canada thistle was found in a few patches as well as several scattered individuals

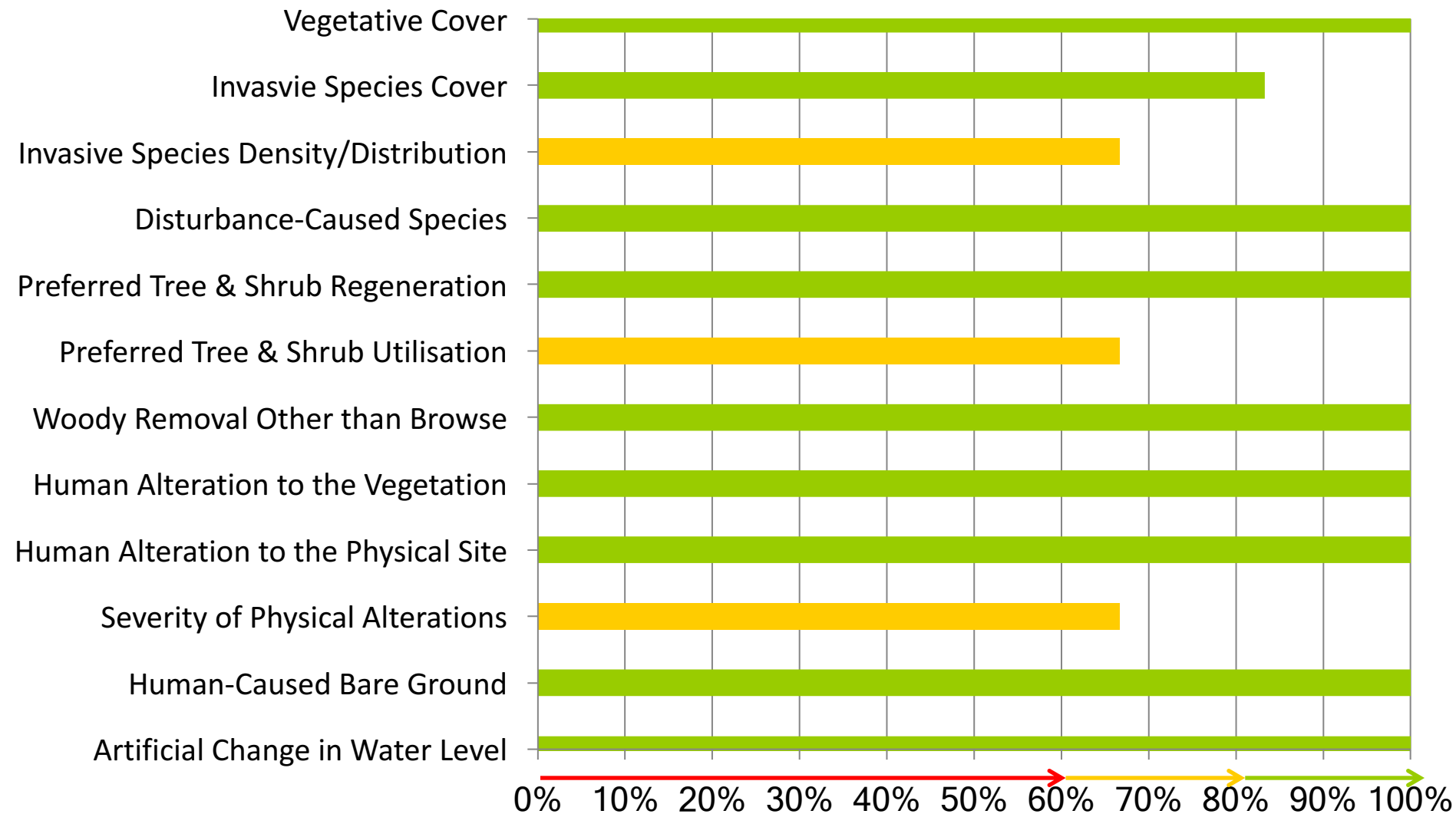
Browsing of preferred woody species is light overall



Recreational activities and human-caused bare ground are apparent within the Lesueur Creek watershed

Unnamed Wetlands near Lesueur Creek

Evaluation of Wetland Health Parameters (2 Sites)





95% Proper Functioning Condition (Healthy)

- 39 plant species identified on one wetland and 79 identified on the other
- *only 1 invasive and 6 disturbance-caused species*
- 82% covered by trees and shrubs
- alteration to the vegetation was observed on only one site



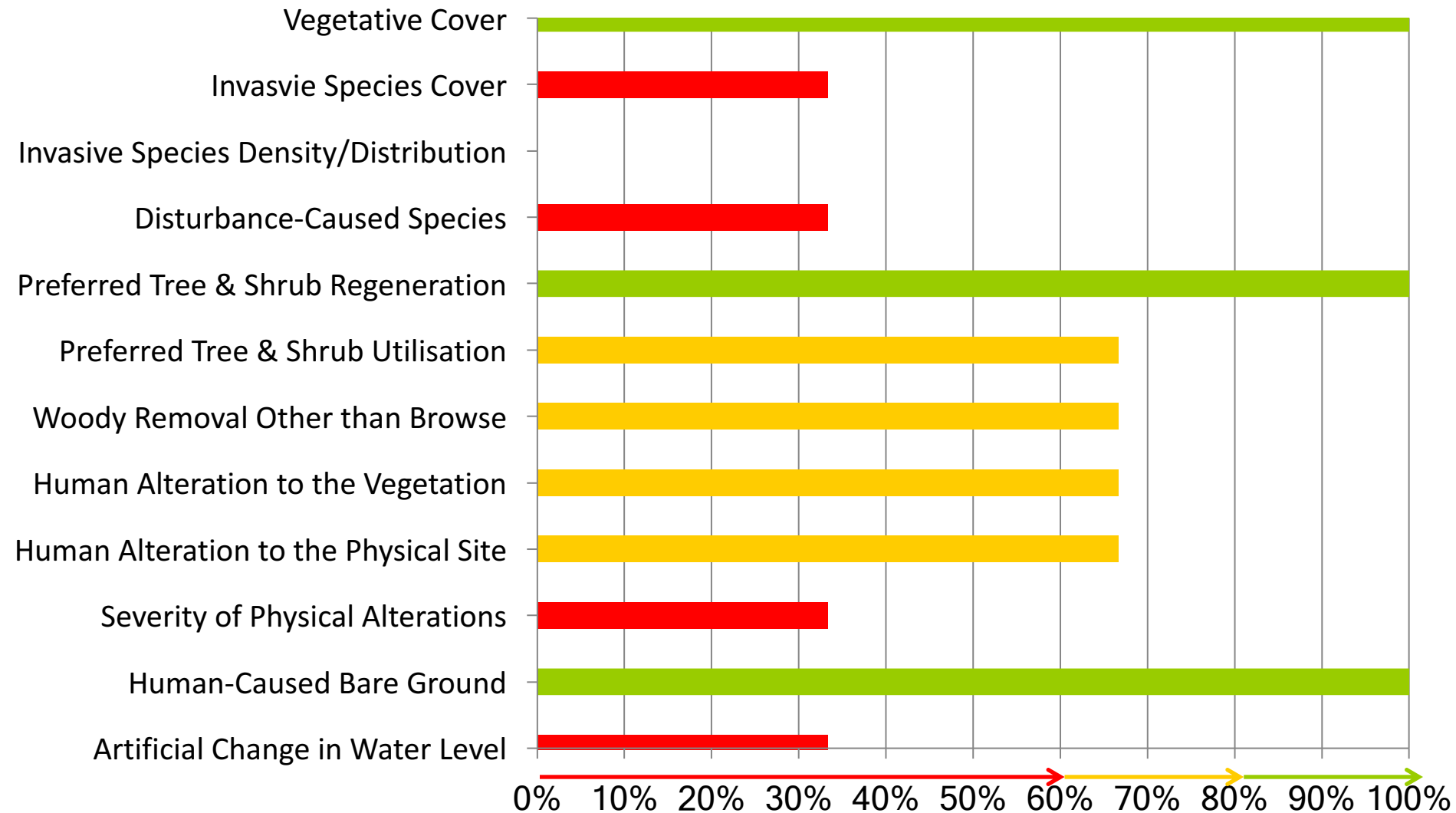
Canada thistle was found on one wetland in a single patch as well as a few scattered individuals

Browsing of preferred woody species is light overall

Few physical alterations were observed on either site and severity was only slight

Unnamed Wetland near Ghost River

Evaluation of Wetland Health Parameters (1 Site)





63% Functional at Risk (Healthy, but with Problems)

- 79 plant species identified, including ***3 invasive and 12 disturbance-caused species***
- 40% covered by tree and shrubs
 - 10% of the vegetative community altered by human activities
- 10% of the site physical altered as well



Garden bluebell, Canada thistle,
and Perennial sow-thistle cover
>3% of the riparian area

A few patches and several
sporadically occurring individuals

***40% covered by disturbance-
caused species***



Physical alterations are
moderately severe

Water level has increased due to
the berm



So How Do I
Look?

Healthy



Healthy, but with Problems



Unhealthy







Alec McCay, Alberta Invasive Plants Council factsheet



Flickr: manypetals



Andy Fyon, www.ontariowildflowers.com

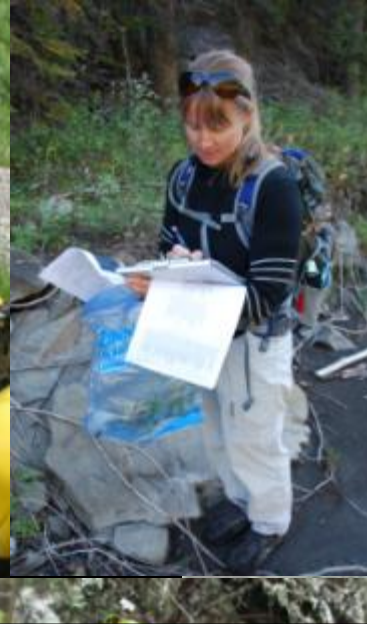


Michael Shephard, www.ab-conservation.ca



Doug Waylett





Your Cows & Fish friends that took part in this project...



A close-up photograph of a brown dog's face, focusing on its eyes and snout. The dog has a dark brown coat and large, expressive orange-brown eyes. Its snout is dark and textured. The background shows a patch of green grass and sandy ground. A semi-transparent dark grey rectangular box is positioned on the right side of the image, containing the text "Thank You!" in a bold, white, sans-serif font.

**Thank
You!**