Introduction to the

Clean Water Prioritization Tool

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It's Our Nature *to Know*

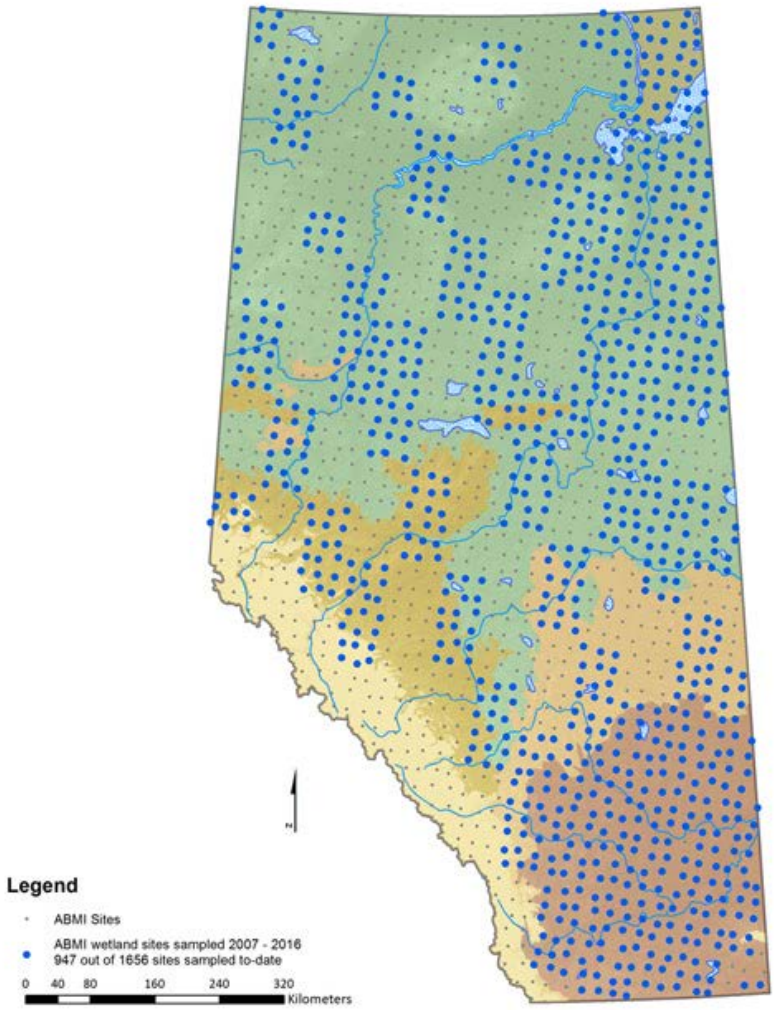
Alberta Biodiversity Monitoring Institute

About the ABMI

Scientific, not-for-profit organization

Produce publicly accessible data on Alberta's environmental systems

Core work is biodiversity monitoring



About the ABMI

Research and develop other informational tools:

- Human Footprint Inventory
- Vegetation
- Surface Water
- Ecosystem Services

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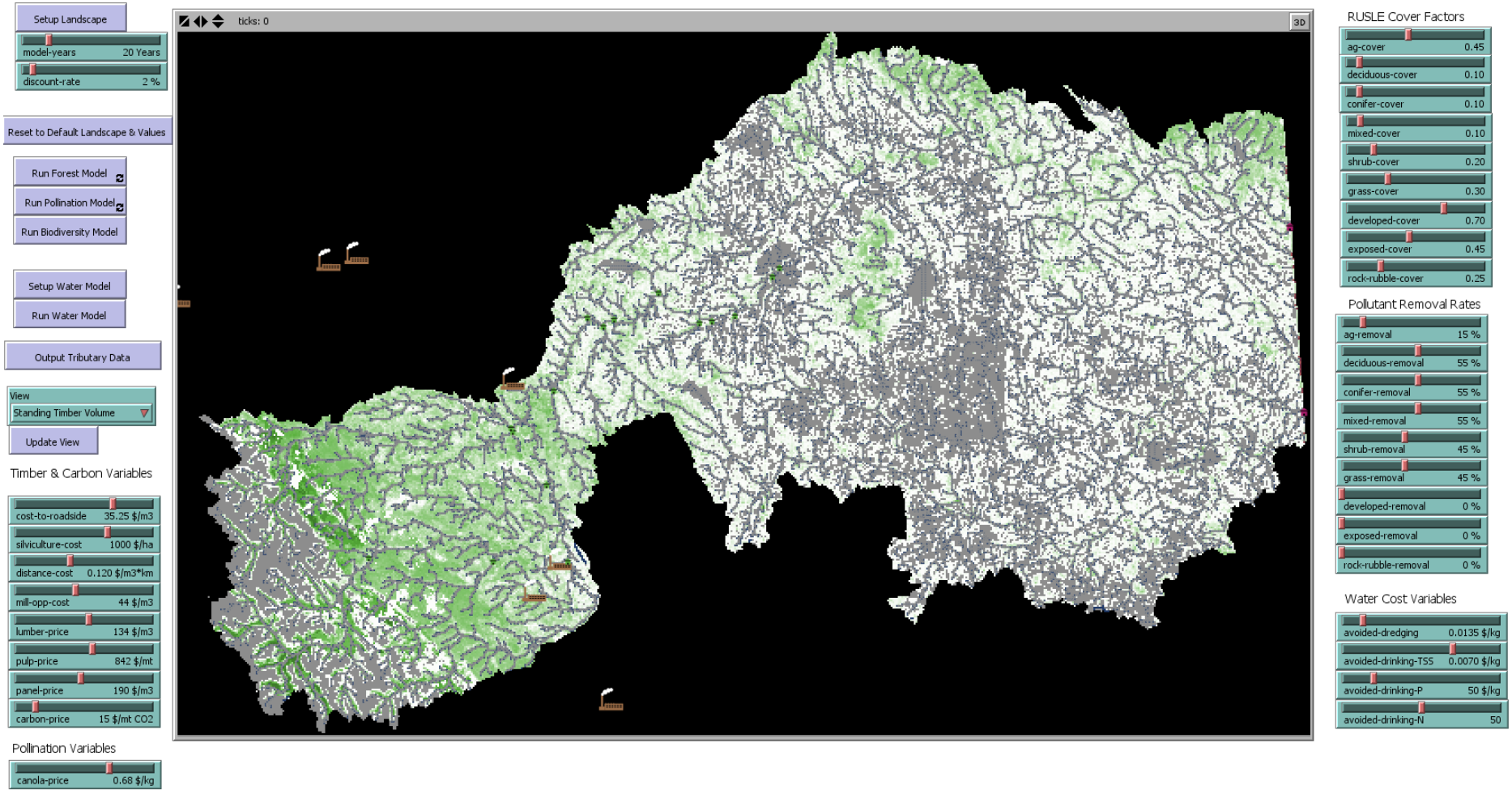
Ecosystem Services Model Interface



Habib et al. 2016. Impacts of land-use management on ecosystem services and biodiversity: an agent-based modelling approach. PeerJ 4:e2814.

Water Purification

Clean Water: Important goal among many municipalities, watershed groups, etc.

Where are the sources & sinks for water pollution?

1. Identify areas contributing to nutrient and sediment runoff (through surface runoff and erosion)

2. Identify important areas for removing these substances

Problem: too complex! Need more practical guidance.

Clean Water Prioritization Tool

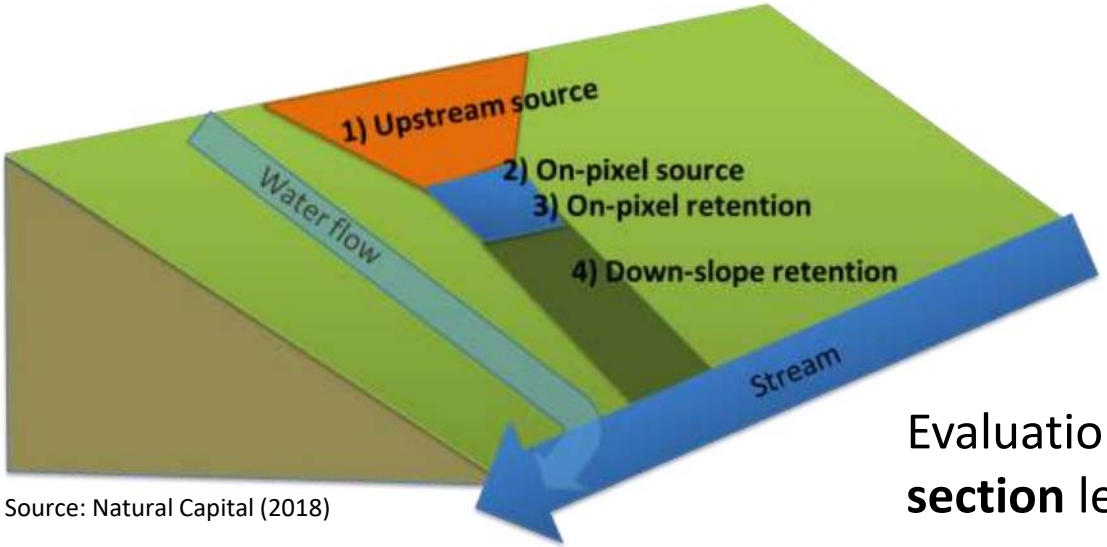
Boots on the ground – where do you start if you want to improve water quality in your region?

Decision-support tool

- Nutrient runoff reductions
- Prioritize placement of projects
- Information on a management-relevant scale
- Recognize importance of local expertise

Clean Water Prioritization Tool

1) Upstream source
2) On-pixel source
3) On-pixel retention
4) Downslope retention



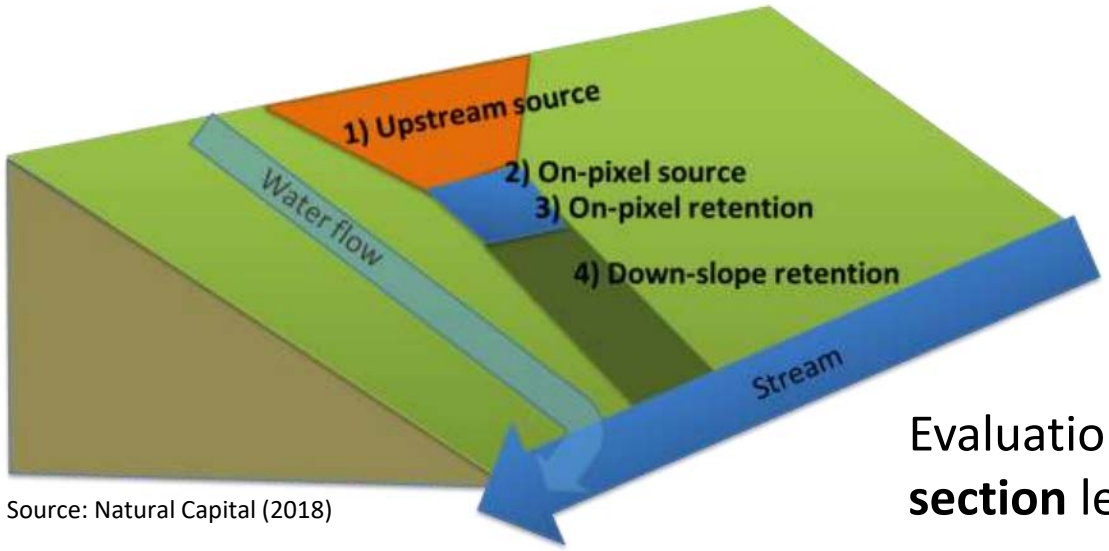
Source: Natural Capital (2018)

Evaluation done at the **quarter-section** level

Clean Water Prioritization Tool

1) **Upslope source**
2) On-pixel source
3) On-pixel retention
4) **Downslope retention**

How important is this area?



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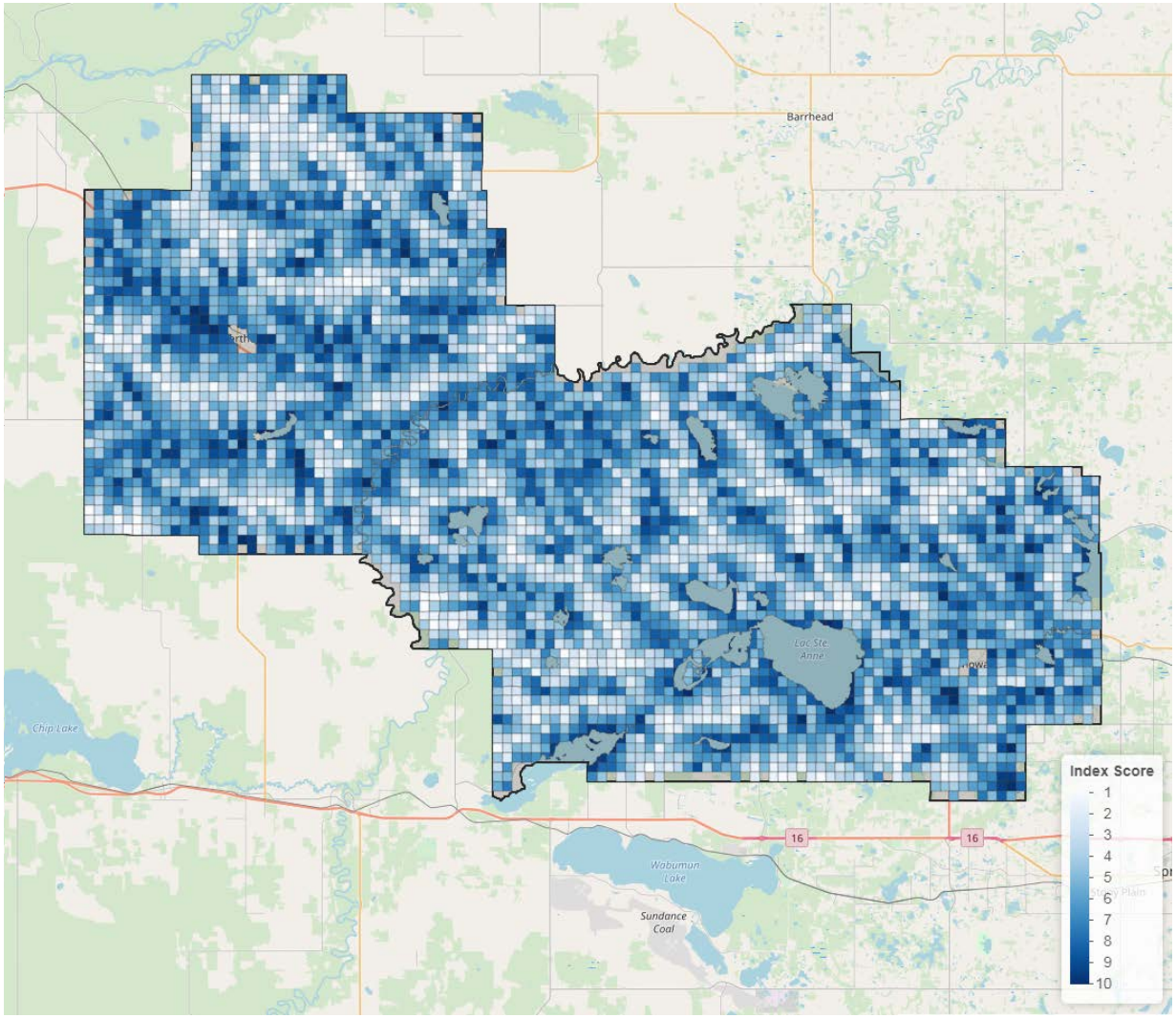
CWPT Demonstration



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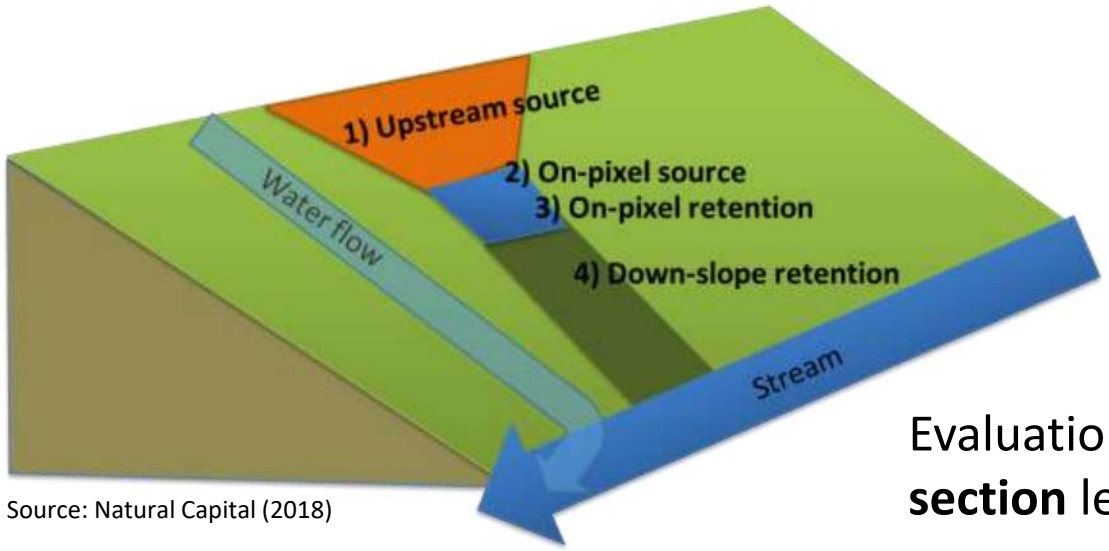

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And which management actions are appropriate?

Conservation
vs.
Restoration / Mitigation

Evaluation done at the **quarter-section** level

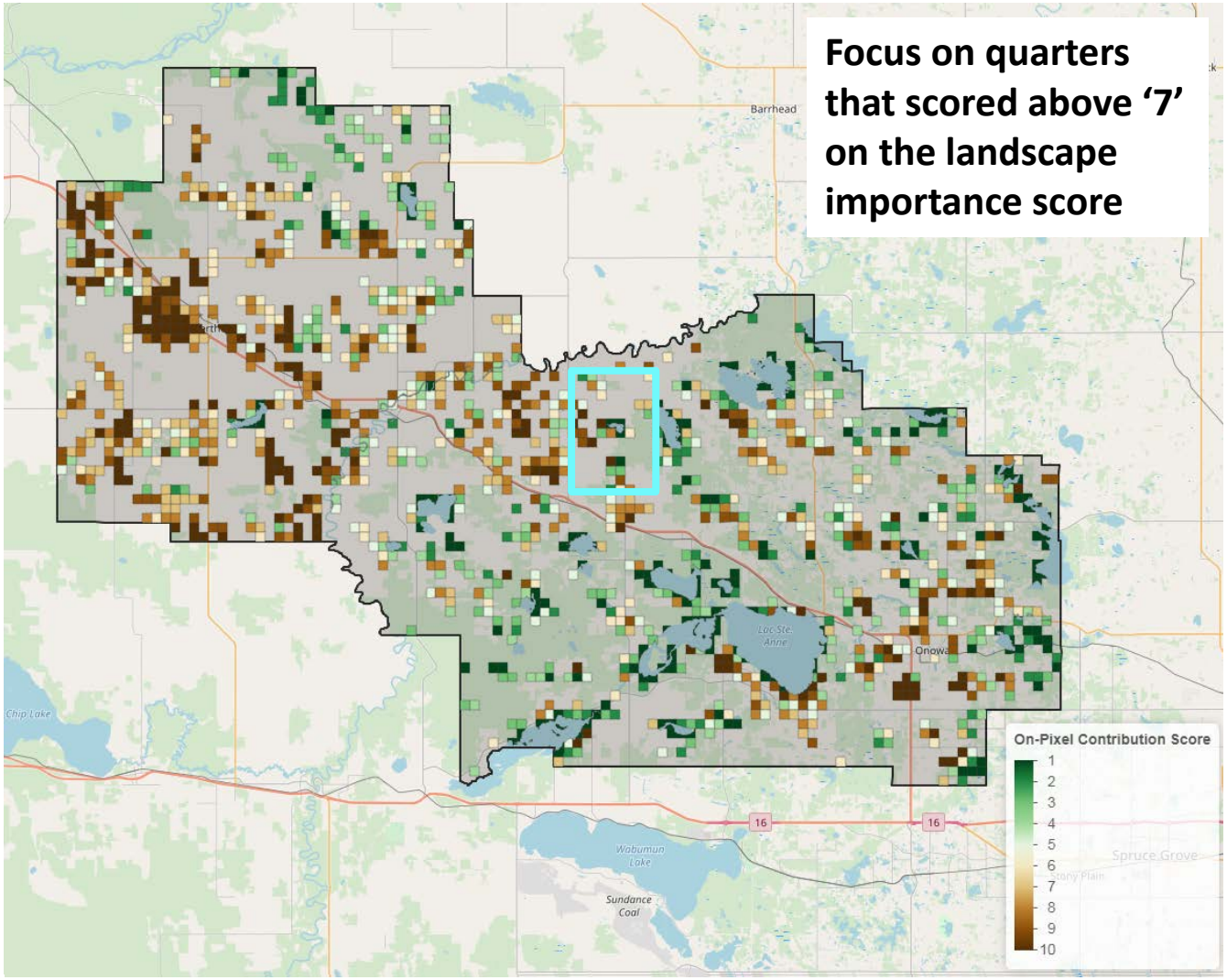
CWPT Demonstration

Green quarters –

Management oriented towards *conservation* of existing landcover

Brown quarters –

Management oriented towards *restoration* activities



Using the Tool

What are the appropriate management options?

Importance of local knowledge and expertise

Conservation

Keep native vegetation

Protect riparian areas

Fencing off sensitive areas

Restoration

Plant native vegetation

Create buffer strips

Fertilizer management

Get in touch!

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