WET AREAS MAPPING AT EMEND

TESTING UTILITY AND EXPANDING APPLICATIONS

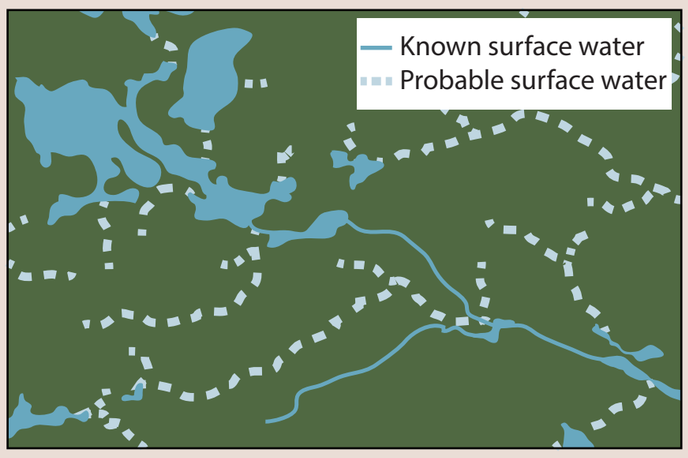
Soil moisture drives many patterns in the upland boreal forest. It affects vegetation, productivity, soil processes, and even wildlife habitat. Wet Areas Mapping is a tool originally developed to reduce operational risk, but can it be used as a sophisticated predictive tool of ecosystem function?

What is Wet Areas Mapping (WAM)?

Wet Areas Mapping uses high resolution, remotely-sensed terrain data to predict the likelihood of wet soils and a detailed stream network. These maps provide several useful outputs:

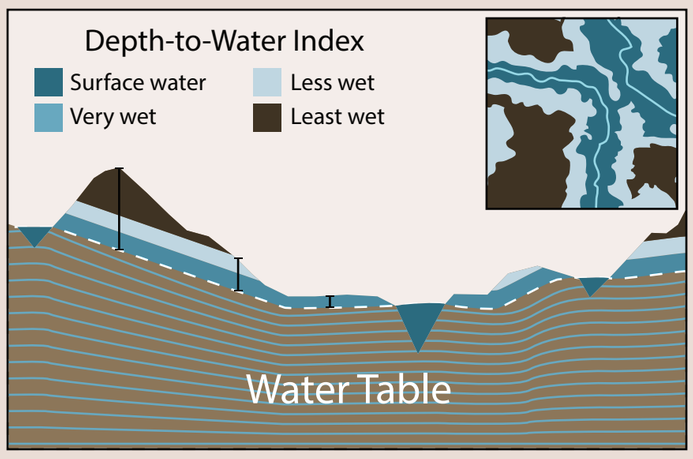
Likely Areas of Surface Water

Includes ephemeral features



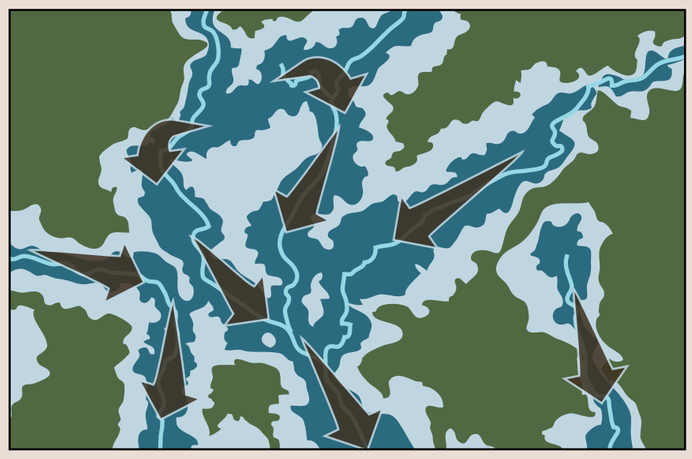
Depth-to-Water Index

Likelihood of wet soils



Flow Direction

Visual maps of water flow



Discovering WAM's Hidden Potential

The information provided by WAM has the potential to inform landscape management for many values—but first, we need to put it to the test. To that end, researchers are testing relationships between depth-to-water and important forest characteristics like biodiversity, carbon dynamics, and productivity.

Biodiversity patterns

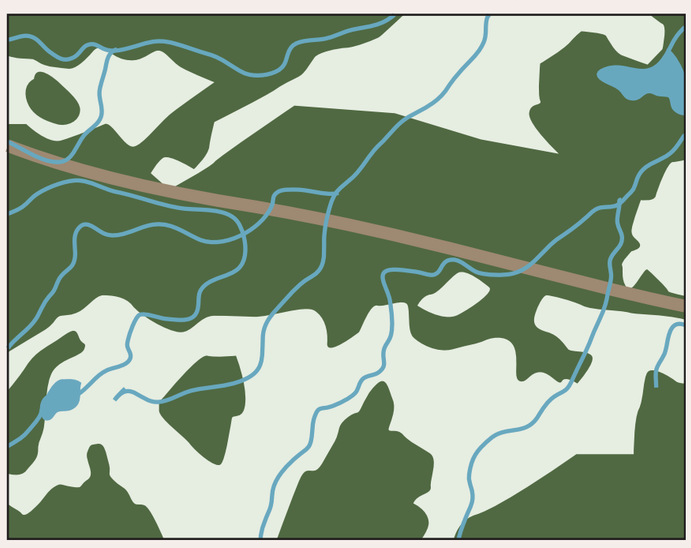
Ecosystem function

Forest productivity

This research will inform how WAM is used for years to come...

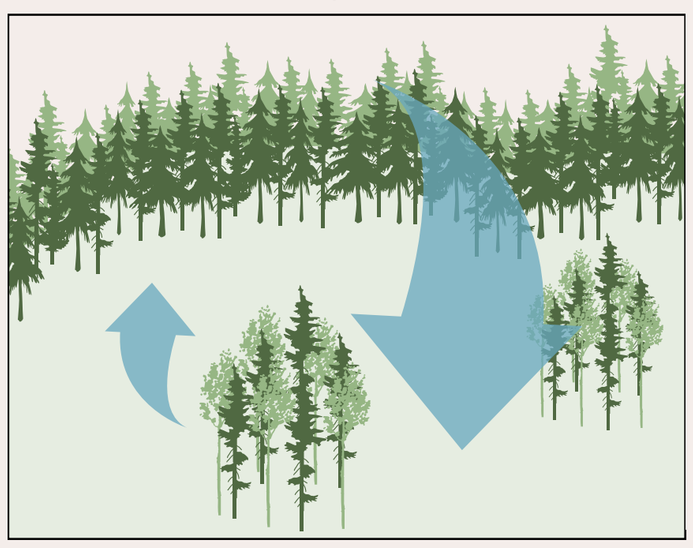
Predict & protect biodiversity

Retention and reserves to protect biodiversity



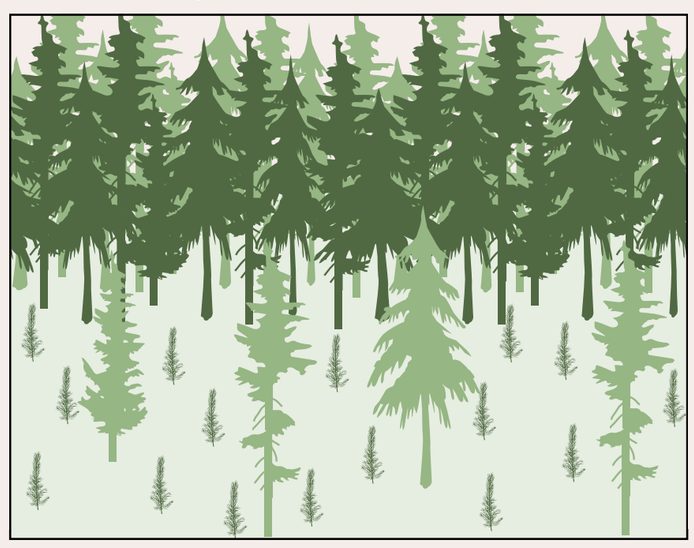
Sequester more carbon

Tailoring harvests to a site's carbon processes



Regenerate faster

Take advantage of naturally productive sites



... with exciting potential applications.

Conservation Offsets | **Carbon Credits** | **Less Intensive Silviculture**

Research at EMEND is made possible by our many partners and funders:

UNIVERSITY OF ALBERTA DEPARTMENT OF RENEWABLE RESOURCES

Alberta Agriculture and Forestry

NSERC CRSNG

Natural Resources Canada

DMI

CANFOR

Wet Areas Mapping is a collaborative project:

UNIVERSITY OF ALBERTA DEPARTMENT OF RENEWABLE RESOURCES

Alberta Agriculture and Forestry

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Go to http://bit.ly/access-WAM to request WAM data.