NEPTUNE

NEPTUNE

Landscape managers in forestry, energy, parks and other sectors need to manage their disturbance activities in ways that help maintain ecosystem processes and productivity.

Accepted wisdom is that if we can model human disturbance patterns after those of Mother Nature, we are more likely to sustain important biological functions and structures.
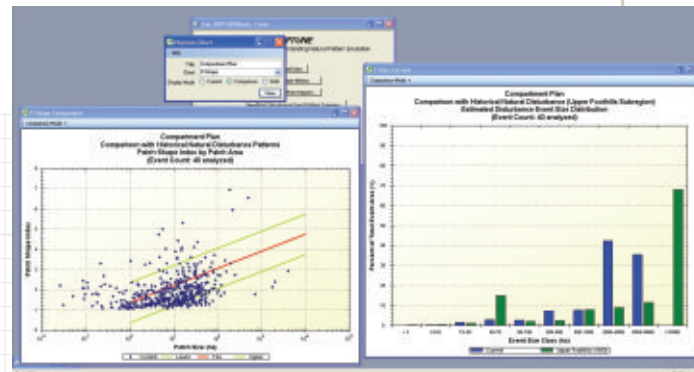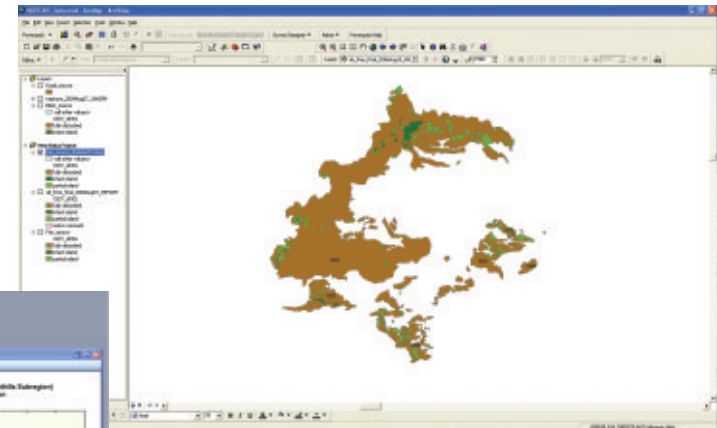
NEPTUNE - "Novel Emulation Pattern Tool for Understanding Natural Events" - is the first tool in Canada that allows the user to evaluate just how "natural" past or proposed disturbance activities are - with the click of a button. Modeling human disturbance patterns after those of Mother Nature just got a whole lot easier.

An Evaluation Tool

It's one thing to adopt the concept of emulating natural disturbance patterns, but quite another to objectively translate that concept into reality.

NEPTUNE provides objective evaluation of individual or cumulative disturbance activities in western boreal Canada against historic wildfires.

With **NEPTUNE**, the user can evaluate how close and in what ways human disturbance activities vary from, or match, historic events.

NEPTUNE

Goes Anywhere

NEPTUNE self-installs on any PC with ARC GIS software and incorporates a simple, universal spatial language with region-specific, natural-range-of-variability data for 10 key pattern metrics

- Event sizes
- Event shapes
- # disturbed patches per event
- % event area in largest disturbed patch
- Disturbed patch shapes
- % of event area in matrix remnants
- % of event area in island remnants
- % of event area in total remnants
- % of disturbed patch area in island remnants
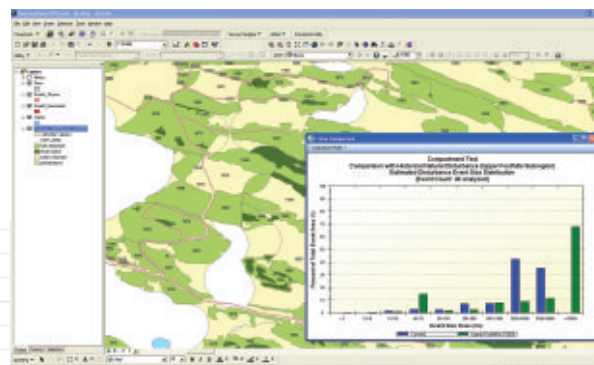- Sizes of island remnants.

How will it help?

NEPTUNE will assist anyone responsible for:
- Setting and evaluating prescribed burn objectives
- Performing fast, accurate landscape disturbance history assessments
- Designing more "natural" timber harvest activities
- Simple and fast assessment of compliance with coarse filter pattern obligations
- Evaluating the relative impact of different disturbance sources - harvesting, wildfire, linear features, etc.)

NEPTUNE will work on any landscape, but the 10 pattern metrics are currently (November, 2009) calibrated for all forested areas in Alberta and southern Saskatchewan.

How do I get it?

Access to NEPTUNE is now available to corporate, government and academic organizations, in forms ranging from full membership to time-limited access to full-service disturbance planning solutions for user-defined objectives.

To learn more:

Dr. David Andison,
Program Lead,
Natural Disturbance Program
Foothills Research Institute
Hinton, Alberta, Canada

Ph: (780) 865-8330
E-mail: andison@bandaloop.ca
Website: www.foothillsresearchinstitute.ca