



BURNP3+

A SIMULATION SANDBOX FOR MANAGING FIRE LANDSCAPES

CANADIAN WILDLAND FIRES ARE BURNING WITH INCREASING FREQUENCY AND INTENSITY. THERE IS A PRESSING NEED FOR TOOLS THAT CAN HELP MANAGE FIRE LANDSCAPES AND REDUCE RISK.

BURNP3+ IS A USER-DRIVEN LANDSCAPE MANAGEMENT TOOL

BurnP3+ provides a snapshot of fire hazard under present-day and hypothetical conditions. It estimates the likelihood of fire and its magnitude if it happened, so that managers can better reduce fire risk.

Developed by the Canadian Forest Service, BurnP3+ combines fire ignition, weather and other burning conditions with a fire growth model on the SyncroSim platform.

LAND MANAGERS AND CONSERVATION PRACTITIONERS CAN USE BURNP3+ TO EXPLORE A RANGE OF POSSIBLE FUTURES, VISUALIZING HOW DIFFERENT MANAGEMENT DECISIONS OR ENVIRONMENTAL CONDITIONS INFLUENCE BURN PROBABILITY.

APPLICATIONS



1 Prevention & Mitigation: Compare before/after snapshots of fire hazard under different fuel treatments.



2 Watershed Planning: Describe landscape changes that impact ecology, water availability and quality.



3 Baseline Fire Potential Assessments: Assess how the current landscape will respond to fire for long-term strategic planning.



4 Development Studies: Explore how land-use change would affect the area's fire regime.



5 Climate Change Impact Studies: Account for how the weather patterns driving fire will change over time, plus subsequent carbon emissions.



6 Restoration and Conservation: Delineate where fire hazard overlaps with critical habitat.



7 Forest Management: Integrate with forest management planning tools to target zones for forest harvest, planting, or reclamation.



Stochastic models allow randomness to consider a variety of outcomes based on user-defined inputs, rather than the rule-based reproducible outcomes of deterministic models. Because of its complexity, BurnP3+ is excellent when exploring possible scenarios but is not suitable for real-time, emergencies, active wildfire suppression or evacuation efforts.



YES, BURNP3+ IS FOR LONG-TERM LAND MANAGEMENT PLANNING.



NO, BURNP3+ DOES NOT PREDICT SINGLE FIRE EVENTS.

PROCESS

DIFFERENT MANAGEMENT STRATEGIES ALTER THE FIRE REGIME OF A LANDSCAPE. EXAMINING THE EFFECTS OF DIFFERENT DECISION-MAKING SCENARIOS SUPPORTS ACTIONS THAT CAN REDUCE FIRE HAZARD AND BENEFIT LONG-TERM PLANNING.



Fuel Types



Weather



Ignition

With BurnP3+, users can change inputs to compare the outcomes. Compare fire hazard of different areas or timeframes by altering the fuel types, fire parameters, ignition distribution, or weather patterns.



Inputs



Timeframe

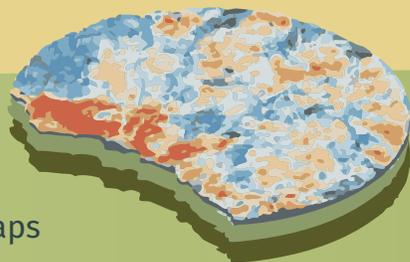


Location



PRODUCTS

- Burn probability maps
- Fire behaviour metrics (rates of spread, fire intensity, and fuel consumption)
- Simulated fire perimeters



To learn more or use BurnP3+, visit: burnp3plus.ca



Canadian Conservation and Land Management

TO LEARN MORE ABOUT BURNP3+ CHECK OUT THESE RESOURCES AND MORE AT WWW.CCLMPORTAL.CA

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