

Bigfoot

National-scale fire growth modeling
Information current as of April 1, 2026

Bigfoot is a tool that produces daily deterministic fire spread perimeters at a national scale. It automates growth modeling for fires across Canada using national datasets and the Prometheus fire growth model. It helps answer the question: “given the weather forecast and what we know about on-ground conditions, **which fires are expected to grow the most?**”

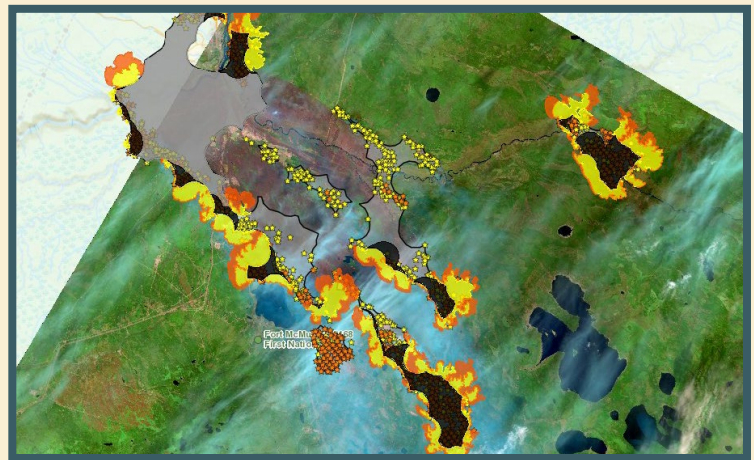
Model Characteristics



Automated: Running multiple times per day for all satellite-detected fire activity (hotspots) across Canada.



Familiar: High uncertainty, but long history within fire management.



Typical Uses

- Provides decision-makers with situational awareness of fire spread potential over the next 24 and 48 hours.
- Supports decisions around necessity and timing of fire suppression measures and evacuation orders.



Key Considerations

- Cloud cover and smoke plumes can prevent hotspot detection, reducing the accuracy of ignition lines.
- Coarse resolution of input data (hotspots, fuel types) limits certainty.
- Does not account for fire suppression.
- Displayed fire boundaries can provide a false sense of confidence.

How it Works



Inputs

- Fuel type (e.g., pine, spruce or mixedwood forest)
- Weather conditions and forecasted hourly weather, including the Fire Weather Index (FWI)
- Topography
- Active fire perimeters based on hotspot data



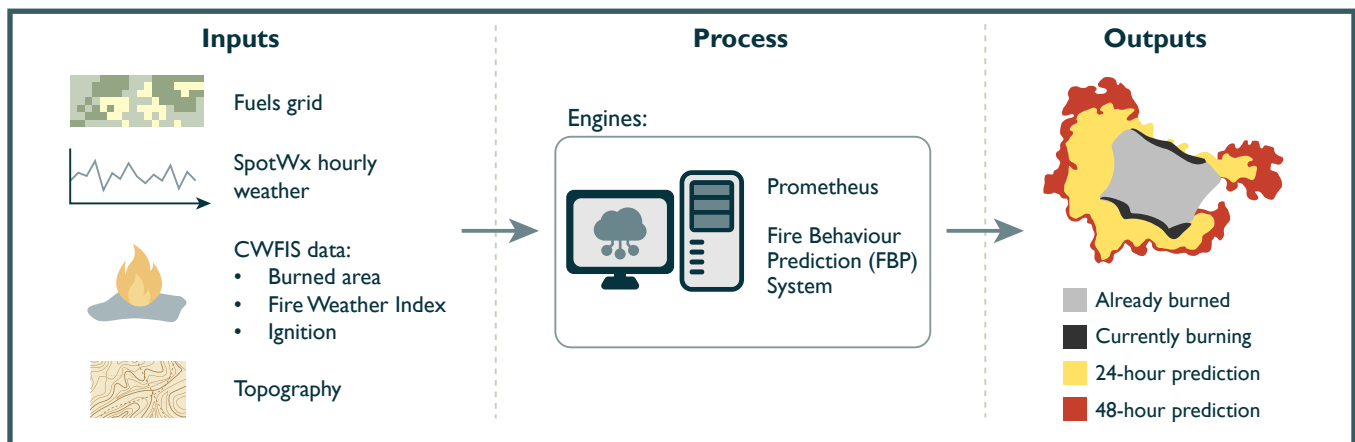
Process

Bigfoot assembles the necessary weather, fuels and ignition information for each fire, and then uses the Prometheus model engine to predict fire spread.



Outputs

Produces GIS-compatible maps indicating area burned, currently burning and predicted to burn in the next 24 and 48 hours.



This summary is part of a six-part series introducing Wildfire Intelligence and Predictive Services (WIPS), its suite of data products and three key tools.