
# Announcing the release of WindNinja 2.0.0!

WindNinja 2.0.0 is now available for download from www.firemodels.org. This release includes several significant improvements:

- **Simulation of diurnal winds** – A slope flow model has been incorporated to simulate buoyancy driven upslope and downslope flows. Solar heating and shadows are computed as part of the ground-to-air heat transfer calculation. Simulation of diurnal winds can be turned on or off using a check box. The additional inputs required for diurnal wind simulation are minimal, but include the date, time, percent cloud cover, air temperature, and latitude/longitude (which can usually be obtained automatically from the DEM file).
- **Multithreading capability** – Multiple processor/core computers can now be used to shorten simulation times. Speed up is nearly perfect when simulating multiple runs. For example, a dual-core computer doing 2 wind runs will only take the time of a single wind run.
- **Faster solver** – Considerable improvements to the solver have also cut simulation times (usually in the 8 - 45 second range).
- **Newer, more modern GUI** – The Graphic User Interface (GUI) has been updated to include a tree view, console output, more feedback to the user, a progress bar, and many other features. The new GUI will also make it much easier to improve WindNinja in the future, such as adding an OpenGL 3D graphics window, built in Google Earth to view wind vectors, and to run WindNinja on other operating systems such as Linux and Mac OS.
- **Additional elevation import options** – Elevation data can now be imported using 4 different file formats: Arc/Info ASCII Raster (*.asc), FARSITE landscape file (*.lcp), GeoTiff (*.tif), and ERDAS Imagine (*.img).
- **Gridded roughness** – Gridded roughness (surface drag) values can be automatically imported from a FARSITE landscape file (*.lcp) using the fuels and canopy information.
- **Additional output options** – The resolution of each type of output file (Google Earth, fire behavior, and shape file) can now be specified independently. Also, an option to use the wind simulation mesh resolution has been added and more control over Google Earth output files is now possible.

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