About NEXUS
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NEXUS 2.1 is crown fire hazard analysis software that links separate models of surface and crown fire behavior to compute indices of relative crown fire potential. Use NEXUS to compare crown fire potential for different stands, and to compare the effects of alternative fuel treatments on crown fire potential. NEXUS includes several visual tools useful in understanding how surface and crown fire models interact.

Crown fire hazard assessment and behavior prediction is an emerging science. In NEXUS we have linked existing models of surface and crown fire behavior to produce a system to assess the potential for crown fires at the stand level. In 1998 the modeling system was initially implemented in a Microsoft Excel spreadsheet. At the time the authors envisioned a short life-span for NEXUS as other more established programs incorporated similar modeling capabilities. In 2001 we updated the spreadsheet and produced an online user's guide, but still did not envision a long life. Now, in 2003, we have finally accepted that many of the concepts and modeling simulated in NEXUS are unique enough to warrant its maintenance independent of other programs. Therefore, we obtained funding to re-code NEXUS as a stand-alone computer program, finally shedding the Excel spreadsheet interface.

There are other modeling systems whose functions partially overlap with those of NEXUS. BehavePlus is the industry standard tool for modeling surface fire behavior. The present version simulates only surface fire spread, but later versions may include crown fire simulation capability. BehavePlus is like a late-model sedan -- but the ride is smooth and straight, the warranty is excellent, and the documentation comprehensive.

We likened the spreadsheet version of NEXUS to an old 1-ton truck -- it did a lot of work, but it wasn't pretty and the ride was often rough. There were plenty of buttons and switches on the dashboard, some of them without labels. This stand-alone version is only slightly different. It's a newer 1-ton truck. The chassis is a little softer than the old one, so the ride is nicer, but it can't quite do everything the old truck could. It does come with an owner's manual; read it carefully before operating the vehicle.

NEXUS is not for everyone. No one should use NEXUS who is not already very familiar with BEHAVE or BehavePlus for simulating surface fire behavior. You should have taken all of the NWCG fire behavior courses through S-490, or have thoroughly studied the supporting papers on your own. In addition, familiarity with crown fire modeling techniques is also necessary to fully utilize and understand the crown fire simulations in NEXUS.