National Fire Plan

Remote Sensing Research Nationwide

Scientists at the Fire Effects Unit in the Fire Sciences Laboratory, Missoula, Mont., are gathering spatial data with remote sensing (i.e., the use of satellites and aircraft) applications because such data provides more complete, accurate, and up-to-date information to fire and land managers.

Effective in assessing fuel conditions and fire potential, mapping and modeling fire behavior, and post-fire assessment, spatial data is compatible with the current fire behavior and fire effects models on which scientists and managers rely.

At its most basic, spatial data is simply a point on a map that denotes a place. What makes this tool different is that, when gathered with a remote sensing application and analyzed, spatial data results in many levels of data layered on top of one another. This gives a dimension to remote sensing maps that is lacking in flat maps. Even a fire manager's normal perception of space must adapt. Rather than ask, "Where is this fire on the map?", a fire manager using spatial data asks, "What does this mapped data tell us and how can it help us fight this fire?"

After the 2001 fire season, Fire Effects scientists gathered spatial data using remote sensing, GIS, and landscape assessment tools. Their results were used to assist local, state and federal managers in Montana as they planned post-fire management, salvage operations, and forest health projects.

The unit is currently cooperating with the University of Montana in a remote-sensing research project incorporating spatial data. They gave a national workshop on remote sensing techniques in active fires and initiated new studies with state and federal cooperators. Scientists conducted two tours of the Fire Sciences Laboratory and participated in four consultations with national forests, states and state foresters.

Fire Effects is conducting on-going research jointly with the other units of the Fire Sciences Laboratory (Fire Chemistry and Fire Behavior), the Aldo Leopold Wilderness Institute, and the Logan, Utah, Forestry Sciences Laboratory.

For additional information on the National Fire Plan, visit www.fireplan.gov