

Fire Ecology



Left: Water quality is being monitored in the Big Wash watershed at Great Basin National Park as a result of the Granite Fire. Increased run off and erosion after a fire removes surface vegetation and is often accompanied by increased nutrients from ash.

Right: Occasional passive torching occurred on the Pine Valley Springs prescribed burn at Lake Mead NRA. This was a desired effect to achieve stand density reduction, one of the burn's primary objectives.



The Fire Ecology Program integrates multiple scientific and operational disciplines to inform fire management actions. University partnerships and the Joint Fire Science Initiative expand the program's capacity...

Within the region, there are currently 7 fire ecologists supporting 23 parks, plus 3 regional staff members, and 5 fire effects crews. A sixth fire effects crew, based at Zion National Park, also serves parks in the Pacific West Region. The fire ecologists are key members of Fire Management Plan ID Teams, providing an ecological framework to formulate objectives and justify alternatives. The Fire Ecology Program also coordinates BAER (Burned Area Emergency Rehabilitation) activities and trains Resource Advisors in support of wildland fire suppression. The majority of the program focuses on 3 main areas:

Long-term monitoring

Treatments are monitored to detect change and determine whether resource management objectives are being met. This includes FMH and CBI plots. FMH (Fire Monitoring Handbook) plots are used to measure the effects of prescribed burns. CBI (Composite Burn Index) plots measure the burn severity of wildland fires.

Research

Fire science questions that are not adequately addressed through monitoring, are pursued through more rigorous investigation. Currently there are 16 major, ongoing research projects throughout the region. Topics include: Fire History at WHIS; Cheatgrass and Fire Effects at LABE and SEKI; Fire and Restoration at SAMO; Forest Structure Goals at SEKI and YOSE; Native American Burning Regimes at YOSE.

Inventory

The systematic collection of spatial data through fuels and vegetation mapping is necessary for informed decision-making. Mapping in four Cascade parks will be initiated in FY04.

An enormous amount of data is being collected.

In addition to fire effects plots in management-ignited prescribed burn units, the Fire Ecology Program has begun to establish plots to monitor alternative fuel treatments (such as thinning) and rapid assessment plots to monitor the effects of wildland fire...

Implementation of FEAT will begin in FY04, and will shape the future of the NPS Fire Ecology Program...

FEAT, Fire Ecology Assessment Tools, is a software program being designed under contract for the NPS to manage the vast and varied data collected within the Fire Ecology Program. FEAT will have statistical analysis capabilities, a critical feature which has been missing until now.

FEAT will strengthen our ability to interpret fire effects data, improve burn prescriptions, and guide resource management decisions to achieve desired results.

Two parks in the Pacific West Region will be prototypes for FEAT.