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Catalina-Rincon FireScape
Working Group - Science
Meeting Notes
November 14, 2008

Overview: Don Falk reviewed what FireScape includes and the structure. Tom Swetnam covered why we're doing the FireScape project. We are also a "proof of concept" for this approach to fire management at the landscape scale.

TEAMS: Chris French described the TEAMS concept, their possible role and the technical abilities they bring to the FireScape process. About 50% of their work is compliance/NEPA. They can provide individual specialists as requested. Technical skills include: fire and fuels, silviculture, logging engineering, fisheries biology, wildlife biology, soils, air quality, GIS, recreation, landscape architecture, writer/editor, social science, economics. Chris described FireSCape as a management concept project with an outstanding opportunity for science. Chris made the point that for Compliance (NEPA) we must be able to show how we get from "Point A" to " Point B."

Jim Malusa and Larry Laing gave a presentation about the Land Type Association classification and presenting it using Google Earth. They demonstrated how easy it is to use. The Land Type Association (LTA), there are 85 in the Catalina-Rincon FireScape area, is subdivided into Ecological Land Types (ELT), there are 280, and can be further subdivided into ELT Phases. For management and compliance it is desirable to combine the ELT's into areas which would require similar treatment options, hopefully about 12 to 15 areas. It is critical to be able to tie the LTA's and ELT's to fire behavior and fuel modeling. Chris mentioned that it is important to identify areas which will not be treated. Larry will provide the references about Land Type classification.

Fire Return Interval Departure (FRID) uses historical references, time since last fire, fire frequency and relates them to vegetation, slope and aspect to produce an index value of how far "out of wack" the ecosystems are from the natural fire cycle. Aspect is the important control of FRID The index value would be presented on a map as well as in a description. The index value would be used to help identify the priority for action. There is a detailed fire history study for the Santa Catalina Mountains produced by Pepe (need complete name and reference).

One conclusion of the discussions about Land Type Association classification and Fire Return Interval Departure was that there will be a need for different levels of detail and scale for different work.

Tyson Swetnam talked about using LiDAR, Light Detection and Range, and gave a demonstration using Pima County data for the Sabino Canyon drainage. This technology can provide data about above ground biomass, fuel continuity and canopy bulk density; it does not show surface fuels i.e., fuels 0 to 6 inches above the surface. This technology can be used for gaming crown fire, carbon sequestration, absolute fuel loading and provide canopy diameter and

tree height.

(I had some notes about fuel moisture stress index, passive remote sensing, determining fire season length, fires burn where index is high, fuel curing rate is related to elevation, can use ?? to help set action priority. Someone will have to make sense of this. S.Plevel)

Additional discussion included the potential to use WALTER to provide information about science work being done.

Tom Swetnam talked about using this FireScape project as a living laboratory for science and education. He mentioned the possibility of applying for an NSF-IGERT grant. The chance to build U of A capabilities in social and biological sciences.