POLICY DIRECTIONS AND MANAGEMENT OPTIONS FOR HIGH-INTENSITY FIRE HABITATS: COMMENTS IN PANEL DISCUSSION

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Fire management must be considered in the broader context of ecological management policy and practice. The deciding factor in fire management policy on public lands today is not science, but politics. This situation has unfortunate consequences for biological diversity. As the events of last summer (i.e., Yellowstone and other fires) made clear, politicians seem to be responding to that segment of the public that knows and cares the least about fire ecology and the perpetuation of natural ecosystems. Those people who yell loudest, not necessarily those with the facts, get political attention.

Public lands managers have to compromise the demands of competing interests. Their decisions are shaped by the political climate, and if that climate is antifire, then agency policies with respect to fire management will shift in that direction. The only way that ecological management (fire management and otherwise) will have more influence in public lands policy is if biologists and others who support ecological management make their points more emphatically. They must become a powerful constituency that cannot be ignored. This does not mean abandoning fact and science for zealous advocacy, but it may require yelling louder.

Environmental groups could do much to further the ideals of ecological management on public lands by taking the recommendations of scientists and making them a platform for action. Unfortunately, the major environmental groups have been negligent in this regard. I have not seen a strong, comprehensive statement from environmentalists on ecological management of public lands, one that includes the critical topic of managing the disturbance regime.

One credible point of view is that the primary goal of public lands management should be to maintain and restore biodiversity, and the ecological and evolutionary processes underlying biodiversity. Certainly, biodiversity is not just another resource, another of the "multiple uses" to be managed for on public lands. Rather, biodiversity ultimately creates and maintains virtually every other resource. Biodiversity, therefore, is an appropriate primary goal and organizing paradigm for land management. Environmentalists might advocate this point of view with regard to ecological management on public lands.

Human impacts on biodiversity represent two things: (1) a change in the disturbance regime and (2) an increased rate of change. The species in any area are adapted to a particular regime of natural disturbance (for example, a certain frequency, intensity, and seasonality of fire). If humans drastically alter that disturbance regime, many species will not be able to cope with the change.

Disturbance regimes change naturally over time, such as with changing climate. A hotter, drier climate increases the frequency and intensity of fire. However, human activities have increased the rate of disturbance change far beyond the adaptive capabilities of many species. Habitat fragmentation has occurred very rapidly in many regions, with severe effects on many forest-interior, edge-sensitive, area-dependent, and wide-ranging species. Greenhouse effects may increase the rate of climate change up to 50 times that of past natural changes. Habitat fragmentation and greenhouse effects interact to threaten many species with limited dispersal capacities. Furthermore, the increased frequency and severity of severe weather events (drought, storms, high winds), which is expected during the transition to a warmer climate, may make fires like those of 1988 commonplace (with serious policy implications!).

The best that land managers might do to cope with these problems, with respect to maintaining biodiversity, is to attempt to mimic the natural disturbance regime (however changing) with their management activities. Because land management is essentially a giant experiment on the land, managers will require suitable "control" areas with which their manipulated lands can be compared. Large, roadless areas such as designated Wilderness fulfill an important function in this regard. Environmentalists can assist land managers by becoming powerful advocates for Wilderness, so that existing boundaries can be enlarged, and new Wilderness areas can be created to represent all major ecosystem types adequately and in replicate.

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