
RODEO-CHEDISKI: SOME UNDERLYING QUESTIONS

Doug Beal

Editor's note: The fires of 2002 revived a fierce debate over who or what is to blame for uncharacteristically severe wildland fires in the Interior West. Some say it's too little active management, and others say it's too much, or maybe not the right kind. In the wake of the Rodeo-Chediski Fire on Arizona's Apache-Sitgreaves National Forest, Fire Management Today (FMT) discussed such questions with Doug Beal, a silviculturalist for the USDA Forest Service, Apache-Sitgreaves National Forest, Springerville, AZ.

FMT: It's sometimes said that fires like Rodeo-Chediski are "unnatural." Does the biological/paleoecological record suggest a history of similar fires in the region? For example, can ponderosa pine stands be identified by age class, perhaps suggesting a history of stand replacement fires under severe drought conditions?

Beal: Prevailing science tells us that the Rodeo-Chediski Fire was outside the historical range of variability for southwestern ponderosa pine ecosystems (Cooper 1960; Covington 1994; GAO 1999; Johnson 1996; Moore and others 1999; Steele 1994). Field observations on the Apache-Sitgreaves National Forest support research findings that our southwestern ponderosa pine—and most other low-elevation, dry forest types in the Interior West—has an ecological history of frequent low-intensity fire.

The very anatomy of ponderosa pine—thick bark; protected buds; and long, resinous needles forming a litter layer conducive to surface fires—suggests a species adapted to surviving fire. By contrast, lodgepole pine—with its serotinous cones—has a strategy for replacing itself after large fires that kill entire forest stands.

The patchy nature of ponderosa pine also suggests a species that responds to a pattern of small disturbances

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rather than to stand-scale or landscape-scale replacement events. Although great variation occurred historically in the size and distribution of these relatively small events, there is little evidence that stands of ponderosa pine on the Apache-Sitgreaves National Forest originated from a single widespread event like the Rodeo-Chediski Fire.

FMT: The Rodeo-Chediski Fire burned both tribal and Federal land, where management histories and strategies might have been quite different. Were there clear differences in fire severity across jurisdictions?

Beal: No. Mapped polygons of fire severity do not show a clear distinction in distribution or size of intensely burned areas on tribal and national forest lands. Fire severity was equally variable across jurisdictions, depending on variations in topography, fuel conditions, stage of the fire, and burning period.

If you look at the entire area burned by severity class, the percentages in each class do not differ significantly across jurisdictions. Rough calculations based on preliminary maps are reflected in the Apache-Sitgreaves National Forest's summary report on Rodeo-Chediski fire effects (USDA

Forest Service 2002). They show about 28 percent in the high-severity class for national forest land and 32 percent for the entire fire area. Other classes show similar small differences, which are probably not statistically significant.

FMT: A postfire report by several environmental organizations (CBD and others 2002) suggests that the area of the Rodeo-Chediski Fire that is national forest land had been heavily logged in the 1990s, and that the fire's severity therefore shows the failure of active management. Is that correct?

Beal: Unfortunately, CBD and others (2002) confused the issue by comparing apples to oranges. The heavy regeneration cuts of the 1980s and early 1990s—including the ones listed by CBD and others (2002)—were designed to increase the representation of younger age classes under a land and resource management plan for the Apache-Sitgreaves National Forest that called for even-aged stand management. Adequate treatment of slash and other fuels resulting from timber harvest was always an objective, but landscape-level management for fuels reduction—let alone ecological restoration—was not yet on the radar screen. At the

time, aggressive suppression action was still a satisfactory strategy for dealing with large fires.

Since then, our management prescriptions have changed. In 1996, an amendment to the forest's land and resource management plan shifted ponderosa pine management into an uneven-aged/thin-from-below regimen for northern goshawk habitat. The Forest Service's Cohesive Strategy in 2000 and the National Fire Plan then refocused our management on landscape-level fuels reduction, especially in or near the wildland/urban interface. The corresponding projects are just now [as of late 2002] emerging through the planning pipeline.

It seems rather misleading for CBD and others (2002) to characterize logging as all one thing—the liquidation of the largest trees in a forest. In reality, vegetation removal comes in a variety of shades and hues. It can accomplish a whole range of land management objectives, depending on what your purpose is.

We make no apology for our past management purposes and practices. CBD and others (2002) might disagree with them, but that does not change the fact that our timber management was, and still is, the execution of the congressional will for the public good. Our land and resource management plans are developed with full public engagement, including participation by the organizations that sponsored CBD and others (2002). Their disagreement with the outcome does not invalidate the lawful fulfillment of our commitments under the plan.

FMT: Can fire behavior on the Rodeo–Chediski Fire be correlated with certain treatment histories? For example, was the fire controlled in

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areas where treatments allowed firefighters to safely attack it?

Beal: We correlated fire behavior with treatment histories in our fire effects summary report (USDA Forest Service 2002). The results suggest a picture that is far more complex than what CBD and others (2002) would have you believe.

Based on postfire systematic samples of treated versus untreated transects, we found benefits from every type of forest treatment studied except for precommercial thinning. Areas where fuel treatments, commercial timber harvest, and prescribed fire occurred within 15 years before the fire showed significantly less burning intensity than untreated areas. Treatments in the Hop Canyon area, for example, allowed suppression forces to hold the eastern flank of the fire and stop it from advancing into the town of Show Low.

FMT: In ponderosa pine ecosystems typical of the Southwest, thick grasses and forbs suppress tree seedling growth and, after curing later in the season, carry low-severity fires that keep many surviving seedlings from maturing into saplings. CBD and others (2002) allege that overgrazing disrupted the process, promoting the dense forest regeneration that contributed to the severity of the Rodeo–Chediski Fire. Is that correct?

Beal: It's true that overgrazing a century ago contributed to the irruption of trees in the numbers we have today. Other factors included our aggressive fire suppression policy

and logging practices that triggered and released forest regeneration.

Such activities “built the West,” and they were not necessarily wrong, given the context and knowledge of the time. Sure, knowing what we do now, we might have done things differently. But the mantra of CBD and others (2002) that a ban on logging and grazing would somehow magically undo the legacy of overstocking is far more shortsighted than the activities they denounce.

The reductions in crown density and fuel loading needed to improve current conditions simply cannot be achieved without management intervention. Ecological restoration does not necessarily mean that grazing must stop, so long as pastures are rested and the grazing rotated to allow for the necessary maintenance burns. Grazing can even be used as a tool for managing the vegetation in certain areas.

To ban all grazing, fire suppression, and logging just because these practices historically contributed to the problem makes no more sense than banning the use of a scalpel in the operating room simply because the patient has a stab wound. To prevent future Rodeo–Chediskis, we need to reduce crown density, increase canopy height, and diminish fuel loading. For that, we need the right management tools.

The sponsors of CBD and others (2002) profess the same goal of restoring our southwestern ponderosa pine ecosystems that we do. I believe that a sincere, meaning-

ful dialogue with them and anyone else who might be interested on the best way to use the tools we have to achieve our mutual goals would be far more productive than scoring political points by condemning past management practices.

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Areas with prefire treatments such as timber harvest and prescribed fire showed significantly less burning intensity than untreated areas.

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WEBSITES ON FIRE

Wildland Fire: Home of the Wildland Firefighter

This Website provides a forum for communication and information exchange in the wildland fire community. Opinions are

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expressed, issues are raised, and questions are answered—all with confidentiality ensured. FireChat, a new addition to the site, gives firefighters real-time chat space to “talk” to all users or just one person. Even firefighter family members have a special area for conversation. The News Page helps keeps firefighters aware of current events and information using standard search terms. Website visitors

can also read what firefighters have to say about fire-related books and take a look at associations, training, and equipment recommended by firefighters. Links to relevant sites—Federal, State, world, weather, and aviation—are extensive and current.

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