



A Blaze with Benefits: Fire Ecology at Work

- Fire and smoke are as much a part of the Yosemite ecosystem as water and ice. Every year, thousands of lightning strikes occur within park boundaries, igniting vegetation made tinder-dry by Yosemite's long, hot summers.
- 50 years of fire ecology have shown fire managers that suppressing all fires results in unnatural fuel buildup and only delays the inevitable and can make fires more severe than they otherwise would have been.
- Just as dam operators must let some water spill through their dams in order to prevent floods, fire managers must let some fire and smoke occur to keep the larger conflagrations at bay, especially in mid-elevation, mixed conifer forests where a "flood" of accumulated biomass threatens to be released by severe fire.
- Fire managers work to restore healthy forests and reduce the threat of extensive, severe fire by allowing some lightning-ignited wildfires to burn under moderate conditions. They also use prescribed fire and mechanical tree thinning to reduce fuels.
- In addition to reducing the risk of severe fire at large scales, wildfires can also help create healthy forests. The current widespread tree mortality event is likely more extensive than it would have been without a century of fire suppression. In addition to the ongoing drought, warming temperature and native bark beetles, fire suppression dramatically increased tree densities, which in turn increased competition for limited water resources.
- Wildfires that burn under more moderate conditions can also increase habitat and species diversity across the landscape by burning intensely in some areas and less so in others.
- While balancing this need for fire, Yosemite's fire managers strive to protect the quality and clarity of the air that park visitors breathe. Although wildfires managed under more moderate conditions may have transient, moderate smoke impacts in areas near the fire, it limits the potential for future severe fires that could otherwise cause extremely unhealthy levels of smoke for extended periods, over a much wider area.
- Despite the ecosystem health benefits of wildfire, managers will suppress wildfires that threaten homes and infrastructure.

