

PEOPLE AND THE SIERRA NEVADA

ISSUE STATEMENT

Humans have traveled through and lived in the Sierra Nevada for centuries. The early influence of native Californians on fire patterns and the translocation of plants has been documented (Anderson and Moratto 1996). With the arrival of European settlers, interests in mining, timber, livestock grazing, and water development were established and the land further shaped by the demands placed on it. Today, humans live in, make a living from, recreate in and seek solace from the Sierra Nevada ecosystem. There is little dispute that humans have altered the Sierra Nevada environment in ways that are not sustainable. The demands on water for consumptive uses and the suppression of fire are just two examples of the ways that humans have impeded essential cycles and processes in the name of deriving social and economic benefits.

Our goal is to live in balance with the Sierra Nevada ecosystem and not at its expense. To that end, we adopt in this conservation strategy the principle that land management will be designed to meet “human needs without compromising the health of ecosystems” (Callicott and Mumford 1997).

Public Safety

People live, work and recreate within and adjacent to national forest lands in the Sierra Nevada. Our challenge is to design ways for people to safely enjoy the outdoors and benefit from forest resources while protecting and restoring the health of the ecosystem.

One of the most prevalent public safety concerns is related to wildfire. The protection of life and property is often foremost in the minds of those who live and work in the Sierra Nevada. It is the responsibility of the community as a whole to provide for a safe environment. Individual land owners and managers, including the Forest Service, are responsible for maintaining a fire resilient

environment near their structures and including the structures themselves. Forest roads necessary for egress during emergencies also need to be maintained in a fire resilient condition that allows passage. Recreationists, forest workers, and other forest visitors also are responsible to conduct their activities in ways that are fire-cautious and that do not introduce fire risk into the environment.

Forests, Woodlands, and Shrublands

Our goals for this fire dependent ecosystem include the restoration of characteristic and resilient ecological conditions through the re-introduction of fire at appropriate scales and intensities across significant portions of the Sierra Nevada. To accomplish this goal, we recognize that the mechanical removal of vegetation prior to the application of managed fire will likely be necessary in some landscapes. Mechanical removal of vegetation needs to be carefully designed to remove the vegetation necessary for reducing risk while retaining sufficient habitat structure and diversity to support healthy wildlife populations. Further, we promote the maintenance and development of the necessary infrastructure designed to remove wood fiber, such as biomass and small diameter wood, to achieve our restoration goals. We support the creation of infrastructure to process wood fiber that also supports the removal of biomass in a manner that is ecologically sustainable. It is critical that the capacity of the infrastructure fit the pace and scale of the restoration need and for the infrastructure to adjust to ecosystem needs – not drive or override them.

Rangelands

Rangelands include a variety of vegetative communities, e.g., aspen, montane meadows, shrubland, and oak woodland. Aspen habitat, meadow and riparian areas encompass some of the most ecologically important habitats in the Sierra Nevada and have been significantly degraded by historic and contemporary grazing programs and other activities (Kattelman 1996; Moyle 1996).

The current health of these systems needs to be carefully evaluated. Management practices need to be designed and applied to restore degraded systems and maintain or enhance healthy systems. Further, restoration plans that target these plant communities need to alleviate the full range of stressors, including overgrazing and other human impacts where present.

Water Resources

People throughout California depend on the high quality water originating in the Sierra Nevada. It has been estimated that 65 percent of the water used in California comes from this region (Timmer 2003). Water that passes through the region is used locally and downstream for consumptive use and to generate hydro-electric power. The cycle of dry and wet years common to California has always presented a challenge to water planning in the State. The anticipated changes in temperature and precipitation due to human induced climate change are certain to exacerbate the conflicts.

The water needs of people place demands on aquatic and hydrologic systems that are already highly taxed. The Sierra Nevada Ecosystem Project (SNEP) concluded that “aquatic/riparian systems are the most altered and impaired habitats of the Sierra” (Centers for Water and Wildland Resources 1996, p. 8). Further, SNEP found that water quality in the Sierra Nevada was negatively affected by excessive sediment, restricted water flow, and chemical contamination.

Providing for the health of the Sierra Nevada ecosystem will require communities, resource managers, scientists, and conservation interests to work together to build a conservation and restoration economy that is ecologically sustainable and “tooled” to protect and restore ecosystem health while avoiding more harm.

POLICY ACTIONS NEEDED

The following policy actions are designed to provide administrative and planning support to enhance the ability to use small diameter wood products, to support local processing and use of products, and to engage communities of interest and place in the management of national forests. These actions are intended to improve our ability to utilize natural resources at a pace and scale that is in balance with the ecosystem. Measures important to the protection of specific resources are noted elsewhere in this conservation strategy, e.g., management direction pertaining to timber harvest is noted in several sections relating to the management of old forests, species at risk, aquatic management, and more.

Proposal for Revision to Forest Plan Direction

A. Desired Condition. *The following statements represent the desired future condition of the administrative setting or landscape and may not reflect the current conditions.*

Desired Condition ES-1. Projects are designed to be ecologically sustainable with respect to both the effect on the environment from removing forest products, and the utilization or processing of the product. Products or ecosystem services include resources such as wood fiber, minerals, livestock forage, and water.

Desired Condition ES-2. Projects providing wood fiber incorporate design elements, such as processing areas for biomass or material sorting, to provide opportunities to utilize or process materials on-site or in adjacent communities.

Desired Condition ES-3. Projects are developed that utilize wood fiber locally in support of local wood processing efforts and community-based restoration.

Desired Conditions ES-4. Landscapes provide ecosystem services such as water storage, water

filtration, soil regeneration, biodiversity, stable and resilient carbon pool, and resilience to drought, insect and disease that are outside the range of natural variability.

B. Objectives

Objective ES-1. By the fifth year following adoption of the plan, fifty percent or more of the projects proposed by a national forest to generate wood products are designed for local wood processing opportunities.

Objective ES-2. A Wood Products Working Group, whose charge is to support local wood processing efforts, is established within two years of the adoption of the forest plan.

Objective ES-3. Restoration plans have been developed within five years of adoption of the plan for rangelands that are not in the desired ecological condition.

Objective ES-4. The length of time between timber harvest-related disturbance is increased in the next 10-15 years to ensure carbon is stored in ecosystem stocks for longer periods of time.

C. Standards

Standard ES-1. Land allocations identify, generally or specifically, areas appropriate for processing biomass or wood fiber sorting.

Standard ES-2. Projects promoting the use of biomass as a renewable energy source must undergo a cradle-to-grave carbon footprint analysis, including so-called “indirect” effects, i.e., the impacts caused as worldwide markets adjust to increased biomass harvesting.

Standard ES-3. Apply fire-resistant building standards and practices for buildings permitted under special use permits or for buildings maintained by the Forest Service.

Recommended Actions at the National Forest Level Not Directly Addressed in the Forest Plan

- Forest Service and community scale partnerships should focus on biomass-to-thermal uses as a priority. Proposed electric or combined heat and power generating facilities should be no larger than 3 megawatts and capacity should be based on appropriate criteria for economic and ecological sustainability.
- District Ranger and Forest Supervisor offices should utilize local densified wood products (e.g., wood pellets, “bricks” or shavings) to support their operations when feasible within the next 5 years
- Leadership at the forest-level should support collaborative community involvement to ensure the success of processing small diameter materials locally.
- Projects providing forest products should incorporate design elements, such as processing areas for biomass or material sorting, to provide opportunities to utilize or process materials on-site.
- Use the Wood Products Working Group for each national forest to develop information and resources to utilize in designing local projects. For example:
 - Identify project design features important to the successful processing of forest products locally or on-site,
 - Provide a survey of businesses that process small diameter wood products locally and characterize their customer base,
 - Identify the opportunities for assistance and collaboration in the use of small diameter materials for local projects, including public service and work programs, youth corps, and other local partners.

Recommendations for New Regional Direction or Policy

- Create a Wood Products Working Group at the regional level to support the work of the working groups associated with each national forest.
- Promote programs (e.g., assistance grants, regional and national funding sources) and opportunities (e.g., community partnerships, stakeholder interest) that could facilitate the use of small diameter wood products.

- Provide examples of successful partnerships among the Forest Service, businesses, and communities that supported development of programs to process and utilize wood products locally.

Additional Recommendations

- Improve wildfire preparedness by using the Firewise Communities program (<http://www.firewise.org/>) to educate and mobilize forest communities to prepare and plan for wildfire.

REFERENCES

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