Sequoia National Forest and Giant Sequoia National Monument Implementation Strategy for Ecological Restoration

Ecological Restoration Overview:

The Sequoia National Forest/Giant Sequoia National Monument (SQF) is the most southern National Forest in the Sierra Nevada. It is dominated by mixed conifer forest types which includes over 20,000 acres of giant sequoia groves. The SQF is a highly fire prone forest environment with a recent history of large fires, including the Manter (75,000 acres in 2000), Mc-Nally (150,000 acres in 2002), and Piute (38,000 acres in 2008) wild fires as well as several large managed wildfires, including the Sheep (6,000 acres in 2010) and Lion (21,000 acres in 2011). In FY 2011, the SQF applied ecological restoration actions on approximately 2% of the landbase and has applied restoration actions on approximately 10% of the landbase over the last decade.

Our primary restoration goals are to treat the land to improve overall forest health and resiliency, and to re-introduce fire into the landscape. These actions must be carefully planned and implemented to protect key resources, including the giant sequoia groves, wildlife habitat, meadow and riparian habitat, and many communities located within the forest boundary.

There are unlimited opportunities to treat the landscape to meet our restoration goals and almost as many challenges. The most significant challenges are completing the Giant Sequoia National Monument Management Plan; protecting the highest concentration of Pacific fisher in the Sierra Nevada; maintaining quality wildlife and aquatic habitat while protecting a large number of threatened communities in a highly fire prone landscape; maintaining the current, local infrastructure; and finding a balance of management actions to satisfy competing values among our stakeholders.

Ecological Restoration Accomplishments, Tactics, and Integration:

The SQF accomplishments for 2012 include reforestation on approximately 5000 acres, primarily within two of the large fires mentioned above (McNally and Piute); vegetation improvement (primarily small tree thinning) on approximately 3,500 acres; watershed improvement on approximately 1,200 acres; habitat improvement on 17 miles of streams and 5,700 acres of terrestrial habitat; and noxious weed treatment on 280 acres. For FY 2013 our five year schedule indicates a similar amount of vegetation and habitat improvement projects. One project of note is the proposed Boulder Burn, a prescribed fire that is planned for approximately 8,000 acres in 2013. This project is being designed in collaboration with several partners, including R5 Air Resource staff, Sierra Forest Legacy, local air pollution control board, EPA, local land owners and permittees, and Sequoia and Kings Canyon National Parks. Another noteworthy project planned for 2013 is the Tule River Reservation Planning Project. This project is being developed in cooperation with the Tule River Indian Reservation, consistent with the Tribal Restoration Act. This project would treat lands adjacent to the reservation to reduce the potential for fires crossing into the reservation watershed. The project includes treatments with the giant sequoia groves that are located on SQF and reservation lands.

The SQF is implementing a significant watershed restoration strategy that includes meadow restoration on three degraded meadows in the Kern River basin. These are part of an effort to improve the overall watershed health upstream of Lake Isabella, a federally-listed impaired reservoir under the Clean Water Act. The SQF has successfully implemented "plug and pond" techniques on Big Meadow and is currently designing a similar application for Long Meadow and Osa Meadow. This work is proceeding with a combination of allocated funds and a grant from the Sierra Nevada Conservancy. Additional meadow restoration work is planned for French Meadow, located within the Piute Fire perimeter.

Integration of funds has been successfully applied to most restoration projects on the SQF for the past several years. Virtually all of our projects meet multiple objectives, especially vegetation improvement and fuels projects that include fuel reduction, forest health, wildlife habitat, and watershed condition improvement. The objectives shown on our five year schedule indicates this type of integration for the vast majority of projects. A more intensive application of unified budget in FY 2012 has enhanced this effect and expanded the number of staff integrated into the budgeting and prioritization of projects on the SQF.

The fire/fuels staff, ecosystem management staff, and line officers have worked closely to integrate funding to meet targets and prioritize accomplishments on the forest.

The SQF worked closely with the Strategic Decision Support group at McClellan to develop an integrated timber strategy to meet restoration goals and to maintain the local manufacturing infrastructure in Terra Bella, CA. The fire/fuels, ecosystem, GIS, and planning staffs worked with line officers to define a set of assumptions and guidelines that were combined with known information and modeling to determine the best combination of restoration treatments for lands on SQF that are outside the Giant Sequoia National Monument. Maintaining the local mill provides opportunities to treat lands to meet these objectives in a cost effective way by keeping the local infrastructure in place.

Part of the SQF strategy to re-introduce fire to the landscape is managing naturally ignited fires for ecological restoration. In the past decade the SQF has successfully managed wildland fire on approximately 50,000 acres. This includes the Deep and Lion Fires, managed in cooperation with Sequoia and Kings Canyon National Parks, San Joaquin Air Quality Control Board, Fish and Wildlife Service, and local agencies to meet resource objectives on approximately 27,000 acres.

Another example of partnering and integration is monitoring the effects of the Lion Fire with a combination of Forest Service funds and funds provided through an agreement with the U.S. Fish and Wildlife Service. The final monitoring outcomes will be synthesized into a white paper in cooperation with staff from fire and fuels, range, air quality, hydrology, fisheries, wildlife, and our zone ecology program.

The SQF has received State OHV grants for trail development, maintenance and restoration. Based on the Forest's Travel Management Plan we are proposing restoration of several user created routes within the watershed of Lake Isabella. The SQF has also received State OHV grant funds for watershed condition road inventory, a program developed in cooperation with the Watershed staff of R5, TEAMS enterprise team, and SQF. The SQF hydrology program is also responsible for inventory and management of the R5 Water Rights program.

Summary of Three Ecological Restoration Accomplishments:

The Lion Fire burned 21,000 acres in the Golden Trout Wilderness, all within critical habitat for the Little Kern Golden Trout. While this was an unplanned ignition the fire/fuels staff and ecosystem staff worked closely with the Sequoia Kings Canyon National Park, San Joaquin Air Quality Control Board, Fish and Wildlife Service, CA Department of Fish and Game, and Adaptive Management Services Enterprise Team (AMSET) to evaluate and monitor the potential effects of the Lion Fire on resource conditions. The pre and post fire monitoring program was initiated and is continuing in an effort to quantify the impacts and effects of the fire on critical fish habitat, stream condition, vegetation and fuels condition, and range condition. This monitoring effort should provide valuable information on the effect of re-introducing fire to this ecosystem and the effect of decisions made during the management of the fire.

The SQF has applied Stream Condition Inventory (SCI) into all ground disturbing projects including timber harvest, fuel reduction, prescribed burning, and range management. Integration of SCI into all projects requires significant planning and integration in order to cover all projects with the fewest plot locations necessary. The workload is funded by a wide array of funds as appropriate for the type of objectives met by each project. The information gathered is critical to meeting regional water quality control reporting requirements for forest management actions. The hydrology program provides a well trained staff to complete this work on the SQF and has provided their services to the Angeles, Cleveland, Sierra, Mendocino, and Los Padres forests. In addition, the hydrology staff coordinated regional SCI training and protocol enhancement for R5.

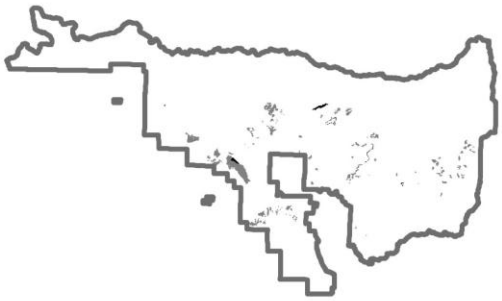
The Ice Timber sale was enjoined by a federal court in 2006 until additional analysis was completed to determine the effects of timber harvesting on Pacific fisher. Many new studies were incorporated into the analysis to determine if the Ice project could be implemented without negative effects on fisher. An extensive analysis was completed using information gathered from several sources including the Conservation Biology Institute (CBI) report, ongoing carnivore monitoring in the southern Sierra Nevada, cooperative studies with the Pacific Southwest Research Station, use of the Fisher Assessment and Sustainability Tool, and extensive work with the U.S. Fish and Wildlife staff. An interdisciplinary team was formed from all resource areas and work was funded from several allocations. Based on this analysis the court released the Ice sale and the contract was re-started within 5 days.

NEPA Ready Projects:

We currently have approximately 787 acres of fuels treatments that are NEPA ready and could be accomplished with an additional $322,600. In addition, we could accomplish an additional 200 acres of small

tree thinning with an additional $50,000. These projects were included in our FY 2012 mid-year request.

Meadow restoration at French and Mack Meadow within the Piute Fire (2008) could be accomplished with an additional $60,000. This restoration would improve 1/4 mile of stream, install a culvert and drain in an existing road to protect the meadows, and install fencing to protect the restoration work from impacts from cattle grazing. This proposal was included in our response to the Regional Office request on May 3, Approval of Additional Watershed Restoration Capability Project Proposals.



SEQUOIA NATIONAL FOREST
GIANT SEQUOIA NATIONAL MONUMENT

Ecological Restoration Projects FY2012 and FY2013