

Forest Service News

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Sequoia National Forest and the Giant Sequoia National Monument

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Monumental Outlook Over The Horizon **(What's Happening on the Sequoia National Forest** **Giant Sequoia National Monument)**

By Tina Terrell, Forest Supervisor
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PORTERVILLE, CA – Hello Sequoia National Forest/Giant Sequoia National Monument Stakeholders and Happy New Year!

This update about the Sequoia National Forest/Giant Sequoia National Monument deals with restoring meadows on public lands.

When it comes to watershed management efforts, riparian-wetland areas are often the first place one looks as indicators of a functioning watershed. Meadows or riparian areas are unique ecosystems. From a technical standpoint, there are three components or parts of a watershed: aquatic zones, riparian-wetland areas, and uplands. A critical function of any watershed is the capture, storage, and safe release of the precipitation it receives. When properly functioning, upland soils capture moisture where it falls, store that moisture for plant growth and other biological activity; and slowly release surplus moisture to seeps, springs, and streams-or, through deep percolation, to groundwater.

The Forest/Monument (Hume Lake Ranger District) embarked on a collaborative effort in 2004 to restore a degraded meadow ecosystem located in the high Sierra Mountains. The idea to improve a meadow ecosystem on the forest was presented by a group of interested individuals in meadow restoration work who provided the funding for a master's student thesis project from the geology department at California State University, Fresno. They approached us about entering into a collaborative effort to restore the Big Meadows area located near the Generals' Highway.

This collaborative project was started by people "working together" for a common goal. In the resource management context, this meant we would collaboratively work together to pool funds or other resources from a number of partners and stakeholders, to address a restoration issue that no individual or group could accomplish alone.

The initial collaborators were the Fresno Flyfishers for Conservation and California State University, Fresno. Big Meadows was chosen as it is typical of the historic land use impacts and resultant channel incision that has occurred throughout the Sierra Nevada mountain range. The Big Meadows Improvement Project, implemented in October 2007, is restoring 6,100 feet of degraded stream channel to enhance aquatic species and 300 acres of riparian meadow habitat while maintaining existing land uses including recreation and grazing. The project used a restoration process called "pond and plug", which eliminates the existing down cut channel and redirects

stream flow back into stable, historic remnant channels on the meadow surface. This process reconnects the channel to its naturally-evolved floodplain. Benefits of this process include improved water quality and increasing in-stream cover and shading.

In addition to the “pond and plug” technology that was used, whole trees were incorporated into the meadow channel and ponds, and the staging and installation of a rock vegetation valley grade structure was placed at the lower end of the meadow, to help address the need for restoration of this riparian ecosystem. Volunteer partners helped to move fish and re-establish vegetation on the exposed soil resulting from the construction of the ponds and plugs.

The Big Meadows Improvement Project has grown from its initial partnerships to include many other partners. Check out the Forest’s website at, www.fs.fed.us/sequoia to read more about this project.

We are currently working with our partners on monitoring. Stay tuned as we learn more on how a “pond and plug” protocol can help in restoring meadows to their natural flow and regime.

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