Draft Decision Memo for Comment

Long Meadow Restoration Project

USDA Forest Service
Western Divide Ranger District
Giant Sequoia National Monument
Sequoia National Forest
Tulare County, California
T22S, R31E, Section 25 and 36

Background

The stream channel within the northern portion of Long Meadow has been eroding as a result of a several headcuts. The primary headcut has eroded for approximately 375 feet, creating a 70-foot wide and seven-foot deep gully. The estimated sediment loss from within the gully is approximately 3,400 cubic yards. For the last five years, the main headcut continues to erode at an accelerated rate of an average of five cubic yards per year, which affects water quality (non-point source pollution) and downstream aquatic resources, including fish habitat.

These conditions have caused the northern portion of the meadow to no longer properly function hydrologically. The meadow has a lowered water table associated with the gully (or incised channel) that inhibits floodwaters from connecting with its natural floodplain. As a result of this dewatering, meadow vegetation composition is shifting from traditional moist meadow species to dryer upland meadow vegetation types, allowing conifers to grow (or encroach) into the meadow. Habitat for water-dependent or water-associated (aquatic) wildlife is restricted throughout the meadow.

The purpose of the Long Meadow Restoration Project is to restore this meadow ecosystem and provide for the viability of its species by returning the stream channel to its proper hydrological function while decreasing erosion and sedimentation. The needs are to reduce sedimentation back to the natural levels of approximately 0.1 - 0.4 cubic yards per year, to restore Long Meadow's hydrologic function and connectivity to its floodplain, and to sustain diverse habitats.

Long Meadow lies in the southern portion of the Giant Sequoia National Monument (Monument). Current management direction for the project area is contained in the 2012 Giant Sequoia National Monument Management Plan (Monument Plan) (USDA Forest Service 2012). This project is in line with the purpose of the Monument Plan and its vision for meadow habitats as described in the desired conditions for hydrological resources (Monument Plan, pp. 24-25):

> Aquatic, riparian, and meadow ecosystems are protected and restored and provide for the viability of species associated with these ecosystems. Hydrological resources, including rivers, streams, meadows, seasonally or perennially wet areas, and their associated riparian vegetation, are able to adjust and recover from natural and human-caused events.
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> Riparian and wetland areas are dynamic systems that change in response to climatic events including climate change. Riparian areas are in dynamic equilibrium with respect to erosion and deposition, sediment supply, discharge, pattern, profile, and dimension. Riparian and wetland areas function hydrologically according to their riparian ecotype: naturally-stable, stable-sensitive, unstable-sensitive-degraded, and naturally-unstable.

Specific management direction from the Monument Plan guiding the Long Meadow Restoration Project includes:

Strategies for Hydrological Resources (Monument Plan, p. 53)

- Restore streams, meadows, wetlands, and other special aquatic features to their desired conditions whenever possible (Strategy #1).
- Design hydrologic restoration projects to improve water storage and retention in riparian and wetland areas for longer flow duration (i.e., upgrading an unstable-sensitive-degraded system to a stable-sensitive system) (Strategy #2).
- Manage stream channels to maintain riparian vegetation, transport sediment, and ensure streambank stability (Strategy #4).

Objectives for Hydrological Resources (Monument Plan, p. 53)

- During the life of the Monument Plan, based on assessment, restore hydrologic function in priority meadows to enhance riparian habitat (Objective #3).

In addition, the Pacific Southwest Region has developed direction for ecological restoration, including the restoration of meadows: "Restore at least 50% of accessible, degraded forest meadows to improve their habitat function and ability to hold water longer into the summer and deliver clean water when most needed" (Region 5 Ecological Restoration Leadership Intent, March 2011, p. 3).

Decision

To decide whether or not to restore the hydrological function of Long Meadow by decreasing the existing erosion rate through implementation of the following five activities:

- Install plug structures.
- Install rock and vegetation (also known as a valley grade control structure).
- Plant various riparian species in the meadow, including native willows and sod.
- Use an existing access road during the implementation of the project.
- Install a temporary fence.

Plug Structures (also known as Pond and Plug)

Two plugs would be installed. The exact location would be staked in the field in spring 2013.

Creation of the plug structures would include removing soil from the sides and bottom of the gully and the surrounding areas and using it to create the plugs. The soil removal would be done in a manner that sculpts the gully in preparation for the ponds, which would fill with water and would help raise the water level to restore the meadow. The ponds would be designed and constructed to have irregular shapes and varying depths that would provide numerous habitats for riparian-dependent species. This process would relocate approximately 1,000 cubic yards of existing soil through the use of mechanical equipment, such as a backhoe, dozer, or a tracked excavator.

Sod, taken from within the project area, and willows established in the gully bottom would be stockpiled and transplanted to pond edges and plug surfaces. Topsoil from all excavation areas would be stockpiled adjacent to the plugs and used on top of the plugs once constructed.

Valley Grade Control Structure

The valley grade control structure would be located downstream of the plug structures, and above an existing partially intact dam. An estimated 200 cubic yards of 0.5 to 2.0 foot diameter rock would be used to provide armoring at the lower end of the meadow. Some of the stockpiled soil removed from the gully would be added to the structure.

Revegetation

Willows, native to the meadow, would be planted along the stream banks and around ponds. Willow slips and rooted stock taken from the project area, or nearby vicinity, would be used, along with stockpiled sod, to stabilize the existing bank and trap sediment. Stockpiled sod and willows would be placed on the plug structures. Large conifers that have become established within the meadow would not be cut as part of this project unless they pose a safety hazard or prevent equipment access during implementation of the project. Any felled tree would remain on site. The Management Tool Determination and Tree Felling Criteria for the Long Meadow Restoration Project document the assessment of risk, effectiveness, and feasibility, as well as the tree felling criteria applied, as required by the Monument Plan (Monument Plan, pp. 79-82). This document is in the project file at the Western Divide Ranger District office.

Access

Mechanical equipment would access the meadow using Forest Road 22S08A that is currently not open to public vehicle travel. This road would be temporarily opened for the purpose of moving equipment and materials to the meadow to complete the restoration project. Water bars and/or rolling dips may be installed to prevent erosion during implementation. Once the project is completed, the road would be closed and the proper drainage restored to prevent future erosion.

Temporary Fence

Install a temporary fence (in place approximately five to seven years) to keep horses out of the project area.

Reasons for Categorically Excluding the Proposed Action

My assessment is that this proposal falls within categories of actions listed in the Forest Service Handbook (FSH) 1909.15 that are excluded from documentation in an Environmental Assessment or Environmental Impact Statement. The category for exclusion is FSH 1909.15, Chapter 32.2 (6) Timber stand and/or wildlife habitat improvement projects that do not include the use of herbicides or do not require more than 1 mile of low standard road construction. (36 CFR 220.6(e)(6))

I have determined that there are no extraordinary circumstances associated with this project that would preclude the use of this categorical exclusion. This determination is based on the absence or the negligible level of adverse effects on the following resource conditions:

a. **Federally listed threatened, endangered and/or Region 5 sensitive species or designated critical habitat.** A Biological Assessment /Evaluation was completed to assess the potential impacts of the Long Meadow Restoration Project on federal listed species and those recognized by the Regional Forester as sensitive. No federal threatened or endangered wildlife or plant species are known to occur in the project area, and the project area does not overlap with any designated critical habitat. Region 5, Forest Service sensitive species with the potential to occur include the California spotted owl (*Strix occidentalis occidentalis*), great gray owl (*Strix nebulosa*), northern goshawk (*Accipter gentilis*), fisher (*Martes pennanti*), American marten (*Martes americana*), greenhorn mountain slender salamander (*Batrachoseps altasierrae*), and the mountain yellow-legged frog (*Rana muscosa*). A determination of "May affect individuals, but is not likely to result in a trend

toward Federal listing or loss of viability" was issued for all of the above species. No Forest Service sensitive plant species were found to occur within the project area and therefore would not be impacted by this project.

b. **Floodplains, wetlands, or municipal watersheds.**
Cumulative watershed effects analysis for this action includes restoration activities such as mechanical equipment and streambed alteration. These disturbances have the potential to increase sediment transport, soil compaction, and negatively affect water quality. However, these disturbances would be short term and minimized using Best Management Practices. The long term benefits of the project would reduce sedimentation back to natural levels, restoring Long Meadow's hydrologic function and connectivity to its floodplain, and sustain diverse habitats. Restorations efforts on the existing headcuts would improve the area, counteracting the negative effects generated by the headcuts.

BMP 2.13 Erosion Control Plan
BMP 2.4 Road Maintenance and Operations
BMP 2.5 Water Source Development and Utilization
BMP 2.11 Equipment Refueling and Servicing
BMP 7.1 Watershed Restoration
BMP 7.4 Forest and Hazardous Substance Spill Prevention Control and Countermeasure (SPCC) Plan
BMP 7.6 Water Quality Monitoring
BMP 7.8 Cumulative Off-site Watershed Effect

c. **Congressionally designated areas, such as wilderness, wilderness study areas, or National Roadless Areas.**
The project is outside any of these areas, therefore no discussion is warranted.

d. **Inventoried Roadless Areas.**
The project area is outside any of the roadless areas, and therefore no discussion is warranted.

e. **Research Natural Areas.**
The project area is outside any research natural area, therefore no discussion is warranted.

f. **American Indian religious or cultural sites; and archaeological sites, or historic properties or areas.**
All surveys and site protection measures have and will follow standards defined in the Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region, California State Historic Preservation Officer, and Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National historic Preservation Act for Undertakings on the National Forests of the Pacific Southwest Region (Regional PA).

The following protection measures, should they be needed, will be implemented for the Long Meadow Restoration Project. When these protection measures are effectively applied, the Forest will have taken into account the effect of these undertakings on historic properties.

I. At a minimum, historic properties shall be excluded from areas where activities associated with an undertaking will occur.

All historic properties within an APE shall be clearly delineated prior to implementing any associated activities that have the potential to affect historic properties.

1. Historic property boundaries shall be delineated with coded flagging and/or other effective marking. Activities within historic property boundaries will be prohibited with the exception of using developed Forest transportation systems when the HRM recommends that such use is consistent with the terms and purposes of this agreement.

2. Historic property location and boundary marking information shall be conveyed to appropriate Forest Service administrators or employees responsible for implementation so pertinent information can be incorporated into planning and implementation documents, and contracts (e.g., clauses or stipulations in permits).

3. Monitoring may be used to enhance the effectiveness of protection measures in conjunction with other measures. The results of any monitoring inspections shall be included in the annual report.

Public Involvement

On December 30, 2011, a scoping letter outlining the purpose and need of the project and the proposed action was sent to 50 individuals and organizations, including local federally recognized tribes. The comment period lasted 30 days, ending on January 30, 2012. Two letters were received: one representing the Sequoia ForestKeeper and the Kern-Kaweah Chapter of the Sierra Club (SFK-Club) and one representing the Alta Peak Chapter of the California Native Plant Society (CNPS). Neither of these letters raised any significant issues, however, they did each express a concern about the project. In the letter submitted by SFK-Club, they indicated that the Forest Service should prepare an environmental assessment or environmental impact statement so that another alternative can be analyzed.

SFK-Club suggested an alternative that would fill in the incised meadow with locally-derived soils and other materials to restore the original contour of the meadow, providing the upper Halstead Meadow restoration project in Sequoia National Park as an example. Prior to developing the proposed action, district hydrologist and biologist analyzed the option of filling in the meadow with soil. The engineering staff has calculated filling in the gully would require approximately 3,400 cubic yards of sediment, and would require soil to be obtained from off-forest. Using a standard dump truck, with a holding capacity of 5 to 10 cubic yards, this would take from 340 to 680 loads to fill in the gully.

The soil used would have to be certified by a soils engineer who is familiar with this type of meadow restoration work, and the borrow site may need to be certified as acceptable. Using this amount of equipment to fill in the meadow would create an unacceptable level of compaction to the meadow's natural structural surface along the multiple paths that would be needed to dump sufficient fill into the voided/head-cut area.

The engineer also analyzed this option from a road use standpoint. Having dump trucks complete 340 to 680 trips would create excessive wear and compaction on the dirt and paved National Forest System roads that provide access into the project area. At this time there is no funding source to offset the damage this may create. In addition, this amount of truck traffic going on and off forest to obtain the soil would present a higher risk of introducing invasive plant species in the meadow or other sensitive areas along the route.

CNPS was concerned with the term "desired non-native plants" (a term used in the scoping letter when discussing the current management direction) used in the restoration of the meadow and the introduction of invasive species. As described above in the Revegetation section, the Forest Service would use vegetation from sources from within or nearest to the project area in order to maintain the native species of the meadow. As for the introduction of invasive species into the meadow, the Noxious Weed Risk Assessment outlines protocol to prevent invasions.

Findings Required by Other Laws

This decision complies with the Monument Plan. The project was designed in conformance with and contributes to achieving strategies and objectives of the Monument Plan.

This decision is also consistent with California Environmental Quality Act (CEQA) regulations as documented on the Notice of Exemption.

Implementation Date

This project is planned for implementation during the autumn of 2013.

How to Comment and Timeframe

Written, facsimile, hand-delivered, oral, and electronic comments concerning this action will be accepted for 30 calendar days following publication of a notice in the Porterville Recorder and simultaneously in the Bakersfield Californian. The publication date in the newspaper of record is the exclusive means for calculating the comment period for this proposal. Those wishing to comment should not rely upon dates or timeframe information provided by any other source. The regulations prohibit extending the length of the comment period.

Written comments must be submitted to: Richard Stevens, District Ranger at Western Divide Ranger Station, 32588 Highway 190, Springville, California 93265. The office business hours for those submitting hand-delivered comments are 8:00 am to 4:30 pm Monday through Friday, excluding holidays.

Oral comments must be provided at the Responsible Official's office during normal business hours via telephone at 559-539-2607, or in person, or at an official agency function (i.e. public meeting) that is designed to elicit public comments. Electronic comments must be submitted in a format such as an email message, plain text (.txt), rich format (.rft), or Word format (.doc) to comments-pacificsouthwest-sequoia-tule-river-hotsprings@fs.fed.us, Subject: Long Meadow Restoration Project. In cases where no identifiable name is attached to a comment, a verification of identity will be required for appeal eligibility. If using an electronic message, a scanned signature is one way to provide verification. It is the responsibility of persons providing comments to submit them by the close of the comment period. Individuals and organizations wishing to be eligible to appeal must meet the information requirements of 36 CFR 215.6.

Contact Person

For additional information, contact Robin Galloway, District Biologist, at the Western Divide Ranger District, 32588 Highway 190, Springville, CA 93265. Phone: 559-539-2607 Ext. 280.