

Proposed Action for the Meeks Creek Meadow Ecosystem Restoration

USDA Forest Service Pacific Southwest Region
Lake Tahoe Basin Management Unit
El Dorado Co., California

Location:

The Meeks Creek Meadow is located within the Meeks Management Area on the western shore of Lake Tahoe in El Dorado County, California in Section 29, SE ¼ Section 30 and the NW ¼ Section 31, T14N, R17E of the Homewood, California Quadrangle map.

Background:

At Meeks Creek human activity has long been an important influence on ecosystem function. Beginning with the ancestral Washoe inhabitants, vegetation and wildlife were cultivated, harvested and managed using sustainable practices, including burning the meadow, for at least six thousand years prior to 1860. The Washoe Tribe of Nevada and California (the Tribe) traditionally used Meeks Bay during the warmer seasons to gather and cultivate plants and to fish and hunt. Meeks Meadow continues to be an important location for the Tribe to continue traditional cultural practices, including the gathering of culturally important plants.

Europeans arrived in Meeks as early as 1860, dramatically changing the way humans used the landscape. The first settlers used the meadows for grazing and hay production, while discontinuing the practice of burning the meadow. Grazing no longer occurs in the meadow, however regular burning of the meadow has not been resumed. The result has been a change in the vegetation composition, including a loss of riparian deciduous trees and lodgepole pine encroachment into meadows areas.

A Girl Scout Camp known as Camp Wasiu was established in 1950 in the upper (west) Meeks. This camp was active until about 1965 when it was apparently abandoned. Remnants of buildings, toilets and other debris remain in the area.

Proposed Action:

Lodgepole Pine Management

The total area to be treated for lodgepole pine encroachment is 76.5 acres in five separate units (Figure 1). Two USFS system roads will be used to access the project area: 14N42 (north side of meadow) and 14N44 (south side of meadow).

The following treatment guidelines are proposed for units A-1, A-2, B-1 and C-1:

- Desired future overstory tree density of approximately 8 to 10 trees per acre.
- Hand thinning or low impact mechanical method of thinning of lodgepole pine less than 20 inches dbh; maintain all snags greater than 8 inches dbh.

- Protect or create down logs that are greater than 12 inches in diameter, when log density is less than 5 per acre and trees are proposed for removal. Preference would be given to the largest logs available for wildlife habitat.
- Slash material should be removed from the meadow and chipped or burned off site, or scattered for a broadcast burn.
- Prescribed fire may be applied after thinning is complete. Preferred timing of prescribed fire treatments is fall.

Unit A-1

Unit A-1 covers approximately 6.5 acres and is dominated by wet meadow. This unit is bordered by mixed conifer forest and mixed riparian scrub (alder-willow complex). Most of the Unit A-1 is within a mapped SEZ. Slopes are mostly flat and the unit drains to the southeast towards Meeks Creek, which traverses the southern end of the unit.

Unit A-2

Unit A-2 covers approximately 3.9 acres and includes a mixture of dense lodgepole pine forest with open patches of wet meadow. The unit is bordered by mixed conifer forest, dry and wet meadow. Unit A-2 is not located within an SEZ. Slopes are mostly flat and the unit drains to the southeast towards Meeks Creek.

Unit B-1

Unit B-1 is dominated by very dense, early seral lodgepole pine forest with small patches of wet meadow. The vast majority of lodgepole pines in this unit are less than 14 feet in height and 4 inches dbh. Most of the unit is mapped as wet meadow, but recent surveys conducted in 2008 indicate that the meadow has become desiccated, which is likely the result of lodgepole pine growth. The majority of the unit is located within an SEZ. Slopes are mostly flat and the unit drains to the northwest towards Meeks Creek.

Unit C-1

Unit C-1 covers approximately 5.7 acres of a mixture of dense lodgepole pine forest with open patches of wet meadow. The unit is bordered by mixed conifer forest and wet meadow. The unit is not located within an SEZ. Slopes are flat to moderate and the unit drains to the southeast towards Meeks Creek.

The following treatment guidelines are proposed for unit C-2:

- Desired future overstory tree density of approximately 12 to 16 trees per acre.
- Hand thinning or low impact mechanical method of thinning of lodgepole pine less than 20 inches dbh; maintain all snags greater than 8 inches dbh.
- Protect or create down logs that are greater than 12 inches in diameter, when log density is less than 5 per acre and trees are proposed for removal. Preference would be given to the largest logs available for wildlife habitat.
- Slash material should be removed from the meadow and chipped or burned off site, or scattered for a broadcast burn.
- Prescribed fire may be applied after thinning is complete. Preferred timing of prescribed fire treatments is fall.
- Upgrade of FS system road 14N42 to facilitate vegetation treatments

Unit C-2

Unit C-2 is the largest unit covering 32.8 acres. This area is dominated by very dense, early seral lodgepole pine forest with small open patches of wet meadow and obligate sedge meadow. The vast majority of lodgepole pines in this unit are less than 14 feet in height and 4 inches dbh. This unit comprises a significant portion of the meadow that was burned during the 1995 fire. Consequently, there is a significant number of standing dead trees throughout the unit. The unit is not located within an SEZ. Slopes are mostly flat and the unit drains towards Meeks Creek, which bisects the unit.

Other Restoration and Management Actions

Aspen Reforestation

Aspen reforestation efforts would be concentrated in Region A-1 (approximately 6.5 acres). Aspen revegetation stock should be propagated from plant materials (e.g., root and above ground cuttings) or seeds sourced from the west-side of the Basin to ensure appropriate ecotype. The density of the plantings would be determined based on the quantity of plant materials available for reforestation. There is a significant level of beaver activity in this area, so aspen that are planted here would require browse protection such as tree cages or fencing. The plants would likely be installed when dormant in the late fall. Some irrigation in the first year or two after planting may be necessary.

Camp Wasiu Clean-up

Numerous structures associated with the former Girl Scout Camp are spread across several acres at the southwest or upper end of the project area. These structures are unsightly and may present hazards to visitors, and therefore should be removed. The former camp is nearly accessible by truck along the roadway/trail that follows the north boundary of the meadow in this area. The following actions are proposed for Camp Wasiu:

- Dismantle all concrete and cinder-block foundations and remove for offsite disposal; retention of the old dining hall foundation located on the elevated rock outcrop near the northwest corner of the project area will be considered if removal cannot be achieved without excessive site disturbance.

- Remove all glass, plastic, metal and other anthropogenic materials, including pipes used to divert water to the camp, and dispose offsite; burning or otherwise disposing of timber from former wood buildings/structures in a designated area of the Site coordinated with other restoration actions.
- Fill exposed pits and other soil disturbances to restore ground surfaces to adjacent grades.
- Amend soils and revegetate as necessary.
- Construct temporary access roads and restore upon project completion

Forest Plan Consistency:

The NFMA analysis team completed a LRMP consistency matrix and found all components of the proposed action to be consistent with the LTBMU LRMP with implementation of the project design features included with the proposed action. The NFMA analysis and PIM included all possible restoration actions within Meeks Creek Watershed. However, this project does not include the campground/marina area due to the need for further internal discussion on actions to be included for that area.

The project is expected to meet the Forest-wide standards and guidelines, and the Management Area direction with the inclusion of the design features below:

Transportation

1. Access roads will generally use pre-existing roads and/or require little grading if any. If temporary roads are required, they will be obliterated upon completion of work. Routes will be located to avoid wetlands and meadows wherever possible.

Hydrology/Soils

1. To provide ground cover and protect soil resources in areas of ground disturbance, including landings and temporary roads, masticated or chipped material would be spread over the disturbed areas, with a maximum depth of approximately 4"
2. Temporary roads and landings used for mechanical thinning will be completely restored following project activities.
3. Mechanical equipment operations in SEZs would be limited to CTL operations or operations using equipment that has been demonstrated to adequately protect soil and water resources (i.e. equipment that is lighter on the land, rubber-tired equipment, equipment that operates on a bed of slash, or other innovative technologies that reduce impacts to soils).
4. Meeks Meadow SEZ stands that are determined to be suitable for treatment with ground based equipment using the SEZ Sensitivity Rating System as evaluated by a LTBMU hydrologist or soil scientist may be treated with ground- based equipment under operable soil moisture conditions.
5. SEZ stands that are determined not suitable for ground based equipment using the SEZ Sensitivity Rating System as evaluated by a LTBMU hydrologist or soil scientist would be treated by hand crews, endlining, or mechanical over-snow operations.

6. When only a portion of the stand is responsible for the high sensitivity rating, the less sensitive part may be treated with mechanical equipment, but the sensitive portions of these stands would be treated by hand crews, endlining, or mechanical over-snow operations. Areas with wet soils or other sensitive features would be flagged for hand treatment prior to commencement of mechanical operations.
7. No ground based mechanical equipment would be allowed to operate within 25 feet of a perennial stream or waterbody. When removing trees within the 25 foot buffer, equipment may reach in, however ground contact must be avoided.
8. Prescribed fire would be planned to ensure that fire intensity and duration do not result in detrimentally burned soils.
9. Underburning prescriptions would be designed to avoid adverse effects on soil and water resources. Flame heights would not exceed two feet within 50 feet of stream courses or on wetlands unless higher intensities are required to achieve specific objectives consistent with the Forest Plan standards, above.

Wildlife and Fish

1. For treatments within aspen stands:
 - a. Logging slash should be removed to allow sunlight to reach the forest floor, unless a prescribed fire is planned to stimulate additional suckering. In the latter case, only scattered branches and tops should be left (broadcast burning of heavy fuel loadings will likely kill too many shallow aspen roots and result in poor suckering).
 - b. Design prescribed fire treatments to minimize disturbance of groundcover and riparian vegetation in RCAs.
 - c. Prescribed burn activities in meadows and aspen stands are desired; however, they should be designed to protect existing late seral vegetation (e.g., willow along streams and within meadows, larger overstory aspen trees).
2. Leave larger diameter trees (e.g., large coarse woody debris) on the ground (including recently felled trees) to the extent possible without exceeding a desired fuel load. Emphasize retention of wood in the largest size classes and in decay classes 1, 2, and 3. Consider the effects of follow-up prescribed fire in achieving desired down woody material retention levels (SNFPA 51.10).
3. Jeffrey/ponderosa and sugar pine would be favored for retention, as well as desired riparian species, such as aspen and willow.
4. Native or locally harvested aspen stock will be used for aspen stand restoration/enhancement

Air Quality

1. A burn plan will be prepared and reviewed by the Lake Tahoe Basin Management Unit Forest Fire Management Officer prior to implementation of any prescribed burning. This burn plan includes a Smoke Management Plan, which is the basis for obtaining a burn permit from the El Dorado County Air Quality Management District. In order to

minimize the effects of prescribed burning on air quality, monitoring, mitigation, and contingency measures will be identified in the Smoke Management Plan. Desirable meteorological conditions such as favorable mixing layer and transport wind speeds are required in the Smoke Management Plan to facilitate venting and dispersion of smoke from populated areas.

Scenic

1. Construction of temporary roads, meadow restoration, and stand improvement work would be accomplished to the extent practical in a manner that closely duplicates the existing lines, forms, colors, and textures of the surrounding landscape character.

Recreation

1. Prepare a Project Implementation Plan to ensure that all potential effects to recreationists and users are minimized through a well planned schedule, phased implementation, and timing of project activities. The Plan would address the following phases and requirements:

A. Pre-Implementation Phase

Develop a Communication and Sign Plan that includes signage posted at the access road and trailhead that describe the purpose of the project and safe travel suggestions.

B. Construction Phase

Due to potential safety hazards to the public inherent in the construction process, implement the following strategies: Closures and Signage: Use of heavy equipment on access routes may preclude the safe use of those routes by the public; therefore, the area should be temporarily closed. Temporary closures should be adequately posted with signage that meets Forest Service design standard guidelines.

Heritage

If any previously unrecorded heritage resources are discovered during maintenance activities, all related activities must cease immediately and the procedures as set forth in Section 800.13 of the Council on Environmental Quality's regulation 36 CFR Part 800 must be initiated.

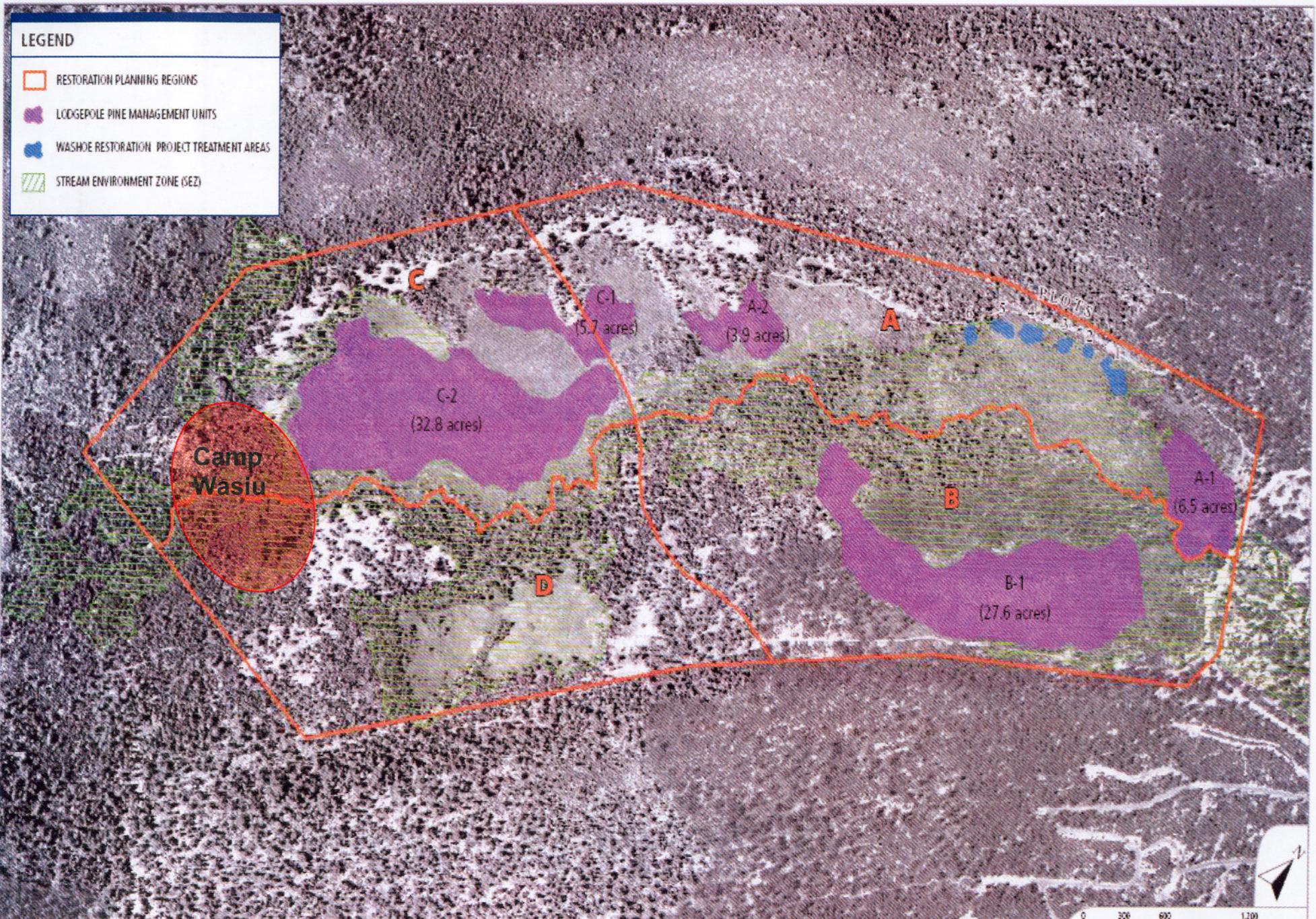


Figure 1: Meeks Meadow with regions for restoration planning (A-D) and lodgepole pine treatment units delineated. The blue areas indicate a thinning/burning project implemented by the Washoe Tribe in 2009. Red polygon shows approximate extent of Camp Wasiu debris and structures.