

**North Eagle Lake, Champs Flat, and Lower Pine Creek Allotments
Grazing Management Project
Eagle Lake Ranger District, Lassen National Forest
Lassen County, California
2018**

Introduction

The Lassen National Forest is proposing to authorize continued livestock grazing with changes to management strategies on the North Eagle Lake, Champs Flat, and Lower Pine Creek Allotments. These allotments cover 74,569 acres and are located approximately 15 miles northwest of Susanville, CA (centered at Logan Mountain). The allotments include part of the Pine Creek Valley, Champs Flat, Antelope Valley, Dow Butte and extend to a small portion of the west shore of Eagle Lake. (Map 1, attached)

Under the terms of Section 504(a) of the 1995 Rescission Act (Public Law 104-19), a schedule for completion of grazing Allotment Management Plans (AMPs), including National Environmental Policy Act (NEPA) analysis was developed. The Lassen National Forest (LNF) has implemented, with several revisions, the schedule for completing NEPA documentation to analyze the effects of grazing on all allotments as required by the Rescission Act.

From 2005 through 2007, the US Forest Service was given authority to document environmental analysis of grazing allotments under a temporary Categorical Exclusion (CE) authority. The North Eagle Lake, Champs Flat and Lower Pine Creek Allotments were analyzed using the CE authority and a Decision Memo signed in 2006. A regional litigation filed in 2008 on the use of the CE authority resulted in an agreement by Region 5 of the US Forest Service to re-analyze these allotments under an Environmental Assessment by the end of 2016. Due to changing Forest priorities and lack of personnel, it has been delayed until now.

It is appropriate to analyze these three allotments together because one livestock herd grazes all three allotments in a deferred rotation system. A second, smaller herd of livestock grazes a smaller, separate unit in the Champs Flat Allotment. The current grazing management systems have included rotating livestock through numerous pastures, resting riparian pastures from grazing during certain years, adjusting livestock numbers, and adjusting timing and length of grazing based on annual forage and water conditions. Grazing management has been adaptive in an effort to help improve conditions of the Pine Creek drainage, the primary stream that flows through all three allotments and terminates at Eagle Lake.

Pine Creek is important because it is the largest stream draining into Eagle Lake, and provides the primary natural spawning habitat for the Eagle Lake rainbow trout (ELRT), historically native only to this system and highly adapted to the alkaline environment. Portions of its migration and spawning habitat along Pine Creek are degraded as a result of historic land management practices that included extensive logging, heavy grazing, stream channelization, and construction of railroads and roads across meadows and streams. Efforts to restore natural spawning started in the late 1990's, but there is still a need to improve watershed function to enhance the aquatic and riparian habitat along Pine Creek.

Pine Creek is intermittent where it flows through the allotments, and flows are highly variable, depending on the amount of runoff from snowmelt during the spring. Streamflow typically begins in March and ends by June, depending on water year. Riparian areas and meadows are graminoid-dominant, lacking a riparian woody species component. Pine Creek within Pine Creek Valley is a wide, shallow, multiple channel system with stable and relatively well-vegetated banks. Pine Creek and tributaries are significantly more incised in the large alluvial valleys, including Champs Flat, McCoy Flat, Antelope Valley, and Little Antelope Valley, with unstable, vertical banks and significant lateral erosion. Incision along Pine Creek and tributaries is due to multiple factors, including historic road and railroad infrastructure for logging, channelization, as well as intensive livestock grazing and sheep drives that occurred between the late 1800s and early 1900s. Several segments of Pine Creek are relatively steeper and stable where it crosses volcanic bedrock through narrow canyons between the large valleys.

A Geomorphic Assessment and Trend Analysis as well as a Meadow Assessment for restoration opportunities in the Pine Creek watershed were completed in 2015 and 2016, respectively. The reports identified areas that could benefit most from restoration efforts, using active and/or passive methods. The Pine Creek Restoration Project (2014) is awaiting implementation and will address some of the areas identified in these assessments. The Confluence Meadow Project is currently being analyzed and would also address identified areas for restoration. Both projects would use active methods that physically change the stream channel, move soil, and require the use of machinery. Proposed actions identified in this analysis would complement the above activities, but focus more specifically on livestock management and related actions.

Purpose

The purpose for the proposed action is to continue to permit livestock grazing on all or portions of the North Eagle Lake, Champs Flat, and Lower Pine Creek Allotments, while moving existing riparian vegetation and stream channel conditions toward desired conditions. An adaptive livestock management strategy would be developed to move existing conditions toward desired conditions in a timely manner, consistent with Forest Plan objectives, as amended.

It is timely to re-evaluate the allotment management on these allotments because the Eagle Lake Ranger District has assessed other projects in the Pine Creek watershed that can complement and be complemented by this project in an effort to improve resource conditions throughout the watershed. This project would focus on areas within the allotment boundaries.

Authorization of livestock grazing and management is appropriate in the project area because:

- Where consistent with other multiple use goals and objectives there is Congressional intent to allow grazing on suitable lands. (Multiple Use Sustained Yield Act of 1960, Wilderness Act of 1964, Forest and Rangeland Renewable Resources Planning Act of 1974, Federal Land Policy and Management Act of 1976, National Forest Management Act of 1976).
- These allotments contain lands identified as suitable for domestic cattle grazing that meet the goals, objectives, standards, and guidelines as described in the Lassen National Forest Land and Resource

Management Plan (LRMP, 1992), as amended by the Sierra Nevada Forest Plan Amendment (SNFPA, 2004).

- It is Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing consistent with land management plans (36 CFR 222.2 (c)).
- It is Forest Service policy to continue contributions to the economic and social well-being of people by providing opportunities for economic diversity and by promoting stability for communities that depend on range resources for their livelihood (FSM 2202.1).
- Updated management strategies would outline how livestock would be grazed and at what levels would be developed to assure implementation of Forest Plan management direction and meet Section 504 of Public Law 104-19 (Rescission Bill, signed July 27, 1995), which requires revision of existing allotment management plans.

Need

Over the last 20-25 years, resource management, including grazing, has focused on improving riparian and stream conditions along the length of Pine Creek. There has also been emphasis on restoring the health of aspen stands throughout the area. Riparian pastures, riparian exclosures, and more restrictive livestock use standards have helped improve vegetative cover and species composition, and increased bank stability along the creek and in adjacent riparian areas. However, recent analyses and utilization monitoring from 2012 to 2017, have identified segments of Pine Creek where changes in livestock management is needed in order to continue improving riparian vegetation composition and streambank stability.

Livestock Management

Monitoring over the last few years has indicated there is a need for changes in livestock management to improve riparian vegetation condition and streambank stability along segments of Pine Creek, particularly in the large open valleys of Champs Flat, and McCoy Flat. Timing of use, repeat grazing, and incomplete removal of livestock from pastures has resulted in over use of riparian vegetation and/or aspen. Late season grazing has resulted in excessive bank trampling in some locations such as McCoy Flat. There is a need to refine the grazing strategy and describe the objectives for deferring or resting pastures, so grazing can continue and upward trends in riparian conditions can be achieved.

Fences

Improvements or repairs to existing fences, as well as some new fences, are needed. Pasture fences constructed for riparian and stream improvement were placed too close to the stream channel and need to be relocated to allow for natural movement of the channel as it improves. Active headcuts have developed in the Stanford Headquarters area and need to be fenced to allow them to stabilize and recover. Additional boundary fences are needed where livestock drift into adjacent allotments, because natural barriers that previously acted as fences have been removed. Fences to protect aspen regeneration may also be needed if monitoring indicates after treatment.

Watershed Improvements

Man-made impoundments used to water livestock and historical grazing patterns have contributed to degradation of streambanks within multiple meadows and valley bottoms within the allotments. On-channel waterholes along Pine Creek continue to act as attractants, particularly in drought years, which encourages livestock to concentrate in adjacent meadow areas. There is a need to restore flow patterns and rehabilitate channels and associated meadow vegetation by replacing on-channel waterholes with alternate water sources, stabilizing headcuts, and changing livestock distribution at times when bank trampling is most critical. Several locations have been identified for proposed improvement work that would meet this need.

Aspen Enhancement

Aspen are shade intolerant and are often overtopped and shaded by conifers in the absence of disturbance. Conifer encroachment into aspen communities has significant effects on mature aspen tree growth and regeneration success through changes in light conditions. Therefore, removing conifers to increase direct and indirect light is typically recommended to enhance aspen vigor and regeneration success. Aspen regeneration is also a preferred browse resource in late summer for livestock and wildlife because it has higher forage value. Excessive browsing suppresses establishment of new aspen tree cohorts by maintaining suckers in a hedged form or totally eliminating regeneration. Moderate or even incidental browsing occurring along the edges of aspen communities can impede aspen communities from expanding where possible.

Identified aspen stands within the allotments are declining in vigor and regeneration from conifer encroachment and/or browsing of regeneration. Conifer removal followed by some form of protection from browsing is needed in these stands to promote regeneration and increase the health and vigor of the stands.

Proposed Action

The Forest Service proposes to continue to authorize livestock grazing on the North Eagle Lake, Champs Flat and Lower Pine Creek Allotments under updated Allotment Management Plans (AMPs) that would implement decisions based on this environmental analysis. Changes to livestock management would incorporate specific rest for pasture units, adjustments to season of use based on identified drought conditions, and use of portable water facilities to improve livestock distribution.

Grazing Authorization

Grazing in the project area would be authorized under two Term Grazing Permits for two different permittees (Table 1). One permit would authorize grazing on the Northwest Unit of the Champs Flat Allotment, referred to below as “Champs Flat (NW)”. Pasture units included in this Unit are listed in Table 2 and shown on Map 2 (attached). The other permit would authorize grazing on all three allotments, referred to below as “Combined Allotments”. This permit would authorize one herd of cattle to rotate through 10-12 pastures/units, identified in Tables 3 and 4 and shown on Map 2, attached. Each permit would have a separate AMP to document management because livestock would not graze in common. The following table displays details of both permits.

Table 1. Authorized Grazing by Term Permit

Allotment	No.	Class	Permitted Dates	Adjusted Dates for Drought Conditions	Days	AM's	AUM's
Champs Flat (NW)	175	Cow/calf	6/1-9/30	5/1-8/31	122	702	927
Combined Allotments							
<i>N. Eagle Lake</i>	200	Cow/calf	6/1-9/30	5/1-8/31	122	802	1059
<i>Champs Flat</i>	300	Cow/calf	6/1-9/30	5/1-8/31	122	1203	1588
<i>L. Pine Creek</i>	492	Cow/calf	6/1-9/9	5/15-8/25	101	1634	2157
	992				112	3639	4804

Terms and Conditions Common to Both Permits

Variable Numbers and Season

Each permit would be under a variable grazing permit where numbers, type of livestock (cow/calf, yearlings, dry cows) dates and times may be adjusted when authorized by a Forest Officer. Variable management operations may occur on a year-by-year basis.

- Seasons of use may vary between May 15th to October 15th during typical or normal years based on precipitation and forage conditions.
- Seasons of use may be adjusted by as much as one month earlier for years where there is moderate or greater severity drought, resulting in reduced forage growth and water supply shortages. Because of the great degree of inter-annual variability in regional precipitation, drought severity would be determined using common, nationally-recognized drought indices that use multiple key indicators; these include the US Drought Monitor classification scheme and Palmer Hydrologic Drought Index (PHDI). Drought conditions would be triggered when the US Drought Monitor classification scheme is at D1 or greater severity, and PHDI values are at -2.0 or below.
- On and off dates would be determined annually based on range readiness, allowable use standards, and management objectives.
- Scheduled yearlong rest could be applied in the grazing strategy as resource protection versus personal convenience nonuse.
- Adult cattle include animals weaned or 6 months old or older at the time of entering the allotment, those animals which will become 12 months of age during the grazing season, and animals greater than 600 pounds in body weight.

Grazing Utilization Standards - General

For general areas of rangeland within allotments that have not been assigned site-specific utilization standards, the following standards from the Forest Plan (LRMP, 1992) as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (SNFPA ROD, 2004), would apply.

Upland Rangelands:

- 50 percent utilization of perennial rangeland vegetation that is in at least fair condition with stable trend and not associated with riparian zones.
- On perennial vegetation where rangeland condition is in less than fair condition or has a downward trend, adjust utilization to promote upward trend.
- Utilization is based upon current year's annual growth (actual percent by weight).

Riparian Zones:

- Up to 45 percent use of streamside herbaceous vegetation with no reduction in ground cover for streamside zones in good condition.
- For streamside zones in poor condition, adjust utilization to 1-25 percent until restored to fair condition.
- Retain 4-6 inches stubble height, where feasible, on streamside vegetation at the end of the grazing season.
- Prevent disturbance to streambanks and natural lake and pond shorelines from exceeding 20 percent of stream reach or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, and other means of exposing bare soil or cutting plant roots.

Browse Utilization:

- Limit browsing to no more than 20 percent of the annual leader growth of mature riparian shrubs (including willow and aspen) and no more than 20 percent of individual seedlings. Remove livestock from any area of an allotment when browsing indicates a change in livestock preference from grazing herbaceous vegetation to browsing woody vegetation.

Grazing Utilization Standards - Site-specific Areas

Site-specific standards are applied in locations that require more careful management to obtain resource objectives and are typically more restrictive. Key areas were identified throughout the allotments in uplands, meadows, and along Pine Creek in 2006 and site-specific standards were established to promote upward trends in conditions. The site-specific standards identified in 2006 have not changed and are summarized below with the key areas they apply to. When a standard is reached in a pasture, livestock would be removed from that area.

Uplands:

- 45% utilization of perennial grasses - Uplands associated with Gordon Creek, Antelope Valley, McCoy Flat and Pine Creek Reaches 9 and 10.

Riparian:

- 40% utilization of herbaceous vegetation - Meadows associated with Pine Creek Reaches 9, 10, 20-25.
- 30% utilization of herbaceous vegetation - Meadows associated with Pine Creek Reaches 16-18.
- 0-5% utilization - Pine Creek Reaches 15 and 19 are excluded from grazing (5% in case unplanned grazing occurs).
- 40% utilization of herbaceous vegetation - Dry meadows in the North Champs Field (associated with aspen), Ashurst and Houseman areas.

Streamside Stubble Height: (on key species)

- Pine Creek reaches associated with the meadow areas above (Reach 9, 10, 20-25) would leave a minimum of 4" herbaceous residual stubble height along the streambanks when grazing is finished in that unit.
- A minimum of 4" herbaceous residual stubble height would be left along the streambank of the tributary to Ashurst Lake.
- A minimum of 6" herbaceous residual stubble height would be left around the edge of the Pine Creek Wetland.

Livestock Management

1. Livestock moves between pastures or general areas would be completed prior to utilization standards being met. This would necessitate beginning the move one or more days prior to reaching the allowable use standard or the scheduled off date. Any livestock use after the scheduled off date would be approved in advance by the Forest Officer and would be based on an estimate of forage remaining until allowable use standards would be reached.
2. Portable watering facilities would be used for distribution of livestock into upland areas and reduce grazing pressure on meadow/riparian areas, particularly during dry years. Facilities would include a portable storage tank, trough with float system, or other efficient set-up that would meet the objective.
3. Sites for portable watering facilities would be identified and approved in cooperation with the permittees on an annual basis, and would typically be areas of past disturbance, such as old logging landings, road intersections, etc. Locations would be outside of known archaeological sites, known botanical, terrestrial, or aquatic TES populations or sensitive areas, aspen stands, riparian areas, and known invasive weed sites.

4. No salting or livestock supplement stations would be placed within 1/4 mile of water developments, streams, or other riparian areas. This would not apply to portable watering facilities.
5. Salt blocks, livestock supplement stations, and staging or gathering areas would be located outside of known archaeological sites, known botanical, terrestrial, or aquatic TES populations or special habitats, aspen stands, known invasive weed sites and aquatic features, i.e. stream channels, wetlands, springs, lakes or associated RCAs.
6. The permittee would be authorized to use Off Highway Vehicles (OHV) off of designated routes, trails, or OHV use areas to conduct permitted activities, including removal of dead livestock and/or construction and maintenance of range improvements. Cross-country travel in the performance of these responsibilities would be reviewed and approved annually in the Annual Operating Instructions. Wet or sensitive areas would be avoided, use would be a route with the least impact, and “Tread Lightly” guidelines would be practiced. The permittee is responsible for abiding by all state OHV safety regulations as they apply to implements of husbandry.
7. All allotment boundary fences would be maintained to standards prior to livestock entering the allotment. Internal pasture fences would be maintained to standards prior to livestock entering the pasture. Maintenance responsibility and standards are included in Part 3 of the Term Grazing Permit.

Terms and Conditions Specific to the Champs Flat (NW) Allotment (Maps 2, 3A)

- On alternating years, livestock would graze the Northwest Field, beginning in the Ashurst area first, then drifting south toward Champs Flat. On the other years, livestock would graze the Champs Flat area first, then move north toward Ashurst.
- The Pine Creek Reaches (16-18) would be grazed early, one year out of every three years, before entering the Northwest Field, resting at least one reach each year.
- The remaining holding fields would be grazed in rotation, as needed, to change season of use from one year to the next.

Terms and Conditions Specific to the Combined Allotments (Maps 2, 3A, 3B, 3C)

- Full rest of at least one pasture/unit would be incorporated into the rotation schedule annually. Rest would be coordinated with watershed improvement projects, included in this or other project proposals, to allow recovery/re-establishment of soils and vegetation. The rotational grazing system and pasture rests would be identified annually within the Annual Operating Instructions (AOI).
- Utilization standards would determine the length of time spent in each unit. If utilization standards are reached in any unit prior to the scheduled rotation date, livestock would be moved to the next unit. The full rotation schedule would remain flexible to provide for meeting standards throughout all units.

- These allotments are permitted for 955 cow/calf pair based on Forest Service lands, and an additional 37 pair under the on/off provision for the private lands within the Lower Pine Creek Allotment. Total numbers permitted on these allotments is 992 cow/calf pair. Authorized animal numbers generally vary from 500 to 992 cow/calves.
- The allotments are authorized up to a total of 4,804 Animal Unit Months. Numbers and season of use may be adjusted from year to year, as long as total AUMs are not exceeded. AUMs available in each allotment would not be exceeded, so days within each allotment would be adjusted based on authorized numbers.

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Herd Movement (refer to Map 2)

Champs Flat (NW)

The Champs Flat (NW) allotment is divided into 11 units, including two private land inholdings (Table 2). Generally, a small group of cow/calf pairs would be placed in one of the three Pine Creek pastures first, for early season grazing. The remaining pairs would graze two of the smaller holding fields, before the entire herd would be moved into the main pasture, the Northwest Field. Once utilization is reached, livestock would be gathered to the remaining fields on the flat to finish the season. In general, the fields grazed early one year would be grazed late the following year.

Table 2. Champs Flat (NW) Pastures

Pasture/Field		Order of Rotation	Length of Use
East Cabin Field (Private)	Cow/calf pairs	1st or last - alternate w/Gordon & Corral fields	Early or end of season
West Cabin Field (Private)	Cow/calf pairs	1st or last - alternate w/Gordon & Corral fields	Early or end of season
Government Field (FS)	Cow/calf pairs	1st or last - alternate w/Gordon & Corral fields	Early or end of season
Gordon Creek Field (FS)	Cow/calf pairs	1st or last - alternate w/Cabin & Govt. fields	Early or end of season
Corral Field (FS)	Cow/calf pairs	1st or last - alternate w/Cabin & Govt. fields	Early or end of season
Herrick Field (FS & Private)	Cow/calf pairs	before or after NW field	2 weeks mid-season
Northwest Field (FS)	Cow/calf pairs	3rd or 4th	Mid-season
Pine Creek Reach 15		n/a	No grazing
Pine Creek Reach 16	Cow/calf pairs	First	Graze 1 of 3 years
Pine Creek Reach 17	Cow/calf pairs	First	Graze 1 of 3 years
Pine Creek Reach 18	Cow/calf pairs	First	Graze 1 of 3 years

Combined Allotments

There are eleven (11) main pasture units (Table 3), three each in Champs Flat and Lower Pine Creek, and five in North Eagle Lake, which would be grazed in rotation by one herd of cattle. The order of use would vary each year to avoid use of any one area during the same time of year and vegetative development stage in consecutive years. Length of time in each pasture would vary from year to year, depending on the order of rotation and which pastures are being rested. The objective would be to rest at least one pasture unit each year. Some pastures may be rested more often than others depending on resource objectives, such as when additional rest is necessary for recovery of treated aspen stands, or vegetation/soil recovery after watershed projects, etc.

There are six (6) riparian pastures (Table 4), created in the mid-1990s, along Pine Creek, mostly in the Champs Flat Allotment. These pastures would be used only as short-term, pass-through areas when moving livestock between larger pastures. Individual riparian pastures would be rested when watershed improvement projects within that pasture are implemented.

Table 3. Main Pastures/Units – Combined Allotments

Pasture/Unit	Allotment	Time in Rotation	Days of Use
North Champs	Champs Flat	As fits into other pasture restrictions – both upland pastures	14-30
South Champs	Champs Flat		
Reach 21b Pine Creek	Champs Flat	Mid-season	14
North Pasture	L. Pine Cr	Mid-season	30 combined
South Pasture	L. Pine Cr	Early, Mid-season	
Mountain Pasture	L. Pine Cr	Mid, late season	
Houseman Unit	N. Eagle Lake	1 st or 2 nd	14
McCoy Flat Unit (No Pine Cr.)	N. Eagle Lake	Before preference to browse aspen occurs	7-10
Penitentiary Flat Pine Cr. Reach 23	N. Eagle Lake	Before preference to browse aspen occurs	7-10
Spalding	N. Eagle Lake	First/Last	7-10
Lakeshore	N. Eagle Lake	First/Last	14

Table 4. Riparian Pastures/Units – Combined Allotments

Pasture/Unit	Allotment		Days of Use
Champs holding field	Champs	Between pasture moves	Small groups, 2-3 days
Reach 19 Pine Creek	Champs		Exclosure; no grazing
Reach 20 Pine Creek	Champs	Between pasture moves	Small groups, 2-3 days
Reach 21a Pine Creek	Champs	Early to mid-season	Overnight w/ small groups
Reach 21c Pine Creek	Champs	Early to mid-season	Overnight w/ small groups
Reach 22 Pine Creek	N. Eagle Lake	Early or Late	Overnight w/ small groups

Rangeland Improvements and Developments

All proposed actions involving fences, water developments, and aspen treatments would occur as soon as is feasible after a decision is signed. Where several projects are in the same area and complement each other, activities would be coordinated for efficiency of time and resources. Maps of proposed improvements are by allotment to better display location and identification of individual proposed actions. (Maps 3A, 3B, 3C)

Proposed Fences

The allotments are well fenced, particularly for riparian protection and controlled management within reaches of Pine Creek. Some new fences are needed to control drift from the Champs Flat Allotment into adjacent allotments due to timber activities that have removed natural barriers that previously impeded livestock movement. Some realignment of fences along Pine Creek is needed to allow for natural movement of the stream channel. Fence maintenance responsibilities are included in Part 3 of the Term Grazing Permit which would be modified to include permanent fences that are implemented as part of this project.

1. Boundary fence between Champs Flat (Northwest) and Harvey Valley Allotment – T33N, R9E, Section 8 from Ashurst Mountain, northeast along the ridge to Forest Road 33N05A where it crosses the saddle, then continuing northeast along the ridge to the Forest boundary in T33N, R9E, Section 4. Then continuing east along the Forest boundary to the existing boundary fence in Section 3. (Map 3A)
2. Fence Realignments along Pine Creek – the fences along Pine Creek from Bradford Crossing to McCoy Flat would be realigned to allow for movement of the stream channel and accommodate rest periods when watershed projects are implemented. (Map 3A)
3. Aspen stands (GOPS 04 & 05) along Forest Road 33N94 on the southeast side of McCoy Flat would be fenced to protect sprouts and suckers from livestock browsing. (Map 3B)
4. Stanford Headquarters – the meadow at Stanford Headquarters (T33N, R9E, Section 34) would be fenced to exclude livestock and to protect head-cut treatments and the known archaeological site. (Map 3A)
5. Aspen stand GOST 02 (T33N, R9E, Section 27), northeast of Stanford Headquarters, is bisected by the existing pasture fence between the South Champs pasture and Pine Creek Reach #18. This fence would be re-located to the north of the aspen stand so it would have less incidence of browsing by livestock due to the proximity of a water source within the riparian pasture. (Map 3A)
6. Water Gap – a fence would be constructed to create a water gap at the waterhole adjacent to the three culverts where Pine Creek flows under County Road 105 (T32N, R9E, Section 32). This would allow livestock to access the water from both the north and south pastures and provide an alternative water source to others proposed for removal in the next section. (Map 3C)
7. Mapes Cow Camp – a fence would be constructed around the two springs in the meadow below the old cabin site in T32N, R9E, Section 33 to protect the historic features of the site and discourage livestock from concentrating there for water. (Map 3C)

8. A portable fence would be used in the Lakeshore Pasture to remove access to the lake shore itself as a watering source. The fence would be portable so it could be moved from year to year to adjust for lake levels. Existing water troughs in the uplands within the pasture would provide livestock water. (Map 3B)
9. Corral Facility at Spalding Troughs – a second corral would be constructed near the Spalding Troughs to facilitate livestock sorting when the rotation schedule results in mid- to late-season use in the North Eagle Lake Allotment. (Map 3B)
10. Lake Pasture Troughs – the two new troughs on the north side of the Spalding Road would be moved away from a known archaeological site to protect it from impacts by livestock while watering at the troughs. (Map 3B)

Watershed Improvement

Stock ponds and historical grazing patterns have contributed to degradation within multiple meadows and valley bottoms within the allotments. These features on the landscape and past management practices have resulted in headcuts, gully formation, alterations in flow patterns, and changes in meadow vegetation. Several locations have been identified for proposed improvement work. Existing water developments would not be decommissioned without a functioning replacement water source being in place prior to the decommissioning. These include the following locations:

1. A headcut located in the small meadow north of FSR 33N07 near the old Stanford Headquarters (T33N, R9E, Secs 34 and 37), would be stabilized to halt continued incision and protect meadow and riparian vegetation communities. It is proposed to rehabilitate the channel grade by recontouring to match the surrounding area to the extent possible, then stabilizing the channel by using straw wattles or riprap and filter cloth. The meadow area would be fenced to eliminate this attractant to livestock and thus to protect the headcut treatment and an archaeological site. Materials would be staged on the south side of 33N07, on the opposite side of the road from the meadow. Installation of materials and recontouring of features would be conducted by hand or with the aid of a tracked backhoe or similar machinery.
2. Decommission waterholes and provide new water sources in upland areas away from Pine Creek, its tributary drainages and riparian areas, and improve reliability of some existing waterholes by increasing depth using mechanical equipment. Waterhole locations proposed for decommission, improvement and/or relocation include those in the Table 5. (listed by priority within each allotment):

Table 5. Watershed Improvement

PROPOSED WATERHOLE TREATMENTS by ALLOTMENT				
Allotment	Location	Waterhole Inventory ID	Recommendation	Township, Range, Section
Champs Flat	Shay's Hole	WDCF08	Re-contour and fill existing waterhole and create new one on edge of meadow further south	T33N, R9E, S12 NE 1/4
Champs Flat	Champs Flat	21	Re-contour and fill; need maintenance on	T33N, R9E, S23

			WDCF28 to ensure reliability	
Champs Flat	Gordon Aspen	W6	Fence off existing water hole; pump to trough to reduce livestock use adjacent to aspen	T33N, R10E, S18 NE 1/4
N. Eagle Lake	McCoy Flat (Pine Cr Reach 22)	TBD	Try management changes 1 st (ie. small #s, overnight use), then consider need for off-stream water source in north pasture	T33N, R10E, S32
L. Pine Creek	Martin Springs	WH15 & WH17	Fence springs; pump to trough or use well located in Cowbell	T32N, R9E, S33
L. Pine Creek	Summit Camp and adjacent meadow	WDLP11 & 14	Re-contour and fill 14; need maintenance on WDLP11 to ensure reliability (reconnect well and troughs)	T32N, R9E, S24 SE ¼
L. Pine Creek	East of Summit Camp	WDLP10 & WDLP05	Re-contour and fill 10; need maintenance on WDLP05 to ensure reliability	<u>WDLP10</u> : T32N, R10E, S19 NE 1/4; <u>WDLP05</u> : T32N, R10E, S20 W 1/2
L. Pine Creek	21 Rd near Cowbell	2	Remove & re-contour dugout waterhole	T32N, R9E, S34 N

Aspen Enhancement

Protection of aspen regeneration from browsing is often necessary to sustain the existence of declining aspen communities as well as increase aspen health and vigor. In aspen communities with excessive browsing in large areas, temporary fencing would be used to exclude cattle, using a four strand barbed wire fence, or to exclude deer using a wildlife exclosure. In stands with moderate browsing, excessive browsing in small patches, or stands with limited access, hinge barriers would be constructed in patches or along edges to protect aspen regeneration. Hinge barriers are created by felling live or dead conifers 3-4 feet above the ground while maintaining stem connection to the stump. Monitoring would also be used in moderately browsed aspen communities to determine if fencing would be needed after initial treatment. In aspen communities near areas of primary and secondary forage, conifers would be hand felled, hand-piled outside the aspen root system and burned, or lopped and scattered. Aspen stands proposed for treatment are listed in Table 6 by priority, based on risk, within each allotment.

Table 6. Aspen Enhancement

PROPOSED ASPEN TREATMENTS by ALLOTMENT				
Allotment	Location	Stand Inventory ID	Recommendation	Township, Range, Section
Champs Flat	Antelope Valley	GOAV 01, 02	Handthin <10" dbh; hinge	T33N, R9E, Sec 36
	SE of Million \$\$ Bridge	GOPC 06	Handthin <10" dbh; Hinge	T33N, R10E, Sec 30
	Stanford Hdqts	GOST 01	Handthin < 20" dbh; fence	T33N, R9E, Sec 34
	Pine Cr Reaches	GOST 03	Handthin <10" dbh; Hinge (03)	T33N, R9E, Sec 27
	SE of Shays Hole	GOGW 01	Handthin <10"dbh; expand existing fence	T33N, R10E, Sec 7
	McCoy Flat	GOMF 01	Handthin <10"dbh; monitor for fence	T32N, R10E, Sec 5
	SE of Million \$\$ Bridge	GOPC 04, 05	Handthin <10" dbh; Hinge	T33N, R10E, Sec 30
	Stanford Hdqts	GOPC 08, 09	Handthin <10" dbh; Hinge (08)	T33N, R9E, Sec 34
	Pine Cr Reaches	GOST 02, 04	Handthin <10" dbh; Fence (02)	T33N, R9E, Sec 27
Champs Flat (NW)	Ashurst Lake	GOAH 01, 02	Handthin <10" dbh; fence	T33N, R9E, Secs 3,4
	Ashurst Lake	GOAH 06	Handthin <10" dbh; hinge	T33N, R9E, Secs 3,4
	SE of Ashurst Lake	GOSC 01	Handthin < 20" dbh; Monitor for fence	T33N, R9E, Sec 10
	SE of Ashurst Lake	GOSC 02, 03, 04	Handthin <10" dbh; Monitor for fence	T33N, R9E, Sec 10
	Ashurst Lake	GOAH 03	Handthin <10" dbh; fence	T33N, R9E, Secs 3,4
	Ashurst Lake	GOAH 04, 05	Handthin <10" dbh; expand existing fence	T33N, R9E, Secs 3,4
	North of Ashurst	GOSH 01	Handthin <10" dbh; Hinge	T33N, R9E, Sec 3
N. Eagle Lake	East end of McCoy Flat	GOPC 10	Handthin <10" dbh; Hinge	T33N, R10E, Sec 33
	Prison Spring	GOPS 01, 02, 03	Handthin <10" dbh; monitor for fence (03)	T33N, R10E, Sec 4
	McCoy Flat	GOPS 04, 05	Handthin <10" dbh; Realign existing fence	T33N, R10E, Sec 33

Integrated Design Features

The following Integrated Design Features (IDFs) are resource protection measures that are developed by specialists and incorporated as part of all action alternatives for this project. They are in addition to standards and guidelines from Best Management Practices (BMPs) and the Lassen LRMP, as amended. These IDFs are also included for implementation parameters that would be incorporated into treatments, contracts, or used to guide Forest Service personnel in conducting implementation.

Threatened, Endangered, or Sensitive (TES) Plant Species

1. Any new occurrences of TES or Special Interest plant species discovered after project implementation would be monitored for effects by livestock. If monitoring indicates effects from livestock activities, then adjustments would be made to alleviate continued effects.
2. *Mimulus evanescens* occurrences would be avoided by all aspen treatment activities.
3. *Mimulus evanescens* Occurrence #3, along Pine Creek just west of Spalding and Road 33N89, would not be used by livestock until the soils are dry and the plants have set fruit. In wet years, the site would be grazed only late in the season.
4. Where possible, when filling/recontouring waterholes where *Mimulus pygmaeus* or *Juncus hemiendytus* var. *abjectus* are present, slight depressions would be left in moist places for the plants to recolonize.
5. Piles from aspen treatments would be placed outside of known occurrences of TES or Special Interest species.

Invasive Plant Species

1. All off-road equipment would be weed-free prior to entering the Forest. Staging of equipment would be done in weed-free areas.
2. Known invasive plant infestations would be identified and mapped for this allotment. Identified invasive plant sites within or adjacent to the project area containing isolated patches with small plant numbers would be evaluated and treated according to the species present and project constraints.
3. Monitoring for implementation and effectiveness of invasive plant treatments and control of new infestations would be conducted as soon as possible within the allotment.
4. If project implementation calls for hay or other feed, straw, and/or mulch, it would be certified weed-free. Seed mixes used for revegetation of disturbed sites would consist of locally adapted native plant materials to the extent practicable.

Cultural Resources

1. All historic properties within areas proposed for ground disturbing activities shall be clearly delineated prior to implementing any associated activities that have the potential to affect historic properties. (Regional Programmatic Agreement (RPA) Appendix E. section 1.3(1)(2))
 - a. Historic property boundaries shall be delineated with coded flagging and/or other effective marking.

- b. Historic property location and boundary marking information shall be conveyed to appropriate Forest Service administrators or employees responsible for project implementation so that pertinent information can be incorporated into planning and implementation documents, contracts, and permits (e.g., clauses or stipulations in permits or contracts as needed).
2. Proposed ground disturbing undertakings shall avoid historic properties. Avoidance means that no activities associated with undertakings that may directly affect historic properties, unless specifically identified in this RPA, shall occur within historic property boundaries, including any defined buffer zones. Portions of undertakings may need to be modified, redesigned, or eliminated to properly avoid historic properties. (RPA Appendix E. section 1.1)
3. Felling and removal of hazard, salvage, and other trees within historic properties under the following conditions: RPA Appendix E section 2.2a(1)(2)(4)
 - a. Trees may be limbed or topped to prevent soil gouging during felling;
 - b. Felled trees may be removed using only the following techniques: hand bucking, including use of chain saws, and hand carrying, rubber tired loader, crane/self-loader, helicopter, or other non-disturbing, HPM-approved methods;
 - c. No skidding nor tracked equipment shall be allowed within historic property boundaries; and
4. If an unanticipated discovery of an at risk historic property is made during project implementation and the site has been impacted by project activities, the Forest shall use the process defined in the Discoveries and Inadvertent Effects stipulation (stipulation 7.10) to notify and consult with Region 5, the SHPO, and the ACHP. RPA Appendix H section 7.3b(1)
5. If an unanticipated discovery of an at risk historic property is made during project implementation and the site has not been impacted by the time of discovery, project activities shall be halted immediately in the vicinity of the site, and the HPM, in consultation with fuels, vegetation management, or fire specialists as necessary, shall design and implement SPMs to eliminate or minimize impacts, prior to authorizing resumption of project activities. RPA Appendix H section 7.3b(2)
6. Standard Protection Measures (SPM) are those actions which prevent ongoing or future damage to “resources of interest” (ROIs), or those heritage resources most subject to adverse effects from rangeland activities.. Stipulation III.B.2 identifies the following acceptable SPMs:
 - a. fencing or enclosure of livestock from the heritage resource with some specifications;
 - b. relocation of livestock management facilities and resources away from the heritage resource;
 - c. removal of the area(s) containing heritage resources from the allotment.

Additional SPMs may be developed by the Forest, contingent upon consultation with and approval by State Historic Preservation Officer. Monitoring for the effectiveness of SPMs may be necessary to ensure long-term resource protection. (Lassen National Forest Grazing-Heritage Management Strategy section 5. Standard Protection Measures)

7. The following conditions may be used to determine a threshold for mandatory evaluation and/or the application of Standard Protection Measures to ROIs, per the discretion of the Heritage Resource Specialist (HRS), in consultation with appropriate staff and other interested parties. Data for these

conditions may be derived from observations made during initial site re-visitation and/or monitoring, or from existing field records: (Lassen National Forest Grazing-Heritage Management Strategy section 3. Site Selection/Monitoring for Existing Damage)

- a. Site exhibits erosional features such as cattle wallows churned to a depth greater than one inch and greater than 25 square feet;
 - b. Single cattle trails churned to a depth of greater than one inch;
 - c. Presence of braided cattle trails (more than two “figure 8s”) regardless of depth;
 - d. Rangeland facilities (salt licks, fences, corrals, etc.) onsite
 - e. Erosion features resulting from onsite or nearby cattle trails, wallows, stream access points (stream bank chiseling) etc.
 - f. Physical alteration of rock or historic features
 - g. Damage or displacement of surface artifacts;
 - h. Loss of visual landscape important to or physical alteration of Traditional Cultural Properties
8. Resources of Interest where impacts from rangeland activities are identified, but the effects to the resource may be ambiguous or unknown, will be monitored to determine if rangeland activities are producing an ongoing effect. Additionally, sites treated by SPMs may be monitored to determine the adequacy of treatment measures over time. All monitoring within LNF allotments will use the following standards: (Lassen National Forest Grazing-Heritage Management Strategy section 5. Monitoring Plan)
- *Regularity and Timing* - Sites will be monitored twice each season for potential impacts from rangeland activities. Monitoring shall occur once before the commencement of activities on the allotment and once at the end of activities defined as follows: no earlier than one week prior to the end of grazing and no later than one week after grazing has ceased;
 - *Consistency* - Monitoring consistency will be made through the use of standardized monitoring forms that focus on recording possible damage to the resource from rangeland activities. Monitoring will be conducted through the use of consistent observation points, photographic media, descriptions of possible damage and detailed site mapping;
 - *Reporting* - standard monitoring forms will be used for site monitoring, sufficient to easily identify changes in the physical features of the site that may be caused by grazing. The HRS will review monitoring forms to assess the potential for damage and determine if continued monitoring, evaluation, application of SPMs or other management option is necessary;
 - *Duration* – monitoring will continue for three years after initial site revisitation and updating.

Wildlife

1. Fences would be designed, built, and maintained to prevent barriers to wildlife movement and possible injury or death from impact or entanglement. Standards include smooth bottom wire and maximum height and spacing requirements.
2. The following actions would be taken to minimize the potential for livestock/wolf conflicts, in cooperation with the permittee and California Department of Fish and Wildlife personnel.
 - a. If an active den or rendezvous site is within one mile of the planned turn out area, the turn out location would be changed to be at least one or more miles away.
 - b. If an active den or rendezvous site is in or within one mile of the allotment, management activities such as infrastructure installation or maintenance would be suspended as follows and as feasible within the limits of Annual Operating Instructions:
 - i. Salt blocks would be promptly relocated to minimize livestock use near the site(s) and the potential for conflicts.
 - ii. Allotment management activities would be suspended within one mile of an active den site or rendezvous site from April 1 – August 31.
 - iii. The one-mile distance from the den or rendezvous site may be reduced based on site-specific information.
 - c. Salt or other livestock attractants would not be placed within one mile of current or prior-year wolf dens or rendezvous sites in order to minimize livestock use of these areas.
 - d. Sick or injured livestock within three miles of an active den or rendezvous site would be removed from the allotment as soon as feasible.
 - e. If a livestock carcass is discovered within three miles of a den or rendezvous site, the permittee would notify Forest Service personnel with the location and other details within 48 hours so that the proper agencies can be notified.
 - f. Livestock carcasses or bone piles within three miles of an active den or rendezvous site would be removed or otherwise disposed of as soon as feasible within the existing regulatory framework.
 - g. In the event of a suspected livestock depredation (injured or killed animal including guard or herding dogs, or other domestic animals), the permittee would notify Forest Service personnel with the location and other details so that the proper agencies can be notified.
3. If new locations of Western bumble bee (*Bombus occidentalis*) are documented within the project area, insure salting and portable watering locations are beyond 0.25 miles from the new locations.
4. During construction of the proposed fence line on Ashurst Mountain, no tree over 10 inches diameter at breast height (dbh) would be felled to avoid alterations of current stand structure of the existing California spotted owl Protected Activity Center (PAC) and associated Home Range Core Area (HRCA).

Aquatics

1. Screening devices would be used for water drafting pumps, including those utilized for off-site watering. Pumps with low entry velocity would be used to minimize removal of aquatic species, including amphibian egg masses and tadpoles, from aquatic habitats.

Hydrology and Soils

1. Riparian Conservation Area widths are allocated along all streams, wetlands, wet meadows and other special aquatic features within the allotment boundaries in accordance with the 2004 Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision (ROD). Features and associated RCA widths are described in the table below.

RCA Category	RCA Width (feet)	Features within Project Area
Special Aquatic Features (wet meadows, springs, waterbodies)	300	Wetlands associated with springs and seasonally-flowing streams, Eagle Lake, Houseman Camp Reservoir, Signal Butte Reservoir, Ashurst Lake, Shays Hole Reservoir, Prison Spring, McCoy Water Pit, Pine Creek Wetland, Martin Springs, other unnamed springs
Perennial streams	300	None in the project area
Seasonally-flowing streams	150	Pine Creek and ephemeral tributaries, Martin Creek

2. Best Management Practices (BMPs) would be implemented to meet water quality standards. The BMPs applicable to range management include:
 - BMP 8.1 (Range Analysis and Planning) /Range-1 (Rangeland Management Planning) (range analysis, management planning and permit administration to safeguard water quality under perpetual production and forage harvest by livestock),
 - BMP 8.2 (Grazing Permit Administration) /Range-2 (Rangeland Permit Administration) (controlled livestock numbers and season of use to safeguard water quality under perpetual production and forage harvest by livestock), and
 - BMP 8.3 (Rangeland Improvements)/Range-3 (Rangeland Improvements).
3. Watershed improvement sites other than Martin Springs and Gordon Aspen, which would have permanent fenced enclosures, would be excluded from grazing, using either temporary fence or rest, to protect and facilitate healing at these sites until channels and banks achieve desired conditions and have been revegetated.
4. Any spring or water development would be designed in such a way that the water source would not be dewatered by the delivery of water to the off-site trough.

5. Soils would be firm before grazing starts and moisture content would be low enough to minimize soil erosion related to trampling and compaction; soils would not be saturated. (Range Readiness Guidelines)
6. Soils must be operable for vehicles to enter Riparian Conservation Areas (RCA). Under moist or wet conditions, vehicles may not create ruts exceeding two inches in depth and 25 feet in length. No ruts exceeding three inches in depth are allowed, and vehicles may not operate when soils are saturated.

Decision to be Made

The Eagle Lake District Ranger on the Lassen National Forest is the deciding official for this proposed action. Considering the purpose and need, the deciding official would review the proposed action and alternatives developed in response to issues raised by the public

The responsible official would decide whether or not to authorize livestock grazing on the North Eagle Lake, Champs Flat, and Lower Pine Creek Allotments either as described in the proposed action, in its current manner (no action) or in another manner that would meet the identified purpose of and need for this decision. The decision would also include whether or not to implement some or all of the resource improvement projects identified in the proposed action.

These management activities were developed to implement and be consistent with the Forest's 1993 Land and Resource Management Plan (LRMP), as amended by the Sierra Nevada Forest Plan Amendment (SNFPA) FEIS, FSEIS and Records of Decision (2004). The proposed action has been determined to be in conformance with this plan as required by regulations (36 CFR 222.1 et. seq.).

Where

The Project area encompasses the allotment boundaries for the North Eagle Lake, Champs Flat, and Lower Pine Creek Allotments, on the Eagle Lake Ranger District of the Lassen National Forest. Livestock management activities would take place within the capable and suitable rangelands of the allotment.

When

The Forest Service expects to conclude its review and analysis, and issue a decision on this proposal by September 2018. Livestock management activities authorized under the decision would begin implementation during the 2019 grazing season. Other resource projects would be implemented as soon as practical after decision and as funding sources become available.