

**HFQLG
Project Evaluation Form**

Project Name: Guard and Deanes projects from the Meadow Valley Environmental Assessment

Project Type: Group Selection and DFPZ

Forest: Plumas Ranger District: Mt Hough

Date: 18 September 2008

Attendance: 13 people

Agency: None

Public: Michael Yost, Quincy Library Group (QLG) & Retired Environmental Scientist, Feather River College; Frank Stewart, Counties QLG Forester and QLG; Darrel Jury, Environmental Scientist Feather River College; Brian Wayland, SPI Forester

USFS: Mike Donald, Mt Hough District Ranger; Ryan Tompkins, Mt Hough District Silviculturist; Dave Evans, Lassen Forest Silviculturist; Angela Parker, Herger-Feinstein Quincy Library Group (HFQLG) Implementation Team Assistant Team Leader; Colin Dillingham, HFQLG Monitoring Team Leader; Terry Simon-Jackson, Plumas NF Planning Officer; Angie Dillingham, Plumas NF Partnership Coordinator; Joe Smailes Mt Hough Ecosystem Operations Team Leader; John Ngwembo, HFQLG International Volunteer; Renee Wimer, HFQLG Acting Public Affairs Officer.

Itinerary: 1) Bear Creek Guard Station - 1911 Photo versus current conditions
 2) Guard Defensible Fuel Protection Zone (DFPZ) Unit 17
 3) Guard Group Selection Unit 406
 4) Guard Group Selection 726
 4) Old growth Pine tree surrounded by encroaching White Fir
 5) Urban Interface Area – Deanes Group Selection 726

Appendix 1: Type of treatment and acres - Meadow Valley Group Selection (Field Trip Handout)

Resource Area	Attribute	Objective	Source of Objective	Degree Met	Comments
Silviculture	Ponderosa Pine	Regenerate Ponderosa Pine in group selection unit	Silvicultural prescription, HFQLG FEIS	146 acres, or 20% of group selection units planted. See discussion.	90+% of planting survived past the first year. Guard unit 406 had abundant white fir seedlings on margins of group. Deanes unit 276 shows multiple volunteer pines establishing in opening.
Soils and Wildlife	Retention of Large Wood Material	Maintain 5 logs per Acre to meet requirements for soil and wildlife.	Plumas LRMP	No	Woody debris/downed logs remaining on site do not meet the minimal requirements. Logs from the unit were placed in grapple piles for burning. Should have been left on site. Consider distribution of logs to establish shelter areas for fawns while Doe is feeding.
Fuels	Canopy/Crown Cover	40% canopy cover to prevent crown fire from carrying into DFPZ.	HFQLG FEIS, appendix J	No	Guard DFPZ unit 17 greater than 40% crown cover. In some circumstances safe fire fighting with higher canopy cover has been determined to be safe.
Fire Fighter Safety	Safe DFPZ	Provide fire fighters with a safe way of approach to fight wildfire.	HFQLG FEIS	Yes	The ladder fuels and surface fuels were reduced providing a safer area to fight fire.

Discussions:

Group Selections are being applied to reestablish shade intolerant species. Approximately 35% of the selected group sites have been site prepped and 24% have been planted. A large percent of selection units will rely on natural regeneration to meet stocking standards due to shifted priorities in order to restore Moonlight and Antelope after wildfire events. We expect high levels of white fir regeneration (as documented on Guard Unit 406) in mixed conifer stands where white fir is a dominant component. Although this may result in the reestablishment of fir instead of pines in this project area, the scale of the Moonlight and Antelope fires requires the shifted planting priorities. In the recent past, an average of 200 acres per season was planted. In spring 2008, nearly 1,000 acres were planted on the district, and for each of the next two years, 12,000 acres of planting is planned.

The group selection units are 1 - 2 acre areas. There are operational difficulties involved with planning, site preparation, planting implementation, and subsequently managing hundreds of small 1-2 acre units across a 50,000 acre landscape. Ryan Tompkins, the district silviculturist, would desire units to be greater in individual size, up to 10 acres, but have fewer individual units to overall achieve the group selection acreage from the Herger Feinstein Quincy Library Group (HFQLG) Act. Additionally, expense concerns include: higher cost of the project at all stages, higher timber harvest cost, expense of accessing the sites at first snow melt (the more sites the more accessibility problems), and follow up treatments. Small unit size creates about a 100% increase in cost as compared to a lesser number of larger units such as the units on the Lassen National Forest (Dave Evans comment).

The group selection area near the Bear Creek Guard Station was the first visit of the day. Ryan Tompkins presented a picture of the Bear Creek Guard Station taken in 1911. Standing on the site where the station once

was, you can see the existing Ponderosa Pine trees in the old photograph. Looking beyond the station there is now a thick stand of fir trees in various stages of growth. The picture also shows this same area to once be a more open brushy area with an occasional Ponderosa Pine. Ryan also presented a historic map of the area. This map depicted the existing vegetation conditions of the early 1900's to be chaparral. However, the area is not climax chaparral vegetation. The early 1900 conditions were more likely the result of some type of disturbance, such as a forest fire. The result of the disturbance and subsequent conditions, or alternatively the result of fire exclusion, created a species change. It was surmised that with the brush field present, Ponderosa Pine was unable to grow underneath the dense brush. White Fir trees, much more tolerant of shade, persisted through the brush field to become what is now a forest stand of White Fir ranging from 70 to 80 years in age at breast height.

The Bear Creek group selection area (Guard 406) was cut in fall of 2004/spring of 2005. Site preparation (construction of grapple piles) took place in the fall of 2006. Slash piles were built prior to this time period but did not dry out until the spring of 2007. These piles were burned after the planting took place. White Fir seedlings are growing abundantly in the shaded edge of the site. A low density planting was established with 108 trees per acre on 20'x20' spacing. Research shows wider spacing promotes growth of individual trees, greater survival, and reduces costs of follow-up treatments such as pre-commercial thinning. This site has maintained an excellent (90%+) first year survival rate.

Adjacent to the Bear Creek Guard Station was Guard DFPZ unit 17, which was thinned to approximately 50 percent canopy cover (Figure 1). In previous site visits, it was determined by fire personnel that fire fighters would be able to use this Guard DFPZ for direct attack and burn out operations. While the canopy cover could have been thinned more, the ladder fuels were effectively reduced allowing for safe fire fighting. Within the DFPZ the objective is to reduce surface fuels and fuel ladders as well as reduce canopy cover. Achieving all the objectives creates the most defensible fuel breaks.



Figure 1. Guard Unit 17, photo shows removed fuel ladder and lower surface fuel loading, but canopy cover higher than the 40% objective.

Additional discussions of canopy cover included: What canopy cover is more suitable for what wildlife species? It was agreed that a mosaic of canopies is important to increase habitat diversity in order to support plant and animal life and create greater forest resilience. There was a discussion about using basal area marking guidelines to assist marking crews rather than canopy cover marking guidelines which are very difficult to meet.

Our lunch stop was at a site that was dominantly White Fir and Douglas Fir undergrowth with large old-growth Ponderosa Pine (Figure 2), showing that the environment is not within the historic range of variability (as compared to historical photographs in similar condition). These sites are ripe for management, which might include treatments such as radial thinning around old growth pine trees, or group selection to open up the stands to allow for pine regeneration.



Figure 2. Old-growth Ponderosa Pine with encroachment of White Fir into stand.

Guard group selection unit 726 was visited and topics discussed included leave trees, retention of large wood and group selection location and amount of groups within a stand. Adaptive Management in the spirit of the HFQLG Collaboration Process was discussed with consideration to the 30" DBH upper diameter limit. Consideration for leaving ponderosa pine within the project area that may be smaller, such as 18-20" dbh pine, and eliminating white fir trees that are greater than 30" dbh to help reduce unwanted influential growth within a silvicultural system more akin to shelterwood or seed tree systems. The Silvicultural prescription allowed the marking crew to select areas with high white fir component to be removed so that pine regeneration could be accomplished. Both Ponderosa and Sugar Pine trees were retained on the edge of the unit which provides a good seed source.

It was observed in the unit that very little large wood was retained, and that many large logs had been piled up in grapple piles for burning. Surface fuels were still too high to prevent loss of seedlings in the event of a surface fire. Several people felt that we were not reducing the fine surface fuel objectives in this group. Also, reducing the large wood that is important for wildlife and soil concerns, but aren't important to remove in order to meet wildfire objectives. It was suggested that a picture be given to sale administrators so that it would be easier meet the needs of log placement and abundance left on site (benefits to wildlife would also be better addressed). Broadcast burning the site was recommended instead of grapple piling to better achieve objectives, however timing and implementation challenges were also discussed.

A question was brought up regarding how close group selection units can be. Groups are located so that there is room for another group in a later time in the rotation in between the currently placed units.



Figure 3. Guard 726 shows retention of White Fir seed tree in center of unit (left edge of photo) because it was over 30 inches DBH. Also shows grapple pile (planned for burning) with large logs. Logs should have been retained and scattered over the unit to meet large wood requirements.

The last stop of the day was located at Deanes group selection 276. This site was located in an area that was desirable silvicultural for a group, but also was in the Wildland Urban Interface (WUI). A homeowner adjacent to the group selection unit was initially displeased with the new view from their yard of the slash and windthrown leave trees. Some landowners in similar situations have mentioned they are happy with fuel reduction and increased view and light to their homes. It was recommended that adjacent landowners are directly notified about activities adjacent to their homes (knock on their front door and talk to them). Continued contact with the local public over a long period of time has proven to create a better understanding and appreciation of project areas. This site shows great promise of a future pine dominated site as it appears to be a silvicultural success (Figure 4).



Figure 4. Silvicultural Success - Deanes Unit 726 with planted Ponderosa pine seedling as well as a sea of naturally regenerated pine seedlings.

Additional Discussions consisted of:

1. The advantages of leave tree marking (marking trees that would remain versus marking trees that are to be removed).
2. Could the restriction of natural fires have prevented open spaces required for Ponderosa Pine to grow and allowed the opportunity for White Fire to dominate selection areas?
3. Soil scientist review shows that soil management objectives are being met in one unit monitored (but not visited during the field trip).

Notes by Colin Dillingham/Renee Wimer – HFQLG Implementation Team 9/19/2008

Reviewed by:

District Ranger: _____ Date: _____

**2008 HFQLG Monitoring Field Trip
Mt. Hough Ranger District
Group Selection Reprise, Meadow Valley Project
September 18, 2008**

Group Selection (from Helms Dictionary of Forestry 1998): trees are removed and new age classes are established in small groups- note 1. the width of groups is commonly approximately twice the height of the mature trees with smaller openings providing microenvironments suitable for tolerant regeneration and larger openings providing conditions suitable for more intolerant regeneration – note 2. the management unit or stand in which regeneration , growth and yield are regulated consists of an aggregation of groups.

Outline of topics for the day:

- Group Selection and disturbance ecology
- Group Selection and stand structure
- Planning and Prep
- Timber Implementation
- Site Prep and Reforestation

Table 1. General Group Selection Statistics

Total Acres of GS units in Meadow Valley projects:	718 acres
Total Number of GS units in Meadow Valley projects:	467 units
Number of GS units in DFPZ units:	187 units
Number of GS units outside DFPZ units:	280 units
Average size of GS units:	1.54 acres
Range of sizes of GS units:	0.5 to 2.0 acres
Years harvested:	05/06/07

Table 2. General Site Prep Statistics to date.

Total acres of GS units site prepped:	265 acres	37%
Total number of GS units, site prepped:	164 units	35%
2006/2007 acres of GS units site prepped:	137 acres	20%
2006/2007 number of GS units site prepped:	82 units	18%
2008 acres of GS units site prepped:	128 acres	18%
2008 number of GS units site prepped:	82 units	18%

Table 3. General Planting Statistics to date.

Total acres of GS units planted:	146 acres	20%
Total number of GS units planted:	112 units	24%
2007 acres of GS units planted:	53 acres	7%
2007 number of GS units planted:	34 units	7%
2008 acres of GS units planted:	100 acres	14%
2008 number of GS units planted:	59 units	13%