**Road 80 2013 THP**

Area: 230 Acres

Silvicultural Prescription: Selection

Harvesting System:
The harvesting system design for this timber harvest plan has not yet been finalized. The majority of the road system has already been constructed and it appears that upwards of 90% of the area will be designated for aerial systems with the remainder being ground based.

Location/Topography
The THP area is located approximately 7 miles southeast of the community of Fort Bragg, California. The legal description is Township 18 North, Range 16 West, Sections 31, 32, 33, Township 17 North, Range 16 West, Section 5, Mount Diablo Base and Meridian. The elevation ranges from 160 feet to 1,000 feet above sea level. The slope aspect of harvest units is variable throughout.

Stand History
The entire Road 80 area was initially harvested prior to 1920. First the area adjacent to the South Fork of the Noyo River was river logged. Steam donkey and railroad logging soon followed, extending operations further up the slope and smaller watercourses. JDSF last entered the sale area under the Gulch 23 Timber Sale in 1992-93. Silviculture consisted of Clearcut, Seed tree (seed tree step), and commercial thinning. The area proposed for harvest under this Timber Sale is the commercial thinning portion of the Gulch 23 Timber Sale.

Vegetation and Stand Conditions
The last entry into this stand was designed as a commercial thinning. Suppressed, intermediate and codominant trees were removed to promote growth on the remaining stand. The next entry (this entry) was planned to be an even-aged rotation. The 1992-93 harvest recruited some regeneration which is healthy and vigorous. The stand is lacking in the middle and lower middle diameters with the resulting structure being skewed to the upper diameter classes. This poses a challenge when considering a selection entry as 42% of the stand is comprised of Douglas-fir and whitewoods nearing 100 years in age.

Hardwoods are present as both trees and shrubs throughout the harvest area. In some areas they will not have a significant impact on the stand. In other locations hardwood trees will need to be removed to maintain the site occupancy of conifers. Hardwood brush may also need to be treated to encourage regeneration in areas lacking redwood stocking and the potential for occupancy from stump sprouts.

Watershed and Stream Conditions
The Road 80 2013 THP lies in the Parlin Creek Planning Watershed which drains to the Noyo River. Early harvesting activities in this drainage began with river logging activities and evolved to railcar transportation systems supplied with logs yarded with stream donkeys. The watercourses bear evidence of these early activities which left the channels in a highly modified condition. The South Fork Noyo River, Peterson Gulch, and 23 Gulch are fish bearing watercourses that lie adjacent to the THP. Numerous non-fish bearing streams are found throughout the harvest area

Silviculture
The silviculture applied will be single tree selection. Harvesting will focus on removing codominant upper diameter class trees. This will promote regeneration and continued heath and vigor of advanced regeneration and lower to middle diameter classes. The stand as mentioned above is skewed towards the upper diameter classes with a deficit in the middle and lower diameters. When considering a long-term selection system it is important to adjust the stand's diameter distribution.

Frequent light reentry harvests are proposed to facilitate moving this area toward an uneven-aged stand. Modeling efforts indicate that the reentry period between the first and second selection entry may be 15 to 20 years to allow trees to grow into higher diameter classes. The reentry interval following this second selection entry would then decrease to 10 to 15 years while maintaining at least the same standing volume and basal area. The removal rate for such a regime would be approximately 20-25% BA 30% volume and 15-20 % BA 25% volume respectively.

**Road 80 2013 Proposed Harvest**

| Conifer Pre-harvest Basal Area | Conifer Post-harvest Basal Area | Conifer Pre-harvest Volume | Conifer Post-harvest Volume |
|---|---|---|---|
| 227 | 174 | 61,752 | 43,156 |

** Above data is based on 2005 FRI data grown in FORSEE to 2012.*

Watercourse Protection

Class I

- Class I Water Lake Protection Zone (WLPZ) is 150 feet, 0 to 30 feet no-cut* from the watercourse transition line, 30 to 100 feet 80% canopy retention, 100-150 feet 70% canopy retention.
- Minimum 240 sq. ft. conifer basal area/acre retention and the 13 largest conifers per 330 feet of stream channel

Class II

- Class II Water Lake Protection Zone (WLPZ) is 100 feet; 0 to 30 feet no-cut* from the watercourse transition line.
- Minimum 240 sq. ft. conifer basal area/acre retention and the ten largest conifers per 330 feet (13 for large class II streams) of stream channel.

Class III

- Class III watercourses have 30 to 50 foot Equipment Limitation Zones where ground based equipment will be utilized. Except for the necessary removal of trees for safe cable yarding operations, no harvest shall occur within the channel area.

**No-cut WLPZ allows for the exception of harvesting cable corridor trees where needed.*

Roads

Only minor repairs and short road spurs are anticipated to facilitate operations in this area.

Demonstration and Research Values

- Maintaining elements of the Older Forest Structure Zone while producing timber products.
- Sampling to determine snag densities in the harvest area.
- Hardwood removal project *(details under development)*
    - Selective removal of hardwoods around conifers to evaluate effectiveness for treatment in areas not being harvested.

Aesthetic and Recreational Considerations

The Road 80 area is not located within any known special recreation area and is not identified within the JDSF management plan as a recreation corridor with the exception of Highway 20. Mushroom gatherers utilize the area and the general public view the portion adjacent to the Highway 20 corridor. Past clearcuts and seed tree removal units included the road itself; e.g. roadways were not buffered. The proposed silviculture should provide a spatial arrangement of retained trees that will mitigate the visual impacts of harvesting and over time may improve the visual aesthetics of the area.

Proposed harvesting adjacent to Highway 20 will retain aesthetic values and significant shade canopy. A feathered approach will be implemented with special care taken where visual impacts could be viewed from the highway.

Marbled Murrelet

No known potential marbled murrelet habitat is known to occur within 0.25 miles of the THP boundary.

Northern Spotted Owl

The plan contains habitat suitable for the Northern Spotted Owl (NSO) (*Strix occidentalis caurina*). No recorded NSO activity centers are located within the plan boundary. One NSO activity center is known to be located within .7 miles of the plan boundary. Northern Spotted Owl surveys will be conducted as required by protocol.

Botany

A full botanical survey will be conducted and included/amended into the harvest plan along with any necessary mitigation.

Additional Information Included with Summary (DRAFT THP Map and Stand data)

The attached summary report and stand table were produced from FRI plot data measured in 2005. The plot data was grown to the current period using a growth modeling program (FORSEE). Harvest, regeneration and growth were then modeled over a 20 year period to obtain the basal area and volume estimates included in the table above.

# Road 80 THP

## Preliminary Map

Sec 31, 32 T18N R16W MDB&M
Sec 5 T17N R16W MDB&M
USGS 7.5 min Quadrangle:
- Mathison Peak 1991
- Noyo Hill 1991

Entire THP:
- Selection Silviculture
- Site Class II / III

Contour Interval = 40'

Tractor Yarding
(all other areas Cable Yarding)

High EHR
(all other areas Moderate EHR)

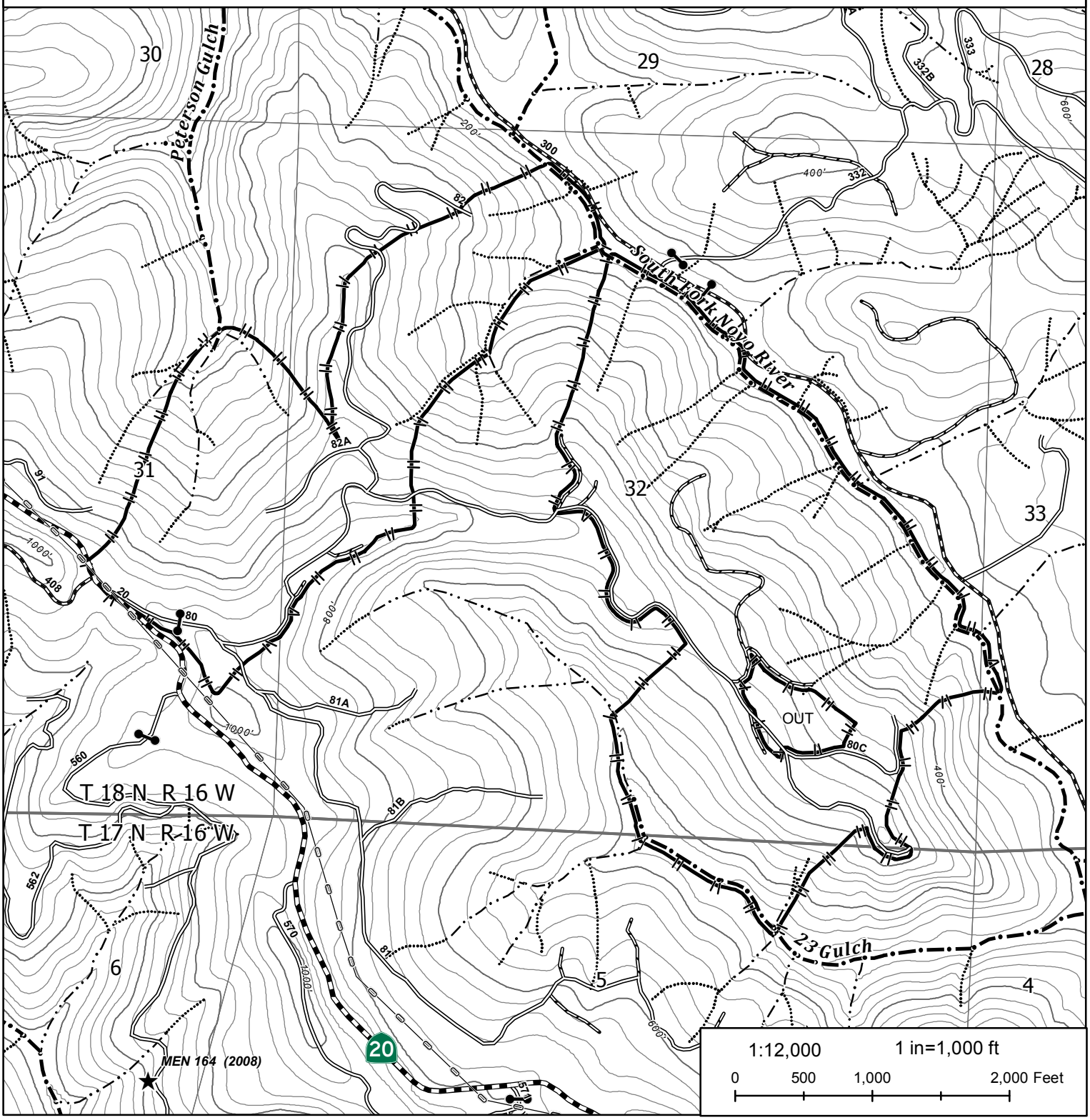
Gate
Map Point
Existing Landing
Unstable Area
Spring / Seep
NSO Activity Center

Watercourse Class Transition
Class II L 1,000' Transition
Class I Watercourse
(salmonoid spawning & rearing habitat)
Class II L Watercourse
Class II S Watercourse
Class III Watercourse

THP Boundary
Utility Line
Existing Permanent Road Paved
Existing Permanent Road Rocked
Existing Seasonal Road
Existing Temporary Road
Road > 200' & >15% Grade

JACKSON DEMONSTRATION STATE FOREST
3/29/2012 Headley

**DRAFT VERSION: Not all symbology included in map detail. Legend & map elements are subject to additions & removals.**



# UNIT (FRI) Summary Report Road 80 for trees >=11 DBH

| SPECIES | TPA | TPA SE | BA | BA SE | QMD | BF Vol./Acre Gross | BF Gross SE | BF Vol./Acre Net | CF Vol./Acre | CF Vol SE |
|---|---|---|---|---|---|---|---|---|---|---|
| Young Redwood | 35.1 | 9.62 | 106.7 | 24.29 | 23.6 | 23,013.0 | 6,200.0 | 22,706.3 | 3,929.8 | 984.55 |
| Young Douglas-fir | 10.2 | 2.40 | 70.0 | 15.67 | 35.5 | 25,748.0 | 6,105.1 | 25,748.0 | 3,807.6 | 888.06 |
| Grand Fir | 0.9 | 0.00 | 3.3 | 0.00 | 25.6 | 561.9 | 0.0 | 561.9 | 102.9 | 0.00 |
| Western Hemlock | 5.6 | 0.00 | 6.7 | 0.00 | 14.8 | 1,777.1 | 0.0 | 1,640.7 | 288.2 | 0.00 |
| Tanoak | 13.6 | 7.48 | 13.3 | 7.52 | 13.4 | 658.6 | 376.9 | 0.0 | 266.8 | 152.28 |
| **Conifer** | 51.9 | 11.50 | 186.7 | 23.78 | 25.7 | 51,100.0 | 7,498.3 | 50,656.9 | 8,128.5 | 1,128.94 |
| **Hardwood** | 13.6 | 7.48 | 13.3 | 7.52 | 13.4 | 658.6 | 376.9 | | 266.8 | 152.28 |
| **Grand Total** | 65.5 | 13.06 | 200.0 | 22.02 | 23.7 | 51,758.6 | 7,292.8 | | 8,395.2 | 1,059.11 |

Plots located within 1992 23 Gulch TS currently called road 80.

2005 FRI Height equations and 1989 Calibrated Volume equations used

# of Plots included: 12

# FRI Stand Table (Average Stems per Acre) Road 80

12 plots

| | DBH | Young RW | Old RW | Young D-fir | Old D-Fir | Grand Fir | Western Hemlock | Bishop Pine | Other conifers | **Conifer Subtotal** | TO | Other Hardwood | **TOTAL** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 34.0 | | | | | | | | 34.0 | 17.0 | | 50.9 |
| | 8 | 19.1 | | | | | | | | 19.1 | 19.1 | | 38.2 |
| | 10 | 18.3 | | | | | | | | 18.3 | 31.7 | | 50.0 |
| **Subtotal** | | 71.4 | | | | | | | | 71.4 | 67.7 | | 139.1 |
| | 12 | | | | | | 4.2 | | | 4.2 | 4.2 | | 8.5 |
| | 14 | 12.2 | | | | | | | | 12.2 | 9.4 | | 21.6 |
| | 16 | 4.8 | | | | | | | | 4.8 | | | 4.8 |
| **Subtotal** | | 17.0 | | | | | 4.2 | | | 21.2 | 13.6 | | 34.8 |
| | 18 | 1.9 | | | | | | | | 1.9 | | | 1.9 |
| | 20 | 3.2 | | | | | | | | 3.2 | | | 3.2 |
| | 22 | 1.3 | | 2.6 | | | 1.4 | | | 5.2 | | | 5.2 |
| **Subtotal** | | 6.3 | | 2.6 | | | 1.4 | | | 10.3 | | | 10.3 |
| | 24 | 3.1 | | 1.0 | | | | | | 4.1 | | | 4.1 |
| | 26 | 0.9 | | 0.9 | | 0.9 | | | | 2.7 | | | 2.7 |
| | 28 | 2.4 | | | | | | | | 2.4 | | | 2.4 |
| **Subtotal** | | 6.4 | | 1.9 | | 0.9 | | | | 9.2 | | | 9.2 |
| | 30 | 0.7 | | | | | | | | 0.7 | | | 0.7 |
| | 32 | 0.6 | | 2.4 | | | | | | 3.0 | | | 3.0 |
| | 34 | 0.6 | | | | | | | | 0.6 | | | 0.6 |
| **Subtotal** | | 1.8 | | 2.4 | | | | | | 4.2 | | | 4.2 |
| | 36 | 0.5 | | 0.5 | | | | | | 0.9 | | | 0.9 |
| | 38 | 1.3 | | 0.8 | | | | | | 2.1 | | | 2.1 |
| | 40 | 0.8 | | | | | | | | 0.8 | | | 0.8 |
| **Subtotal** | | 2.5 | | 1.3 | | | | | | 3.8 | | | 3.8 |
| | 42 | 1.4 | | 1.1 | | | | | | 2.4 | | | 2.4 |
| | 44 | | | 0.9 | | | | | | 0.9 | | | 0.9 |
| **Subtotal** | | 1.4 | | 2.0 | | | | | | 3.4 | | | 3.4 |
| | 48+ | 0.7 | | 1.2 | | | | | | 1.9 | | | 1.9 |
| **Subtotal** | | 0.7 | | 1.2 | | | | | | 1.9 | | | 1.9 |
| | **TOTAL** | 107.4 | 0.0 | 11.5 | 0.0 | 0.9 | 5.6 | 0.0 | 0.0 | | 81.3 | 0.0 | 206.8 |
| | | | | | | | | | **Conifer Total** | 125.4 | | | |