

MEMORANDUM

TO: William Imboden, Chief, Region I
Department of Forestry & Fire Protection
P. O. Box 670
Santa Rosa, CA 95402

DATE: February 22, 1988

FISH & GAME**FEB 24 1988**

FROM: DEPARTMENT OF FISH AND GAME

YOUNTVILLE

SUBJECT: Timber Harvesting Plan 1-88-011 MEN
Barton Gulch, Navarro River, Mendocino County

An on-site inspection was conducted on February 1, 1988. Participants were Lee Susan, RPF; Jim Purcell, CDF; Tom Spittler, Geologist; Tom Schultz, LP; Bill Stancer, LTO; and Dick Moore, DFG.

The Department of Fish and Game's concerns include activities near steep cascading streams providing habitat for native fishes and animals and possible cumulative effects from past, present, and future logging in both Barton Gulch and the Navarro River Watershed. Osprey are present near the area during nesting and spotted owls have territories in similar vegetation near this area. The Department of Fish and Game's computerized Natural Diversity Data Base indicates no recorded plant or animal species of concern within the plan area.

Observations:

1. Portions of the seasonal road (above Point M) contained waterbreaks that had been breached by traffic. They had remained in this condition after the most recent rainfall. This included at least one weekend. The RPF indicated these waterbreaks would be reinstalled or repaired following the on-site inspection on February 1, 1988.
2. At Area 1, the Class II watercourse extends upslope to this point approximately 200 feet upslope of the existing truck road. There is a six foot "nick point" at this location. At present-flow begins at this point. Pools and vegetation remain dense downstream past the slide. At the slide flow is underground surfacing at the base of a ten foot plus falls in the watercourse near the slide at Point 2. Several large second growth Redwood have fallen across the watercourse at Point 2. These can be removed by cable machine. There is access on benches for tractors north and east of the watercourse downstream from the slide at Point 2. The watercourse is deeply incised in this area. The incised slopes will not require tractor operations other than end-lining from the WLPZ.

3. The KPF indicates a Class I watercourse up to Point 4. No fish were observed in this area, however, fish have access to this area during the winter period. The area upstream of Area 4 contains meandering channels where gravel has settled. The source of this gravel was not located during this inspection, however, some stream meandering and sidecutting was observed upstream of Area 4. Extensive erosion on the public road north of this area (Navarro Ridge Road) has been noted in the past. It is not known if this erosion has contributed to erodible materials mentioned above.
4. A wet area with a one to two foot scarp was noted at Area 5. The RPF has this flagged off of the THP area, however, It appears as indicated on the attached map. Point 5 should either be shown on the map or the map changed to reflect conditions as flagged on-site.
5. Point 6 indicates areas, northeast of the added Class II watercourse, where steepness of slope indicates this is a moderate erosion hazard rated area. The watercourse is deeply incised in some areas (10+ feet) and contains a lens shaped channel with underground flow in other areas. The channel transports bedload soil downstream of Point 1 with considerable materials transported downstream of the slide at Point 2. Almost all of the gravel settles on the flat in a delta at the edge of the flood plain. Extreme high water has flooded Highway 128 in the past. The culvert under Highway 128 is accessible to fish during normal winter flows.
6. Between Points 2 and 5, concentrated surface flow was carried in the inside road ditch and along the road surface for extended distances without the benefit of relief. This will be addressed by the Geologist and/or CDF in their- reports.

Cumulative Impacts:

The cumulative impacts should not significantly adversely impact fish and wildlife resources if accomplished as indicated within this plan and the attached recommendation in this report.

The Department of Fish and Game's computerized Natural Diversity Data Base indicates no recorded plant or animal species of concern within the plan area. Osprey nest near the plan area and spotted owls have territories in similar vegetation near the area, however, no owls are recorded from this area.

The area contains second growth Redwood and fir that was partially harvested. An additional area north of Barton Gulch and northeast of Highway 128 is planned for harvest in the immediate future. These plans, and the past harvest plans near this area, represent steps in the long-term management of slopes to the Navarro River. Recently, the major portion of the flat flood prone areas along this portion of the Navarro River were either sold or donated to organizations or agencies to preserve the old-growth Redwood and large second growth Redwood remaining on the flats.

Impacts that may occur as a result of this logging plan are small in comparison to values retained by the donation of land as mentioned above.

Review Team Chairman's Questions:

1. Q. Evaluate watercourse classifications.

A. Evaluated. Extended Class II watercourse. See Observation 1 and Recommendation 1.

2. Q. Evaluate use of tractors in cable area. How extensive is this expected to be?

A. Evaluated. Use of tractors in the cable area near the eastern plan boundary would be on moderate slopes (less than 30-50%). There would be no operations (tractors) within the WLPZ. The cable area near the westernmost Class II watercourse is more than 70% slope near and downstream of the slide. Tractors in the cable area would not operate on slopes of more than 50% in this area or would be in violation of the rules. The RPF and the CDF inspector and the geologist did not indicate they were concerned with this plan area as proposed. These lower slopes were not checked on-site on February 1, 1988. The DFG inspector did walk down this watercourse.

3. Q. Evaluate tractor logging near the class III. Are any additional erosion control measures needed?

A. Care will be required in Sections 1 and 12. The Class II watercourse was extended up to Area 1 approximately 200 feet upslope of the existing truck road. The Class III watercourse upstream of this area has moderate slopes on the east and steep slopes on the west. Care will be required when yarding on this west side of the Class III. The RPF and CDF inspector did not anticipate problems in this area.

7. Q. Please evaluate the Class III watercourse protection (east edge of plan). Will intermittent flow in south facing stream be cooled by underflow and/or fog? If so, please provide references and/or data. (DFG).

A. The above mentioned watercourse can be indicated as three different areas. The upper one-third will be pools with possibly underflow between pools and some surface flow during the summer low flow period.

This area has trees marked for retention with various sizes of Redwood and some large fir. There is sparse understory with moderate ground cover. Not ail marked trees (leave trees} are marked on the base and/or easily identified once the trees in the area are felled. Approximately two-thirds of the large Redwood and very few of the large fir are marked for harvest. Almost all trees less than 16-18 DBH will be retained. After a close evaluation, this is believed to retain 50% of the existing shade on the surface of the water during the critical summer months.

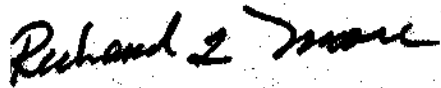
The center one-third of this Class II watercourse will have sub-surface flow during the summer. The braided channels drop the bedload materials through this area. There are wide unvegetated gravel area interspersed with individual Redwood, or clumps of Redwoods. These Redwoods can be harvested without affecting the water temperature. Care will be required to long-line these trees from the adjacent slope if the gravel areas are soft or wet.

The downstream (southern) one-third of this class II watercourse has an alder canopy with approximately 100% shade. No problems are anticipated in this area.

The intermittent flow will be cooled by underflow and the existing and retained canopy over the watercourse. Fog will not cool this watercourse during extended periods when summer fog does not extend inland due to a high pressure east of Northern California.¹⁾ Areas of underflow will exceed those areas of surface flow during the summer months. This is especially true of the mid-1/3 of the Class II watercourse. Very little if any cooling will occur where surface water flows under an overhead canopy, unless this flow is "gaining" flow (gaining added flow from the water table either by sub-surface of surface flow).²⁾

Recommendations:

1. Extend the Class II watercourse up to Point 1.
2. Trees marked for leave shall be marked at the base of the tree.
3. Either map wet area and scarp at Area 5 or change map to reflect flagged area on-site.



Richard L. Moore
Assoc. Water Quality Biologist
Dept. of Fish and Game





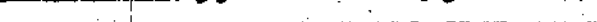


Map Attached

- 1) Azevedo, J. & Morgan, D.L., 1914. Fog Precipitation in Coastal California Forests. Ecology Vol. 55, No. 5.
- 2) Brown, G.W., 1980. Forestry and Water Quality, School of Forestry, Oregon State University.

MAP TO ACCOMPANY
TIMBER HARVESTING PLAN
Giacomini - West Barton Gulch - Louisiana Pacific



LEGEND:

- Plan area boundary 
- Existing truck road 
- Watercourses: Class 1 
- Class 2 
- Class 3 
- Harvesting Method: Cable and-tractor longlining 
- Tractor (all not shown otherwise) 

Truck road below Point "M" is permanent; road above Point "M" is seasonal