

Inspection Memorandum

To: Jim Burke, Senior Engineering Geologist Southern Nonpoint Source and Forestry Unit, NCRWQCB
Coast Region California Department of Forestry and Fire Protection (CAL FIRE)
Second Review Team Chair, Mendocino CAL FIRE
Jamie Pusich, Registered Professional Forester (RPF)

From: Izaac Russo, Engineering Geologist, Southern Nonpoint Source and Forestry Unit

Date: August 5, 2020

Subject: Preharvest Inspection (PHI) Report and Recommendations
1-20-00084 SON, "Silver Estates" PHI

Legal Description

T8N, R10W, Sections 31, 32
T7N, R10W, Section 5
Mt. Diablo base and meridian

Watershed CalWater (2.2)

1114.110301: Pocket Canyon
1114.110301: Hulbert Creek
1114.110301: Dutch Bill Creek

CWA 303(d) Listed

Sediment, Temperature, Pathogens

Landowner

Roger A. Burch and Michele Burch

Silviculture

Selection (51 acres)
Group Selection (33 acres)
Transition (140 acres)
WLPZ Operations, WLPZ Equipment, WLPZ Additional

Erosion Hazard Rating (EHR)

Moderate, High

Harvesting Practices

Ground, cable

Proposed Winter Operations

Yes

Roads and Landings

90' road reconstruction

Watercourses

Class I, II, III, IV

Erosion Control Plan

Yes

WLPZ In Lieu Practices

I. INTRODUCTION

On July 24, 2020, I participated in the Pre-Harvest Inspection (PHI) for Timber Harvest Plan (THP) 1-20-00084 MEN PHI, "Silver Estates" THP. Also present during the inspection were:

- Jamie Pusich, RPF (NRCM)
- Jesse Weaver, Landowner Representative
- Kim Sone, CALFIRE
- Kevin Doherty, California Geological Survey
- Julie Coombes, California Department of Fish & Wildlife (CDFW)
- Carolyn Buesch, CDFW
- Greg Guensch, Russian River County Sanitation District

Discussion and recommendations proposed within this report are intended to provide input to CAL FIRE as part of the multi-agency review team process as well as to inform the RPF and plan submitter as to any issues that may be pertinent to the Regional Water Board permitting. If recommendations contained within this memorandum are adequately addressed, I anticipate that this THP will be eligible for coverage under Order No. R1-2004-0030, Waste Discharge Requirements for Discharges Related to Timber Harvesting Activities on Non-Federal Lands in the North Coast Region (General WDR).

II. BACKGROUND

The plan area lies on moderate to steep slopes on Neeley Hill between the Russian River and Mays Canyon and on the flood plain of the Russian River at the base of Neeley Hill. The town of Guerneville lies less than one mile to the north of the plan area, across the Russian River, and the community of Vacation Beach sits at the foot of Neeley Hill, directly downslope of proposed timber operations.

Water bodies in the Russian River watershed are listed under the Clean Water Act Section 303(d) (per the 2012 List) due to impairments to water quality by several pollutants.

The entire Russian River watershed is impaired for sediment and temperature. Recent data show a pathogen impairment throughout the watershed, as well.

Water quality studies conducted in the Russian River and its tributary creeks, indicate a widespread problem with bacteria and other evidence of fecal waste discharge, which represent a potential threat to the health of the river ecosystem and the people who visit it. Fecal indicator bacteria can indicate the presence of pathogenic organisms that are found in warm-blooded animal waste. The North Coast Regional Water Quality Control

Board has developed the Russian River Pathogen TMDL to address the pathogen impairment and sources of fecal waste pollution in the Russian River Watershed.

In 2004, the Regional Water Board adopted a Sediment TMDL Implementation Policy (Resolution RI-2004-0087), which states that Regional Water Board staff shall control sediment pollution by using existing permitting and enforcement tools. The goals of the Policy are to control sediment waste discharges to impaired water bodies so that the TMDLs are met, sediment water quality objectives are attained, and beneficial uses are no longer impaired by sediment.

In January 2012, the Regional Water Board also adopted Resolution RI-2012-0013, Policy Statement for Implementation of the Water Quality Objective for Temperature in the North Coast Region (Policy Statement). In March 2014, the Regional Water Board adopted a basin plan amendment to incorporate the approach articulated in the Policy Statement. The approach encourages combining TMDL requirements with region-wide nonpoint source programs for efficiency and to avoid duplicative regulation. Often, the same management measures can address nonpoint source water quality concerns regardless of whether the waterbody is impaired. Sediment conditions interact with water in many ways that can affect water temperatures. Therefore, practices implemented to prevent and minimize elevated sediment discharges may also help control elevated water temperatures.

Generally, timber operations on non-federal lands that fully and properly implement the Forest Practice Rules that provide water quality protection, and comply with the provisions of applicable Regional Water Board permits, will contribute to implementation of sediment and temperature TMDLs, with additional protection measures necessary to protect the beneficial uses of water incorporated into THPs for site-specific conditions when recommended by the Regional Water Board.

Section 5 of the THP includes an Erosion Control Plan (ECP) as required by the General WDR, which consists of an inventory of Controllable Sediment Discharge Sources (CSDS), proposed corrective action for each site, a prioritization for treatment based on potential impacts to water quality, and a schedule for implementation of corrective action based on the prioritization. CSDS are defined in the General WDR as sites or locations, both existing and those created by proposed timber harvest activities, within the Project area that meet all the following conditions:

1. is discharging or has the potential to discharge sediment to waters of the state in violation of applicable water quality requirements or other provisions of these General WDRs,
2. was caused or affected by human activity, and
3. may feasibly and reasonably respond to prevention and minimization management measures.

During my field inspection and office review of the THP, I focused on addressing measures to prevent and minimize the discharge of earthen materials from controllable sediment sources, potential discharges of treated wastewater, as well as the maintenance of sufficient canopy around waterbodies to protect onsite and downstream

beneficial uses of water. The purpose of my participation in the PHI was to evaluate the adequacy of the proposed management practices to meet narrative water quality standards established in the Basin Plan.

According to the Engineering Geologic review of the plan, the Russian River County Sanitation District (RRCSD) entered into a 99-year lease agreement with Louisiana Pacific (the landowners at the time of the agreement) for spray irrigation of partially treated wastewater on roughly 77 acres of timberland. The irrigation fields were completed in 1983. An additional ridgetop irrigation field may have been added after 1996.

While substantially representative portions of the THP were inspected during the PHI, not all proposed harvest areas or road locations were inspected. Other members of the review team are expected to provide recommendations related to water quality. We discussed specific recommendations during the PHI, and I concur with those being necessary for water quality protection. Therefore, in the interest of efficiency, those recommendations will not be reiterated here. However, the Regional Water Board concurs with recommendations related to water quality protection (**RWB Recommendation 1.**)

III. FIELD OBSERVATIONS AND RECOMMENDATIONS

Map points referred to below are keyed to THP maps. The complete THP documents, including Regional Water Board staff's PHI report, may be accessed electronically on the CALTREES website at: <https://caltreesplans.resources.ca.gov/caltrees/>

Weather during the PHI was clear and mild to warm. The review team examined harvest units, appurtenant roads, landings, watercourse crossings, watercourse classifications, tractor crossing, irrigation fields, and unstable areas.

During the PHI, RWB staff observed a road fill failure and associated debris slide. The failure occurred on a permanent road constructed on an ~85% slope above a Class III watercourse, extending about seven feet into the old road prism and narrowing the road to less than seven feet in width. The failure is approximately 75 feet wide, 40 feet long and 4 to 8 feet deep (Fig 1.) Sediment and debris from the failure entered the Class III watercourse at the foot of the slope, but reportedly did not reach the Class I watercourse in Mays Canyon. Two options for remediation are presented in the THP. Generally, either option proposed – widening the road into the cut bank or rebuilding the fill with a retaining wall – should serve to protect water quality.



Figure 1. Looking northeast (downhill) and fill failure at Map Point E.

Just uphill of Map Point E, at Map Point 23, the permanent road crosses a Class III watercourse. In addition to the work described in the THP, RWB staff recommends adding a critical dip to this crossing to prevent diversion of the Class III stream down the road to Map Point E. Add Map Point 23 to the Controllable Sediment Discharge Sources in the Erosion Control Plan (**RWB Recommendation 2.**)

Map Point 1 is a 100' long, 24" diameter culvert where a Class II stream crosses the main haul road and Neely Road before entering the Russian River. The culvert inlet appeared to be fully buried and was not visible during the inspections. A ~8' deep pool with over-steepened banks had formed at the inlet (Fig 2.) The stream had overtopped the pool at some point in the past and diverted down the main access road and eroded a 6" to 12" deep gully (Fig 3) down the road before crossing Neeley Road and entering the Russian River. There are signs of erosion on the outboard edge of Neeley Road where the outflow exits the road (Fig 4.) The outlet of the culvert is shotgunned (Fig 5) and rusted through (Fig 6.) In addition to the issues above the culvert is undersized and in need of replacement. The consensus of the review team was that all reviewing agencies should work with the Sonoma County Department of Transportation and Public Works to prioritize replacement of this culvert.



Figure 2. Inlet and over-steepened banks at inlet of culvert at Map Point 1.



Figure 3. Gully erosion caused by overtopping of inlet pool at Map Point 1.



Figure 4. Erosion on outboard edge of Neeley Road at Map Point 1.



Figure 5. Shotgunned culvert outlet on Neeley Road at Map Point 1.



Figure 6. Culvert outlet rusted through at Map Point 1.

During the PHI, RWB staff observed many homeless encampments, both occupied and abandoned. All of these sites and other sites throughout the plan area were littered with trash, some of which may contain toxic substances. RWB staff observed one small (~5 gallon) tank of refrigerant and numerous camping gas tanks. Several of these sites were situated in the channels of Class II and III watercourses.

RWB staff recommends removal of anthropogenic debris and any potentially toxic materials that is in, adjacent to, or has potential to discharge into a watercourse. Prior to second review, the RPF shall submit to the Regional Water Board, a pollution prevention plan detailing the manner of debris and toxic material removal and describing methods of storage and disposal of such material. If removal of the material requires operating equipment in an ELZ or WLPZ, the RPF shall revise the THP to include the appropriate in-lieu practice (**RWB recommendation 3.**)

The Russian River County Sanitation District (RRCSD) disposes of treated wastewater from their Neeley Road treatment facility under a Federal National Pollution Discharge Elimination System (NPDES) permit administered by the Regional Water Board. RWB staff inspected two wastewater irrigation fields operated by the RRCSD in the plan area. One is on a ridgetop to the east of the treatment plant (see RRCSD Irrigation Lines Map on THP page 95). There are two potential issues of concern with respect to the irrigation lines; one is the potential for impacts to slope stability by removal of trees on saturated vulnerable ground and the other is impacts to the districts disposal process if a line is damaged. There are two small slides in this area that are no harvest areas. The impacts to slope stability appear to be adequately addressed by Certified Engineering Geologist Tim Best's Focused Engineering Geologic Review of the THP area included in section 5 of the THP, which includes a characterization of geologic hazards in the THP area and recommendations to minimize or reduce any impacts resulting from timber operations, which have been incorporated into the THP. The other irrigation field in the plan area is on the floodplain of the Russian River, south of the treatment plant. The spray heads in this area were painted with fluorescent orange paint in an effort to reduce the risk of accidental damage to the sprinkler heads during timber operations. RWB staff recommend adding language to the THP detailing measures taken to avoid damage to the irrigation lines and sprayers during timber operations (**RWB Recommendation 4.**)

At Map Point 22 a permanent road crosses a Class III watercourse. The crossing consists of 24" CMP culvert which is almost entirely crushed. RWB staff recommend revising the THP to state that the culvert shall be replaced with a new drainage facility sized to pass the anticipated 100-year flow event and debris. In addition, this site should be added to the ECP (**RWB Recommendation 5.**)

During the PHI RWB staff observed a permanent road crossing of a Class III watercourse at Map Point 8. The crossing is currently a rocked ford which appears to overtop during high flows. THP proposes installation of an 18" culvert. There is an approximately 1' knickpoint just upslope of the proposed culvert inlet. RWB staff recommend rocking the knickpoint with the rock currently used for the ford (**RWB Recommendation 6.**)

Map Point 11 is an 18" ditch relief culvert that is partially blocked with sediment. The banks of the channel at the outlet of the culvert are over-steepened with perched material above the inlet. RWB recommends pulling back banks above outlet to 1.5:1. Add Map Pont 11 to the Controllable Sediment Discharge Sources in the Erosion Control Plan. (**RWB Recommendation 7**)

IV. WASTE DISCHARGE REQUIREMENTS

Following plan approval by CAL FIRE, and prior to beginning timber harvest activities, landowners must apply for coverage under the General WDRs (Order No. R1-2004-0030), the Categorical Waiver (Order No. R1-2014-0011), an individual waiver or WDR, or in some cases a Watershed-wide WDR. If the review team recommendations, including those of the Regional Water Board, are incorporated into the THP, once approved, the THP will be likely to avoid or minimize both short term and long-term adverse impacts to beneficial uses of water. When considered with the proposed silviculture, the requirements for post-harvest retention of overstory canopy, and watercourse and lake protection zone requirements, the plan will likely comply with applicable water quality standards and therefore will be eligible for coverage under the General WDRs. The following web link provides a copy of the Order:

http://www.waterboards.ca.gov/northcoast/water_issues/programs/timber_operations/

V. RECOMMENDATION SUMMARY

1. Incorporate water quality protection measures presented by the other members of the review team into the plan.
2. RPF shall revise the THP for Map Point 23 to include a critical dip at the Class III crossing. Add Map Pont 23 to the Controllable Sediment Discharge Sources in the Erosion Control Plan.
3. RWB staff recommends removal of anthropogenic debris and any potentially toxic materials that is in, adjacent to, or has potential to discharge into a watercourse. Prior to second review, the RPF shall submit to the Regional Water Board, a pollution prevention plan detailing the manner of debris and toxic material removal and describing methods of storage and disposal of such material. If removal of the material requires operating equipment in an ELZ or WLPZ, the RPF shall revise the THP to include the appropriate in-lieu practice.
4. RPF shall revise the THP to add language detailing measures taken to avoid damage to the irrigation lines and sprayers during timber operations.
5. RPF shall revise the THP for Map Point 22 to replace crushed CMP culvert. Add Map Pont 22 to the Controllable Sediment Discharge Sources in the Erosion Control Plan.
6. RPF shall revise the THP for Map Point 8 to rock armor the knickpoint above the proposed culvert inlet with existing rock from rock armored ford.

7. RPF shall revise the THP for Map Point 11 to pull the channel banks at the culvert outlet back to 1.5:1. Add Map Point 11 to the Controllable Sediment Discharge Sources in the Erosion Control Plan.

While a significant portion of the plan area was evaluated during the PHI inspection, Regional Water Board staff did not evaluate the entire THP area. The observations and recommendations are relevant only to the areas observed. The recommendations and comments in this memorandum are provided pursuant to the statutory authority contained in the Porter-Cologne Water Quality Control Act (Water Code, section 13000 et seq.), the Water Quality Control Plan for the North Coast Region (Basin Plan), and the Z'berg-Nejedly Forest Practice Act (Public Resources Code, section 4511 et. seq.; Cal. Code Regs., tit. 14, section 1037.5)