



DEPARTMENT OF FORESTRY AND FIRE PROTECTION

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September 18, 2019

ARTHUR HASCHAK
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 ARCATA, CA 95521

PREHARVEST INSPECTION REPORT

Harvest Document: **1-19-00098-MEN**
 Inspection Date: **09/13/2019**
 Inspection Number: **1**
 Inspector Name: **Kenneth Margiott**

PHI/DIRECTORS DETERMINATION DATE EXTENDED BY MUTUAL CONSENT: **Yes**
 (If yes, please include documentation provided by the RPF as an attachment to the report)

Reviewed On Previous Visit: **Field Hours: 34** Office Hours: **14**

Agencies that Attended the Preharvest Inspection

Agency	Notes
WQ	Jim Burke from the NCRWQCB attended the PHI.
CGS	CGS Geologist Kevin Doherty attended the PHI.
CDFW	CDFW Biologist Adam Hutchins attended the PHI.

DETAILS OF PREHARVEST INSPECTION

1. Was the PHI able to be started within the initial 10 day period? **No**
 Inspector Observations: **The RPF agreed to extend the PHI date to allow for all of the reviewing agencies to attend.**
2. List any personnel who were contacted but could not attend the PHI: **All agency members who were contacted attended the PHI.**
3. a. Was the Notice of Intent properly posted at the timber harvesting site? **Yes**
 If "NO", Describe: **The Notice of Intent was posted at the junction of the main haul road and Mendocino County Road 501. The Notice of Intent was posted in a conspicuous location.**
- b. Does the Notice of Intent accurately describe the proposed silviculture, Plan area, nearest perennial watercourse, legal description, and timberland owners? **Yes**
 If "NO", Describe: **During the PHI, I observed that the Notice of Intent accurately listed all of the information as required by 14 CCR 1032.7.**

4. Is the proposed plan:
- a. Outside of the boundaries of any active Plan? Yes
- b. If "No", does the overlap area have an approved completion and stocking report?
If "NO", Describe:

PROJECT AND TIMBER STAND DESCRIPTION

5. Has the Plan accurately described the physical conditions at the plan site (soils & topography information, vegetation & stand conditions, watershed & stream conditions?)[14 CCR §1034(gg)] Yes
- If "NO", describe: **During the PHI, I determined that the RPF includes an accurate description of the plan area in Section III of the THP.**
6. What is the zoning for the proposed harvest area [Government Code § 51104(g)]? TPZ
7. Are timber stands correctly described in the Timber Harvest Plan? Yes
- Inspector Observations: **During the PHI, I determined that the RPF includes an accurate description of the timberstands in Section III of the THP.**
8. Have timber site classes been correctly identified and accurately depicted [14 CCR §1034(x) (12)]? Consider even-aged regeneration method limitations, and differences in minimum stocking requirements. Yes
- Inspector Observations: **During the PHI, I determined that the RPF provides accurate Site Class descriptions for this THP. The RPF identifies Site Class I timberstands in the flood prone areas and Site Class II and Site Class III on the hillslope areas.**
9. Are the Plan maps and associated diagrams accurate and sufficiently clear to allow for review/implementation of the Plan? Yes
- Inspector Observations: **During the PHI, I determined that the RPF provides accurate maps and diagrams in THP.**

SILVICULTURE

10. Are the silvicultural methods appropriate for existing stand conditions? Yes
- Inspector Observations: **The RPF is proposing single tree selection for the flood prone areas and in one hillslope unit. The RPF is proposing clear cut silviculture for one hillslope unit. The RPF is proposing single tree selection on the flood prone areas to meet the restrictions of 14 CCR 916.9 (3). The RPF is proposing single tree selection for a timberstand that is well stocked with commercial sized conifer trees in the overstory and a moderate amount of conifer regeneration in the understory. The RPF is proposing one clear cut harvest unit in a timberstand that contains a moderate amount mature trees with a signs of defect, a moderate hardwood component and a minimal amount of conifer regeneration in the understory.**
11. For even-aged management: If a "regeneration step" harvest is proposed (Clearcut, Seed Tree Seed Step, Shelterwood Seed Step), will the provisions of 14 CCR § § 913.1, 933.1, 953.1(a) (1-7) be met? Yes

Inspector Observations: The RPF is proposing a 24 acre tractor clear cut unit. During the PHI, I determined that this oversized clear cut unit is appropriate since this silviculture practice will allow the GRT Forest Manager to regenerate a timberstand that includes a moderate hardwood component and is sparsely stocked with conifer regeneration without re using skid trails that are in that unit under a timber harvest plan.

During the PHI, I observed that the proposed conifer harvest and conifer regeneration should ensure that the clear cut harvest units will be stocked to meet the point count stocking requirements of 14 CCR 912.7 (b) (1).

- 12. For uneven-aged management: Will the prescription ensure the the establishment and/or maintenance of a balanced stand structure, and establishment of new reproduction? Yes

Inspector Observations: During the PHI, I observed that the proposed timber harvest should ensure that an addition age class of conifer trees will be established in the understory following timber operations in the selection harvest unit that is outside of the flood prone areas.. I observed that a combination of redwood sprouting and natural seeding of Douglas-fir and grand fir will provide an additional age class of conifer trees to be established in the understory. I observed that an additional age class of redwood sprouts will be established following timber operations in the flood prone timberstands.

- 13. If Group B species are proposed for management [14 CCR § 912.7, 932.7, 952.7(d)]: Does the proposed prescription maintain relative site occupancy between Group A and Group B species? Yes

Inspector Observations: During the PHI, I determined that the hardwood component in the selection harvest units is low. I observed that enough hardwood trees will be knocked down to ensure that the Group A to Group B species ratio is maintained following timber operations in both the selection harvest and the clear cut harvest units of the THP area.

- 14. Comments or general observations regarding silviculture: During the PHI, I observed that the proposed timber harvest and artificial regeneration plan should ensure that the clear cut unit is fully stocked with conifer regenerations within five years of the completion of timber operations. I observed that the clear cut harvest unit contains a significant number of Douglas-fir trees with signs of defect and poor form. I observed that trees of all commercial size classes will be retained and harvested within the selection harvest unit that is outside of the flood prone areas. I observed that the QMD diameter will be maintained or increased in the flood prone areas as required by 14 CCR 916.9 (3). I did observed that stem diameter growth will be somewhat improved in the flood prone areas following timber operations. I did observe that stem diameter growth will be improved in the selection harvest unit outside of the flood prone areas. During the PHI, I made no recommendations regarding the proposed silviculture system.

MAXIMUM SUSTAINED PRODUCTION OF HIGH QUALITY WOOD PRODUCTS

- 15. Does the Plan comply with goals of 14 CCR § 913.10, 933.10, 953.10 to restore, enhance, and maintain the productivity of the state's timberlands? Yes

Inspector Observations: During the PHI, I observed that the appropriate silviculture systems are being proposed. I observed that the basal area stocking requirements of 14 CCR 913.2 (a) (2) (A) (2) in the selection units following timber operations. I observed that the point count stocking requirements of 14 CCR 912.7 (b) (1) will be met within five years of the completion of timber operations in the clear cut harvest unit.

- 16. Does the plan assure that growing stock will be harvested in a manner which prevents significant delays in reaching or maintaining MSP? [14 CCR § 913, 933, 953(a)] Yes

Inspector Observations: During the PHI, I observed that the an additional age class of conifer trees will be established in the selection harvest units following timber operations and that the clear cut harvest unit fill be fully stocked with conifer regeneration within five years of the completion of timber operations.

- 17. Does the Plan comply with the MSP requirements of 14 CCR § 913.11, 933.11, 953.11? (Check Appropriate Option)
Option A Option B Option C Does not comply

Notes :

Will the post-harvest stand:

- a. Obviously satisfy minimum stocking requirements (countable trees only)? [PRC § 4528(b)] Yes
- b. Contain the required number of seed trees? (if required) Yes
- c. Contain seed trees of full crown, capable of seed production and representative of the best phenotypes available in the preharvest stand? [14 CCR § 913.1, 933.1, 953.1(c)(1)(A)] Yes
- d. Contain leave trees that are uniformly distributed across the treatment areas? Yes
- e. Contain a species mixture similar to the pre-harvest stand? (A "no" answer may be used to indicate high-grading or species conversion).
- f. Have average stand diameters that are larger than the pre-harvest stand or improve stand health (for thinning operations)? [14 CCR § 913.3, 933.3, 953.3(a)] Yes

If "No" or proposed thinning operation is for stand health, explain: **During the PHI, I observed that the QMD will be maintained or increased in the flood prone areas following timber operations as required by 14 CCR 916.9 (3).**

18. If a regeneration and/or site preparation plan has been submitted, is it sufficient to ensure prompt regeneration of the site? Yes

Inspector Observations: **During the PHI, I determined that the proposed regeneration plan should ensure that the clear cut unit is fully stocked with conifer regenerations with five years of the completion of timber operations.**

19. Stand Information was verified by: Ocular

Notes:

20. a. Stands have been marked as follows:
Cut Tree Leave Tree Whole Area Marking Waiver

Inspectors Observations: **The RPF is not proposing a waiver to marking timberstands. The RPF is proposing to mark trees to be harvested within the selection harvest units with blue paint and a base mark. The RPF is proposing to mark all trees to be retained with a "W". During the PHI, I observed that the boundaries of the clear cut harvest unit were clearly marked with "Timber Harvest Boundary" flagging.**

- b. Was the mark representative and sufficient to evaluate the prescription(s)? Yes

Inspector Observations: **During the PHI, I observed that the RPF marked all of the flood prone areas as required by 14 CCR 916.9. I observed that the RPF provide a well representative sample mark for the selection harvest unit that is outside of the flood prone areas. I observed that the LTO marked the leave trees within the clear cut harvest unit. During the PHI, I made no recommendations to address timber marking for this THP.**

- 21 a. If the plan contains Aspen, Meadow and Wet Area Restoration, are the measurable standards contained in the plan sufficient to document success? NA

Notes:

- b. Are pictures of the pre-harvest Aspen, Meadow and Wet Area Restoration included in your report? NA

If no, how will monitoring data for the Board be provided?

22. Comments or general observations regarding MSP: None.

HARVESTING OPERATIONS

23. Have exceptions or alternative practices been fully explained and justified? Yes

Inspector Observations: **The RPF is proposing exception skid trails along a two ridges in the clear cut harvest unit. During the PHI, observed that the RPF provides adequate justification and explanation in Section III of the THP for the use of these exception skid trails.**

24. If tractor operations proposed on: [14 CCR § 914.2, 934.2, 954.2(f)(1)]

- Slopes >65%
- Slopes >50% with HIGH or EXTREME EHR
- Slopes >50% that lead without flattening to sufficiently trap sediment before reaching a watercourse or lake

a. Is such use appropriate?

Yes

Inspector Observations: **The RPF is proposing to conduct ground based yarding operations on slopes over 50 percent with a High EHR. I observed that this exception to yarding practices is appropriate since there are no tail holds needed to conduct cable yarding operations. The RPF flagged and mapped all of the exception skid trails prior to the PHI. I observed that there is no feasible alternative to the use of the proposed exception skid trails. During the PHI, I made no recommendations to address exception skid trails.**

b. In your opinion, has the RPF met the standards of 14 CCR § 914.2, 934.2, 954.2(f)(3) with a clear explanation, and justification as to why the application of the standard rule is either not feasible, or would not comply with 14 CCR § 914, 934, 954?

Yes

Inspector Observations: **The RPF provides a clear explanation of why exception skid trails are needed to conduct ground based yarding operations in the clear cut harvest unit in Section III of the THP.**

25. If tractor operations are proposed on slopes between 50 & 65% with MODERATE EHR but are not limited as specified in the rules (limited to existing tractor roads that do not require reconstruction OR to new tractor roads that have been flagged by the RPF prior to use [14 CCR § 914.2, 934.2, 954.2(f)(2)(i) & (ii)]), answer "a" & "b" below:

a. Is such use appropriate?

NA

Inspector Observations:

b. In your opinion, has the RPF met the standards of 14 CCR § 914.2, 934.2, 954.2(f)(3) with a clear explanation, and justification as to why the application of the standard rule is either not feasible, or would not comply with 14 CCR § 914, 934, 954?

Yes

Inspector Observations:

26. Did the RPF flag tractor roads prior to the PHI as required by 14 CCR § 914.2, 934.2, 954.2(f)(3)?

Yes

Inspector Observations: **During the PHI, I observed that the RPF has flagged all of the tractor roads in the WLPZ areas and the exception skid trails as required by 14 CCR 914.2 and 14 CCR 916.9.**

27. Have Special Treatment Areas been adequately disclosed and mitigated in the Plan? [ref. 14 CCR §895.1] *Note: Special Treatment Area Prescriptions are considered a specific silviculture which must be included under item #14 (Nest buffers for non T&E species do not require a special treatment area)

Yes

Inspector Observations:

28. Comments or general observations regarding harvesting operations: **During the PHI, I walked along all of the exception skid trails and many of the in-lieu practice skid trails within the WLPZ areas. I observed that the THP area can be logged using a minimal number of existing skid trails. I observed that surface erosion along these skid trails is not significant. I observed that the selection units can be logged with ground based yarding equipment with minimal damage to the residual timberstand. During the PHI, I made no recommendations to address timber harvesting operations for this THP. During the PHI, I evaluated several tractor road watercourse crossings in the THP area. During the PHI, I made no recommendations to address tractor road watercourse crossings in the THP area.**

ROADS AND LANDINGS

29. Have all Plan roads and landings (including appurtenant roads) been correctly located and classified on Plan maps? Yes

Inspector Observations: The RPF is proposing to use existing seasonal and permanent roads during timber operations. During the PHI, I made no recommendations to address classifying or mapping the existing roads proposed for timber operations. I did a make a PHI recommendation to address mapping and addressing an alternative road south of Map Point 3. This new seasonal road can be constructed in a better location than the existing seasonal road south of Map Point 3.

30. Do all exceptions or alternative practices meet the standards outlined in the rules for exceptions or alternative practices? Yes

Inspector Observations: The RPF is not proposing any exceptions or alternative road practices. The RPF does provide accurate descriptions of significant erosion sites in Section II of the THP and appropriate measures to address significant erosion sites in Section II of the THP.

31. Are proposed construction, reconstruction, and/or abandonment methods and mitigations as described in the Plan sufficient to protect resource values? NA

Inspector Observations: The RPF is proposing to only use existing roads that do not require reconstruction for this THP.

32. Comments or general observations regarding roads and landings: During the PHI, I observed that existing roads south of Elk Prairie are located on low gradient slopes that do not require reconstruction.. I observed that the main haul roads and appurtenant roads are rocked and are adequately drained with rolling dips or inboard ditches. The seasonal roads north of Elk Prairie are located on low to moderate gradients. I observed that surface erosion along the seasonal roads is not significant. During the PHI, the inspection team members agreed that the use of the proposed seasonal road south of Map Point 3 needed to be further addressed.

During the PHI, all of the agency members and the representatives from GRT and Redwood Empire walked along the WLPZ road south of Map Point 3. This road is needed to access timberstands within the Class I WLPZ between the truck road watercourse crossing at Map Point 3 and Map Point 10. This existing seasonal road is located within a shallow depression. The concern is that this seasonal road will need to be graded to facilitate log hauling operations. Therefore, the road grade will be further lowered and tend to collect and potentially hold surface drainage. Therefore, surface drainage for this road is a concern. During the PHI, Redwood Empire RPF Jesse Weaver located an existing skid trail that would be a more suitable road to access the flood prone unit south of Map Point 3. This proposed road is located in an area that is elevated above the liner depression where the existing road grade is located. During the PHI, Redwood Empire RPF Weaver flagged this proposed road. During the PHI, all of the agency members could walk the entire length of this road. This proposed road follows an existing skid trail that can be improved to facilitate log hauling operations without significant excavation or sidecasting of soil. This proposed seasonal road can be construction by out sloping it so water can be drained in a way to minimize surface erosion. The RPF shall revise the THP item 24 yes prior to Second Review to indicate that a new seasonal road will be constructed south of Map Point 3. The RPF shall include a complete road construction description for the proposed road south of Map Point 3 prior to Second Review. The RPF shall revise the THP maps in Section II of the THP prior to Second Review to show the location of the proposed road south of Map Point 3. This is addressed as CAL FIRE PHI Recommendation #1.

During the PHI, made no additional recommendations to address the road system within the THP area.

WATERCOURSE PROTECTION

33. Have watercourses been correctly described and classified within the Plan? [Include Class II-S (standard) and Class II-L (large) for watersheds with anadromous salmonids.] Yes

Inspector Observations: During the PHI, I walked the hillslope units and along the flood plain units. The RPF identifies the segment of the North Fork of the Gualala River that bisects the THP area as a Class I watercourse with flood prone areas. The RPF identifies Standard Class II watercourses and Class III watercourses. The RPF identified and mapped springs in the THP area. During the PHI, a considerable amount of time was spent walking along the edges of the channel migration zone of the Class I watercourse. During the PHI, the inspection team members agreed that a small channel west of Map Point 7 shows signs of bank erosion. Therefore, there is the potential that the channel migration zone can shift further into the streambank at this location. The inspection team members agreed to require the RPF to flag off and map the small area between Map Points 6 and 7 as being in the channel migration zone of the Class I watercourse. During the PHI, GRT staff foresters flagged this area as be outside of an area where timber operations will occur. During the PHI, Jim Burke from the NCRWQCB agreed to make this PHI recommendation.

During the PHI, CDFW Biologist Adam Hutchins identified a two acre area east of Map Point 6 that is within Inner Zone A that includes an red alder stand with aquatic plants. CDFW Hutchins suggested that this area should be part of the channel migration zone since there is the stand of red alder within a redwood timberstand. I do not concur with CDFW Biologist Hutchins. Therefore, the only channel migration zone recommendation I support was the one made by Jim Burke of the NCRWQCB.

34. Do all in-lieu or alternative practices proposed meet the standards outlined in the rules for in-lieu or alternative practices? Yes

Inspector Observations: The RPF is proposing to conduct ground based yarding using an existing in lieu practice skid trail system. The RPF is proposing to use two WLPZ roads and two WLPZ landings during timber operations. During the PHI, I evaluated the two WLPZ road and the two WLPZ landings. During the PHI, I walked along many of the WLPZ skid trails. During the PHI I made no recommendations to address WLPZ tractor roads or landings. During the PHI, I made a recommendation to relocate the WLPZ road south of Map Point 3.

35. a. Are proposed protection measures for watercourses, lakes and wet areas adequate to protect the beneficial uses of water, native aquatic and riparian species, and the beneficial functions of the riparian zone? Yes
- b. Are proposed protection measures adequate for areas near and areas with the potential to directly impact watercourses and lakes for sensitive conditions? Yes
- c. Will the objectives and provisions of 14 CCR § 916, 936, 956 (a-d) be met? Yes

Inspector Observations: During the PHI, I evaluated the Class I and Class II WLPZ watercourse flagging and WLPZ timbermark. During the PHI, I determined that WLPZ flagging and WLPZ timber marking meets the requirements of 14 CCR 916.9.

36. a. Are the identified truck road crossings properly designed and correctly located? No

Inspector Observations: The RPF identifies a temporary Class I truck road watercourse crossing at Map Points 2 and 3. The RPF identifies permanent truck road watercourse crossing bridges along the appurtenant roads. The RPF identifies The RPF is proposing to install a temporary truck road watercourse crossing bridge to span the Class I watercourse at Map Point 3. The RPF is proposing to install the temporary bridge by crossing the Class I watercourse with a tractor to pull the bridge in place. The concerns that crossing the Class I watercourse channel with heavy equipment could result in a take of listed fish or amphibian species. During the PHI, GRT Forest Manager John Bennett proposed placing two logs across the watercourse channel so a piece of heavy equipment needed to pull the temporary bridge would not need to cross the Class I watercourse channel at Map Point 3. GRT Manager Bennett suggested that a temporary bridge could be constructed on site so heavy equipment would not need to cross through the Class I watercourse channel at Map Point 3. These two alternatives are preferable to allowing the LTO to cross the Class I watercourse channel with heavy equipment. The RPF shall revise the THP prior to Second Review to state that the LTO shall either cross the Class I watercourse channel at Map Point 3 with heavy equipment with two logs when installing the temporary bridge or constructing the temporary bridge without the use of using heavy equipment to cross the Class I watercourse at Map Point 3. This is addressed as CAL FIRE PHI Recommendation #2. During the PHI, I made no additional recommendations to address truck road watercourse crossings for this THP.

- b. Is the stabilization treatment sufficient to avoid downstream impacts? Yes

Inspector Observations:

Yes

37. Have all crossings been accurately described and have appropriate mitigations been prescribed to protect the integrity of the crossing (e.g. installation of critical dips where diversion potential exists, armoring inlet, outlet and/or fill material etc.)
Inspector Observations: **During the PHI, I determined that truck road bridges are properly designed and described. The only PHI recommendation I made was the method of installing the truck road watercourse crossing at Map Point 3. This is addressed as CAL FIRE PHI Recommendation #2.**
38. Were locations of proposed heavy equipment use in any WLPZ/ELZ clearly described in the plan or flagged and marked on the ground prior to the PHI (including crossings of class III watercourses)? [14 CCR § 916.4, 936.4, 956.4(c)(1)] Yes
Inspector Observations:
39. Are winter operations appropriate? Yes
Inspector Observations:
40. If winter operations are proposed, do the mitigation measures proposed adequately protect the beneficial uses of water? Yes
Inspector Observations:
41. Have all domestic water supplies been accurately identified and adequately protected? Yes
Inspector Observations: **There are three landowners who are within 1000 feet downstream of the THP area. The RPF contacted these three landowners by mail and submitted a newspaper notification in the Independent Coast Observer dated August 3, 2019. The RPF received one letter from the local water company and one phone call from a local landowner. the local water company has a well adjacent to the THP area. The local landowner has a spring where she collects water for her residence. The RPF responded to these requests by flagging a WLPZ near her property line to ensure that her water intake would not be impacted during timber operations. The RPF is not proposing to conduct any timber operations within 100 feet of any of these two domestic water intake. Therefore, no recommendations are needed address domestic water intakes for this THP.**
42. Comments or general observations regarding watercourse protection: **During the PHI, I determined that as proposed and marked timber operations comply with the restrictions of 14 CCR 916.5 and 14 CCR 916.9.**

GEOLOGY AND EROSION HAZARD RATING

43. Have soils within the Plan area been correctly classified? Yes
Inspector Observations: **During this inspection, I observed that the RPF provided an accurate soil description in Section III of the THP.**
44. a. Has the erosion hazard rating for soils within the operating area been correctly calculated, as per Technical Rule Addendum #1? Yes
Inspector Observationse: **During the PHI, I determined that the RPF appropriately identifies the soils within the operating area in Section III of the THP.**
- b. Have erosion hazard ratings been correctly shown on the Plan map, as per 14 CCR § 1034 (x) (8)? Yes
Inspector Observations: **During the PHI, I determined that the RPF provides an accurate EHR map in Section II of the THP. I observed that the EHR calculation Worksheet in Section V of the THP is accurate for site conditions.**
45. Are the proposed erosion control methods (e.g. waterbreak spacing and/or treatments for exposed soil) adequate to reduce soil loss? Yes
Inspector Observations:
46. Have unstable areas been properly identified? No
Inspector Observations: **The RPF identifies unstable areas in both the clear cut and the selection harvest unit above Elk Prairie. The RPF identifies one unstable area above the Class I watercourse adjacent to Map Point 7. During the PHI, CGS Geologist Kevin Doherty identified an additional unstable area at PHI Map Point G1. Please see the CGS PHI report for details.**

No

47. If operations are proposed on unstable areas, are the proposed operations appropriate and properly mitigated?

Inspector Observations: **The RPF is proposing not to harvest any trees or conduct any timber operations on unstable areas. During the PHI, CGS Geologist Kevin Doherty walked along the slopes above Elk Prairie to evaluate the unstable areas mapped by the RPF. During the PHI, CGS Geologist Doherty viewed the unstable area above the Class I watercourse near Map Point 7. During the PHI, CGS Geologist Kevin Doherty made a recommendation that no trees be harvested within the headwall swales above any of the unstable areas above Elk Prairie. During the PHI, CGS Geologist Doherty made a recommendation that tree harvesting within 50 feet of the perimeters of the unstable areas along the lateral scarps be limited to single tree selection that retails at least 75 feet of square feet of basal area per acre. Please see the CGS PHI report for details.**

48. Comments or general observations regarding watercourse protection: **Please see the CGS PHI report for details concerning slope stability for this THP. During the PHI, I made no recommendations to address Erosion Hazard Rating for this THP.**

HAZARD REDUCTION

49. a. Does the plan accurately disclose any current forest insect or disease problems? Yes

- b. Do the mitigation measures contained in the plan limit the spread of forest insects or disease? Yes

Inspector Observations: **The RPF identifies that the THP area is within the Zone of Infestation for both Pine Pitch Canker disease and Sudden Oka Death disease. The RPF provides adequate measures to address Pine Pitch Canker disease and Sudden Oak death disease in Section II of the THP.**

50. Consider the areas fire hazard severity rating, fire history, expected fire behavior, and resources at risk: NA
Will proposed treatments be sufficient to reduce fire hazard and provide defensible space around buildings and along roads?

Inspector Observations: **The RPF does not identify any structures, roads or improvements requiring a Fire Protection Zone. During the PHI, I did not observe any structures , roads or improvements requiring a Fire Protection Zone.**

51. If operations are proposed for the purposes of specifically reducing fire hazard or risk of ignition (fuelbreaks, biomass removal), will the proposed hazard reduction methods be effective for the purposes of reducing damage to the natural environment, or to other resources? NA

Inspector Observations:

52. Comments or general observations regarding hazard reduction: **None.**

ARCHAEOLOGY

NOTE: IF CONFIDENTIALITY IS REQUIRED OF YOUR RESPONSE, PLEASE PROVIDE THE RESPONSE ON A SEPARATE PAGE MARKED "CONFIDENTIAL".

53. Does the RPF's archeological survey appear adequate based upon spot checks of potentially sensitive areas? Yes

Inspector Observations:

54. If sites are present, are the archeological site descriptions and/or site records accurate with regard to site size, content, and mapped location? Yes

Inspector Observations:

Yes

55. If sites are present, is the proposed archeological site protection adequate to prevent significant adverse impacts?

Inspector Observations:

56. Comments or general observations regarding archeology: **On September 9, 2019, CAL FIRE Archeologist Ben Harris conducted a focused PHI with GRT Forest Manager John Bennett. For specific details concerning cultural or historic resources see CAL Fire Archeologist Harris's PHI report.**

WILDLIFE

57. Have all state or federal (T&E) listed species present in the Plan area been accurately disclosed and mitigated (excluding Northern Spotted Owl and anadromous salmonids)? Yes

Inspector Observations:

58. Have any required CESA or FESA consultation occurred? NA

Inspector Observations:

59. Have impacts to wildlife and plants (including listed and non-listed species), been correctly assessed within the Plan and appropriate protection provided? Yes

Inspector Observations:

60. Have all Late Successional Forest Stands been disclosed? [14 CCR § 919.16, 939.16, 959.16] NA

Inspector Observations:

61. If Late Successional Forest Stands are present and proposed for harvesting, do your observations support a conclusion that such harvesting would not significantly reduce the amount and distribution of late succession forest stands, or their functional wildlife habitat value such that it constitutes a significant adverse impact of the environment as defined in 14 CCR §895.1? NA

Inspector Observations:

62. Does the plan accurately disclose any components that would be associated with Late Successional Forest Stands (e.g. large living and/or dead trees, large downed woody debris, decadent and/or deformed trees) that require disclosure and analysis in the cumulative impacts discussion? [Ref: Shintaku 2005 "Large Old Trees Memo"] NA

Inspector Observations:

63. Is the proposed plan within a watershed(s) with listed anadromous salmonids? Yes

Inspector Observations:

If "Yes", does the entire "ASP" rules package apply, or only the "Road Rules"
 Full ASP Rules X Upstream ASP only

64. Estimate percentage of canopy cover:

Class I inner zone	Preharvest	<u>100</u>	Post Harvest	<u>100</u>
Class I outer zone	Preharvest	<u>100</u>	Post Harvest	<u>80</u>
Class II inner zone	Preharvest	<u>100</u>	Post Harvest	<u>80</u>
Class II outerzone	Preharvest	<u>100</u>	Post Harvest	<u>75</u>

65. Will the post-harvest stand in the WLPZ provide for large wood recruitment that improves or maintains salmonid habitat on Class I and Class II large watercourses? Yes

Inspector Observations: **During the PHI, I observed that the RPF had marked all WLPZ timberstands prior to the PHI. During the PHI, I observed that the timber mark within the WLPZ areas meets the requirements of 14 CCR 916.9.**

Yes

66. Will the post-harvest stand in the WLPZ retain the 13 largest conifer trees per acre (7 outside the coastal anadromy zone), live or dead, on each acre that encompasses the core and inner zones?

Inspector Observations:

67. Are proposed erosion control and soil stabilization measures for sediment control adequate to protect salmonid habitat in the following areas?

a. Operations in the WLPZ (roads, landings, or tractor operations)? No

Inspector Observations: **During the PHI, I made no recommendations to address tractor operations or landing usage within WLPZ areas. During the PHI, I made one recommendation to address relocating the WLPZ road south of Map Point 3 to a location that is above the linear depression where the proposed existing road is located. This is addressed as CAL FIRE PHI recommendation #1. During the PHI, I made no additional recommendations to address road usage within WLPZ areas for this THP.**

b. Watercourse crossings (permanent and temporary)? Yes

Inspector Observations: **During the PHI, I made a recommendation to address the temporary truck road watercourse crossing at Map Point 3. This is addressed as CAL FIRE PHI Recommendation #2.**

c. Winter operations? Yes

Inspector Observations: **The RPF is proposing no timber operations during the mid-winter period. During the PHI, I made no recommendations to address the proposed timber operations during the Spring and Fall Operating periods.**

d. Site preparation NA

Inspector Observations: **The RPF is not proposing any site preparation operations for this THP.**

68. Are protection measures adequate to deal with adverse impacts from significant rain events, even during the non-winter period? Yes

Inspector Observations:

69. Are protection measures adequate to prevent significant adverse impacts on downstream flows from water drafting operations? Yes

Inspector Observations:

70. Is the Plan located within the range of the Northern Spotted Owl? Yes
If "N/A", skip to question 71

Take avoidance option: "a/f" (SORP) _ "b" _ "c" _
 "d" (HCP/ITP) _ "e" (TA) X "g" _

a. Does the NSO habitat definitions (USFWS or FPR) used in the plan accurately reflect vegetation conditions? Yes

Inspector Observations: **During the PHI, I determined that the NSO habitat typing is appropriate.**

b. Are the retained habitat quantities depicted on the Plan maps accurate? Yes

Inspector Observations: **During the PHI, determined that the NSO typing maps are accurate. During the PHI, CDFW Biologist Adam Hutchins stated that he will recommend that the historic NSO activity centers be show in Section V of the THP.**

c. Do the protection measures for the activity center(s) appear adequate and in conformance with the rules? Yes

Inspector Observations:: During the PHI, I determined that the measures to protect NSO activity centers are consistent with the requirements of 14 CCR 919.9. During the PHI, CDFW Biologist Adam Hutchins stated that he recommends that NSO habitat typing maps be included in Section II of the THP as well as Section V of the THP to ensure that the LTO has all of the information needed to protect NSO activity centers. The RPF includes the required NSO activity center map showing the core zone, the 500 foot, the 1000 foot and the quarter mile buffer zones as required by 14 CCR 919.9. During the PHI, CDFW Biologist made a PHI recommendation that the RPF identify and map what he believes is the best available habitat to be identified as nest/roost habitat to be protected during timber operations.

d. Evaluate the proposed NSO call points. Are call point(s) distribution and Location adequate? Yes

Inspector Observations:

71. Comments or general observations regarding wildlife and fisheries: During the PHI, I observed that conifer and hardwood trees with branching structures and basal hollows that will benefit wildlife habitat will be retained following timber operations. I observed that flat topped redwood trees will be retained following timber operations. I observed that Douglas-fir trees with conk rot and poor form will be retained to benefit wildlife habitat. Furthermore, I observed that the proposed timber harvest will open up the understory and improve foraging habitat for many wildlife species.

CUMULATIVE IMPACTS

72. Are the defined resource assessment areas appropriate? [Ref Technical Rule Addendum #2] Yes
[N/A for Modified THP]

Inspectors Observations:

73. Has the RPF correctly assessed the potential for significant cumulative impacts upon resource values within the defined assessment areas? Yes

Inspectors Observations:

74. Has the RPF accurately listed all known past/present/future projects within the assessment area? [Including other CEQA projects that have a similar effect on the environment] Yes
If "No", explain:

Inspectors Observations:

75. If there are waterbodies within or downstream of the proposed Plan that are listed as water quality limited under Section 303(d) of the Federal Clean Water Act, has the RPF assessed for impacts that may combine with existing listed stressors to impair beneficial uses of the waterbody? Yes

Inspectors Observations:

76. Comments or general observations regarding Cumulative Impacts: During this inspection, I observed that impacts to soil resources and the beneficial uses of water will not be significant. The use of WLPZ roads, landings and skid trails will be done in a way that minimizes ground disturbance and the damage to the residual timberstand. I observed that the skid trail system can be used during ground based yarding operations in a way that minimizes damage to the residual timberstand within the selection harvest units outside of the flood prone areas. None of the THP area is within any public recreation areas. Visual impacts will be minimal since none of the THP area is within the viewshed of any residences or public roads. Traffic impacts during timber operations are no greater than what is normally expected during timber operations. Furthermore, the RPF provides an accurate greenhouse gas analysis in Section IV of the THP.

77. Other comments or concerns not covered elsewhere in the report: None.

78. Response to any Public Comment received prior to the conclusion of the PHI, if any: During the writing of this THP, no public comment was received by CAL FIRE concerning this proposed THP.

79. a. Are other agency recommendations in agreement with those in your report? Yes

If "No", explain:

80. Comments or general observations to other and public concerns: None.

CAL FIRE PHI RECOMMENDATIONS

Conformance Determination: In conformance if recommendations are agreed upon

PHI map attached as part of the recommendation? **Yes**

Supplemental materials provided (CD's, aerial photos, etc) **No**

RPF: Please respond to each recommendation provided below and indicate: (1) Whether or not you concur with the recommendation and (2) Provide any necessary revisions or documentation.

No.	Review Agency	Recommendation
1	CAL FIRE	The RPF shall revise THP Item #24 prior to Second Review to state that a new WLPZ road shall be constructed south of Map Point 3. The RPF shall revise the THP maps prior to Second Review to show the new location of the WLPZ road south of Map Point 3.
2	CAL FIRE	The RPF shall revise the THP prior to Second Review to state that the LTO shall either cross over the Class I watercourse channel at Map Point 3 over logs when installing the temporary bridge at Map point 3 or construct a temporary bridge at Map Point 3 in a way so that heavy equipment does not need to cross the wetted channel at Map Point 3.
3	CDFW	<p>CDFW Recommendation 1</p> <p>Based on observations made during the PHI and the analysis described in Attachment 20190926_1-19-00098MEN_PHI-CDFW Recommendation 1 Supplemental Information (uploaded attachment in CalTREES), it appears the North Fork Gualala River may laterally shift within the floodplain. This area is located outside the area currently identified as the channel migration zone in THP 1-19-00098 MEN, "EIK". CDFW is not able to assess the THP and the potential impacts to salmonid habitat, in addition to other aquatic biological resources occurring in the North Fork Gualala River floodplain, without an accurate delineation of the channel migration zone.</p> <p>To assess potential impacts to salmonid habitat and aquatic biological resources, the plan proponent shall identify areas where the lateral channel migration may result in floodplain features that provide important habitat to salmonids (such as floodplain channels, seasonal wetlands, and off channel ponds) within the time required to grow redwood to a mature size (150 years based on Dunning's Classification). Please revise the THP to include an analysis of the lateral channel migration and resulting floodplain features and address past, current, and future channel migration in the North Fork Gualala floodplain as it pertains to THP 1-19-00098 MEN, "EIK".</p> <p>See the forthcoming CDFW PHI Report for additional discussion of this recommendation.</p>
4	CDFW	<p>CDFW Recommendation 2</p> <p>CDFW is not able to assess the THP and the potential impacts to salmonid habitat, in addition to other aquatic biological resources occurring in the North Fork Gualala River floodplain, without an accurate delineation of the channel migration zone.</p> <p>To reduce potentially significant impacts to salmonids and other aquatic biological resources:</p> <ul style="list-style-type: none"> • Revise the THP to provide all channel migration zones and Class I Watercourse and Lake Protection Zone (WLPZ) protections per Cal. Code. Tit. 14 §916.9(f)3. <p>Or,</p> <ul style="list-style-type: none"> • Revise the THP to include Alternative WLPZ protections per Cal. Code. Tit. 14 §916.6 and include a clear and complete explanation and justification.

No.	Review Agency	Recommendation
5	CDFW	<p>CDFW Recommendation 3</p> <p>The THP designates a single Northern Spotted Owl core area polygon for the activity centers associated with MEN0179. The core area polygon includes the following: the 2002/2003 nest site, 18 acres within 500 feet of the 2002/2003 nest site, an area along the North Fork Gualala River that borders non-suitable habitat, and an area to the east that is comprised of stands overlapping the hillslope and a small portion of the floodplain. The designated core area polygon includes 53 acres beyond the 1,000 feet surrounding the 2002/2003 nest site. However, THP 1-19-00098 MEN does not propose a designated core area polygon for the 1991/1977 MEN0179 nest site activity center. CDFW observed high quality nesting/roosting Northern Spotted Owl habitat along the floodplain south of the designated core area polygon, including a multi-storied canopy with multiple age-classes of redwood and trees greater than 24-inches (diameter at breast height) within 1,000 feet of the 2002/2003 nest site.</p> <p>To reduce potentially significant impacts to Northern Spotted Owls, including cumulative impacts to suitable nesting/roosting habitat, revise the THP to designate a minimum 100-acre Northern Spotted Owl core area polygon that includes the best available high quality nesting/roosting habitat contiguous with habitat within 1,000 feet of the MEN0179 2002/2003 nest site activity center and the MEN0179 1991/1997 nest site activity center.</p>
6	CDFW	<p>CDFW Recommendation 4</p> <p>Numerous timber operations are proposed to occur within the designated Northern Spotted Owl core area polygons listed in Section II (including within 1,000 feet of the MEN0179 2002/2003 nest site). The THP identifies the portion of the Northern Spotted Owl core area polygon within 500 feet of the MEN0179 2002/2003 nest site activity center. However, the THP does not identify the remainder of the core area polygon.</p> <p>To reduce potentially significant impacts to Northern Spotted Owl, revise the THP to include the entire Northern Spotted Owl core area polygon that includes a minimum 100 acres of the best available high quality nesting/roosting habitat in the appropriate Section II maps.</p>
7	CDFW	<p>CDFW Recommendation 5</p> <p>The THP proposes appurtenant road use within 0.25-mile of the Green Bridge Marbled Murrelet Habitat Area.</p> <p>To reduce potentially significant impacts to Marbled Murrelet, revise the THP to disclose the Green Bridge Marbled Murrelet Habitat Area on the THP Appurtenant Roads Map in Section II. In addition, Section II shall specify that GRT will re-consult with CDFW prior to commencing operations, including timber hauling, should operations within 0.25-mile of the Green Bridge Marbled Murrelet Habitat Area plan to proceed after the beginning of the 2024 Marbled Murrelet breeding season.</p>
8	CDFW	<p>CDFW Recommendation 6</p> <p>The THP occurs within the range of Osprey (<i>Pandion haliaetus</i>), and includes potential nesting habitat within the biological assessment area. Osprey are a Board of Forestry sensitive species (14 CCR §895.1 and §919.3(b)(5)). Per Fish and Game Code §3503 and §3503.5, it is unlawful to take, possess, destroy nest, eggs, or any life stage of any raptor. The THP does not provide protections should an Osprey nest occur within one quarter-mile of the THP.</p> <p>To reduce potentially significant impacts to Osprey, revise the THP to include species specific protective measures for Osprey.</p>

No.	Review Agency	Recommendation
9	CDFW	<p>CDFW Recommendation 7</p> <p>The THP occurs within the range of Bald Eagle (<i>Haliaeetus leucocephalus</i>). A pair of Bald Eagles have occupied the lower Gualala River estuary since 2017 (personal observations). Potential suitable nesting habitat occurs within and adjacent to the THP. Pursuant to Fish and Game Code §2050 et seq., the Bald Eagle is listed as endangered within the State of California. The Bald Eagle is also a sensitive species as defined by 14 CCR §895.1. The THP does not provide protection measures for the Bald Eagle.</p> <p>To reduce potentially significant impacts to Bald Eagle, revise the THP to include species specific protective measures for Bald Eagle.</p>
10	CDFW	<p>CDFW Recommendation 8</p> <p>The THP overlaps the range of several species of heron, including the Great Blue Heron (<i>Ardea Herodias</i>) and the Great Egret (<i>Ardea alba</i>). THP 1-19-00098 MEN, "EIK" is located less than 2 miles from the Gualala River estuary. High quality foraging habitat and suitable nesting habitat occurs within and adjacent to the THP. The Great Blue Heron and the Great Egret are sensitive species as defined by 14 CCR §895.1. The THP does not provide heron rookery protections.</p> <p>To reduce potentially significant impacts to heron rookeries, revise the THP to include protection measures for heron rookeries that may support nesting Great Blue Herons and Great Egrets.</p>
11	CDFW	<p>CDFW Recommendation 9</p> <p>GRT has conducted foothill yellow-legged frog (<i>Rana boylei</i>) surveys within the Gualala watershed and documented multiple breeding sites, including the immediate area around a proposed temporary crossing at Map Point 3. As a candidate species for threatened status, activities which may result in take of foothill yellow-legged frog without authorization (such as an Incidental Take Permit, Safe Harbor Agreement, or a Natural Communities Conservation Plan) are unlawful per Fish and Game Code §2081.1.</p> <p>To reduce potentially significant impacts to foothill yellow-legged frogs, revise the THP to disclose known foothill yellow-legged frog occurrences within the proposed THP area. The survey information shall, at a minimum, include the following:</p> <ol style="list-style-type: none"> a. Map of the surveyed areas; b. Map of foothill yellow-legged observations and known breeding sites; c. Field survey forms; and d. A discussion of findings.

No.	Review Agency	Recommendation
12	CDFW	<p>CDFW Recommendation 10</p> <p>To reduce potentially significant impacts to foothill yellow-legged frogs at Class I watercourse crossings where there is breeding habitat for <i>Rana boylei</i>, revise the THP to include the following protection measures:</p> <ul style="list-style-type: none"> a. Exclusion fencing shall be used during the installation and removal of the watercourse crossing. Exclusion fencing is expected to be a temporary effective technique provided it is properly installed, both trenched in and vertically stout, and regularly maintained. b. A qualified biologist or person knowledgeable with all life stages of <i>Rana boylei</i> and similar species shall install and remove the fence and educate personnel on-site of the protection measures. c. Exclusion fencing shall be installed after surveys are completed, within 5 days prior to the watercourse crossing installation, and again within 5 days prior to the watercourse crossing removal. d. Exclusion fencing shall be installed upstream and downstream of the watercourse crossing and associated project footprint, on both river right and river left, a distance equal to twice the length of the crossing so that any frogs dispersing from the watercourse will be excluded from the project footprint. e. The exclusion fencing shall extend perpendicular to the wetted channel approximately 5 feet, and approximately 30 feet onto the bank, where feasible, to prevent tadpoles, juveniles, and adults from migrating into the work area. f. Exclusion fencing shall be at least three feet high and the top few inches shall be folded over to curtail climbing frogs away from the construction area. The proposed design shall allow frogs to climb up and out of the impact zone while preventing them from climbing into the project area. g. The fence shall consist of ¼-inch mesh or smaller opening material, preferably consisting of wire, or alternatively fabric netting if capable of withstanding flow. h. Fencing must be sufficiently anchored to the gravel bar near the edge of the streambed to prevent immigration of frogs. i. If any personnel encounter a foothill yellow-legged frog within or near the project site, work in the immediate vicinity of the sighting shall cease until the species has cleared the work area. The biologist and project proponent shall be informed of any sightings, and frogs shall be allowed to leave the area unharmed and on their own volition. j. All sightings shall be reported to the Department by email @ CTP@wildlife.ca.gov k. If any life stage of foothill yellow-legged frog cannot be avoided during project activities, work shall be suspended, the Department notified, and measures shall be developed in agreement with the Department prior to recommencing activities. l. An Incidental Take Permit associated with 2081(b) of the California Endangered Species Act may be necessary, and the plan proponent is encouraged to apply.
13	CGS	1). Harvesting Within Mapped Unstable Areas: None
14	CGS	<p>2). Harvesting Within Shallow-Seated Unstable Areas: Prior to second review, Section II of the THP shall be revised to describe the establishment of Special Treatment Zones (STZ) around the headwalls of the observed unstable features within the area proposed for clearcutting (Figure 4). Harvesting and heavy equipment operation shall be restricted within the STZ's, which shall extend 50-feet upslope of top of the headwalls. The swales below the headwalls shall be designated as equipment limitation zones (ELZ). The ELZ's shall be a minimum of 100-foot wide, measured 50-feet on either side of the axis of the swales and extend to the existing seasonal road below. Heavy equipment operation within the ELZ shall be restricted to existing stable skid trails. A minimum of 50-percent of existing canopy shall be retained within the ELZ. The STZ's and ELZ's shall be identified on the THP maps and flagged in the field. For disclosure, the unstable features observed within the area proposed for selection harvesting (Figure 4) shall be identified on the THP maps.</p>
15	CGS	3). Harvesting Within Shallow-Seated Unstable Areas: None
16	CGS	<p>4). Appurtenant Road Bridges: Prior to second review, the Road Work table in Section II of the THP shall be revised to remove the statement "Inspected by CGS on another THP pre-harvest" for Map Points 20, 21, 22, 23, 24, 25, 26 and 27.</p>

No.	Review Agency	Recommendation
17	CGS	5). Temporary Bridge Construction: Prior to second review, Section II of the THP shall revised to include a description of the proposed half pipe installations at Map Points 2 and 3. The description shall include a design sketch, with dimensions, and be provided to CGS for review and comment.
18	WQ	Areas within 30 feet of the meander bend cutoff shown in Figure 1 of this report shall be removed from the THP. THP Maps and flagging in the field shall be revised to reflect this.

The following questions were generated by the interagency review team to be answered on the PHI by agency staff.

CAL FIRE Inspector - evaluate the following questions:

No.	Review Agency	Question
1	CDFW	Please review conditions in areas identified in CDFW CMZ attachment for indicators of channel migration.
2	Longstreth	Please evaluate proposed operations upslope of plan identified landslide areas. Are additional mitigations necessary to minimize adverse impacts to slope stability.
3	Longstreth	Please utilize hillshade imagery to evaluate landslide areas that may not be identified in the THP.
4	CDFW	Please review NSO habitat quality beyond 500 feet from the identified MEN0179 activity center.
5	WQ	As in similar recent THPs on flood prone areas on the plan submitter's ownership, the Regional Water Board will be evaluating proposed harvest areas for the presence of wetlands, including seasonal wetlands indicated by areas dominated by wetland plant species, and measures to protect beneficial uses associated with wetlands. Please evaluate plan area for wetland indicators.

Inspector Answers:

No.	Answer
1	During the PHI, the agency members and the timberland owner representatives a considerable amount of time was spent walking along channel migration. During the PHI, the agency members agreed that a small section of the channel migration zone needs to be moved in a location between Map Points 6 and 7 due to the presence of stream bank erosion. During the PHI, Jim Burke from the NCRWQCB agreed to make this PHI recommendation.
2	During the PHI, CGS Geologist Kevin Doherty walked along the slopes above Elk Prairie to view the mapped unstable areas. During the PHI, CGS Geologist viewed the unstable area above the Class I watercourse near Map Point 7. During the PHI, CGS Geologist Doherty made two additional recommendations to address the mapped unstable areas above Elk Prairie. See the CGS PHI report for details.
3	During the PHI, CGS Geologist Kevin Doherty located an additional unstable area he identified as CGS Map Point 1. See the CGS PHI report for details.
4	During the PHI, CDFW Biologist Adam Hutchins reviewed the THP area in the vicinity of NSO Activity Center MEN0179. During the PHI, CDFW Biologist Hutchins made a recommendation that the RPF chose what he believes is the best available habitat in the area as being nest roost habitat.

No.	Answer
5	During the PHI, no additional wetlands or springs were identified by any of the agency members.

cc: RPF, PS

To view harvesting documents, please visit: <https://caltreesplans.resources.ca.gov/caltrees/>