

Notification EPIMS-HUM-58368-R1
Streambed Alteration Agreement
Page 1 of 28

California Department of Fish and Wildlife

Northern Region
619 Second Street
Eureka, California 95501



Streambed Alteration Agreement

Notification No. EPIMS-HUM-58368-R1

Unnamed tributaries to Minor Creek, tributary to Redwood Creek, Humboldt County

87 Encroachments

Applicant: Barnum Timber Company, as represented by Thomas Blair

Property owner: Barnum Timber Company

Associated Timber Harvesting Plan: 1-25-00008-HUM; Lower Minor

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Barnum Timber Company (Permittee), as represented by Thomas Blair.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified CDFW on January 17, 2025 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The activities to be completed according to the Agreement are located 1.9 miles northeast of Lord-Ellis Summit in Humboldt County in unnamed tributaries to Minor Creek, tributary to Redwood Creek. The project is located in Sections 25, 26, 27, 33, 34, 35 and 36, Township7N, Range3E; Humboldt Base and Meridian, in the Lord-Ellis Summit, California, U.S. Geological Survey 7.5-minute quadrangle.

PROJECT DESCRIPTION

The project proposes to install Class II and III rock-armored fords, Class II and III rock-filled fords, Class II and III temporary crossings, Class II and III culverts, draft water from a Class I watercourse and Class IV pond, conduct channel maintenance and abandon a crossing. (Table 1 for encroachment details).

Table 1: Streambed Alteration Agreement EPIMS-HUM-58368-R1 encroachment details for 1-25-00008-HUM “Lower Minor”.

Map Point	Watercourse classification	Encroachment description	Minimum culvert size (in)
101	I	Temporary crossing	n/a
W1	I	Water drafting	n/a
103	II	Culvert replacement	48
106	II	Culvert replacement	42
109	II	Culvert replacement	42
116	II	Culvert replacement	54
123	II	Culvert replacement	54
132	II	Culvert replacement	24
135	III	Culvert replacement	18
148	II	Culvert replacement	54
151	II	Culvert replacement	36
154	II	Channel maintenance	n/a
158	III	Culvert replacement	24
165	II	Rock-Fill Ford	n/a
168	II	Culvert replacement	48
171	II	Culvert replacement	60
174	III	Culvert replacement	24
179	II	Culvert replacement	36
183	III	Culvert replacement	24
202	III	Culvert installation	24
204	III	Culvert installation	24
210	III	Culvert installation	24
214	III	Culvert installation	18
216	III	Culvert installation	18
219	III	Culvert installation	18
222	II	Culvert replacement	30
225	III	Culvert replacement	24
230	II	Culvert replacement	30
233	III	Culvert installation	18
235	III	Abandon crossing	n/a
237	III	Culvert installation	18
240	III	Culvert installation	18

243	III	Culvert installation or rock-armored ford	18
245	III	Rock-armored ford	n/a
246	III	Rock-armored ford	n/a
249	III	Rock-fill ford	n/a
252	III	Culvert installation	18
255	III	Culvert installation	36
261	II	Culvert installation	48
301	III	Culvert installation	24
310	II	Culvert installation	36
313	II	Culvert installation	36
316	II	Culvert installation	24
405	II	Culvert replacement	54
423	III	Culvert replacement	24
501	III	Culvert installation	30
600	II	Culvert replacement	60
606	II	Culvert replacement	60
609	III	Rock-armored ford or culvert installation	18
618	III	Rock-armored ford	n/a
3.1	II	Temporary crossing	n/a
3.3	III	Temporary crossing	n/a
3.5	II	Temporary crossing	n/a
3.7	III	Temporary crossing	n/a
3.11	III	Temporary crossing	n/a
3.13	III	Temporary crossing	n/a
4.1	III	Temporary crossing	n/a
4.5	III	Temporary crossing	n/a
4.6	II	Temporary crossing	n/a
4.9	II	Temporary crossing	n/a
5.2	II/III	Temporary crossing	n/a
5.4	II	Temporary crossing	n/a
5.5	III	Temporary crossing	n/a
5.7	II	Temporary crossing	n/a
5.8	II	Temporary crossing	n/a
5.9	II	Temporary crossing	n/a
6.10	II	Temporary crossing	n/a
6.16	III	Temporary crossing	n/a
7.3	III	Temporary crossing	n/a

7.5	III	Temporary crossing	n/a
7.7	III	Temporary crossing	n/a
8.1	II	Temporary crossing	n/a
9.4	II	Temporary crossing	n/a
12.1	III	Temporary crossing	n/a
13.1	II/III	Temporary crossing	n/a
14.5	II	Temporary crossing	n/a
16.1	III	Temporary crossing	n/a
16.3	III	Culvert replacement	24
16.4	III	Culvert replacement	24
16.5	II	Culvert replacement	42
16.6	II	Culvert replacement	36
18.1	III	Rock-armored ford	n/a
18.7	II	Culvert replacement	36
18.11	III	Temporary crossing	n/a
18.13	III	Temporary crossing	n/a
18.15	II	Temporary crossing	n/a
W2	IV	Water drafting from pond	n/a

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: steelhead (*O. mykiss*), Foothill Yellow-legged Frog (*Rana boylei*), other amphibians, reptiles, aquatic invertebrates, and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include direct and/or incidental take of species protected under the California Endangered Species Act, mortality contributing to local decline or extirpation of California species of special concern, impeded up- and/or down-stream migration of aquatic species, damage to spawning and/or rearing habitats and potential cumulative impacts.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. ADMINISTRATIVE MEASURES

Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site: Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

- 1.2 Providing Agreement to Persons at Project Site: Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions: Permittee shall notify CDFW if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact Permittee to resolve any conflict.
- 1.4 Minor Language Changes. CDFW reserves the right to authorize minor language revisions to this Agreement provided both CDFW and the Responsible Party concur with minor language changes and both initial and date changes on the respective documents belonging to both the Responsible Party and CDFW.
- 1.5 Project Site Entry: Permittee agrees that CDFW personnel may enter the project site at any time to verify compliance with the Agreement.
- 1.6 Project Accordance: Except where otherwise stipulated in this Agreement, all work shall be in accordance with the project description submitted with Notification No. EPIMS-HUM-58368-R1 and 1-25-00008-HUM approved by CAL FIRE on April 1, 2025.
- 1.7 Amendment of Agreement into the Timber Harvesting Plan (THP): Before any work covered by this Agreement is undertaken, this Agreement shall be amended into and made enforceable as part of the THP.
- 1.8 All Lake and Streambed Alteration Agreement (LSAA) notification, amendment, extension, and emergency forms can be found:
<https://www.wildlife.ca.gov/Conservation/LSA/Forms>.

2. REPORTING AND NOTIFICATION MEASURES

- 2.1 CDFW Reporting Location: All reports shall be sent by email to (R1BInland.Timber@wildlife.ca.gov).
- 2.2 Notice of Beginning Work. The Permittee shall contact CDFW within the 7-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, (THP) number, and the anticipated start date.
- 2.3 Notice of Work Completion. The Permittee shall contact CDFW within thirty days of completion of the work permitted by this Agreement. Information to be disclosed shall include Agreement number and THP number.

- 2.4 Fish Surveys at Map Point 1: To avoid substantial adverse impacts to listed and sensitive fish during installation and removal, the permittee shall conduct the following measures:
- a) Qualified Individual Survey: Within 5 days prior to initiating operations, a qualified individual shall survey 100 feet above and 100 feet below the project area.
 - b) Species Identified in Project Area: If fish are identified, no operations shall commence until CDFW is notified by email (R1BInland.Timber@wildlife.ca.gov) and mutually agreeable avoidance measures are developed between CDFW and the permittee.
 - c) Relocation Prohibition: Capturing, handling, moving, and/or relocating State, federally listed or other species are not permitted under this Agreement.
- 2.5 Emergency Road Work: Permittee may remove obstructions and sediment at any time if the obstructions and sediment would reasonably be expected to cause substantial damage to resources or cause the facility to fail outside the time periods specified above. If heavy equipment is used, notify CDFW within 14 days after completing activity using the emergency work form (<https://www.wildlife.ca.gov/Conservation/LSA/Forms>).

AVOIDANCE AND MINIMIZATION MEASURES

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below as outlined in Sections 3 through 12.

3. PROJECT TIMING

- 3.1 Timing for Work on Class I, II and III Watercourses: Permittee shall conduct the following activities only during periods between June 1 and October 15: vegetation removal; bank stabilization; and maintenance, replacement, and installation of watercourse crossings. Temporary crossings installed during this time shall be removed prior to October 15.
- 3.2 Early and Late Season Work: The project may commence early between May 1 and May 31 or be extended late from October 15 to November 15, provided adherence to all conditions in this Agreement, and a-f below.
- a) Permittee shall obtain written approval from CDFW prior to commencement of work activities.
 - b) Permittee shall complete any unfinished encroachment work, including erosion control measures, within 24 hours of CDFW directing the Responsible Party to do so.
 - c) Prior to any ground disturbing work at a project site, Permittee shall stock-

pile erosion control materials at the site. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance, or repair, shall be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff. Erosion control shall consist of packed slash or weed-free straw mulch in a mosaic of depths of ½ to 2 inches. If the site is seeded, a mix of native grasses common to the area shall be used, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used.

- d) Road construction leading directly into or out of a proposed stream crossing shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams.
- e) All crossing installation or removal work at a given site shall be conducted in one day. If equipment breakdowns prevent completion of installation or removal in one day, work shall be completed in the shortest period feasible.
- f) When a 7-day National Weather Service forecast of rain includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Responsible Party shall finish work underway at encroachment and refrain from starting any new work at encroachment prior to the rain event.

4. INSPECTIONS AND REPAIR WORK

- 4.1 Inspection Timing: All crossings appurtenant to proposed operations shall be inspected by Permittee at least once during the first spring following construction. The inspection shall ensure that crossings are functioning as designed, road approaches hydrologically disconnect the road prism from waters, and the fine sediment present on road approach surfaces is prevented from delivery to streams. Inspection results and follow-up repair measures shall be documented and provided to CDFW in the annual monitoring report.
- 4.2 Repair Work: Permittee shall perform routine repair work that prevents diversion of water from a stream or ditch or helps maintain a stable operating surface within 50 feet of a crossing (e.g., repairing inboard ditches, cross drains, waterbars, road surface and fill, unblocking of culverts) as soon as possible, regardless of the time of year. Forest floor discharge sites below the outlets of drainage facilities on all roads within the plan area and appurtenant to proposed operations shall be inspected for evidence of sediment delivery to streams. If evidence of sediment delivery is present, additional measures shall be undertaken to reduce the discharge of sediment from the site.
- 4.3 Emergency Road Work: Permittee may remove obstructions and sediment at any time if the obstructions and sediment would reasonably be expected to cause

substantial damage to resources or cause the facility to fail outside the time periods specified above. If heavy equipment is used, notify CDFW within 14 days after completing activity using the emergency work form (<https://www.wildlife.ca.gov/Conservation/LSA/Forms>).

5. GENERAL CONDITIONS FOR ALL ENCROACHMENTS

- 5.1 Equipment shall not operate in a Class I watercourse when water is present unless site specifically provided for in this Agreement. In Class II and/or Class III watercourses, equipment shall not operate in a flowing stream or wetted channel except as may be necessary to construct and remove in-stream structures to catch and contain water (i.e., cofferdams) to divert stream flow and isolate the work site, or as otherwise specifically provided for in this Agreement.
- 5.2 Heavy equipment shall not enter, cross, or operate in a stream when surface water is present. If heavy equipment is approved by CDFW for use in the stream at a particular site, equipment shall be cleaned of materials deleterious to aquatic life including oil, grease, hydraulic fluid, soil, and other debris. Cleaning of equipment shall take place outside of the Watercourse and Lake Protection Zone (WLPZ) and prior to entering the water.
- 5.3 In Class II and III watercourses, where flowing water is present during operations:
 - a) Cofferdams shall be installed to divert stream flow, isolate, and dewater the work site, catch any sediment-laden water, and minimize sediment transport downstream. Cofferdams shall be constructed of non-polluting materials including sandbags, rock, and/or plastic tarps. Mineral soil shall not be used in the construction of cofferdams.
 - b) Flowing water shall be cleanly bypassed and/or prevented from entering the work area through pumping or gravity flow, and cleanly returned to the stream below the work area. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and provide flows to downstream reaches.
 - c) Permittee shall remove any turbid water and sediment present in the work area prior to restoring water flow through the project site and place them in a location where they cannot enter the Waters of the State.
- 5.4 No fill material shall be placed within a stream except as specified in this Agreement.
- 5.5 Adequate and effective erosion and siltation control measures shall be used to prevent sediment or turbid or silt-laden water from entering streams at all times. Where needed, Permittee shall use native vegetation or other treatments including jute netting, straw wattles, and geotextiles to protect and stabilize soils.

Geotextiles, fiber rolls, and other erosion control treatments shall not contain plastic mesh netting.

- 5.6 All bare mineral soil outside of the stream channel and in the riparian area exposed in conjunction with road work and drafting activities shall be treated for erosion prior to the onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Restoration shall include the seeding and mulching of all bare mineral soil with at least 2 to 4 inches straw mulch and native plants or regionally appropriate seeds, or sterile varieties or short-lived non-native annuals that are known not to persist or spread such as cereal cover crops [e.g. barley (*Hordeum vulgare*), buckwheat (*Fagopyron esculentum*), oats (*Avena sativa*), rye (*Secale cereale*), wheat (*Triticum aestivum*)] to avoid the propagation of non-native (invasive) plants and minimize competition with native vegetation. Annual (Italian) ryegrass (*Lolium multiflorum*) shall not be used.
- 5.7 Encroachments and associated approaches, structures, fills, and other exposed soils shall be armored as needed to protect the stream channel and banks from erosion. Armoring shall be comprised of rock riprap, large woody debris (LWD), or other non-polluting materials and shall be constructed to remain in place during periods of high flow events. When used on permanent culverts, armoring shall extend at least as high as the top of the culvert and shall prevent bank erosion by extending a sufficient distance upstream and downstream along the banks.
- 5.8 Encroachments shall be constructed, deconstructed, and maintained in a manner that minimizes to the extent feasible headcutting or downcutting of the stream channel by installing grade control such as riprap, woody debris, or through other effective measures.
- 5.9 Approaches to all encroachments shall be treated to eliminate the generation and transport of sediment to streams. Treatment locations shall include, but not be limited to, road surfaces, fill faces, cut banks, and road drainage ditches. Road approaches and other work shall be left in a finished condition with all hydrologic connectivity from the road or ditch to the site eliminated as feasible and effective erosion control in place prior to any rainfall event capable of generating runoff. Effective erosion control shall extend away from the crossing to at least the first waterbreak.
- 5.10 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. Any trees felled in encroachment road approaches pursuant to this condition shall be left on site as large wood.
- 5.11 Temporary erosion control devices, such as straw bales, silt fencing, and sandbags, may be used, as appropriate, to prevent siltation of the stream. To minimize the risk of ensnaring and strangling wildlife, coir rolls, erosion control mats or blankets, straw or fiber wattles, or similar erosion control products shall be composed entirely of natural-fiber, biodegradable materials. Permittee shall not use "photodegradable" or other plastic erosion control materials.

- 5.12 All non-merchantable LWD excavated during crossing construction or deconstruction shall be used on site for streambed and bank stabilization or erosion control. LWD shall be sufficiently anchored or keyed-in to resist movement during high flows and placed in a manner that prevents undercutting of streambanks.
- 5.13 Permittee shall provide site maintenance including, but not limited to, re-applying erosion control to minimize surface erosion and ensure streambeds and banks remain sufficiently armored and/or stable at the encroachment for as long as the encroachment remains.
- 5.14 Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high-water mark before such flows occur or the end of the yearly work period, whichever comes first.
- 5.15 Refueling of equipment and vehicles and storing, adding, or draining lubricants, coolants or hydraulic fluids shall not take place within RMZs or within stream beds, banks or channels. All such fluids and containers shall be disposed of properly. Heavy equipment including water drafting trucks parked within RMZs or streambeds, banks or channels shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.
- 5.16 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil, or petroleum products, or other organic or earthen material from any logging, construction, or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into Waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high-water mark of any stream.

6. PERMANENT CULVERT CROSSINGS

- 6.1 Culvert Alignment: Permittee shall align culverts with the watercourse channel. Culverts shall extend beyond the road fill and shall not be perched (suspended). On Class II and III watercourses they shall be installed at watercourse gradient or have downspouts or energy dissipaters (rock rip-rap or boulders) at the outfall to prevent erosion.
- 6.2 Basins at Culvert Inlets: Permittee shall ensure basins are not constructed and channels are not widened at culvert inlets unless designed and approved.
- 6.3 Culverts Extend Beyond Toe of Fill: Permittee shall ensure that culverts extend lengthwise completely beyond the toe of fill.
- 6.4 Culverts Aligned With the Stream Channel: Permittee shall ensure that permanent culverts and their outfall structures are aligned with the stream channel and as wide as or wider than the channel width.

- 6.5 Culvert Bottom at Natural Streambed Elevation: Permittee shall ensure that permanent culverts are placed with the bottom set at or slightly below the natural streambed elevation to the maximum extent feasible.
- 6.6 Culverts Not Set to Grade: Permittee shall ensure, if permanent culverts cannot or will not be set to grade, that they shall have downspouts and/or energy dissipators below the outfall as needed to effectively control erosion. If half-round downspouts (flumes) are used, they shall be placed in line with the culvert, sized larger than the culvert and of sufficient size to accommodate entire anticipated stream flow. Downspouts shall be securely attached to the culvert and staked or otherwise anchored to the fill slope.
- 6.7 Permanent Culvert Sized to Pass One Hundred Year Flow: Permittee shall size permanent culverts at stream crossings to pass the estimated 100-year flood flow, including debris and sediment loads, without overtopping or diverting. Culvert sizing factors shall include transportation of bedload and the abundance and size of woody debris likely to be introduced to the stream upstream of the culvert crossing. Culverts shall be set at the natural streambed elevation to the maximum extent feasible.
- 6.8 Culvert Criteria for Fish Passage: Permittee shall use bottomless arch culverts or embedded culvert design methods (e.g. stream simulation or active channel design) in accordance with the "Culvert Criteria for Fish Passage" found as Appendix IX-A of the California Salmonid Stream Habitat Restoration Manual (<http://www.dfg.ca.gov/fish/resources/habitatmanual.asp>). Bottomless culverts shall meet culvert width criteria in the manual and culvert footings shall be deep enough to avoid scour exposure. Channel design shall be in accordance with the specified fish passage design method and shall allow passage of all life stages of fish at the design flows.
- 6.9 Culvert Protection: Permittee shall protect culvert inlets and outlets from erosion as appropriate through armoring constructed of rock rip-rap or other non-erodible material (e.g. concrete head wall). Where used, rock rip-rap or armoring shall be of sufficient size and depth to remain in place during 100-year peak flows (generally 12 inch or greater diameter or equal to the largest size that naturally exists in the channel), extend at least as high as the top of the pipe on inlets, and shall extend sufficient distance upstream as wing walls to prevent bank erosion. Where armoring is used, the channel at the culvert outlet shall be rip-rapped in a U-shaped channel and rip-rap set below grade so as to allow the natural accumulation of bedload at watercourse grade.
- 6.10 Excavate and Dispose of Sediment Depositions: Permittee shall excavate and dispose of sediment depositions from stream channels at the inlets of the culvert at a location and in a manner where sediment shall not enter the waters of the State.

Diversion Potential: All crossings shall be constructed with critical dips to avoid diversion potential if culverts become blocked during storm events.

7. FORD, ARMORED FILL and VENTED CROSSINGS

7.1 Definitions: Type of ford, armored fill and vented crossing shall be specified, defined, and installed as follows

- a) Ford Crossing: A watercourse crossing where the road surface crosses at the natural grade of the channel. Thus, in ford crossings, no fill is placed in the watercourse channel to elevate the road grade and to make the crossing passible by vehicle traffic. If water is present at the time of use, the crossing is a “wet ford” and if water is not present at the time of use, the crossing is a “dry ford”. In some cases, a small amount of sacrificial clean rock may be placed in the ford crossing to provide additional stability and a more suitable running surface for vehicle traffic or to ease the transition from the channel banks to the natural grade of the channel.
- b) Rock-fill crossing: A watercourse crossing where rock that is free of fines is placed as fill in the watercourse channel to establish a usable road grade through the crossing to accommodate traffic. Often a thin layer of sacrificial small-diameter rock is placed on top of the rock fill to provide a running surface that can accommodate truck traffic. Streamflow will typically pass through the rock fill during periods of low flow but will pass over the rock fill during periods of high flow.
- c) Rock-armored crossing: A watercourse crossing where fill, often composed of native earth material, is placed in the channel to establish a usable road grade through the crossing to accommodate traffic. The outfall of the crossing and road surface are protected against scour by revetment composed of rock. Streamflow will typically pass over, rather than through, the crossing fill.
- d) Log-armored crossing: Built to remediate historically constructed ‘Humboldt’ large wood-fill watercourse crossings where complete removal of all pre-existing soil and large wood from the historical crossing is not feasible. Soil and organic fill material are removed to the extent feasible while stable large wood within the channel is retained in place. The crossing is back-filled with screened, well-graded rock material as necessary to fill any voids created by the excavation of pre-existing soil and loose organic fill material prior to armoring the roadbed. Low flows pass through the remaining Humboldt fill material while seasonal high flows may also pass over the armored roadbed and down an armored fill slope to the natural watercourse channel below.
- e) Vented Crossing: A watercourse crossing structure designed to allow low water flow in the stream channel to pass through the structure (e.g., culverts) below a hardened (usually rock or concrete) roadway. During periods of high water or flooding, streamflow passes over the roadway.

- 7.2 Ford crossings, armored and vented, are considered permanent watercourse encroachments and shall accommodate the 100-year flood flow plus associated sediment and debris.
- 7.3 Ford crossings, armored and vented, shall not be used for log hauling except when the road surface is dry.
- 7.4 Hydrologically connected road approaches to ford crossings, armored and vented, shall be rocked and maintained to avoid delivery of fine sediment to the watercourse below.
- 7.5 Ford crossings, armored and vented, shall be maintained as necessary to avoid delivery of fine sediment to the watercourse below.
- 7.6 Ford crossings, armored and vented, shall be sufficiently outsloped to minimize aggradation of suspended sediments at the crossing
- 7.7 The lowest point of ford crossings, armored and vented, shall be constructed within or directly over the original stream channel, to the extent feasible, to contain high flows up to twice bank-full and to avoid diversion potential.
- 7.8 Armor material shall be comprised of durable angular screened quarry rock of sufficient size and placement to minimize mobilization during a 100-year storm event. Wood may be used for armoring if sound, tight-grained, redwood is applied and sufficiently keyed into the fillslope to resist movement during a 100-year storm event.
- 7.9 Rock sizing, armoring thickness, chute width and chute depth shall be calculated and sized using the nomograph provided in Cafferata et al, California Forestry Report No. 1 – Designing Watercourse Crossings for Passage of 100-Flood Flows, Wood, and Sediment (Updated 2017) Figure 23.
- 7.10 Stream crossing spillway fill slopes shall be armored from roadbed to the natural channel in a manner sufficient to prevent significant scour or removal of armor during high flows. Some scour is expected through road surface rock cap.

8. TEMPORARY CROSSINGS

- 8.1 Class I Temporary Crossings: On streams with a wetted channel width (during installation) of 4 feet or less, an open-bottomed Spittler crossing or multiple culvert crossings (installed at reverse grade or half rounds) shall be used. The crossing shall pass juvenile and resident adult fish.
- 8.2 Incised, Deep, Rough or Steep Channels: Permittee shall use a bridge, Spittler, or modified Spittler-type crossing on Class II and III watercourses that have incised, deep, rough, or steep channels to minimize bank disturbance.
- 8.3 Temporary crossings shall not restrict surface flows at the time of installation.

- 8.4 At all temporary crossings, logs, green slash, tops and/or straw bales shall be used as fill instead of earthen material to the maximum extent feasible.
- 8.5 When surface water is present, temporary crossing fill shall only be composed of clean, durable, screened rock and a culvert or a combination of such rock, filter fabric, sound logs and green slash, and straw. These materials shall cause no siltation. Above this fill, a fractured rock or native soil cap may be installed to provide a compacted road surface. The cap's thickness and soil content shall not exceed the minimum necessary to provide for adequate compaction. No soil from the cap shall come in contact with the stream channel.
- 8.6 During temporary crossing deconstruction and removal activities, when stream crossings, stream channels, and fills are excavated, all materials shall be excavated down to the original stream channel and outwards, horizontally, as wide as or wider than the natural channel to form a channel as close as feasible to the natural stream grade and alignment.

Spittler or Modified Spittler-Type Crossings

- 8.7 Permittee shall ensure that Spittler and modified Spittler-type crossings include a culvert to carry flows, choked-logs to fill the channel, a six-inch minimum straw layer, and a temporary running surface of local earthen fill or rock.
- 8.8 Culverts shall be of sufficient size to accommodate the expected flow during the use period.
- 8.9 Log fill crossing (Spittler Type) shall be constructed by laying choker cables or similar cables across stream channel, then placing pipe and/or sound logs in the channel bottom. The logs shall then be covered with filter fabric and/or straw mats, and rock or a local earthen fill used for road surfacing. For removal, the earthen fill shall be scraped off, the logs removed as a unit by pulling the chokers, and loose soil removed from the crossing using mechanized equipment and/or hand tools, as necessary. The straw layer in temporary log fill crossings (Spittler Type) shall extend beyond the road fill surface to prevent fill from entering the logs and stream (i.e., the straw layer should be visible on the crossing edges after installation). If whole bales are used the twine shall be cut after installation of the bales to create a continuous straw layer.

9. DECONSTRUCTION AND ABANDONMENT

- 9.1 When stream crossings and fills are removed, all fills shall be excavated down to the original stream channel and outwards, horizontally, as wide as or wider than the natural channel to form a channel as close as feasible to the natural stream grade and alignment. The restored stream bank slopes shall be no steeper than a 2:1 slope (horizontal: vertical) or natural slope. Restored slopes shall be stabilized to prevent slumping and to minimize soil erosion that could lead to sediment deposition into Waters of the State.

- 9.2 Sites previously not fully excavated shall be completely excavated when crossings are deconstructed. Adjacent potentially unstable road or landing fill that can enter a stream shall also be excavated when crossings are deconstructed.
- 9.3 All excavated fills shall be placed and stabilized/compacted in stable areas where it cannot enter or erode into a stream.

10. WATER DRAFTING

- 10.1 Limitations and restrictions of drafting conditions apply to each individual drafting site. All NTMPs/THPs using a drafting site shall comply individually and collectively with limitations and restrictions in this Agreement.
- 10.2 Drafted water shall only be used for timber operations related to dust abatement, road maintenance, road and stream crossing construction, reconstruction, deconstruction, upgrading and decommissioning, fire suppression, prescribed fuel reduction burning, and pesticide mixing.
- 10.3 Permittee shall not grant permission to other parties to use water drafting sites or water drafted under this Agreement for purposes other than permitted without first informing CDFW and amending this Agreement. Such permission shall assure that conditions to which Permittee must adhere are followed individually and collectively by all parties using the site.
- 10.4 Water may be drafted year-round, prior to drafting in each calendar year, a pre-operational meeting shall take place between the RPF and the licensed timber operator (LTO) responsible for field operations. The meeting shall take place at a representative sample of drafting sites, including all drafting sites with unique, site-specific conditions. The LTO shall inform all water truck operators of their responsibilities under this Agreement.
- 10.5 Drafting by more than one truck shall not occur simultaneously at the same site.
- 10.6 All water drafting vehicles shall be checked daily and shall be repaired as necessary to prevent leaks of deleterious materials from entering the WLPZ or stream.
- 10.7 For any instream work for intakes or approaches that was not described in the notification project description, Permittee shall notify CDFW and obtain an amendment to this Agreement, if necessary, prior to doing this work.
- 10.8 Effective erosion control such as waterbars, gravel berms, or hay bales shall be installed and maintained as necessary to remain effective where overflow run-off from water trucks or storage tanks may enter the stream.

- 10.9 Pesticide mix trucks shall not directly draft water from a stream or pond. Pesticide shall not be mixed where runoff may enter a stream or hydrologically-connected drainage facility.
- 10.10 Water truck operators drafting water from within or downstream of a known sudden oak death syndrome infestation area shall disinfect water in trucks and shall disinfect truck water tanks before leaving the area. Disinfection shall be accomplished by using 1 gallon of Ultra Clorox Bleach per 1000 gallons of drafted water (i.e., a solution equivalent to 50 parts per million chlorine). The water truck shall be filled to capacity and then driven for 5 minutes to allow the bleach-water mixture enough contact time to allow for complete mixing and disinfection prior to using or disposing of water from the truck. Following disinfection, the bleach-water mixture shall be disposed of by spreading on a bare mineral surface area (e.g., a rocked or native-surface road surface) at least 100 feet from any lake, stream, or riparian area, at a rate that will ensure rapid absorption and/or evaporation. No bleach-water mixture shall be allowed to come in contact with water in a stream, lake, or pond, or riparian or wetland vegetation.
- 10.11 Screens shall be installed on intakes wherever water is drafted. Intakes shall be at least 6 inches above the bottom of the channel and away from submerged vegetation, where practicable. Where not practicable, intakes shall maximize these clearances.
- 10.12 Screens and intakes shall be inspected weekly, kept in good repair, and kept clean and free of accumulated algae, leaves, or other debris or obstructions.
- 10.13 Drafting for storage tanks shall:
- a) Screen flow at the point of diversion (intake);
 - b) Have a valve in the diversion line before it enters the tank so flow can be regulated;
 - c) Have float valves to prevent overflow or drain overflow from tanks using pipes that will return all excess water to the source stream, and armor or otherwise prevent erosion of the outfall location of water storage tank return pipes. If overflow drains are used, outflow water temperature shall not exceed more than 1 degree Celsius of the bypass flows;
 - d) Not spill excess water onto the drafting pad, tank pad, or road surface; and
 - e) Screen or close all points of ingress to the tank to prevent wildlife entry or entrapment.
- 10.14 Class I watercourse water drafting intake screens shall:
- a) Be designed so that approach velocity is no more than 0.1 feet per second

(fps);

- b) Have at least 2.5 square feet of wetted, unobstructed screen; and
- c) Be constructed of wire mesh, perforated plate, or pipe with at least 27 percent open area. Round openings in the screen shall not exceed 3/32 inch (2.38 millimeters) in diameter. Slotted openings shall not exceed 1/16 inch (1.75 mm) horizontally (providing a maximum diagonal opening of 3/32 inch).

10.15 At the end of drafting operations each season, intakes shall be removed from the channel. Intakes shall then be plugged, capped, or blocked using a shut-off valve, or removed from the flood prone area during the winter period.

10.16 If CDFW determines water drafting from a site is, or may result in, significant adverse impacts to sensitive resources, drafting operations shall cease until a site-specific plan to reduce the impacts is developed and this Agreement is amended to include these measures.

10.17 Source flow at drafting sites shall be measured using a flow meter, bucket, or float method. Permittee shall document equipment and procedures used to measure streamflow.

PROCEDURES FOR WATER DRAFTING FROM CLASS I WATERCOURSES

In addition to the General Water Drafting Procedures above, the following shall apply to water drafting from Class I watercourses.

10.18 Water drafting from Class I watercourses shall adhere to requirements in Table 2. Water drafting from a Class I watercourse drafting site shall cease when source flow drops to 2 cubic feet per second (cfs).

Table 2. Class I Watercourse Requirements: Maximum Allowable Water Drafting Rates.

Source Flow (streamflow) in cfs (gpm)	Range of allowable water drafting rates (gpm)	Estimated time to draft 3,200 gallons	REQUIREMENTS
> 7.8 (3500)	350	9 minutes	Maximum removal rate shall be < 10% of source flow (streamflow). Monthly reporting.
> 6 - 7.8 (2693 – 3500)	270 – 350	9 – 12 minutes	Maximum removal rate shall be < 10% of source flow (streamflow). Biweekly reporting
> 2.25 - 6 (1009 – 2693)	101 – 270, depending on flow	12 – 32 minutes	Drafting Logs Required; Maximum removal rate shall be < 10% of source flow (streamflow); Trucks likely require smaller pumps; pumping rate verification required. Biweekly reporting

>2 – 2.25 (898 – 1010)	90 – 101, depending on flow	32 – 48 minutes	Drafting Logs Required; Maximum removal rate shall be < 10% of source flow (streamflow); Trucks will require smaller pumps; pumping rate verification required. Biweekly reporting.
≤ 2 (898)	NO DRAFTING		WATER DRAFTING PROHIBITED

PROCEDURES FOR LAKE AND POND DRAFTING SITES

- 10.19 Drafting shall not reduce average pool width, depth, or volume (whichever parameter is reached first) of Ponds with Class II watercourse habitat by more than 50%, of that width, depth or volume found either June 1 or the first day of drafting at the pond, whichever is later.
- 10.20 Benchmarks shall be placed in the pond to represent the 10% or 50% draw-down thresholds of pool width, depth, and volume, with the purpose of indicating to the pump truck operator and inspectors when to terminate water diversions. Benchmarks shall be maintained as necessary while actively drafting.
- 10.21 When benchmarks indicate draw-down threshold has been reached, drafting shall cease.
- 10.22 New and existing pond bottom and bank excavation/enlargement activities shall occur only after July 1 and prior to October 15 to minimize impacts to aquatic species.

CONTACT INFORMATION

Written communication that Permittee or CDFW submits to the other shall be delivered to the address below unless Permittee or CDFW specifies otherwise:

To Permittee:

Barnum Timber Company
PO Box 2517
McKinleyville, California 95519

Email:blairforestry@gmail.com

To CDFW:

Department of Fish and Wildlife
North Coast Region
619 Second St.
Eureka, California 95501
ATTN: Lake and Streambed Alteration
Program
Notification # EPIMS-HUM-58368-R1
R1BInland.Timber@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees,

representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it. For example, if the project causes take of a species listed as threatened or endangered under the Endangered Species Act (ESA), such take will be unlawful under the ESA absent a permit or other form of authorization from the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species under the California Endangered Species Act – CESA), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend the Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form.

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form.

EXTENSIONS

In accordance with FGC section 1605 (b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form. CDFW shall process the extension request in accordance with FGC 1605 (b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification before beginning or continuing the project the Agreement covers (FGC § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under CEQA.

TERM

This Agreement shall expire 5 years from the CDFW signature date below unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605 (a) (2) requires.

EXHIBITS

Maps of the encroachment sites are included as an exhibit to the Agreement and shall be incorporated herein by reference.

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR: BARNUM TIMBER COMPANY

DocuSigned by:

Thomas Blair

7944CA77709F492...

5/18/2025

Thomas Blair

Date

FOR: California Department of Fish and Wildlife

Signed by:

Rich Klug

888574D8EE20405...

5/19/2025

Richard Klug

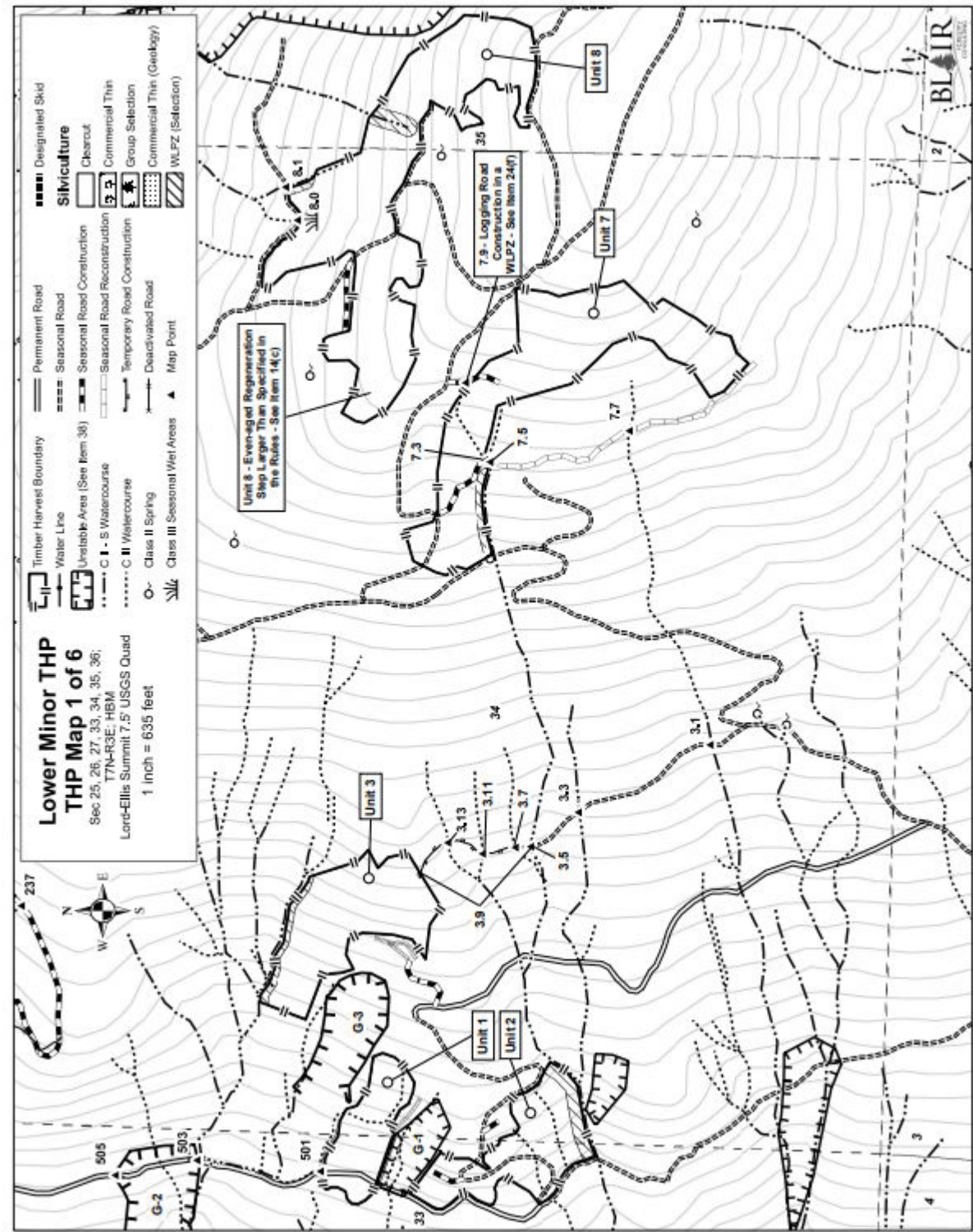
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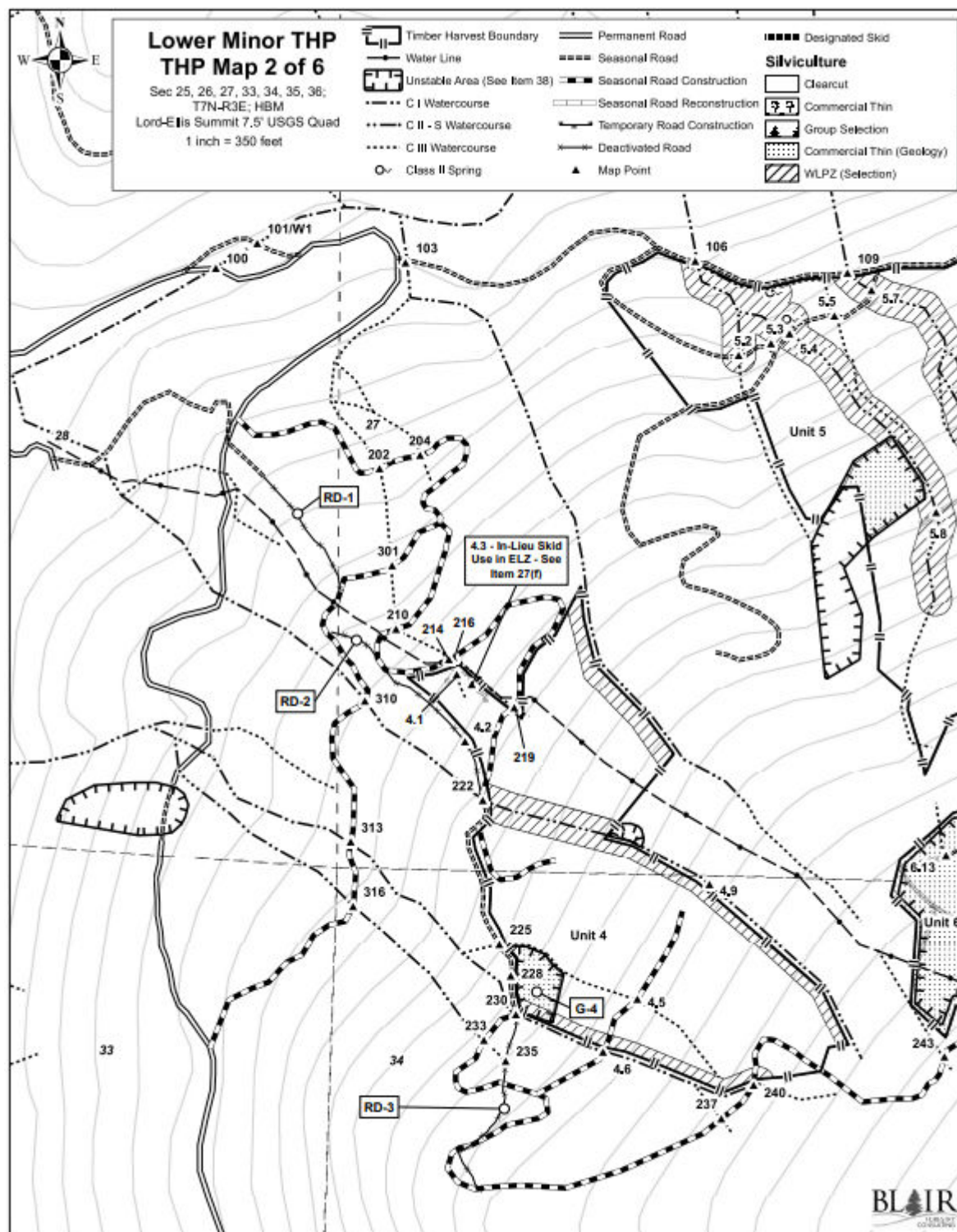
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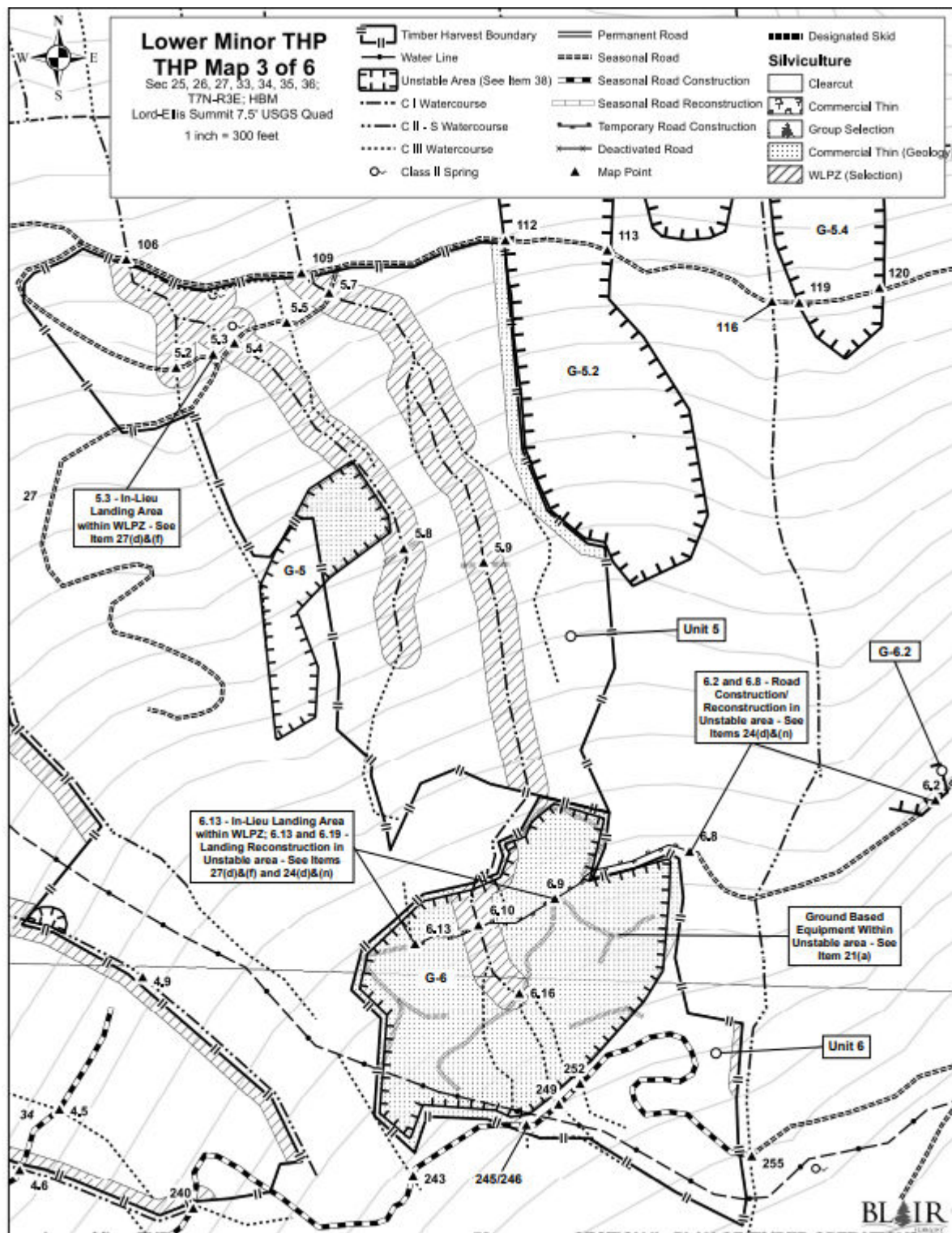
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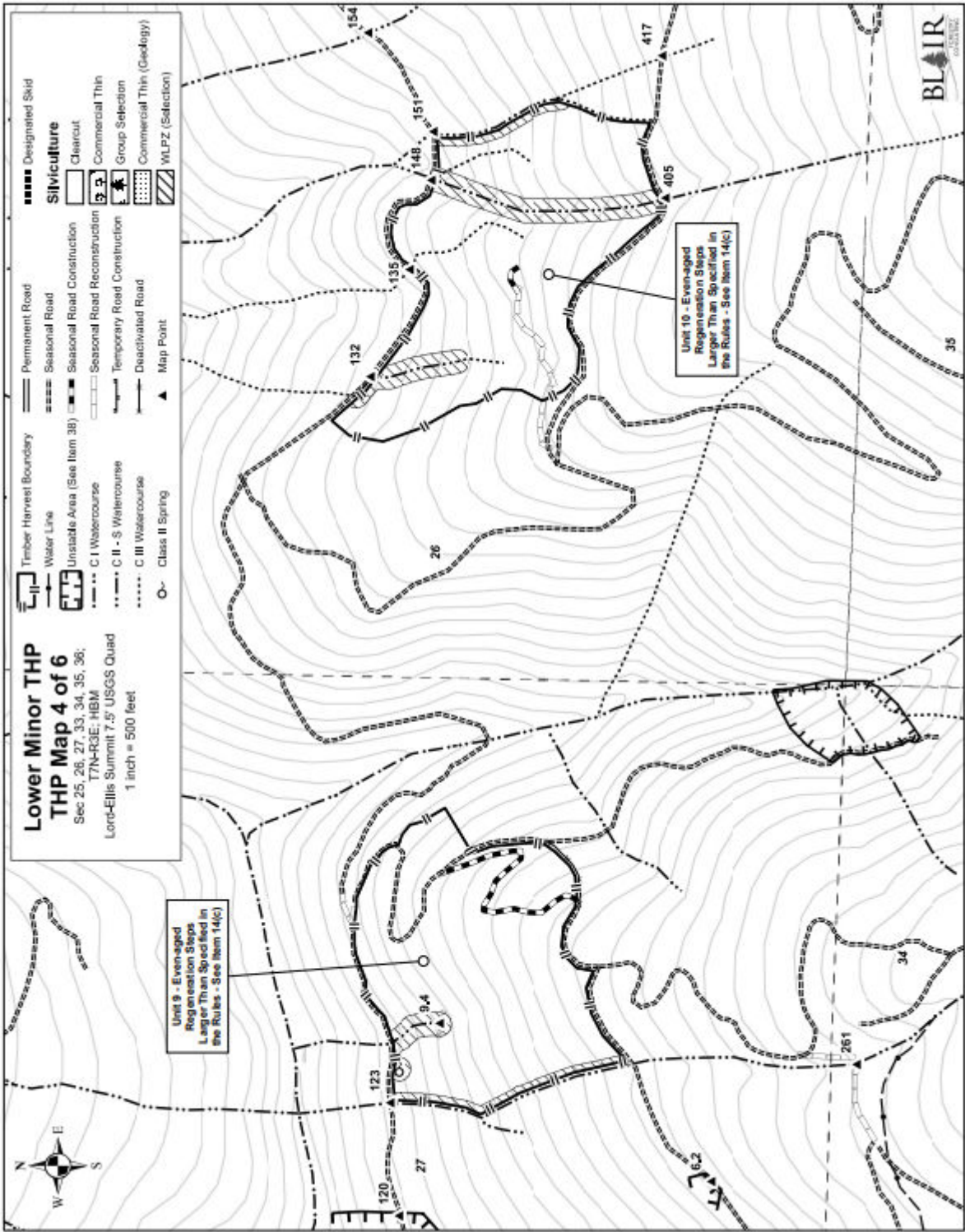
Prepared by: Nicholas Simpson
Senior Environmental Scientist (Specialist)
April 8, 2025

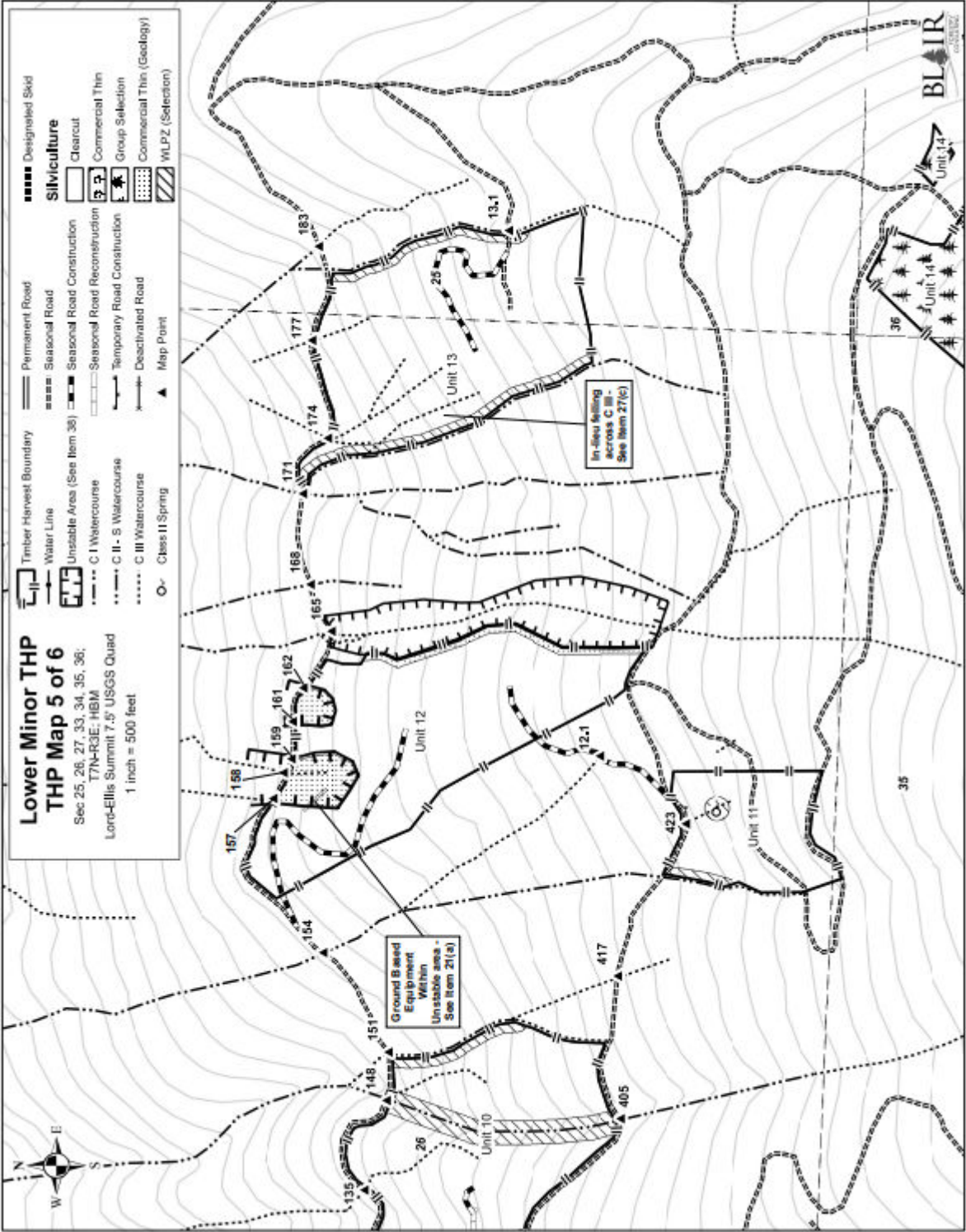
Maps of Encroachments

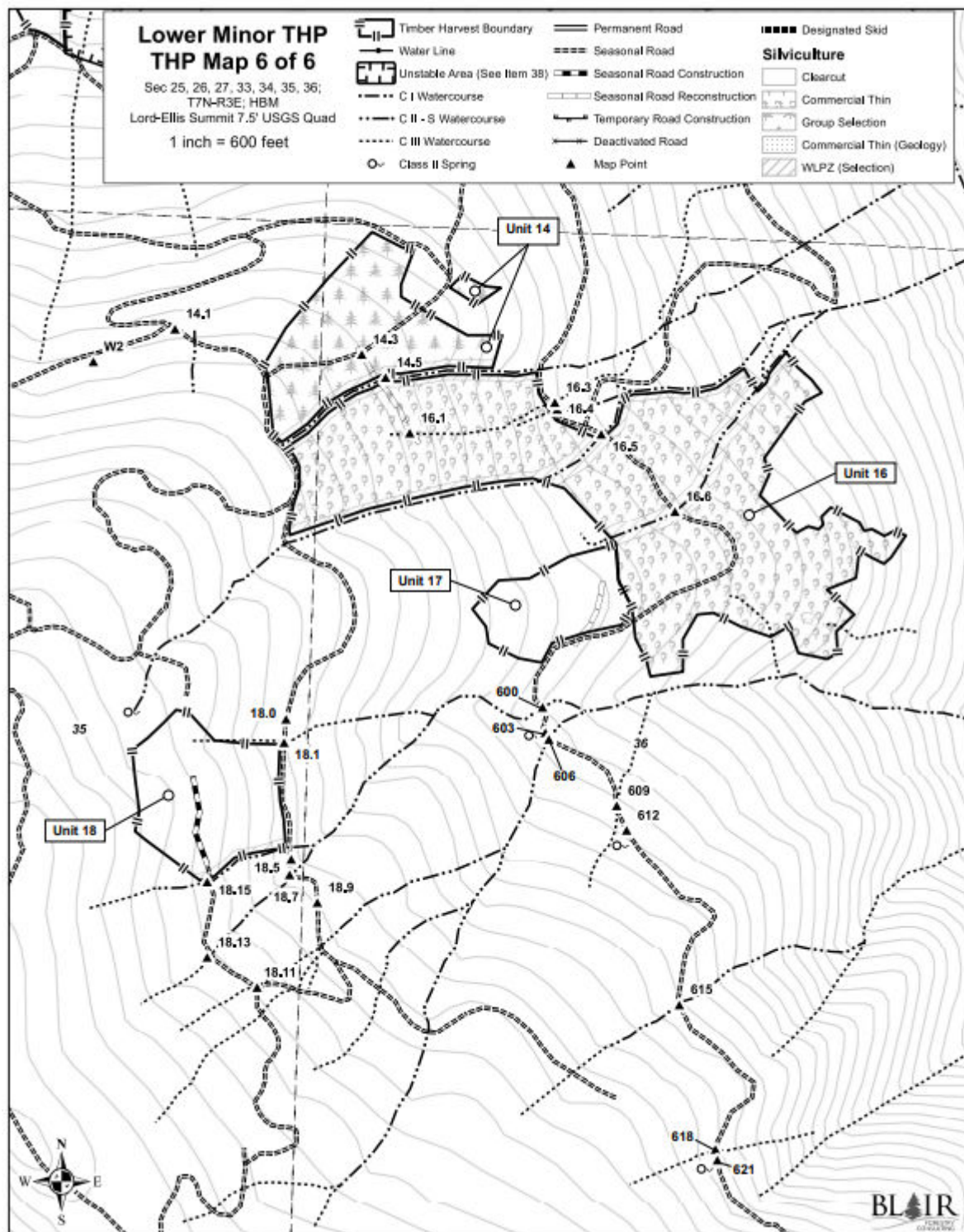












**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS FOR
STREAMBED ALTERATION AGREEMENT No. EPIMS-HUM-58368-R1**

Introduction

The California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, *et seq.*) and the State CEQA Guidelines (Guidelines) (Section 15000, *et seq.*, Title 14, California Code of Regulations) require that no public agency shall approve or carry out a project that identifies one or more significant effects, unless the agency makes the following finding as to each significant effect:

Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.

Timber Harvesting Plans (THPs) and Nonindustrial Timber Management Plans (NTMPs) are documents prepared according to a certified state regulatory program and they substitute for a Negative Declaration or an Environmental Impact Report, pursuant to Guidelines sections 15251 and 15252. As the Lead Agency for THPs and NTMPs, the California Department of Forestry and Fire Protection (CAL FIRE) approved THP 1-25-00008-HUM on April 1, 2025. CAL FIRE found that the THP will not result in significant environmental effects with the mitigation measures required in, or incorporated into the THP.

The California Department of Fish and Wildlife (CDFW) is entering into a Streambed Alteration Agreement (Agreement) with Barnum Timber Company. The activities to be completed according to the Agreement are located approximately 1.9 miles northeast of Lord-Ellis Summit in Humboldt County on unnamed tributaries to Minor Creek, tributary to Redwood Creek. The project located in Sections 25, 26, 27, 33, 34, 35 and 36, T7N, R3E; Humboldt Base and Meridian, in the Lord-Ellis, U.S. Geological Survey 7.5-minute quadrangle.

Because CDFW is issuing the Agreement, it is a Responsible Agency under CEQA. As a CEQA-Responsible Agency, CDFW is required by Guidelines Section 15096 to review a THP or NTMP approved by the Lead Agency that includes the activities addressed in the Agreement and to make a finding that the Agreement's activities will not cause significant, adverse environmental effects. However, when considering alternatives and mitigation measures approved by the Lead Agency, a Responsible Agency is more limited than the Lead Agency. When issuing the Agreement, CDFW is responsible only for ensuring that the direct or indirect environmental effects of activities addressed in the Agreement are adequately mitigated or avoided. Consequently, the findings adopted or independently made by CDFW with respect to an Agreement's activities are more limited than the findings of the Lead Agency funding, approving, or carrying out the activities addressed in a THP or NTMP.

Findings

CDFW has considered the THP approved by CAL FIRE that is named above. CDFW has independently concluded that the Agreement should be issued under the terms and conditions specified therein. In this regard, CDFW hereby adopts the findings of CAL FIRE as set forth in the THP insofar as they pertain to the impacts on biological resources from the activities addressed in the Agreement.

Signed by:

Signature: RRB57AD8EF29405

Date: 5/19/2025

Richard Klug, Senior Environmental Scientist (Supervisory)
Northern Region, California Department of Fish and Wildlife

Notice of Determination

TO: ☒ Office of Planning and Research

For U.S. Mail:

P.O. Box 3044

Sacramento, CA 95812-3044

Street Address:

1400 Tenth Street

Sacramento, CA 95814

FROM: Department of Fish and Wildlife

Northern Region

601 Locust Street

Redding, California 96001

Contact: Nicholas Simpson

Phone: (707) 601-8401

LEAD AGENCY (if different from above):

Department of Forestry and Fire Protection

135 Ridgway Avenue

Santa Rosa, California 95401

Contact: Eric Hedge

Phone: (707) 576-2953

SUBJECT: *Filing of Notice of Determination pursuant to § 21108 of the Public Resources Code*

State Clearinghouse Number (if submitted to State Clearinghouse):

Project Title: Streambed Alteration Agreement No. EPIMS-HUM-58368-R1 for Timber Harvesting Plan (THP) 1-25-00008-HUM

Project Location: The project is located approximately 1.9 air miles northeast of Lord-Ellis Summit in Humboldt County on unnamed tributaries to Minor Creek, tributary to Redwood Creek. The project is located in Sections 25, 26, 27, 33, 34, 35 and 36, T7N, R3E; Humboldt Base and Meridian, in the Lord-Ellis Summit, California, U.S. Geological Survey 7.5-minute quadrangle.

Project Description: The Department of Fish and Wildlife (CDFW) is issuing an agreement to install Class II and III rock-armored fords, Class II and III rock-filled fords, Class II and III temporary crossings, Class II and III culverts, draft water from a Class I watercourse and Class IV pond, conduct channel maintenance and abandon a crossing.

This is to advise that CDFW, acting as ☐ the Lead Agency / ☒ a Responsible Agency approved the above-described project and has made the following determinations:

1. The project ☐ will / ☒ will not have a significant effect on the environment. (This determination is limited to effects within CDFW's jurisdiction when CDFW acts as a responsible agency.)
 2. ☐ An environmental impact report / ☐ A negative declaration / ☒ A timber harvesting plan / nonindustrial timber management plan was prepared for this project pursuant to the California Environmental Quality Act (CEQA).
 3. Mitigation measures ☒ were / ☐ were not made a condition of CDFW's approval of the project.
 4. A Statement of Overriding Considerations ☐ was / ☒ was not adopted by CDFW for this project.
 5. Findings ☐ were / ☒ were not made by CDFW pursuant to Public Resources Code § 21081(a). CDFW adopted findings to document its compliance with CEQA.
 6. Payment is not required due to provisions of Public Resources Code §4629.6 (c).
- ☐ Lead Agency certification: CDFW, as Lead Agency, has made the final Environmental Impact Report (EIR) with comments and responses and record of project approval, or the Negative Declaration, available to the General Public at the CDFW office identified above.
- ☒ Responsible Agency statement: The final EIR, Negative Declaration or THP/NTMP that was prepared by the Lead Agency for this project is available to the General Public at the office location listed above for the Lead Agency. CDFW's CEQA Findings are available at the Eureka CDFW office located at 619 Second Street, Eureka, California, 95501.

Signature:

Rich Klug

BBB574D8FE29405

Date: 5/19/2025

Richard Klug, Senior Environmental Scientist (Supervisory)
Northern Region, Department of Fish and Wildlife

Date Received for filing at OPR: