Programmatic Project Design Criteria for Willamette National Forest Timber Management Treatments

A. General Criteria

The following general criteria must be met in order for a project to be eligible for coverage under this programmatic consultation:

A1. Projects must be consistent with the Standards and Guidelines found in the Willamette National Forest Land and Resource Management Plan (USDA, 1990), the NW Forest Plan (USDA & USDI 1994) and National Best Management Practices for Water Quality Management on National Forest System Lands (USDA, 2012) for the protection of water quality.

Was PDC A1 met? ☒

A2. Fuel and other petroleum products must be stored and refueling must occur at least 150 feet from any stream or other waterbody.

Was PDC A2 met? ☒

A3. Prohibit ground based equipment activities (such as mechanized falling, ground-based yarding, ground based fuels treatment, temporary road construction, etc.) outside the dry season (generally May 15 to October 15), unless unusually dry conditions allow without soil compaction.

Was PDC A3 met? ☒

A4. Predicted changes in peak or base stream flows due to the implementation of this action must be minimal or immeasurable, based on hydrologic analysis. The Willamette National Forest LRMP currently uses a hydrologic analysis called Aggregate Recovery Percentage (ARP) to ensure timber harvest does not alter peak flows enough to increase bank erosion.

Was PDC A4 met? ☒

A5. All areas of exposed soil related to the proposed action that have the potential to be hydrologically connected to any streams (such as landings, system and non-system roads, cleared ditch lines, decommissioned roads, etc.) will be seeded or mulched with weed free seed or weed free mulch, or other erosion control measure, to prevent offsite movement of soil and facilitate vegetative recovery. Cleared ditch lines will be fitted with sediment traps (such as wattles or straw mulch) to prevent sediment from entering streams from the cleared ditch lines.

Was PDC A5 met? ☒

A6. All instream work will be completed during the ODFW instream work window.

Was PDC A6 met? ☒

B. Tree Felling:

B1. Streams within the project area must be protected with stream protection no-harvest buffers as shown in Table4. Within these buffers, no commercial harvest is allowed. Stream buffers are measured from the edge of active channel (stream banks) on both sides of the stream.

Table 4. Minimum Stream Protection No-harvest Buffer Widths by Stream Class.

Stream Class	No-harvest buffer
Class 1	120’
Class 2	100’ within 1000’ of a Class 1 stream, 75’ outside of 1000’ from a Class 1 stream
Class 3	60’
Class 4	30’

Was PDC B1 met? ☒

B2. Upland Timber harvest is allowed in previously managed stands and naturally regenerated, single story, even aged, stands (approximately 80% or more of trees in the stand are similar height and age).

Was PDC B2 met? ☒

B3. Regeneration treatments must retain at least 15% of the stand, and are prohibited in Riparian Reserves..

Was PDC B3 met? ☒

B4. Roadside hazard tree treatment is only allowed within 2 SPTHs uphill of the road prism and 1 SPTH downhill of the road prism.

Was PDC B4 met? ☒

B5. Commercial harvest of roadside hazard trees is prohibited in the no cut stream buffers, and commercial harvest of Douglas fir trees greater than 20” DBH is prohibited within 172’ of streams. As specified in the NW Forest Plan, commercial harvest of roadside hazard trees in Riparian Reserves is prohibited unless treatment is required to attain ACSOs, including after catastrophic events such as wildfires.

Was PDC B5 met? ☒

B6. Riparian Reserve harvest is allowed in previously managed stands, and overstocked naturally regenerated stands under 80 years old when required to attain ACSOs.

Was PDC B6 met? ☒

B7. Riparian Reserve harvest in stands greater than 80 years old is only allowed when the stand has greater than 300 trees per acre and less than 14” average DBH.

Was PDC B7 met? ☒

B8. Riparian Reserve treatments require at least 40% canopy cover and 60 trees per acre (TPA) remain in treated areas. All legacy trees must also be retained.

Was PDC B8 met? ☒

B9. Trees for harvest must be felled away or parallel to the no-harvest buffer. Trees that are inadvertently felled into the no-harvest buffer, fall and leave trees, or trees felled to create yarding corridors or non-system roads within the stream buffer, must be left on site.

Was PDC B9 met? ☒

B10. Gaps in the 1st SPTH of Riparian Reserves are prohibited. Gaps in the 2nd SPTH portion, shall not occupy more than 10% of the 2nd SPTH portion, and must be less than 0.5 acre in size.

Was PDC B10 met? ☒

B11. Gaps outside of Riparian Reserves must be no greater than 3 acres in size in thinning units.

Was PDC B11 met? ☐

B12. Fall-and-Leave treatments in Riparian Reserves must maintain a minimum of 70% canopy cover. Fall and leave can include moving trees closer to (and into) the stream to improve hydrologic and habitat complexity.

Was PDC B12 met? ☒

B13. Stream restoration source wood may be obtained from any stand of appropriate size needed for successful stream restoration, but must come from outside Riparian Reserves. Source wood is obtained by placing gaps (up to 3 acres) or removing individual trees or small clumps of trees, and must not reduce the overall stand below 60% canopy cover.

Was PDC B13 met? ☒

B14. In pre-commercial thinning, require only hand equipment, prohibit cutting of streambank stabilizing trees, and maintain a minimum of 200 trees per acre. Felled trees must be left on site.

Was PDC B14 met? ☒

B15. Prohibit harvest in unstable or potentially unstable areas. These areas are identified by features such as crevices in soil, tipped trees at multiple angles, and slump formations. The unstable areas will be identified by a soil scientist through field surveys of timber sale units.

Was PDC B15 met? ☒

C. Yarding

C1. Skyline (cable) yarding that requires clearing a corridor of trees is prohibited through the no harvest buffers on Class 1 streams.

Was PDC C1 met? ☒

C2. Full suspension is required when cable yarding (including lateral yarding) over Class 2 and 3 stream channels. Full suspension over Class 4 streams will occur whenever feasible, however, bump logs within the channel will be utilized if full suspension cannot be achieved.

Was PDC C2 met? ☒

C3. Require cable yarding operations to maintain a minimum of one-end suspension except at the landing and tail trees where it is not possible.

Was PDC C3 met? ☒

C4. Limit the establishment of skyline yarding corridors that clear corridors of trees over all streams to no more than five corridors per 1,000 lineal feet of stream. Individual corridor widths must not exceed 12 feet. Corridors will be spaced at least 100 feet apart (along the stream).

Was PDC C4 met? ☒

C5. Ground based yarding equipment is prohibited within 120’ of Class 1 streams

Was PDC C5 met? ☒

C6. Ground based yarding equipment is prohibited within no-harvest buffers of all streams except as allowed under C7.

Was PDC C6 met? ☒

C7. Skid trails should not be designated to cross streams, but when stream crossings are necessary the following will apply:

a) Prohibit skid trails across Class 1 streams,
b) Skid trail stream crossings are prohibited within 1000' of LFH.
c) Limit skid trail corridors through no harvest buffers to less than 15' and no more than one crossing per 1000' of stream.
d) Require bank protection in the crossing with the use of logs felled from the corridor, or other bank protection technique. All trees felled in no harvest buffers must be left on site.
e) Require stream crossings to be removed before the wet season (generally October 16 to May 14).
f) Require skid trails to be perpendicular to the stream channel and take the shortest corridor through the no-harvest buffer.

Was PDC C7 met? ☒

C8. Ground-based equipment is prohibited on slopes exceeding 35% (except for short pitches (< 250') on less than 45%).

Was PDC C8 met? ☒

C9. Require ground based yarding equipment to run on slash to minimize soil compaction.

Was PDC C9 met? ☒

C10. Prohibit construction of new landings, or the use of existing vegetative recovered landings (does not apply to landings in existing roads) if they are:

a) within 200 feet of LFH,
b) within 200 feet of a class 2 stream, if the potentially affected stream reach is within 0.5 miles of LFH, or
c) within 100 feet of any stream channel.

Prohibit designating skid trails through wetlands or other wet areas.

Was PDC C10 met? ☒

C11. Use existing landings and skid trails to maximum extent possible.

Was PDC C11 met? ☒

D. Road and Landing Construction

D1. There must be no net increase in system roads after completion of project activities.

Was PDC D1 met? ☒

D2. Prohibit the construction of new system roads within 500 feet of class 1 streams, or within 200 feet of any other stream.

Was PDC D2 met? ☒

D3. New system road construction should be on or near stable ridgetop locations, or on stable, relatively flat topography.

Was PDC D3 met? ☒

D4. Require full bench construction of any new system roads (no slope fill or side cast).

Was PDC D4 met? ☒

D5. New road construction must not increase the stream drainage network. New roads will be out-sloped, or the outflow of new ditch relief drainage structures will drain to shallow sloped, well-vegetated areas.

Was PDC D5 met? ☒

D6. Require new system road compacted width not to exceed 24 feet (including ditch line).

Was PDC D6 met? ☒

D7. Prohibit non-system roads within no-harvest buffers, or within equivalent buffer distances elsewhere, unless needed to cross streams. If non-system road construction is required to cross streams the following will apply:

a) Prohibit non-system roads from crossing Class 1 streams
b) Prohibit non-system road stream crossings within 1000' of LFH
c) Stream crossings (stream class 2-4) will be removed before the wet season if the road is needed for more than one operating season. If it is not feasible to remove stream crossings during the wet season the road must be hydrologically stabilized before the wet season in concurrence with an aquatics specialist
d) Require non-system road crossings to be perpendicular to the stream channel

Was PDC D7 met? ☒

D8. All non-system roads will be decommissioned after completion of project activities, which generally includes removing all stream crossings and de-compacting the road surface. At a minimum decommissioning include removing all stream crossings, and closing the road to vehicle access.

Was PDC D8 met? ☒

E. Road Work (System Road Maintenance and Reconstruction)

E1. Generally require road maintenance and reconstruction activities to be implemented during the dry season (generally May 15 to October 15) unless the road segment has no hydrologic connection to streams. Addition of gravel (including blading and compacting) for wet season haul and unforeseen slide removal is allowed in the wet season.

Was PDC E1 met? ☒

E2. Require all waste material generated from road maintenance (ditch cleaning, blading, etc.) be placed in a pre-designated area outside of Riparian Reserves.

Was PDC E2 met? ☒

E3. When removing vegetation from ditch lines where ditches are hydrologically connected to any stream, install an effective sediment trap to prevent ditch erosion from entering streams (e.g. wattles, mulching cleared ditches within 100' of stream crossing culverts) until vegetation is re-established.

Was PDC E3 met? ☒

E4. All new replacement culverts will be designed to pass at least a 100-year flood streamflow

Was PDC E4 met? ☒

E5. Dust abatement is limited to the application of water or lignosulfonate only. If lignosulfonate is used for dust abatement, one application will occur during the dry season (July/August/September) at a dilution rate of 50 percent lignosulfonate and 50 percent water. Lignosulfonate will remain on the road surface and not go over road edge. During blading, small berms may be created or wattles used at stream crossings to assist with keeping palliatives on the road surface. A 1 foot no-application buffer on the edge of gravel shall be used if road width allows. Lignosulfonate will not be applied when raining, and a 3 day forecast of clear weather shall follow application.

Was PDC E5 met? ☒ **No dust abatement** ☐

E6. Surface water may be diverted to meet dust abatement, maintenance or construction needs, but only if developed sources are unavailable or inadequate. Where ESA-listed fish may be present, diversions may not exceed 10% of the available flow and fish screen(s) will be installed, operated, and maintained according to NMFS's fish screen criteria (NMFS 2011e). No more than a 50% reduction in flow may occur in non-ESA streams and fish screens will be used when in fish bearing streams.

Was PDC E6 met? ☒

E7. Culvert and bridge replacements occurring on fish-bearing streams shall adhere to the design criteria in the Aquatic Restoration Biological Opinion II (ARBOII). Projects will follow all provisions in the following sections:

a) Section B: General Aquatic Conservation Measures
b) Section C: Work Area Isolation & Fish Capture and Release
c) Section E, subcategory 1. Project Design Criteria for Aquatic Restoration Activity Categories: Fish Passage Restoration.

Was PDC E7 met? ☒

E8. Require an approved dewatering plan for all perennial stream crossing culvert replacements that maintains downstream flow.

Was PDC E8 met? ☒

E9. Require the complete excavation of fill material over the culvert at each replacement site prior to extracting the existing culvert.

Was PDC E9 met? ☒

E10. Replacement bridges, including temporary bridges, must consist of a single span with the abutments located outside of bankfull width. Abutment work areas must be isolated from any flowing water.

Was PDC E10 met? ☒

E11. Fresh concrete (cured less than 72 hours), concrete contaminated wastewater, welding slag and grindings, concrete saw cutting by-products, and sandblasting abrasives shall be contained and not come in contact with waterbodies or wetlands. Prepare concrete at least 150 feet from water bodies.

Was PDC E11 met? ☒

F. Rock Quarry Operation

No rock quarry operation planned, skip to G ☒

F1. New rock quarries shall not be developed in Riparian Reserves.

Was PDC F1 met? ☐

F2. For existing quarries within Riparian Reserves, conduct activities with the potential to introduce sediment into streams only during the dry season (generally May 15 to October 15). If unusual circumstances (e.g. emergency road repair) require such activities to occur outside of the dry season (or occur at any time adjacent to bull trout spawning or rearing habitat), erosion control measures will be implemented to prevent off-site soil movement, to prevent damage to water quality and fish habitat. Erosion control measures include use of filter materials (such as straw bales or silt fencing) and other mitigation measures.

Was PDC F2 met? ☐

F3. For existing quarries within Riparian Reserves, prepare and carry out an erosion and pollution control plan, commensurate with the scope of activity at the quarry, that includes the following information: (a) The name, phone number, and address of the responsible official; (b) best management practices to confine vegetation and soil disturbance to the minimum area, and minimum length of time, as necessary to complete the action, and otherwise prevent or minimize erosion and sedimentation associated with the action; (c) best management practices to confine, remove, and dispose of hazardous materials generated, used, or stored at the work site; (d) procedures to contain and control a spill of any hazardous material generated, used or stored at the work site, including notification of proper authorities;

Was PDC F3 met? ☐

F4. For blasting, follow setback criteria from LFH based on the following table:

Table 5. Setback distances for blasting activities based on charge weight.

Charge Weight (lbs.)	Setback Distance (ft.)	Setback Distance (mi)
10	282	0.053
20	397	0.075
40	564	0.107
60	689	0.13
80	797	0.151
100	889	0.168
140	1053	0.199
150	1089	0.206
200	1260	0.239
500	1991	0.377
1,000	2815	0.533
5,000	6299	1.193
10,000	8907	1.687
15,000	10909	2.066

Was PDC F4 met? ☐ **No blasting** ☐

G. System Road Decommissioning and Closure

G1. Decommissioning will include at a minimum removing all stream culverts and water-barring the road. May also include removal of ditch relief culverts, side cast pull back, de-compaction and re-contouring the slope. Decommissioning includes the administrative action of removing the road from the road system.

Was PDC G1 met? ☒

G2. Closed roads will be hydrologically stabilized. This usually includes removing all stream culverts and water-barring, but sometimes deep fill stream crossings will be stabilized by reducing the fill material over culverts left in place, or other measures to hydrologically stabilize the road as determined by a hydrologist.

Was PDC G2 met? ☒

G3. Closed roads (level 1) with any stream culverts left in place will receive a low level of maintenance to ensure culverts are not plugged.

Was PDC G3 met? ☒

G4. Road decommissioning and closure will follow PDCs in Aquatic Restoration Biological Opinion (ARBO II) programmatic, including culvert removal on fish bearing streams shall adhere to the measures described in Fish Passage Restoration.

Was PDC G4 met? ☒

G5. Culvert removal sites will be dewatered while the culvert is being removed if stream flow is sufficient for dewatering to be possible. On class 1 and 2 streams, maintaining continuous stream flow is required.

Was PDC G5 met? ☒

G6. Excavations to remove stream culverts will be matched to the approximate bed elevation and bank-full stream width of the existing streambed. At a minimum the bottom of the fill will be excavated to 1.5 times the width of the culvert being removed and fill removal slopes must be at least 1.5:1 slope, or match natural bank slopes. Fill removal slopes should by 2:1 and the bottom of fill removals should be equal to or greater than bank full width.

Was PDC G6 met? ☒

G7. At culvert removal sites, the road must have waterbars or other drainage features constructed to route surface water away from the newly excavated slopes.

Was PDC G7 met? ☒

H. Timber Transport (Haul)

H1. Require system roads used for timber haul to meet minimum design standards to ensure safe haul without road failure. Prohibit timber haul on roads that are failing, or likely to fail, if failure causes direct sediment impacts to streams.

Was PDC H1 met? ☒

H2. Timber haul operations will be stopped immediately if road use is causing deep rutting of the road surface, there is ponding of water on the road, there is failure of any drainage structure, or other situation occurs which may result in sediment delivery to a stream. The road must be repaired before haul can continue.

Was PDC H2 met? ☒

H3. Timber transport on aggregate surfaced and native surfaced roads is only allowed during the dry season (generally May 15 to October 15), except on aggregate surfaced roads where conditions of H6 are met.

Was PDC H3 met? ☒

H4. There are no timing restrictions on the transport of timber over paved roads.

Was PDC H4 met? ☒

H5. Prohibit timber transport on native surfaced roads and landings during the wet season (generally October 16 to May 14).

Was PDC H5 met? ☒

H6. Timber transport is only allowed during the wet season (generally October 16 to May 14) on aggregate surfaced roads if all the following criteria are met:

a) Roads must be meet design standards for being able to support wet weather haul (e.g. competent subgrade, minimum 6" depth of compacted aggregate) as determined by engineering during timber sale planning.
b) Haul routes must be inspected weekly, or more frequently if weather conditions warrant. Inspections will focus on road surface condition, drainage maintenance, and sources of sediment delivery to streams.
c) In subwatersheds with listed fish habitat adequate cross drainage has been installed near streams so that there is less than 200 feet of ditchline (on each side of crossing) draining directly to any stream
d) On road segments that have the potential to deliver sediment to any stream channel, implement erosion control measures to prevent offsite movement of soil. This work will occur prior to the wet season (generally October 16 to May 14).
e) The approach and crossing of each LFH stream is paved or has a high quality, well drained, and recently maintained aggregate surface.
f) Timber transport will be stopped by the timber sale administrator when road sediment can be observed moving into ditches, perennial, or intermittent streams.

Was PDC H5 met? ☒

I. Fuels Treatment

I1. Fuels treatment of any kind is prohibited within the no-harvest buffers (Table 1), with the exception that fire backing into the no-harvest buffers during under-burning will be kept to the minimal extent possible.

Was PDC I1 met? ☒

I2. Under-burning will be conducted during spring like conditions when fuel moistures are high to reduce the risk of loss of overstory trees. No more than 10% mortality of overstory trees should occur during under-burning operations and no less than 30% of the duff layer shall be retained.

Was PDC I2 met? ☒

I3. Piling of fuels intended for burning is prohibited closer than 15 feet from the no-harvest buffer.

Was PDC I3 met? ☒

I4. Mechanical fuels treatment, or the construction of mechanical fire control line is prohibited within the no-harvest buffers.

Was PDC I4 met? ☒

I5. Mechanical fuels treatments are subject to the same slope standards as ground based yarding equipment (<35% slope).

Was PDC I5 met? ☒

I6. Prohibit the construction of hand-built fire lines where water could be channeled into areas of instability, headwalls or streams. Construct waterbars on fire line to reduce soil erosion.

Was PDC I5 met? ☒

I7. Water used for fuels treatment will be drawn from sources near the units treated. No water will be drafted from LFH. Flow in other streams will be minimally impacted. This includes not reducing flow more than 10% in streams inhabited with ESA listed species and not reducing flow more than 50% in all other streams. The District Fish Biologist or District Hydrologist will be consulted prior to utilizing any water sources.

Was PDC I5 met? ☒