

Appendix A. Project Design Criteria (PDC)

The National Environmental Policy Act defines "mitigation" as avoiding, minimizing, rectifying, reducing, eliminating or compensating project impacts. The following project design criteria (PDC) are an integral part of this project and would be carried out when the project is implemented. These are draft PDC that may be changed throughout the analysis process. Additional PDC may also be added throughout the analysis process to protect natural and cultural resources within the project area.

Aquatic Resources

- Hand thinning, fall and leave, and prescribed fire, including pile burning, are authorized activities within the Limited Activity Buffer identified in Table 1 below. All other activities are prohibited unless described elsewhere in this document (e.g. system roads, yarding). Ground based equipment operations are prohibited within the Limited Activity Buffer. Density and fuels reduction activities, including, but not limited to, commercial treatments, mastication, machine piling, pile burning, and underburning, are authorized in both the Middle Riparian and Outer Riparian Zone. Where treatment occurs in Riparian Reserves, the Middle Riparian Zone will retain higher canopy cover than the Outer Riparian Zone. Refer to subsequent PDC for more specific details.

Table 1. Riparian Reserve Treatment Zones

Waterbody Type	Limited Activity Buffer Zone (Hand thin, prescribed fire, pile burning, fall and leave treatments)	Middle Riparian Zone	Outer Riparian Zone
Perennial Stream Riparian Reserves	0-60'	60'-120'	120'-300'
Intermittent Streams	0-60'	N/A	60'-125'
Seeps or Springs	0-60'	N/A	60'-100'

- Only needed for cable logging methods: If cable logging systems require use of hold trees that are within the Riparian Reserves, avoid using western redcedar, western white pine species, and any tree greater than 30 inches, when possible.
- Spill Prevention - All trucks used for refueling would carry a hazardous material recovery kit. All vehicles and machinery would be free of petroleum leaks. Any leaks that occur would be immediately repaired. Power equipment would be refueled at least 150 feet from water bodies to prevent direct delivery of contaminants into a water body. If local site conditions do not allow for a 150-foot setback, then refueling would be as far away as possible from the water body, defined in the NWFP as portions of a watershed directly coupled to streams and rivers, that is, the portions of a watershed required for maintaining hydrologic, geomorphic, and ecologic processes that directly affect standing and flowing waterbodies such as lakes and ponds, wetlands, streams, stream processes, and fish habitats. For all immobile

equipment, absorbent pads would be used. All petroleum products being transported or stored would be in approved containers meeting Occupational Safety and Health Administration and Oregon Department of Transportation standards. The Contracting Officer would be notified of any spills. Any contaminated soil, vegetation or debris must be removed from National Forest System lands and disposed of in accordance with state laws.

4. Ground-based mechanized equipment (e.g. skidder, dozer, feller-buncher) operation will not be allowed outside the Normal Operating (Dry) Season (generally June 1 – October 30) within Riparian Reserves unless approved through the existing waiver process by the District Ranger, based on recommendations from a soil, hydrology, and/or fisheries specialist.
5. Erosion control measures will be implemented to prevent off-site movement of disturbed or exposed soil associated with road and landing construction, use and decommissioning/closure (including cut-banks, fills, ditches, etc.) on road segments, including bridges and other stream crossings, that have the potential to directly or indirectly deliver sediment to any stream channel. Erosion control measures include silt fences, wattles, straw bales, matting, mulch, slash, water bars, ditch check dams, grass seed, or other products. Sediment control features will be maintained in working order throughout project implementation and will remain in place, as appropriate, after activities are completed.
6. Streams within the project area must be protected with stream protection buffers as shown in Table 1. Within the limited activity buffer, no commercial harvest (removal of trees greater than 10” DBH) is allowed. Stream buffers are measured from the edge of active channel (stream banks) on both sides of the stream.
7. Retain at least 50% canopy cover in riparian reserves with consideration of plant community and associated stand characteristics. Within limited activity buffer, trees greater than 10” DBH will not be cut with the exception of fall and leave trees. Outside of the limited activity buffer, but still within riparian reserves, trees greater than 22” DBH will not be cut. Cedar, white pine, pacific yew and hardwood tree species greater than 10” DBH will be left to the extent possible.
8. Trees for harvest must be felled away or parallel to the limited activity buffer. Trees that are felled into this buffer, whether inadvertently, as fall and leave trees, or trees felled to create yarding corridors or non-system roads, must be left on site.

Yarding

1. Full suspension is required when cable yarding (including lateral yarding) over perennial stream channels. Full suspension over intermittent streams will occur whenever feasible, however, bump logs within the channel will be utilized if full suspension cannot be achieved.
2. Require cable yarding operations to maintain a minimum of one-end suspension except at the landing and tail trees where it is not possible. During lateral yarding, use one-end suspension to the extent practicable.
3. Limit the establishment of skyline yarding corridors that clear corridors of trees over all streams to no more than five corridors per 1,000 linear feet of stream. Individual corridor widths must not exceed 12 feet. Corridors will be spaced at least 100 feet apart (along the stream).
4. In Riparian Reserves, ground-based mechanical equipment will be required to operate on a continuous slash-covered path, as much as practical, to minimize soil compaction.

5. Unless authorized elsewhere, ground-based mechanical equipment is prohibited within the limited activity buffer on all streams except on existing system roads.
6. With the exception of pre-existing road alignments, skid trails should not be designated to cross streams including perennial and intermittent channels.
7. Prohibit designating skid trails through wetlands or other wet areas.
8. Tethered ground-based equipment may operate on slopes up to 60% but the following shall be applied:
 - a) Limited to dry season (generally June 1 – October 30).
 - b) Shall operate on slash mat.
 - c) Monitoring will occur after implementation for all units where tethered logging is used.

Temporary and Non-system Road and Landing Construction

1. Construction of new temporary roads and landings within riparian reserves is prohibited.
2. Use of existing landings and temporary road alignments within riparian reserves will be allowed if there are no erosion potential and sedimentation concerns to area streams, or those concerns can be mitigated, as determined by a District soil scientist, hydrologist or fish biologist. If a landing or temporary road alignment is approved for use in riparian reserves, erosion control measures will be installed prior to use, where appropriate, to prevent soil movement downslope from the landing. Erosion control measures may include, but are not limited to, straw bales around landing perimeter, wattles, rock surfacing, or avoidance during wet conditions. The portion of the landing outside a system road prism would be rehabilitated after use (compacted soils fractured, covered with slash or seeded and mulched).

See other sections for resource-specific PDC pertaining to temporary roads.

Silviculture

1. Gaps (i.e. “openings”) will be created in a variety of sizes no larger than 2 acres. The sizes and total quantity will vary within and between units. Gap locations will be focused in areas with root diseases pockets where possible. Gaps are areas where few trees will be retained and retained trees will be focused on non-susceptible species.
2. Gap placements will occur outside of riparian reserves.
3. Pruning should not exceed 6 feet in height, or more than half the tree height, whichever is less.
4. Within pine/oak plant communities Douglas-fir and grand fir greater than 24 inches DBH that are over topping healthy ponderosa pine greater than 18 inches DBH and Oregon white oak greater than 14 inches DBH can be topped or felled and left on site with the approval of District silviculturist and fuels planner.
5. If appropriate areas are identified by the interdisciplinary team for fall and leave activities, activities within stream buffers will be limited to approximately one tree every 75 feet. DBH may range between approximately 14”and 24”. Tree species selected for fall and leave will be based on plant community and current insect and disease activity. Trees may be felled into streams during the in-water work period as prescribed by ODFW (July 15 - October 31).

Fuels

1. Hand piles would be a minimum of 6' in diameter and 6' in height.
2. Machine piles would be a minimum of 10' in diameter and 10' in height.
3. All piles shall be as wide as they are tall.
4. No piles would be constructed on stumps or on sections of large down logs.
5. All piles would be as compact and free of dirt as possible.
6. All material would be contained within the general contour of the pile.
7. All hand piles would be covered. Covering would consist of 6 mil black plastic (polyethylene) or an equivalent water-resistant barrier. Forest Service personnel would approve prior to use. Cover when pile is approximately 75% complete, then place remaining material on top.
8. Mechanical piling would be done with equipment capable of picking up (grasping) slash material and piling.
9. All piles would be located so that burning would not cause damage to residual trees or snags. Piles would be located outside the drip line of leave trees.
10. Piles would not be placed on or in the following areas: pavement, road surface, ditch lines, the bottom of ephemeral channels, within the limited activity buffer outlined in Table 1 above.
11. Slash resulting from fuels reduction and non-commercial treatments would be piled concurrently with the thinning activities. Piles should be burned within 2 years of construction.
12. Low severity burns shall constitute the dominant type of controlled burn within Riparian Reserves, resulting in a mosaic pattern of burned and unburned landscape.
13. Moderate severity burns are permitted in no more than 20% of Riparian Reserves to invigorate desirable deciduous species.
14. If hand-built fire lines are constructed on slopes exceeding 20%, construction of water bars would be required.
15. Water used for fuels treatment may be drawn from sources near the units treated. Diversions may not exceed 25% of the available flow and fish screen(s) will be installed, operated, and maintained according to NMFS's fish screen criteria (NMFS 2011e stating that pipe intakes would be screened with woven wire screens having a maximum 1.75 mm gap, and perforated plate screens would have a maximum opening of 3/32nd inch). The District Fish Biologist or District Hydrologist will be consulted prior to utilizing any water sources.
16. Do not pump directly from a water source if chemical products are going to be injected into the pump or pumping system. If chemicals are needed, use a fold-a-tank from which to pump water. Do not use surfactant and foam near waterbodies and in Riparian Reserves.

Wildlife

1. No timber harvest activities, mechanical fuels treatments, or temporary road construction

within 65 yards of known spotted owl nest patches from March 1 to July 15. If a new spotted owl nest is located during the period of the contract, the same seasonal restrictions would apply.

2. No burning would take place within 0.25 mile of a spotted owl nest patch between March 1 and September 30.
3. No new temporary roads will be constructed in nest patches.
4. An average of 6 logs per acre in decomposition classes 1, 2 and 3 would be retained. Logs would be at least 20 inches in diameter at the small end and have a volume of 40 cubic feet. Skid trails and skyline locations would avoid disturbing key concentrations of down logs or large individual down logs where possible.
5. Snags will be retained in all units where safety permits. If snags must be cut for safety reasons, they will be left on site.
6. District staff will select some live trees (minimum 12" DBH) as leave trees that have elements of wood decay. This may include trees with features such as dead tops, broken tops, and heart rot. Tree species selected will be based on plant community and current insect and disease activity.
7. Buffers for Survey and Manage species needing protection would be designated on-the-ground prior to ground disturbing activities (e.g., units 310, 200). Additional units may be identified based on results of forthcoming surveys.
8. If a wolf den or rendezvous site is found in or near the project area, no activities associated with the proposed action would be allowed within one mile of the den or rendezvous site from April 1 through July 15.
9. If a raptor nest is found, the area would be protected according to the buffers as defined by forest plan standards.
10. Consult wildlife biologist or botanist before placing landings within meadows in order to protect floral diversity and wildlife resources.
11. A District wildlife biologist will approve any treatment activities in the B4 land use allocation (including units 100, 101, 110, 114, 128, 132, 160, 168, 170, 200, 202, 226, 302, 304, 306, 310, 318) between December 1 and April 1 to ensure prevention of the harassment of deer and elk.
12. Both foraging and dispersal habitat will maintain their current habitat functionality post mechanical and prescribed fire treatment (maintain 50% and 40% canopy cover respectively).

Soils

1. Skid trails will be designated and approved prior to logging by the contract administrator. When feasible, they would be located on previously disturbed areas, such as old landings, spur roads, and skid trails.
2. Landing locations will be approved by the Forest Service prior to operations.
3. Mechanical fuels treatments (mastication) would only occur on slopes up to 30%.
4. Convey to all equipment operators the need to limit ground disturbance as much as is feasible. Avoid travelling over undisturbed ground unless necessary.

5. Avoid repetitive passes by heavy equipment except over designated primary routes (i.e., roads, or skid trails). Restrict travel of heavy equipment off designated primary routes to two passes or fewer.
6. Limit, as feasible, heavy equipment, particularly tracked machinery from pivoting or unnecessary side-hill travel on slopes greater than 15 percent. Travel would mostly be down the fall-line and perpendicular to the contour of the slope.
7. Meadows identified on pre-sale maps would be protected by not allowing new temporary roads, landings, or skid trails or ground based equipment to operate within the delineated area.
8. The contract administrator and soils/hydro resource specialist would coordinate to monitor and evaluate soil conditions to determine when they are suitable (e.g. dry enough) for operations.
 - a. Start of operations would be approved on a unit-by unit-basis due to differing soil types in the area since some soils may be more prone to detrimental damage than others.
 - b. Monitoring would be conducted to determine when soil conditions are beginning to become too wet for operations.
9. Ground-based operations would be suspended during wet periods when soil moisture is high and off-trail heavy equipment tracks sink deeper than 6 inches below the soil surface with one or two passes (or if tracks in primary skid trails sink deeper than 12 inches); particularly during spring, after heavy or prolonged rain, or in late fall.
 - a. Rainfall guidelines for when to temporarily defer or cease ground-based operations:
 - i. If it rains at least 0.3 inches per 4-hour period.
 - ii. When precipitation for the prior 24- hour period (1:00 A.M. – 12:00 A.M.) as recorded at the Wamic Mill RAWS site (<https://raws.dri.edu/cgi-bin/rawMAIN.pl?orOWAM>) is 0.6 inches or greater.
10. For whole-tree harvest systems, primary skid trails would be spaced at least 100 to 150 feet apart at the furthest termini from the landing, except where terrain limitations dictate otherwise.
11. For cut-to-length harvest systems, spacing of primary forwarder trails would be at least 65 feet, except where terrain limitations dictate otherwise. To the extent possible, slash mats would be deposited over primary forwarder trails during cutting operations.
12. All skid trails and landings would be rehabilitated immediately after harvest activities.
13. Only needed for cable logging methods: Spacing of yarding corridors for parallel settings would be at least 100 feet apart, and 150 feet at the tail-hold for radial settings. When feasible, previously used yarding corridors should be used.
14. Only needed for cable logging methods: Front-end log suspension would be required during yarding operations.
15. Only needed for cable logging methods: Retain trees that have been used as guy line anchors, tail-holds, or intermediate supports for future coarse woody debris (CWD) recruitment.

16. Only needed for tethered logging methods: Spacing of yarding corridors would be at least 65 feet apart.
17. Only needed for tethered logging methods: Tethered logging applications would be approved by the Forest Service Sale Administration on a unit by unit basis.
18. Crushed aggregate or other rock may be used when necessary to reduce erosion, puddling, ponding, rutting, soil displacement, or compaction on temporary roads and landings. Following harvest activities, rock would be removed or incorporated into the soil by decompacting to a depth of 24 inches or scarifying the roadbed to provide an efficient base for vegetative growth and water infiltration.
19. Native Surfaced Roads - Haul would not occur on native surfaced roads during wet conditions unless hardened with crushed aggregate or other rock, and drainage structures or other erosion control measures are installed to prevent sediment delivery to streams and protect the road surface.
20. Haul routes would be inspected weekly, or more frequently if weather conditions warrant. Inspections would focus on road surface condition, drainage maintenance, and sources of soil erosion and sediment delivery to streams. If sediment traps are used, they would be inspected weekly during wet conditions and entrained soil would be removed when the traps have filled to $\frac{3}{4}$ capacity. Removed materials would be deposited in a stable site that is not hydrologically connected to a stream.
21. Winter Operations would only occur when the ground is frozen on the surface and to a depth of at least 6 inches, and when the snowpack is at least 24" deep and firm. Temperatures would remain below freezing for at least 8 hours in a day. Winter operations would be considered on a unit by unit basis because of the different soil types in the area.
 - a. Guidelines for when conditions are no longer favorable for ground-based operations over the snow:
 - i. When rain-on-snow softens the snowpack.
 - ii. When the temperature is above freezing for more than 8 hours per day and the snow pack becomes soft.
 - iii. When heavy equipment ruts in the snowpack have become mixed with mud.
22. Mechanical piling of post-activity fuels would be limited, as is feasible, to existing primary travel routes and skid trails. Restrict travel of heavy equipment off designated primary routes to two passes or fewer.
23. Machine piling of slash during fuels treatments would generally be avoided on slopes over 30 percent. Minimize impacts of machine piling by piling no more than needed to break up fuel continuity.
24. Maintain effective ground cover and organics by retaining >50% of litter/duff depth as is feasible wherever it exists.
25. For Mt Hood National Forest Soil Resource Inventory (SRI) units 156, 157 and 159, temporary roads and primary skid trails will be decompacted as part of the rehabilitation process.

Transportation

1. If in-water work is determined to be required, follow the appropriate Oregon Department of Fish and Wildlife (ODFW) guidelines for timing of in-water work (in this watershed the in-water work window is July 15 to October 31), and requirements outlined in the Forest Service Best Management Practices Handbook (2012) and the Routine Actions and Maintenance Activities Programmatic (2018)¹. Exceptions to the ODFW in-water work windows would be requested by the Forest or its contractors, and subsequently approved by ODFW, U.S. Army Corps of Engineers, and Oregon Division of State Lands.
2. All signing requirements on roads that are open for public use within the Mt. Hood National Forest would meet applicable standards as set forth by the Manual of Uniform Traffic Control Devices (MUTCD). Some roads accessing State and County highways would require additional signing to warn traffic of trucks entering onto or across the highway.
3. Unsuitable excavation² from ditch cleaning or other operations would be disposed of at Forest Service approved sites. Material disposed of would be spread evenly over an appropriate area outside of riparian reserves and with a maximum layer thickness of 4 feet. All disposals would be seeded and mulched at the completion of operations, and prior to the wet season.
4. The use of steel-tracked equipment on asphalt or similar surface roads would not be used unless approved by a Forest Service representative. If a suitable site for the loading and unloading of equipment and materials is not available, then use of a paved surface may be permitted provided that the purchaser uses approved matting materials (such as wood chip or crushed rock) to protect the road surface. Purchaser is responsible for restoring roads to existing condition.
5. Temporary roads and landings located on or intersecting National Forest System (NFS) roads that are asphalt or similar surface would have 3-inch minus or finer dense graded aggregate placed at the approach to prevent surface damage. The purchaser would purchase the material from a commercial source and place the material so that the approach flares are wide enough to accommodate the off-tracking of vehicles entering onto or leaving the site.
6. Appropriate measures would be taken to prevent or reduce mineral soil contamination to aggregate surface roads. If contamination occurs, the purchaser would repair contaminated areas with specified aggregate surfacing. Mineral soil contamination degrades and reduces the load bearing capacity of the existing aggregate surface road.
7. The appropriate Forest Service specialist would be consulted whenever:

¹ Endangered Species Act Section 7(a) (2) Programmatic Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for Routine Actions and Maintenance Activities of USDA Forest Service, USDI Bureau of Land Management, and the Coquille Indian Tribe on Lands Held in Trust for the Tribe by the Bureau of Indian Affairs in Western Oregon and Southwest Washington (RAMBO)

² Soil that is silty, sandy, saturated, frozen, or contains clay, organics, or other material that would be unsuitable for use in road construction and maintenance work. (Unsuitable excavation, by specification, is any material containing excess moisture, muck, frozen lumps, roots, sod, or other deleterious material along with certain types of soil that contain unacceptable amounts of silt or clay have insufficient load bearing properties and are considered unsuitable for use in construction of any structural component of a roadway. Therefore this type of material, typically found in ditches or slide material, needs to be end-hauled and disposed of).

- a. Temporary roads would be constructed in areas with an existing cross-slope greater than 40%,
 - b. Temporary roads would have a road grade above 15% for any distance greater than 2,000 feet, or
 - c. Temporary roads would have a road grade above 18% for any distance greater than 600 feet.
8. Temporary roads and National Forest System roads which are designated for 'project use only' would be closed to public use. The purchaser would sign the entrance to such roads with "Logging Use Only" signs and make every reasonable effort to warn the public of the hazard and to prevent any unauthorized use of the road.
 9. All slash created through road reconstruction and/or road maintenance including temporary road construction would be machine grapple piled outside the road prism. Construction and placement of piles would adhere to all other resource area PDC.

Road Work (System Road Maintenance and Reconstruction)

1. Generally require road maintenance and reconstruction activities to be implemented during the dry season (generally June 1 to October 30) 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.
2. Require all waste material generated from road maintenance (ditch cleaning, blading, etc.) be placed in a pre-designated area outside of Riparian Reserves.
3. 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. Ditchlines should be deepened/cleaned the year prior to haul to allow for vegetation to reestablish prior to haul activities.
4. Dust abatement is limited to the application of water.
5. Surface water may be diverted to meet dust abatement, maintenance or construction needs, but only if developed sources are unavailable or inadequate. Surface water may be diverted only from water sources identified by Forest Service staff prior to diversion activities. Diversions may not exceed 25% of the available flow and fish screen(s) will be installed, operated, and maintained according to NMFS's fish screen criteria (NMFS 2011e stating that pipe intakes would be screened with woven wire screens having a maximum 1.75 mm gap, and perforated plate screens would have a maximum opening of 3/32nd inch).

Timber Transport (Haul)

1. System roads used for haul must meet a 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.
2. If road use may result in road damage or sediment delivery to a stream, haul operations will be stopped immediately, even in the dry season. Examples may include rutting of the road surface, ponding of water on the road, failure of any drainage structure, or other situation. The road must be repaired before haul can continue.

3. There are no timing restrictions on haul over paved roads.
4. Log and rock haul on aggregate or native (system and temporary) roads shall be prohibited at any time there is 0.5 inch of precipitation within any given 24-hour period as measured at the lowest elevation along the haul route. To measure precipitation, the purchaser may install a temporary rain gauge on National Forest System land near or adjacent to the lowest elevation along the haul route; otherwise, precipitation would be measured according to a running average of the data measured from the Wamic Mill RAWS station. Data for these RAWS stations can be found at <https://raws.dri.edu/cgi-bin/rawMAIN.pl?orOWAM>
5. Hauling on aggregate roads is allowed during the dry season (generally June 1 to October 30).
6. Haul on native surfaced roads and landings is only allowed during the dry season (generally June 1 to October 30). No waivers will be granted outside of this season if there are any hydrologic connections of native surface haul routes to streams.

Temporary Road Closure

1. Temporary roads used during project implementation would be obliterated and landings would be scarified upon completion of project activities. Culverts would be removed and cross-drain ditches or water bars would be installed as needed. Disturbed ground would be seeded and mulched and available logging slash, logs, or root wads would be placed across the road or landing surface. Post-harvest motorized access would be prevented through the construction of a berm, placement of large boulders, or other approved techniques. The coverage of effective ground cover would be sufficient to prevent off-site movement of soils as guided by Forest Plan standard and guideline FW-025 and by Forest Service Handbook 2509 (R6 supplement).

Heritage

1. In accordance with 36 CFR 800 and Section 106 of the National Historic Preservation Act (1966), all known cultural and archaeological sites within the project planning area which are eligible or potentially eligible (unevaluated) for listing on the National Register of Historic Places (NRHP) will be protected throughout the life of the project.
2. Cultural and archaeological site boundaries within or immediately adjacent (~30 meters) to project activities will be flagged for avoidance. A map will be provided to the sale administration and fuels planning resources prior to implementation with buffered site boundaries labeled as “Sensitive Resource – Area to Protect.”
3. The project lead will consult with a Forest Service Archaeologist on locations of equipment staging and access routes and any modifications in project location or design before any activities proceed.

4. If during project activities cultural material is encountered, all work will cease immediately, and a Forest Archaeologist will be contacted to evaluate the inadvertent discovery. A mitigation plan, if needed, will be developed in consultation with the Oregon State Historic Preservation Office (SHPO) and the Confederated Tribes of Warm Springs Reservation of Oregon, the Confederated Tribes of Grand Ronde, and Tribal Historic Preservation Office (THPO) as appropriate.
5. Fire control line would be constructed, using either wet line or hand line, around all fire sensitive heritage resources. Prescribed burning may occur within heritage resources which are not fire-sensitive, but piling may not occur within the flagged buffer zones.
6. Linear cultural and archaeological resources shall only be crossed perpendicularly at designated points where previous disturbances have occurred.
7. Mechanical treatment would not occur within 100 feet of talus slopes; nor would cable yarding occur over talus slopes. Hand felling may occur within 100 feet of talus slopes if directionally felled away from the talus slope.

Recreation

1. A minimum of two weeks advance notice will be provided to recreation specialists before timber or fuels management activities occur.
2. Informational signs regarding timber harvest and fuels activities would be posted by Forest Service staff at affected trailheads and trails, including, but not limited to Post Point Trailhead, Gate Creek Trailhead, Rock Creek Reservoir Campground and Day Use Area, Rock Creek 919 Trail, Rock Creek 921 Trail, and Rock Creek #923 Trail.
3. Timber and fuels staff will work with recreation specialists to develop public information materials and outreach plan using a combination of key entry/exit portals, visitor information boards and outreach via websites and other information sources.
4. Any damage to trail tread, corridor, or signage on trails #919, #921, or #923 from timber or fuels management activities will be restored to a similar condition previous to management activity. Timber and fuels management activities include felling, hauling, skidding, mulching, mastication and prescribed burning.
5. Landings will not be located on system trails or trailheads.
6. If timber or fuels management activities are anticipated to continue beyond the current operating season, then temporary effective closure of temporary roads and skid trails would occur to prevent unauthorized use.

Visual Quality (Scenic Resources)

1. When feasible and reasonable in Partial Retention and “seen” areas (defined as 660 feet from trails and 0.5 miles from Forest Service Road 4800000 (FSR 48)), use machine piling for slash piles and avoid piling within 100 feet of another pile. Avoid overly dense hand-piling in partial retention areas if hand-piling is necessary for the area.
2. When feasible, slash piles should be at least 50 feet from trails and FSR 48.
3. When feasible and reasonable, within 100 feet of or trails develop slash piles behind existing vegetation as a way of visually concealing piles from trails and Highway 48, or concentrate piles in areas not seen from FSR 48 (established in the visible-landscape map).

4. Mark side of tree facing away from road within 100 feet of FSR 48 and trails.
5. Boundary tags, flagging, and markers should be removed from visual foreground areas (i.e., 100 feet) in treatment units after completion of activities.
6. To the extent possible, align temporary roads so view down temporary roads from FSR 48 and trails are limited.
7. To the extent possible, any temporary roads that need to be built in the foreground (660 feet) of trails and FSR 48 should aim to develop routes in the least seen areas established in the visible-landscape map provided for this project.
8. When feasible and applicable, landings should be developed behind existing vegetation as a way of visually concealing landings from trails or FSR 48.
9. Landings created should be placed at least 200 feet from the trails or FSR 48.
10. When feasible and reasonable, long views down skid-trails should be avoided when seen from FSR 48 and system trails.
11. Stump height should be 6-8". attention within 100 feet from FSR 48 and trails.
12. Where feasible and reasonable, flush cut stumps on level land; on slopes, ensure faces of stumps are not visible within 100 feet of trails and FSR 48.

Botany and Invasive Plants

1. In Unit 306 there will be mechanical exclusion areas delineated to protect areas of sensitive soils and sensitive plant habitat in biscuit scablands, while avoiding plant community shift to non-native plant species. Equipment may travel along predisturbed alignments after consultation with the District soil scientist and botanist.
2. In order to prevent the spread of invasive plants, all equipment would be cleaned of dirt and weeds before entering National Forest System lands. This practice would not apply to service vehicles traveling frequently in and out of the project area that would remain on the roadway.
3. If the need for restoration/revegetation of skid trails and landings is identified, the use of native plant materials are the first choice for meeting this objective where timely natural regeneration of the native plant community is not likely to occur. Non-native, non-invasive plant species may be used in any of the following situations:
 - a. when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality and to help prevent the establishment of invasive species)
 - b. as an interim, non-persistent measure designed to aid in the re-establishment of native plants
 - c. if native plant materials are not available
 - d. in permanently altered plant communities
4. If using straw, hay or mulch for restoration/revegetation in any areas, use only certified, weed-free materials.

5. Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.
6. Coordination for project sites and staging areas would occur with botanical staff to avoid areas that have high concentrations of invasive species. If use of these areas is identified, effort should be made to treat populations ahead of time to reduce the spread of infestations.

Range

1. Protect existing range improvements.
2. Any unmapped range improvements discovered during project activities would be protected with a 50-foot buffer and avoided. The range specialist would be notified of the location. The area would be avoided until the range specialist has completed inspection of the area and determined measures for protection.