ATTACHMENT 6

LTBMU Agreement for Wet Weather Operations and Operations Outside Normal Operating Season (Fall to Spring) version dated April 17, 2012
Provision references updated for IRSC (February 11, 2016)

The following agreement is intended to further clarify Mechanical Stewardship Contract requirements by providing specific criteria for conducting operations during wet weather and winter conditions. Compliance with pertinent Best Management Practices (BMPs) by the Contractor is necessary for water quality protection as agreed to between the State of California and the US Forest Service. All requirements in this agreement are consistent with the intent of the Tahoe Regional Planning Agency (TRPA) Code of Ordinances and the Lahontan Regional Water Quality Control Board (LRWQCB) Basin Plan, which were developed to achieve the TRPA Thresholds, as specified in USFS/ TRPA/ LRWQCB Memorandum of Understanding.

The conditions of this agreement apply only to effects of the vegetation management treatments implemented, and those activities required for implementation of treatments (such as road maintenance). They do not obligate the Contractor to any mitigation for conditions that are not the result of the Contractor's operations.

The following guidelines are to be used to determine if conditions are suitable for wet weather/ winter operations and to provide guidance as to when conditions warrant suspension of operations and/or remedies for resource damage, if incurred as a result of the operations. These guidelines also apply within the Normal Operating Season (NOS) (GT.6.6/IRSC #7) when prolonged periods of wet weather (see definition of precipitation event in Wet Weather Operations Field Glossary) are encountered. This document does not include specific corrective actions because these will vary with the situation. When corrective actions are needed to mitigate risks to water quality, a watershed specialist will be consulted.

For the purposes of this agreement, it is understood that the operator with the USFS Sale Administrator seek to prevent disturbance to soils and impacts to water quality. Although some level of such effects may be realized as a result of operations, the operator will implement the measures identified in this agreement.

A: General Guidelines:

No sediment/contaminant flow into stream courses, lakes, ponds or other natural water bodies from any facility used by Contractor, including roads, skid trails, cableways or harvest areas, landings, and fueling locations will be permitted at any time (IRSC #44).

B: Road Use for General Hauling/Access:

Required road work for pre-haul must be accomplished prior to the wet season or periods of precipitation (IRSC #33/Appendix C #1). Saturated road surfaces should not be graded. Snow should not be plowed so that the road surface is exposed during plowing. Road surfaces must be at a standard that will support the impacts of wet weather operations. This includes the following:

Requirements for Wet Conditions

1. The native surface roads listed in the contract are located in areas that are prone to road surface damage during wet weather use. There shall be no log hauling on these roads during periods of rain. The timber sale operator shall allow an adequate drying period after a rain occurrence (normally one day depending on soil type) prior to resuming hauling.
2. Drainage structures and erosion and sediment delivery prevention actions shall be in place and functioning prior to expected precipitation events (IRSC #44).
3. Roads shall be properly graded and ditched or out sloped.
4. Portions of roads that lie within Stream Environment Zones (SEZs) and road locations where eroded material is likely to enter channels shall be rocked to Forest Service specifications and geotextile fabric used when appropriate, unless otherwise agreed, with input from a soil scientist/ hydrologist and an engineer.
5. When the amount and duration of a precipitation event indicates that use of a road is infeasible without causing resource damage, schedule operations not to use roads during these events.
6. When the roadway can support vehicles without causing rutting, soil displacement, damage to drainage structures, or off-site movement of sediment, it can be used; if not, it should remain unused.
7. Locations where road rocking is required to harden the road surface for wet weather haul shall be designated in writing and flagged on the ground by the engineering representative or the Sale Administrator. Minimum depth of rock that meets engineering specifications will be established in writing and inspected by the Forest Service prior to use of the road for hauling outside the NOS.

Requirements for Frozen or Snow Conditions

8. If the road surface freezes, the road surface segment in use must remain completely frozen and must be able to support the weight of any vehicle that will be driven on it.
9. When any part of the active road length thaws and mitigations, such as road surface treatments including rocking or chipping, cannot be implemented to ensure water quality protection, the road will not be used. This will preclude the use of the road by all vehicles including administrative, unless the activity can be restricted to the portion of the road that remains frozen.
10. Unless adequate snow cover or frozen soil conditions exist, where native surface road meets a paved road, the native road section must be covered with rock or organic material to prevent tracking of mud onto the paved road. If dirt or mud is tracked onto the paved

road, dirt or mud shall be removed prior to any subsequent precipitation such that the material does not enter a water body or municipal drainage system.

11. Roads within the sale area requiring snow removal shall be staked on both sides along the entire alignment to facilitate plowing. Areas for disposal of excess snow shall be identified prior to snow fall. Excess snow removed during plowing shall not be placed into natural drainages or riparian areas. No soil or aggregate should be intermixed with the side cast snow during plowing or grading.
12. On native surface roads at least 6" of snow shall remain on 85% or more of the road surface after snow plowing to facilitate freezing. During road use, a minimum 6 inches of compacted snow must be present on 85% or more of the road surface, unless the road surface is frozen or ice is present to a depth of 3 inches or more.
13. Ensure that plowing does not damage drainage structures.
14. During winter operations, paved roads may be plowed, including turnouts, if the action will not cause damage to the road surface and associated drainage structures.
15. Before over the snow operations begin, mark existing culvert locations. During and after operations, ensure that all culverts and ditches are open and functional.
16. Snow berms created from plowing must be breached, except in sensitive areas, to allow proper road drainage. These outlets must be spaced so as not to concentrate road surface flows (usually spaced no more than 300 feet apart). Erosion control structures may be required at the outlets to collect road generated sediment, and will be agreed to by the Sale Administrator in consultation with a Watershed Specialist.

Potential Resource Risk - Corrective Action Required
(Operations may continue during implementation of corrective actions)

Culverts

1. Contractors operations have caused a piping erosion event, however less than 10% of the flow is passing beneath or around the culvert or other pipe.
2. Sediment and/or debris is blocking 30% of an inlet or outlet of a cross drain.

Erosion

3. Rills extend more than 20 feet from the outlet of a drainage dip or culvert.
4. Erosion/sediment movement into an SEZ is present.
5. Side cast material (i.e. organic or vegetative debris) is within 25 feet of a channel, or other surface water feature, or onto slopes vegetated for erosion control.

Ponding

6. Ponding is present on the road surface that is causing fill subsidence or otherwise threatening integrity of fill.
7. Ruts form that can channel water past erosion control structures.
    a. Rills present at a stream crossing, but do not extend to the stream.

Imminent Resource Risk – Stop Operations and Apply Corrective Actions
(Operations may resume after corrective actions have been implemented and accepted)

Culverts

1. Contractors operations have caused a substantial piping erosion event (i.e. more than 10% of the flow passing beneath or around the culvert or other pipe).

Erosion

2. Erosion or sediment movement into a channel, or other surface water feature.
3. Side cast material (i.e. organic or vegetative debris) has entered a channel, or other surface water feature.

Ponding

4. When the travel way is rutted to a depth of two inches or more for a distance of 25 feet or more, Contractor's use of the road will be suspended.
5. If the road is to remain closed, it must have a barrier of some type installed to keep all vehicular traffic off the road surface.
    a. Rills present at a stream crossing that extend to the stream.

Corrective Actions

1. Roads damaged by Contractor's operations and associated damage will be repaired at the Contractor's expense (Appendix C). Proposed remedies shall be approved by the Sale Administrator in consultation with a watershed specialist and road engineer. Repair work shall be accomplished immediately when conditions are such that additional damage to the resources will not occur or when designated by the Forest Service.

C: Skid Trails, Cableways, and Harvest Areas:

General

1. Skid trails will be flagged by the Contractor and approved by the Forest Service <u>in advance</u> of falling (GT.4.2.2).

Requirements for Frozen or Snow Conditions

1. Winter operating conditions must be adequate to prevent erosion and detrimental soil compaction.
2. Operable conditions must be present on at least 85% of the treatment unit and generally will include the following:
    a. Unless otherwise agreed, within the operating area, a minimum of twelve inches of compacted snow/ice shall be maintained on undisturbed ground, and at least six inches of compacted snow/ice shall be maintained on existing disturbed surface.
    b. Frozen soil operations are permitted where operated vehicles, tractors and equipment can travel without sinking into soil, road, and landing surfaces to a depth of more than 2 inches for a distance of more than 25 feet. Temperatures must also remain low enough to preclude thawing of the soil surface.
    c. Approval to operate on lesser snow or frozen soil depths than indicated above must include a field evaluation by a soil scientist or hydrologist.
    d. If operable soil moisture conditions are present beneath a lesser snow depth (i.e. < 6 inches), operations may continue until conditions become inoperable.
3. Flag and avoid springs, seeps and other areas that do not freeze sufficiently to support equipment.
4. Monitor winter operations regularly during implementation to ensure that adequate snow and frozen soil depths are maintained and that measures to protect soil and water quality

are effective.
5. Move equipment and materials to areas near pavement before conditions become inoperable.
6. Exclude ground based equipment from the 25 foot buffer around perennial and intermittent channels, lakes and ponds.

Requirements for Wet Conditions

- Unless otherwise agreed, the following harvest guidelines are required to achieve ≤15 percent disturbed area:
    - For all ground based equipment operations, operable soil moisture conditions must be present between 2 and 10 inches, and surface soils must be dry enough that puddling is not occurring.
    - For full suspension skyline or helicopter operations, no specified pre-conditions are required.

Potential Resource Risk - Corrective Action Required
(Operations may continue during implementation of corrective actions)

- Skid trails/cableways surfaces have ruts over two inches deep and 25 feet or greater in length over less than 15% of the area.
- Rills present but are not enlarging.
- Erosion/sediment movement extending into a ditch or SEZ, but no sediment movement into a channel.
- Skid trails intercept and divert water down the trail (snow melt/subsurface flow/ swale) past erosion control structure location.

Imminent Resource Risk – Stop Operations and Apply Corrective Actions
(Operations may resume after corrective actions have been implemented and accepted)

- 15% or more of the skid trails/cableways surface has ruts over two inches deep and 25 feet or greater in length, or rills present and average more than one per five lineal feet.
- Rills present and are enlarging.
- Erosion/sediment movement extending into a channel or other surface water feature.
- Presence of or evidence of formation of gullies.

Corrective Actions

- Skid trails, cableways and harvest areas damaged by the Contractor's operations and associated damage will be repaired at the Contractor's expense. Proposed remedies shall be approved by the Sale Administrator in consultation with a watershed specialist. Repair work shall be accomplished immediately when conditions are such that additional damage to the resources will not occur or when designated by the Forest Service.

D. Landings

Requirements for All Conditions

- Landing locations will be agreed to prior to their construction and/or use. (GT.4.2.2)

Landings shall not be located within SEZs unless agreed to otherwise. Landings in SEZs will only be allowed where there is no reasonable alternative.

- Landings shall be constructed to allow for proper drainage and stability, and monitored to ensure that drainage is effective; for example, landings will not create a depression which cannot be properly drained. Upslope runoff will be diverted to an appropriate location around the activity area (Appendix C #4).
- As a preventative measure, all landing fill slopes constructed outside of Normal Operating Season will be mulched. Mulch material can consist of wood chips, certified weed-free straw, or any other Forest Service approved material which will provide slope protection against erosion and rilling. In addition, down slope perimeter erosion control will be required if a potential threat to water quality exists as determined by a soil scientist or hydrologist.

Potential Resource Risk - Corrective Action Required
(Operations may continue during implementation of corrective actions)

- Rills and/or sediment delivery extends more than 10 feet from the down slope edge of the landing and is present along more than 25% of the down slope edge.
- Erosion, sediment delivery or slope failure into SEZ, but no sediment delivery to a channel or other surface water feature.

Imminent Resource Risk – Stop Operations and Apply Corrective Actions
(Operations may resume after corrective actions have been implemented and accepted)

- Erosion, sediment delivery or slope failure into a channel or other surface water feature.

Corrective Actions

- Landings damaged by Contractor's operations and associated damage will be repaired at the Contractor's expense. Proposed remedies shall be approved by the Sale Administrator in consultation with a watershed specialist. Repair work shall be accomplished immediately when conditions are such that additional damage to the resources will not occur or when designated by the Forest Service.

E. Fueling Sites

Requirements for All Conditions

Contractor shall take appropriate preventative measures to ensure that any spill of oil or oil products does not enter any stream or other waters (IRSC #41).

Imminent Resource Risk – Stop Operations and Apply Corrective Actions
(Operations may resume after corrective actions have been implemented and accepted)

- Evidence of oil or oil products outside containment area.

Corrective Actions

- Fueling sites damaged by Contractor's operations and associated damage will be repaired at the Contractor's expense. Proposed remedies shall be approved by the Sale

Administrator in consultation with a watershed specialist. Repair work shall be accomplished immediately when conditions are such that additional damage to the resources will not occur or when designated by the Forest Service.

The Forest Service retains the authority to suspend any or all of the Contractors operations as needed to protect the resources.

This agreement will be reviewed on an annual basis and modified, if necessary, prior to commencement of wet weather operations.

_____	_____
Forest Service Representative	Contractor Representative
_____	_____
Date	Date

Wet Weather Operations Glossary

Best Management Practices- Alternative structural and nonstructural practices proven effective in erosion control and management of surface runoff in the Lake Tahoe region.
Disturbed Area- an area where soil, vegetation or other natural feature of a site has been removed or substantially altered.
Gully - A channel resulting from erosion and caused by the concentrated but intermittent flow of water usually during and immediately following heavy rains, at least 18 inches deep and 10 feet long.
Over the snow removal- removal of trees from a project site using yarding equipment capable of traveling over the snow without disturbing the soil or vegetation beneath.
Precipitation event- causing water quality problems is when too much precipitation creates site runoff and causes unacceptable soil compaction.
Rills- are depressions in the surface caused by washing away of soil at least 1/2" deep and 10' long.
Ruts - are vehicle depressions 2" deep for 25 feet or greater in length.
Significant soil disturbance - Damage to soil structure, chemistry and biota through compaction, burning, removal of topsoil, soil contamination or other activities, to the degree that there may be reduced vegetation growth, increased surface runoff or erosion. Soil compaction and other disturbance potential can vary depending upon soil type, rooting depth soil moisture content, surface litter thickness and compaction forces.
SMZ- Streamside Management Zone, for the purposes of this document SMZ is the same as SEZ.
Spill containment plan for wet weather operations- will include the usual containment needs plus water diversion around site and all oil products spill containment.

Trout Creek Cut-to-Length Stewardship IRSC