

APPENDIX A

Jasper Timber Salvage Sale

Table 1 Design Features and Management Requirements

Objective		Timeline
HYDROLOGY/WATER QUALITY/AQUATIC HABITAT		
Protect aquatic habitat and comply with the Forest Plan as amended by PACFISH	Stream and riparian protection for the Jasper/Teal Fire Salvage is based on the Forest Plan as amended by PACFISH. Riparian Habitat Conservation Areas (RHCAs) would be delineated such that timber would not be harvested within 300 feet of fish-bearing streams, within 150 feet of perennial, non-fish-bearing streams, or 120 feet of seasonally intermittent streams. (PACFISH pages C-8, C-9 & TM-1).	prior to activity
	<p>Road maintenance would be commensurate with use and would be included in the timber sale contract. This would include regulation of traffic during wet periods to minimize erosion and sediment delivery to streams. (PACFISH, RF-2c & RF-2c5).</p> <p>For the Jasper Salvage project this would include a prohibition of haul during wet weather.</p> <p>For temporary roads constructed for the Jasper, determine the influence of each temporary road on PACFISH criteria to avoid adverse effects on ESA listed fish. (PACFISH, RF-3).</p> <p>New landings will not be constructed within PACFISH RHCA's.</p> <p>Trees may be felled in RHCAs when they pose a safety risk. Felled trees would be kept on site unless doing so would create a safety hazard. (PACFISH, RA-2).</p> <p>Fuels, lubricants, and other potentially toxic materials would not be stored within PACFISH RHCA's. Refueling would not be conducted within RHCA's unless there are no other alternatives, and any such refueling sites must be approved by the Forest Service and have an approved spill containment plan. (PACFISH, RA-4).</p> <p>If dust abatement is determined to be necessary, magnesium chloride, calcium chloride, or water may be used. Guidelines for water drafting from streams include:</p> <ol style="list-style-type: none"> a. Dimensions for pump intake screens (related to pumping rate). b. Pumping rates as related to NMFS standards 	Prior to, and during activity

Objective		Timeline
<p>Protect aquatic habitat and comply with the Forest Plan as amended by PACFISH</p>	<p>c. How and where to place the screen/foot valve to avoid disturbing fish</p> <p>d. Instructions for monitoring of stream flow where this is needed. (It would be needed for drafting from the North Fork Touchet River.).</p> <p>e. Identification of water sources where such screens would be needed/not needed.</p> <p>Assign an individual to find sources for screens sized and constructed correctly to match the several sizes of pumps on which they would be used and to draft guidelines as listed above.</p> <p>Revisit the stream cross section monitoring stations on the North Fork Touchet to look for evidence of changes attributable to either the Columbia Complex fire and/or the road paving project.</p> <p>Snow would not be sidecast into RHCAs</p>	
<p>Protect water quality (Clean Water Act)</p>	<p>Implement and monitor Best Management Practices (BMPs) and incorporate findings into project implementation.</p> <p>Ground based equipment will only cross ephemeral draws and channels at pre-approved sites, and crossings will be minimized.</p> <ul style="list-style-type: none"> • Harvest systems will be designed to minimize crossing ephemeral draws. Ephemeral draws will not be crossed where equipment will cause bank breakdown. • In ephemeral draws all embedded and pre-fire downed wood will be retained. • Ephemeral draws will not be used as forwarder trails, landing sites, or as road locations. <p>Commercial use of National Forest roads shall be suspended when commercial contract or permit operations create a continuous discharge of sediment into live streams that result in an increase on turbidity. This may be from pumping of saturated fines creating sediment-laden water on and/or from the road surface. Visual evidence of this may be identified by the increase in turbidity in live running streams evident at points downstream from the outflows of culverts, ditchlines, or fords.</p>	<p>Prior to, during, and post activity</p>
SOILS		
<p>Protect soil during burning</p>	<p>Broadcast burning will be done when the duff layer will be left intact or reduced minimally. Fuel moisture will be at least 15% on one-thousand-hour fuel (logs > 24 inches diameter).</p> <p>Prescribed fire will not be ignited in Riparian Habitat Conservation Areas, however, fire will be allowed to back into them and exposure of mineral soil will not exceed 10 percent.</p>	<p>During, and post activity</p>

Objective		Timeline
Control erosion on fire lines	Fireline construction will only occur where necessary. Any fireline constructed will be to minimal standard. Locations will be evaluated post-harvest. Fireline will be water-barrred and seeded with native species upon project completion (as needed).	Prior to, and during activity
Soil protection/erosion control	<p>No ground-based equipment will operate on sustained slopes greater than 35%, in order to reduce the potential for soil movement.</p> <p>Skid trails and corridors spacing will vary by yarding system. Except where converging, the average distance is noted below:</p> <ul style="list-style-type: none"> • Conventional ground based - 100' • Forwarder - 50' • Skyline - 150' <p>Landings will be designed to minimize size and constructed to minimize effects and provide for safe operations.</p> <p>During and upon completion of harvest activities erosion control measures will kept current. Post-activity exposed mineral soil will be treated as necessary to reduce soil erosion and compaction. This may include seeding, water-barring, or subsoiling. Where necessary and possible, forwarder and skid trails will be subsoiled or have logging slash and large wood left.</p> <p>Waterbars will be used to stabilize temporary roads during and immediately after use. Newly constructed temporary roads will be recontoured and seeded (as is reasonably possible).</p> <p>Best Management Practices (BMPs):</p> <ul style="list-style-type: none"> T-3. Use of Erosion Potential Assessment for Timber Harvest Unit Design T-9. Determining Tractor Loggable Ground T-11. Tractor Skid Trail Location and Design T-13. Erosion Prevention and Control Measures During Timber Sale Operations T-14. Revegetation of Areas Disturbed by Harvest Activities T-15. Log Landing Erosion Prevention and Control T-16. Erosion Control on Skid Trails T-19. Acceptance of Timber Sale Erosion Control Measures Before Sale Closure T-23. Obliteration of Temporary Roads and Landings 	During and Post activity
RECREATION		
Protect summer/fall recreational access	Primary access routes (Mountain Road FR 64, and 46) may remain open to through traffic during logging operations, but may be subject to short delays for public safety. All other roads within the project areas will be closed on a case-by-case basis while logging operations are ongoing. Current road closure information will be available at all portal kiosks and at local Forest Service District offices.	During activity

Objective		Timeline
Protect Developed and Dispersed Camping Areas	Locate landing sites, and equipment maintenance and storage sites outside of identified perimeters at key traditional dispersed camping sites located within the project area. Dispersed recreation sites will be closed as needed for public safety while logging operations are ongoing.	During activity
Protect winter recreation activities	<p>Schedule winter logging activity to provide designated alternative snowmobile routes, including groomed routes, in order to avoid conflicts between winter logging operations and snowmobile activity. Ensure winter recreationists have the opportunity to “know before they go”. Prior to Dec 1 of each year identify routes open to snowmobile use. Post Current and/or proposed route information at all portal kiosks, at local Forest Service District offices and with the Washington State Parks and Recreation Department.</p> <p>Prohibit weekend log hauling on Road 64 leading to the Bluewood Ski Area when the resort is open to the public. Bluewood is generally closed on Mondays and Tuesdays. Restrict Wednesday thru Friday log hauling on a case-by-case basis to ensure ski area traffic and operational safety on Forest Road 64.</p> <p>The Touchet Corral Sno-Park, located on Forest Road 64, may be utilized during the summer season to support logging operations. Restrict logging related activities within the Sno-park during the snowmobiling season.</p>	During activity
NOXIOUS WEEDS		
Control and prevention of invasive plants (noxious weeds)	<p>Noxious weed sites will be treated consistent with the 1995 noxious weed decision notice and consistent with the 2005 invasive species Forest Plan amendment record of decision.</p> <p>District noxious weed crews will place a special emphasis on aggressive control of known weed populations within the project sale areas early in the growing season to prevent seed set later in the summer.</p> <p>All gravel, fill, sand stockpiles, quarry sites, and borrow material will be inspected for the presence of invasive plants before use and transport. Use only gravel, fill, sand, and rock that are judged to be weed seed free by District or Forest weed specialist.</p> <p>During road maintenance, blading, brushing, and ditch cleaning in areas with high concentrations of invasive plants will be conducted in consultation with District or Forest-level invasive plant specialists. Invasive plant treatment and prevention practices will be incorporated as appropriate. This may include minimizing soil disturbance, but would not preclude it.</p>	Prior to and during activity

Objective		Timeline
Control and prevention of invasive plants (noxious weeds)	<p>Project or contract maps will show currently inventoried high priority noxious weed infestations as a means of aiding in avoidance and/or monitoring.</p> <p>Prior to moving onto the Forest, reasonable measures will be taken to insure that all off-road equipment is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. In addition, prior to moving off-road equipment from a cutting unit known to be infested with invasive species to any other unit that is believed to be free of noxious weeds, reasonable measures will again be taken to make sure equipment is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds (timber sale contract provision B/BT 6.35 or equivalent provision).</p> <p>All soils disturbed by project activities will be revegetated with certified "weed free" native seed.</p>	
WILDLIFE		
Maintain Dead Wood Habitat	<p>Snag Retention – Within each unit/stand proposed for salvage harvest, a minimum of 3 snags/acre \geq 21 inches in diameter at breast height (dbh), if available, would be retained after treatments. If snags \geq21 inches in diameter are not available the next largest snags would be substituted. Hard snags would be selected for retention, with a preference for ponderosa pine and Douglas-fir. Soft snags are not considered merchantable, and therefore would not be removed from the unit.</p>	During activity
PUBLIC SAFETY		
During project implementation	<p>Warning or informational signs will be placed along major travel routes during project operations (timber, fire, engineering, restoration projects, etc) to alert and inform the public. Current information will be posted on portal entry kiosks.</p> <p>Public access may be restricted in some areas during active haul of merchantable material for public and operational safety.</p>	During activity
PLANTS		
Protection of Sensitive Species	<p>Open grasslands and “scabs” will be avoided during all harvest activity to protect Sierra onion plants.</p>	During activity