

K-C.3.5# - DESIGNATION OF TIMBER AND SUBDIVISION UNIT BOUNDARIES (8/2007) Trees are designated for cutting under C.3.5# only if designated as shown in the Timber Designation table below. The boundaries of Subdivisions are designated as shown in the Boundary Designation table below. Trees used for boundary designation are not to be cut.

SPECIFICATIONS PURSUANT TO K-C.3.5# - DESIGNATION OF TIMBER AND SUBDIVISION UNIT BOUNDARIES

Timber Designation Table A

Unit/ Subdivision	Tree Paint Color	Designation or Specification
Subdivisions 1, 2, 3 & 4	Green "X" or "H"	<u>Roadside Hazard Tree</u> . Notwithstanding C.3.2 all dead and unstable live trees which are leaning towards a road or are otherwise hazardous to a road, and are sufficiently tall to reach Contractor's landings or the roadbed of National Forest System roads within Contract Area, shall be felled by Contractor when Marked in the specified paint color above and below stump height by Forest Service in advance of felling any other timber in the vicinity. Pieces meeting Utilization Standards from such dead and unstable live trees shall be removed unless Contractor is notified in writing that removal would cause unacceptable damage to areas requiring special protection such as residual timber, roads, administrative sites, streamside management zones, and areas identified on Contract Area Map or on the ground.
Units 20, 21, 22 & 23	Green (Note: Trees with green paint over orange paint are designated for cutting)	<u>Individual Tree Mark</u> . Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
Units 1, 2, 3, 4, 5, 6, 7 and 8	Orange (Note: Trees with orange paint over green paint are <u>not</u> designated for cutting)	<u>Leave Tree Mark</u> . All live conifer trees are designated for cutting unless marked as leave trees. Leave trees are marked above and below stump height with the specified paint color. Contract Area Map indicates areas plainly identified on the ground where leave trees are marked to be left uncut.
N/A		Salvage Area.
N/A		Wildlife Trees.
N/A		Designation by Spacing K-C.3.5.1#
Subdivisions 1, 2, 3 & 4		Designation by Species and Diameter, K-C.3.5.2#
Subdivisions 1, 2, 3 & 4		Designation by Damage Class, K-C.3.5.3#
N/A		Designation by Row Spacing, K-C.3.5.4#

Subdivision Boundary Designation Table

<u>Subdivision/Unit</u>	<u>Boundary Paint Color</u>	<u>Boundary Designation</u>
<p>Subdivisions 1, 2, 3 & 4</p>	<p>Pink</p>	<p>Unit corners have a double horizontal ring around the bole. Line trees have rectangles facing into the units and in the direction of the lines plus stump marks (except along roads). Boundary lines are also flagged with white flagging (except along roads).</p>

K-C.3.5.2# – DESIGNATION BY SPECIES AND DIAMETER. (9/04)

Tree Designation Table

Subdivision(s)	Designated Species ^{1/}	More than Stump Diameter (inches)	Less than Stump Diameter (inches)
3 and 4 (Within Individual Tree Mark Units)	Live SP ^{2/} , PP/JP, IC & WF/RF Non-sawlog trees with orange paint above and below dbh are <u>not</u> designated for cutting. Trees with orange paint over green paint above and below dbh are <u>not</u> designated for cutting)	5	13
1 and 2 (Within Leave Tree Mark Units)	All non-sawlog trees without orange paint above and below dbh are designated for cutting. Non-sawlog trees with green paint over orange paint above and below dbh are also designated for cutting	5	13

^{1/} Order of species preference for retention

^{2/} Sugar Pine with no evidence of white pine blister rust

K-F.3.1# – ROAD MAINTENANCE REQUIREMENTS. (9/04) Contractor shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

Contract Road Maintenance Requirements Summary Table

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications									
	From	To		T-801	T-802	T-803	T-804	T-805	T-806	T-807	T-808	T-809	T-810
4N26	SR108	4N70	3.8	D	D	D	D	D	D	D	D	D	D
4N10	4N26	MP1.2	1.2		P	P		P	P	P		P	
4N10b	4N10	MP .2	.2		P	P		P	P	P		P	
4N70	4N26	MP .2	.2		P	P		P	P	P		P	
4N68Y	4N26	MP .4	.4		P	P		P	P	P		P	

P = Contractor Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications									
	From	To		T-801	T-802	T-803	T-804	T-805	T-806	T-807	T-808	T-809	T-810
4N26	SR108	4N70	3.8	D	D	D	D	D	D	D	D	D	D
4N10	4N26	MP1.2	1.2		P	P		P	P	P		P	
4N10b	4N10	MP .2	.2		P	P		P	P	P		P	
4N70	4N26	MP .2	.2		P	P		P	P	P		P	
4N68Y	4N26	MP .4	.4		P	P		P	P	P		P	

P = Contractor Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications									
	From	To		T-801	T-802	T-803	T-804	T-805	T-806	T-807	T-808	T-809	T-810
4N26	SR108	4N70	3.8	D	D	D	D	D	D	D	D	D	D
4N10	4N26	MP1.2	1.2		P	P		P	P	P		P	
4N10b	4N10	MP .2	.2		P	P		P	P	P		P	
4N70	4N26	MP .2	.2		P	P		P	P	P		P	
4N68Y	4N26	MP .4	.4		P	P		P	P	P		P	

P = Contractor Performance Item D = Deposit to Forest Service D3 = Deposit to Third Party

SPECIFICATIONS PURSUANT TO K-F.3.5# - REQUIREMENTS OF ROAD AND WATER SUPPLY USE,

TABLE A

<p>Load Limitations</p>	<p>Contractor shall notify Forest Service in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation. Within 15 days after receipt of the written notice Forest Service shall notify Contractor in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities.</p> <p>A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.</p>										
<p>Existing Non-National Forest System Roads</p>	<p>Roads not shown on Contract Area Map may be used as Temporary Roads if there is agreement before use is started.</p>										
<p>Snow Removal</p>	<p>If Contractor removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources.</p> <p>Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils.</p> <p>Snow must not be removed to the road surface. A minimum <u>6</u> inch snow depth must be left to protect the roadway. If the road surface is damaged, Contractor shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing.</p> <p>Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with intervisible turnouts.</p>										
<p>Water Supply Deposits</p>	<p>N/A</p>										
<p>Surface Replacement Deposits</p>	<p>Purchaser shall make Required Deposits for deferred surface replacement (16 U.S.C. 537) for use of existing surfaced roads. If applicable, such deposits shall be based upon the volume and distance hauled on the roads and at the applicable rates listed in the table below titled Surface Replacement Deposit Schedule. If Purchaser uses surfaced roads under jurisdiction of Forest Service other than those listed, Forest Service may establish applicable rates for such surfaced roads.</p> <p style="text-align: center;"><u>SURFACE REPLACEMENT DEPOSIT SCHEDULE</u></p> <table border="1" data-bbox="370 1703 1383 1793"> <thead> <tr> <th>Road No.</th> <th>From</th> <th>To</th> <th>Miles</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4N26</td> <td style="text-align: center;">Highway 108</td> <td style="text-align: center;">4N70</td> <td style="text-align: center;">3.8</td> <td style="text-align: center;">\$0.56/CCF</td> </tr> </tbody> </table>	Road No.	From	To	Miles	Rate	4N26	Highway 108	4N70	3.8	\$0.56/CCF
Road No.	From	To	Miles	Rate							
4N26	Highway 108	4N70	3.8	\$0.56/CCF							

SCHEDULE PURSUANT TO K-G.3.1.5# - PROJECT OPERATIONS SCHEDULE (12/2006)

TABLE A

Subdivision/ Area/Unit	Conditions of Operation	Purpose
Units 20, 22 & 23 (See CA-3 on Contract Area Map)	All operations (with the exception of the hauling of products, road maintenance and dust abatement) must be conducted between August 15 and March 1	Avoid disturbance to nesting California spotted owls
Units 20, 21 & 23 (See CA-4 on Contract Area Map)	All operations (with the exception of the hauling of products, road maintenance and dust abatement) must be conducted between September 15 and February 1	Avoid disturbance to nesting Northern goshawks
Units 1, 2, 3, 4, 5, 6, 7 and 8	All operations within these units must be completed in the same calendar year, either 2011 or 2012	Research Study Requirement
Units 20, 21, 22 and 23	All operations within these units must be completed in the same calendar year, either 2011 or 2012	Research Study Requirement
Contract Area	Included Timber must be removed from the Sale Area within: 1. four weeks of felling from March 1 to June 30. 2. six weeks of felling from July 1 to Sept. 30. 3. eight weeks of felling from Oct. 1 to Dec. 31 If the Forest Service agrees in writing to allow Included Timber to remain on site from the end of the Normal Operating Season to March 1, material must be removed from the Contract Area before March 1. Logging slash must be treated in accordance with K-G.7# - Slash Treatment within: 1. four weeks from March 1 to June 30. 2. six weeks from July 1 to Sept. 30. 3. eight weeks from Oct. 1 to Feb. 29	Control of slash breeding insects
Contract Area	All Included Products felled in the woods or decked at landings must be removed within 30 days of cutting from June 1 - September 30 inclusive. Outside of this time period, felling shall be limited to the amount of Included Products that can be removed from the Contract Area within 8 weeks or prior to March 1, whichever is sooner.	Fuels reduction during period of high fire danger

SPECIFICATIONS AND TREATMENTS PURSUANT TO K-G.4.1# - FELLING, BUCKING AND LIMBING

TABLE A

Treatment Method	Felling, Bucking and Limbing Specifications
Limbing	<p>Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided by G.4.1.3, Contractor shall, prior to skidding/yarding operations, cut exposed limbs from products which are to be skidded/yarded. Such limbing of stems shall be done to a top diameter of approximately (See Whole Tree Yarding Specifications Below) inches, at which point the top shall be cut from the remainder of the stem.</p>
Whole Tree Yarding "Whole"	<p>Notwithstanding the requirements above, within units or subdivisions designated "Whole" on Contract Area Map, trees smaller than 18 inches DBH shall be skidded/yarded to agreed landing locations prior to limbing, bucking, and lopping. Trees larger than or equal to 18 inches DBH shall be bucked into two or more pieces with the butt portion being no longer than 41 feet prior to skidding/yarding. The butt log shall be limbed prior to skidding/yarding.</p>
Directional Felling	<p>Within areas designated DF on Contract Area Map, Included Timber shall be directionally felled away from <u>other harvest units, boundary trees, controlled areas, reserve trees, streamcourses, structures, gates, waterlines, plantations, roads, and survey monuments</u> with the use of specialized equipment. Such directional felling shall not be required when in the faller's judgment it is unsafe to do so, and shall be left standing.</p>
Treatment of Stumps	<p>Within areas shown on Contract Area Map, Contractor shall treat stumps of all live <u>conifer</u> trees equal to or greater than 14 inches stump diameter, (measured inside bark) unless otherwise agreed in writing. Treatment shall be with a borate compound registered by EPA in the State of California for prevention of annosus root disease.</p> <p>Treatment shall consist of removal of sawdust and other loose debris from the cut surface of the stump and application of a thin layer of the borate compound uniformly over the entire cut surface, including exposed wood surfaces on the stump sides, at the rate specified on the product label.</p> <p>Any surface irregularities on the stump preventing application of a uniform layer of borate compound shall be cut prior to treatment. Treatment shall be done as soon as possible but shall be completed no later than 4 hours after felling, otherwise stumps shall be re-cut and treated.</p> <p>Contractor shall not apply borate compound during heavy rain or when such precipitation rate is predicted within 2 hours of application to cause borate compound to be flushed off the stump and become ineffective, in that case treatment shall be reapplied. Application shall be completed within 24 hours of the precipitation having ceased. Borate compound also shall not be applied to stumps located within 10 feet of live streamcourses and meadows/wetlands shown on Contract Area Map.</p>

	<p>Contractor shall provide the borate compound and apply it in compliance with the State of California laws and regulations pertaining to pesticides and pest control operations. Borate compound storage shall be located such that any spillage will not contaminate water. All spills shall be promptly cleaned up and spilled material disposed of according to the product label. All spills occurring in water or over <u>1/4</u> pounds shall be reported to Forest Service within <u>2</u> hours. Contractor shall submit at the end of each month a "Monthly Summary of Pesticide Use Report" to the appropriate County Agricultural Commissioner with a copy to the District Ranger.</p>								
<p>Maximum Log Length</p>	<p>Cut trees shall be bucked prior to skidding so that resulting logs shall not exceed the maximum log length including trim allowance shown in following table:</p> <table border="1" data-bbox="418 590 1256 686"> <thead> <tr> <th data-bbox="418 590 800 640">Subdivision Number</th> <th data-bbox="800 590 1256 640">Maximum Log Length</th> </tr> </thead> <tbody> <tr> <td data-bbox="418 640 800 686" style="text-align: center;">1-4</td> <td data-bbox="800 640 1256 686" style="text-align: center;">41 feet</td> </tr> </tbody> </table>			Subdivision Number	Maximum Log Length	1-4	41 feet		
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<p>Minimum Stump Height</p>	<table border="1" data-bbox="418 737 667 919"> <thead> <tr> <th data-bbox="418 737 667 842">Subdivision Number</th> </tr> </thead> <tbody> <tr> <td data-bbox="418 842 667 919" style="text-align: center;">1-4</td> </tr> </tbody> </table>	Subdivision Number	1-4	<table border="1" data-bbox="667 737 930 919"> <thead> <tr> <th data-bbox="667 737 930 842">Minimum Stump Height (inches)</th> </tr> </thead> <tbody> <tr> <td data-bbox="667 842 930 919" style="text-align: center;">1.0</td> </tr> </tbody> </table>	Minimum Stump Height (inches)	1.0	<table border="1" data-bbox="930 737 1505 919"> <thead> <tr> <th data-bbox="930 737 1505 842">Purpose or Reason</th> </tr> </thead> <tbody> <tr> <td data-bbox="930 842 1505 919" style="text-align: center;">Facilitate timber accountability</td> </tr> </tbody> </table>	Purpose or Reason	Facilitate timber accountability
Subdivision Number									
1-4									
Minimum Stump Height (inches)									
1.0									
Purpose or Reason									
Facilitate timber accountability									

Ground-Based Skidding

Table A

Map Symbol	Requirements
TRAC	<p>Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. Contractor shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding.</p> <p>Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain.</p>
SUSP	<p>Products shall be skidded with leading end clear of ground.</p>
SPACE	<p>Skid roads will average 132 feet from center to center, except where converging.</p>
ENDL	<p>Endlining shall not be required for distances in excess of 120 feet uphill, and 60 feet downhill.</p>
MAX	<p>Tractors used for skidding outside Clearcutting Units, regeneration units or other authorized clearings, shall be of the type (rubber-tired or track-laying) shown on the Contract Area Map and shall not exceed the overall width designated on Contract Area Map.</p>
MH	<p>Contractor shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least 20 feet for bunching trees, capable of severing, lowering and placing trees up to 24 inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to 45 %.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage.</p> <p>Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of G.4.1 - Felling and Bucking, K-G.4.1# - Felling, Bucking, and Limbing Requirements and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>

SPECIFICATIONS PURSUANT TO K-G.6# - EROSION PREVENTION AND CONTROL

TABLE A

Soil Erosion Prevention Measures: Recontour constructed, entrenched or benched skid trails and developed stream crossings.

Maximum Acres to Treat: **N/A**

Backblading: Purchaser shall, at Forest Service request, backblade skid trails in lieu of cross ditching.

Maximum Acres to Treat: **2 (Locations to be determined post harvest)**

Tillage: Unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.

Tillage shall be accomplished by equipment that will lift and fracture the soil by vertical and lateral shattering, leaving soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted.

Tillage depth is shown in the following table. Agreement in writing may be made to a lesser depth if rocks or other limiting site conditions are encountered.

Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Contractor and Forest Service shall agree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.

Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat
Landings	24	10
Main Skid Roads and Tractor Roads designated by Forest Service	N/A	N/A
Temporary Roads	24	0.5

SPECIFICATIONS PURSUANT TO K-G.7# - SLASH TREATMENT

TABLE A

Specified slash treatment methods shall be shown on Contract Area Map or listed in the following tables by the following symbols:

Slash Treatment Methods

<u>Symbol</u>	<u>Method</u>	<u>Definition</u>
CHIP	"Chipping"	Chippable Logging Slash up to 4 inches in d.o.b. shall be processed through a chipping machine. Chips shall be scattered to a loose depth not exceeding 6 inches.
Mach	"Machine Piling"	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled by tractor equipped with brush rake for disposal by Forest Service.
Pile	"Piling" small material	Logging Slash smaller than <u>10</u> inches in large end d.o.b. and <u>6</u> feet long shall be hand Piled for disposal by Forest Service.
Remove	"Removing"	Logging Slash shall be moved or hauled to locations shown on Contract Area Map and designated on the ground where it shall be piled for disposal by Forest Service.
Scat 18"	"Scattering"	Logging Slash shall be scattered to reduce slash concentrations with slash being generally left within <u>18</u> or 30 inches of the ground as shown on Contract Area Map. Logging Slash shall be scattered into openings away from and without unnecessary damage to residual trees. All scattered logs shall be limbed, placed away from trees and positioned so they will not roll. When Scattering is specified, another method may be used by agreement.
Cover	"Covering Piles"	All piles shall be covered with a durable waterproof covering as approved by Forest Service. The material shall be at least six feet in width. Piles shall not be less than fifty percent covered, with the covering extending not less than half way down all sides. Pieces of burnable material shall be placed on top of the durable waterproof covering to keep the covering from blowing off the pile.
Fell	"Damaged Small Tress"	Unless treated under other provisions, all trees smaller than the minimum d.b.h. in A.2, over 5 feet in height, and damaged beyond recovery by Contractor's Operations shall be felled. Such trees shall be limbed to a stem diameter outside bark of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and shall be bucked into lengths not exceeding 20 feet.

PILING SPECIFICATIONS. All piles shall be reasonably compact and free of soil to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. Such Logging Slash shall be bucked into lengths not exceeding ten feet prior to piling. Maximum width of tractor, with brush rake attached, shall not exceed 136 inches. Machine Piling is not required on areas where use of tractors would cause undue damage to residual timber or where slopes exceed 30 percent. Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags. Piles shall be no less than four feet in height or greater than 20 feet in height. Material extending three feet or more outside the edge of a pile shall be trimmed. An eight foot fuelbreak shall be cleared of all but fine material around each Machine Pile and an 18 inch wide fireline shall be cleared to mineral soil around the outer ring of the fuelbreak.

For hand piles, Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each pile. In areas where there is a potential for burning material to roll, firelines, including those for Machine Piles, shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines. Trenches shall be constructed by hand unless otherwise agreed.

UNIT AND SUBDIVISION SLASH TREATMENT SPECIFICATIONS.

SLASH TREATMENT		
Subdivision No.	Specified Method	Prohibited Method
1, 2, 3 and 4	Scat 18"	

LANDINGS AND DISPOSAL SITES. Unutilized logs accumulated at landings and disposal sites shall be decked by Contractor for disposal by Forest Service. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

		SLASH TREATMENT	
	Subdivision or Unit No.	Specified Method	Maximum Height of Decks
Landings	Contract Area	Chip/Remove	N/A
Disposal Sites	Contract Area	Chip/Remove	N/A

TREATMENT ALONG PERMANENT ROADS Permanent roads that require roadside slash treatment are listed in the attached table and shown on Contract Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Contractor. "Required Disposal Strips" are those areas adjacent to permanent roads where slash treatment is required for resource objectives. The width of Required Disposal Strips is shown in the attached table and is measured in slope distance from Roadbed edges of permanent roads. By agreement, in Clearcutting Units and regeneration units slash from Required Disposal Strips may be treated with other Logging Slash. By agreement the location of Required Disposal Strips may be adjusted from side to side without materially changing the total work required.

Slash treatment in Required Disposal Strips shall be accomplished without affecting the proper functioning of channels leading to and from drainage structures.

Logging Slash larger than treatment size requirements of the specified method shall either be Scattered outside Required Disposal Strip, within Required Disposal Strip or Decked at agreed locations as shown in the attached table.

SLASH TREATMENT				
Road No.	Subdivision and/ or Unit No. or Road Junctions (From To)	Width of Required Disposal Strip	Specified Method	Slash Larger Than Treatment Size Requirements of Specified Method
N/A				

TREATMENT ALONG TEMPORARY ROADS. Outside of Clearcutting Units or regeneration units, all trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem d.o.b. of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into lengths not exceeding <> feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

ADDITIONAL SLASH TREATMENT REQUIREMENTS. Within areas shown on Contract Area Map, Contractor shall perform work according to the specifications in the attached Table, unless otherwise agreed in writing.

ADDITIONAL SLASH TREATMENT REQ.				
Disposal Strip (Adjacent to)	Unit No.	Width of Required Disposal Strip	Specified Method	Slash Larger Than Treatment Size Requirements of Specified Method
N/A				

K-G.8.1.6# - Scaling Deposits Schedule Table

Type of Service	Rate per Load for Scaling Services under A14 ^{1/}		
	Standard ^{2/}	Overtime	Holiday
Truck Scaled Loads	\$26.77 (FY10)	\$1.5 x Standard Rate	\$1.5 x Standard Rate
Weighing Services	\$2.11 (FY10)	\$1.5 x Standard Rate	\$1.5 x Standard Rate
Load Count	N/A	N/A	N/A

^{1/} Rate per Load for Scaling Services in Table does not include the overhead charges of 17.8%.

^{2/} Rate will adjust with each Fiscal Year. Contractor is responsible for adjusted rates

G-G.9# - Stewardship Projects

I. MANDATORY STEWARDSHIP PROJECTS

A. Project Number 1 – Within “Leave Tree Mark” Units

Required Work: HNSP; TOS; EC; ST; SUB; BVA; & RM, for the Units listed in Table A. All Required Work in Project Number 1 shall be completed in the same calendar year, either 2011 or 2012.

Table A

Unit	Acres	System	Total CCF	Total Gr. Tons
1	43	Mech.	555.1	1526.7
2	28	Mech.	361.5	994.1
3	12	Mech.	154.9	426.1
4	25	Mech.	322.7	887.6
5	12	Mech.	154.9	426.1
6	35	Mech.	453.8	1242.7
7	12	Mech.	154.9	426.1
8	11	Mech.	142.0	390.6
Total	178		2,300	6,320

B. Project Number 2 – Within “Individual Tree Mark” Units

Required Work: HNSP; TOS; EC; ST; SUB; BVA; & RM, for the Units listed in Table B. All Required Work within Project Number 2 shall be completed in the same calendar year, either 2011 or 2012.

Table B

Unit	Acres	System	Total CCF	Total Gr. Tons
20	54	Mech.	697.1	1917.3
21	30	Mech.	387.3	1065.1
22	38	Mech.	490.6	1349.2
23	11	Mech.	142.0	390.6
Total	133		1,717	4,722

a) HNSP - Harvest of Non-Sawlog Products (felling, skidding and chipping of non-sawlog material). The non-sawlog material has been designated by description or by “leave tree” marking. Non-sawlog material (biomass) includes small green trees (4.0 to 9.9 inches d.b.h), tops of sawlog trees (topwood) and dead trees. Specifications for non-sawlog product removal can be found in: CT.0 – Timber Specifications; K-C.3.5# - Designation of Timber and Subdivision Boundaries; K-C.3.5.2# - Designation by Species and Diameter; K-C.3.5.3# - Designation by Damage Class; and on Contract Area Map.

b) EC - Erosion Control. Specifications for erosion control (including backblading) can be found in: G.6 – Erosion Prevention and Control; G.6.3 – Temporary Roads; G.6.3 – Temporary Roads to Remain Open; G.6.5 – Skid Trails and Fire Lines; G.6.6 – Current Operating Areas; G.6.7 – Erosion Control Structure Maintenance; and K-G.6# - Erosion Prevention and Control; and on Contract Area Map.

c) ST - Slash Treatment. Specifications for slash treatment measures can be found in: G.7 – Slash Disposal; and K-G.7# - Slash Treatment; and on Contract Area Map.

- d) SUB – Subsoiling. Specifications for subsoiling can be found in K-G.6# - Erosion Prevention and Control; and on Contract Area Map.
- e) TOS – Treatment of Stumps. Specifications for treatment of stumps can be found in K-G.4.1# - Felling, Bucking and Limbing; and on Contract Area Map.
- f) BVA – Block Vehicular Access. Prior to the end of Normal Operating Season, for all disturbed, unprotected ground within harvest units, Contractor shall block unauthorized vehicular access areas with boulders, cull logs covered with dirt, or other natural features. Specifications for blocking can be found in G.6.6 – Current Operating Areas.
- g) RM - Road Maintenance. Specifications for road maintenance can be found in F.3 – Road Maintenance; and K-F.3.1# - Road Maintenance Requirements.

II. OPTIONAL STEWARDSHIP PROJECTS

A. Project Number 3 – Within “Mastication” Units

Required Work: Mastication of downed woody material within Units 3A, 14, 16 and 19 (43 acres combined)

TECHNICAL SPECIFICATIONS FOR MASTICATION

1A. EQUIPMENT SPECIFICATIONS (Project Number 3)

Equipment shall be furnished on a fully operational basis, of modern design, and in good operating condition, with a competent, fully qualified operator. The equipment shall be of a low ground pressure type, which meets the following specifications:

- (a) Prime power unit - tracked unit with a maximum outside width of 6 feet and maximum ground pressure of 6 pounds per square inch (psi).
- (b) An independently mounted, adjustable, mechanically or hydraulically powered cutter head and housing that controls the height and angle of shredding heads/blades. Must be able to raise cutter head a minimum of 6 feet above the ground level.
- (c) Capable of working continuously on 0 to 35 percent slopes, and on pitches up to 45 percent.
- (d) Maximum cutter head/blade cutting width 5 feet, no minimum width.
- (e) Forest Service approved spark arrester. Spark arresters are not required on equipment powered by exhaust-driven turbo-charged engines or motor vehicles equipped with a maintained muffler as defined in California Public Resources Code, Section 4442 and 4443.
- (f) Canopy approved by the State of California, Division of Industrial Safety.
- (g) The Contractor shall provide all tools and equipment for self and employees.
- (h) All equipment must be in good running condition with no excessive fluid leaks or overheating.
- (i) All equipment must be equipped with the tools and supplies necessary for making emergency and routine repairs and servicing.

- (j) All equipment and service/transport vehicles must be equipped with the required fire tools.
- (k) Contractor shall be responsible for all fuel, lubrication, parts, repair, and replacement for equipment.

2A. WORK SPECIFICATIONS (Project Numbers 3)

Required work:

- (a) Masticate all concentrations of downed woody material. Individual logs shall be left untreated.
- (b) Slash heights for trees and woody slash shall not exceed 12 inches measured from the ground level.
- (c) The masticated/shredded material shall be evenly distributed over the treated areas so as to not leave large accumulations of slash. Concentrations of brush, slash, and small dead trees may need repeated treatment in order to satisfy desired work standards.
- (d) Protection of the residual trees shall be the highest priority in all operations. Excessive residual stand damage may result in contract shut down and/or default. Excessive damage shall be defined as damage to 5% or greater of the residual trees.
- (e) Waterbars in skidtrails, firelines, and roads disturbed by the Contractor shall be restored to condition prior to damage at the Contractor's expense.
- (f) Soil displacement shall be minimized by working the shredding equipment in as straight a line as possible, up and down slopes, given the known limitations of residual trees and terrain.
- (f) All streamcourses specified on the Contract Area Map have a 15 foot buffer from the high water mark, which excludes all track laying or rubber tired equipment.
- (h) Equipment shall be kept free of debris accumulations that may result in fire starts.
- (i) Soils in the operating area must be dry enough to prevent rutting by a single pass of the equipment.
- (j) Contractor's equipment shall not cross meadows, "wet" stream channels, or other non-work areas. Riparian vegetation shall not be shredded, cut or damaged.
- (k) Contractor shall have road signs indicating warning of work in progress at the beginning of any road while the contractor is working in the vicinity and material from Contractor's work might cause a hazard to the general public using these roads.

B. Project Number 4

Required Work: manual felling, bucking, limbing and piling of sawlog and non-sawlog trees on railroad grades within Units 1, 2, 3, 8, 19 and 21 that cannot be reached by equipment (3 acres).

1A. WORK SPECIFICATIONS (Project Number 4)

Railroad Grade Hand Treatment:

Equipment cannot be driven within the flag line and this treatment would be used in all areas where the feller buncher cannot reach marked trees within the railroad grades. Trees to be removed range in size from 1 inch DBH to 16 inches DBH, and the residual stumps shall not exceed 8 inches in height. Two options can be used for removal and treatment of the trees and slash.

Option 1: Trees are hand felled and carried to a location where the feller buncher can lift the tree out of the site without dragging any part of it. The biomass size and timber size material would then be processed at the landing just like the rest of the sale. Material less than biomass size would be hand piled, see specs below.

Option 2: Trees are hand felled and carried from within the site and hand piled. See specs below.

All slash (as well as boles up to 8 inches in diameter) will be piled for later burning by the Forest Service.

Hand pile specifications:

- Sever all limbs completely from boles (stobs not to exceed 3 inches), and cut material, as needed, into pieces small enough to be stacked in a compact arrangement. Maximum length is 5 feet.
- Locate piles in openings, as far from residual trees as possible. Piles shall be a minimum of 10 feet (horizontal distance) from residual live tree crowns.
- Do not locate piles on stumps.
- Piles shall not exceed 6 feet in height or 6 feet in diameter, unless larger piles are approved by the Contracting Officer or his Representative.
- Construct piles such that the fine fuels form the base of the pile with heavier larger fuels on top to provide for adequate consumption of all material.
- Cover half of each pile with waterproof paper, provided by the Forest Service. The paper cover shall be held down with adequate slash to keep it in place.
- Do not pile within 10 feet of the high water mark in drainages or meadows and other riparian areas.

Fireline Specifications (these are required around each hand pile):

Firelines shall be constructed 2 feet away from the perimeter of the pile and shall be cleared of all combustible material, to bare mineral soil. This includes all living vegetation.

Firelines shall be a minimum of 18 inches in width.

Specific Equipment Requirements and Fire Precautionary Measures Table – K-H.2# Table A

Version 12/2006

<p>a. <u>Fire Tools and Equipment</u></p>	<p>Contractor shall meet minimum requirements of Sections 4427 and 4428 of the California Public Resources Code (C.P.R.C.). Fire tools kept at each operating landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Contractor 's Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source.</p> <p>Where cable yarding is used, Contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump within 10 feet of each tail and corner block.</p> <p>Trucks, tractors, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.</p>
<p>b. <u>Fire Extinguishers</u></p>	<p>Contractor shall equip each internal combustion yarder, fuel truck, and loader with a fire extinguisher for oil and grease fires (4-A:60-B:C).</p> <p>Contractor shall equip each mechanized harvesting machine with hydraulic systems, powered by an internal combustion engine (chipper, feller/buncher, harvester, forwarder, hot saws, stroke delimeter, etc), except tractors and skidders, with at least two 4-A:60-B:C fire extinguishers or equivalent. In addition, concentrations of wood dust and debris shall be removed from such equipment daily. Additional extinguishers and sizes may be required at landings.</p>
<p>c. <u>Spark Arresters</u></p>	<p>Contractor shall equip each operating tractor and any other internal combustion engine with a spark arrester, except for motor vehicles equipped with a maintained muffler as defined in C.P.R.C. Section 4442 or tractors with exhaust-operated turbochargers. Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the. National Wildlife Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be maintained in good operating condition.</p>
<p>d. <u>Power Saws</u></p>	<p>Each power saw shall be equipped with a spark arrester approved according to C.P.R.C. Section 4442 or 4443 and shall be maintained in effective working order. One fire extinguisher meeting specifications of C.P.R.C. Section 4431 shall be kept with each operating power saw. A size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can but not more than 300 feet from each power saw when used off cleared landing areas.</p>
<p>e. <u>Fire Supervisor and Fire Patrolperson</u></p>	<p>Contractor shall designate in the fire plan required by H.1 and furnish on Contract Area during operating hours a qualified fire supervisor authorized to act on behalf of Contractor in fire prevention and suppression matters.</p> <p>Contractor shall furnish a qualified fire patrolperson each operating day when Project Activity Level B or higher is in effect. When on duty, sole responsibility of patrolperson shall be to patrol the operation for prevention and detection of fires, take suppression action where necessary and notify the Forest Service.</p> <p>By agreement, one patrolperson may provide patrol on this and adjacent projects or sales. No patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.</p>

<p>f. <u>Seasonal Permits</u></p>	<p>Contractor shall obtain written permits from Forest Service before allowing attended warming fires, burning, or blasting.. In addition, Contractor shall obtain necessary Explosives Permits as required by California Health and Safety Code, Section 12101.</p>						
<p>g. <u>Blasting</u></p>	<p>Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a watchperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.</p>						
<p>h. <u>Time of Snag Felling</u></p>	<p>Unless the felling of dead trees would interfere with the felling, skidding or yarding of green timber or be a safety hazard, or be prevented, required felling of dead trees shall be concurrent with the felling of live timber. There shall be reasonably timely felling of dead trees to facilitate utilization and protection from fire.</p>						
<p>i. <u>Clearing of Fuels</u></p>	<p>Contractor shall clear away, and keep clear, fuels and logging debris as follows:</p> <table border="1" data-bbox="441 688 1432 999"> <tr> <td data-bbox="441 688 831 831"> <p>Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:</p> </td> <td data-bbox="831 688 1432 831"> <p>10 feet slope radius</p> </td> </tr> <tr> <td data-bbox="441 831 831 905"> <p>Tail or corner haulback blocks:</p> </td> <td data-bbox="831 831 1432 905"> <p>5 feet slope radius</p> </td> </tr> <tr> <td data-bbox="441 905 831 999"> <p>Lines near, between or above blocks:</p> </td> <td data-bbox="831 905 1432 999"> <p>Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material</p> </td> </tr> </table>	<p>Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:</p>	<p>10 feet slope radius</p>	<p>Tail or corner haulback blocks:</p>	<p>5 feet slope radius</p>	<p>Lines near, between or above blocks:</p>	<p>Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material</p>
<p>Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:</p>	<p>10 feet slope radius</p>						
<p>Tail or corner haulback blocks:</p>	<p>5 feet slope radius</p>						
<p>Lines near, between or above blocks:</p>	<p>Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material</p>						
<p>j. <u>Oil Filters and Glass Jugs.</u></p>	<p>Contractor shall remove from National Forest lands oily rags and used oil filters and shall prohibit use of glass bottles and jugs in Contractor's Operations.</p>						
<p>k. <u>Smoking.</u></p>	<p>Any smoking shall be done while sitting in an area at least 3 feet in diameter, cleared of flammable materials. Burning tobacco and matches shall be extinguished before they are properly disposed of.</p>						
<p>l. <u>Reporting Fires.</u></p>	<p>As soon as feasible but no later than 15 minutes after initial discovery, Contractor shall notify Forest Service of any fires on Contract Area or along roads used by Contractor.</p>						
<p>m. <u>Tank Truck</u></p>	<p>Contractor shall meet minimum requirements of Section 4430 of the California Public Resources Code (C.P.R.C.). Contractor shall provide a water tank truck or trailer on or in proximity to Contract Area during Contractor 's Operations hereunder during Fire Precautionary Period unless otherwise agreed. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or immediately adjacent to each active landing unless otherwise excepted when hot saw technology is being used.</p> <p>The tank shall contain at least 300 gallons of water available for fire suppression. A water sprinkling tank truck will meet this requirement if provision is made to insure that the minimum of 300 gallons is available for fire suppression at all times. Ample power and hitch shall be readily available for promptly and safely moving tank over roads serving Contract Area. Tank truck or trailer shall be equipped with following:</p>						

- (1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Contract Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:

T e m p	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10000 Feet	
	55	179	23	174	23	169	23	165	22	161	22	157	22	153	22	150	21	146	21	142	21	139
70	175	23	171	23	166	22	162	22	158	22	154	22	150	21	147	21	143	21	139	21	136	20
85	171	23	168	23	163	22	159	22	155	22	151	21	147	21	144	21	140	21	136	20	133	20
100	168	23	164	23	159	22	155	22	152	22	148	21	144	21	141	21	137	20	133	20	131	20
	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G	P	G
	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P
	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M	I	M

The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.

- (2) 300 feet of 3/4-inch inside diameter rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than approximately 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings, or other failures.
- (3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:

	G.P.M.	Horizontal Range
Straight Stream	10	38 feet
Fog Spray	6 - 20	N/A

- (4) Sufficient fuel to run pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.

When Contractor is using Hot Saw Technology, an additional 500 feet of not less than one (1) inch outside diameter serviceable hard rubber poly or rubber lined or fiber jacket rubber lined (FJRL) hose shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurturances in (2) and (3) above. Synthetic hose may be used by agreement.

<p>n. <u>Communications.</u></p>	<p>Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with Contractor's headquarters. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or agreed to alternative) and Forest Service via commercial or Forest Service telephone. The communications system shall be operable during Contractor's Operations in Fire Precautionary Period of May 1 to December 1 and during the time fire patrolperson service is required. A radio-equipped fire patrolperson vehicle will satisfy this requirement if in operation during the time required except during PAL levels "D" and "Ev". A CB is not acceptable communication because FCC Regulations prohibit commercial use.</p>
<p>o. <u>Skyline Tank Unit</u></p>	<p>When all or part of Included Timber will be yarded by a long span (over 1,500 feet) skyline, Contractor shall provide at each active skyline landing a suitable tank trailer or tank unit which can be lifted and transported by the skyline carriage. The unit shall meet the same requirements as specified for the water tank trailer.</p>

PROJECT ACTIVITY LEVEL – K-H.2.2# - EMERGENCY PRECAUTIONS, TABLE A

Table version 12/2006

PROJECT ACTIVITY LEVEL

Level	Project Activity Requirements
A	Minimum required by K-H.2.2# <ol style="list-style-type: none"> 1. PAL levels are cumulative, Ev level would include all preceding PAL requirements.
B	<ol style="list-style-type: none"> 1. A fire patrolperson is required for mechanical operations from cessation of operations until 2 hours after operations cease or sunset, which ever occurs first. 2. Tank truck or trailer shall be on or adjacent to each active landing. 3. When hot saw technology is being used, the tank truck or trailer (B2 above) may serve dual purpose as active landing tank truck provided it shall be kept readily available for use as follows: <ol style="list-style-type: none"> a. Within one quarter mile of the operating hot saw technology; and b. Within 10 minutes of the active landing; and c. Effective communications exist between hot saw technology and active landing. Otherwise, there shall be a tank truck or trailer at both the active landing and within one quarter mile of the operating hot saw technology. 4. (Additional restrictions specified by the forest.)
C	<ol style="list-style-type: none"> 1. The following operations are prohibited from 1:00 PM until 8:00 PM local time: <ol style="list-style-type: none"> a. Blasting 2. Operations using hot saw technology are prohibited between 1:00 PM and sunset local time. Hot saw technology operations may continue if Contractor provides a portable fire suppression system capable of extinguishing a 20-foot by 20-foot wild land fire within five (5) minutes of discovery. The following equipment will meet the requirements above: <ol style="list-style-type: none"> a. Compressed Air Foam System with minimum requirements of 20 gallons stored energy, 100 feet of 1 inch hose and adjustable 1 inch nozzle, minimum discharge range of 60 feet and 1 spare air cylinder; or b. All terrain tank truck or equivalent capable of traveling throughout the cutting unit, containing not less than 300 gallons of water and complies with all tank truck requirements of K-H.2.2#. All terrain tank truck or equivalent may serve dual purpose as active landing tank truck provided:

- 1) Tank truck or equivalent shall be kept readily available to extinguish a fire within 5 minutes of discovery of the operating hot saw technology,
 - 2) Tank truck or equivalent shall be no further than 10 minutes travel time to the active landing,
 - 3) A 4-A:80-B:C extinguisher is maintained at the landing fire tool box and,
 - 4) Effective communications exist between the hot saw technology, active landing and all terrain tank truck or equivalent.
- Otherwise there shall be a tank truck at the active landing and an all terrain tank truck or equivalent with the hot saw technology.

3. (Additional restrictions specified by the forest.)

D

1. The following restrictions apply:
 - a. No blasting after 10:00 AM
 - b. Welding or cutting of metal only by special permit
 - c. No Burning without a permit

2. The following activities may not operate after 1:00 PM local time unless fire patrolperson(s) walks all areas operated that day once per hour until sunset local time and has the capability of notifying the designated Forest Service Dispatch Center within fifteen (15) minutes of discovery of a fire:
 - a. Track-laying equipment
 - b. Chipping outside of landings and roadbeds
 - c. Equipment using Hot Saw Technology
 - d. Chainsaw operations outside of landings and roadbeds
 - e. Tree felling operations
 - f. Ripping roads and landings
 - g. Mastication
 - h. Cable-yarding employing motorized carriages.

3. (Additional restrictions specified by the forest.)

<p>Ev</p>	<ol style="list-style-type: none"> 1. The following operations are prohibited: <ol style="list-style-type: none"> a. Blasting b. Welding or cutting metal c. Burning 2. Following activities may operate when fire patrolperson walks from 9:00 AM until local sunset all areas once per hour that were mechanically operated that day. <ol style="list-style-type: none"> A. Activities that may operate all day: <ol style="list-style-type: none"> 1. Hauling and loading of logs decked at approved landings. 2. Hauling and loading of chips piled at approved landings. 3. Equipment servicing at approved sites. 4. Roads: Dust abatement or rock aggregate installation (does not include pit or quarry development) 5. Chainsaw or stroke delimeter operation associated with loading at approved landing sites. B. All other Operations are permitted until 1:00 PM local time subject to the following: <ol style="list-style-type: none"> 1. When hot saw technology is being used a tractor or other equipment with blade capable of constructing fire line, shall be on standby and immediately available. Tractor will have effective communications with hot saw technology and be within one quarter mile of hot saw technology to quickly reach and effectively attack a fire start. C. (Additional restrictions specified by the forest.)
<p>E</p>	<p>The following activities may operate subject to B1. and B2.</p> <ol style="list-style-type: none"> 1. Hauling and loading of logs decked at approved landings. 2. Hauling and loading of chips piled at approved landings. 3. Equipment at approved sites may be serviced. 4 Roads: Dust abatement or rock aggregate installation (does not include pit development). 5. Chainsaw operation associated with loading at approved landings.