

Nina IRTC Stewardship Attachment

K-G.9#

Mandatory Project Number 1 Contractor Leave Tree Marking on a minimum of 5 acres each operating season or as agreed to by the Forest Service.

Desired End Result: properly designate included timber according to the prescription using tree marking paint in subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44 or as agreed to by the Forest Service.

Project Location: The locations of the work sites are shown on the Contract Area Map. This project work will occur within the boundaries of subdivisions: 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44

Technical Specifications:

Contractor will be required to mark leave trees on a minimum of five acres in one subdivision at the beginning of the operating season to demonstrate the prescription. Forest Service shall inspect marking prior to cutting (K-C.3.5.5#). Contractor shall provide and use orange non-tracer paint to identify leave trees by painting a slash at or below DBH and a stump mark on the downhill side of the tree in the crevices of the bark.

In DXP subdivisions (Subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44) Refer to provision K-C.3.5.5#-DESIGNATION BY PRESCRIPTION (9/2004) in the contract.

The following criteria are presented in the order of precedence

1. Do not cut any trees 21.0" DBH and Larger or trees of any size that exhibit Old Growth Characteristics
2. Do not cut any trees marked with orange paint
3. Do not cut any sugar pine
4. Remove all lodgepole pine
5. Thin from below removing from the remaining trees less than 21.0" DBH to achieve an average of 60 square feet of total basal area per acre, with an acceptable range at any point of 40 to 80.

Basal Area will be determined using a basal area factor of 10.

Trees over 21.0" will be included in the determination of basal area up to the maximum allowable range (80 sqft). In areas where only trees over 21.0" remain and they are in excess of the maximum allowable range, these excess trees will not be included in the stand average.

Old Growth characteristics - defined as trees with orange/yellow bark with maximum fissure to fissure plate width >6" and no knot/whorl indicators visible below main crown. For more information see Van Pelt, 2008 Identifying Old Trees and Forests in eastern Washington. Washington state Department of Natural Resources, Olympia, WA 166 p.

A copy of the Van Pelt guide is available at the Crescent Ranger District or on the internet at:

http://www.dnr.wa.gov/ResearchScience/Topics/ForestResearch/Pages/lm_oldgrowth_guides.aspx

Thin from Below - In general the smallest trees will be removed first, leaving the largest most vigorous trees. Vigorous trees are indicated by dominate and codominate crown positions, crown ratios greater than 30%, and no dwarf mistletoe or dwarf mistletoe restricted to the lower half of the crown.

Upon Forest Service inspection of leave tree marking, Contractor will cut the marked area and will then have the opportunity to demonstrate the prescription on a 3-5 acre area by cutting to the prescription specifications without marking. Forest Service shall inspect and approve cutting of this area prior to continuation. If the Contractor determines that they can effectively implement the prescription from the machine, additional leave tree marking throughout the subdivision will be allowed at the Contractor's expense. Marking will be for sawtimber trees only. Non-sawtimber and biomass size trees will be thinned to a spacing as outlined in project 2. Definition: non-saw and biomass trees are trees less than 7 inches for all species (less than 9 inches for Ponderosa pine).

If at any time the Forest Service determines the prescription is not being met, the Contractor may be required to leave tree mark before cutting. Any additional marking in excess of the five acres will be a cost born by the Contractor. The Forest Service may also exercise the option to flag/mark cut or leave trees to aid in demonstrating the prescription.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

- a) Damage attributable to the Contractor's operation shall be repaired immediately by the Contractor to prevent accelerated erosion or soil damage.

Acceptable Quality Level:

1. The Forest Service will make periodic inspections while work is in progress, usually daily at first, to assure work is proceeding satisfactorily. The Contractor shall notify the Forest Service when subdivisions are completed and ready for inspection prior to contractor moving out of the general area. An inspection will be made within five calendar days and the Contractor notified of any parts of the subdivision(s) requiring additional work or rework.
2. Each subdivision will be inspected as a separate subdivision. Subdivisions will not be averaged with other subdivisions for acceptance or payment.
3. The Forest Service will determine compliance of contract specifications through informal, 100 percent visual inspections. The Contractor or a designated representative is encouraged to observe inspections while they are underway. Failure to meet specifications will require prompt corrective action.

Mandatory Project Number 2 Treatment of non-saw and biomass Trees and Operator Created Slash in subdivisions: 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44

Desired End Result: Treat non-saw or biomass trees by mechanical thinning according to the following specifications. The resulting operator created slash shall be treated by removal or piling to meet required fuel loading. **No mastication is allowed in subdivisions: 8, 18, 38, 39, 40, 41, 42, 43, and 44.**

Project Location: The locations of the work sites are shown on the Contract Area Map. This project work will occur within the boundaries of harvest subdivisions: Subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, and 44

Technical Specifications:

Mechanical thinning Specifications

For non-saw and biomass sized trees

Definition: non saw and biomass trees are trees less than 7 inches for all species (less than 9 inches for Ponderosa pine).

Subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, and 44

Remove all non-saw or biomass trees within 25 feet of saw log sized trees remaining after DXP saw log portion of prescription is followed.

Tree condition/Vigor

Leave the largest, healthiest, most vigorous, least defective trees available. These are trees with more than 30 percent live crown ratio, dark green foliage, and long needles, with low branch/twig mortality and the least stem defect(crooks, forks, ect.)

SPECIES COMPOSITION

Leave healthy ponderosa pine over any lodgepole pine. If a healthy ponderosa pine is not available leave the healthiest most disease free tree of any species. Retain all Engelmann spruce, Douglas fir, or sugar pine to promote diversity.

INSECTS AND DISEASES

Dwarf mistletoe is the disease of most concern in the area. The most infected trees shall be favored for removal.

SPACING

Select the appropriate category for spacing based on the species and size categories of the tree that will be left and is spaced from.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

Optional Project Number 3 Treatment of non-saw and biomass Trees and Operator Created Slash in subdivisions: 4, 5, 6, 17, 19, 22, 23, 24, 25, 26, 33, 37, 45, 46

Desired End Result: Treat non-saw or biomass trees by mechanical thinning and/or mastication according to the following specifications. The resulting operator created slash shall be treated by removal, mulching, chopping, or piling to meet required fuel loading. **No mastication is allowed in subdivisions: 4, 17, 19, and 45.**

Project Location: The locations of the work sites are shown on the Contract Area Map. This project work will occur within the boundaries of harvest subdivisions: 4, 5, 6, 17, 19, 22, 23, 24, 25, 26, 33, 37, 45, 46

Technical Specifications:

Mechanical thinning Specifications

For non-saw and biomass sized trees

Definition: non saw and biomass trees are trees less than 7 inches for all species (less than 9 inches for Ponderosa pine).

subdivisions 4, 5, 6, 17, 19, 22, 23, 24, 25, 26, 33, 37, 45, and 46

Remove all non-saw or biomass sized trees on a 14 foot average spacing for lodgepole pine and on a 18 foot average spacing for Ponderosa pine.

Tree condition/Vigor

Leave the largest, healthiest, most vigorous, least defective trees available. These are trees with more than 30 percent live crown ratio, dark green foliage, and long needles, with low branch/twig mortality and the least stem defect (crooks, forks, ect.)

SPECIES COMPOSITION

Leave healthy ponderosa pine over any lodgepole pine. If a healthy ponderosa pine is not available leave the healthiest most disease free tree of any species. Retain all Engelmann spruce, Douglas fir, or sugar pine to promote diversity.

INSECTS AND DISEASES

Dwarf mistletoe is the disease of most concern in the area. The most infected trees shall be favored for removal.

SPACING

Select the appropriate category for spacing based on the species and size categories of the tree that will be left and is spaced from.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

Grapple Pile Specifications

Slash within the subdivision boundaries shall be piled except for that material specifically exempted as indicated herein. Quality standard shall be 90% of specified slash shall be piled.

In all subdivisions where such material is available, contractor shall leave a total of three un-utilized logs in decay Classes 2 and 3 per acre having a volume of at least 40 cubic feet. Example of logs containing 40 cubic feet, (160 bdft):

12 inches in diameter and larger and a minimum of 36 feet long

18 inches in diameter and larger and a minimum of 20 feet long

24 inches in diameter and larger and a minimum of 12 feet long

DO NOT MOVE OR DISTURB FROM NATURAL BED, DECAY CLASS 4 AND 5 LOGS

LOCATION OF PILES

- (1) Piles shall be located so that burning will not cause damage to standing trees. Unless otherwise approved, this will mean at least 10 feet from the crown or drip line of any tree or equidistant between standing live trees, whichever is greater.
- (2) Piles shall not be located in the bottom of draws which carry water during periods of surface runoff. The Forest Service will determine the location of these draws.
- (3) Whenever possible, piles created by the contractor shall be placed on an existing skid trail, log landing, temporary road or other previously disturbed site.

CONSTRUCTION AND SIZE OF PILES

- (1) All piles shall be compact and contain minimum soil. Height of the piles shall be no less than six feet. Diameter of piles shall be no less than twelve feet.
- (2) All material shall be piled so that it is compact to ensure the piles can be burned (ignited and consumed) during wet weather conditions.

Contractor's Obligations:

(a) Contractor shall furnish all equipment, labor, supervision, transportation, materials, tools, supplies, and incidentals necessary to perform the described work according to the specifications.

EQUIPMENT SPECIFICATIONS

All equipment utilized during contractors operations shall be of durable design and construction to withstand the stresses of natural

obstructions within forest lands such as rocks, stumps, roots, slash, dust and the general unevenness of uncultivated land.

(a) Grapple piling machine must be a track mounted mechanism; shall be equipped with a bucket and thumb type attachment or grapple that shall be able to reach a minimum of 15 feet, measured from center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

(b) Mastication and mechanical thinning machine must be a track mounted mechanism; shall be equipped with a drum or rotating head capable of breaking up material, up to and including 9 inches in diameter. Head shall be able to reach a minimum of 15 feet, measured from the center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

Hand Piling Specifications

1. All piles shall be constructed by laying slash in a pile so as to be parallel with each other. Piles will be trimmed with the excess pieces of slash placed in the hand pile. Slash that causes large air spaces in piles shall be cut or crushed to eliminate air spaces. Each pile shall include an area of small sized slash (small branches less than $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter and/or small branches with needles attached) to provide "kindling" for prompt ignition and to aid in combustion of larger slash. These fuels shall be placed at the bottom and middle of the pile.
2. All thinning slash between 1 and 9 inches in diameter and greater than 2 feet in length shall be piled. Slash left on the ground shall not exceed 3 inches in depth.
3. Unless otherwise approved by the COR, maximum hand pile size shall be 6 feet in diameter by 5 feet in height. Minimum hand pile size shall be 4 feet in diameter by 4 feet in height.
4. Pile shall be located so that burning will cause only minimal damage to standing trees. Unless otherwise approved, this means at least 5 feet from crown or drip line of any tree or equal distance between standing live trees, whichever is greater.
5. Piles shall not be located on logs, stumps, and roadways.
6. If piles are required by the Forest Service, Piles must be covered with contractor supplied plastic (at least 4 mil thick, 10 feet wide). Plastic shall be applied to piles after piling 80 percent of total material in pile. The remaining 20 percent of material shall be placed on top of the plastic to secure the plastic. Plastic shall be placed to cover 80 percent of pile to provide the best protection from rain and snow for later ignition. All unused/cut plastic shall be carried out of the unit if no longer needed to cover piles.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

Mastication Specifications

Technical Specifications:

MASTICATION

Slash within the subdivision boundaries shall be chopped, chewed, mulched or ground up until it is within 12 inches of the ground surface. 90 percent of all material shall be treated to those specifications.

Contractor's Obligations:

(a) Contractor shall furnish all equipment, labor, supervision, transportation, materials, tools, supplies, and incidentals necessary to perform the described work according to the specifications.

EQUIPMENT SPECIFICATIONS

All equipment utilized during contractors operations shall be of durable design and construction to withstand the stresses of natural obstructions within forest lands such as rocks, stumps, roots, slash, dust and the general unevenness of uncultivated land.

(a) Grapple piling machine must be a track mounted mechanism; shall be equipped with a bucket and thumb type attachment or grapple that shall be able to reach a minimum of 15 feet, measured from center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

(b) Mastication and mechanical thinning machine must be a track mounted mechanism; shall be equipped with a drum or rotating head capable of breaking up material, up to and including 9 inches in diameter. Head shall be able to reach a minimum of 15 feet, measured from the center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

Acceptable Quality Level for all the above mentioned specifications for Project 2 & 3:

1. The Forest Service will make periodic inspections while work is in progress, usually daily at first, to assure work is proceeding satisfactorily. The Contractor shall notify the Forest Service when subdivisions are completed and ready for inspection prior to contractor moving out of the general area. An inspection will be made within five calendar days and the Contractor notified of any parts of the subdivision(s) requiring additional work or rework.
2. Each subdivision will be inspected as a separate subdivision. Subdivisions will not be averaged with other subdivisions for acceptance.
3. The Forest Service will determine compliance of contract specifications through informal, 100 percent visual inspections. The Contractor or a designated representative is encouraged to observe inspections while they are underway. Failure to meet specifications will require prompt corrective action.

Nina IRTC Stewardship Attachment

K-G.9#

Mandatory Project Number 1 Contractor Leave Tree Marking on a minimum of 5 acres each operating season or as agreed to by the Forest Service.

Desired End Result: properly designate included timber according to the prescription using tree marking paint in subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44 or as agreed to by the Forest Service.

Project Location: The locations of the work sites are shown on the Contract Area Map. This project work will occur within the boundaries of subdivisions: 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44

Technical Specifications:

Contractor will be required to mark leave trees on a minimum of five acres in one subdivision at the beginning of the operating season to demonstrate the prescription. Forest Service shall inspect marking prior to cutting (K-C.3.5.5#). Contractor shall provide and use orange non-tracer paint to identify leave trees by painting a slash at or below DBH and a stump mark on the downhill side of the tree in the crevices of the bark.

In DXP subdivisions (Subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44)
Refer to provision K-C.3.5.5#-DESIGNATION BY PRESCRIPTION (9/2004) in the contract.

The following criteria are presented in the order of precedence

1. Do not cut any trees 21.0" DBH and Larger or trees of any size that exhibit Old Growth Characteristics
2. Do not cut any trees marked with orange paint
3. Do not cut any sugar pine
4. Remove all lodgepole pine
5. Thin from below removing from the remaining trees less than 21.0" DBH to achieve an average of 60 square feet of total basal area per acre, with an acceptable range at any point of 40 to 80.

Basal Area will be determined using a basal area factor of 10.

Trees over 21.0" will be included in the determination of basal area up to the maximum allowable range (80 sqft). In areas where only trees over 21.0" remain and they are in excess of the maximum allowable range, these excess trees will not be included in the stand average.

Old Growth characteristics - defined as trees with orange/yellow bark with maximum fissure to fissure plate width >6" and no knot/whorl indicators visible below main crown. For more information see Van Pelt, 2008 Identifying Old Trees and Forests in eastern Washington. Washington state Department of Natural Resources, Olympia, WA 166 p.

A copy of the Van Pelt guide is available at the Crescent Ranger District or on the internet at:

http://www.dnr.wa.gov/ResearchScience/Topics/ForestResearch/Pages/lm_oldgrowth_guides.aspx

Thin from Below - In general the smallest trees will be removed first, leaving the largest most vigorous trees. Vigorous trees are indicated by dominate and codominate crown positions, crown ratios greater than 30%, and no dwarf mistletoe or dwarf mistletoe restricted to the lower half of the crown.

Upon Forest Service inspection of leave tree marking, Contractor will cut the marked area and will then have the opportunity to demonstrate the prescription on a 3-5 acre area by cutting to the prescription specifications without marking. Forest Service shall inspect and approve cutting of this area prior to continuation. If the Contractor determines that they can effectively implement the prescription from the machine, additional leave tree marking throughout the subdivision will be allowed at the Contractor's expense. Marking will be for sawtimber trees only. Non-sawtimber and biomass size trees will be thinned to a spacing as outlined in project 2. Definition: non-saw and biomass trees are trees less than 7 inches for all species (less than 9 inches for Ponderosa pine).

If at any time the Forest Service determines the prescription is not being met, the Contractor may be required to leave tree mark before cutting. Any additional marking in excess of the five acres will be a cost born by the Contractor. The Forest Service may also exercise the option to flag/mark cut or leave trees to aid in demonstrating the prescription.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

- a) Damage attributable to the Contractor's operation shall be repaired immediately by the Contractor to prevent accelerated erosion or soil damage.

Acceptable Quality Level:

1. The Forest Service will make periodic inspections while work is in progress, usually daily at first, to assure work is proceeding satisfactorily. The Contractor shall notify the Forest Service when subdivisions are completed and ready for inspection prior to contractor moving out of the general area. An inspection will be made within five calendar days and the Contractor notified of any parts of the subdivision(s) requiring additional work or rework.
2. Each subdivision will be inspected as a separate subdivision. Subdivisions will not be averaged with other subdivisions for acceptance or payment.
3. The Forest Service will determine compliance of contract specifications through informal, 100 percent visual inspections. The Contractor or a designated representative is encouraged to observe inspections while they are underway. Failure to meet specifications will require prompt corrective action.

Mandatory Project Number 2 Treatment of non-saw and biomass Trees and Operator Created Slash in subdivisions: 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, 44

Desired End Result: Treat non-saw or biomass trees by mechanical thinning according to the following specifications. The resulting operator created slash shall be treated by removal or piling to meet required fuel loading. **No mastication is allowed in subdivisions: 8, 18, 38, 39, 40, 41, 42, 43, and 44.**

Project Location: The locations of the work sites are shown on the Contract Area Map. This project work will occur within the boundaries of harvest subdivisions: Subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, and 44

Technical Specifications:

Mechanical thinning Specifications

For non-saw and biomass sized trees

Definition: non saw and biomass trees are trees less than 7 inches for all species (less than 9 inches for Ponderosa pine).

Subdivisions 1, 2, 3, 8, 18, 38, 39, 40, 41, 42, 43, and 44

Remove all non-saw or biomass trees within 25 feet of saw log sized trees remaining after DXP saw log portion of prescription is followed.

Tree condition/Vigor

Leave the largest, healthiest, most vigorous, least defective trees available. These are trees with more than 30 percent live crown ratio, dark green foliage, and long needles, with low branch/twig mortality and the least stem defect (crooks, forks, ect.)

SPECIES COMPOSITION

Leave healthy ponderosa pine over any lodgepole pine. If a healthy ponderosa pine is not available leave the healthiest most disease free tree of any species. Retain all Engelmann spruce, Douglas fir, or sugar pine to promote diversity.

INSECTS AND DISEASES

Dwarf mistletoe is the disease of most concern in the area. The most infected trees shall be favored for removal.

SPACING

Select the appropriate category for spacing based on the species and size categories of the tree that will be left and is spaced from.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

Additional Project Number 3 Treatment of non-saw and biomass Trees and Operator Created Slash in subdivisions: 4, 5, 6, 17, 19, 22, 23, 24, 25, 26, 33, 37, 45, 46

Desired End Result: Treat non-saw or biomass trees by mechanical thinning and/or mastication according to the following specifications. The resulting operator created slash shall be treated by removal, mulching, chopping, or piling to meet required fuel loading. **No mastication is allowed in subdivisions: 4, 17, 19, and 45.**

Project Location: The locations of the work sites are shown on the Contract Area Map. This project work will occur within the boundaries of harvest subdivisions: 4, 5, 6, 17, 19, 22, 23, 24, 25, 26, 33, 37, 45, 46

Technical Specifications:

Mechanical thinning Specifications

For non-saw and biomass sized trees

Definition: non saw and biomass trees are trees less than 7 inches for all species (less than 9 inches for Ponderosa pine).

subdivisions 4, 5, 6, 17, 19, 22, 23, 24, 25, 26, 33, 37, 45, and 46

Remove all non-saw or biomass sized trees on a 14 foot average spacing for lodgepole pine and on a 18 foot average spacing for Ponderosa pine.

Tree condition/Vigor

Leave the largest, healthiest, most vigorous, least defective trees available. These are trees with more than 30 percent live crown ratio, dark green foliage, and long needles, with low branch/twig mortality and the least stem defect (crooks, forks, ect.)

SPECIES COMPOSITION

Leave healthy ponderosa pine over any lodgepole pine. If a healthy ponderosa pine is not available leave the healthiest most disease free tree of any species. Retain all Engelmann spruce, Douglas fir, or sugar pine to promote diversity.

INSECTS AND DISEASES

Dwarf mistletoe is the disease of most concern in the area. The most infected trees shall be favored for removal.

SPACING

Select the appropriate category for spacing based on the species and size categories of the tree that will be left and is spaced from.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

Grapple Pile Specifications

Slash within the subdivision boundaries shall be piled except for that material specifically exempted as indicated herein. Quality standard shall be 90% of specified slash shall be piled.

In all subdivisions where such material is available, contractor shall leave a total of three un-utilized logs in decay Classes 2 and 3 per acre having a volume of at least 40 cubic feet. Example of logs containing 40 cubic feet, (160 bdft):

12 inches in diameter and larger and a minimum of 36 feet long

18 inches in diameter and larger and a minimum of 20 feet long

24 inches in diameter and larger and a minimum of 12 feet long

DO NOT MOVE OR DISTURB FROM NATURAL BED, DECAY CLASS 4 AND 5 LOGS

LOCATION OF PILES

- (1) Piles shall be located so that burning will not cause damage to standing trees. Unless otherwise approved, this will mean at least 10 feet from the crown or drip line of any tree or equidistant between standing live trees, whichever is greater.
- (2) Piles shall not be located in the bottom of draws which carry water during periods of surface runoff. The Forest Service will determine the location of these draws.
- (3) Whenever possible, piles created by the contractor shall be placed on an existing skid trail, log landing, temporary road or other previously disturbed site.

CONSTRUCTION AND SIZE OF PILES

- (1) All piles shall be compact and contain minimum soil. Height of the piles shall be no less than six feet. Diameter of piles shall be no less than twelve feet.
- (2) All material shall be piled so that it is compact to ensure the piles can be burned (ignited and consumed) during wet weather conditions.

Contractor's Obligations:

(a) Contractor shall furnish all equipment, labor, supervision, transportation, materials, tools, supplies, and incidentals necessary to perform the described work according to the specifications.

EQUIPMENT SPECIFICATIONS

All equipment utilized during contractors operations shall be of durable design and construction to withstand the stresses of natural

obstructions within forest lands such as rocks, stumps, roots, slash, dust and the general unevenness of uncultivated land.

(a) Grapple piling machine must be a track mounted mechanism; shall be equipped with a bucket and thumb type attachment or grapple that shall be able to reach a minimum of 15 feet, measured from center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

(b) Mastication and mechanical thinning machine must be a track mounted mechanism; shall be equipped with a drum or rotating head capable of breaking up material, up to and including 9 inches in diameter. Head shall be able to reach a minimum of 15 feet, measured from the center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

Hand Piling Specifications

1. All piles shall be constructed by laying slash in a pile so as to be parallel with each other. Piles will be trimmed with the excess pieces of slash placed in the hand pile. Slash that causes large air spaces in piles shall be cut or crushed to eliminate air spaces. Each pile shall include an area of small sized slash (small branches less than $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter and/or small branches with needles attached) to provide "kindling" for prompt ignition and to aid in combustion of larger slash. These fuels shall be placed at the bottom and middle of the pile.
2. All thinning slash between 1 and 9 inches in diameter and greater than 2 feet in length shall be piled. Slash left on the ground shall not exceed 3 inches in depth.
3. Unless otherwise approved by the COR, maximum hand pile size shall be 6 feet in diameter by 5 feet in height. Minimum hand pile size shall be 4 feet in diameter by 4 feet in height.
4. Pile shall be located so that burning will cause only minimal damage to standing trees. Unless otherwise approved, this means at least 5 feet from crown or drip line of any tree or equal distance between standing live trees, whichever is greater.
5. Piles shall not be located on logs, stumps, and roadways.
6. If piles are required by the Forest Service, Piles must be covered with contractor supplied plastic (at least 4 mil thick, 10 feet wide). Plastic shall be applied to piles after piling 80 percent of total material in pile. The remaining 20 percent of material shall be placed on top of the plastic to secure the plastic. Plastic shall be placed to cover 80 percent of pile to provide the best protection from rain and snow for later ignition. All unused/cut plastic shall be carried out of the unit if no longer needed to cover piles.

Contractor's Obligations: The Contractor shall furnish all equipment, materials, supervision, transportation and supplies to complete this project.

Mastication Specifications

Technical Specifications:

MASTICATION

Slash within the subdivision boundaries shall be chopped, chewed, mulched or ground up until it is within 12 inches of the ground surface. 90 percent of all material shall be treated to those specifications.

Contractor's Obligations:

(a) Contractor shall furnish all equipment, labor, supervision, transportation, materials, tools, supplies, and incidentals necessary to perform the described work according to the specifications.

EQUIPMENT SPECIFICATIONS

All equipment utilized during contractors operations shall be of durable design and construction to withstand the stresses of natural obstructions within forest lands such as rocks, stumps, roots, slash, dust and the general unevenness of uncultivated land.

(a) Grapple piling machine must be a track mounted mechanism; shall be equipped with a bucket and thumb type attachment or grapple that shall be able to reach a minimum of 15 feet, measured from center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

(b) Mastication and mechanical thinning machine must be a track mounted mechanism; shall be equipped with a drum or rotating head capable of breaking up material, up to and including 9 inches in diameter. Head shall be able to reach a minimum of 15 feet, measured from the center pin. Machine with attachment(s) shall not exert more than 7 pounds per square inch ground pressure.

Acceptable Quality Level for all the above mentioned specifications for Project 2 & 3:

1. The Forest Service will make periodic inspections while work is in progress, usually daily at first, to assure work is proceeding satisfactorily. The Contractor shall notify the Forest Service when subdivisions are completed and ready for inspection prior to contractor moving out of the general area. An inspection will be made within five calendar days and the Contractor notified of any parts of the subdivision(s) requiring additional work or rework.
2. Each subdivision will be inspected as a separate subdivision. Subdivisions will not be averaged with other subdivisions for acceptance.
3. The Forest Service will determine compliance of contract specifications through informal, 100 percent visual inspections. The Contractor or a designated representative is encouraged to observe inspections while they are underway. Failure to meet specifications will require prompt corrective action.

Contract Name: Nina Stewardship

K-H.1 - PLANS (05/2005)

The plan shall state how Contractor's representative or alternates will be contacted in a fire emergency, both during periods of operation and at other times such as evenings or weekends. Contractor shall certify compliance with specific fire precautionary measures included as Subsections under K-H.2 - Specific Fire Precautions, before beginning operations during Fire Precautionary Period (closed season) and shall update such certification when operations change.

If helicopter yarding is required, the plan shall include a schedule of rates mutually agreed to for computing Contractor costs incurred toward meeting Contractor's obligations under A.14, or for paying for helicopters controlled by Contractor and used under Forest Service direction for suppressing Operations Fires or other fires on Contract Area, excluding Negligent Fires.

Contract Name: Nina Stewardship

K-H.2 - SPECIFIC FIRE PRECAUTIONS (05/2005)

When the industrial fire precaution level is I or higher, unless waiver is granted under K-H.2.2, specific required fire precautionary measures are as follows:

A. Fire Security.

Contractor shall designate in writing a person or persons who shall perform fire security services listed below on Contract Area and vicinity. The designated person will be capable of operating Contractor's communications and fire fighting equipment specified in the contract, excluding helicopters, and of directing the activities of Contractor's personnel on Forest fires. Such person must report any fire detected to Forest Service within 15 minutes of detection. In lieu of having the designated person perform the required supervisory duties, Contractor may provide another person meeting the qualifications stated above to direct the activities of Contractor's personnel and equipment during all fire fighting activities.

Services described shall be for at least 1 hour from the time Contractor's Operations are shut down. For the purposes of this provision, personnel servicing equipment, and their vehicles, who are not engaged in cutting or welding metal are excluded.

Fire security services shall consist of moving throughout the operation area or areas constantly looking, reporting, and taking suppression action on any fires detected. Where possible, the designated person shall observe inaccessible portions of helicopter operating areas from vantage points within or adjacent to Contract Area.

Contractor shall furnish fire security services based on the predicted industrial precaution level, obtained by Contractor from the appropriate Ranger District Headquarters. If predictions made after 6:00 p.m. local time, are significantly different than originally estimated, Forest Service will inform Contractor when changes in fire security services are indicated.

B. Fire Extinguisher and Equipment (on Trucks, Tractors, Power Saws, etc.).

(a) Each yarder or loader equipped with an internal combustion engine or other spark emitting source shall be equipped with a readily accessible fire extinguisher, with an Underwriter's Laboratory (UL) Rating of at least 5 B,C.

(b) All power-driven equipment operated by Contractor on National Forest land, except portable fire pumps, shall be equipped with one fire extinguisher having a UL rating of at least 5 B,C and one "D" handled or long handled round point shovel, size O or larger. In addition, each motor patrol, truck and passenger-carrying vehicle shall be equipped with a double-bit axe or Pulaski, 3-1/2 pounds or larger.

(c) Equipment required in (a) and (b) shall be kept in a serviceable condition and shall be readily available.

(d) Each gasoline power saw operator shall be equipped with a pressurized chemical fire extinguisher of not less than 8-ounce capacity by weight, and one long handled round point shovel, size O or larger, except at a landing where a suitable fire extinguisher and shovel are immediately available. The extinguisher will be kept in possession of the saw operator at all times. The shovel shall be accessible to the operator within 1 minute.

(e) Each helicopter shall be equipped with one fire extinguisher having a UL rating of at least 5 B,C mounted inside the aircraft within reach of the pilot's operating position.

(f) One refill for each type or one extra extinguisher sufficient to replace each size extinguisher required on equipment shall be safely stored in the fire tool box or other agreed upon place on Contract Area that is protected and readily available.

Contract Name: Nina Stewardship

(g) At each area where helicopters are being serviced or supplied, a carbon dioxide fire extinguisher with a UL rating of at least 20 B,C will be provided on the site and placed where it is available for immediate use.

C. Spark arresters and mufflers.

Each internal combustion engine shall be equipped with a spark arrester qualified and rated under USDA Forest Service Standard 5100-1a as shown in the National Wildfire Coordination Group Spark Arrester Guide, unless it is:

(a) Equipped with a turbine-driven exhaust supercharger such as the turbocharger. There shall be no exhaust bypass.

(b) A multi-position engine, such as on power saws which must meet the performance levels set forth in the Society of Automotive Engineers (SAE) "multi-positioned small engine exhaust fire ignition standard, SAE recommended practice J335B" as now or hereafter amended.

(c) A passenger carrying vehicle or light truck, or medium truck up to 40,000 GVW, used on roads and equipped with a factory designed muffler complete with baffles and an exhaust system in good working condition.

(d) A heavy duty truck, such as a dump or log truck, or other vehicle used for commercial hauling, used only on roads and equipped with a factory designed muffler and with a vertical stack exhaust system extending above the cab.

Exhaust equipment described in this Subsection, including spark arresters and mufflers, shall be properly installed and constantly maintained in serviceable condition.

D. Fire Tools.

Contractor shall furnish serviceable fire fighting tools in a readily accessible fire tool box or compartment of sound construction with a hinged lid and hasp so arranged that the box can be secured or sealed. The box shall be red and marked "Fire Tools" in letters at least 1 inch high. It shall contain a minimum of:

(a) Two axes or Pulaskis with a 32 inch handle.

(b) Three adze eye hoes. One Pulaski may be substituted for one adze eye hoe.

(c) Three long handled, round point shovels, size 0 or larger.

E. Tank Truck.

Contractor shall provide a tank truck or trailer, containing not less than 300 gallons of water, during yarding, skidding, loading, land clearing, right-of-way clearing, mechanical falling, and mechanical treatment of slash. Such tank truck or trailer shall be maintained in a serviceable condition and located within 10 minutes, round trip, from each operating side during Fire Precautionary Period (closed season), except as provided under H.2.1.

The tank truck or trailer shall be equipped with a pump capable of discharging 20 gallons of water per minute, using a 1/4 inch nozzle tip, through a 50 foot length of poly or rubber lined hose. In addition, 500 feet of serviceable hard rubber poly or rubber lined or FJRL hose of not less than 1 inch outside diameter, fitted with a nozzle capable of discharging a straight stream of 1/4 inch diameter and a spray pattern shall be immediately available for use. The tank, pump, nozzle and at least 250 feet, of the total 500 feet of hose, shall be connected and ready for use at all times. Synthetic hose may be used by

Contract Name: Nina Stewardship

agreement.

If a trailer is used, it shall be equipped with a hitch to facilitate prompt movement. A serviceable tow vehicle shall be immediately available for attachment to the trailer and must meet the time requirements stated above. Such truck or trailer shall be equipped to operate for a minimum of 8 hours.

Where designated on Contract Area Map, Contractor shall provide a tank trailer or water source and pumping equipment, including accessories, which can be lifted and transported by the yarding system. The component parts shall meet all specifications above. The tank trailer or water supply and pumping accessories shall be deliverable to a fire, in area of operations, within 15 minutes of detection.

In lieu of the above tank trailer or water supply for helicopter operations, Contractor may provide a suitable helicopter water bucket with a 300 gallon capacity. When Contractor provides a water bucket, a water source shall be provided within 5 minutes round trip flight time from operating side.

F. Communications.

During Contractor's Operations, excluding powersaw falling and bucking, Contractor shall provide adequate two-way communication facilities to report a fire to Forest Service within 15 minutes of detection. Citizen Band radios (CB's) are not considered adequate two-way communications because FCC Regulations prohibit commercial use.

G. Smoking and Open Fire Restrictions.

Smoking and fires shall be permitted only at the option of Contractor. Contractor shall not permit open fires on Contract Area without advance permission in writing from Forest Service.

H. Blasting.

Blasting shall be permitted only for road construction purposes unless advance permission is obtained from Forest Service.

Whenever the Industrial Fire Precaution Level is II or greater, a fire security person equipped with a long handled round point No. 0 or larger shovel and a 5 gallon backpack pump can filled with water, will stay at location of blast for 1 hour after blasting is done. Blasting may be suspended by Forest Service, in areas of high rate of spread and resistance to control.

Fuses shall not be used for blasting. Explosive cords shall not be used without permission of Forest Service, which may specify conditions under which such explosives may be used and precautions to be taken.

I. Compliance with State Fire Laws.

Listing of specific fire precautionary measures in the foregoing Subsections is not intended to relieve Contractor in any way from compliance with State fire laws covering fire prevention and suppression equipment, applicable to Contractor's Operations.

J. Aircraft Communications.

Every aircraft used in conjunction with Contractor's Operations shall be equipped with an operable radio system. The radio system shall be capable of transmitting and receiving on VHF frequency 122.85 Megahertz (MHz) with a minimum output of 5 watts at the transmitter. The system shall be located and installed so that the pilot can operate it while flying. A shielded all-weather broad-band antenna shall be part of the system. Radio and antenna shall be properly installed and maintained.

Upon discovery or notification of a fire on Contract Area, all aircraft pilots controlled by Contractor

Contract Name: Nina Stewardship

shall monitor VHF frequency 122.85 MHz when within 5 miles of a fire and broadcast their intentions.

K. Logging Block Equipment.

Contractor shall provide a serviceable 5 gallon backpack pump full of water, one axe, and one long handled round point shovel, size 0 or larger, at each haulback block through which a running line passes.

The area below such blocks must be kept clear of all flammable debris under 4 inches in diameter for a distance of 6 feet in all directions. Material larger than 4 inches that poses a fire risk, such as punky logs, must also be removed.

Contractor shall avoid line-rub on rocks or woody material which may result in sparks or sufficient heat to cause ignition of fire.

K-H.2.0.1 - BURNING BY CONTRACTOR (06/2006)

Notwithstanding the Fire Precautionary Period limitation of H.2, Contractor is required to obtain written permission from Forest Service prior to any burning on the National Forest Lands.

Contract Name: Nina Stewardship

K-H.2.2 - EMERGENCY FIRE PRECAUTIONS (05/2005)

Contractor shall restrict operations in accordance with the Industrial Fire Precaution Levels attached. Forest Service may change the Industrial Fire Precaution Levels to other values upon revision of the National Fire Danger Rating System and may change the specific Industrial Fire Precaution Levels when such changes are necessary for the protection of the National Forest. When sent to Contractor, the revised Industrial Fire Precaution Levels will supersede the attached levels.

INDUSTRIAL FIRE PRECAUTIONS SCHEDULE

LEVEL INDUSTRIAL FIRE PRECAUTION

I. Closed Season - Fire precaution requirements are in effect. A Fire Watch/Fire Security is required at this and all higher levels unless otherwise waived.

II. Partial Hootowl - The following may operate only between the hours of 8 p.m. and 1 p.m. local time:

power saws, except at loading sites;
cable yarding;
blasting;
welding or cutting of metal.

III. Partial shutdown - The following are prohibited:

cable yarding - except that gravity operated logging systems employing non-motorized carriages may be operated between the hours of 8 p.m. and 1 p.m. local time when all blocks and moving lines are 10 feet or more above the ground, excluding the line between the carriage and the choker.

power saws - except at loading sites and on tractor/skidder operations between the hours of 8 p.m. and 1 p.m. local time.

In addition, the following are permitted between the hours of 8 p.m. and 1 p.m. local time:

tractor, skidder, feller-buncher, forwarder, or shovel logging operations where tractors, skidders or other equipment with a blade capable of constructing fireline are immediately available to quickly reach and effectively attack a fire start;
mechanized loading and hauling;
blasting;
welding or cutting of metal;
any other spark-emitting operation not specifically mentioned.

IV. General shutdown - All operations are prohibited.

The following definitions shall apply to these Industrial Fire Precaution Levels:

Cable yarding systems: A yarding system employing cables and winches in a fixed position.

Closed Season (Fire Precautionary Period): That time period each year when a fire hazard exists and as described in A.12.

Hauling: Where hauling involves transit through more than one shutdown zone/regulated use area, the precaution level at the woods site shall govern the level of haul restrictions, unless prohibited by other than the Industrial Fire Precaution Level system.

Loading sites/woods site: A place where any product or material (including but not limited to logs,

Contract Name: Nina Stewardship

firewood, slash, soil, rock, poles, posts, etc.) is placed in or upon a truck or other vehicle.

Advance written waiver of the above precautions may be issued by the Contracting Officer or Forest Service Representative.

Such waiver, or substitute precautions under H.2.1, shall prescribe measures to be taken by Contractor to reduce the risk of ignition, and/or the spread of fire. The Contracting Officer or Forest Service Representative shall consider site specific weather factors, fuel conditions, and specific operations that result in less risk of fire ignition and/or spread than contemplated when precaution level was predicted. Consideration shall also be given to measures that reduce the precaution levels above. Contractor shall assure that all conditions of such waivers or substitute precautions are met.

Contractor shall obtain the predicted Industrial Fire Precaution Level from the appropriate Ranger District headquarters. If predictions made after 6:00 p.m., local time, are significantly different than originally estimated, Forest Service will inform Contractor when changes in restrictions or industrial precautions are indicated.

K-H.3.1 - ADDITIONAL AREA OF FIRE RESPONSIBILITY (05/2005)

The area within 200 feet slope distance of the center line of any road constructed or reconstructed under this contract on National Forest lands outside of Contract Area shall be considered as a part of Contract Area in connection with responsibilities under H.3 and H.4 until the road has been accepted in writing by Forest Service.

K-I.1.0 - DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTY (05/2005)

Contractor and Forest Service hereby agree, acknowledge, and accept that there is no expressed or implied warranty provided by the Forest Service that guarantees the Contractor will be allowed to complete the removal of products sold under the terms of the contract. Upon execution of the contract, Contractor hereby acknowledges the acceptance of the risk that this contract is subject to interruption or termination as a result of litigation associated with the environmental analysis process used by the Forest Service in the planning of this project. If such interruption or termination occurs due to litigation, Contractor agrees to accept as full compensation for such interruption remedies pursuant to I.3.3, or for termination remedies pursuant to I.3.4.

Contract Name: Nina Stewardship

K-I.2.1.2 - MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52. The Producer Price Index used to determine when a drastic reduction in price has occurred is stated in A.20. Contractor will be notified whenever the Chief determines that a drastic reduction in wood product prices has occurred. If the drastic reduction criteria specified in 36 CFR 223.52 are met for 2 consecutive calendar quarters, after contract award date, Contracting Officer will add 1 year to the contract term, upon Contractor's written request. For each additional consecutive quarter such a drastic reduction occurs, Contracting Officer will, upon written request, add an additional 3 months to the term during Normal Operating Season, except that no single 3-month addition shall extend the term of the contract by more than one year. Contracting Officer must receive Contractor's written request for a market-related contract term addition before the expiration of this contract.

No more than 3 years shall be added to a contract's term by market-related contract term addition unless the following conditions are met:

(i) The contract was awarded after December 31, 2006; and

(ii) A drastic reduction in wood product prices occurred in at least ten of twelve consecutive quarters during the contract term, but not including the quarter in which the contract was awarded.

For each qualifying quarter meeting the criteria in paragraphs (i) and (ii) of this provision, the Forest Service will, upon the Contractor's written request, add an additional 3 months during the normal operating season to the contract, except no single 3-month addition shall extend the term of a contract by more than 1 year.

In no event shall a revised contract term exceed 10 years as a result of market-related contract term addition.

Additional contract time may not be granted for those portions of the contract that have a required completion date or for those portions of the contract where Contracting Officer determines that the timber is in need of urgent removal or that timber deterioration or resource damage may result from delay.

K-I.3.1# - CONTRACT CHANGES (OPTION 1) (05/2005)

Contract changes involving volumes and/or values will use a weight ratio of 3.3077 to convert net CCF cruise volumes to Tons.

Contract Name: Nina Stewardship

K-I.6.8# (Option 1) - USE OF TIMBER (09/2004)

(a) This contract is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, et seq.).

(b) Except for NONE determined pursuant to public hearing to be surplus, unprocessed Included Timber shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Contractor or any person as defined in the Act (16 USC 620e).

(c) Timber in the following form will be considered unprocessed:

(i) Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use;

(ii) Lumber, construction timbers, or cants intended for remanufacturing not meeting standards defined in the Act (16 USC 620e); and

(iii) Aspen or other pulpwood bolts exceeding 100 inches in length.

(d) Unless otherwise agreed in writing, unprocessed Included Timber shall be delivered to a domestic processing facility and shall not be mixed with logs intended for export.

(e) Prior to award, during the life of this contract, and for a period of 3 years from Termination Date, Contractor shall furnish to Forest Service, upon request, records showing the volume and geographic origin of unprocessed timber from private lands exported or sold for export by Contractor or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Contractor shall require each buyer, exchangee, or recipient to execute an acceptable agreement that will:

(i) Identify the Federal origin of the timber;

(ii) Specify domestic processing for the timber involved;

(iii) Require the execution of such agreements between the parties to any subsequent transactions involving the timber;

(iv) Require that all hammer brands and/or yellow paint must remain on logs until they are either legally exported or domestically processed, whichever is applicable; and

(v) Otherwise comply with the requirements of the Act (16 USC 620d).

(g) No later than 10 days following the execution of any such agreement between Contractor and another party, Contractor shall furnish to Forest Service a copy of each such agreement. Contractor shall retain, for 3 years from Termination Date, the records of all sales, exchanges, or dispositions of all Included Timber.

(h) Upon request, all records dealing with origin and disposition of Included Timber shall be made available to Contracting Officer.

(i) For breach of this Section, Forest Service may terminate this contract and take such other action as may be provided by statute or regulation, including the imposition of penalties. When terminated by Forest Service under this Section, Forest Service will not be liable for any Claim submitted by Contractor relating to the termination.

