

West Sulphur Mountain Fuel Modification Prescriptions

Prepared for:
Erin Tassell & Jane Park
Parks Canada, Banff Field Unit

Prepared by:
Stew Walkinshaw, R.P.F.

MONTANE
Forest Management Ltd.

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Overview

Prescriptions are based on overstory timber type (density, height, species), understory characteristics, and slope and include:

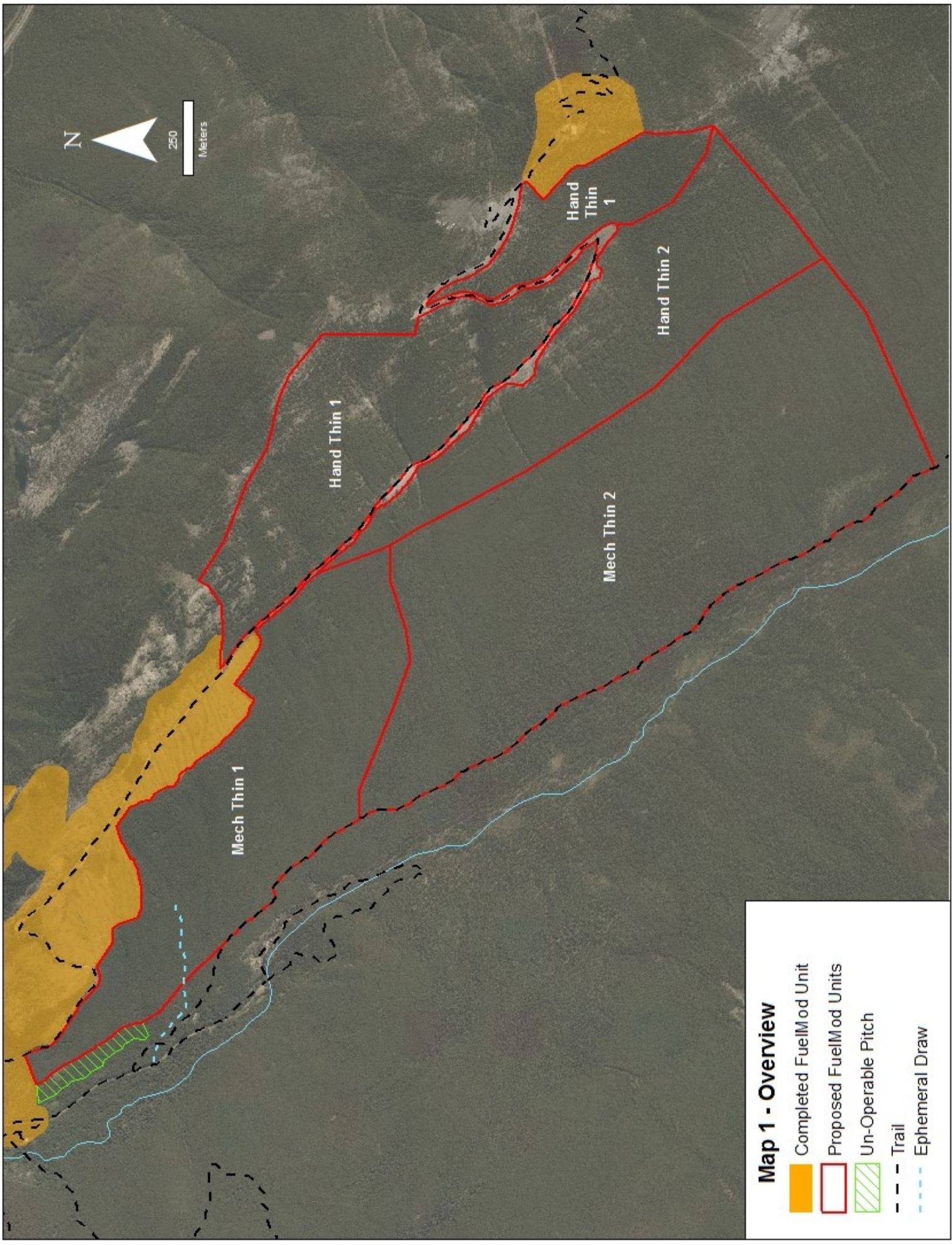
- Cluster-Thinning in “D” density (71-100% crown closure) ≤ 20 m height lodgepole pine stands
- Understory thinning in “A”, “B”, and “C” density ($< 71\%$ crown closure) > 20 m height stands
- Ladder fuels, dead standing, and dead & down removal in all units including cluster retention patches
- Retention of all Whitebark pine, Douglas fir, and deciduous trees and shrubs

Mechanical equipment operability is based on percent slope, determined from BNP contour data and field measurements:

- Mechanical operations on slopes 45% or less
- Hand-crews on slopes $> 45\%$
- There may be some isolated steep pitches ($> 45\%$) within the mechanical blocks that will need to be avoided by mechanical crews and completed by hand crews

Unit boundary corners have been field confirmed however internal boundaries have not and may change at time of field unit layout.

Debris disposal in all units is by piling and burning



Mechanical Thin 1

Retain:

- **ALL** Whitebark pine and Douglas fir
- All healthy deciduous trees and shrubs

Remove/Reduce:

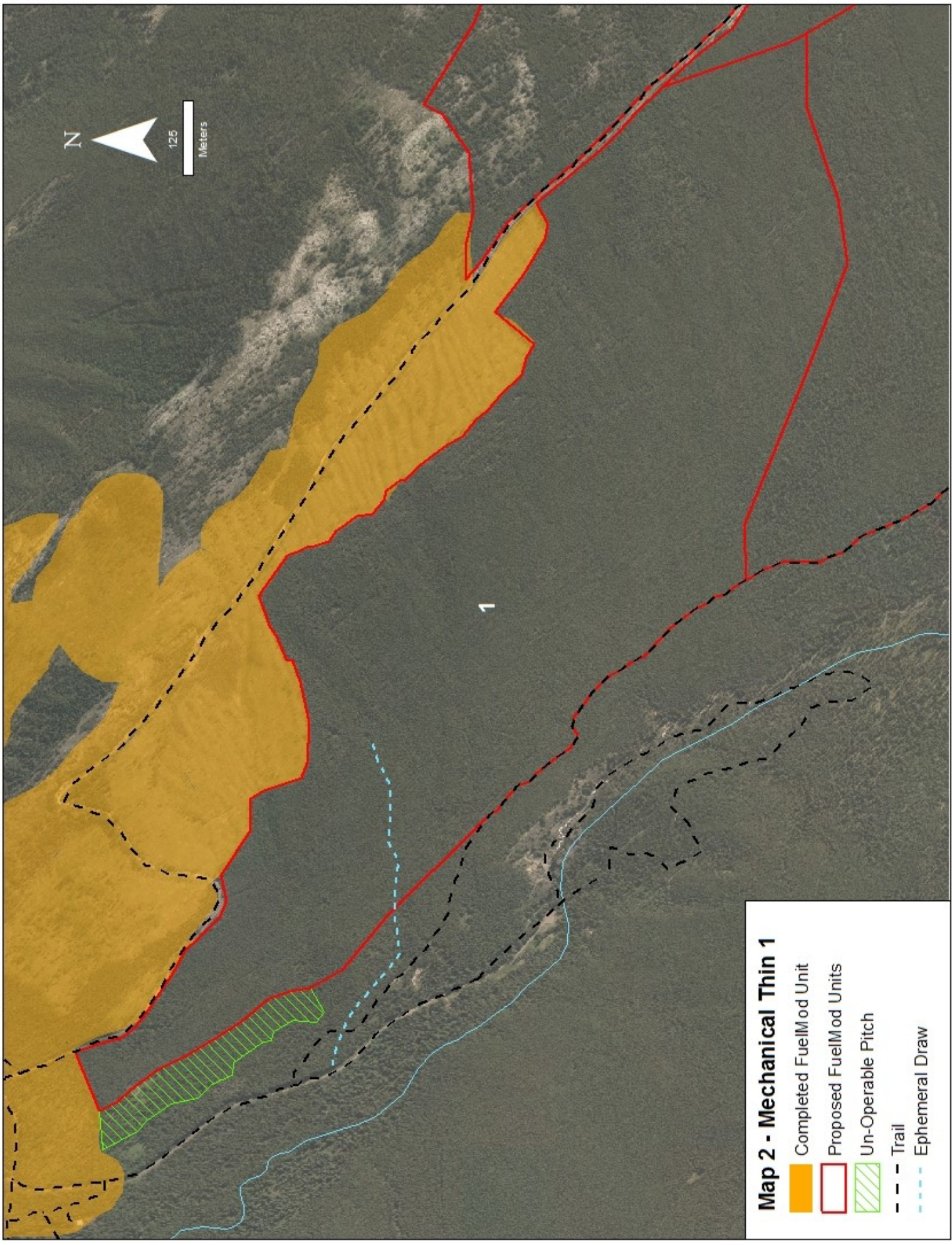
- Cluster-Thin coniferous overstory and advanced-growth understory to 2 crown-width spacing as follows:
 - Residual cluster diameters of approximately 25 metres
 - 75 metre inter-cluster spacing
 - Coniferous regeneration (<6 metres height) to be undamaged and retained
- Prune limbs on coniferous stems in residual clusters to 2 metres above ground level at the lowest point
- Remove all dead standing in residual clusters unless showing signs of recent cavity-nesting activity
- Remove all dead and down debris in residual clusters unless in an advanced state of decay and not contributing to fuel load

Debris Disposal:

- All debris resulting from fuel modification operations to be piled for burning:
 - Debris to be piled clean and as tightly as possible
 - If a processor and/or excavator are used to pile debris, pieces shall not exceed 2 metres
 - If a feller buncher is used to windrow the debris, tops and butts shall be alternated throughout the pile or windrow to improve burning success
- All debris to be piled in cleared areas a minimum of 15 metres from residual clusters for future burning by Parks Canada

Environment:

- Protection measures to the ephemeral drainage channel include:
 - Machinery to cross only at planned locations and only during frozen ground conditions
 - Undisturbed buffer of brush and lesser vegetation to be left within 5 metres of both sides of the channel bottom
 - Accumulations of slash and debris from operations within 5 metres of both sides of the channel bottom to be removed progressively with operations
 - No burn piles within 10 metres of the channel bottom



Mechanical Thin 2

Retain:

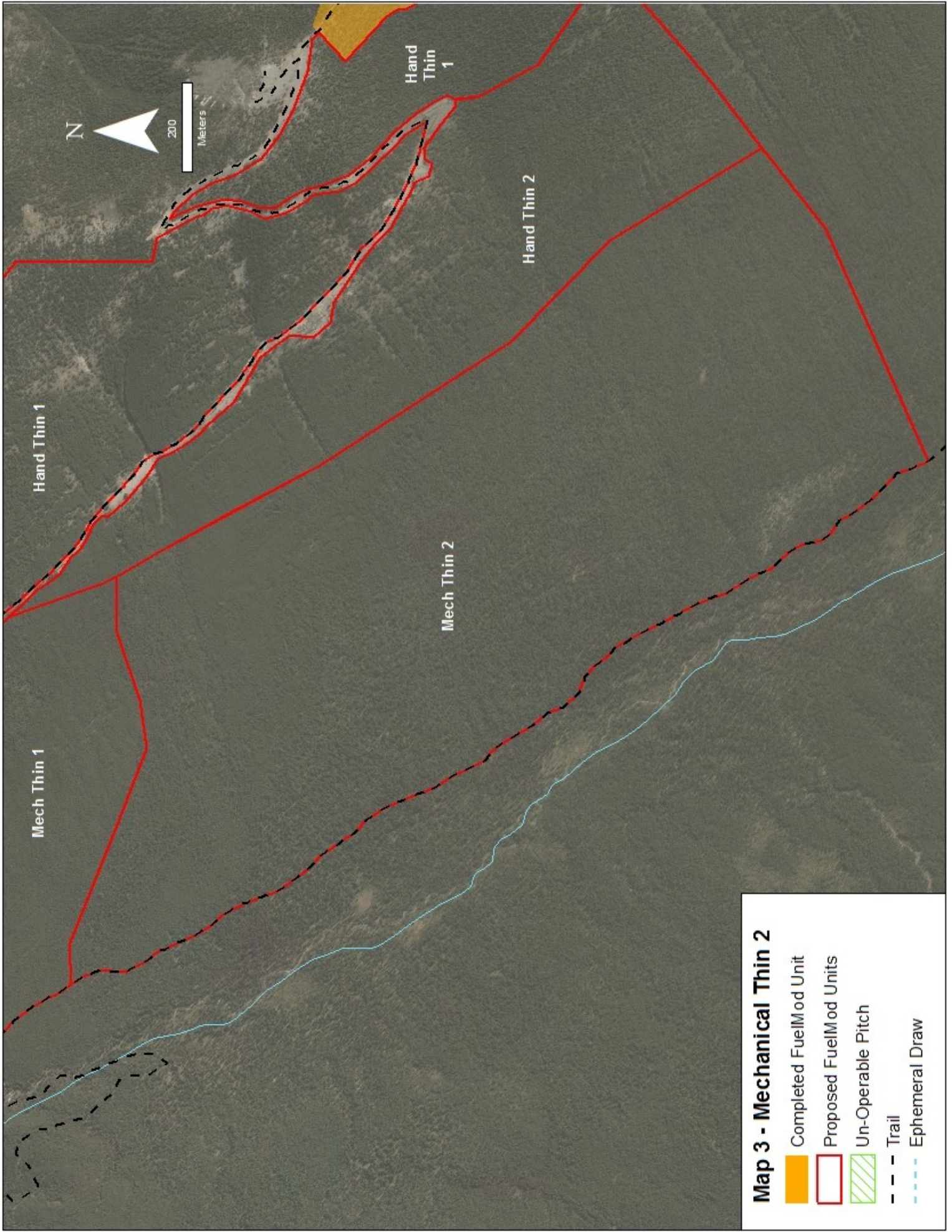
- **ALL** Whitebark pine and Douglas fir
- All healthy deciduous trees and shrubs

Remove/Reduce:

- Thin coniferous advanced growth understory (AGUS) and regen ≤ 25 cm butt diameter to a minimum of 4 metre crown-spacing between residual coniferous regen, AGUS, and overstory
- Thin coniferous overstory >25 cm butt diameter to a minimum of 2 metre crown-spacing
- Prune limbs on residual coniferous stems to 2 metres above ground level at the lowest point
- Remove all dead standing unless showing signs of recent cavity-nesting activity
- Remove all dead and down debris unless in an advanced state of decay and not contributing to fuel load

Debris Disposal:

- All debris resulting from fuel modification operations to be piled for burning:
 - Debris to be piled clean and as tightly as possible
 - If a processor and/or excavator are used to pile debris, pieces shall not exceed 2 metres
 - If a feller buncher is used to windrow the debris, tops and butts shall be alternated throughout the pile or windrow to improve burning success
- All debris to be piled in natural clearings or clearings created during the thinning process to minimize scorch damage when burned by Parks Canada



Map 3 - Mechanical Thin 2

- Completed FuelMod Unit
- Proposed FuelMod Units
- Un-Operable Pitch
- Trail
- Ephemeral Draw

Hand Thin 1 and 2

Retain:

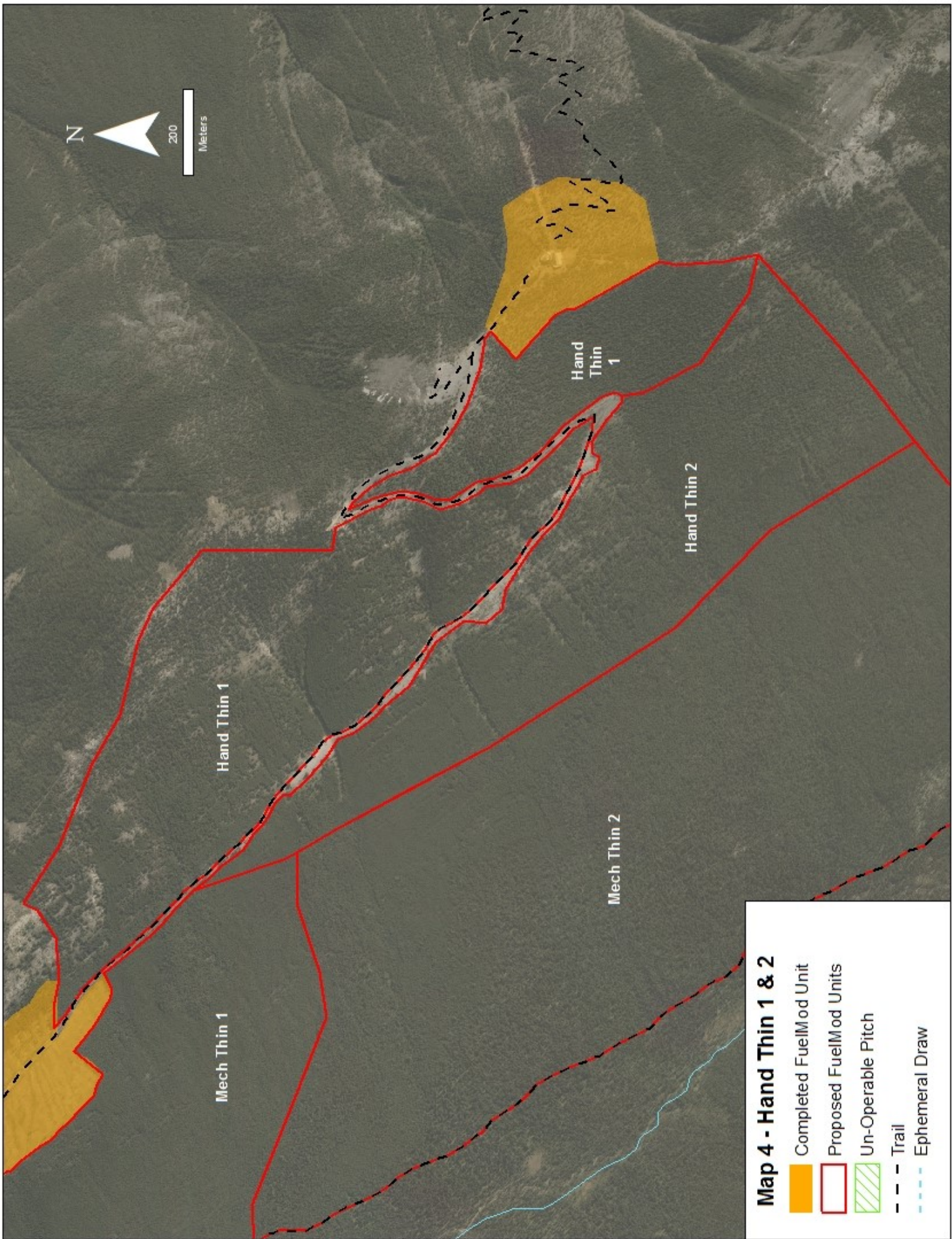
- **ALL** Whitebark pine and Douglas fir
- All healthy deciduous trees and shrubs

Remove/Reduce:

- Thin coniferous advanced growth understory (AGUS) and regen ≤ 27.5 cm butt diameter to a minimum of 4 metre crown-spacing between residual coniferous regen, AGUS, and overstory
- Clumping of coniferous AGUS/Regen is acceptable when overstory and AGUS are spaced by more than 6 metre crown-spacing
- Thin coniferous overstory >27.5 cm butt diameter to a minimum of 2 metre crown-spacing
- Prune limbs on residual coniferous stems to 2 metres above ground level at the lowest point
- Remove all dead standing unless showing signs of recent cavity-nesting activity
- Remove all dead and down debris unless in an advanced state of decay and not contributing to fuel load

Debris Disposal:

- All debris resulting from fuel modification operations to be piled for burning
- All debris to be piled in natural clearings or clearings created during the thinning process to minimize scorch damage when burned by Parks Canada



Map 4 - Hand Thin 1 & 2

- Completed FuelMod Unit
- Proposed FuelMod Units
- Un-Operable Pitch
- Trail
- Ephemeral Draw