



HAZARDOUS FUELS PROJECT DESIGN & IMPLEMENTATION

*Allen Chrisman
North Fork Fire
Mitigation Committee
Firewise Day 2012*

CHRISMAN/WILEY NORTH FORK FAMILY FOREST



Management Plan Objectives:

- 1. Reduce natural fuel loadings and create fuel breaks through timber management and slash disposal to reduce threat of property loss from wildfire**
- 2. Manage timberlands to provide for healthy forests**
- 3. Aggressively treat noxious weeds and invasive species**
- 4. Protect the recreational, cultural and aesthetic values of the property**
- 5. Provide for wildlife habitat over time**
- 6. Provide for long term yield of forest products over time**

Hazardous Fuels Project Prescription

Fuels:

- **Remove surface fuels**
- **Remove ladder fuels**
- **Space out aerial fuels ~ 10 feet between crowns**
- **Remove lower limbs to 6' to 8'**

Silviculture:

- **Retain western larch, Douglas-fir, Engelmann spruce**
- **Remove most subalpine fir, lodgepole pine**
- **Manage for large diameter WL, DF & ES**
- **Remove sick/lame/lazy**
- **Minimize surface disturbance (not encouraging regeneration)**
- **Thin patches of larch regeneration**

BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



BEFORE



AFTER



Logging

Equipment:

- 2 Kubota 4wd Tractors w/brush/log forks
 - Logging winch/arch
- Track mounted excavator
 - Bucket with thumb
 - Processor head

Operations:

- Hand felling, whole tree skidding to landing
- Processor manufactured logs, sorted into sawlogs & pulp, mostly 16' lengths
- Large landing, large landing pile (70'x25'x10')
- Few small piles in woods from limbs, broken tops, burned well (like handpiles)
- Landing pile required dozer to push in during burning

Clearing Landing



Processor Head



Skidding to Landing



Top kill Spruce



Low Impact Skidding



Low Impact Skidding



Low Impact Skidding



Processing at the Landing



Loading and Hauling



Loading and Hauling



Loading and Hauling



Loading and Hauling



Loading and Hauling



Burning Piles



Burning Landing Pile



Burning Landing Pile

11/5/2009



Burning Landing Pile

11/5/2009



Burning Landing Pile



11/5/2009



Burning Landing Pile

11/5/2009



Landing Pile

***11/8/2009: 3 days after ignition,
pushed in at least once every day,
excellent consumption***



Rehab Landing Pile

9/5/2010



Rehab Landing Pile



9/25/2010



11/15/2010

Rehab Landing Pile



Rehab Landing Pile



Weed Wash All Equipment!



Spotted
Knapweed



Orange Hawkweed



Meadow Hawkweed

Precommercial Thinning Project

Silviculture:

- **Retain western larch, planted Ponderosa Pine, Douglas-fir, Engelmann spruce**
- **Space out lodgepole pine (predominant species)**
- **Strive for 9' by 9' spacing**
- **Remove sick/lame/lazy: mistletoe, terminal weevil, gall rust**
- **Leave prescribed unthinned wildlife patches**
- **Make brush piles 4' x 4' x 4' for small mammals**
- **Remove lower limbs on crop trees to ~ 6'**

Fuels:

- **Directionally fall cut trees (not criss-crossed)**
- **Lop boles into sections (6' to 10' sections)**
- **Lop branches to get bole sections on the ground**
- **Slash depth not to exceed 18"**

Precommercial Thinning Project



Precommercial Thinning Project



10/16/2010



7/9/2011



Precommercial Thinning Project

Precommercial Thinning Project



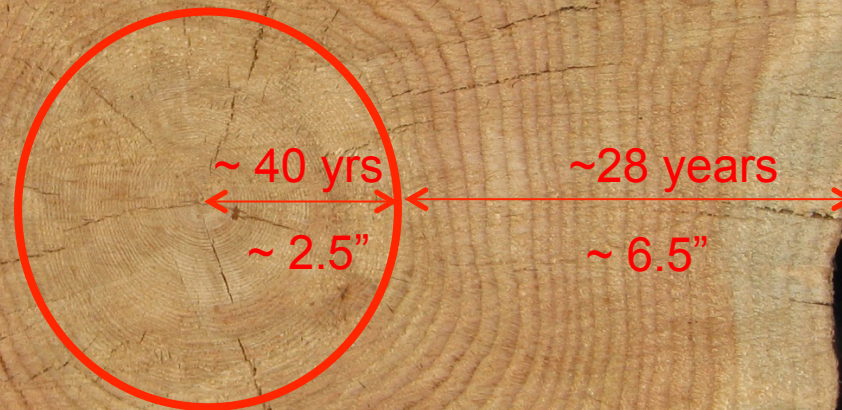
Western Larch Release

- *Suppressed pole-sized WL ~ 5" diameter, ~ 40 years old in 1978*
- *Horse logging removed lodgepole pine in 1978 during mountain pine beetle infestation*
- *Tree released, growing approximately 13" in diameter over the next 28 years to 18" total when girdled by bears in approximately 2006*

Western Larch Release



Western Larch Release



Juvenile Lodgepole Pine Growth

- *Lodgepole regeneration from 2003 Wedge Canyon Fire*
- *Stand densities in excess of 10,000 stems per acre*
- *Tree thinning has resulted in increased height growth in crop trees*
- *Unthinned stand approximately 2' to 3' in height*
- *Thinned stand approximately 8' to 10' in height*



Juvenile Lodgepole Pine Growth

Take Home Messages

- *Every Acre on the North Fork will burn at some time*
- *We can't change topography or fire weather. All we can do is manipulate fuels*
- *Know what your objectives are for the land you own*
- *We can't keep trees from growing here*
- *Vegetation will change over time no matter how much we want it to stay the same*
- *Decide which trees you want to keep and mow down the rest. Then stand back and watch your trees grow!!!*

Questions?

