

ASSESSING THE POTENTIAL FOR SALVAGE HARVESTING AFTER WILDFIRE

What is salvage harvesting?

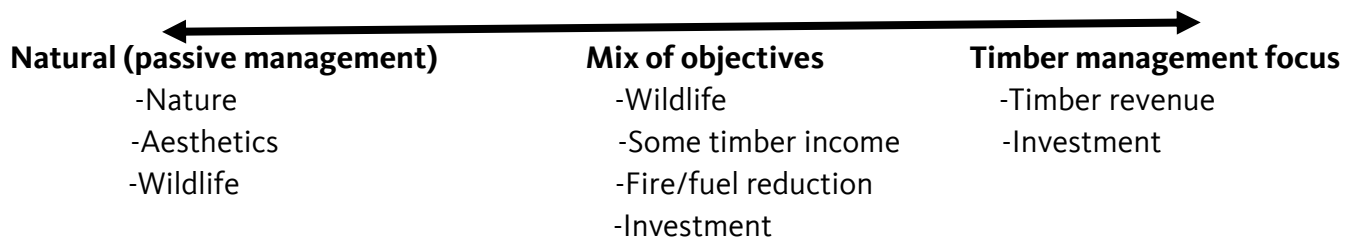
Primary purpose of salvage harvesting is to recover the economic value of trees killed or damaged by unforeseen and uncontrollable events (insects, wildfire, wind, ice & snow, volcanoes, etc.)

Other objectives of salvage harvest:

- Reduce heavy fuels
- Create strategic fuel breaks
- Improve safety around homes, roads and other infrastructure
- Prepare the site for reforestation
- Reduce the potential for insects to increase

What Are Your Management Objectives?

Management Spectrum



The need for and the role of salvage harvesting will be different depending on where you are on this management spectrum. Other factors that could influence where you are on the spectrum after a fire include the location of your property, acreage burned, proximity of your property to other burned properties, and your economic situation.

Wildfire, Succession, & Wildlife Habitat

Early seral stage is important for wildlife, include the snags (dead trees)



Figure 1: This area was salvage logged, leaving large snags for wildlife and abundant early seral vegetation (shrubs, grasses). It was also planted with native tree seedlings.

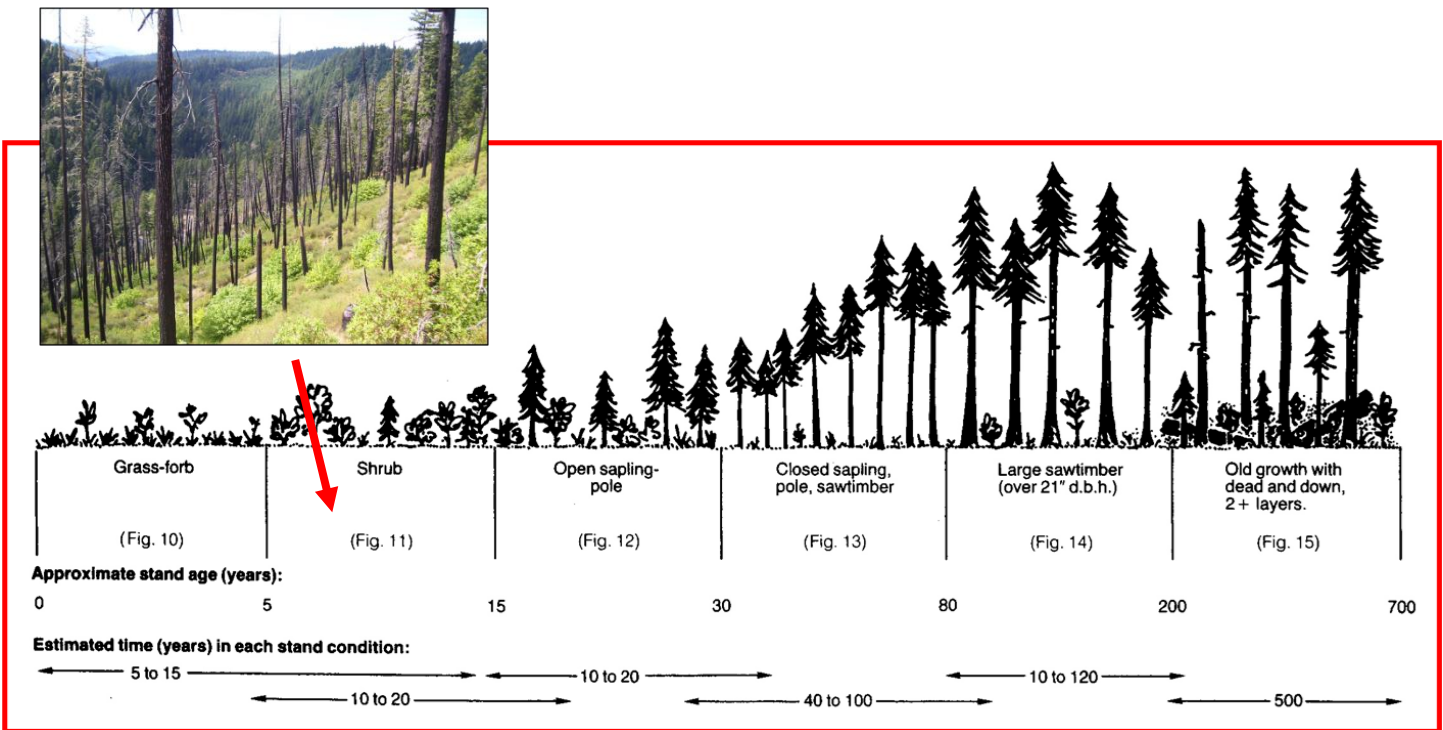


Figure 2: Forest successional stages. The shrub stage, or early seral stage, is shown in the photograph.

Some Definitions/Units of Measure/Costs

- Board foot – a board that is 12” x 12” x 1”
- MBF - Thousand Board Feet
- Logs are bought and sold based on a thousand board feet (MBF) delivered to the mill (or by the ton). Example: \$700/MBF
- A log truck contains anywhere from 5,200 to 6,800 board feet (5.2 MBF and 6.8 MBF, respectively)
- Logging costs and hauling costs are quoted on a per MBF basis.
 - Logging costs \$150/MBF Trucking costs \$50/MBF

Measurement of Logs (“scaling”)

- Measure the small end diameter inside bark (dib) in inches two directions
- Measure the length of the log in feet
- Look-up volume tables (gross scale)
- Deduct for decay & defect
- Calculate net scale for payment



To Salvage or Not to Salvage?

- Do you have enough timber volume to harvest?
 - Two weeks of work?
 - Average volume per acre to be removed?
 - 5 mbf, 10 mbf, 15 mbf, or more per acre?
 - You may need to hire a consulting forester to estimate volume
- Can you salvage quickly before trees lose significant value through defect & decay?
 - 44 logging sides (equipment) lost in the Labor Day wildfires in Oregon

- Demand for operators will be high
- How far out will you be able to secure a logging contractor?
- Insects, decay, and checking will become a reality the longer you wait to salvage

Decay and Defect

- Insects – bark beetles and wood borers
- Weather checking
- Stain
- Decay
- Breakage

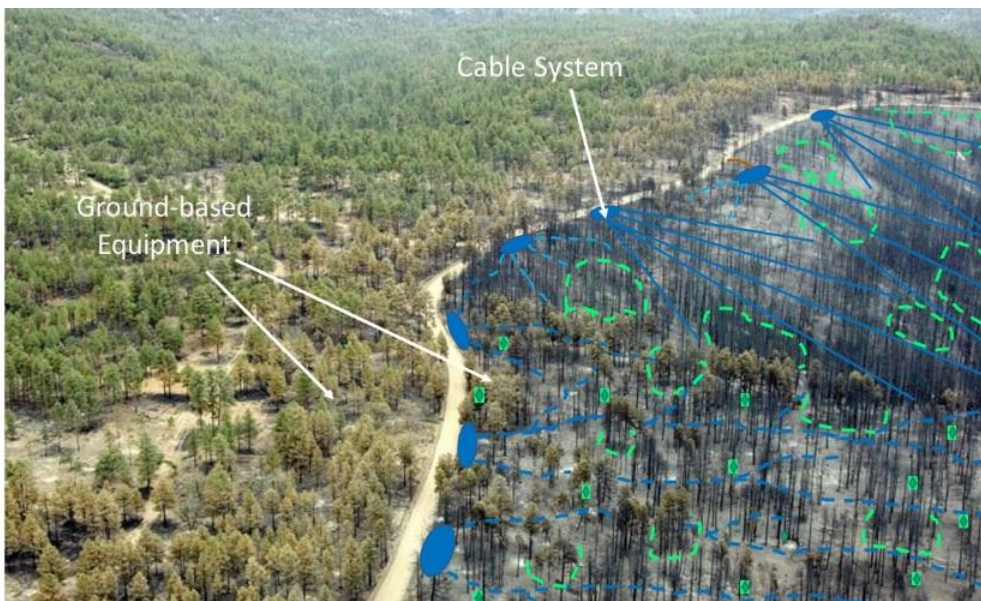
Table 4. Percent wood volume affected by stain, cracks, and decay in fire-killed Douglas-firs by years since death.

Wood Change	Year 1	Year 2	Year 3	Year 4	Year 5
Stain	3.1	9.0	22.4	NC*	NC*
Cracks	6.5	19.0	28.8	30.9	40.3
Decay	0.0	1.1	3.3	6.4	16.4

* Not Calculable due to decay.

Economics of salvage

- What are current/future log prices?
 - Current prices are decent (as of fall 2020)
 - Flood of salvage wood going to market in the coming months and years
- What are the logging costs?
 - Ground-based harvesting \$110-200/MBF
 - Cable harvesting \$185-\$300+ /MBF
 - Complexity of the terrain, access, and volume removed



The figure to the left shows both ground-based (with skid trails and landings) and cable logging in the steeper terrain. Leave areas (no harvest) of dead and dying trees are left (green dashed areas) for wildlife.

Wildlife considerations

- Early seral habitat is often created after a fire
- Snag habitat is created after a fire
- Other special habitats that may be worth protecting: seeps, springs, riparian areas, old trees, etc.

Reforestation after salvage harvesting

- Natural recovery (enough seed from seed trees?)
- Planting tree seedlings
- Vegetation control – necessary to ensure successful seedling establishment

Checklist

- Go back to the check list that you filled out
- Refine the amount and burn severity of vegetation and trees.
 - Fill in the percent area of low, medium, and high vegetation burn severity
 - This will provide roughly the amount of area and potential tree volume for salvage harvesting.

After the Fire Checklist

IF YOUR PROPERTY HAS BEEN AFFECTED BY WILDFIRE, UTILIZE THIS CHECKLIST TO CHART A COURSE FORWARD AND MODIFY TO SUIT YOUR NEEDS.

NAME _____ ADDRESS _____
CONTACT _____ TAXLOT# _____

Outside and around the property

Percent of property area burned: _____ Not sure

Identify slope of property (acres): 0-30%: _____ 30-60%: _____ >60%: _____
 Not sure

Overall percent and location of vegetation burn severity:
Low _____ Moderate _____ High _____ Not sure

Overall percent and location of soil burn severity:
 Low _____ Moderate _____ High _____ Not sure

How close did fire come to water courses: _____
 Not sure

How steep are the slopes (%) above and adjacent to water courses: _____
 Not sure

Was there erosion on the property prior to the fire? (gully, rill, sheet)
 Yes No Not sure