Alternate Harvest Systems Considerations

Prepared by
Steve Lackey, RPF

Before we can discuss Alternate Harvest Systems, there are a few basic forest conditions, concepts, and "emotions" we should talk about.

Topography:

- The slope of the land will impact what alternate harvest system opportunities are available for consideration

    - Flat or slightly sloped land....many options
    - Moderately steep to steep land.....few options

Ground Conditions:

- The soil type and soil moisture will have significant impact on what alternate harvest systems are available for consideration

    - Dry, granular soils are less compactable, more stable.....more options for ground based harvesting
    - Wet, rich soils, or wet soils with clay content are very compactable.....few options

Time of Year:

- The timing of harvest with regard to the season of the year will impact the options available for alternate harvesting.

    - Wet season.....greater chance of soil compaction and soil structure degradation from ground based harvesting = fewer harvest options
    - Dry season.....less chance of soil compaction and degradation from ground based harvesting = more harvest options

Tree Species Physiology:

- The species of trees growing on your forest site will have considerable impact on the alternate harvest options available to you because of the specific growing requirements of each species.....especially light, nutrient, and water requirements.

    - **Douglas-fir**: Shade intolerant (sun loving): Requires at least 80% sunlight for optimum growth and development
    - **Western Red Cedar:** Moderately shade tolerant: Requires a minimum of 40% sunlight for moderate growth.....but 70% or greater is best.
    - **Grand fir:** Shade tolerant: Will grow in 25 to 35% sunlight, but will grow best in 60 to 80% sunlight.
    - **Big-leaf maple:** Relatively shade tolerant, but will grow vigorously in full sun
    - **Red Alder:** Shade intolerant, requires 80% of greater sunlight to fully develop.

Other "Biological" Considerations:

When considering alternate harvesting, other factors should be given consideration such as the level of "retention" (standing timber to be left within a harvest area) and the influence of "Edge Effect" on both a "non clearcut" concept as well as the opportunity and values this effect provides for wildlife, forest growth (regeneration), and visual quality. Some definitions have been provided on a separate handout to help explain these values. Although technical, these concept definitions represent some of the latest scientific research completed by organizations such as UBC, SFU (Dr. Ken Lertzman), and The University of Washington (Dr. Gerry Franklin)

Aesthetics:

The visual impact of forest harvesting is often the driving force behind the public's perception of "good harvesting" techniques. However, it should be kept in mind that even though there are many emotions captured by the act of harvesting a forest the relationship between what a harvest site looks like, and whether or not it is "good forestry" are not always complementary attributes. That is....just because it looks good (a viewscape that is pleasing to the eye) does not necessarily mean it is good forestry(will grow a new crop following harvest of ecologically suited species and of commercial value).

The Land Owners Management Objectives:

In the end, the land owner must carefully consider exactly what his/her objectives are for the forest land they own and manage. Compromises are an everyday reality in all forest management activities. However, it is always a good practice to make every effort to balance ones management objectives with the ecological and biological realities of their managed forest site. This will ensure that whatever options for management the owner chooses, they will be in balance with the natural attributes of the land.

Steve Lackey, RPF
slackey@shaw.ca
250-923-6262