

## Simplified Financial Analysis Tables for Young Even-Aged Stands

The charts included with these field sheets are a *coarse screening aid* for determining whether stocking enhancements will generate at least 2% rate of return in young even-aged stands. They are primarily intended for use following catastrophic disturbance in cases where natural regeneration is expected to produce less-than-desirable stocking. They should only be used if **all** of the following conditions are met:

- stand is predominantly even-aged, with little or no advance regeneration in excess of 1 m
- stand is  $\leq 6$  years old
- stand is currently comprised mainly of lodgepole pine, interior or Engelmann spruce, subalpine fir, Douglas-fir and/or western larch

Both of the inputs for this screening aid are subject to considerable uncertainty which can dramatically affect assessment outcomes:

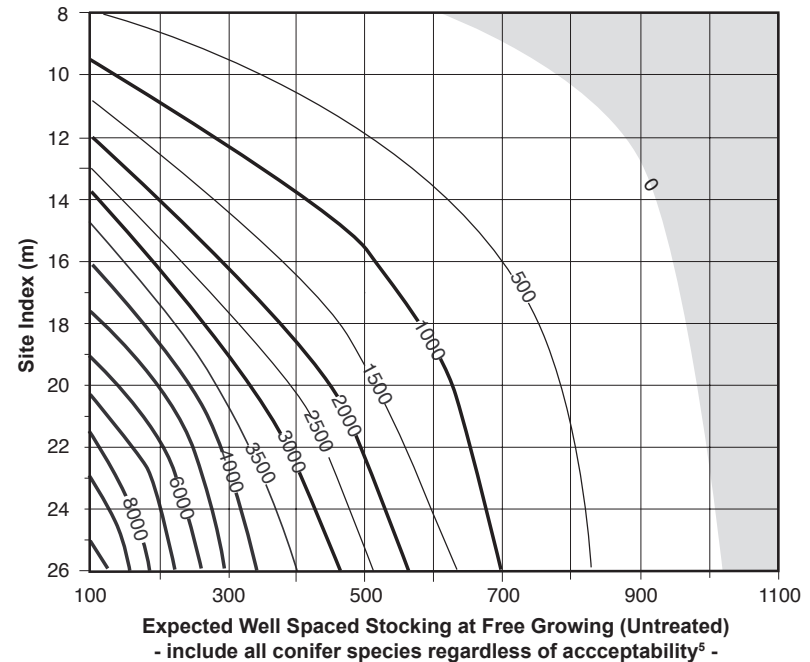
- Considerable local knowledge of species response to disturbance, coupled with assessments of seed source and seed bed conditions, will be required to predict stocking that will occur without intervention
- Many sources of site index (SI) data for individual sites will underestimate site potential by 2 to 3 m or more. Of particular concern are inventory estimates of SI and estimates of SI from the first generation of SIBEC<sup>1</sup>. The best sources will be from a) height/age<sup>2</sup> or growth intercept measures on nearby stands with similar species and ecosystem parameters (site series, soil, slope, aspect), or b) second generation SIBEC estimates<sup>1</sup>.

Users should be cognizant of the risk of uncertain inputs, and question how the results might be different if the inputs have a significant error. In all cases where results from these charts indicate a maximum expenditure that is close to the expected expenditure, it would be prudent to test the scenario using the IRR worksheet. Such action will not reduce uncertainties related to stocking or SI inputs, but will avoid the simplifying assumptions required to build the screening charts.

1. First generation SIBEC estimates are provided in current tables using 3 m classes. Second generation estimates, where available, are provided using actual mean values with an associated standard error.
2. Height/age estimates of SI should be measured on healthy, dominant trees that have never been suppressed or repressed, and are less than 120 years of age.

Maximum investment in post-fire reforestation (\$/ha) that will allow a minimum 2% return on investment for various levels of expected natural regeneration and site index.

## Existing Predominant Species is White Spruce or Subalpine Fir

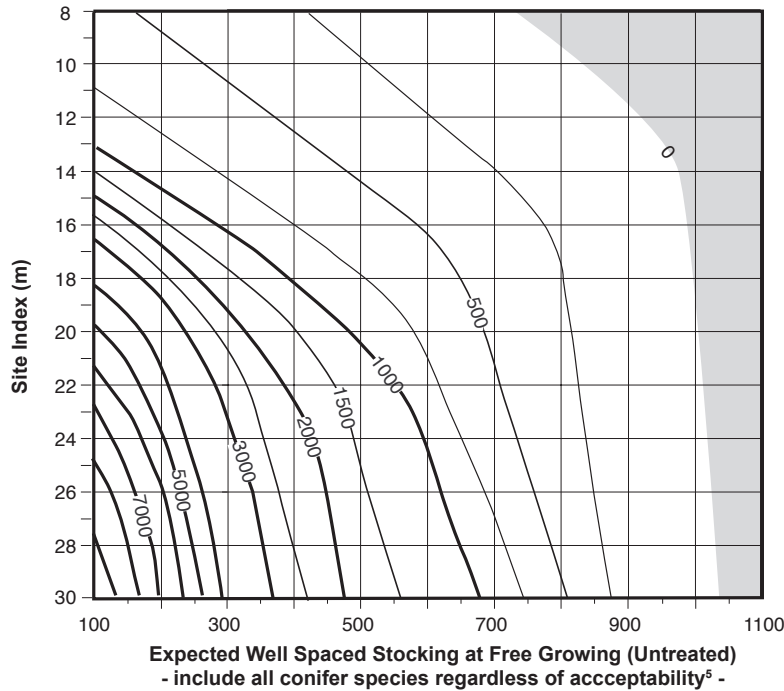


### Notes:

1. Resolution is at best +/- 15%.
2. There is no true zero point - the grey zone labelled zero represents a position where values are so small as to be very close to zero.
3. Site indices should be based on the best possible information available - inventory estimates will often be much lower than that required to represent the site potential. 'Actual' site indices below 15 should be very rare and will only occur on sites of extreme drought, very poor nutrition or at elevations near treeline.
4. In estimating expected stocking, be cognizant of future fill-in by new germinants prior to the end of the free growing window.
5. For well spaced stocking, include all conifer species unless they are not expected to develop with the main canopy - trees that will remain below the main canopy should not be tallied. Use standard survey "M" values.

Maximum investment in post-fire reforestation (\$/ha) that will allow a minimum 2% return on investment for various levels of expected natural regeneration and site index.

### Existing Predominant Species is Douglas-fir or Western Larch

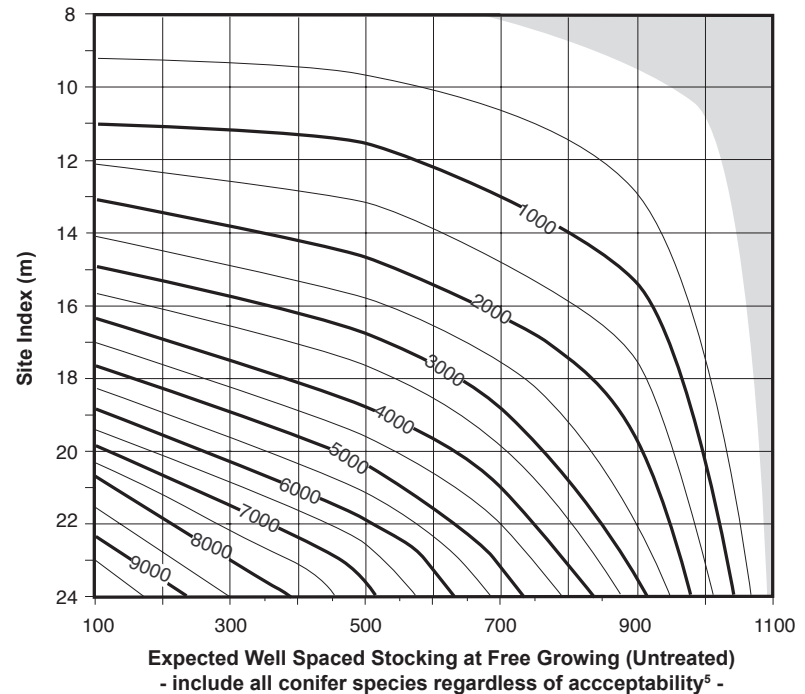


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Maximum investment in post-fire reforestation (\$/ha) that will allow a minimum 2% return on investment for various levels of expected natural regeneration and site index.

### Existing Predominant Species is Lodgepole Pine



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