Determining Boundary Exposure ratings for the Wind Exposure Index

The diagram on the right represents an octagonal cutblock surrounded by a forest edge (arrow indicates direction of wind). The following are the classifications and scores used for calculating exposure to one wind direction for numbered boundary segments in the diagram:

1 = windward score: 5
2 = windward diagonal score: 4
3 = parallel score: 3
4 = lee diagonal score: 2
5 = leeward score: 1
6 = lee diagonal score: 2
7 = parallel score: 3
8 = windward diagonal score: 4

To determine the total WEI score for an existing or proposed boundary, add the scores from the primary and secondary windthrow directions observed in the area. For the example above, you must calculate a second set of scores for each segment based on the next most common direction of windfall.

EXAMPLE:

1 = windward + parallel score: 5+3=8
2 = wind diag + lee diag score: 4+2=6
3 = parallel + leeward score: 3+1=4
4 = lee diag + lee diag score: 2+2=4
5 = leeward + parallel score: 1+3=4
6 = lee diag + wind diag score: 2+4=6
7 = parallel + windward score: 3+5=8
8 = wind diag + wind diag score: 4+4=8

Wind Exposure Index was developed by Terry Rollerson, Golder Associates Ltd., and is described in "Riparian Windthrow – Northern Vancouver Island" by Rollerson and McGourlick (2001), In Proceedings of the Windthrow Researchers Workshop, Richmond, BC. See: [www.fcsn.bc.ca/Proceedings/windthrow.pdf](http://www.fcsn.bc.ca/Proceedings/windthrow.pdf)

Example by W. Beese, Weyerhaeuser Coastal Group.