



| Administrative  |  |  |  |
|---|--|--|--|
| Location  | Opening  | Block #  | Examiner/Date  |
|   |  |  | Segment/Portion  |
| Topographic Exposure Description  |  |  |  |
|   | High Hazard  | Moderate Hazard  | Low Hazard   |
| Large-scale Topography  | <input type="checkbox"/> Coastal plain<br><input type="checkbox"/> Plateau<br><input type="checkbox"/> Rolling plateau<br><input type="checkbox"/> Major coastal inlet<br><input type="checkbox"/> Near large water body | <input type="checkbox"/> Large valley<br><input type="checkbox"/> Hilly          | <input type="checkbox"/> Mountainous<br><input type="checkbox"/> Small coastal inlet<br><input type="checkbox"/> Far from large water body |
| Mid-scale Topography  | <input type="checkbox"/> Ridge <input type="checkbox"/> Saddle<br><input type="checkbox"/> Knoll <input type="checkbox"/> Shoulder   | <input type="checkbox"/> Flat<br><input type="checkbox"/> Side slope             | <input type="checkbox"/> Side valley   |
| Topographic Position  | <input type="checkbox"/> Crest<br><input type="checkbox"/> Upper slope   | <input type="checkbox"/> Mid slope<br><input type="checkbox"/> Flat              | <input type="checkbox"/> Lower slope   |
| Elevation (_____m)  | <input type="checkbox"/> High  | <input type="checkbox"/> Middle  | <input type="checkbox"/> Low   |
| <i>Diagnostic question:</i> Are wind speeds normal for the area, or do they vary due to the presence of a terrain obstacle or constriction?   |  |  |  |
| Topographic hazard rating   | <input type="checkbox"/> High (higher)   | <input type="checkbox"/> Moderate (normal)                                       | <input type="checkbox"/> Low (lower)   |
| Soil Description  |  |  |  |
|   | High Hazard  | Moderate Hazard  | Low Hazard   |
| Parent material   | <input type="checkbox"/> Organic <input type="checkbox"/> Rock<br><input type="checkbox"/> Fine alluvial   | <input type="checkbox"/> Till<br><input type="checkbox"/> Moderate alluvial      | <input type="checkbox"/> Coarse alluvial<br><input type="checkbox"/> Colluvial   |
| Texture   | <input type="checkbox"/> Fine  | <input type="checkbox"/> Medium/ <input type="checkbox"/> V.Coarse               | <input type="checkbox"/> Coarse  |
| Coarse fragment %   | <input type="checkbox"/> >70   | <input type="checkbox"/> 30–70   | <input type="checkbox"/> <30   |
| Rooting depth (cm) and pattern  | <input type="checkbox"/> < 40<br><input type="checkbox"/> Plate roots  | <input type="checkbox"/> 40–80<br><input type="checkbox"/> Flattened base        | <input type="checkbox"/> >80<br><input type="checkbox"/> Rounded base  |
| Impeding layer  | <input type="checkbox"/> Water table   | <input type="checkbox"/> Surface fractured rock                                  | <input type="checkbox"/> Deep fractured rock   |
| Soil drainage   | <input type="checkbox"/> Poor  | <input type="checkbox"/> Moderate  | <input type="checkbox"/> Good  |
| <i>Diagnostic question:</i> Is root anchorage restricted by an impeding layer, low strength soil, or poor drainage?   |  |  |  |
| Soil hazard rating  | <input type="checkbox"/> High (severely restricted)  | <input type="checkbox"/> Moderate (somewhat restricted)                          | <input type="checkbox"/> Low (unrestricted)  |
| Stand Description   |  |  |  |
|   | High Hazard  | Moderate Hazard  | Low Hazard   |
| Structure   | <input type="checkbox"/> Uniform   | <input type="checkbox"/> Two-layer<br><input type="checkbox"/> Uniform with vets | <input type="checkbox"/> Multi-layer   |
| Height (m)  | <input type="checkbox"/> >30   | <input type="checkbox"/> 15–30   | <input type="checkbox"/> <15   |
| Live crown Ratio  | <input type="checkbox"/> <30   | <input type="checkbox"/> 30–70   | <input type="checkbox"/> >70   |
| Height diameter ratio   | <input type="checkbox"/> >90   | <input type="checkbox"/> 70–90   | <input type="checkbox"/> <70   |
| Stand density   | <input type="checkbox"/> Dense   | <input type="checkbox"/> Moderate  | <input type="checkbox"/> Open  |
| Root/stem rots  | <input type="checkbox"/> Significant   | <input type="checkbox"/> Some  | <input type="checkbox"/> Minor   |
| Species   |  |  |  |
| <i>Diagnostic question:</i> Are the individual trees within the stand adapted to wind loads?  |  |  |  |
| <i>Note:</i> If damaged stems would lean back into canopy and be supported by their neighbours instead of working down through the canopy to the ground, then stand hazard is low for clearcut edges. |  |  |  |
| Stand hazard rating   | <input type="checkbox"/> High (poorly adapted)   | <input type="checkbox"/> Moderate (somewhat adapted)                             | <input type="checkbox"/> Low (well adapted)  |

# Windthrow Field Card Assessment Page B

## Existing Windthrow Pattern

|               | Recent | Older | Direction | Comments |
|---------------|--------|-------|-----------|----------|
| Existing edge |        |       |           |          |
| Within timber |        |       |           |          |

## Treatment Description

**Openings: Group selection, patch cut, clearcut, etc.**

| Treatment risk                          | High Risk   | Moderate Risk  | Lower Risk  |
|---|---|--|---|
| Orientation relative to damaging winds  | <input type="checkbox"/> Downwind at right angle<br>       | <input type="checkbox"/> Parallel<br> | <input type="checkbox"/> Upwind at right angle<br> |
| Width of Opening: Upwind Direction      | <input type="checkbox"/> >5 Tree lengths  | <input type="checkbox"/> 2-5 Tree Lengths  | <input type="checkbox"/> <2 Tree Lengths  |
| Influence of opening shape on windspeed | <input type="checkbox"/> Funnels or projects into wind<br> |  | <input type="checkbox"/> Straight<br>              |

## For Uniform Retention: Commercial thin, single tree selection, etc.

| Treatment risk               | High Risk   | Moderate Risk  | Lower Risk  |
|------------------------------|---|--|---|
| Removal level (% basal area) | <input type="checkbox"/> >50  | <input type="checkbox"/> 30-50                           | <input type="checkbox"/> <30  |
| Removal criteria             | <input type="checkbox"/> Remove veterans, healthy dominants<br><input type="checkbox"/> Thin from above | <input type="checkbox"/> Remove across all crown classes | <input type="checkbox"/> Retain veterans, healthy dominants<br><input type="checkbox"/> Thin from below |
| Species                      | <input type="checkbox"/> Least windfirm   |  | <input type="checkbox"/> Most windfirm  |

**Diagnostic question:** Will the proposed harvesting strategy increase wind loading on trees along the stand edge (opening) or retained trees (partial cut)?

|                               |  |   |   |
|-------------------------------|--|---|---|
| Treatment risk rating summary | <input type="checkbox"/> High (large increase) | <input type="checkbox"/> Medium (moderate increase) | <input type="checkbox"/> Low (minimal increase) |
|-------------------------------|--|---|---|

## Windthrow Risk Evaluation

**Site Hazard**

|          |   |   |
|----------|---|---|
| Exposure |   |   |
| L        | M | H |
| L        | L |   |
| M        |   | M |
| H        |   | H |

**Biophysical Hazard**

|             |   |   |
|-------------|---|---|
| Site hazard |   |   |
| L           | M | H |
| L           | L |   |
| M           |   | M |
| H           |   | H |

**Windthrow Triangle**



**Windthrow Risk**

|                |   |   |    |
|----------------|---|---|----|
| Treatment risk |   |   |    |
| N              | L | M | H  |
| L              |   |   |    |
| M              |   |   | M  |
| H              |   |   | H  |
| VH             |   |   | VH |

## Estimated Windthrow Potential:

|                    | Very High                | High                     | Moderate                 | Low                      | None                     |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Topographic Hazard | •                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | •                        |
| Soil Hazard        | •                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | •                        |
| Stand Hazard       | •                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | •                        |
| Biophysical Hazard | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | •                        |
| Treatment Risk     | •                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Windthrow Risk     | <input type="checkbox"/> |