### Geographic, Site, and Climatic Characteristics of the Nine Study Locations

Locations are arranged from highest to lowest summer heat: moisture index (SHM).

<table>
<thead>
<tr>
<th></th>
<th>Venables</th>
<th>Two-bit Creek</th>
<th>Peterhope Lake</th>
<th>Jaffray</th>
<th>Redfish Creek</th>
<th>Alex Fraser</th>
<th>John Prince</th>
<th>Narrows Creek</th>
<th>Malcolm Knapp</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of replicates</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>No. of plots</td>
<td>14</td>
<td>10</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>10</td>
<td>15</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Geographic variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>TO</td>
<td>KB</td>
<td>TO</td>
<td>KB</td>
<td>C</td>
<td>O</td>
<td>KB</td>
<td>SC</td>
<td></td>
</tr>
<tr>
<td>Nearby town</td>
<td>Cache Creek</td>
<td>Castlegar</td>
<td>Merritt</td>
<td>Cranbrook</td>
<td>Nelson</td>
<td>Williams Lk</td>
<td>Ft St James</td>
<td>Nelson</td>
<td>Maple Ridge</td>
</tr>
<tr>
<td>Latitude (°N)</td>
<td>50.54</td>
<td>49.52</td>
<td>50.32</td>
<td>49.21</td>
<td>49.63</td>
<td>52.45</td>
<td>54.65</td>
<td>49.58</td>
<td>49.32</td>
</tr>
<tr>
<td>Longitude (°W)</td>
<td>121.37</td>
<td>118.10</td>
<td>120.32</td>
<td>115.37</td>
<td>117.03</td>
<td>121.75</td>
<td>124.43</td>
<td>116.98</td>
<td>122.54</td>
</tr>
<tr>
<td>Elevation (m)</td>
<td>1280</td>
<td>620</td>
<td>1100</td>
<td>1075</td>
<td>850</td>
<td>950</td>
<td>880</td>
<td>800</td>
<td>1080</td>
</tr>
<tr>
<td>Site variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspect</td>
<td>SE, W</td>
<td>W</td>
<td>variable</td>
<td>S</td>
<td>SE</td>
<td>SE</td>
<td>S</td>
<td>W, W</td>
<td></td>
</tr>
<tr>
<td>Average slope gradient (%)</td>
<td>20</td>
<td>15</td>
<td>15</td>
<td>5</td>
<td>30</td>
<td>10</td>
<td>15</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Slope position</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
<td>mid</td>
</tr>
<tr>
<td>Soil texture&lt;sup&gt;b&lt;/sup&gt;</td>
<td>SCL</td>
<td>SL, L</td>
<td>SiL, L</td>
<td>SiL, SiCL</td>
<td>SL</td>
<td>CL, L</td>
<td>(gr) CL</td>
<td>SL, SiL</td>
<td>SL, SiL</td>
</tr>
<tr>
<td>Soil order&lt;sup&gt;c&lt;/sup&gt;</td>
<td>L</td>
<td>P</td>
<td>LB</td>
<td>L</td>
<td>P</td>
<td>L</td>
<td>P</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>Biogeoclimatic variant&lt;sup&gt;d&lt;/sup&gt;</td>
<td>IDFdk1</td>
<td>ICHdw1</td>
<td>IDFhx2, IDFdk1</td>
<td>IDFdm2</td>
<td>ICHdw1</td>
<td>IDFdk3</td>
<td>ICHmk3</td>
<td>SBSdw3</td>
<td>ICHdw1</td>
</tr>
<tr>
<td>Site series</td>
<td>01/04</td>
<td>101/104</td>
<td>01/04</td>
<td>01</td>
<td>101/104</td>
<td>01</td>
<td>01</td>
<td>101/104</td>
<td>01/03</td>
</tr>
<tr>
<td>Climate data&lt;sup&gt;e&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT (°C)</td>
<td>3.5</td>
<td>7.7</td>
<td>4.1</td>
<td>5.3</td>
<td>6.8</td>
<td>4.4</td>
<td>2.3</td>
<td>5.1</td>
<td>8.0</td>
</tr>
<tr>
<td>MWWMT (°C)</td>
<td>15.0</td>
<td>18.9</td>
<td>15.1</td>
<td>17.0</td>
<td>17.6</td>
<td>15.4</td>
<td>13.9</td>
<td>16.0</td>
<td>16.1</td>
</tr>
<tr>
<td>MAP (mm)</td>
<td>403</td>
<td>653</td>
<td>398</td>
<td>618</td>
<td>868</td>
<td>532</td>
<td>593</td>
<td>1059</td>
<td>2701</td>
</tr>
<tr>
<td>MSP (mm)</td>
<td>166</td>
<td>227</td>
<td>186</td>
<td>249</td>
<td>268</td>
<td>256</td>
<td>240</td>
<td>313</td>
<td>655</td>
</tr>
<tr>
<td>SHM</td>
<td>87.6</td>
<td>83.0</td>
<td>80.7</td>
<td>68.2</td>
<td>66.1</td>
<td>61.1</td>
<td>57.7</td>
<td>51.4</td>
<td>24.5</td>
</tr>
<tr>
<td>AHM</td>
<td>36.5</td>
<td>27.2</td>
<td>36.0</td>
<td>24.7</td>
<td>19.4</td>
<td>27.3</td>
<td>20.8</td>
<td>14.3</td>
<td>6.6</td>
</tr>
</tbody>
</table>

a  TO = Thompson-Okanagan; KB = Kootenay-Boundary; C = Cariboo; O = Omineca; SC = South Coast  
b  SCL = sandy clay loam; SL = sandy loam, L = loam, SiL = silt loam, SiCL = silt clay loam, CL = clay loam, gr = gravelly  
c  L = Luvisol; P = Podzol; B = Brunisol (Soil Classification Working Group 1998)  
d  IDFhx2 = Thompson Very Dry Hot Interior Douglas-fir; IDFdk1 = Thompson Dry Cool Interior Douglas-fir; IDFdk3 = Fraser Dry Cool Interior Douglas-fir; IDFdm2 = Kootenay Dry Mild Interior Douglas-fir; ICHdw1 = West Kootenay Dry Warm Interior Cedar Hemlock; ICHmk3 = Horsefly Moist Cool Interior Cedar Hemlock; SBSdw3 = Stuart Dry Warm Sub-Boreal Spruce; CWHvm1 = Submontane Very Wet Maritime Coastal Western Hemlock (Braumandl and Curran 1992; Lloyd et al. 1992; Delong et al. 1993; Green and Klinka 1994; Steen and Coupe 1997).  
e  Climate data are 1981-2010 averages derived from ClimateNA v5.50 (Wang et al. 2016). MAT = Mean annual temperature; MWWMT = Mean warmest month temperature; MAP = Mean annual precipitation; MSP = May–September precipitation; SHM = Summer heat: moisture index = (MWWMT)/(MSP/1000); AHM = Annual heat: moisture index (AHM) = (MAT+10)/(MAP/1000)