**Supplement: Glacier-Wide Mass Balance Maps**

Maps for balance years 2005-2015 displaying conventional glacier-wide seasonal and annual mass balances estimated using the site-index method. Elevation/balance contour lines are labelled and measurement points are indicated by yellow and black dots. Points labelled with letters indicate ablation stake sites.

White dashed lines on the annual balance maps for years 2005, 2009, 2010, and 2013 specify the location of the seasonal snow line that was measured in the field at the end of the ablation season. The accumulation zone is located at elevations above this line.

Balances assigned to each elevation band are labelled on each map. Italicized and underlined values indicate balances that have been inferred/extrapolated because no point balances are located in those bands. These values were derived from nearby measurement points, from mass balance gradients taken from two different measurement points, or in the case of winter balances above 2650 on the steep headwall, the mean *bw* is used. Further details for each year are as follows:

**2005**

* Used a mass balance gradient value of 0.004 m w.e. m-1 derived from Stakes A and D to calculate the winter balance in the 2600-2650 band.
* Used a mass balance gradient value of 0.003 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.

**2006**

* Used the average of points *19-annual transect* and *4-transect 106* for the winter balance in elevation band below 2300 m.
* Used a mass balance gradient value of 0.010 m w.e. m-1 derived from Stakes C and q to calculate summer balances in bands above 2550 m.
* Used *bs* from stake site m as the assigned balance to elevations below 2350 m.

**2007**

* Used a mass balance gradient value of 0.006 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.

**2008**

* Used a mass balance gradient value of 0.007 m w.e. m-1 derived from Stakes C and D to calculate winter balances in the 2550-2600 & 2600-2650 bands
* Used a mass balance gradient value of 0.004 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.

**2009**

* Used a mass balance gradient value of 0.011 m w.e. m-1 derived from Stakes A and D to calculate winter balance in the 2600-2650 band.
* Used a mass balance gradient value of 0.0004 m w.e. m-1 derived from Stakes A and D to calculate summer balances in bands above 2550 m.

**2010**

* Used a mass balance gradient value of 0.007 m w.e. m-1 derived from Stakes C and D to calculate winter balance in the 2600-2650 band.
* Used a mass balance gradient value of 0.005 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.

**2011**

* Used a mass balance gradient value of 0.006 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.

**2012**

* Used a mass balance gradient value of 0.017 m w.e. m-1 derived from Stakes C and D to calculate winter balances in the 2550-2600 & 2600-2650 bands.
* Used a mass balance gradient value of 0.004 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.

**2013**

* Used a mass balance gradient value of 0.015 m w.e. m-1 derived from Stakes C and D to calculate winter balances in the 2600-2650 band.
* Used a mass balance gradient value of 0.011 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.
* Used *bs* from stake site B as the assigned summer balance to elevations below 2300 m.

**2014**

* Used a mass balance gradient value of 0.019 m w.e. m-1 derived from Stakes C and D to calculate winter balances in the 2550-2600 & 2600-2650 bands.
* Used *bw* from stake site B as the assigned winter balance to elevations below 2300 m.
* Used a mass balance gradient value of 0.004 m w.e. m-1 derived from Stakes C and D to calculate summer balances in bands above 2550 m.
* Used ba from stake site B for the annual balance at elevations below 2300 m.

**2015**

* Used a mass balance gradient value of 0.012 m w.e. m-1 derived from Stakes C and Z to calculate winter balance in the 2600-2650 band.
* Used *bw* from stake site B as the assigned winter balance to elevations below 2300 m.
* Used a mass balance gradient value of 0.015 m w.e. m-1 derived from Stakes C and Z to calculate summer balances in bands above 2600 m.
* Used *bs* and *ba* from stake site B to assign summer and annual balances to elevations below 2300 m.