**ti\_analysis\_ecosystems.csv –** *Dataframe of* *treeling responses, and snowpack, tree, and site or zone predictor variables. Each row is a unique treeling plot \* year combination. Snow predictors vary by year. Predictor variables are at averaged at zone or tree-island/site scale.*

“site” – unique identifier for each tree island. “ti” (Tree Island) + unique number or letter (10-13, s)

“zone” – location in island. “Windward”, “leeward”, “interior”, and “deflation”. “Windward” direction is roughly northwest.

“plot\_id” – unique identifier for each treeling plot.

“density” – density of treelings; total number of living treelings per 1 x 2 m2 plot (treelings / 2 m2).

“germ” – total number of germinants per 2 m2 plot.

“percent\_mort” – percent mortality; proportion of treelings that were present in previous year and died in current year. This is NA for 2014.

“tot\_prev” – totalt-1 = the total number of living treelings (“status” = live) in previous year. Used for the ‘weights’ argument in binomial regression of percent mortality (using glmer() in lme4).

“swe” – Snow Water Equivalent (mm). Calculated from depth and weight of snow sample following Pomeroy and Gray (1995). Also see McCulloch and Kershaw (2007) for more explanation.

“htc” – Heat Transfer Coefficient (W m-2 K-1), following Kershaw (1991). Also see McCulloch and Kershaw (2007) for more explanation.

“ti\_area” – area of each tree island site (m2).

“ti\_perim” – length of perimeter of each tree island site (m).

“stand\_size” – total number of trees in each tree island site.

“isl\_density” – density of trees (trees ha-1) in each tree island/site.

“zone\_area” – area of each zone (m2).

“zone\_density” – density of trees (trees ha-1) in each zone.

“zone\_recruitment” – recruitment metric for trees in each zone. For each zone, it is:

“zone\_recruitment2” – another recruitment metric for trees in each zone. For each zone, it is:

“recruit\_yr” – mean number of recruitment events per year in each zone. Based on tree dates of establishment. The mean is based on the interval from the first date of establishment to the year the tree island was sampled.

Eg., if the first tree in a hypothetical tree island established in 2000, and the island was sampled in 2010, and 5 trees established in that time, then 5 / 10 = 0.5 recruitment events/yr.

“recruit\_decade” – mean number of recruitment events per decade in each zone. Based on tree dates of establishment, binned into ten year intervals. The mean is based on the interval from the first date of establishment to the year the tree island was sampled.

“zone\_age” – mean age of trees in each zone.

“zone\_basal” – mean basal area (m2) of trees in each zone.

“zone\_height” – mean height (m) of trees in each zone.