**Daily Wx:**

**Data source:** Daymet https://daac.ornl.gov/cgi-bin/dsviewer.pl?ds\_id=1840

**Steps:**

1. Download data from the link above:
   1. Download entire years, or subset for time period of interest using the THREDDS NetCDF tool (tutorial here: <https://daymet.ornl.gov/web_services.html#gridded_subsets>)
2. Use the Make Multidimensional Raster Layer tool to import the netCDF into ArcGIS Pro.
   1. Make a Dimension for each season you wish to average, Dimension Definition = “By Ranges”, use Min & Max values to define your timeframe.
   2. “Add another” to include multiple seasons/timeframes.
   3. \*If you subsetted in the step above, you do not need to subset again here.\*
3. If you want to average a season that spans multiple years (e.g. Winter 2017-2018, Dec 2017 - March 2018), then repeat step 2 for both years, subsetting each year for the months of interest. Then use the Merge Multidimensional Rasters tool to combine them into a common raster layer.
4. Calculate statistics over time using the Aggregate Multidimensional Raster tool.
   1. Set “Aggregation Method” according to your statistics of interest.
   2. Check "Dimensionless" since output will not have time as a dimension.
5. Use the Resample tool to change the output cell size of the raster to a value smaller than your sites (100m, in my case, for 250m sites). This will ensure that the statistics calculated in the next step capture the variation in each site.
6. Use Zonal Statistics as Table tool to calculate mean values for each pika site (buffer).
7. Export tables as .csv

**Snow Depth:**

**Data source:** ABoVE <https://daac.ornl.gov/ABOVE/guides/Snow_Cover_Extent_and_Depth.html>

**Steps:**

1. Download data from the link above
2. Use the Make Multidimensional Raster Layer tool to import the netCDF into ArcGIS Pro.
   1. Make a Dimension for each season you wish to average (Jan-Mar 2013-2017 here), Dimension Definition = “By Ranges”, use Min & Max values to define your timeframe.
3. Average years using the Aggregate Multidimensional Raster tool. Check "Dimensionless" since output will not have time as a dimension.
4. Use the Raster Calculator to fill NoData values with the mean of the cells in a 5X5 window around each NoData cell using the following code (replace “raster” with the name of your raster layer):
   1. Con(IsNull("raster"), FocalStatistics("raster", NbrRectangle(5,5, "CELL"), "MEAN"), "raster")
5. Use the Resample tool to change the output cell size of the raster to a value smaller than your sites (100m, in my case). This will ensure that the statistics calculated in the next step capture the variation in each site.
6. Use Zonal Statistics as Table tool to calculate mean values for each pika site (buffer).
   1. The cell size of the snow depth data is large (1km), so change the Cell Size environment option to same as a raster layer with a smaller resolution (or input cell size manually).
7. Export tables as .csv