*Date of study*

Started in 2019, ongoing

*Date of Public Archiving:*

Data are from [Daymet website](https://daymet.ornl.gov/)

*Last modified*:

June 20 2022

*Goal*

1. Understand how the climate in the Napa Valley has changed since the 1980s, especially with respect to winegrape climactic envelopes

*Contributors*

Elizabeth Wolkovich - [e.wolkovich@ubc.ca](mailto:e.wolkovich@ubc.ca)

Faith Jones - [fjones01@mail.ubc.ca](mailto:fjones01@mail.ubc.ca) [faithann.jones2@gmail.com](mailto:faithann.jones2@gmail.com)

Ben Cook - [BC9Z@ldeo.columbia.edu](mailto:BC9Z@ldeo.columbia.edu)

*General Files*

| **File** | **Where** | **What** |
| --- | --- | --- |
| CaliforniaClimateIdeas\_notes.pdf/tex | Github: [notes](https://github.com/lizzieinvancouver/vin/tree/master/CaliforniaClimate/notes) | Faith’s notes meetings and plans for analysis |

*Data and Code*

**Github**: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/tree/master/CaliforniaClimate)

# Data

| **File** | **Where** | **What** |
| --- | --- | --- |
| Calwineshapefiles folder | **Midge:** /home/data/Daymet/California/[vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/tree/master/CaliforniaClimate) | A shapefile of all wine regions sent from Nacho |
| Daymet climate maps | **Midge:**/home/data/Daymet/California | Daymet maps of precipitation, tmin and tmax. Tiles were downloaded from Daymet [websit](https://daymet.ornl.gov/)e in 2021. |
| decadeClimateMaps folder | **Midge:** /home/data/Daymet/California/decadeClimateMaps | The Daymet maps after they are cropped to the size of the BigNapaExtent.shp file that Lizzie and Faith decided on |
| BigNapaExtent.shp | **Midge:** home/data/RE\_Winegrape\_regions/selectRegions/BigNapaRegion | AN extent Lizzie and Faith decided represented Napa region and it goes all the way to the coast. |
| CaliforniaClimateIdeas\_Outline.tex/pdf | **Git:** [CaliforniaClimate/notes](https://github.com/lizzieinvancouver/vin/tree/master/CaliforniaClimate/notes) | An outline of a possible manuscript narrative with figures |

# Analysis

# 

| **File** | **Where** | **What** |
| --- | --- | --- |
| DistanceFromCoast.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/DistanceFromCoast.R) | R code running an analysis to get a map layer of extent BigNapaExtent/BigNapaRegion.shp that say's how far each cell is from the coast. |
| napaDaymetCropping.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/napaDaymetCropping.R) | R code where Faith cropped the Daymet daily min and max layers to BigNapaExtent/BigNapaRegion.shp |
| NapaRasterAnalysis.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaRasterAnalysis.R) | R code taking in daily min and max map layers and outputting decade climateological values. Maps in decadeClimateMaps folder. |
| NapaRasterAnalysis\_prcp.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaRasterAnalysis_prcp.R) | R code taking in daily precipitation map layers and outputting decade climateological values. Maps in decadeClimateMaps folder. |
| NapaRasterAnalysis\_prcp\_yearly.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaRasterAnalysis_prcp.R) | Code getting yearly precipitation from seasons and saving as a stack of 40 maps. |
| NapaElevation.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/napaElevation.R) | R code combining some elevation data from https://dwtkns.com/srtm30m/ and cropping to Napa shape. This is the elevation data used in Daymet modelling. |
| TrialOneLayer.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/TrialOneLayer.R) | R code where Faith tried out various spatial analyses options on a subset of data |
| TryingToGetTopowx.r | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/TryingToGetTopowx.r) | R code Faith wrote to try and access Topowx data. SHe never got it working properly, and instead shifted over to Dayment which was much easier because she just selected tiles to download. |
| NapaCompareMapstoTerroir.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | R code where Faith extracts the change in climate variables between 1980s mean and 2010s mean, and plots against elevation and distance from coast. |
| NapaClimateMoving.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | Code that estimates climate in Napa Valley specifically in the 1980s and see where it has moved using the decadal data |
| NapaClimateMoving\_5Year.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | Code that estimates climate in Napa Valley specifically in the 1980s and see where it has moved using the 5 year aggregated data |
| NapaClimateMoving\_years.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | Code that estimates climate in Napa Valley specifically in the 1980s and see where it has moved using the yearly data |
| SonomaClimateMoving.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | Code that estimates climate in Sonoma Valley and see where it has moved using the decadal data |
| SonomaClimateMoving\_years.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | Code that estimates climate in Sonoma Valley and see where it has moved using the yearly data |
| ShiftingDecadeClimate.R | Github: [vin/CaliforniaClimate](https://github.com/lizzieinvancouver/vin/blob/master/CaliforniaClimate/NapaCompareMapstoTerroir.R) | Code that uses decade aggregated means, but shifts window of time 1 year at a time. |