

Weather Influences on the Future of Wine Production

Opening	MVP Matthew Berkley	Acreage Produced by County	Total Acreage Per Year	Top 5 Harvest Varietals	Temperature Over Time	Temperature Delta 1895-2019	P ..
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Go home earth, you're drunk

Is global warming and basically all of 2020 making you want to drink?

Well feed that alcoholism while you can....

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Weather Influence on Wine Harvest and Production

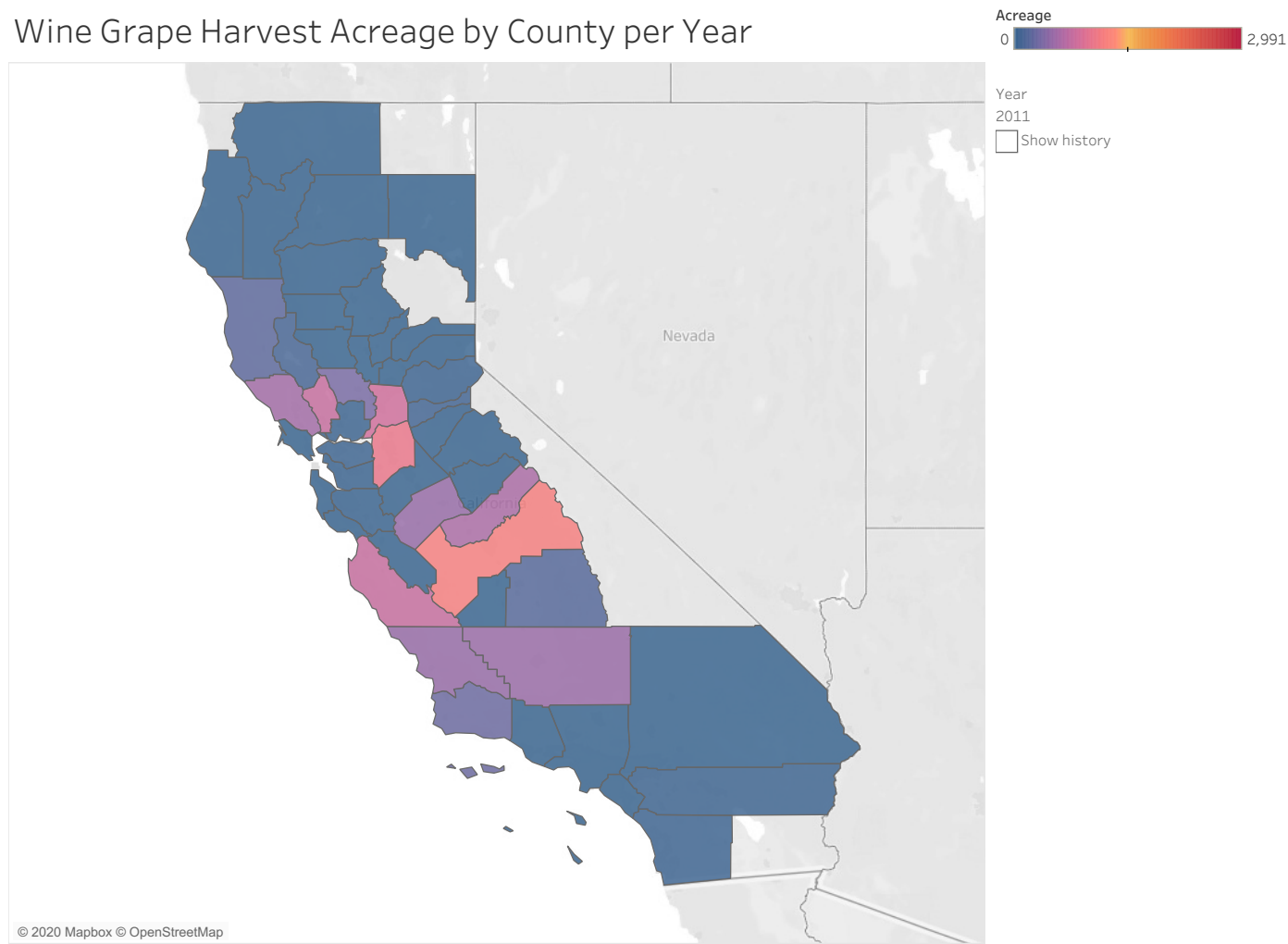
Adam McVey, Matthew Berkley, Gianni Adamo, Jiuhe(Rosa) Zhu, Zac Cheadle, Laura Rice



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Wine Grape Harvest Acreage by County per Year



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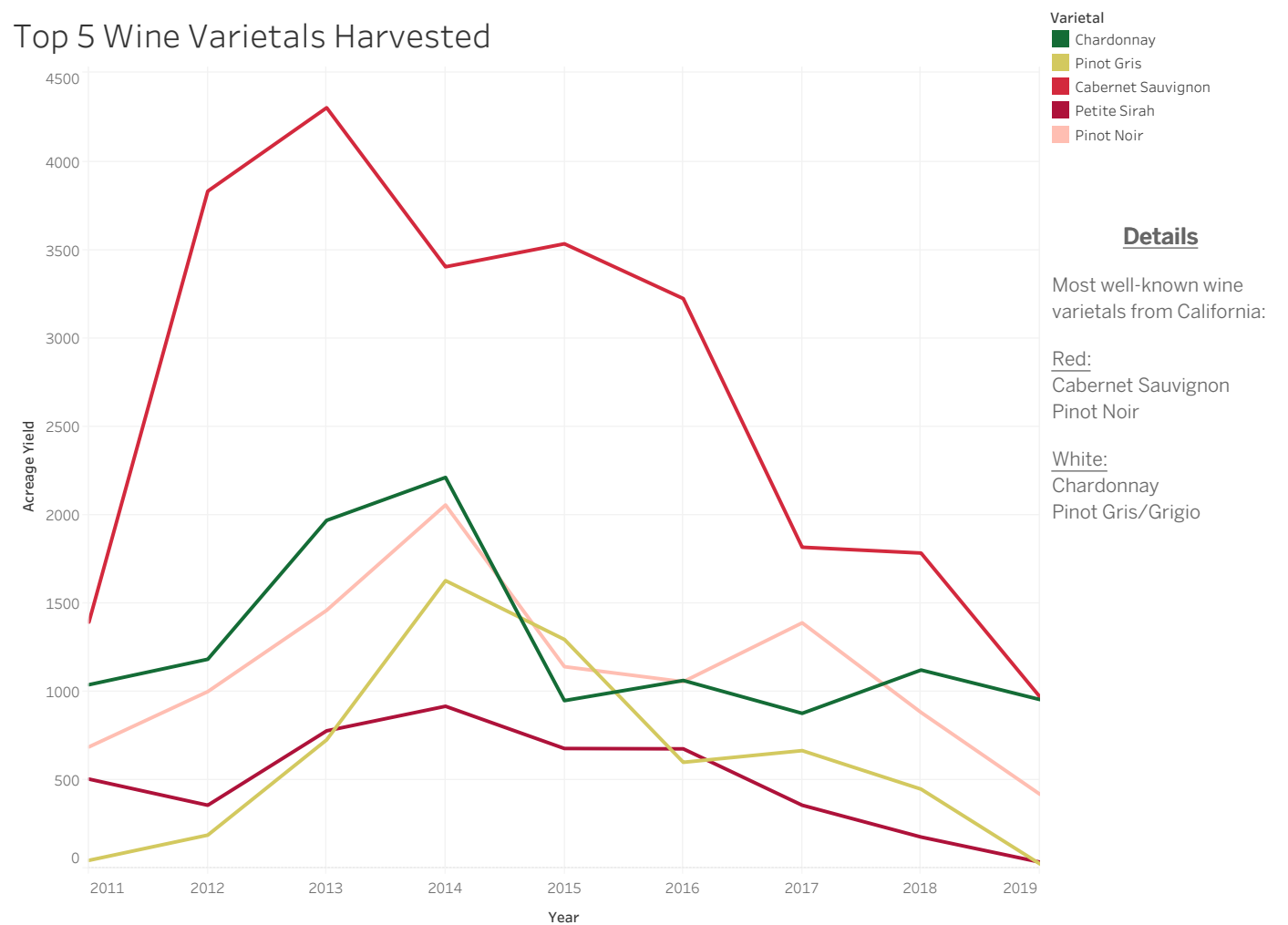
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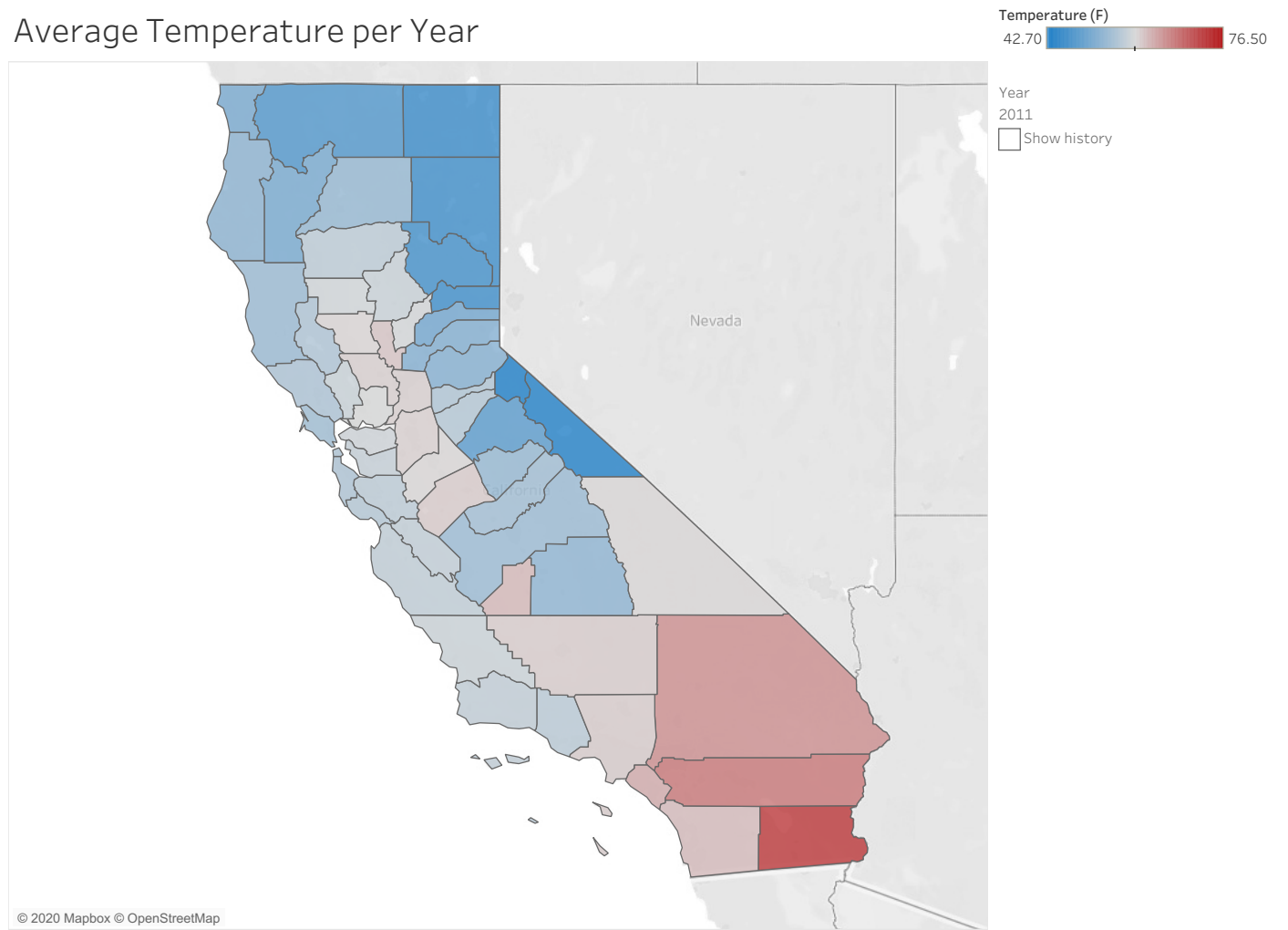
Top 5 Wine Varietals Harvested



Weather Influences on the Future of Wine Production

Acreage Produced by County	Total Acreage Per Year	Top 5 Harvest Varietals	Temperature Over Time	Temperature Delta 1895-2019	Precipitation per Year	January Temperatures	J
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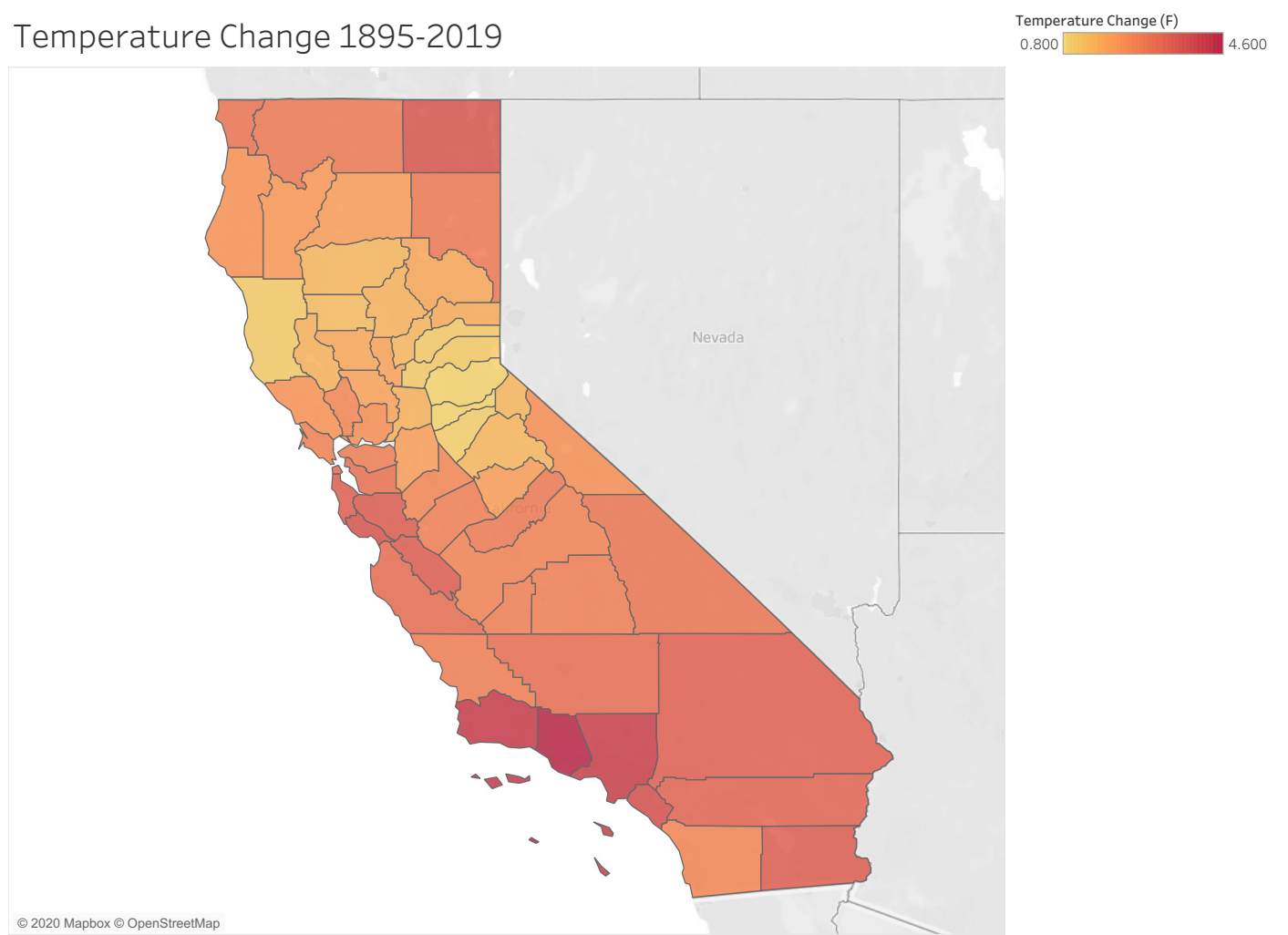
Average Temperature per Year



Weather Influences on the Future of Wine Production

Total Acreage Per Year	Top 5 Harvest Varietals	Temperature Over Time	Temperature Delta 1895-2019	Precipitation per Year	January Temperatures	January Precipitation	.
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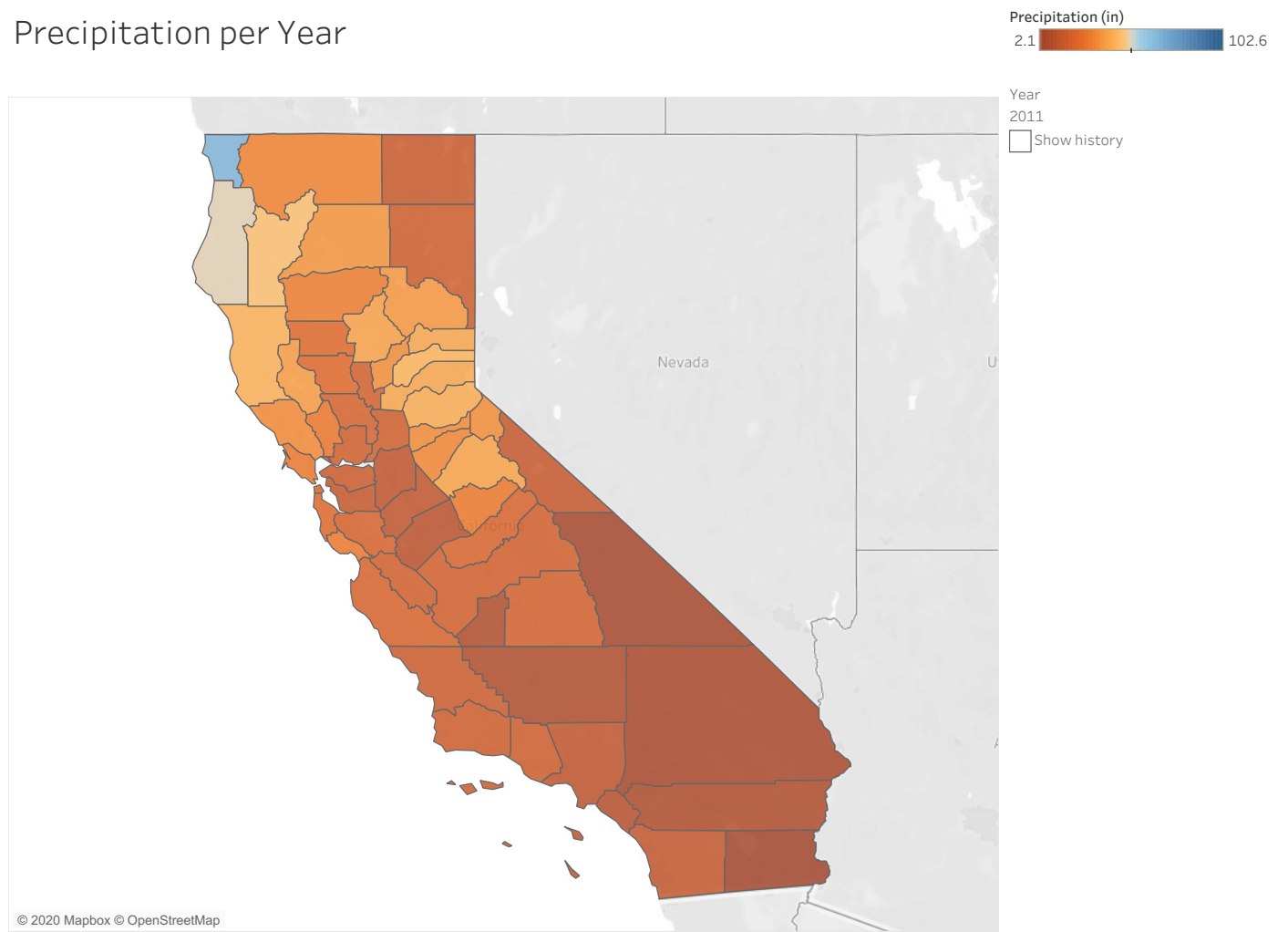
Temperature Change 1895-2019



Weather Influences on the Future of Wine Production

Top 5 Harvest Varietals	Temperature Over Time	Temperature Delta 1895-2019	Precipitation per Year	January Temperatures	January Precipitation	Ozone Days per Year	.
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Precipitation per Year



Weather Influences on the Future of Wine Production

Temperature Over Time	Temperature Delta 1895-2019	Precipitation per Year	January Temperatures	January Precipitation	Ozone Days per Year	White Wine Varietals	.
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January Temperatures Year to Year

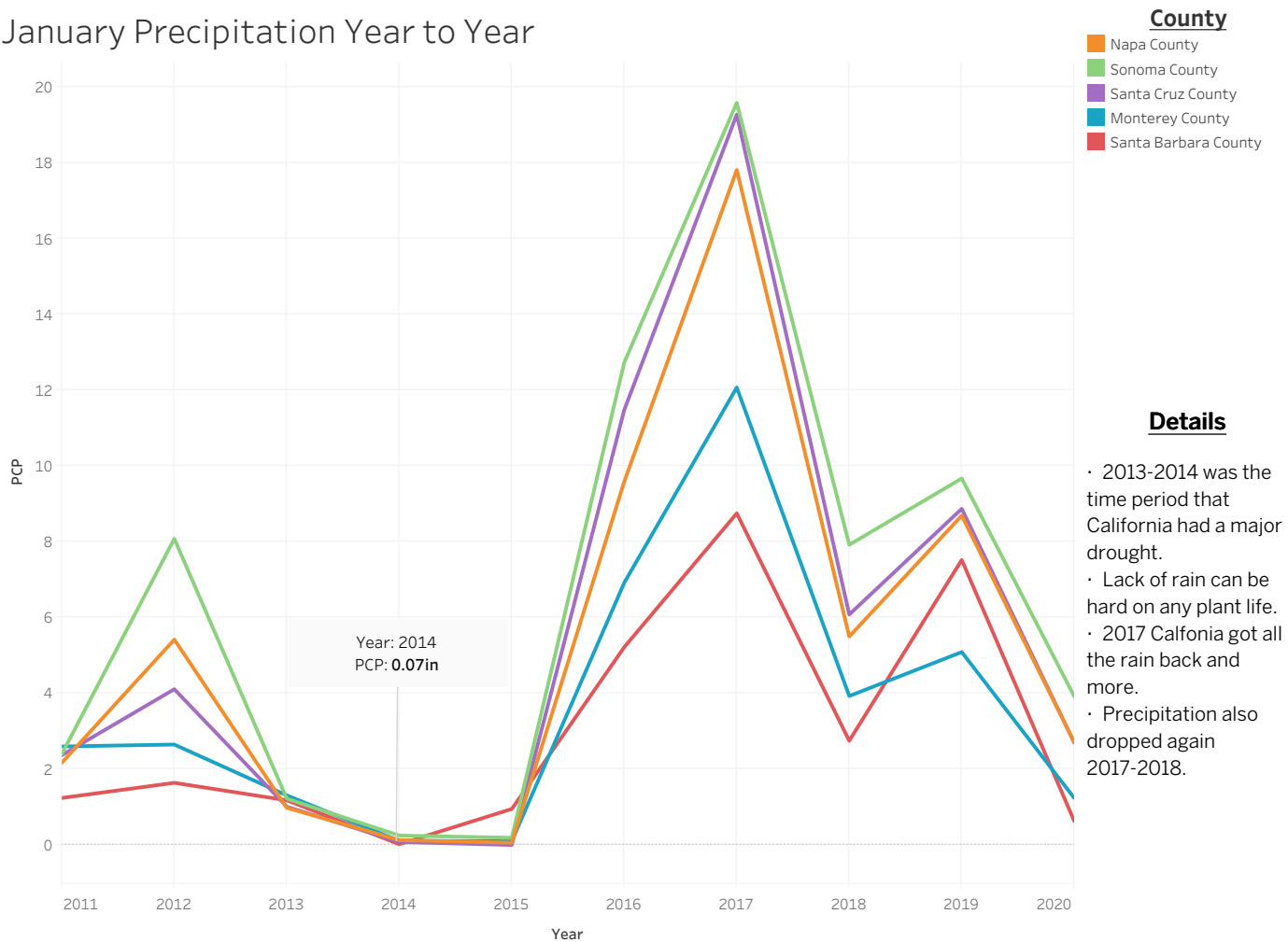


- Focusing at January, because it is the last month of dormant season.
- At this time, wine makers and viticulturalists begin the pruning to allow vines to bear fruit that year.
- 2014 and 2018 show a higher temperature average for the month of January.
- Having warm temperatures too early makes plants think its spring and begin to grow, but then don't survive when temperature drops again.

Weather Influences on the Future of Wine Production

Temperature Delta 1895-2019	Precipitation per Year	January Temperatures	January Precipitation	Ozone Days per Year	White Wine Varietals	Red Wine Varietals by	T
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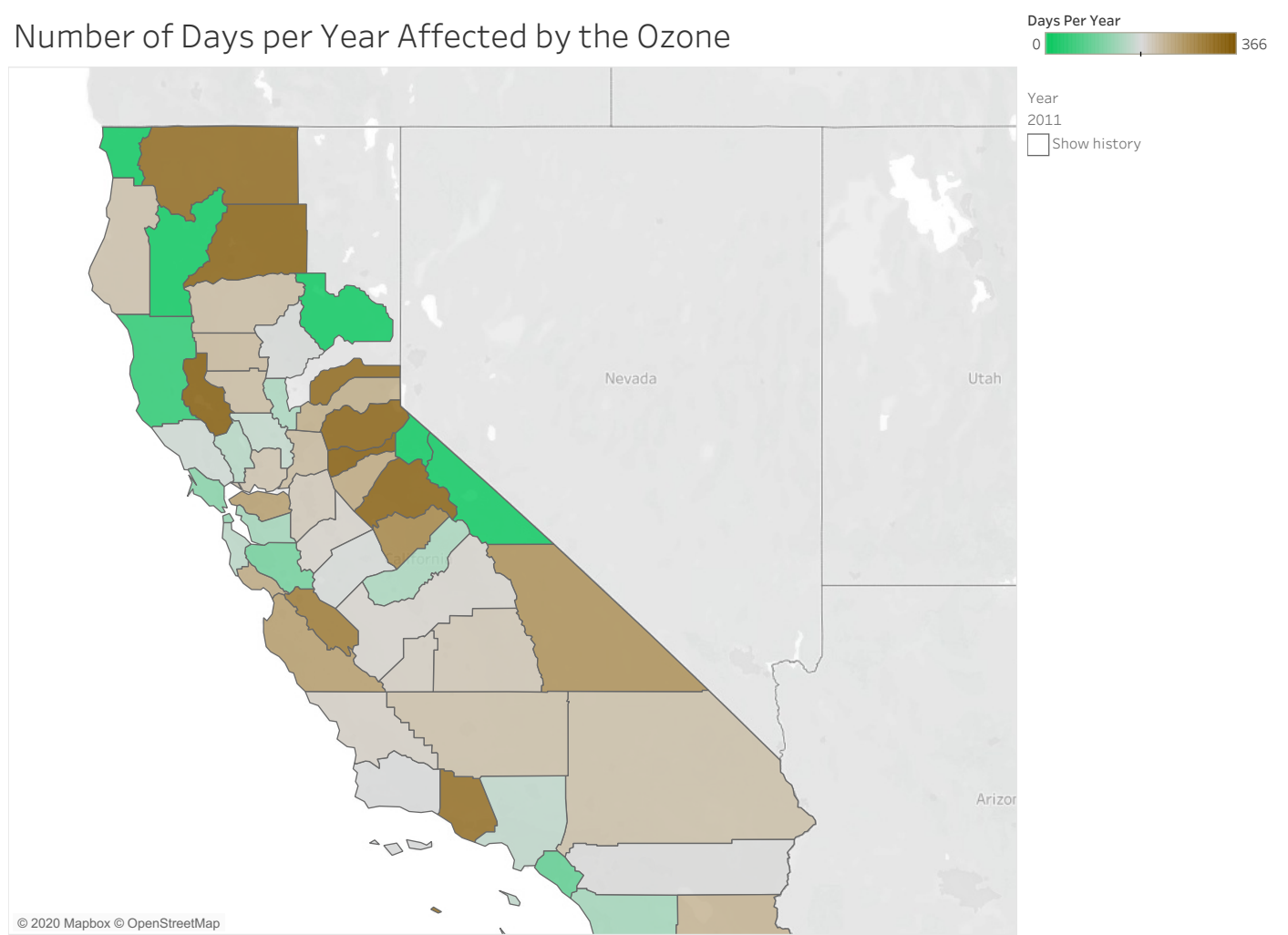
January Precipitation Year to Year



Weather Influences on the Future of Wine Production

Precipitation per Year	January Temperatures	January Precipitation	Ozone Days per Year	White Wine Varietals	Red Wine Varietals by	Thick-Skinned Varietals	T...
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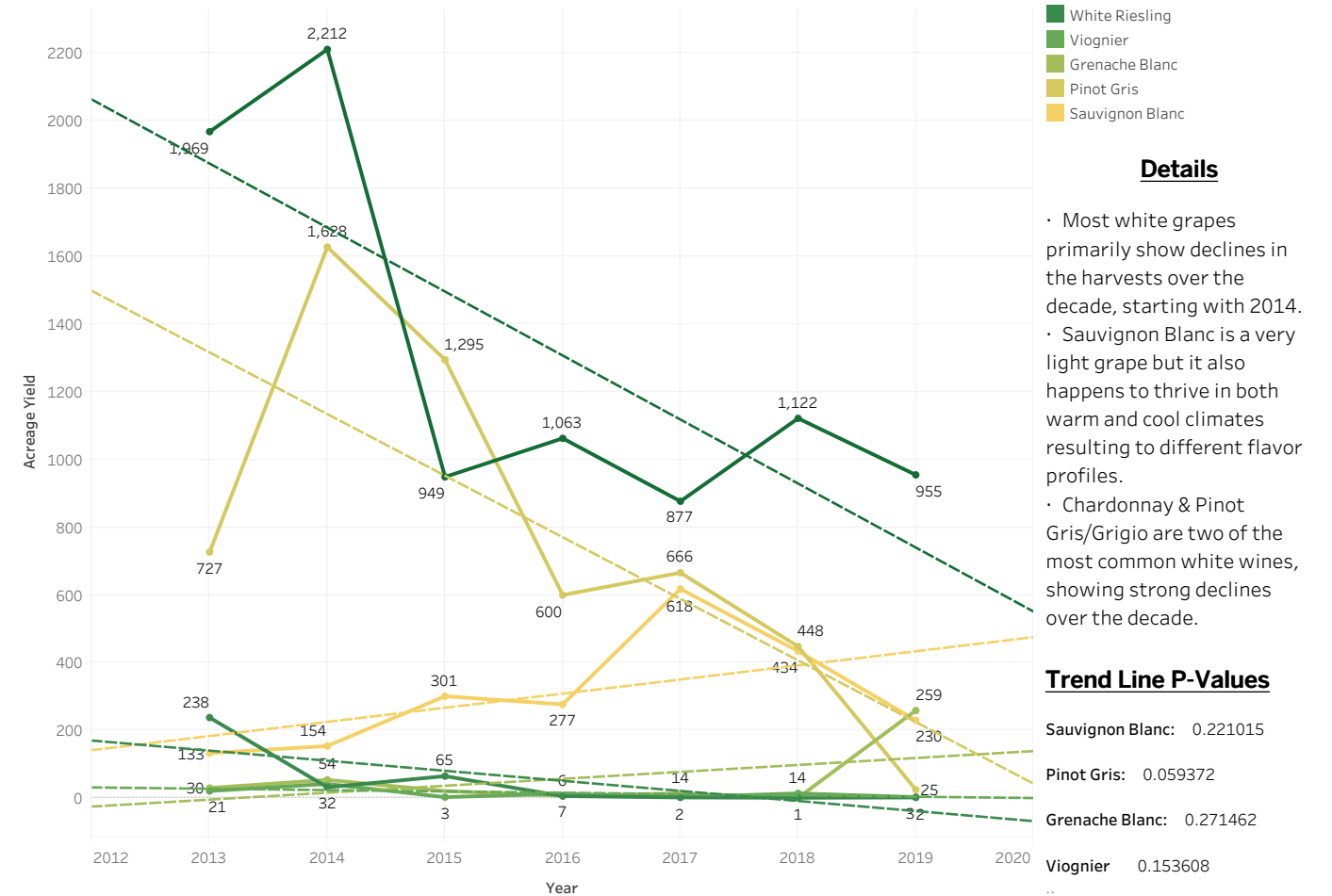
Number of Days per Year Affected by the Ozone



Weather Influences on the Future of Wine Production

January Temperatures	January Precipitation	Ozone Days per Year	White Wine Varietals	Red Wine Varietals by	Thick-Skinned Varietals	Thin-Skinned Varietals	.
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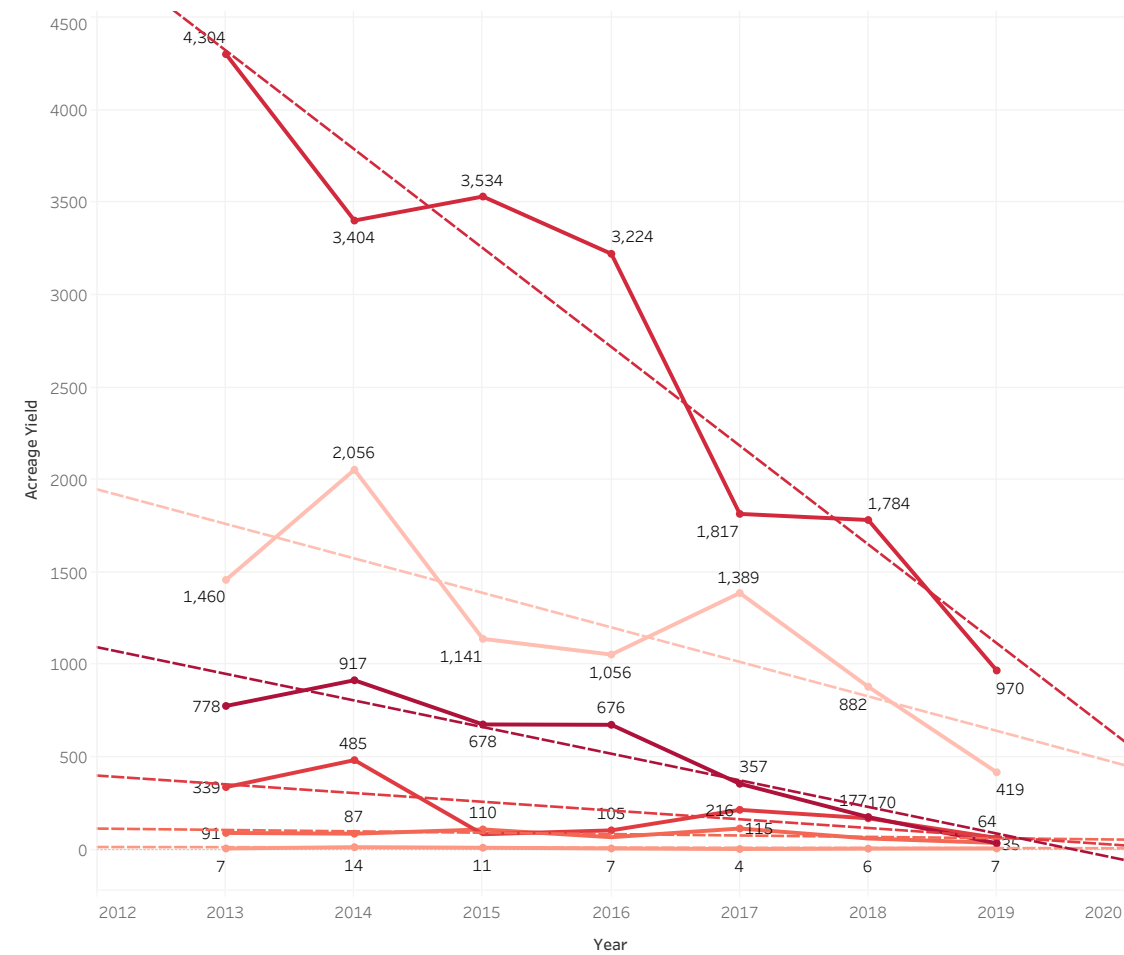
White Wine Grapes by Skin Type



Weather Influences on the Future of Wine Production

J.	January Precipitation	Ozone Days per Year	White Wine Varietals	Red Wine Varietals by	Thick-Skinned Varietals	Thin-Skinned Varietals	Machine Learning
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Red Wine Grapes by Skin Type



Varietal

Details

- All white grapes primarily show declines in the harvests over the decade, starting with 2013.
- Cabernet Sauvignon took some of the biggest hits over the decade.
- Pinot Noir in second as a very thin skinned grape and hard to maintain.
- Petite Syrah is known for having thick, hardy skins and had a similar decline.

Trend Line P-Values

Pinot Noir: 0.035559

Sangiovese: 0.224106

Grenache: 0.172247

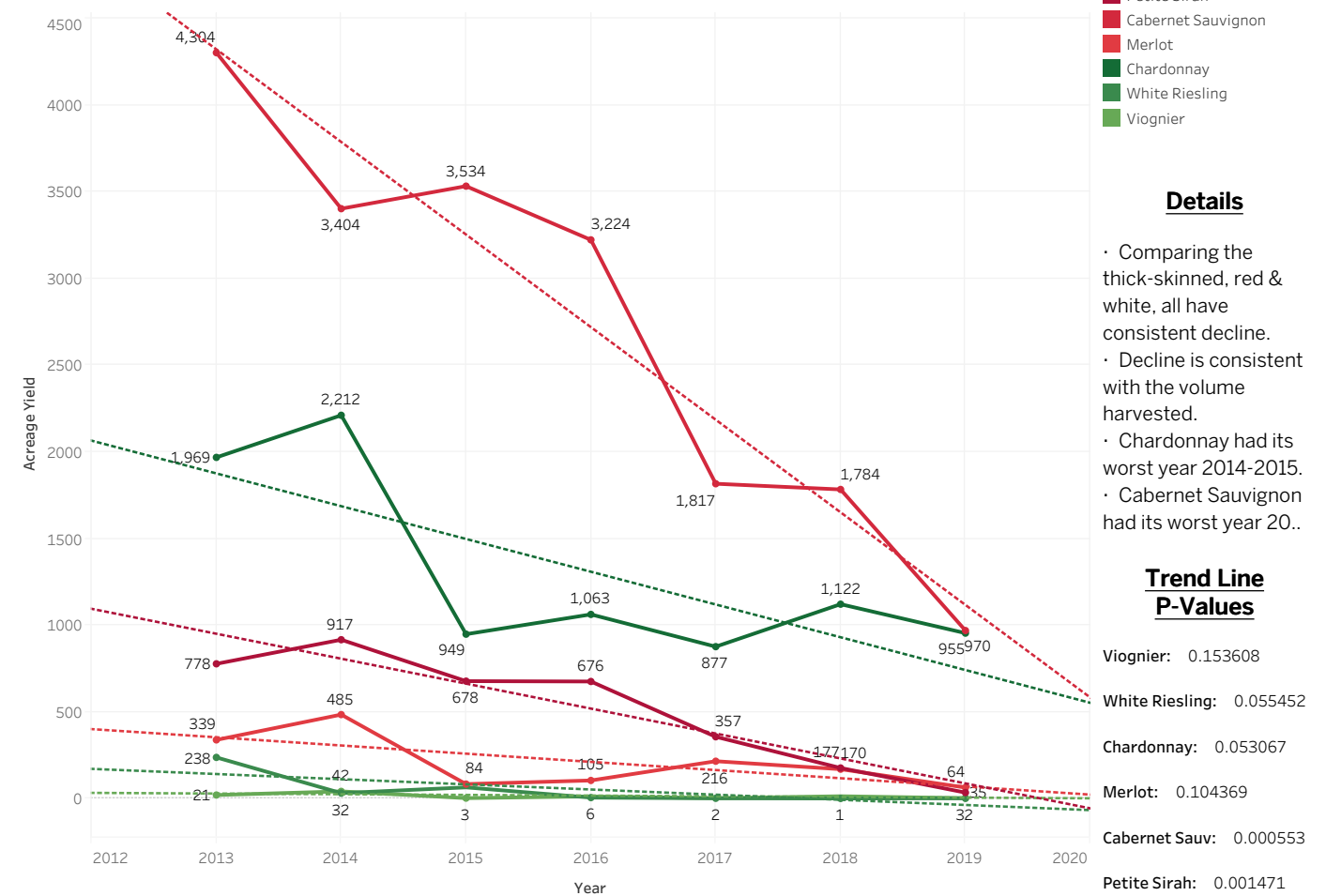
Merlot: 0.104369

Cabernet Sauv: 0.000553..

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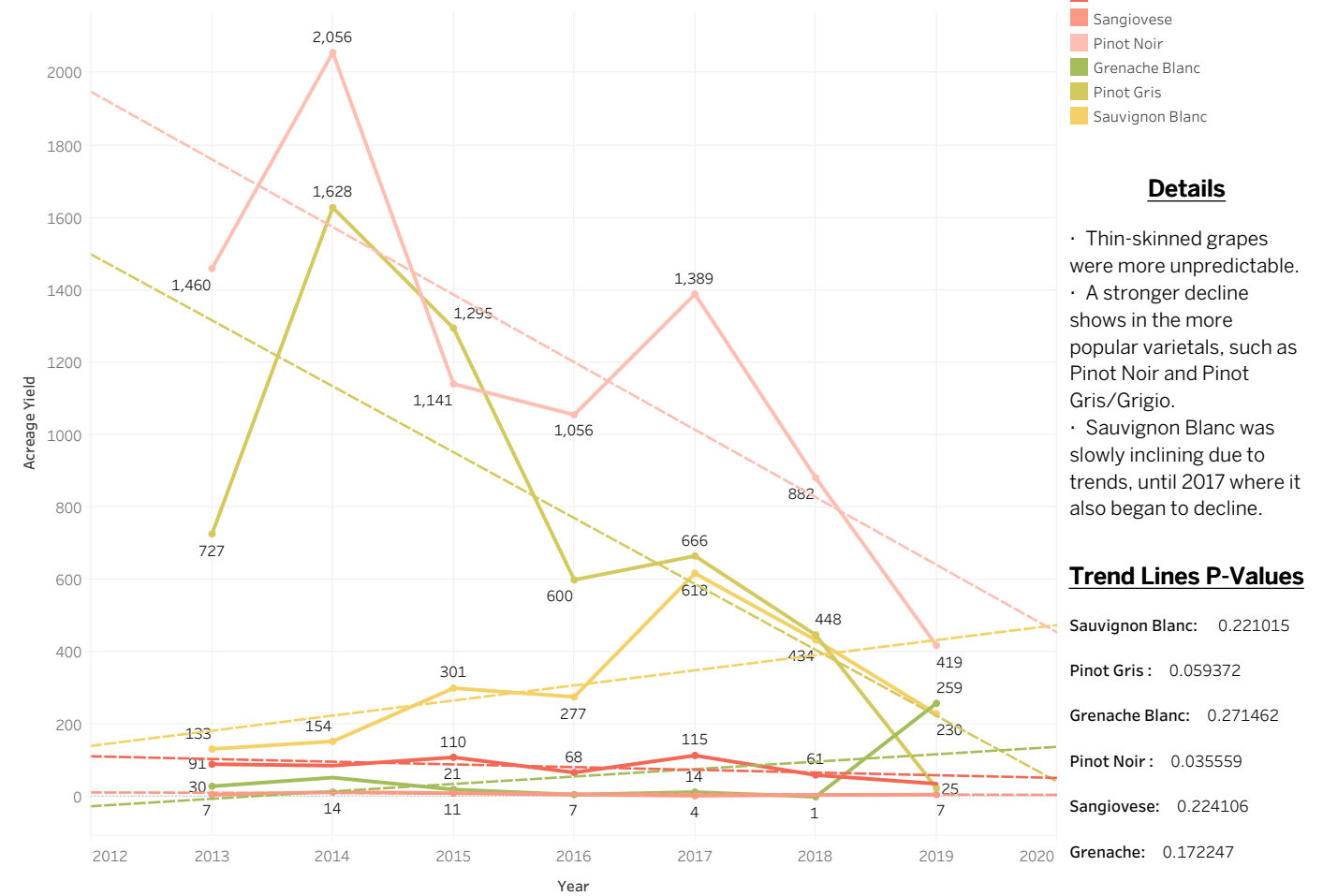
Thick-Skinned Varietals



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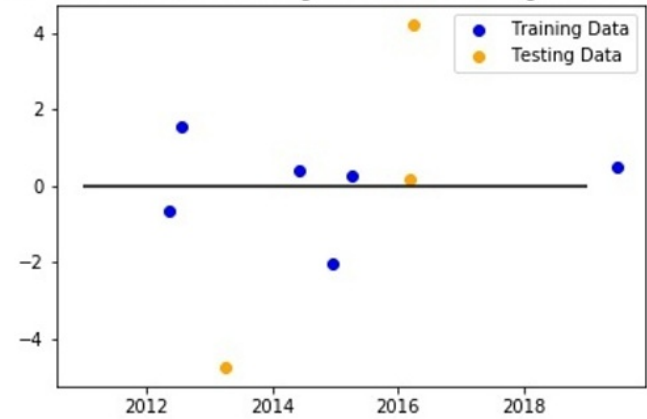
Thin-Skinned Varietals



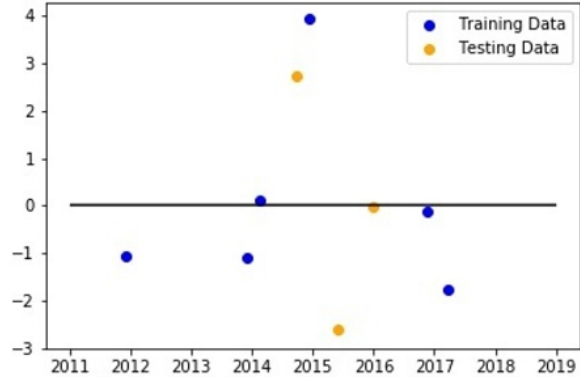
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Residual Ozone Plot: Training Score: 0.816 Testing Score: -1.1780



Residual Plot Precipitation: Training Score: 0.483 Testing Score: 0.242



Residual Temperature Plot Training Score: 0.712 Testing Score: 0.979

