

RESEARCH

World-class wine research program

 Washington's wine industry allocates 25% of its budget to support a groundbreaking viticulture and enology research program, along with the state-ofthe-art WSU Wine Science Center.

 Research priorities are 100% industry driven, and results are available to every winery and vineyard in the state.

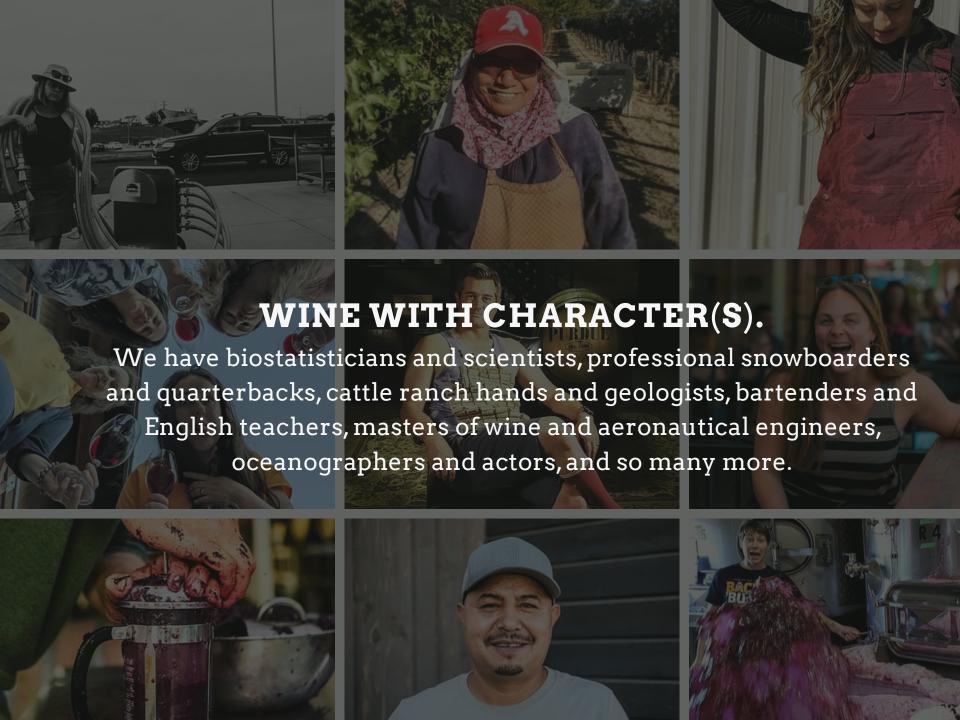
 Outreach is a major priority, to ensure farmers and winemakers have the most updated information to make even better wine and grow even better fruit.











WASHINGTON WINE TIMELINE



1825.

First Grapes Planted

Washington's first grapes are planted at Fort Vancouver by the **Hudson's Bay Company**.



1914

Important vineyards spring up,

in the Yakima Valley —most notably the vineyards of **W.B. Bridgman** of Sunnyside.

1940

Dr. Walter Clore,

"The Father of Washington Wine," begins trials of grape varieties in eastern Washington to determine what would grow where and under what conditions. Later, he works closely with WSU scientist Chas Nagel to make research wines.



•1903



Large-scale irrigation,

fueled by runoff from the melting snowcaps of the Cascade Mountains, begins in eastern Washington.

.1933



1960

Commercial vineyards are planted in Washington.



Ste. Michelle Vintners is established.

Now known as Chateau Ste. Michelle, it is Washington's largest winery.



1983

Yakima Valley AVA is established

as Washington's first American Viticultural Area (AVA).



1962

Associated Vintners is established, later becoming Columbia Winery.

1970 10 wineries



2015

Wine Science Center **●** 2001

100 wineries milestone



•2019 **1,000** wineries



WINERIES **1,070+**



GROWERS **400+**



TONS PRODUCED **240,000**



60,000+



Ninety percent of Washington state's wineries are small, family-owned wineries who make fewer than 5,000 cases a year.

Annual In-state Economic Impact

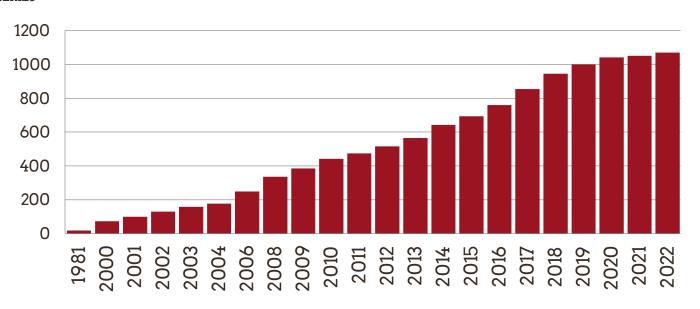
\$8+ Billion

Annual Wine Production

17+ Million Cases

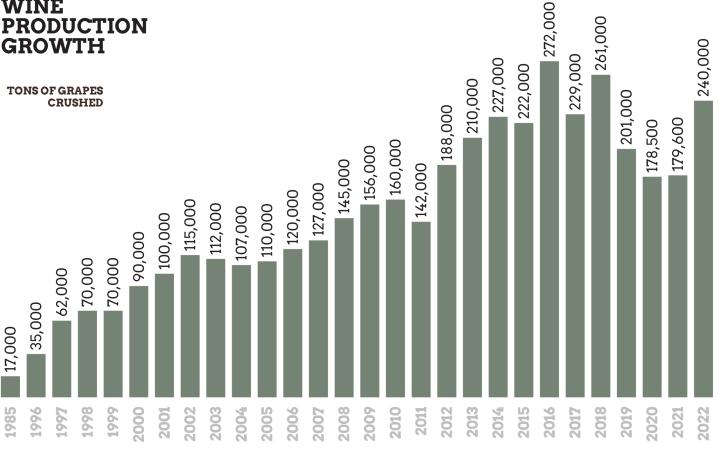
LICENSED WINERIES

NUMBER OF WINERIES

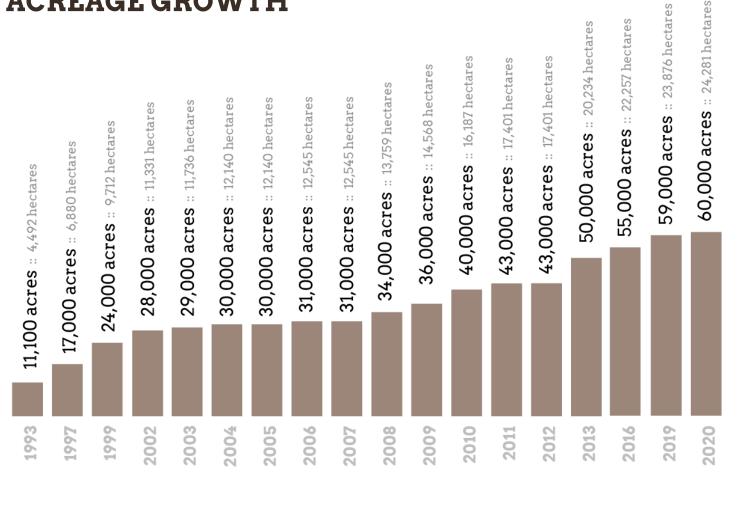


 WASHINGTON STATE ADDS 4 NEW WINERIES PER MONTH, ON AVERAGE





WINE GRAPE ACREAGE GROWTH

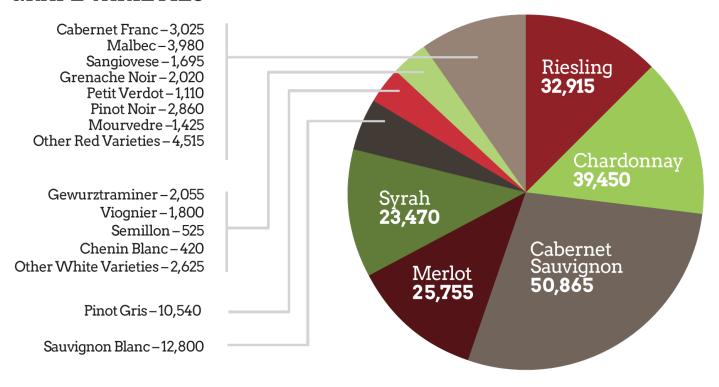


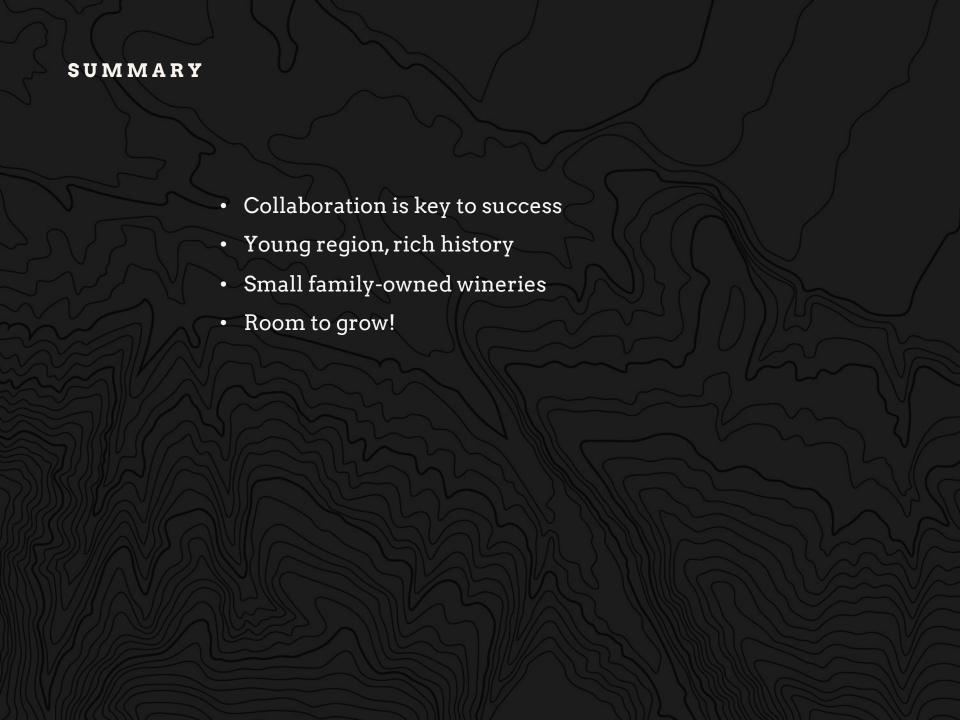
240,000 TONS HARVESTED

REDS 136,870 TONS

WHITE 103,130 TONS

GRAPE VARIETIES





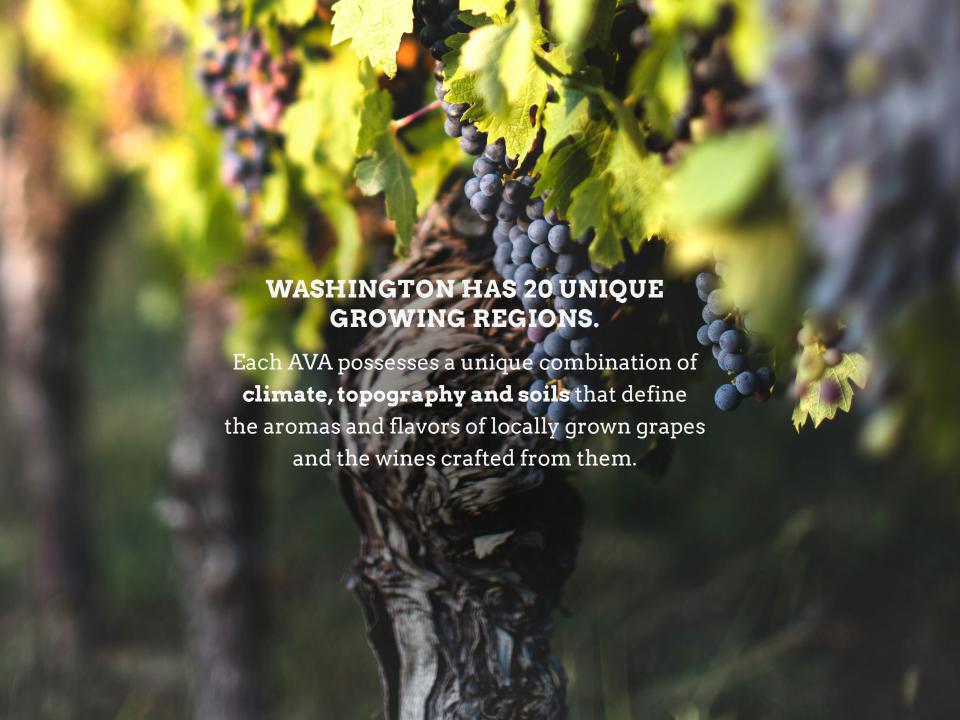


ter·roir

/ter'wär/

noun

- 1. the complete natural environment in which a particular wine is produced, including factors such as the soil, topography, and climate.
- 2. the characteristic taste and flavor imparted to a wine by the environment in which it is produced.



WASHINGTON AVAS



COLUMBIA VALLEY

Encompassing more than a quarter of the state, the Columbia Valley is by far Washington's largest growing region at nearly 11 million acres. Almost all of Washington's other growing regions are sub-appellations of the Columbia Valley.

DESIGNATED: 1984

ACREAGE:

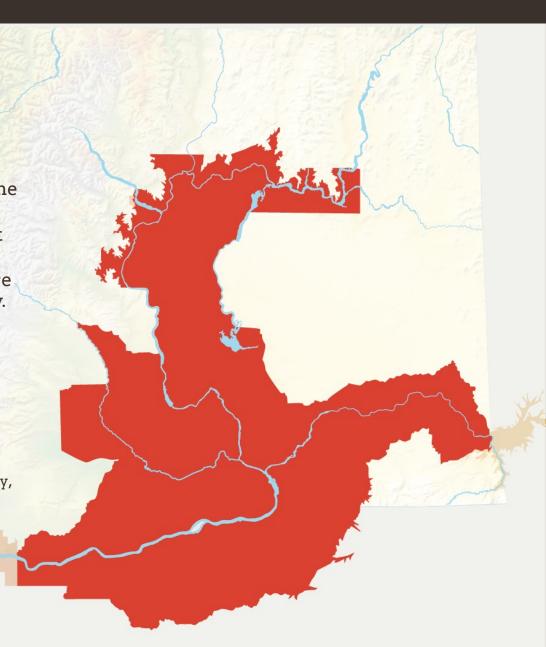
Total acreage: 11,308,636 (4,576,442 hectares)
WA acreage: 8,748,949 (3,540,574 hectares)
Total vineyard acreage: 60,079 (24,313 hectares)
WA vineyard acreage: 59,234 (23,971 hectares)

TOP VARIETIES: Cabernet Sauvignon, Chardonnay,

Merlot, Riesling, Syrah

ANNUAL PRECIPITATION:

Average 6-8 inches, wide range throughout





YAKIMA VALLEY

Washington State's first federally-recognized AVA, Yakima Valley has more than one quarter of Washington's total planted acreage. Yakima Valley is one of Washington's most diverse growing regions.

DESIGNATED: 1983

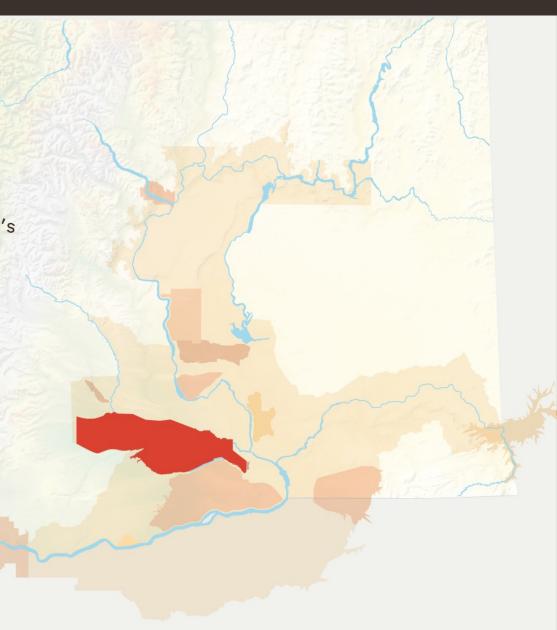
ACREAGE:

Total Acreage: 708,710 (286,804 hectares) Vineyard Acreage: 18,924 (7,658 hectares)

TOP VARIETIES: Chardonnay, Riesling, Merlot, Cabernet Sauvignon, Syrah

ANNUAL PRECIPITATION:

Average 8 inches





WALLA WALLA VALLEY

The Walla Walla Valley is home to some of Washington's oldest wineries and has the highest concentration of wineries in the state.

DESIGNATED: 1984

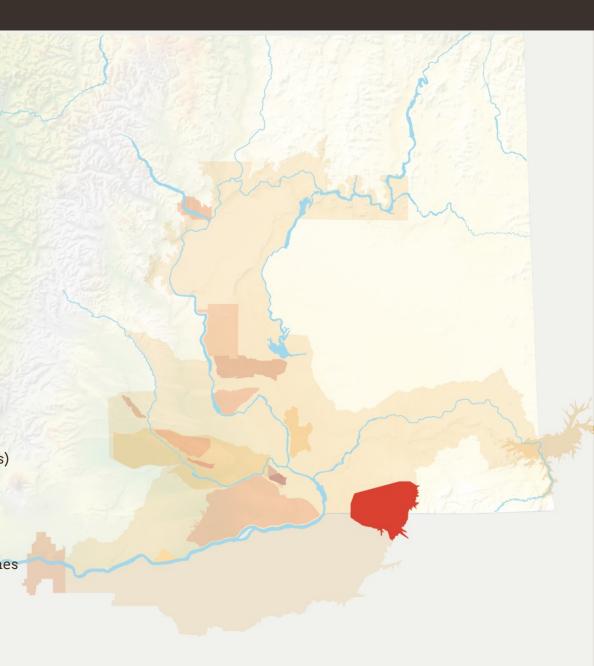
VINEYARDS:

Total acreage: 319,427 (129,267 hectares)
WA acreage: 220,799 (89,354 hectares)
Total vineyard acreage: 2,933 (1,186 hectares)
WA vineyard acreage: 1,672 (676 hectares)

TOP VARIETIES: Cabernet Sauvignon,

Merlot, Syrah

ANNUAL PRECIPITATION: Range 7-22 inches







PUGET SOUND

Washington's only appellation located west of the Cascade crest, Puget Sound is unique for Washington in that has a maritime climate. The appellation enjoys long, mild and dry summers, but gets enough rainfall to grow grapes without irrigation, unlike most growing regions east of the crest.

DESIGNATED: 1995

Acreage:

Total acreage: 2,918,765 (1,181,182 hectares)

Vineyard acreage: 104 (42 hectares)

TOP VARIETIES: Madeleine Angevine, Siegerebbe, Muller-Thurgau, Pinot Gris, Pinot Noir

ANNUAL PRECIPITATION: Range 15-60 inches



RED MOUNTAIN

At 4,040 acres, Red Mountain is one of Washington's smallest and typically its warmest appellation, where growing season daytime temperatures average 90 degrees, gets only 5 inches (127 mm) of rain each year. It is dedicated almost exclusively to red wine grapes and produces some of the state's most sought-after grapes.

DESIGNATED: 2001

ACREAGE:

Total acreage: 4,538 (1,836 hectares) Vineyard acreage: 2,382 (963 hectares)

TOP VARIETIES: Cabernet Sauvignon, Merlot, Syrah

ANNUAL PRECIPITATION:

Average 5 inches



COLUMBIA GORGE

The Columbia Gorge is the state's westernmost appellation east of the Cascade Mountains. A shared appellation with Oregon, the Columbia Gorge has very dry regions to the east as well as areas to the west that receive so much rain they are able to dry farm.

DESIGNATED: 2004

ACREAGE:

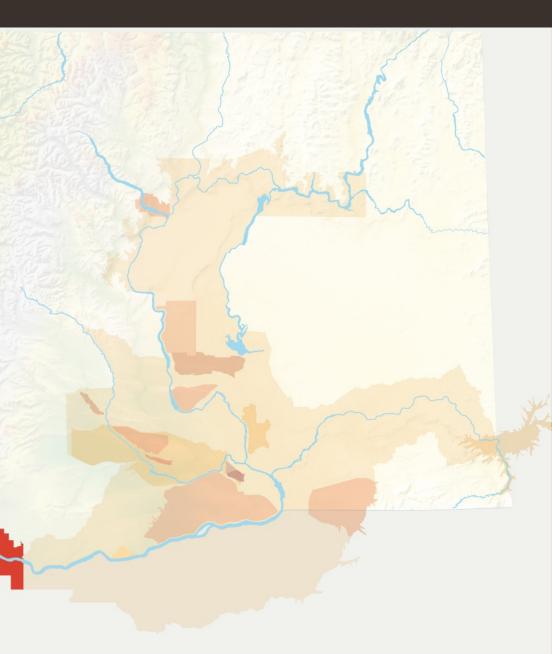
Total acreage: 186,610 (75,518 Hectares)
WA acreage: 66,604 (26,953 Hectares)
Total vineyard acreage: 950 (384 Hectares)
WA vineyard acreage: 372 (151 Hectares)

TOP VARIETIES: Pinot Noir, Chardonnay, Pinot

Gris, Riesling

ANNUAL PRECIPITATION:

Range 10-36 inches





HORSE HEAVEN HILLS

The Horse Heaven Hills is home to over one quarter of Washington's planted acreage. It is a warm region, but with consistent winds that allow a wide variety of grapes to ripen successfully.

DESIGNATED: 2005

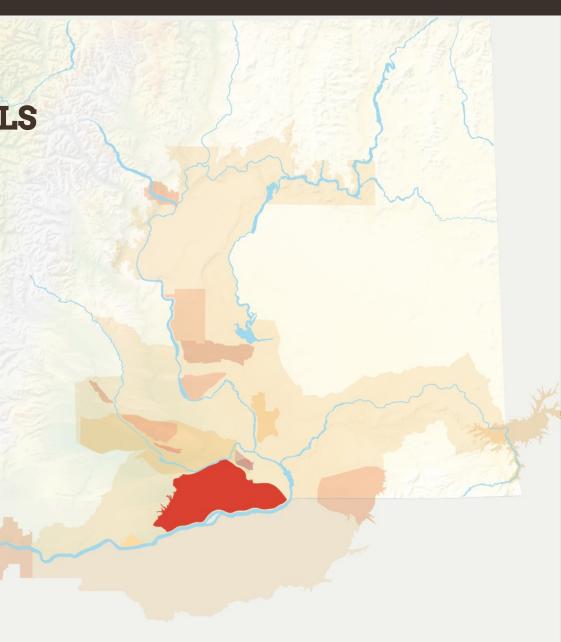
ACREAGE:

Total acreage: 576,603 (233,342 hectares) Vineyard acreage: 17,082 (6,912 hectares)

TOP VARIETIES: Cabernet Sauvignon, Merlot, Chardonnay, Riesling, Syrah

ANNUAL PRECIPITATION:

Average 9 inches





WAHLUKE SLOPE

The Wahluke Slope is a large alluvial fan that stretches down to the Columbia River. It is known for its gentle grade and consistency of aspect. It is a dry, very warm site near the center of the larger Columbia Valley AVA.

DESIGNATED: 2006

ACREAGE:

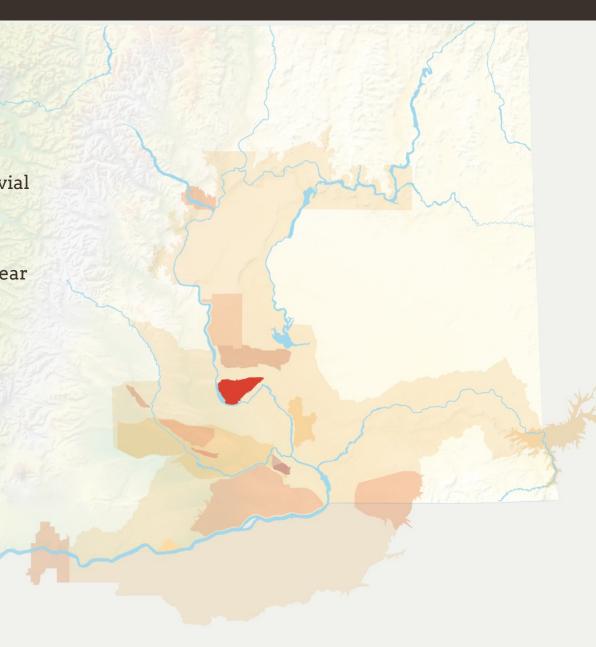
Total acreage: 80,490 (32,573 hectares) Vineyard acreage: 9,277 (3,754 hectares)

TOP VARIETIES: Cabernet Sauvignon,

Merlot, Chardonnay

ANNUAL PRECIPITATION:

Average 6 inches





RATTLESNAKE HILLS

The Rattlesnake Hills AVA is located along the north-central edge of the Yakima Valley appellation. The high elevation of the Yakima Ridge to the north of the Rattlesnake Hills protects the area from winter freezes that can affect other areas of the state.

DESIGNATED: 2006

ACREAGE:

Total acreage: 74,380 (30,100 hectares) Vineyard acreage: 1,832 (741 hectares)

TOP VARIETIES: Merlot, Riesling, Cabernet Sauvignon, Syrah

ANNUAL PRECIPITATION:

Range 6-12 inches



LAKE CHELAN

This AVA wraps around the tourist-popular Lake Chelan. The lake has a moderating effect on summer and winter temperatures, which along with its more northern location allows it to excel at cooler climate grapes. The appellation also has a granitic bedrock, compared to the basalt bedrock of the rest of the Columbia Valley.

DESIGNATED: 2009

ACREAGE:

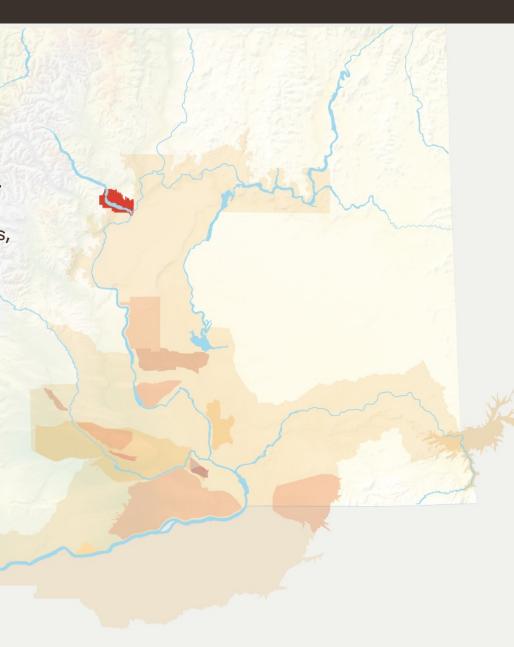
Total acreage: 24,114 (9,758 hectares) Vineyard acreage: 301 (121 hectares)

TOP VARIETIES: Syrah, Pinot Noir, Chardonnay, Pinot

Gris, Merlot

ANNUAL PRECIPITATION:

Average 12 inches





SNIPES MOUNTAIN

Snipes Mountain is an anticline of the Yakima Fold belt, elevated from its surroundings and containing unique soils from the ancestral riverbed of the Columbia River. It contains some of the state's oldest grape vines.

DESIGNATED: 2009

ACREAGE:

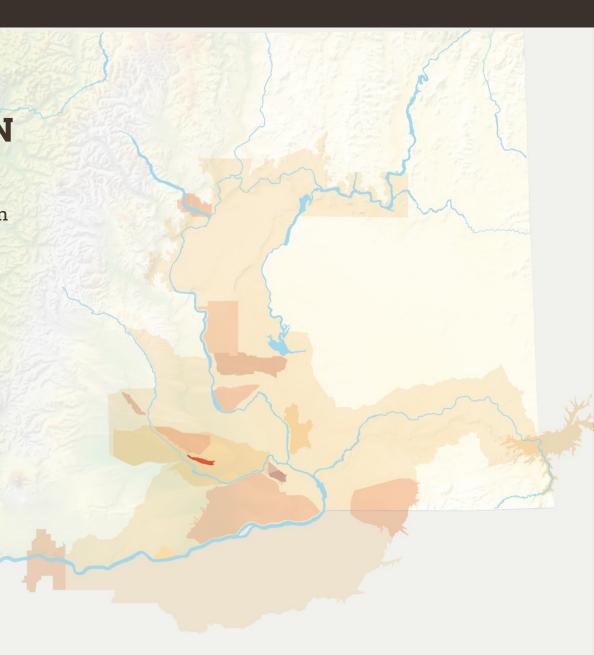
Total acreage: 4,005 (1,620 hectares) Vineyard acreage: 859 (347 hectares)

TOP VARIETIES: Cabernet Sauvignon,

Merlot, Chardonnay

ANNUAL PRECIPITATION:

Average 7 inches





NACHES HEIGHTS

Naches Heights is an extremely young growing region, with its first vinifera plantings in 2002. The AVA sits on a volcanic plateau and all of the vines planted in the appellation are biodynamic or organically farmed.

DESIGNATED: 2011

ACREAGE:

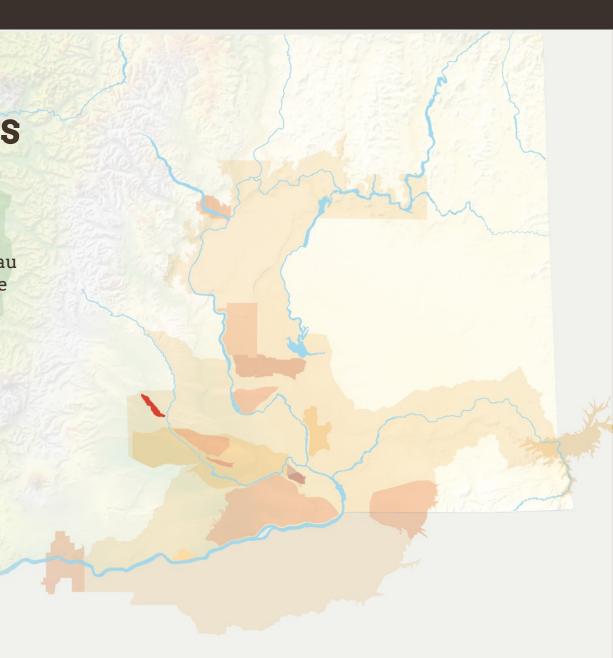
Total acreage: 13,165 (5,327 hectares) Vineyard acreage: 45 (18 hectares)

TOP VARIETIES: Chardonnay and

Cabernet Sauvignon

ANNUAL PRECIPITATION:

Range 10-13 inches





ANCIENT LAKES OF COLUMBIA VALLEY

Named after a series of 35 lakes that dot the area, the Ancient Lakes more northerly location contributes to large diurnal swings and cooler fall temperatures that help lock in acidity. The area is dominated by white varieties.

DESIGNATED: 2012

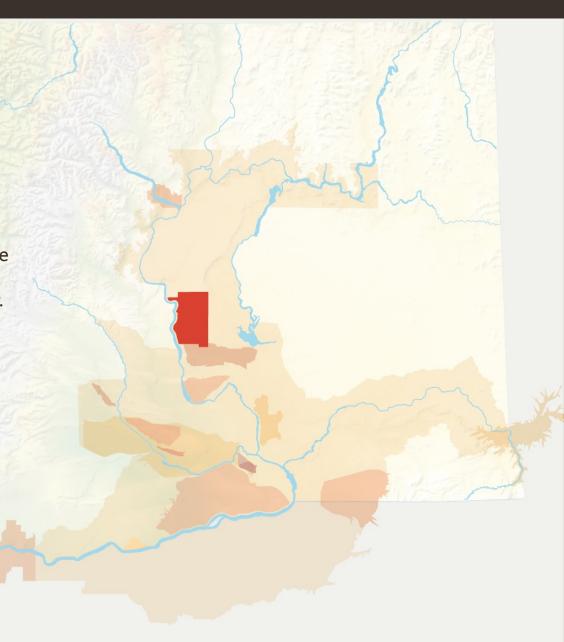
ACREAGE:

Total acreage: 162,762 (65,867 hectares) Vineyard acreage: 1,596 (646 hectares)

TOP VARIETIES: Riesling and Chardonnay

ANNUAL PRECIPITATION:

Average 6 inches





LEWIS-CLARK VALLEY

The Lewis-Clark Valley AVA's soil is comprised of decomposing perennial grasses and grass roots with capacity to hold water. The region has good planting areas that are easy to develop and contains air drainage characteristics that are ideal for wine grapes.

DESIGNATED: 2016

VINEYARDS:

Total acreage: 306,650 (124,096 Hectares) WA acreage: 85,238 (34,494 Hectares) Total vineyard acreage: 100 (40 Hectares) WA vineyard acreage: 9 (4 Hectares)

VARIETIES: Chardonnay, Pinot Noir, Merlot

ANNUAL PRECIPITATION:

16 inches





ROYAL SLOPE

Royal Slope is comprised mostly of south-facing slopes, highly regarded in the Pacific Northwest because of the northerly latitude. There are more than 20 different varieties planted within the appellation.

DESIGNATED: 2020

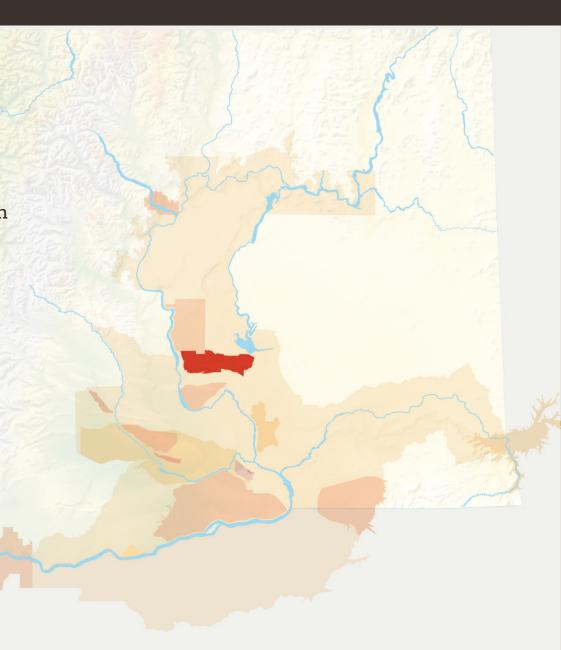
ACREAGE:

Total acreage: 156,389 (63,288 hectares) Vineyard acreage: 1,900 (768 hectares)

TOP VARIETIES: Cabernet Sauvignon, Syrah, Chardonnay

ANNUAL PRECIPITATION:

Average 6-8 inches





CANDY MOUNTAIN

Candy Mountain is Washington's smallest appellation. There are currently 110 acres of vineyards, almost all of which are red varieties. It's located on a very warm, isolated mountain with excellent cold air drainage that rises above lower elevation plains.

DESIGNATED: 2020

ACREAGE:

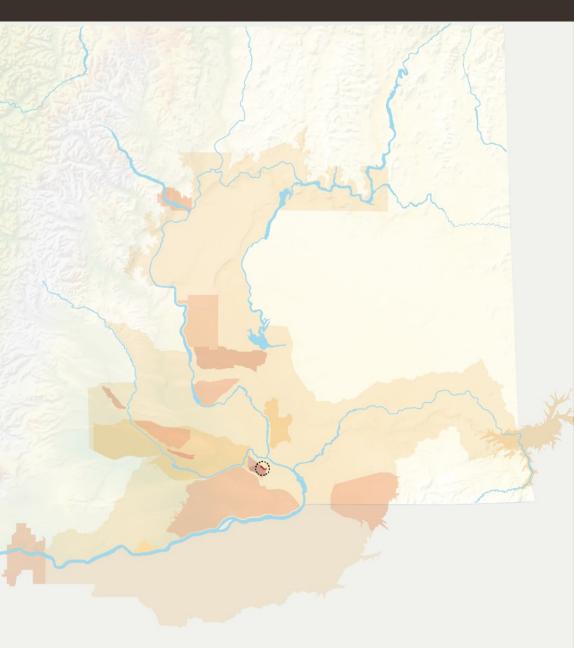
Total acreage: 815 (330 hectares) Vineyard acreage: 110 (44 hectares)

TOP VARIETIES: Cabernet Sauvignon, Merlot,

Syrah, Sangiovese

ANNUAL PRECIPITATION:

Average 5 inches





THE BURN OF COLUMBIA VALLEY

Located west of the Horse Heaven Hills,
The Burn of Columbia Valley experiences
a long growing season, slightly more
precipitation compared to other regions,
and notable impacts from wind coming
up from the Columbia Gorge. There are
approximately 1,500 acres of wine grapes
currently planted, and Cabernet
Sauvignon is the majority variety.

DESIGNATED: 2021

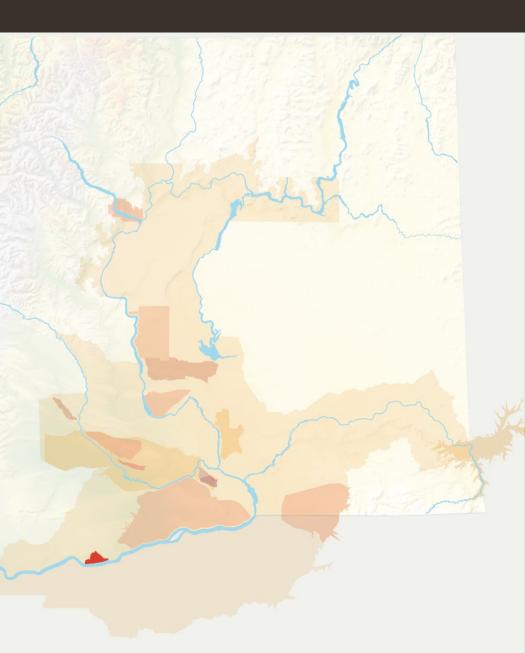
ACREAGE:

Total acreage: 16,870 (6,827 hectares) Vineyard acreage: 1,500 (607 hectares)

TOP VARIETIES: Cabernet Sauvignon, Chardonnay

ANNUAL PRECIPITATION:

Average 8-9 inches





WHITE BLUFFS

Nearly one out of every 10 wineries in Washington sources wine grapes from the White Bluffs AVA. Located in the middle of the Columbia Valley, several vineyards within the AVA are 40+ years old. White Bluffs encompasses two plateaus that rise above the surrounding plains, and the added elevation protects the vines from cold air on the valley floor to extend the growing season.

DESIGNATED: 2021

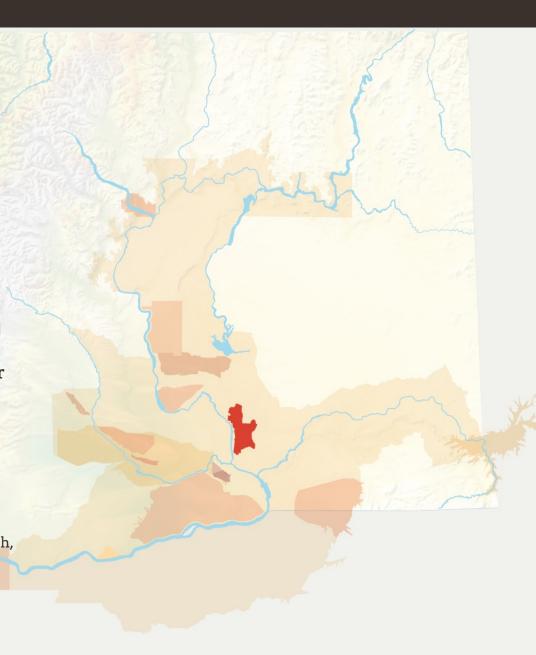
ACREAGE:

Total acreage: 93,738 (37,934 hectares) Vineyard acreage: 1,127 (456 hectares)

TOP VARIETIES: Cabernet Sauvignon, Merlot, Syrah, Riesling, Sauvignon Blanc

ANNUAL PRECIPITATION:

Average 6-8 inches





GOOSE GAP

Goose Gap and the adjoining Goose
Mountain create a rough triangle between
Candy Mountain, Red Mountain and
Badger Mountain. The orientation of Goose
Mountain is east to west, whereas almost all
nearby hills are northwest to southeast.
Vineyards are dominantly planted on north
and northeast slopes as opposed to nearby
vineyards on south or southwest slopes,
which leads to less solar radiation and later
ripening.

DESIGNATED: 2021

ACREAGE:

Total acreage: 8,129 (3,289 hectares) Vineyard acreage: 1,800 acres (728 hectares)

TOP VARIETIES: Cabernet Sauvignon, Merlot, Syrah, Chardonnay

ANNUAL PRECIPITATION: Average 6-8 inches



Rocky Reach

Located between Chelan and Wenatchee,
Rocky Reach is unique from almost all
other appellations in the Columbia Valley
in that it has predominantly granitic
bedrock, a feature it shares with only Lake
Chelan. It is located at low elevations within
the valley, making it considerably warmer
with a longer growing season relative to the
surrounding mountains and plateaus.

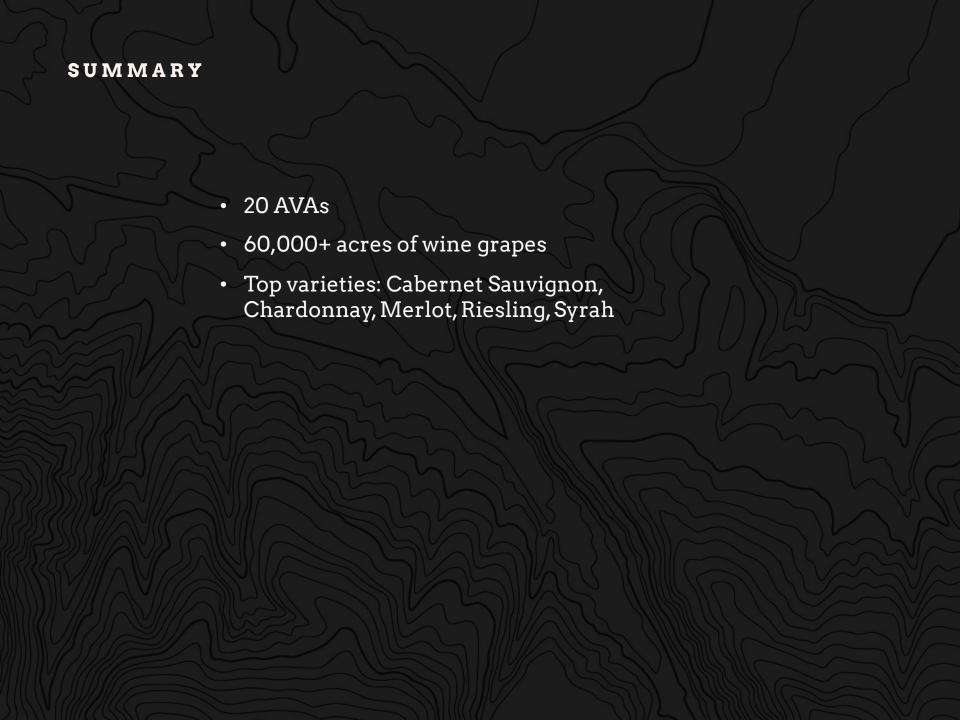
DESIGNATED: 2022

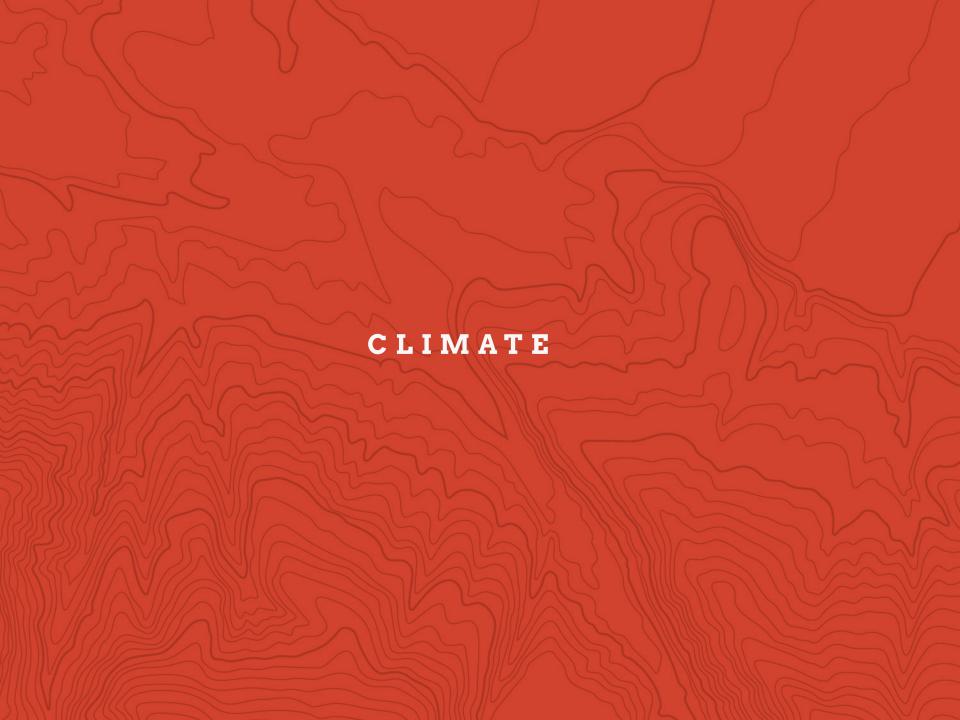
ACREAGE:

Total acreage: 32,333 (13,084 hectares) Vineyard acreage: 117 (47 hectares)

TOP VARIETY: Cabernet Sauvignon







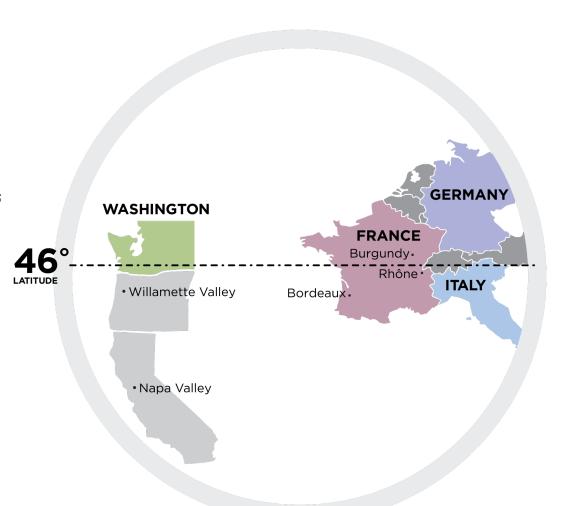


PERFECT CLIMATE FOR GROWING WINE GRAPES

Washington state shares the same latitude as other famous wine regions in Europe–46° North.

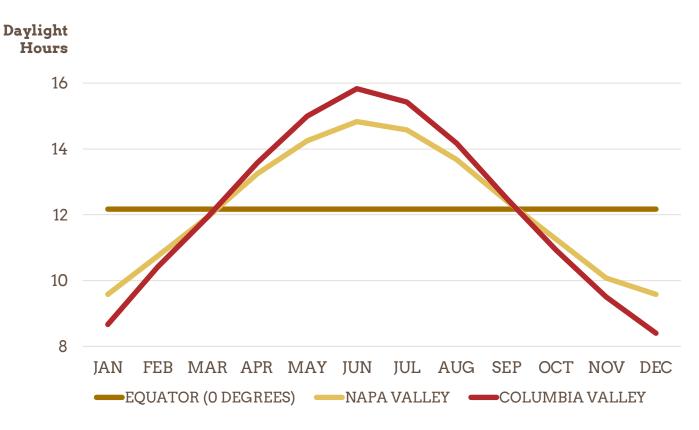
What's so special about the 46° parallel?

The 46° parallel is the sweet spot for growing grapes—at that angle to the sun our region receives the most amount of sunlight during the growing season.



PEAK GROWING PERIOD

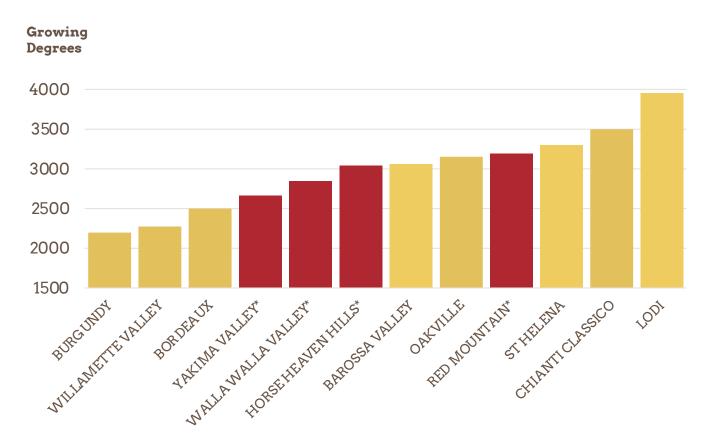
Nearly 55 additional hours of daylight compared to Napa Valley*



 $^{^{\}star}$ Difference in daylight March 19 $^{\rm th}$ – June 21st

Source: U.S. Naval Observatory

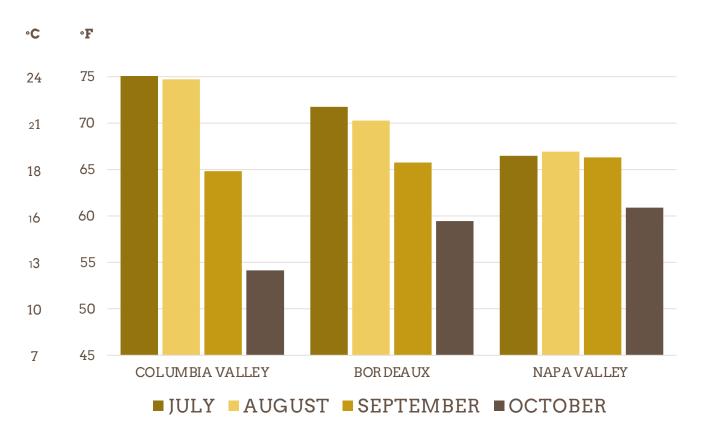
AVERAGE GROWING DEGREE DAYS



^{* 26-}Year Average

Source: WSU Ag Weather Net

MEAN TEMPERATURE BY REGION (2013-2017)



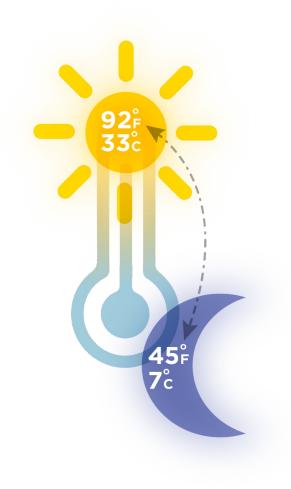
DIURNAL RANGE

Diurnal range is the difference between day and night temperatures in the vineyard; the gap between the hottest temperature and the coolest.

Warm days and cool nights help maintain the natural acidity of the grapes.

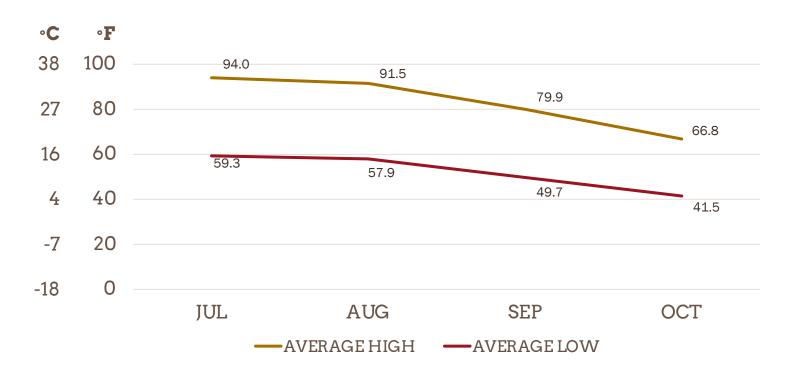
A large diurnal range can help grapes to ripen in a more balanced way. Warmer daytime temperatures help to foster sugar development, but cool nights can help to preserve aromas, freshness and acidity.

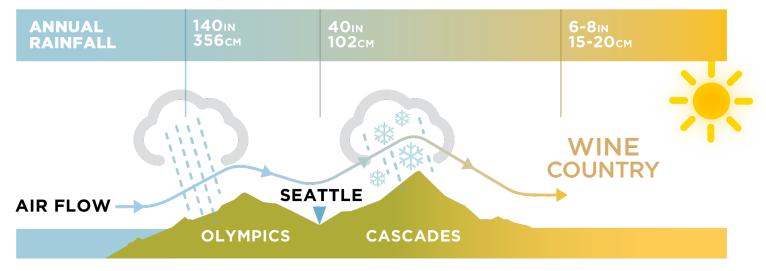
Washington State has some of the most dramatic daily temperature fluctuations of any wine region, ranging from 35°F to as much as 47°F* between day and night temperatures.



SIGNIFICANT & BENEFICIAL TEMPERATURE CHANGES

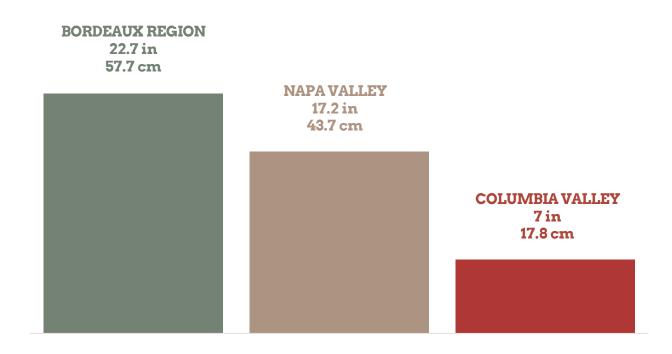
Warm Daytime Temps + Chilly Nighttime Temps = Ripeness of phenolics & acidity

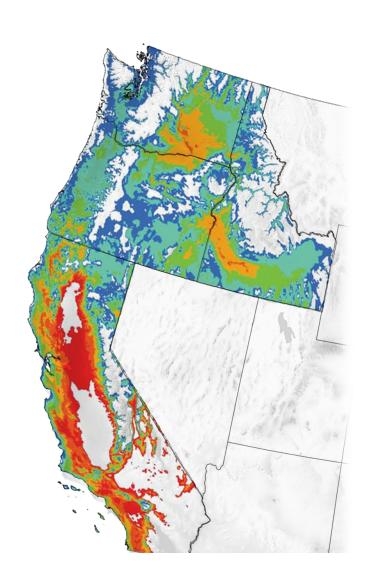




The Columbia Valley is protected from wet weather systems by two major mountain ranges, the Olympics and the Cascades, creating the perfect climate for wine in the warm and dry eastern part of the state.

AVERAGE ANNUAL RAINFALL





HEAT MAP

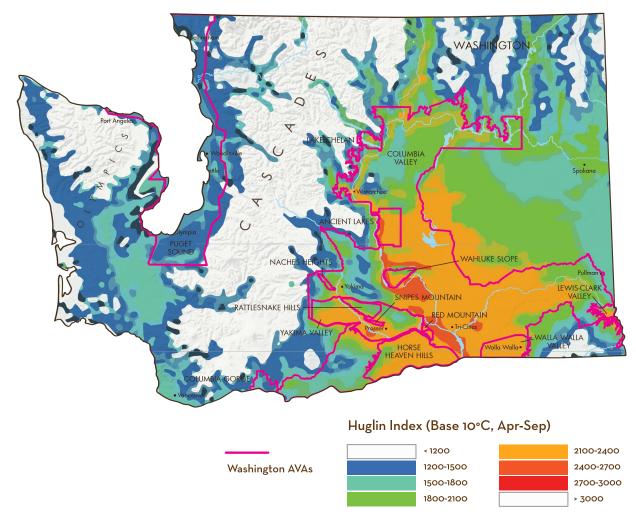
3 climatic indicators to give a macro view of viticulture regions:

- Dryness Index
- Thermal Index
- Cool Night Index

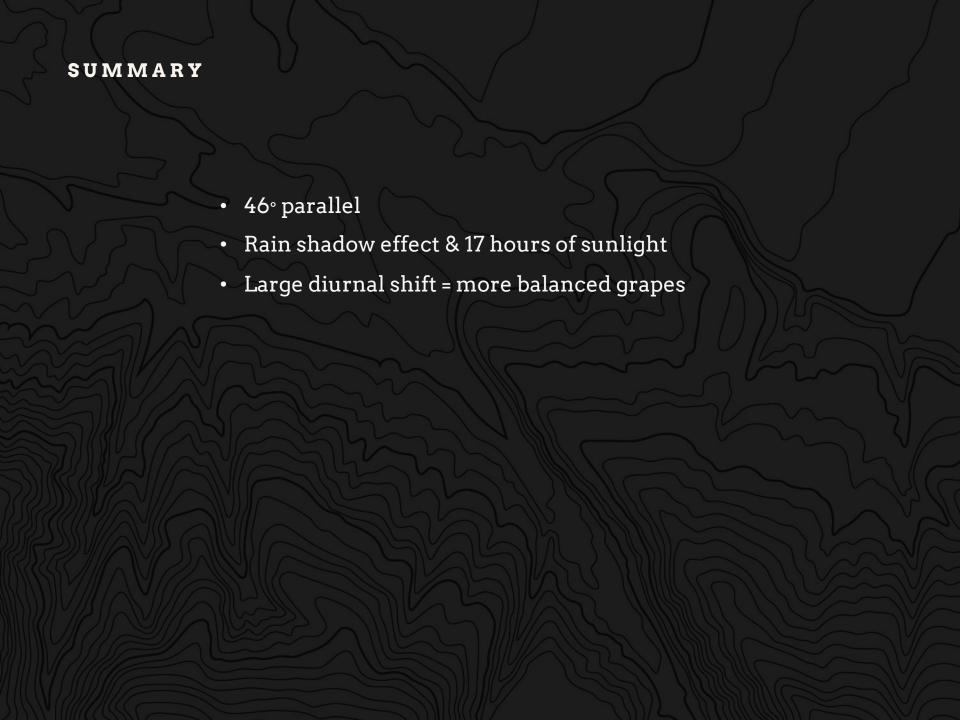
Huglin Index (Base 10°C, Apr-Sep)

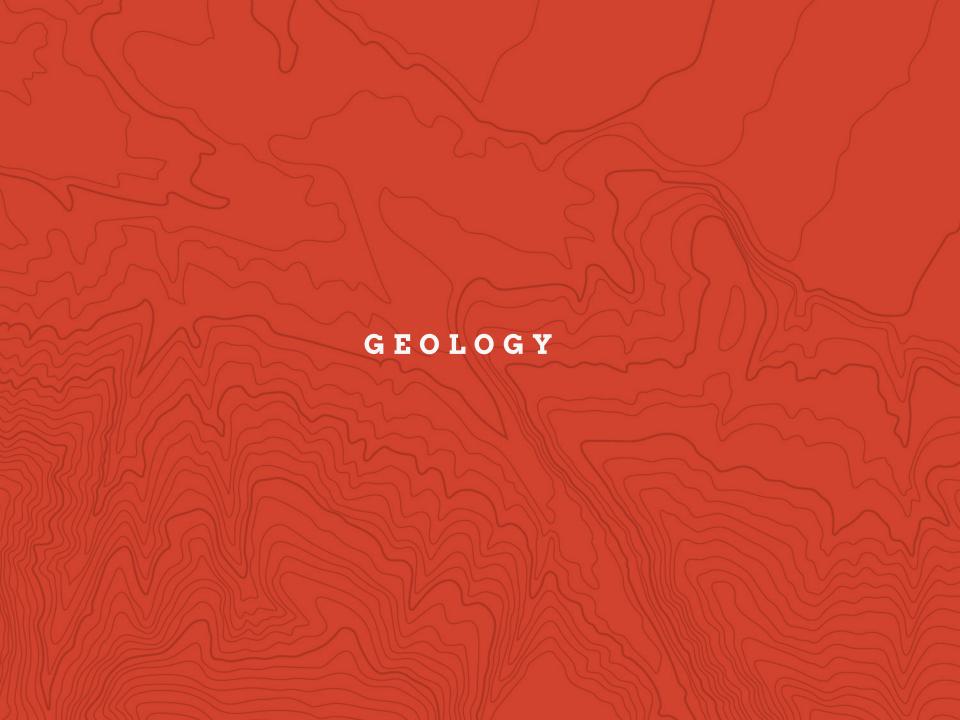


Source: Huglin Index

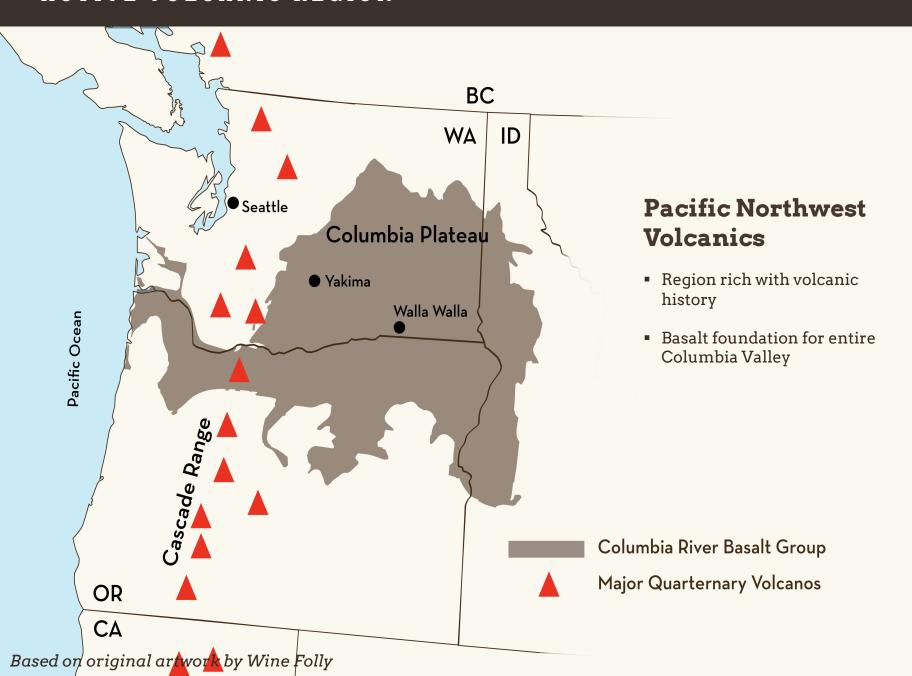


Source: Huglin Index





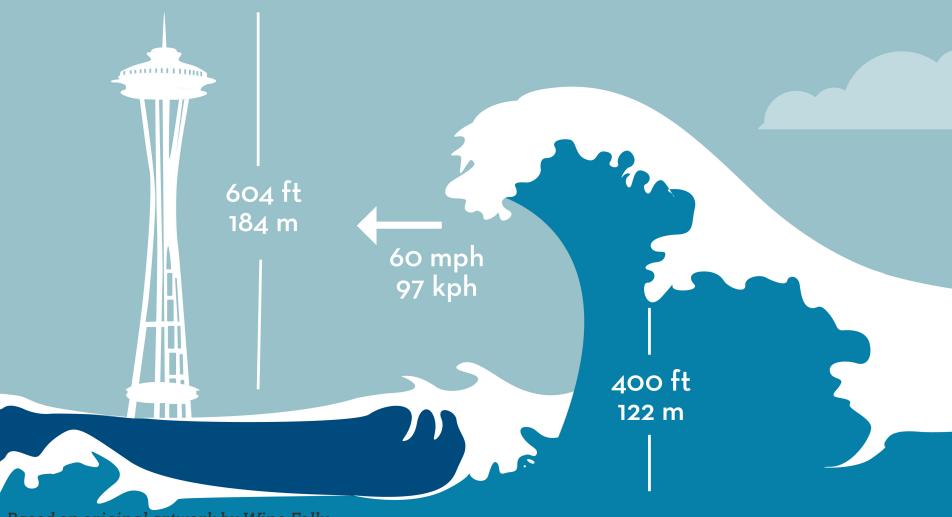




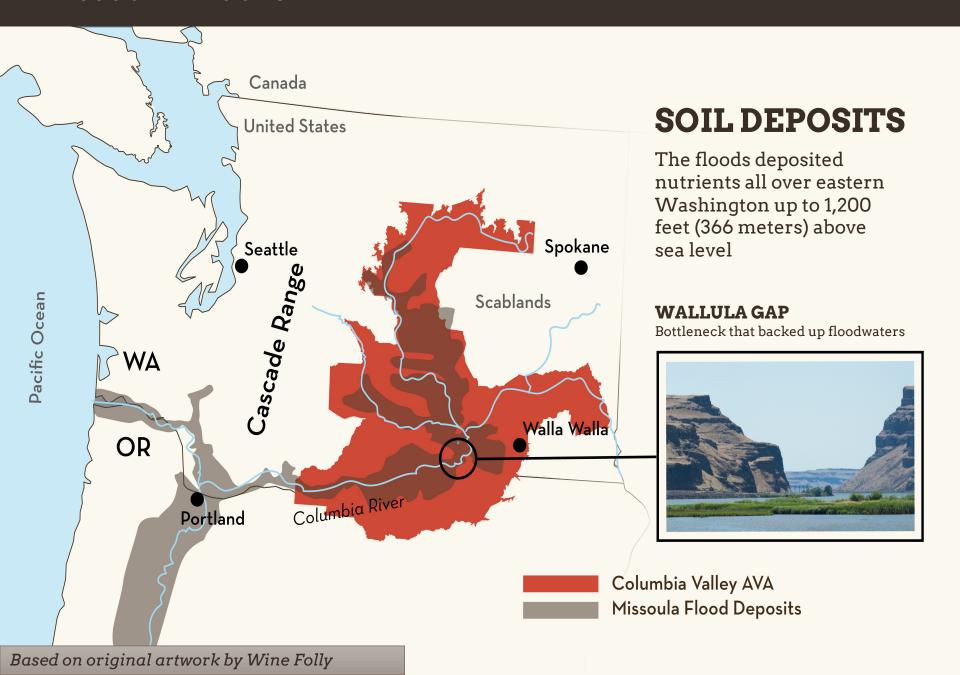




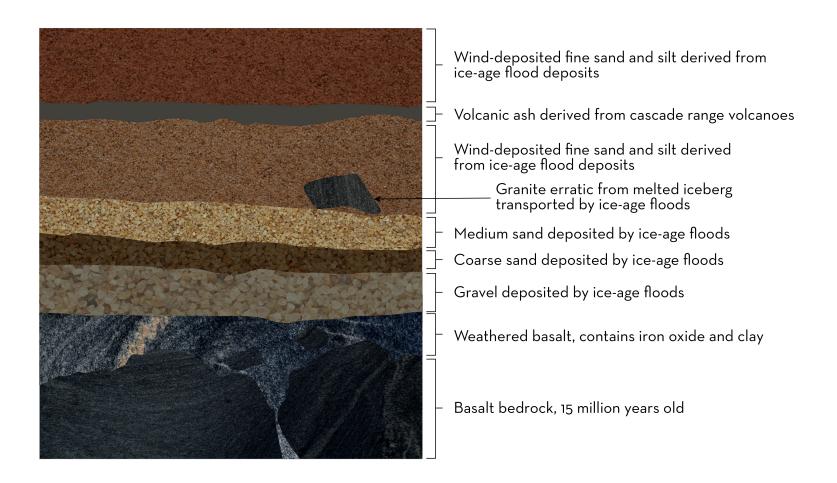
When the ice shelf broke, it caused massive flooding.













LOW PEST

Washington vineyards are sustainable by nature.

- Winter freeze kills many pests
- Arid temps, low humidity and wind help control development of fungal diseases (less need for spray)
- Fewer pests allows for planting on natural rootstock
- Less need for spraying and pesticides



RECIPE FOR SUCCESS

Our terroir and quality of fruit makes for superior wine.

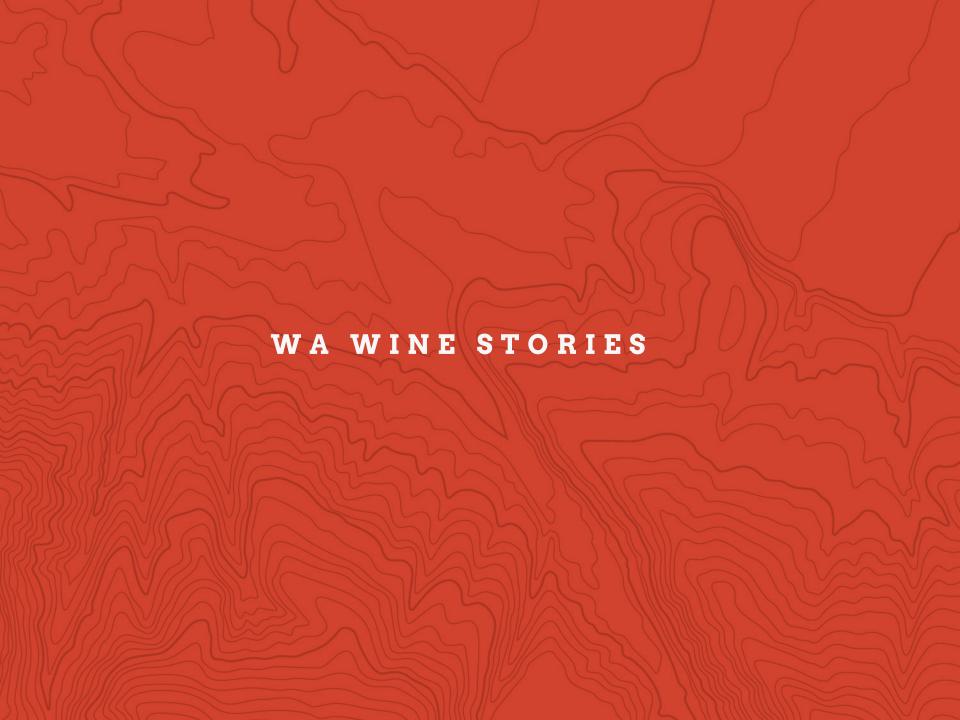
- DRY CLIMATE
- ABUNDANT SUNLIGHT
- DIURNAL SHIFT
- LEAN SOILS
- AVAILABILITY OF WATER
- LOW DISEASE AND PEST PRESSURE
- PERSISTENT WIND
- COLD WINTERS







- Volcanoes & lava flows created a basalt foundation
- The Missoula Floods transformed our landscape & deposited rich soils
- Columbia River = tremendous water source
- Washington vineyards are sustainable by nature



History made us, and now, we're making history.







If there's one thing we've got, it's character.







Nobody tastes like us because nobody looks like us.







Washington wine is sustainable by nature.







We're the best of both worlds.







The Washington wine way? Rising tide floats all boats.







Connect with WA Wine.

