



## Healthy Garden Tips

### **The Climate of Napa County**

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California enjoys a Mediterranean climate, characterized by winter rainfall and dry summers. The major climate influence across the entire area is the marine air flow as it moves from the Pacific Ocean inland over and through the coastal hills and valleys. Napa County topography guides this cool air across ranges of the hills as it moves east toward the Sacramento Valley. Winter winds generally flow up and down the valleys, while summer air currents tend to flow across the hill and valleys. Summer daily fog breezes move through the Russian River gap toward Mt. St. Helena then down Napa and Pope Valley. Similarly, summer fog breezes from Petaluma gap and the Golden Gate cool the southern portion of Napa County. Summer fog is frequently found along the western hilltops, providing respite to native stands of Coast Redwood, and regularly extends to Yountville. Rainfall varies with elevation, from a low annual average of 20 inches in the southern part of the county to over 50 inches near Mt. St. Helena. Similarly, fruit tree chilling hours (below 45° F) varies from near 700 to over 1600, averaging about 1200 per year.

Napa County is divided into four major climate zones according to local experience and observed native plant growth. Within each climate some local microclimates exist based on the elevation, slope and exposure of any particular site. It is important to remember that climate zone margins are vague and subject only to broad interpretation.

- **Marine** – The Marine climate zone is the coolest, located within sight of San Pablo Bay. This climate zone includes the Carneros District, American Canyon and the Soscol Ridge up to the city of Napa. Strong sea breezes blow daily. Less than 800 hours between 70° and 90° F accumulate during the April 1 to October 31 growing season. Fog-loving plants do well, and some heat-loving plants do poorly. Frost seldom occurs in the winter.
- **Coastal Cool** – The Coastal Cool zone includes the fog-catching hilltops around the Napa Valley and the southern part of the county east of the city of Napa. This zone is marked by greater temperature extremes than the Marine zone, but overall is only slightly warmer. Between 800-1100 hours of 70° to 90° F can be expected in this zone from April 1 through October 31. Cane berries and specific varieties of fruits and grapes grow well in this zone. Mt. Veeder, Spring Mountain and Howell Mountain areas are in this zone.
- **Coastal Warm** – The Coastal Warm zone includes the valley floor areas of the major valleys in Napa County. These areas are protected from the summer fog by mountain ranges and distance from the ocean. Over 1100 hours between 70° and 90° F accumulate during the April 1 and October 31 growing season. Most deciduous fruits, nuts and grapes grow well in this climate zone. This is not as warm as the climate of the Central Valley of California.

- Foothill – Digger Pine – The Foothill climate zone is characterized as having warmer summers and colder winters than the Coastal Warm zone, with about a month shorter growing season. Late spring and early fall frosts are more damaging in this zone, while summers are hotter and drier. This climate zone is located in the eastern portion of the county, including Pope Valley and Lake Berryessa region. Late or long blooming fruit and nut varieties perform well in this zone.

For further information:

1. *Sunset Western Garden Book*, Sunset Publishing Corp., Menlo Park, 1995, pp. 15-31, 'The West's 24 Climate Zones'.
2. *Soil Survey of Napa County*, USDA-SCS & UC Ag Exp. Station, 1978, pp. 97-101.
3. The UC Statewide Integrated Pest Management Project (IPM UC Davis) maintains a data base of current and historical weather data for approximately 350 weather stations throughout California. Both NOAA and CEMIS data are on file. The California Dept. of Water Resources operates the California Irrigation Management Information System of over 80 weather stations located in key agricultural and municipal sites. In Napa County, there are CEMIS stations in Angwin, Carneros and Oakville. These data are accessed through UC Davis IPM web site at: <http://www/ipm.ucdavis.edu>