

American Viticultural Area

Petition

*For*

**High Valley**

**Lake County**

Clearlake Oaks, California

Pursuant to the provisions of 27 CFR Section 4.25a (e) (2) the members of the High Valley Appellation Committee respectfully petitions the Alcohol and Tobacco Tax and Trade Bureau (TTB) to establish a viticultural area (AVA) by the name of “High Valley”.

## Introduction:

High Valley is a hanging valley above the eastern shores of Clear Lake in Lake County, California. The proposed American Viticultural Area (AVA) is approximately nine miles long and three miles wide, and encompasses approximately 15,000 acres. High Valley Ridge and other adjoining ridges to the south, east, and west rise steeply above the valley floor of High Valley completely enclosing this small valley. High Valley Ridge rises above the floor of High Valley to heights greater than 3000 feet above sea level, and touches the southernmost border of the Mendocino National Forest. Round Mountain, a once active volcanic cinder cone, rises 400 feet above the eastern floor of High Valley, and is directly responsible for creating High Valley and its unique, distinctive viticultural area.

High Valley is prominently depicted on the USGA 7.5-minute Clearlake Oaks topographic quadrangle, and parts of the Lucerne and Benmore Canyon topographic quadrangles (see relief maps). High Valley Ridge and Round Mountain are also prominent features within the proposed AVA, however the name "High Valley" is the popular and historic reference that is most often used to describe this region. High Valley also best describes the common qualities among the microclimates within the entire viticultural area. The boundaries proposed are established on a 1600-foot minimum elevation in order to include viticultural areas that meet the criteria and distinct characteristics of this hillside / alpine viticultural area, and to exclude the surrounding areas, which do not.

The proposed viticultural area is a sub-appellation of both Clear Lake and North Coast Viticultural areas, however a small area of northeast section of High Valley Ridge falls outside of the North Coast Viticultural boundary. (A separate petition from this one will also be filed to include the entire High Valley Viticultural Area within the North Coast area boundaries.) The following sections will describe in detail the properties of the High Valley Viticultural Area in geography, soils, climate, elevation, and hydrogeology that are unique to this growing area and are significantly different from surrounding grape growing areas.

## Historical Review:

The High Valley area was first settled by Native American Indian descendants of the Pomo tribes, the Elam and Kamdots. The peaceful tribes lived on opposite ends of High Valley and referred to it as "kas". Numerous sites found on steep rock ledges on the southern and western slopes of High Valley were winter high ground camps. This area was also an important transportation route between lake shore tribes and tribes in neighboring Long Valley to the north and Cache Creek to the east. An essential food supply of acorns, wild oats, wild game including deer, rabbit, bear, and quail could be found throughout the valley and surrounding hills.

High Valley remained Pomo territory until the arrival of European settlers in the 1850's. Henry L. Wildegrube was the first white man to settle in High Valley. In 1856 at the age of 21 he settled in what is now Upper Lake and established its first general store. Three years later in 1859 he purchased 160 acres in High Valley after selling his portion of what is now the town of Lucerne to his partner.

Soon after Wildegrube settled in High Valley other settlers began to arrive. At the peak of the 1850's about a dozen small ranches occupied the valley forcing most of the Pomo Indian tribes out of the valley and up into the hillsides and ridges. High Valley Ridge was once the dividing line between Lake and Colusa Counties until 1868 when Long Valley and Indian Valley were added to Lake County moving the boundary further north. Over the next several decades the valley contained a schoolhouse, post office and a stagecoach stop that provided essential supplies and rest to the many travelers utilizing High Valley as a transportation route between Upper Lake and Sacramento. Before their steep climb up High Valley Ridge horses were changed in High Valley at the "Foutch Stage Station" for visitors from San Francisco on there way to the mineral baths at Bartlett Springs.

Since the late 1800's the area has witnessed little change. Ranching still exists along the valley floor although vineyards now occupy a large portion of the moderate to steep slopes, and to a lesser degree, the valley floor to the west. There are nearly 1000 vineyard acres currently producing or are under development during the last six years. Many grape purchasing winery customers throughout the North Coast over the past several vintages have created wines displaying extraordinary qualities. As a result of the high quality wines coming from the High Valley area there are currently several local winery projects either under construction or in the planning phase.

The history of grape and wine production in Lake County is fairly dramatic. The County boasted one of the largest growing areas in California until Prohibition replaced the vineyards with pears, walnuts, prunes, green beans and other crops. However, a few of these old-vine vineyards still exist in a few locations throughout parts of the County. Testimony to this is a derelict vineyard of with about 25 "centennial vines" of perhaps Zinfandel variety on a southeast ridge above High Valley at the Ogulin Ranch.

High Valley Road, off of Highway 20 in Clearlake Oaks, is the only county road that enters High Valley and is the only thoroughfare that leads out of High Valley, up High Valley Ridge, and into the Mendocino Forest linking up with Bartlett Springs Road. Other businesses and entities that reference or use High Valley in their names include: High Valley Adventure Inc., High Valley Ranch, and High Valley Tile and Stone all located in the Clearlake Oaks area.

### *Topography and Geology:*

High Valley is located approximately one mile north northwest of the town of Clear Lake Oaks and Highway 20. The floor of High Valley is at an elevation of 1700 – 1800 feet and 400 – 500 feet above Clear Lake (elevation of 1320). High Valley Ridge rises steeply 500 – 1500 feet above the valley floor, and encompasses High Valley forming an isolated basin with distinct watershed boundaries. The elevation of the ridge tops ranges from 1800 – 3400 feet and is approximately seven miles in length, and demonstrates a rare transverse valley in the California Coastal Range. (See attached geological maps).

High valley is an east-west depression that originally was a small fault basin or graben with all drainage flowing easterly into the North Fork of Cache Creek. However, during Lake County's active volcanic period (late-Pliocene to Holocene) Round Mountain formed out of the gorge on the easterly side of the trough. Over time the resulting lava flow from this volcanic outcropping built up the eastern side of High Valley, and eventually sealed off the preexisting creek flow to the east. With no outlet for hillside runoff a lake formed in the depression west of the volcano until it crested at the lowest point at what is now known as Schindler's Creek. Alluvial sediments and cache have washed down from the hills and filled the initial canyon over the last 10,000 years. Meanwhile, over time water through the small channel at Schindler's Creek eroded and drained the lake leaving behind the large basin plain of High Valley. Today, Tule Lake just west of Round Mountain is a small remnant of this early lake.

Local geology of the proposed High Valley AVA consists of two dominant rock types; (1) Jurassic metasedimentary rocks of the Franciscan Complex which include intercalated basalt flows and (2) Quaternary volcanic deposits consisting of andesitic flows. A large portion of the High Valley's floor is comprised of Quaternary alluvial deposits.

The Franciscan Complex is an assemblage of sandstone, shale, phyllites, radiolarian cherts, and serpentine, which forms the base material, and a majority of the exposed rock surrounding the western portion of High Valley, and southern ridges of the proposed AVA. Exposed Franciscan is commonly weathered in areas within High Valley and on the slopes and ridges with depth to bedrock varying from approximately six inches to at least ten feet. Outcrops of Franciscan are not uncommon on the ridge crests and slopes near the northwest end of the High Valley. These Franciscan Outcrops within the proposed AVA tend to be phyllites, sandstones, and shales, are typically light brown to tannish brown, and moderately to slightly weathered and moderately strong.

Intercalated within the Franciscan Complex are medium gray basalts of the Jurassic / Cretaceous age. The basalts are present throughout the eastern portion of High Valley east of Schindler Creek, and the basaltic flow is bounded to the east and west by north-south trending extensional faults.

Overlaying the Jurassic / Cretaceous basalts are Quaternary volcanics, of which the most prominent feature is Round Mountain. This symmetrical cinder cone rises approximately 400 feet above the eastern valley floor to an elevation of 2200 feet. The west base shows evidence of two flows, one partly buried by cinders from the cone, and a later flow devoid of a mantle of ejecta. The later flow is characterized by a number of craggy ridges, 20 – 30 feet high. The volcanics consist of both basalt and andesite. Both the basalt and andesites form blocky well-exposed ridges. The lavas are fresh, very hard, and commonly vesicular and amygdaloidal. Vesicles range in size from approximately 1/32 to 1/4 inch in diameter. General flow orientation is east west parallel to the valleys long axis.

Six miles south of the proposed High Valley AVA, on the southern slopes of Mt. Konocti, the historic vineyards of the Clear Lake AVA are abundant in rhyolites and dacites. A unique geology feature of High Valley AVA is that the igneous basalts and andesites are lower in magnesium and iron and lower in sodium and potassium than the rhyolites and dacites commonly found along the southern face of Mt. Konocti. Hence, the volcanic parent material within the High Valley basin differs from parent material in the North Coast and Clear Lake AVA's.

At approximately 1350 feet, Long Valley, which lies directly to the north of High Valley and is the headwaters for the North Fork of Cache Creek, is at an elevation much lower than High Valley's. Bordering the easternmost AVA boundary lays a large belt of the Tertiary Cache Formation. The Cache Formation is lacustrine in origin and overlies the Franciscan as well as the Chico and Martinez Formations. The Cache is tan to tannish brown, poorly sorted sandstone containing pebbles of chert and serpentine as well as shales and greenstone. Overall the Cache and Franciscan on the outside of the eastern boundary of the proposed AVA contain physical characteristic not found in High Valley.

Areas to the north and east of the proposed AVA, including some areas within the North Coast AVA, also consist mainly of Jurassic sediments of sandstones and shales with the general degree of metamorphism increasing eastward. However, the North Coast AVA also contains a fair amount of serpentine, an ultramafic rock commonly high in silica and magnesium minerals, but not found within the proposed High Valley AVA.

The distinct watershed boundaries, created by High Valley's surrounding and totally encompassing ridge tops, naturally prohibit the transportation and deposition of foreign material to the watershed. Soils found within the High Valley area are derived only from parent material found within the basin. Parent material is limited to sandstone, shales, and phyllites as well as basalts and andesites.

## Soils:

The difference in mineral composition of the igneous rock types found within the proposed High Valley AVA provides a unique chemical composition of the soil derivatives. Soil types throughout the proposed AVA can be broken into two general types; (1) those derived primarily from residuum of weathered volcanics and (2) those derived from weathered sandstone, shale or phyllitic rocks of the Franciscan Complex.

In general, soils derived from volcanics such as dacites, tuffs, breccias, volcanic ash and basalts are quaternary to recent and are located along the eastern half of the proposed AVA; while those derived primarily from sedimentary and phyllitic source material are Jurassic to Cretaceous and are primarily found throughout the western portion of the proposed High Valley AVA.

The High Valley AVA has four basic soil formations: (refer to soil maps) (1) the Franciscan Hills that form the southern and western boundaries of the proposed AVA (Sanhedrin, Squawrock, and Mayacama), (2) Alluvial basin of High Valley (Lupoyoma), (3) Alluvial Terrace along southeastern boundary of the proposed AVA (Mayacama and Phipps), and (4) Volcanic ridges along the northeastern area of the AVA near Round Mountain (Konocti).

Millsholm, Bressa, Hopland, Estel and Maymen Series soils account for the majority of the soils throughout the western hills and ridges of the proposed AVA. The soils are shallow to moderately deep, loamy to gravelly clay loams. Typically these soils are well to excessively well drained and permeability is slow to moderate. Also, included are terrace deposits and alluvial fans primarily comprised of the Wappo Series. The Wappo loams are very deep, well drained and permeability is slow.

The majority of the High Valley floor consists of Wolfcreek loam, a very deep well drained, clay to sandy loam with moderately slow permeability.

A considerable amount of Maymen, Hopland, and Mayacama Series soils, which are primarily gravelly loams and gravelly sandy clay loams, are intermixed throughout the southeastern portion of the AVA. The loams are generally shallow to moderately deep, excessively drained and contain a moderate to moderately slow permeability.

The primary soils found throughout the eastern half of the proposed AVA include the Konocti Variant, Konocti, Hambright, Benridge and Sodabay Series. They are commonly rocky to cobbly loams with minor intermixed clayey loams, shallow to very deep and well drained. The permeability of these soils is generally moderate to slow.

These soils differ from soils contained within the historically planted vineyards of Big Valley, which is located south of Mt. Konocti within the Clear Lake AVA. Major soil types found throughout much of Big Valley include: Benridge, Forbesville, Bally, Phipps, Still, Sodabay, Konocti, Cole, and Clear Lake Series soils. Soils defining the Big

Valley floor consist of the Still, Clear Lake, Clear Lake Variant, and Cole Series soils. These silt and silty clay thermic loams are very deep and poorly drained with the exception of the Still loams, which are well drained soils. Permeabilities of the Clear Lake, Clear Lake Variant, and Cole Series are typically moderate to slow. Permeability and drainage characteristics of these soils are in part due to the fine sediments of which they are composed of, primarily silts and montmorillonitic clays. These soils are derived from alluvial to lacustrine deposits composed of mixed rock sources and are present on slopes of zero to two percent.

Forbesville, Bally, and Phipps Series soils are loamy to gravelly sandy loams generally formed on terrace deposits and head deposits of alluvial plains with slopes of 15 – 30 percent. The Forbesville, Bally, and Phipps Series soils are typically very deep, well drained and permeabilities are slow. These soils are generally mixed thermic silty to clayey loams derived from mixed rock sources of alluvial deposits.

In general soils within the proposed High Valley AVA contain adequate permeabilities covering both the mesic (mild) and thermic (moderately warm to warm) temperature regimes, whereas the soils found in the historically planted vineyards of Big Valley, and within the Clear Lake AVA, are only of the thermic category. Slopes vary from near flat to at least 75 percent with the majority of the planted slopes at approximately 30 percent in the High Valley area, whereas Big Valley vineyards are found primarily on slopes of zero to two percent. Soils within the proposed High Valley AVA do not share the poor drainage characteristics generally inherent in the basin soils found in the Big Valley growing areas. Not only do the soils on the slopes and ridges of the High Valley area display superlative drainage characteristics, but also this property can be found with the basin soils of High Valley itself. The Wolfcreek, Wappo, and Manzanita Series soils found in the High Valley basin possess above average drainage abilities. Although fertile, the majority of vineyards planted in Big Valley, and many other Clearlake AVA vineyards, are silty clay loams of the Still; Clear Lake, Clear Lake Variant, and Cole Series which display poor drainage characteristics.

## Climatic Conditions:

The High Valley area also possesses unique weather conditions, which contributes to the qualities that make it a desirable grape growing region. Wines made from grapes from cooler climates, and hence slower, longer growing seasons, are known to have better acidities, improved tannin structure, possess darker color, have more concentration of fruit character, and are generally worldwide recognized to be of higher quality.

During the growing months of April through October high and low temperatures are accumulated and converted into degree-day summation units, which can therefore be expressed as wine grape growing regions. A system of Climatic Regions was developed by viticultural professors Amerine and Winkler at the University of California Davis:

Region 1:	0 – 2500 degree-days
Region 2:	2500 – 3000 degree-days
Region 3:	3000 – 3500 degree-days
Region 4:	3500 – 4000 degree-days
Region 5:	4000 + degree-days

Adcon weather station sites have collected temperature data for the 1999, 2000, 2001, and 2002 growing seasons. Tables 1 – 4 show four growing seasons ('99 – '02) and the degree days calculated from weather stations located at various sites in the High Valley area, and for comparison, neighboring grape growing areas and distant growing areas in the North Coast appellation. There are a limited number of weather stations in the various viticultural areas throughout Lake County, and some areas lack comparable weather data, i.e. neighboring Clearlake Oaks.

The Terre Vermeille and Caldwell Ranch weather stations are located on the southeastern ridges, slopes, and eastern valleys of the High Valley area, and the Brassfield weather stations are located on the valley floor and benches of western High Valley. The data shows that the High Valley area displays mostly Region 3, and in certain vintages, can even possess Region 2 temperature criteria. Only the upper Terre Vermeille weather station displays above Region 3 and Region 2 tendencies in the proposed AVA.

Lake County, in general, demonstrates warmer grape growing regions when compared to neighboring North Coast Counties. Such is the case with the Amber Knolls viticultural area located on the southeastern slopes of Mt. Konocti. Traditionally this grape growing region, currently petitioning for its own AVA, demonstrates a Region 3 and 4 in the lowest lying areas, and as high as a Region 5 in numerous vintages for the upland areas. The viticultural area near the city of Clearlake at the eastern end of Clear Lake is traditionally a Region 4 and 5, and on rare occasion a high Region 3. Located less than five miles away this grape growing area, nearest to the proposed High Valley AVA, demonstrates a remarkably warmer climate. The data for the growing areas of Anderson Valley in Mendocino County, Potter Valley in Mendocino County, and the Carneros in



Napa County, known as some of the coolest viticultural areas in the North Coast AVA, is also given for comparison. The vintage of 2000 shows that certain locations of the High Valley AVA had degree-days at, near, or better than these notoriously colder growing regions.

Lake County is too far inland to have temperature influences from cooler marine air as in most other North Coast Regions. The mountain ridges of the Mayacamas surrounding the Clear Lake Basin to the west and Mount St. Helena to the south prevent any marine intrusion. The cooler climate found on the slopes and at the valley floor of High Valley can be traced to the orientation and topography of High Valley Ridge, and the steady wind and air movement in the Clear Lake Basin and surrounding Mountain ridges.

The Clear Lake Basin creates its own natural and perpetual “wind machine” from temperature contrasts over a daily period. The phenomenon that water warms more slowly than adjacent land during the day, and holds its heat longer at night, is the driving force that creates land-water winds. During the day the surrounding land warms much more quickly than the waters of Clear Lake creating land-heated up-valley winds that rise to the ridge tops. Evaporative transfer further cools these winds as they travel across Clear Lake.

Immediately rising above the eastern shores of Clear Lake lays High Valley whose transverse ridges receives and captures these cooled afternoon breezes trapping and retaining them in the basin. Nearly all valleys and ridgelines in the California Coastal Range run north and south in orientation blocking onshore winds to a greater extent. Conversely, the ridges surrounding High Valley have an east-west orientation creating a rare transverse valley allowing onshore winds a channel for less restricted flow. Another example of a transverse valley is the Santa Ynez Valley in Santa Barbara County whose reputation as a cooler viticultural area is world renown. In this case, however, the Pacific Ocean is due west of the Santa Ynez Valley and is the cooling force for this region, but it is the orientation of the valley that allows the least resistance of onshore airflow, and in turn, enhances the cooling effect.

The reverse of the land-water wind begins in late afternoon and early evening. Air in contact with land surfaces, cools and becomes denser creating downward winds from the slopes of High Valley down to the valley floor, which acts as a heat sink. Additional cooling mountain-valley winds can be traced to the cold airflows coming from the mountain slopes and higher elevations such as the Mendocino National Forest, which stated earlier, shares its southern boundary with High Valley Ridge. Colder air flowing down off these 5000 – 7000 foot peaks in the evening hours also finds its way into High Valley, and the bowl formed by the surrounding ridges, traps and contains this colder air as well. An example of similar climatic influences can be found in Potter Valley where cold air flows down from the Mendocino National Forest across Lake Pillsbury, and into the valley itself.

Another example of the unique climate of the proposed AVA is that on an annual basis the longer than average frost season in the High Valley basin can extend well into

the month of June. The High Valley area has proven to be one of if not the coolest viticultural regions currently in Lake County, and as a result, many of the varieties planted on the floor of High Valley are associated with cooler and shorter growing conditions. There are plantings of Pinot Grigio, Pinot Noir, Johannisberg Riesling, and Gewurtraminer currently that are producing as qualitatively as their equivalents in noted cooler viticultural regions such as the Alsace, Burgundy, Mosel, Rhein Gau, Austria, or Northern Italy.

Table 5 shows the temperature readings during the months of June and a portion of July (some of the hottest months of the grape growing season), which shows temperature swings of 40 – 50 degrees on an average daily basis. Warm days and cool nights with similar temperature swings has proven to be an essential growing condition in the Napa Valley, which is internationally recognized for creating world-class wines as a result of this climatic condition.

The only rainfall data on record is from the Terre Vermeille station in the southeastern portion of High Valley AVA. Annual rainfall totals for 2000 was 18 inches, 18 inches for 2001, 29 inches for 2002, and so far this rainfall season of 2003 has produced 35 inches. The proposed Red Hills District viticultural area ranges from 24 – 40 inches of rainfall a year. Kelseyville gauge averaged 46 inches between 1931 – 1970, and Putah Creek basin above Guenoc averaged 47 inches over the same period. At least in the last few years the High Valley AVA has shown to receive less than most other viticultural areas in Lake County.

## Hydrogeology:

With lower than average rainfall totals, and as well drained rocky and gravelly soils are the norm, a huge demand for irrigation water is created in the proposed viticultural AVA. Fortunately, the High Valley area is blessed with a surplus of water aquifers and natural springs. This was the result of the eastern valley lava flow from a volcanic Round Mountain damming the preexisting flow to the North Fork of Cache Creek. The Schindler Creek / High Valley Watershed funnels all runoff to the east, and with only tiny Schindler Creek to take water out of the valley, the water table in High Valley is abnormally high. The Schindler Creek / High Valley Watershed is recognized as an important watershed supplying Clear Lake, California's largest natural body of water. The Schindler Creek / High Valley Coordinated Resource Management and Planning Group (CRMP) is made up of local property owners as well as representatives from county and watershed. The East Lake Resource Conservation District sponsors the CRMP.

Numerous springs and ponds can be found on the valley floor where the winter water table is only 2 – 4 feet deep and 12 – 15 feet deep in summer. There are also hillside and mountain springs on the western and eastern slopes and canyons. Here, thirsty conifers such as Ponderosas are found in abundance. Wells producing over 300 gallons per minute are attainable on the valley floor or on neighboring slopes at depths of 400 – 500 feet (side note: while drilling the Brassfield Estate agricultural well, at the western end of High Valley, a redwood tree was struck at 375 feet deep; testimony to a canyon with a decomposing forest deep under the valley basin). Water at this depth, although plentiful, is high in mineral content such as iron, and requires settling or filtering treatment before use. Domestic wells producing up to ten gallons per minute on average of high quality drinking water can be found easily at 30-50 feet on the valley floor.

Neighboring areas to the south and east are not as fortunate to find springs or water tables any thing close to what the proposed AVA experiences. However, water can be seen in rock outcrops at the far eastern cliffs of the proposed High Valley AVA originating from water seepage under Round Mountain.

## Boundaries:

The carefully considered boundaries under proposal were derived from common and / or shared climactic, soil, geography, watershed, and historical criteria for inclusion into the proposed High Valley AVA. The northern boundary, and parts of the western and eastern boundaries, is created from High Valley Ridge. The hillsides that separate High Valley from Clear Lake form the southern boundary that completes High Valley's enclosure.

The geography of the High Valley AVA demonstrates a mountainous viticultural area that incorporates higher than average elevation and hillside terrain for alpine grape growing. Therefore, to distinguish the proposed AVA from the excluded surrounding area a minimal elevation of 1600 feet has been established. The 1600-foot elevation limit is set just below the lowest point in High Valley (approx. 1700 feet), and high enough above Clear Lake and Long Valley (approx. 1300 feet) to distinguish between higher elevation growing areas from the surrounding lower elevation growing areas. Areas below 1600 feet in elevation lose the common qualities shared by the proposed High Valley AVA. The boundary description is as follows:

1. The beginning point is the intersection of High Valley Road and the 3400 foot elevation contour in the northern portion of Section 16, Township 14 North / Range 8 West, on the Clearlake Oaks, CA quad map.
2. Proceed southwest in a straight line for approximately .12 miles to the intersection of an unnamed stream and the 3000-foot elevation contour.
3. Continue southwest following the stream through Pierce Canyon in Section 16 and the southeast corner of Section 17, to the intersection of this stream with the 1600 foot elevation contour in Section 20, T14N / R8W, on the Lucerne, CA quad.
4. Continue in a generally southeast direction following the 1600-foot elevation contour through Section 21 on the Lucerne, CA quad and through Sections 21, 28, 27, 34, 26, 35, and 36 in T14N / R8W on the Clearlake Oaks, CA quad; continuing east, northeast, then southeast through Sections 31, 30, 29, 33, and 34 of T14N / R7W on the Clearlake Oaks, CA quad; to the intersection of the 1600-foot elevation contour and Highway 20 in Section 3 of T13N / R7W on the Benmore Canyon, CA quad.
5. Follow Highway 20 southeast, east, then northeast to the intersection of Highway 20 and the 1600-foot elevation contour in the southwest corner of Section 35, T14N / R7W.
6. Follow the 1600-foot elevation contour north through Sections 35, 36, 26, 25, 24, and 23 to the intersection with Salt Canyon Creek.

7. Follow the stream to its end at a point slightly below the northwest corner of Section 23, T14N/R7W. Continue north and northwest through a high point marked 2200, then west to another highpoint below the 2000-foot elevation contour in Section 15, T14N/R7W.
8. Head southwest to the intersection of a 4WD road just below the northwest corner of Section 22, T14N/R7W on the Clearlake Oaks, CA quad
9. Follow the unimproved road to the highpoint labeled 2224 in the southeast portion of Section 17, T14N/R7W.
10. Follow the High Valley Ridge in a generally west-northwest direction to an unlabelled highpoint in the northeast portion of Section 13, T14N / R8W.
11. Follow the High Valley Ridge in a generally west-northwest direction for approximately .2 miles to the intersection of two unimproved roads in Section 13.
12. Head west in a straight line for approximately .15 miles to the unlabelled highpoint in Section 13.
13. Head northwest in a straight line to the highpoint marked 2511.
14. Head west in a straight line approximately 335 feet to the intersection of the 2480 contour line and the unimproved road in the northwest portion of Section 13.
15. Follow this unimproved road until it merges with High Valley Road in Section 14, T14N / R8W.
16. Follow High Valley Road slightly north and then west for approximately 2.2 miles to the point of beginning.

## Conclusion:

The body of this petition has demonstrated how unique and different the High Valley AVA is between other neighboring viticultural areas within Lake County. It has also been evidenced, in regards to climate, topography, and soils, how the proposed AVA can be similar in ways to more distant recognized appellations within the North Coast growing regions such as Napa or Sonoma counties. The cooler climate, the volcanic soils, and Franciscan alluvial fans all of which contribute to creating a mountainous grape growing area the likes not experienced in most other notable viticultural areas, much less Lake County.

None of the unique differences of the High Valley AVA would be as fascinating or as significant if the quality of the grapes and resulting wines were just of average quality. Much of Lake County's reputation for growing grapes has been mired in mediocrity. Considering that the majority of viticulture has taken place in Big Valley on heavy, poorly drained soils, its not surprising that Lake County grapes, historically, get the lowest average price over any other North Coast County. The red wines from the Big Valley area generally tend to be lighter, simpler, lacking tannic structure and concentration of fruit when compared to the growing conditions in the higher, mountainous soils of Lake County. The vineyards of High Valley tend to yield lighter than average crops, and thus produce a red wine of higher intensity. Lower yields and better quality wines from shallow, well-drained hillsides, and cooler well-drained gravelly loams increases the average Lake County price for a particular red grape varietal in the proposed AVA by as much as 30% or more. Many large and small wineries throughout Napa and Sonoma North look to grapes from the High Valley area to improve their North Coast blends even over grape sources in their own appellation.

The incredible history and geography of High Valley tell a story of a violent volcanic period that created a hanging valley basin high above the Clear Lake Basin from what was once a steep canyon. For countless centuries the Pomo Indians revered and depended on High Valley as a hunting ground and transportation route between tribes. Homesteaders and pioneers of the past understood that the High Valley area was a special place to farm, raise livestock, and provide a beautiful area in which to live. The next chapter in the High Valley Story continues with agriculture and an appreciation for the gifts from a very special place.

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1944 *Bartlett Springs, Calif.*, 15-minute topographic quadrangle.  
1975 *Clearlake Oaks, Calif.*, 7.5-minute topographic quadrangle (1958 base map, photo inspected 1975).

Vestra Resources Inc.

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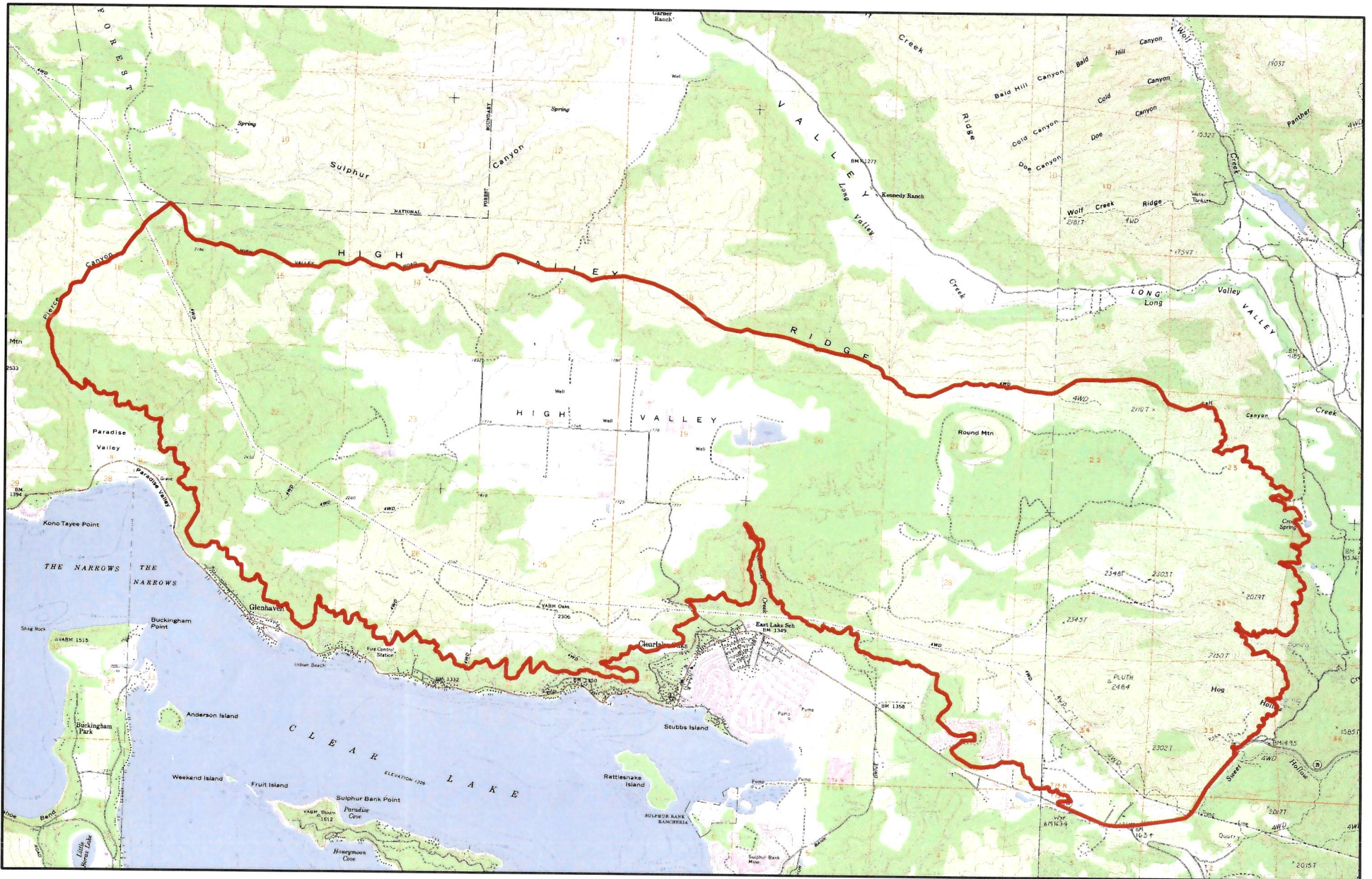
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Zellman, Paul

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## Petition Attachments – High Valley AVA TD #30

1. Map of proposed High Valley AVA region (VESTRA 2003)
2. Shaded Relief Map of proposed High Valley AVA region (VESTRA 2003)
3. Geology Map of proposed High Valley AVA region (VESTRA 2003)
4. Soils Map of proposed High Valley AVA region (VESTRA 2003)
5. Telephone Book excerpt with Name Evidence
6. Temperature statistics and graphs

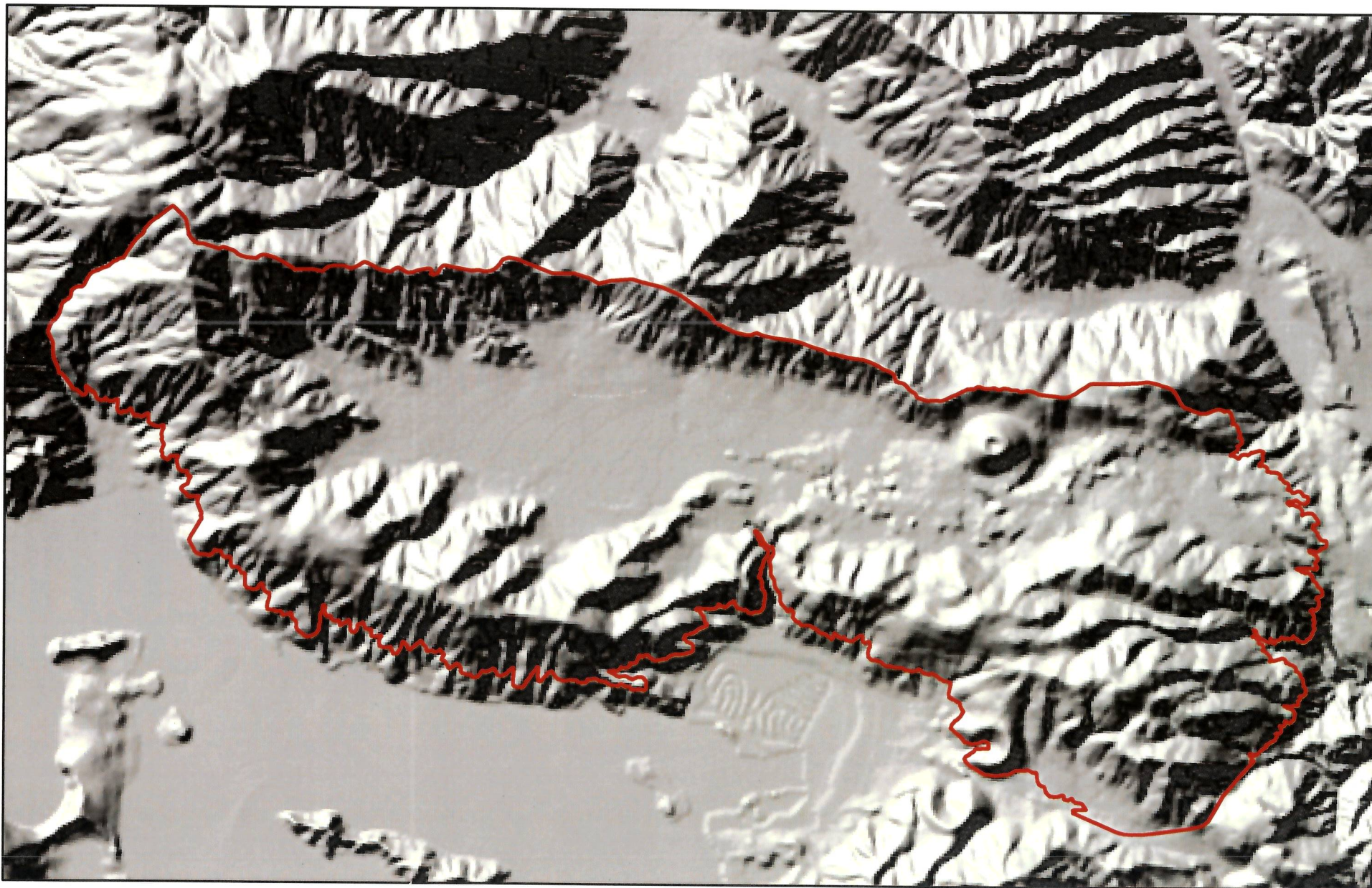


## Proposed High Valley AVA



**Legend**  
 Proposed High Valley AVA



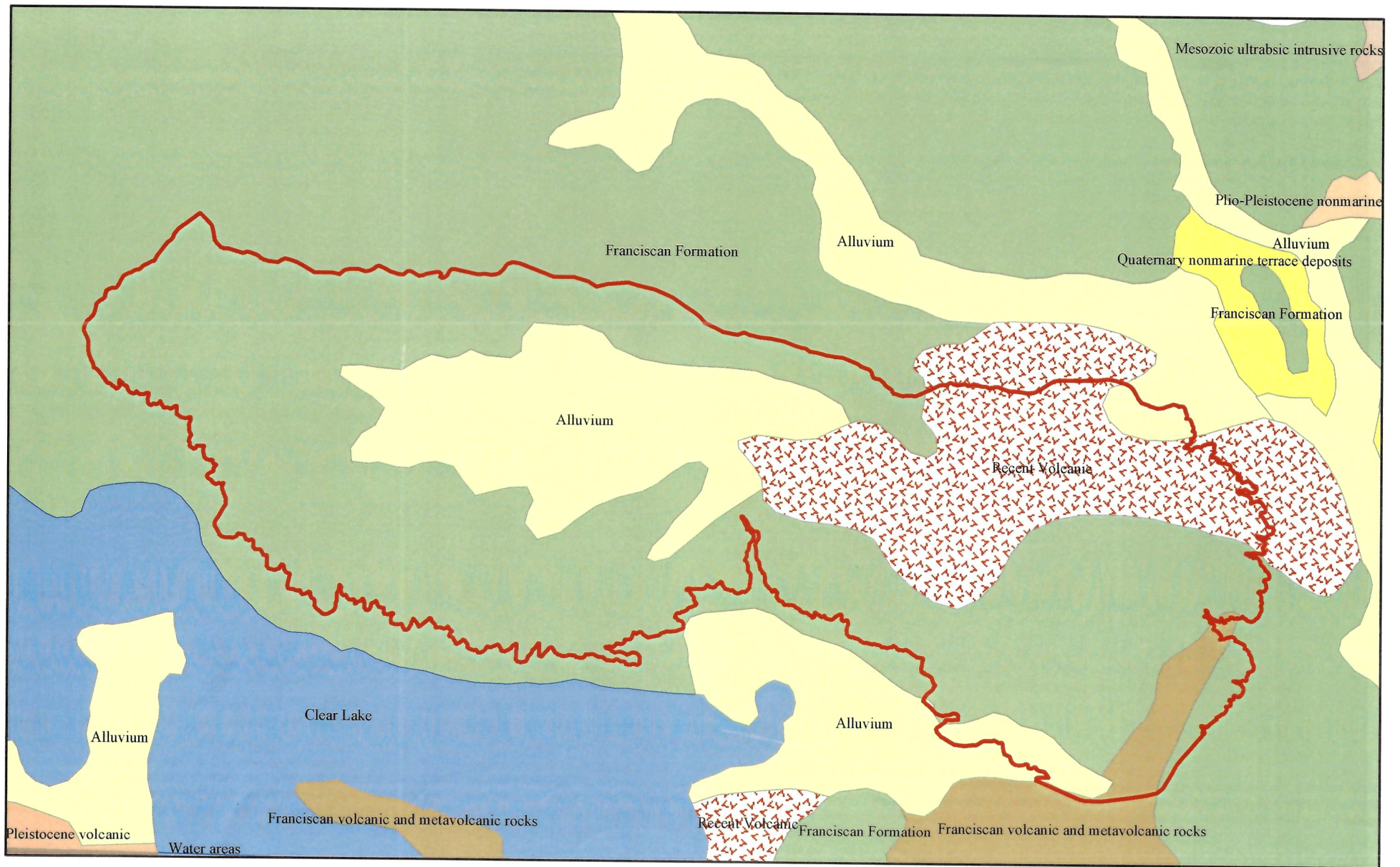


Proposed High Valley AVA  
Shaded Relief

Legend  
 Proposed High Valley AVA



0 0.25 0.5 1 1.5 Miles



## Proposed High Valley AVA Geology



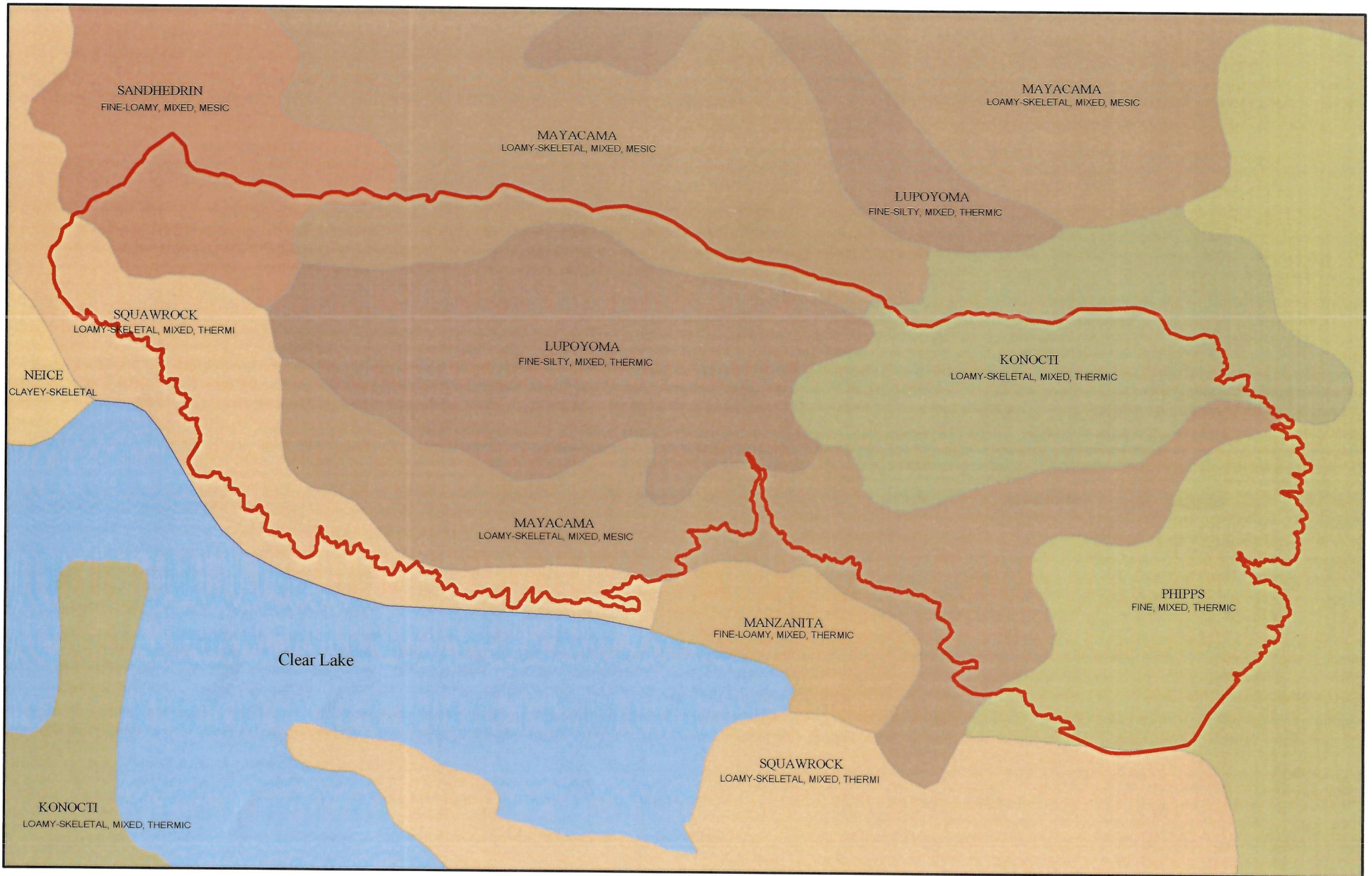
### Legend

- Proposed High Valley AVA
- Alluvium
- Franciscan Formation
- Franciscan volcanic and metavolcanic rocks
- Pleistocene volcanic
- Plio-Pleistocene nonmarine
- Quaternary nonmarine terrace deposits
- Recent Volcanic

VESTRA

www.vestra.com  
April 29, 2003

Geology data is from the Santa Rosa Quadrangle  
California Department of Conservation  
Division of Mines and Geology



## Proposed High Valley AVA Soils

**Legend**

Proposed High Valley AVA

**Soil Name**

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #d9ead3; border: 1px solid #ccc; margin-right: 5px;"></span> Dingman</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4cccc; border: 1px solid #ccc; margin-right: 5px;"></span> Konocti</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fce4d6; border: 1px solid #ccc; margin-right: 5px;"></span> Lupoyama</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fce4d6; border: 1px solid #ccc; margin-right: 5px;"></span> Manzanita</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #f4cccc; border: 1px solid #ccc; margin-right: 5px;"></span> Mayacama</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #d9ead3; border: 1px solid #ccc; margin-right: 5px;"></span> Neice</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #cfe2f3; border: 1px solid #ccc; margin-right: 5px;"></span> Phipps</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #d9ead3; border: 1px solid #ccc; margin-right: 5px;"></span> Sanhedrin</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fce4d6; border: 1px solid #ccc; margin-right: 5px;"></span> Squawrock</li> </ul>
--	--	--



**HARE CREEK AUTOMOTIVE**  
18781 N Highway 1 FB ..... 961 1007

Hare Creek Nursery 32461 Highway 20 FB ..... 964 4648  
Hare Creek Shop 32461 Highway 20 FB ..... 964 9259  
Hare Randy Orchard Ln Cir ..... 994 9400  
Harley-Davidson Michale's  
No Charge To Calling Party ..... 800 400 2011  
Harmon Heating & Air 3001 S State Ukiah ..... 468 9530  
Harolds Club 810 N State Ukiah ..... 462 4200  
Harrah Industries Inc 42 Madrone Wits ..... 459 6874  
Harris Diane I MD 30 Mill Pt Arena ..... 882 3424

**HARRIS PHARMACY**  
707 S Dora Ukiah ..... 462 7518

Harris S DFG ..... 459 2238  
Harrison Street House 331 N Harrison FB ..... 964 6859  
Harter Todd J OD 450 N Mc Pherson FB ..... 964 5927  
Hartley Cemetery Dist 2552 Hill Road East Lkprt ..... 263 0910

**HARTLEY LAURENCE W MD**  
1165 S Dora Ukiah ..... 463 5535

Hartstone Bible I F C A Conference  
17856 Van Arsdale Rd Ptr Vly ..... 743 1621  
Hartstone Bible I F C A Conference  
17856 Van Arsdale Rd Ptr Vly ..... 743 2248  
Harvest Bakery Highway 1 & Highway 20 FB ..... 964 7000  
Harvest Bounty 212 S Main Wits ..... 459 9647

**HARVEST MARKET**  
Highway 1 & Highway 20 FB ..... 964 7000

Harvest Moon 13251 S Highway 101 Hplnd ..... 744 8700  
Harvest Time Worship Center 21443 Pine Mldtn ..... 987 3868  
Harvey Derrick diet counselor ..... 987 0432

**HARVEY LISA OD**  
205 E Pine FB ..... 961 1037

Harvey Lyman Asservice-Lakeport  
2532 Big Valley Rd Lkprt ..... 279 4654

**HARWOOD PRODUCTS**  
Branscomb ..... 984 6181  
Harwood Products 10 W Valley Wits ..... 459 5595  
Hassett Bob P T Redwood Health Club  
3101 S State Ukiah ..... 468 3844  
Hastings Timber Falling Inc ..... 459 0600  
Hatfield Joanne 1184 N Main FB ..... 964 6780  
Hathaway Property Management  
15 W Mendocino Av Wits ..... 459 5975

**HAWK HELEN FNP** 844 S Dora Ukiah ..... 462 8603  
**Hauptman Mitchell** atty 333 Armstrong Lkprt ..... 263 3707  
**Hautala David** Mendo Coast Plumbing & Pump Co  
31865 Little Valley Rd FB ..... 964 2657  
Haverfield Fairlee & Blair 445 E Fir FB ..... 964 5675  
Havrilla Beth Insurance Agent 440 N Main Lkprt ..... 262 5500  
Hawkes Construction 708 Willow Av Ukiah ..... 463 1853  
Hawkins Drafting Service 18200 N Highway 1 FB ..... 964 4125  
Hawkyard & Miller Mechanical ..... 396 2030  
Hayes Music 200 S State Ukiah ..... 462 3739  
Hayes Studio 2210 Smith Ln Klsyvl ..... 279 4777  
Haymond B L Antique Restoration Supply ..... 462 5011  
Haymond B L Art Restoration Supply ..... 462 4221  
Haynes Edward H DVM Ukiah Veterinary Hospital  
1328 S State Ukiah ..... 462 4711

**Hazelton Tracy FNP** 3400 Emerson Cir ..... 994 5272  
**HEAD CONSTRUCTION** ..... 987 3262  
Head Feathers 910 S Main Lkprt ..... 262 1406  
Head Feathers 910 S Main Lkprt ..... 263 5226  
Head Hunters The 262 N Main FB ..... 961 0707  
Head Start 6958 Meadowbrook Dr Cir ..... 994 0647

**HEAD START CHILD DEVELOPMENT PROGRAM**  
Administration 550 N State Ukiah ..... 462 2582  
Bush Street Center 205 N Bush Ukiah ..... 462 0013  
Clearlake Home Base 14501 Pearl Av Cir ..... 994 6045  
Clearlake Home Base 14521 Pearl Av Cir ..... 994 6453  
Fort Bragg Center 330 S Lincoln FB ..... 964 5961  
Fort Bragg Homebase 330 S Lincoln FB ..... 964 0512  
Lakemont Center 150 Lange Lkprt ..... 263 8213  
Lower Lake Center 16250 Main Lwr Lk ..... 994 6601  
Meadowbrook Center 6958 Meadowbrook Dr Cir ..... 994 0854  
Nokomis Center 495 Washington Av Ukiah ..... 462 2671  
North Ukiah Center 1100 N Bush Ukiah ..... 462 2835  
Orchard Center 425 S Orchard Av Ukiah ..... 462 2030  
Pearl Center 14501 Pearl Av Cir ..... 994 6045  
Pearl Center 14521 Pearl Av Cir ..... 994 6453  
South Ukiah Center 2165 S State Ukiah ..... 462 0253  
Ukiah Center 1100 N Bush Ukiah ..... 463 1354  
Ukiah Early Head Start 550 N State Ukiah ..... 462 5549  
Upper Lake Center 679-2d Upr Lk ..... 275 2721  
Upper Lake Home Base 679-2d Upr Lk ..... 275 9129  
Willits Center 20 Spruce Wits ..... 459 5141  
Willits Early Head Start ..... 459 1457  
Head Start Children's Center 2165 S State Ukiah ..... 462 0253  
Head To Toe 400 S Main FB ..... 961 0878  
Headlands Coffeehouse 120 E Laurel FB ..... 964 1987  
Headlands Inn The Howard & Albion Mdocno ..... 937 4431  
Headlines Hair Design 610 S State Ukiah ..... 462 6000  
Headquarters For Hair 5335-5th Klsyvl ..... 279 0853  
Headrick Appliance 38851 S Highway 1 Gualala ..... 884 3364

**HARVEST MOON** 13251 S Highway 101 Hplnd ..... 744 8700  
**HARVEST TIME WORSHIP CENTER** 21443 Pine Mldtn ..... 987 3868  
**HARVEY DERRICK** diet counselor ..... 987 0432  
**HARVEY LISA OD** 205 E Pine FB ..... 961 1037  
**HARVEY LYMAN ASSERVICE-LAKEPORT** 2532 Big Valley Rd Lkprt ..... 279 4654  
**HARWOOD PRODUCTS** Branscomb ..... 984 6181  
**HARWOOD PRODUCTS** 10 W Valley Wits ..... 459 5595  
**HASSETT BOB P T REDWOOD HEALTH CLUB** 3101 S State Ukiah ..... 468 3844  
**HASTINGS TIMBER FALLING INC** ..... 459 0600  
**HATFIELD JOANNE** 1184 N Main FB ..... 964 6780  
**HATHAWAY PROPERTY MANAGEMENT** 15 W Mendocino Av Wits ..... 459 5975  
**HAWK HELEN FNP** 844 S Dora Ukiah ..... 462 8603  
**HAUPTMAN MITCHELL** atty 333 Armstrong Lkprt ..... 263 3707  
**HAUTALA DAVID** Mendo Coast Plumbing & Pump Co  
31865 Little Valley Rd FB ..... 964 2657  
**HAVRILLA BETH INSURANCE AGENT** 440 N Main Lkprt ..... 262 5500  
**HAWKES CONSTRUCTION** 708 Willow Av Ukiah ..... 463 1853  
**HAWKINS DRAFTING SERVICE** 18200 N Highway 1 FB ..... 964 4125  
**HAWKYARD & MILLER MECHANICAL** ..... 396 2030  
**HAYES MUSIC** 200 S State Ukiah ..... 462 3739  
**HAYES STUDIO** 2210 Smith Ln Klsyvl ..... 279 4777  
**HAYMOND B L ANTIQUE RESTORATION SUPPLY** ..... 462 5011  
**HAYMOND B L ART RESTORATION SUPPLY** ..... 462 4221  
**HAYNES EDWARD H DVM** Ukiah Veterinary Hospital  
1328 S State Ukiah ..... 462 4711  
**HAZELTON TRACY FNP** 3400 Emerson Cir ..... 994 5272  
**HEAD CONSTRUCTION** ..... 987 3262  
**HEAD FEATHERS** 910 S Main Lkprt ..... 262 1406  
**HEAD FEATHERS** 910 S Main Lkprt ..... 263 5226  
**HEAD HUNTERS THE** 262 N Main FB ..... 961 0707  
**HEAD START** 6958 Meadowbrook Dr Cir ..... 994 0647  
**HEAD START CHILD DEVELOPMENT PROGRAM**  
Administration 550 N State Ukiah ..... 462 2582  
Bush Street Center 205 N Bush Ukiah ..... 462 0013  
Clearlake Home Base 14501 Pearl Av Cir ..... 994 6045  
Clearlake Home Base 14521 Pearl Av Cir ..... 994 6453  
Fort Bragg Center 330 S Lincoln FB ..... 964 5961  
Fort Bragg Homebase 330 S Lincoln FB ..... 964 0512  
Lakemont Center 150 Lange Lkprt ..... 263 8213  
Lower Lake Center 16250 Main Lwr Lk ..... 994 6601  
Meadowbrook Center 6958 Meadowbrook Dr Cir ..... 994 0854  
Nokomis Center 495 Washington Av Ukiah ..... 462 2671  
North Ukiah Center 1100 N Bush Ukiah ..... 462 2835  
Orchard Center 425 S Orchard Av Ukiah ..... 462 2030  
Pearl Center 14501 Pearl Av Cir ..... 994 6045  
Pearl Center 14521 Pearl Av Cir ..... 994 6453  
South Ukiah Center 2165 S State Ukiah ..... 462 0253  
Ukiah Center 1100 N Bush Ukiah ..... 463 1354  
Ukiah Early Head Start 550 N State Ukiah ..... 462 5549  
Upper Lake Center 679-2d Upr Lk ..... 275 2721  
Upper Lake Home Base 679-2d Upr Lk ..... 275 9129  
Willits Center 20 Spruce Wits ..... 459 5141  
Willits Early Head Start ..... 459 1457  
Head Start Children's Center 2165 S State Ukiah ..... 462 0253  
Head To Toe 400 S Main FB ..... 961 0878  
Headlands Coffeehouse 120 E Laurel FB ..... 964 1987  
Headlands Inn The Howard & Albion Mdocno ..... 937 4431  
Headlines Hair Design 610 S State Ukiah ..... 462 6000  
Headquarters For Hair 5335-5th Klsyvl ..... 279 0853  
Headrick Appliance 38851 S Highway 1 Gualala ..... 884 3364

**HEALING ARTS & MASSAGE CENTER**  
39120 Ocean Dr Gualala ..... 884 4800

**HEALING EARTH-AROMATHERAPY**  
422 S Main Lkprt ..... 262 1211  
Healing Garden The-Rosa Ruppda CMT ..... 468 7473  
Healing Waters Christian Counseling Ukiah ..... 485 8441  
Health Net Dental And Vision  
No Charge To Calling Party ..... 800 999 2844

**HEALTH PLAN OF THE REDWOODS**  
No Charge To The Calling Party ..... 800 248 2071

**HEALTH PLAN OF THE REDWOODS**  
3033 Cleveland Av Santa Rosa ..... 525 4300  
Health Plan Of The Redwoods  
3033 Cleveland Av Santa Rosa ..... 544 2277  
Healthy Start 13050 High Valley Rd Cir Ukiah ..... 998 3007  
Healthy Start 750 Old Lucerne Rd Upr Lk ..... 275 9077  
Healthy Start-Pomo School 3350 Acacia Cir ..... 994 0666  
Hearing Aid Center 486 N State Ukiah ..... 462 1133  
Hearing Aid Repair Center-Lilli Electronics Co  
168 Washington Av Ukiah ..... 462 8211

**HEARST CASTLE-TOURS-MISTIX**  
No Charge To Calling Party ..... 800 444 4424  
Heart & Home 131 E Laurel FB ..... 962 0227  
Hearts And Hands At Cider Creek  
P O Box 1 Albn ..... 937 2555  
Heartwood Designs ..... 964 9311

**HEARTWOOD NURSERY**  
525 S Franklin FB ..... 964 3555

Heat Source 2345 S Main Lkprt ..... 263 9044  
Hebert Stephen 18920 Coyle Springs Rd Mldtn ..... 987 2677  
Painter  
Hebler Ann FNP PA  
13050 High Valley Rd Cir Ukiah ..... 998 2225  
9245 Highway 53 Lwr Lk ..... 994 0404  
Hebler Enterprises ..... 994 0404  
Hefner Rich Machines 18500 Hare Creek Ter FB ..... 964 5522  
Heidi's Hallmark Cards 851 S Main Wits ..... 459 3422  
Heidi's Yarn Haven 180 S School Ukiah ..... 462 0542  
Held-Poage Memorial Home & Research Library  
603 W Perkins Ukiah ..... 462 6996  
Helena House 15850 Armstrong Mldtn ..... 987 3225  
Heller Family Day Care 15090 Woodside Dr Cir ..... 994 9666  
Heller J D 15090 Woodside Dr Cir ..... 994 9666  
Heller Jon ..... 468 4300  
Heller Robert Construction  
2395 Boonville Rd Ukiah ..... 468 9120

**HELMS PETROLEUM PRODUCTS CO**  
3740 Highland Springs Rd Lkprt ..... 263 6511

**HELMS PETROLEUM PRODUCTS CO**  
1785 S Main Lkprt ..... 263 6200

**HELMS TIRE** ..... 263 8400  
**Help Crisis Line-Mendocino County** ..... 463 4400  
Collect Calls Accepted  
Help For Hire 303 N Main FB ..... 964 9000  
Help Services 1971 Big Valley Rd Lkprt ..... 263 3111  
Helpful Hands 490 N Harold FB ..... 964 0000  
Helping Hand Handyman ..... 263 6600  
Helping Hands P O Box 34 Lkprt ..... 263 2300  
Helsel Construction ..... 277 9900  
Hematology Oncology Group 1165 S Dora Ukiah ..... 462 6300  
Hematology-Oncology Of Lakeport  
5150 Hill Rd Lkprt ..... 279 1100

**Hemp Organics**  
From San Francisco Telephones Call ..... 415 861 4400  
Henderson Bonnie FNP 564 S Dora Ukiah ..... 463 8000  
Henley's Art & Interiors Cypress Village Gualala ..... 884 1300  
Hennefer Jim For Congress Friends Of  
20653 Highway 29 Mldtn ..... 987 1000

**HENNESSY BRIAN A** Adair Potswald & Hennessy ct reptprs  
212 W Perkins Ukiah ..... 462 8000

**Henning Carl MD** 564 S Dora Ukiah ..... 463 8000  
Ofc 326 Hospital Rd Ukiah  
**Henny Penny Restaurant** 697 S Orchard Av Ukiah ..... 263 8000  
**Henny's Shear Delight** 1017-11th Lkprt ..... 462 0000  
**Henny's Too See Henny's Shear Delight**  
1017-11th Lkprt ..... 263 8000

**HENRIE PATRICK DDS**  
1096 S Dora Ukiah ..... 462 5000

**Henry Bryan L MD** 15322 Lakeshore Dr Cir ..... 995 9900  
**Henry Cheryl MD** 15322 Lakeshore Dr Cir ..... 995 9900  
**Henry Liz Supervisor** 790 S Franklin FB ..... 961 0000  
**Henry Repairs** 109 Soda Bay Rd Lkprt ..... 964 0000  
**Henry's Meadow** 17555 N Highway 1 FB ..... 964 0000  
**Herb Romine Air Conditioning**  
P O Box 1021 Lwr Lk ..... 994 0000

From Callstoga Telephones Call ..... 942 1777  
From Napa Telephones Call ..... 252 7070  
From Saint Helena Telephones Call ..... 967 0772  
Heritage House 5200 N Highway 1 Ltr Rvr ..... 937 5885  
Dining Room Reservations ..... 937 5885  
Garden Art ..... 937 3855  
Heritage Valley Mobile Home Park  
400 Sulphur Bank Dr Cir Uk Oks ..... 998 3357

**HERMAN LARRY DRILLING**  
13011 Highway 29 Lwr Lk ..... 994 4914

**HERMAN T M & ASSOCIATES INC**  
493 S Main Wits ..... 459 4518

**Herndon Creek Farm**  
17600 Morgan Valley Rd Lwr Lk ..... 994 4709

**Herring Media Group Inc** ..... 962 0550

**Hertz Equipment Rental**  
100 W Lake Mendocino Dr Ukiah ..... 463 5844

**Hertz Rent A Car**  
Worldwide Reservations  
No Charge To Calling Party ..... 800 654 3131  
Ukiah Municipal Airport Ukiah ..... 468 0537

**Hesston Tractors-Redwood Equipment Inc**  
211 Cresco Ct Santa Rosa ..... 586 1790

**Hewlett-Packard Company**  
Sales Consultation And General Inquiries  
No Charge To Calling Party ..... 800 752 0900  
HP Technical Support Printing Imaging Pavilion PC & Handheld  
Products ..... 208 323 2551  
Business Computing And Storage Products ..... 970 635 1000  
**Hewlett Thos M DDS** 3560 Old Highway 53 Cir ..... 994 7271  
**Hey Sport** 1247 S Main Lkprt ..... 263 3332  
**Hey Taxi Inc** P O Box 554 Bml ..... 895 3661  
**Hidden Pines Campgrounds**  
18701 N Highway 1 FB ..... 961 5451  
**Hidden Treasures P O Box 1844 Mdocno** ..... 937 3800  
**Hidden Valley Campground**  
29801 N Highway 101 Wits ..... 459 2521

**Hidden Valley Community Church**  
18160 Spruce Rd Ext Mldtn ..... 987 3510  
**Hidden Valley Community Church Pre-School & Day Care** 21036 Washington Mldtn ..... 987 3321  
**Hidden Valley Fire Information**  
See South Lake County Fire Protection Dist  
**Hidden Valley Food Mart** 18696 Putah Ln Mldtn ..... 987 9794  
**Hidden Valley Lake Association**  
Highway 29 & Hidden Valley Rd Mldtn  
Main Office ..... 987 3138  
Country Club Lounge ..... 987 9414  
Country Club Restaurant ..... 987 3147  
Greenview Restaurant ..... 987 3146  
Main Gate House-Security ..... 987 3515  
Pool ..... 987 9262  
Pro Shop-Golf Course ..... 987 3035  
**Hidden Valley Lake Campground** ..... 987 3138  
**Hidden Valley Lake Campground**  
19234 Hidden Valley Rd Mldtn ..... 987 9079  
**Hidden Valley Lake Community Services District**  
19400 Hartmann Rd Mldtn ..... 987 9201

**Hidden Valley Lake Golf Course**  
18174 Hidden Valley Rd Mldtn ..... 987 3035  
**HIDDEN VALLEY LAKE GOLF CLUB** ..... 987 3138  
**Hidden Valley Lake Golf Course** ..... 987 3138  
**Hidden Valley Lake Insurance Agency**  
19352 Donkey Hill Rd Mldtn ..... 987 2650  
**Hidden Valley Lake Realty** ..... 987 3172  
**Hidden Valley Mail Express**  
18983 Hartmann Rd Mldtn ..... 987 4750

**Hidden Valley Sand & Gravel**  
14572 E Highway 20 Cir Uk Oks ..... 998 1115

**HIDDEN VALLEY STORAGE**  
18235 Spruce Rd Ext Mldtn ..... 987 9216

**Hidden Valley Supply & Rental Inc**  
18195 Spruce Rd Ext Mldtn ..... 987 7368  
**Hidden Valley Video** 17568 Spruce Rd Ext Mldtn ..... 987 9174  
**Hidden Valley Video Sports Cards & Memorabilia**  
17568 Spruce Rd Ext Mldtn ..... 987 9174

**High Serenity Ranch** 10915 High Valley Rd Cir Uk Oks ..... 998 9602  
**High Valley Adventure Inc** ..... 998 3460  
**High Valley Ranch** 11650 High Valley Rd Cir Uk Oks ..... 998 3364  
**High Valley Ranch** 11650 High Valley Rd Cir Uk Oks ..... 998 9918  
**High Valley Tile And Stone** P O Box 1996 Cir Uk Oks ..... 998 4800  
**Highland Auto Parts** 9960 Highway 53 Lwr Lk ..... 995 2003  
**Highland Ranch** P O Box 150 Philo ..... 994 9421  
**Highland Springs Park-Payphone** ..... 895 3600  
**Highlands Alarm Service** ..... 263 9913  
**Highlands Inn** 13865 Lakeshore Dr Cir ..... 994 8982

**HIGHLANDS INSURANCE AGENCY**  
14585 Olympic Dr Cir ..... 994 7214  
Highlands Martial Arts 7050 Old Highway 53 Cir ..... 994 0181

**Highlands Senior Service Center**  
14773 Lakeshore ..... 994 8982  
**Highlands Senior Service Center**  
14773 Lakeshore ..... 994 8982  
**Highlands Village** 6215 Old Highway 53 C ..... 994 8982  
**Highlands Water Co** 14580 Lakeshore Dr ..... 994 8982  
**Highlands Water Co Distribution**  
14585 Lakeshore ..... 994 8982

**Highlight Gallery** 45052 Main Mdocno ..... 994 8982  
**Highway Grocery See Hi-Way Gro**  
160 E Highway 20 FB ..... 994 8982  
**Highway 29 Mini & Boat Storage**  
470 Camb ..... 994 8982

**Highwood Technology** 8233 Pinecrest ..... 994 8982  
**HIGINBOTHAM ALICE** ins Farmers In ..... 994 8982  
275 W Gobbi Ukiah  
**Hill House Inn Of Mendocino**  
10701 Palette ..... 994 8982  
**Hillebrand Homer R** Wood To Burn ..... 994 8982  
5645 Old Highway

**HILLSIDE HEALTH CENTER** 3333 Laws Av Uki ..... 994 8982

**HILLSIDE HONDA**  
460 S Main Lkprt ..... 994 8982

**HILLSIDE STORAGE & CAR WA**  
2544 E Highway 20 Nice ..... 994 8982  
**Hillside Yamaha** 460 S Main Lkprt ..... 994 8982  
**Hilltop Apostolic Community Church**  
4274 Old Highway ..... 994 8982  
**Hilltop Apostolic Community Church**  
4274 Old Highway ..... 994 8982  
**Hilltop Christian School** 40th & Snook ..... 994 8982  
**HILTI INC**  
691 E Brokaw Rd Sd ..... 994 8982

**HILTON RESERVATIONS WORLDWIDE**  
No Charge To Calling Party ..... 994 8982  
**Hinson Larry-Physical Therapy**  
18661 Old Co ..... 994 8982

**HISE THOMAS AIA ARCHITECT**  
13265 S Highway 101 Hplnd ..... 994 8982  
**Hitmen Termite And Pest Control**  
Hobart Sales And Service Food Eq  
Refrigeration Repair 905 W College Av  
Hoberg-Forest Lake Golf Course-F  
16451 Golf Rd ..... 994 8982

**Hock Handmade Knives** ..... 994 8982  
**Hock R J Company** ..... 994 8982  
**Hodge Mechanical Equipment & R**  
15714 Spruce Grov ..... 994 8982  
**Hodge Rotating Equipment & Repa**  
15714 Spruce Grov ..... 994 8982

**Hoek Kenneth MD** 415 Hospital Dr Ukiah ..... 994 8982  
**Hofmann Lisa A DVM** 21503 Highway 29 ..... 994 8982  
**Hog Pen The** 3618 Manzanita Dr Nice ..... 994 8982  
**Hogan Sean J CPA Professional La**  
811 ..... 994 8982  
**Holden Gene N** civil eng 20110 Hollands Ln ..... 994 8982  
**HOLDEN REST HOME**  
611 Holden Ukiah ..... 994 8982  
**Holiday Harbor Marina & RV Park**  
3605 Lakeshore ..... 994 8982

**HOLIDAY INN EXP**  
250 Highway 20 FB ..... 994 8982

**Holiday Inn Express** 1720 N State Ukiah ..... 994 8982  
**Holiday Inn Express** 1720 N State Ukiah ..... 994 8982  
**Holiday Island Mobile Home Park**  
12145 Lakeshore ..... 994 8982  
**Holiday Lodge Motel** 1540 S Main Wits ..... 994 8982  
**Holland Mason Vmd** ..... 994 8982  
**Hollfield Construction** 20208 Hollands ..... 994 8982  
**Holloway Health Insurance Service**  
Holly Heights Apartments 77 Holly Wit ..... 994 8982  
**Holly Hill Farm Bed & Breakfast**  
2151 Highway ..... 994 8982  
**Holmes Automobile Service** 251 Shell ..... 994 8982  
**Holmes Chris S DVM** 3083 Highway 175 I ..... 994 8982  
**HOLMES FRED LUMBER**  
211 W Elm FB ..... 994 8982  
**Holmes Lori MSRD** 804-11th Lkprt ..... 994 8982  
**Holmes Trucking Fax Line**  
1851 Center Vall ..... 994 8982  
**Holway Insurance Agency**  
39040 S Highway ..... 994 8982  
**Holston Richard G PhD** 21159 Callstoga ..... 994 8982  
**Holt Pat Designs** P O Box 112 Klsyvl ..... 994 8982  
**Holten David Marble Co** 14951 Caspar ..... 994 8982  
**Holt's Mark Pest Control** ..... 994 8982  
**Holy Child Residential Care Home**  
1074 Albrigi ..... 994 8982  
**Holy Trinity Episcopal Church**  
640 S Orchar ..... 994 8982  
**Home Appraisal Services** ..... 994 8982  
From Santa Rosa Telephones Call  
**Home Health Outpatient Physical R**  
Services 14880 Olympic Dr Cir ..... 994 8982  
**HOME HEALTH SERVICE OF ME**  
**COAST HOSPITAL** 700 River Dr FB ..... 994 8982



Table 1:

LAKE COUNTY BASE

	1999 Degree Days			Red Hills	Red Hills
	5128	6837	17511	4146	4305
	Terra Vermeille TOP	Terra Vermeille MIDDLE	Terra Vermeille LOWER	Amber Knolls UPPER	Amber Knolls LOWER
April	192.91	168.76	158.61	190.23	173.52
May	320.76	289.75	248.22	340.95	313.13
June	566.49	476.57	458.07	569.83	542.02
July	761.02	616.45	579.84	757.16	648.05
August	719.22	573.18	555.70	709.55	625.54
September	788.82	568.20	513.65	811.17	616.43
October	530.46	234.96	189.37	538.98	263.17
	<b>3879.68</b>	<b>2927.87</b>	<b>2703.46</b>	<b>3917.87</b>	<b>3181.88</b>

IV

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II

IV

III

Mendocino County Base

	1999 Degree Days		
	H & W POTTER	WELCH POTTER	VO HOPLAND
April	144.98	141.04	155.15
May	238.60	235.31	260.68
June	430.56	464.30	457.07
July	506.15	552.25	508.27
August	518.32	546.11	533.16
September	457.98	499.68	418.51
October	192.26	202.55	167.66
	<b>2488.85</b>	<b>2641.24</b>	<b>2498.5</b>

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Table 2 :

PAGE 02

LAKE COUNTY BASE

	Road 188a		Road 188a		Shannon Ridge		Shannon Ridge		WEST	NORTH	SOUTH
	8128	8837	17811	4148	4366	8191	8387	8881	addit 8870	addit 8886	addit 8300
	Terra Vermelle	Terra Vermelle	Terra Vermelle	Amber Knolls	Amber Knolls	Caldwell	Caldwell	BRASS	BRASS	BRASS	BRASS
	TOP	MIDDLE	LOWER	UPPER	LOWER			FIELD	FIELD	FIELD	FIELD
April	388.80	307.05	271.80	357.48	336.10	314.01	304.82	290.38	298.98	271.58	284.99
May	811.39	600.88	592.55	738.28	884.70	867.28	866.08	837.74	810.31	809.92	584.14
June	750.72	587.21	586.08	743.90	884.42	670.28	670.28	650.83	629.13	628.80	621.58
July	788.88	626.84	602.57	817.39	711.27	708.01	724.80	878.41	853.43	659.88	637.71
August	526.78	447.22	405.28	808.88	458.88	497.84	538.20	475.11	457.13	473.85	441.57
September	271.22	185.90	140.84	320.20	218.45	212.47	244.98	202.56	182.88	187.88	174.75
October	271.22	185.90	140.84	320.20	218.45	212.47	244.98	202.56	182.88	187.88	174.75
	3618.9	2748.18	2588.31	3482.11	3075.8	3988.88	3148.38	2833.13	2831.84	2841.31	2724.78

-IV    ~~III~~ II    II    -IV    III    III    III    II    II    II    II

2000 Degree Days  
Lake Co.-Clearlake between HWY 20, Hwy 63 and old Hwy 63

Diamond Ridge	8182	8170	8348	8347
	DR-Addit	DR-Main	DR-Addit	DR-Addit
	LOWER		MIDDLE	UPPER
April	170.15	207.29	171.89	158.77
May	337.54	353.32	326.27	314.78
June	683.68	723.20	688.24	683.68
July	721.18	722.22	721.55	708.44
August	758.55	772.32	783.28	753.23
September	520.31	584.81	548.28	553.57
October	238.28	298.29	278.08	273.53
	3428.88	3688.48	3495.38	3428.88

III+    IV    III+    III+

Mendocino County Base  
2006 Degree Days

H & W		WELCH		ROEDERER		ROEDERER		BECKSTOFFER	
POTTER		POTTER		PHLO		BOONVILLE		CARNEROS	
157.18	150.20	121.21	180.88					220.12	
311.28	306.82	257.16	269.29					353.80	
572.12	585.21	435.92	513.32					448.54	
559.34	583.50	386.97	473.22					421.03	
557.90	578.47	418.54	489.27					483.94	
412.74	443.89	418.65	458.95					470.98	
178.87	188.24	166.63	186.80					244.28	
2748.04	2867.33	2211.88	2681.01					2820.48	

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Table 3:

LAKE COUNTY BASE

	Red Hills				Shannon Ridge		WEST	NORTH	SOUTH		
	2881	6837	17811	4148	4306	8191	8367	8061	8880	9330	
	Terra Vermelle	Terra Vermelle	Terra Vermelle	Amber Knolls	Amber Knolls	Caldwell	Caldwell	BRASS	BRASS	BRASS	BRASS
	TOP	MIDDLE	LOWER	UPPER	LOWER		FIELD	FIELD	FIELD	FIELD	
April	118.18	96.53	86.50	113.65	84.86	73.85	77.18	77.90	69.17	73.28	70.45
May	891.97	578.05	512.72	684.08	604.90	614.11	571.52	564.99	534.28	554.57	518.31
June	818.35	416.78	505.09	629.00	586.77	648.03	530.78	537.73	528.54	535.43	525.88
July	668.58	685.92	684.12	858.59	748.18	718.47	727.68	735.40	722.04	731.79	717.19
August	815.12	1140.83	644.52	858.84	728.31	700.85	732.48	719.27	698.65	688.28	663.00
September	854.57	458.55	442.13	702.41	544.27	505.84	385.46	525.07	508.29	520.91	500.14
October	495.38	278.51	280.91	517.12	321.21	300.97	384.84	328.70	300.59	328.65	286.43
	4282.18	3828.17	3118.39	4388.89	3831.46	3463.02	3688.82	3489.88	3380.88	3440.82	3312.16

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2801 Degree Days

Lake Co. - Clearlake between HWY 26, July 83 and old Hwy 83

Mendocino County Base

Napa County Base

Diamond Ridge

	9182	8178	8348	8347	2801 Degree Days					
	DR-Addit	DR-Main	DR-Addit	DR-Addit	H & W POTTER	WELCH POTTER	ROEDERER PHILO	ROEDERER BOONVILLE	BECKSTOFFER CARNEROS	
	LOWER		MIDDLE	UPPER						
April	97.00	108.84	84.10	97.28	73.37	69.88	73.67	75.77	119.30	
May	605.73	648.95	816.35	482.21	491.88	489.26	425.20	415.86	474.72	
June	830.94	634.08	604.07	608.88	478.83	480.11	421.27	396.15	488.18	
July	809.77	838.91	788.98	811.05	633.85	653.12	484.25	505.78	441.80	
August	791.04	922.08	789.84	794.08	585.23	598.67	483.51	482.53	488.86	
September	582.23	632.12	598.00	608.84	431.03	443.77	378.58	403.45	420.00	
October	350.85	448.08	382.72	388.89	222.00	248.18	280.59	274.55	280.00	
	3877.86	4132.07	3886.04	3900.17	2847.18	2890.79	2588.08	2644.11	2702.87	

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Table 4:

LAKE COUNTY BASE

2002 Degree Days	Red Hills		Red Hills		Shannon Ridge		Shannon Ridge		WEST	NORTH	SOUTH
	8128	8837	17511	4146	4305	8191	addit 9357	8081	addit 8870	addit 8990	addit 9330
	Terra Vermelle TOP	Terra Vermelle MIDDLE	Terra Vermelle LOWER	Amber Knolls UPPER	Amber Knolls LOWER	Caldwell	Caldwell	BRASS FIELD	BRASS FIELD	BRASS FIELD	BRASS FIELD
April	198.93	155.28	117.81	198.85	159.54	201.81	140.23	126.88	119.13	117.87	117.60
May	390.35	322.44	258.48	380.70	344.22	288.57	307.54	288.18	286.32	285.98	287.58
June	690.93	563.33	538.06	670.52	640.82	573.36	589.07	583.38	577.24	586.98	585.75
July	928.88	730.07	741.10	942.43	824.20	785.79	794.08	808.97	787.84	793.20	780.98
August	861.67	615.09	643.99	877.61	715.85	682.34	735.97	715.82	702.41	696.92	684.79
September	884.12	465.39	480.00	885.71	523.57	503.83	582.86	546.18	530.61	540.44	503.39
October	415.81	205.03	149.15	443.18	250.52	200.07	299.32	227.21	214.06	230.10	182.52
	4170.98	3058.61	2908.69	4210.00	3458.72	3233.87	3409.07	3294.20	3227.61	3251.48	3102.01

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2002 Degree Days  
Lake Co.-Clearlake between HWY 20, hwy 53 and old hwy 53

Diamond Ridge

	9192 DR-Addit LOWER	8170 DR-Main	9348 DR-Addit MIDDLE	9347 DR-Addit UPPER
April	181.83	197.28	174.70	183.72
May	375.05	382.03	361.98	360.70
June	875.04	872.08	848.83	845.78
July	878.11	897.88	868.52	883.86
August	777.13	819.02	779.37	773.72
September	580.38	608.62	602.83	583.82
October	252.08	348.60	311.41	284.38
	3719.8	3831.49	3745.42	3675.95

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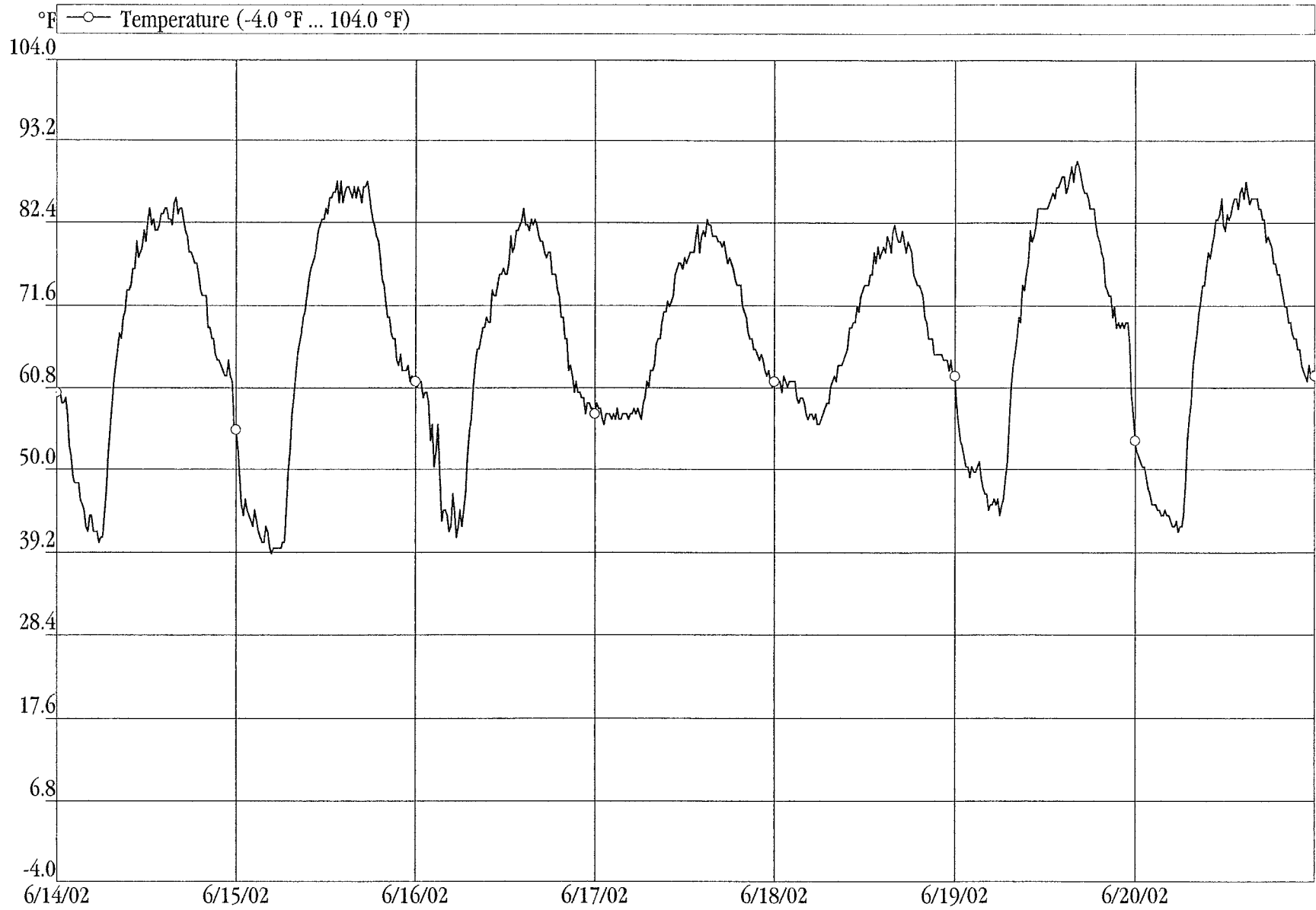
Mendocino County Base  
2002 Degree Days

	3280 H & W POTTER	4240 WELCH POTTER	2876 ROEDERER PHLD	3701 ROEDERER BOONVILLE	2785 BECKSTOFFER CARNERS
April	138.18	135.73	134.70	142.74	138.51
May	247.76	281.06	250.83	212.68	227.10
June	482.10	515.15	423.82	370.86	443.71
July	699.57	687.22	535.95	602.43	493.00
August	601.54	584.88	482.00	430.85	455.88
September	421.43	428.28	444.48	412.27	445.74
October	143.78	181.80	187.20	155.71	280.85
	2732.32	2772.1	2438.98	2327.54	2482.89

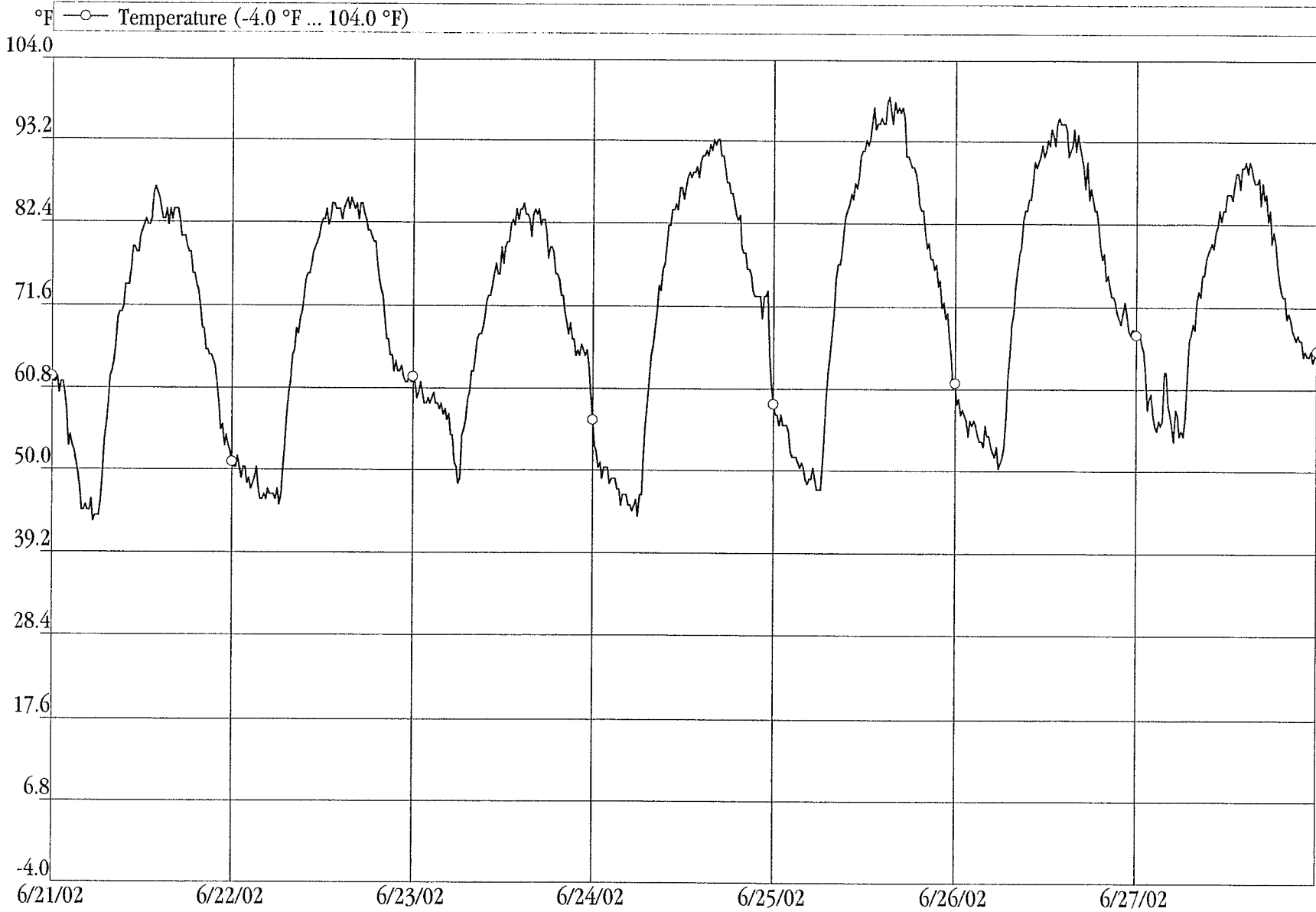
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Table 5:

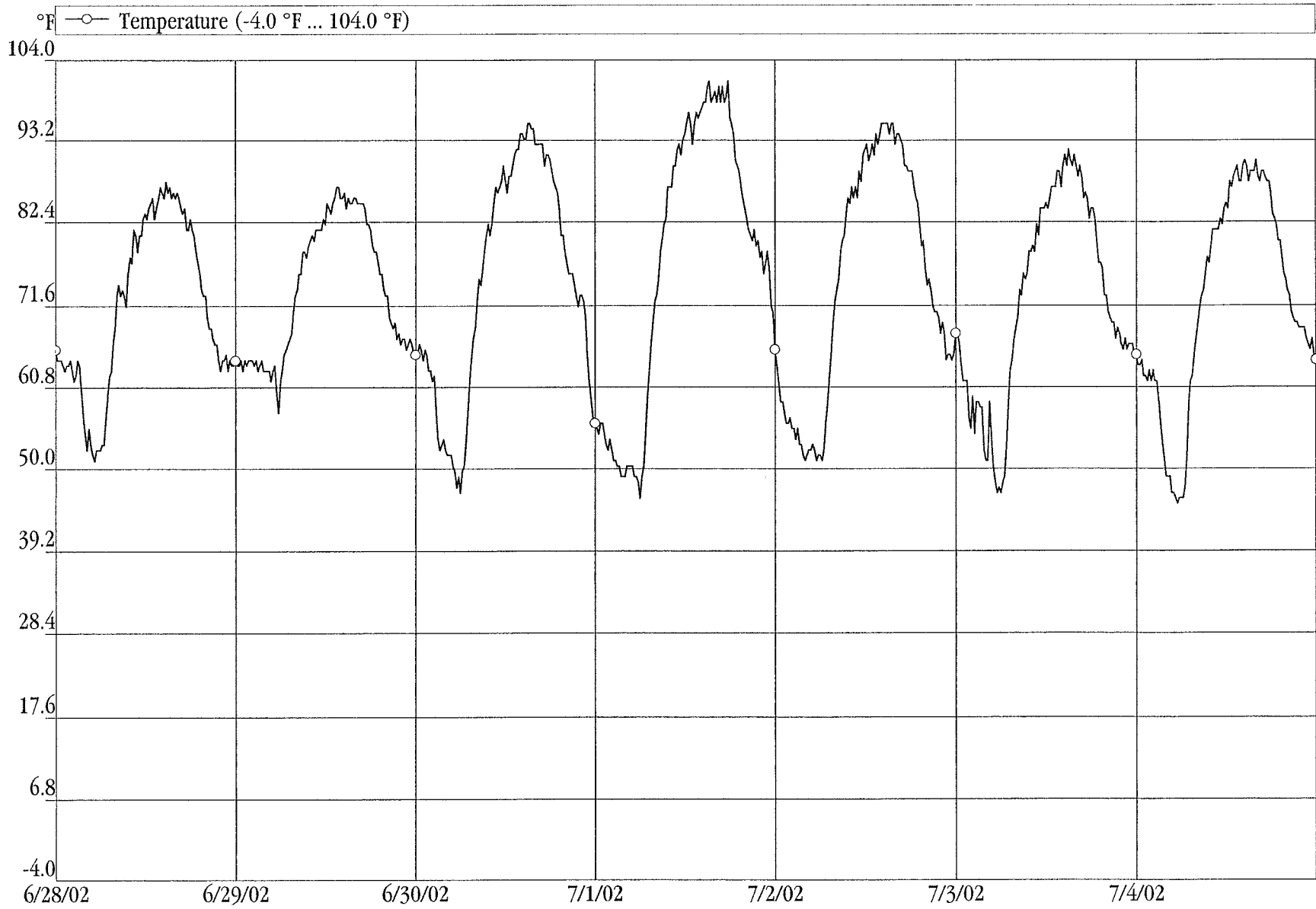
9330 BRASSFIELD ADDIT SOUTH - 6/14/02



9330 BRASSFIELD ADDIT SOUTH - 6/21/02



9330 BRASSFIELD ADDIT SOUTH - 6/28/02



9330 BRASSFIELD ADDIT SOUTH - 7/2/02

