HARMONY WINE COMPANY

290 Igo Way • Boulder Creek • California 95006 • USA • (408) 338-2646

This petition seeks to establish an American Viticultural Area in southern Monterey County, California. The name of the proposed area would be "Hames Valley."

This petition was prepared and submitted by Barry C. Jackson of the Harmony Wine Company. The petition is submitted on behalf of Valley Farm Management, Soledad, CA., and Bob Denney & Associates, Visalia, CA.

Communications regarding this petition should be directed to Harmony Wine Company.

[redacted]

Harmony Wine Company

Enclosure

Introduction

Hames Valley is located in the eastern foothills of the Santa Lucia Range, west of the confluence of the Salinas, San Antonio, and Nacimiento Rivers. The watershed of Hames Creek is the defining feature of the proposed appellation. Hames Valley is wholly contained within the "Monterey" AVA. "Monterey" forms the northern and western boundaries. Swain Valley and the Salinas River form part of the eastern boundary. The ridgeline that separates Hames Valley from the San Antonio River forms the balance of the eastern and southern boundaries.

The proposed appellation encompasses approximately sixteen square miles. There are two existing vineyards that comprise 500 acres. The principle cultivars are: cabernet sauvignon, merlot and cabernet franc. There are no wineries currently located in the proposed area.

Evidence of Name

The name "Hames Valley" appears on the U.S.G.S. Bradley Quadrangle, 15 minute series map of Bradley, California. There is also a U.S.G.S. 7-1/2 minute series map entitled, "Hames Valley." Hames Creek runs through the valley.

Geographic Features

Hames Valley is a small east-west oriented valley, west of the generally north-south orientation of the meandering Salinas River. Formed by the watershed of Hames Creek, Hames Valley thrusts its way seven miles into the eastern flank by the Santa Lucia Mountains. Hames Valley is located approximately three miles west of the town of Bradley and some seven miles north of Lake Nacimiento. Hames Creek empties into the Salinas River approximately two miles downstream from the confluence of the San Antonio and Salinas Rivers. Hames Valley is separated from the San Antonio River by a ridge averaging 1,500 feet in elevation, the highest peak at 1,984 feet. A similar ridgeline forms the northern boundary and separation from the Salinas River.

The general topography within the valley consists of gently sloping alluvial fans and associated terraces. Drainages are generally well defined.

Soils

The principle soils are gravelly sandy loams of the Lockwood series. These comprise approximately 75% of the soil types present. Lesser amounts of Chamise shaley loams and Nacimiento silty clay loams are also present. All viticulture takes place in the Lockwood series soils.

Climate

Heat summation for the Hames Valley-Bradley area is generally in the 3200 to 3500 degree-days range. This corresponds to a warm region III, similar to the King City and Paso Robles areas. This differs from the generally cooler climate (region I/II) for the Gonzales- Soledad-Greenfield area, farther north.

Rainfall averages 10 to 12 inches annually.

The east-west axis relative to the north-south orientation of the Salinas Valley results in a reduced wind stress factor. Windspeed builds up later in the day and at reduced velocities relative to the "wind-tunnel" effect in the Gonzales-Soledad-Greenfield area. This results in shorter overall exposure to wind stress, from both a time and wind velocity standpoint.

Factors of Differentiation

The following factors differentiate the Hames Valley from the adjacent Salinas Valley:

- An east-west axis relative to the general north-south orientation of the Salinas Valley.
- A generally warmer microclimate: Region III vs. Region I/II.
- Higher overall elevation: 500 to 800 feet for Hames Valley, 100 to 500 feet for the Salinas Valley.
- Later daily windspeed build-up and duration of wind.
- More homogenous soil profile: Hames Valley with one principle soil type; Salinas Valley, over 70 soil types.
- Geographically distinct and separate from the Salinas River Valley.

Proposed Boundaries

The proposed Hames Valley Viticultural Area is located in Southern Monterey County, California. The Hames Valley Viticulture Area can be seen in its entirety on the U.S.G.S. 15-minute quadrangle map: Bradley, California. Portions of Hames Valley can be found on the following U.S.G.S. 7-1/2 minute quadrangle maps of California: Tierra Redonda Mountain; Wunpost; Bradley; Hames Valley.

The point of beginning (HV-1) can be found at the southeast corner of section 26, T.23S., R.10E. (point 20 on the Monterey AVA boundary [M20]). Co-incident with this point, the 640 foot contour interval crosses the Swain Valley Drainage. From the point of beginning, the proposed boundary follows the line of demarcation for the Monterey AVA northwest in a straight diagonal line across section 26 to the northwest corner of section 26, T.23S., R.10E. (M21/HV-2). Then west northwest in a straight diagonal line across sections 22, 21, 20 and 19, T.23S., R.10E. to the northwest corner of section 24 T.23S., R.9.E (M22/HV-3). Then southwest across sections 24, 25, 30, 31, and 32, to the southeast corner of section 5T.24S., R.10E. (M23/HV-4). Then east southeast in a straight diagonal line across section 9, the southeast corner of section 10T.24S., R.10E. (M24/HV-5). [The proposed boundary diverges from coincidence with the Monterey AVA, at this point.] Then east southeast in a straight diagonal line for approximately 2-1/4 miles to Hill 704, located in section 18 T.24S., R.11E. (HV-6). Then north in a straight line for approximately 2-1/2 miles through Hill 801, located near the northwest corner of section 7 T.24S., R.11E., onto the northwest corner of section 6T.24S., R.11E. (HV-7/Monterey AVA point 31). Then north along the Salinas River for approximately 1 mile to where the Swain Valley drainage enters the Salinas River (HV-8). Then west for approximately 3/4 mile along the Swain Valley drainage to return to the point of beginning.

HARMONY WINE COMPANY

290 Igo Way • Boulder Creek • California 95006 • USA • (408) 338-2646

Mr. Robert White
Bureau of Alcohol, Tobacco and Firearms
Wine & Beer Branch
Washington, D.C. 20226

27 April, 1993

Dear Mr. White,

Please find enclosed, the information you requested in your letter of 5 March, 1993, regarding the proposed Hames Valley AVA.

Name and Historical Evidence

Enclosed is a copy of the historical background on the name "Hames Valley." This information is detailed in Monterey County Place Names by Donald Thomas Clark, Kestrel Press, Carmel Valley, California, 1991. (this covers questions 1 through 5).

Swain Valley physically is little more than a broad drainage that seldom exceeds 100 yards in width. Viticulture would be possible in the Swain Valley, but operational-economic constraints would render such activities unfeasible. (question 10).

Viticultural activities in Hames Valley commenced in 1986 (question 8). Subsequent to the drafting of the initial petition, 130 additional acres have been planted with vines. (question 9).

Soils Evidence

Enclosed is a composite map of the Hames Valley Area. These maps are found in the Soil Survey of Monterey County, California. U.S.D.A. Soil Conservation Service, U.S. Forest Service, University of California Agricultural Experiment Station, published in 1972. (question 1)

Soils in the Swain Valley are primarily clay loams (Nacimiento-Los Osos complex, Linn-Shedd and Los Osos) and sandy loams (Metz complex and San Andreas). Soils in Hames Valley are primarily shaley clay loams (Lockwood and Chamise Series) and silty clay loams (Nacimiento). (question 2).

Soils in the surrounding areas are silty and shaley loams, but on 30 to 50 percent slopes, and of different compositions. (question 3).

The preponderence of the Lockwood Shaley clay loam and the geomorphology (flat, well defined valley floor) set the Hames Valley apart from the surrounding mountainous areas. (question 4).

Climate Evidence

Please find enclosed a packet of information or temperature and rain fall for the Monterey County area, prepared by A.N. Kasimatis, Extension Viticulturalist, University of California, Davis, August 7, 1970. (questions 1 through 5).

I hope the material provided is helpful in your evaluation of the proposed Appellaton. Please call if you have any additional questions.

Sincerely Yours,

[redacted]

Barry C. Jackson
Harmony Wine Company

enclosures: (3)

cc: Bob Denney
Richard Smith

MONTEREY COUNTY PLACE NAMES

A Geographical Dictionary

by

Donald Thomas Clark

University Librarian, Emeritus
University of California, Santa Cruz
Author, *Santa Cruz County Place Names*

With a foreword by Sandy Lydon

Kestrel Press
Carmel Valley, California
1991

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Hames The creek, hamlet, post office, and valley were named for John Hames, who had extensive land holdings in the area.

John Hames was born in Osage County, New York, [March 22] 1811, son of Benjamin Hames, a native of New York and a millwright by trade. John and his brother, Benjamin, Jr., arrived in California in the early 1840s. John was considered the founder of Soquel. He and his brother also built a flour mill at Corralitos. In 1883 he went into the sheep business on his ranch in Hames Valley, Monterey County. — O'Donnell.

John Hames' mother's maiden name was Rebecca Hardin. Hames was married to Drusilla Shadden in 1846 by Thomas Larkin at Monterey. Laura Frudden Rist states the Hames family moved to Hames Valley from Soquel in 1866.

He built a fine ranch home where the valley joins the Salinas River. The house, though many times remodeled, is still there today [1989] and lived in by Fred and Emily Roth. The Porter Sesnon family purchased Mr. Hames' land in the late 1800s; it comprised some 12,000 acres and ranch buildings. They still own and operate it. — Rist.

Over the years 1867-1872 Hames acquired land in Secs.1-4, 6, 8, 11-14, 21, and 24 of T24S R10E, in Secs 5, 6, & 8 T24S R11E, and in Sec.34 T23S R10E all in or near what became known as Hames Valley. He died at the home of his brother at Peach Tree on December 6, 1894, at the age of 84.

Ref: Patent Book A:498-520; Probate Minutes, Superior Court, Monterey County Book J:481; *Santa Cruz Surf*, December 15, 1894; M. H. O'Donnell in *Monterey Peninsula Herald*, July 2, 1953; Laura (Frudden) Rist's "Hames Valley Brought into View" in Paso Robles *The Daily Press*, October 6, 1989; *Newsletter* San Antonio Valley Historical Association, Summer 1990:4-5

Hames A former small hamlet located in Hames Valley. See Hames Post Office for more details.

Map: 1898HAR, 1903CAL, 1914JUD as **Hames**; 1970SPO, 1975MET shows **Hames Valley Hall**

Hames Creek This stream, running through Hames Valley, rises in Sec.33 T22S R9E near the 2100-ft level about 1.3 m S of Garrissere Canyon. It flows for some 13 m S and E to enter Salinas River in Sec.33 T24S R10E at Mile 99 about 2 m NNW of Bradley. The "Mile" designations shown on the USGS topos indicate the distance from the mouth of the river.

Map: 1947BRD, 1978HAM, 1979BRA, 1979WUN as **Hames Creek**; 1897RHO shows lands of **J. Hames**

Hames Post Office Authorized July 13, 1889, 6 m W of Bradley IN NEQ Sec.4 T24S R10E. It moved 1.25 m NE to SEQ Sec.33 T23S R10E on April 22, 1892. Discontinued January 31, 1914. Pete Jacobsen, the first postmaster, had suggested the name "Hames Valley," but the Post Office Department settled on "Hames." Named for its location in Hames Valley.

Ref: Record 1832-1971; Frickstad 1955:107; Wilkerson 1968:5; Salley 1977:92; Laura (Frudden) Rist's "Hames Valley Brought into View" in Paso Robles *The Daily Press*, October 6, 1989

Map: Site Location 1837-1950 (as of 1889, 1892, and 1899), 1893USP, 1896USP, 1898HAR, 1903CAL, 1906USP, 1907GLO, 1908RAN, 1910CSM, 1914JUD

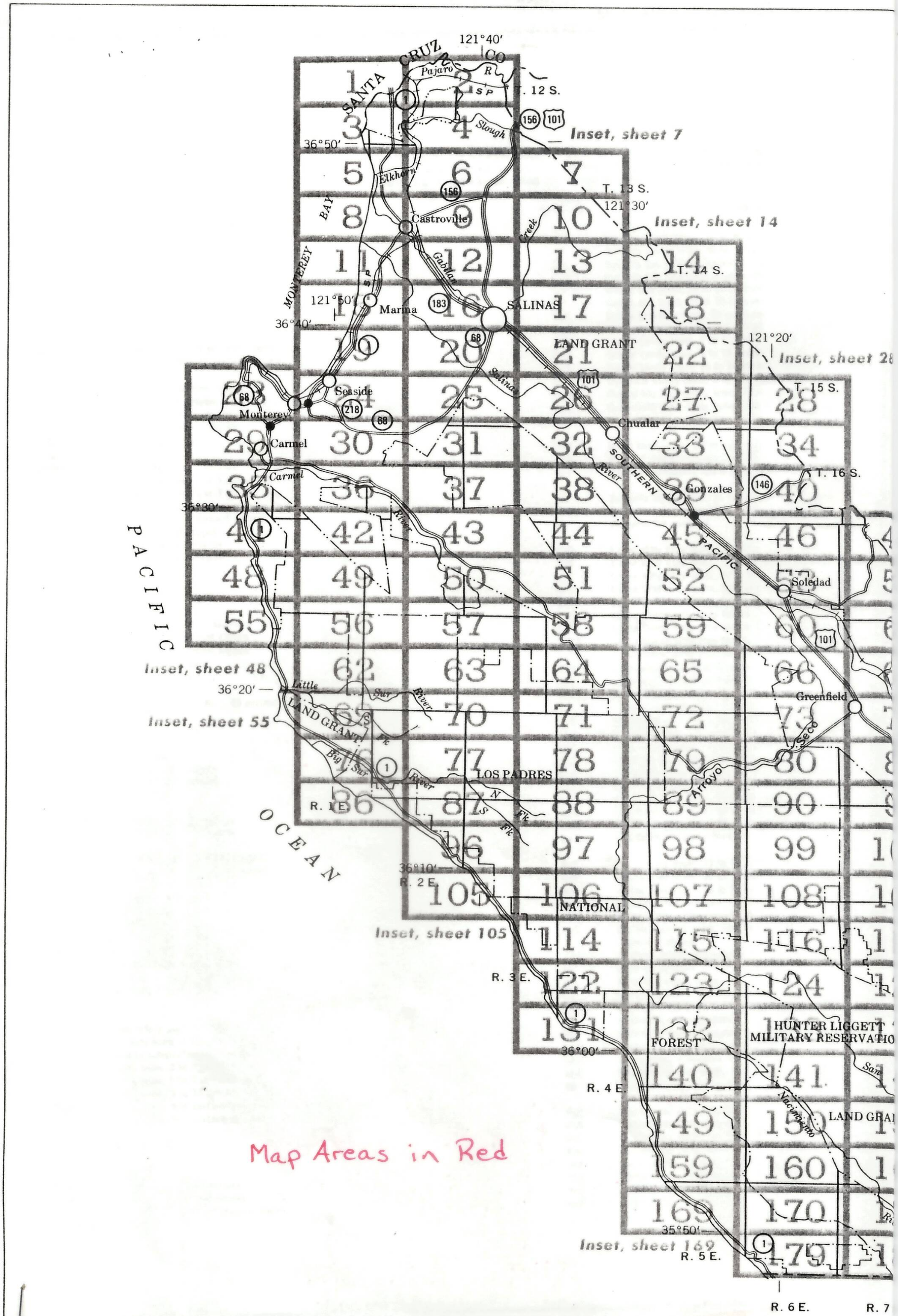
Hames Valley The valley through which Hames Creek runs. See Hames Creek for further detail.

Ref: Gonzales 1894:40; Durham 1966; Laura (Frudden) Rist's "Hames Valley Brought into View" in Paso Robles *The Daily Press*, October 6, 1989

Map: 1889STO, 1898HAR, 1910REC, 1912USG Sheet #3, ASP1915 (Sec.35 T24S R10E) 1919BRA, 1947BRD, 1951bCDF, Orr 1964:9, 1978HAM, 1979BRA, 1979WUN, DeLorme 1986:45 as **Hames Valley**; Hart 1966:37 geologic map of **Hames Valley**

*****

Hamilton Canyon SE of King City, Hamilton Canyon runs E-W from its head in the C of Sec.24 T20S R9E to open onto the Salinas Plain IN Sec.19 between Wildhorse Canyon and Long Valley. It was named for John Steinbeck's maternal grandfather, Samuel Hamilton, and figures frequently in Steinbeck's writings, particularly in *East of Eden*, wherein Steinbeck describes his grandparents with minute detail. We cite only his description of the canyon:

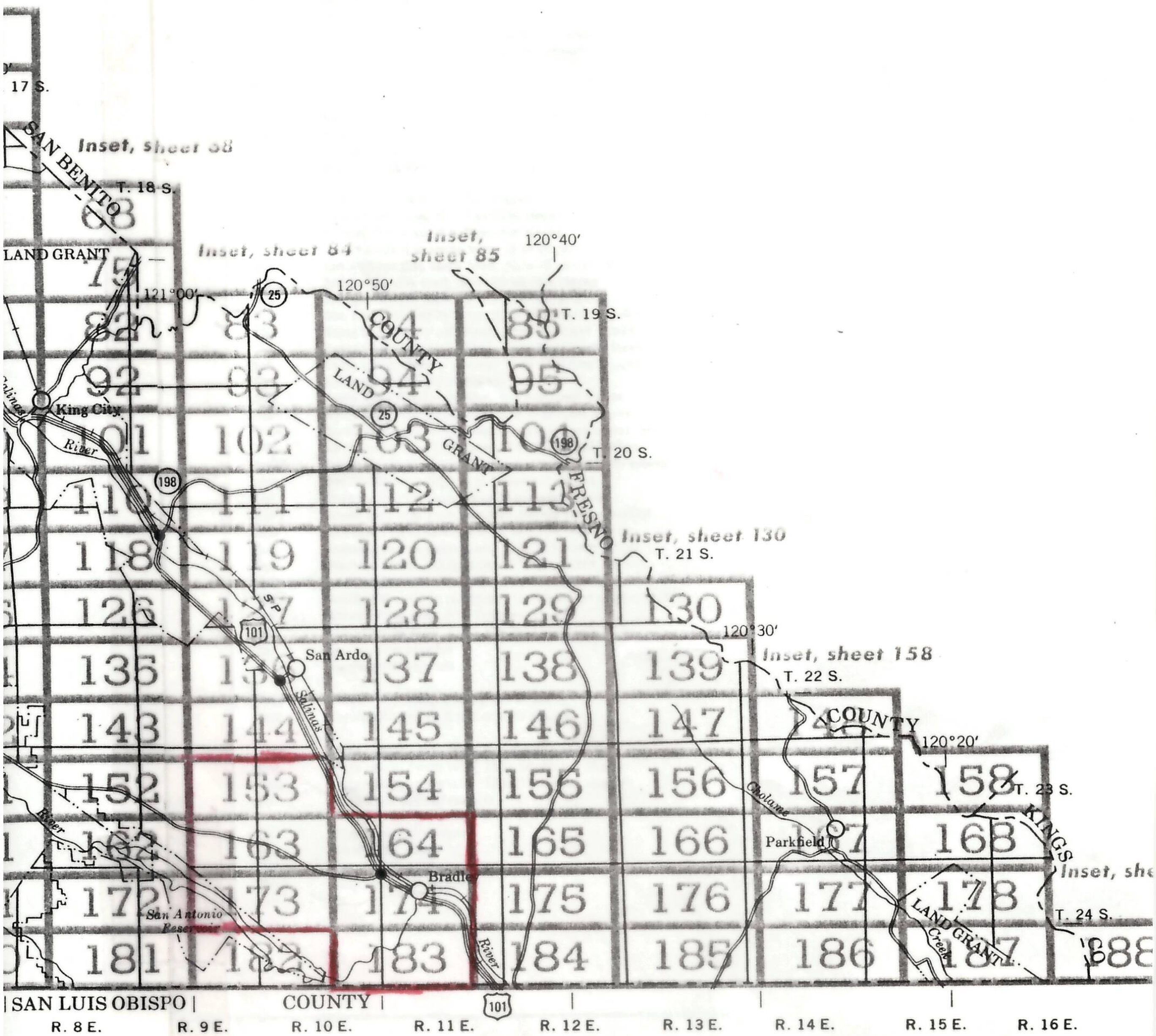


Map Areas in Red

INDEX TO MAP SHEETS
MONTEREY COUNTY, CALIFORNIA

Scale 1:506,880

1 0 1 2 3 4 5 6 7 8 Miles



SOIL LEGEND

The first letter, always a capital, is the initial one of the soil name. A second capital letter, A, B, C, D, E, I
without a slope letter are for those of nearly level soils, but some are for complexes or land types that have a
number, 2 or 3, in the symbol shows that the soil is eroded or severely eroded.

SYMBOL	NAME
AaC	Alo silty clay, 2 to 9 percent slopes
AaD	Alo silty clay, 9 to 15 percent slopes
AaE	Alo silty clay, 15 to 30 percent slopes
AaF	Alo silty clay, 30 to 50 percent slopes
Ab	Alo-Millsholm complex
Ac	Alviso silty clay loam
Ad	Alviso silty clay loam, drained
AeA	Antioch very fine sandy loam, 0 to 2 percent slopes
AeC	Antioch very fine sandy loam, 2 to 9 percent slopes
AeD	Antioch very fine sandy loam, 9 to 15 percent slopes
Af	Aquic Xerofluvents
AgC	Arbuckle gravelly loam, 2 to 9 percent slopes
AgD	Arbuckle gravelly loam, 9 to 15 percent slopes
AkD	Arnold loamy sand, 9 to 15 percent slopes
AkF	Arnold loamy sand, 15 to 50 percent slopes
Am	Arnold-San Andreas complex
Ar	Arnold-Santa Ynez complex
AsA	Arroyo Seco gravelly sandy loam, 0 to 2 percent slopes
AsB	Arroyo Seco gravelly sandy loam, 2 to 5 percent slopes
AsC	Arroyo Seco gravelly sandy loam, 5 to 9 percent slopes
AvA	Arroyo Seco gravelly loam, 0 to 2 percent slopes
AvB	Arroyo Seco gravelly loam, 2 to 5 percent slopes
AyD	Ayar silty clay, 5 to 15 percent slopes
AyE	Ayar silty clay, 15 to 30 percent slopes
AyF	Ayar silty clay, 30 to 50 percent slopes
Ba	Badland
BbC	Baywood sand, 2 to 15 percent slopes
CaD	Chamise shaly loam, 9 to 15 percent slopes
CaE	Chamise shaly loam, 15 to 30 percent slopes
CaF	Chamise shaly loam, 30 to 50 percent slopes
CbA	Chualar loam, 0 to 2 percent slopes
CbB	Chualar loam, 2 to 5 percent slopes
CbC	Chualar loam, 5 to 9 percent slopes
CcG	Cieneba fine gravelly sandy loam, 30 to 75 percent slopes
Cd	Cieneba-Rock outcrop complex
Ce	Cieneba-Sur-Rock outcrop complex
Cf	Clear Lake clay
Cg	Clear Lake clay, moderately wet
ChE	Climara clay, 15 to 30 percent slopes
ChF	Climara clay, 30 to 50 percent slopes
Ck	Climara-Montara complex
Cm	Coastal beaches
CnA	Cropley silty clay, 0 to 2 percent slopes
CnC	Cropley silty clay, 2 to 9 percent slopes
DaA	Danville sandy clay loam, 0 to 2 percent slopes
DaC	Danville sandy clay loam, 2 to 9 percent slopes
DbD	Diablo clay, 9 to 15 percent slopes
DbE	Diablo clay, 15 to 30 percent slopes
DbF	Diablo clay, 30 to 50 percent slopes
DcC	Dibble loam, 2 to 9 percent slopes
DdB	Dibble silt loam, 9 to 15 percent slopes
DdE	Dibble silt loam, 15 to 30 percent slopes
DdF	Dibble silt loam, 30 to 50 percent slopes
DeA	Docas silty clay loam, 0 to 2 percent slopes
DeC	Docas silty clay loam, 2 to 9 percent slopes
Df	Dune land
EaA	Elder sandy loam, 0 to 2 percent slopes
EbC	Elder very fine sandy loam, 2 to 9 percent slopes
EcA	Elder loam, gravelly substratum, 0 to 2 percent slopes
EdB	Elkhorn fine sandy loam, 2 to 5 percent slopes
EdC	Elkhorn fine sandy loam, 5 to 9 percent slopes
EdD	Elkhorn fine sandy loam, 9 to 15 percent slopes
EeD	Elkhorn fine sandy loam, thin surface variant, 5 to 15 percent slopes
EeE	Elkhorn fine sandy loam, thin surface variant, 15 to 30 percent slopes
Fa	Fluvents, stony
Ga	Gamboa-Sur complex
GbC	Garey sandy loam, 2 to 9 percent slopes
GbE	Garey sandy loam, 9 to 30 percent slopes
GbF2	Garey sandy loam, 30 to 50 percent slopes, eroded
Gc	Garey-Oceano complex

SYMBOL	NAME
GdE	Gaviota sandy loam, 15 to 30 percent slopes
GdF	Gaviota sandy loam, 30 to 75 percent slopes
GeE	Gaviota-San Andreas complex, 15 to 30 percent slopes
GeG	Gaviota-San Andreas complex, 30 to 75 percent slopes
GfE	Gazos silt loam, 15 to 30 percent slopes
GfF	Gazos silt loam, 30 to 50 percent slopes
GgE	Gilroy gravelly loam, 15 to 50 percent slopes
GgG2	Gilroy gravelly loam, 30 to 75 percent slopes, eroded
GhC	Gloria sandy loam, 2 to 9 percent slopes
GhD	Gloria sandy loam, 9 to 15 percent slopes
GhF	Gloria sandy loam, 15 to 50 percent slopes
GkB	Gorgonio sandy loam, 0 to 5 percent slopes
GmB	Greenfield fine sandy loam, 2 to 5 percent slopes
GmC	Greenfield fine sandy loam, 5 to 9 percent slopes
GmD	Greenfield fine sandy loam, 9 to 15 percent slopes
HaE	Haire loam, 15 to 30 percent slopes
HbB	Hanford gravelly sandy loam, 0 to 5 percent slopes
HcF	Henneke extremely stony clay loam, 15 to 75 percent slop
JaF	Junipero loamy sand, 30 to 50 percent slopes
JbG	Junipero sandy loam, 30 to 75 percent slopes
Jc	Junipero-Sur complex
LaD	Linne silty clay loam, 5 to 15 percent slopes
LaE	Linne silty clay loam, 15 to 30 percent slopes
LaF	Linne silty clay loam, 30 to 50 percent slopes
LbD	Linne-Diablo complex, 9 to 15 percent slopes
LbE	Linne-Diablo complex, 15 to 30 percent slopes
LcE	Linne-Shedd silty clay loams, 15 to 30 percent slopes
LcF	Linne-Shedd silty clay loams, 30 to 50 percent slopes
LcF2	Linne-Shedd silty clay loams, 15 to 50 percent slopes, e
LcG2	Linne-Shedd silty clay loams, 50 to 75 percent slopes, e
LdA	Lockwood loam, 0 to 2 percent slopes
LdC	Lockwood loam, 2 to 9 percent slopes
LeA	Lockwood shaly loam, 0 to 2 percent slopes
LeC	Lockwood shaly loam, 2 to 9 percent slopes
LeD	Lockwood shaly loam, 9 to 15 percent slopes
LgA	Lockwood shaly loam, 0 to 2 percent slopes, wet
LhE	Lopez shaly loam, 15 to 30 percent slopes
LkF	Los Gatos gravelly loam, 30 to 50 percent slopes
LkG	Los Gatos gravelly loam, 50 to 75 percent slopes
LmD	Los Osos clay loam, 9 to 15 percent slopes
LmE	Los Osos clay loam, 15 to 30 percent slopes
LmF	Los Osos clay loam, 30 to 50 percent slopes
LmG	Los Osos clay loam, 50 to 75 percent slopes
Ln	Los Osos-Millsholm complex
MaE	McCoy clay loam, 15 to 30 percent slopes
MaF	McCoy clay loam, 30 to 50 percent slopes
MaG	McCoy clay loam, 50 to 75 percent slopes
MbE	McCoy-Gilroy complex, 15 to 30 percent slopes
MbG	McCoy-Gilroy complex, 30 to 75 percent slopes
McG	McCoy gravelly loam, very stony subsoil variant, 30 to percent slopes
Md	McMullin-Plaskett complex
Me	Metz loamy sand
Mf	Metz fine sandy loam
Mg	Metz complex
MhG	Millsholm loam, 30 to 75 percent slopes
Mk	Millsholm-Alo association
Mm	Millsholm-Gazos complex
MnA	Mocho silt loam, 0 to 2 percent slopes
MoA	Mocho silty clay loam, 0 to 2 percent slopes
MoC	Mocho silty clay loam, 2 to 9 percent slopes
Mp	Montara-Rock outcrop complex
NaD	Nacimiento silty clay loam, 9 to 15 percent slopes
NaE	Nacimiento silty clay loam, 15 to 30 percent slopes
NaF	Nacimiento silty clay loam, 30 to 50 percent slopes
NaG	Nacimiento silty clay loam, 50 to 75 percent slopes
NbF	Nacimiento-Los Osos complex, 30 to 50 percent slop
NbG	Nacimiento-Los Osos complex, 50 to 75 percent slop
NcC	Narlon loamy fine sand, 2 to 9 percent slopes
NcE	Narlon loamy fine sand, 15 to 30 percent slopes

, or G, shows the slope. Most symbols
considerable range in slope. A final

NAME	SYMBOL
OaD	Oceano loamy sand, 2 to 15 percent slopes
Pa	Pacheco clay loam
Pb	Pacheco silty clay loam, occasionally flooded
PcC	Parkfield clay, 2 to 9 percent slopes
PcE	Parkfield clay, 15 to 30 percent slopes
PdC	Pfeiffer fine sandy loam, 2 to 9 percent slopes
PdD	Pfeiffer fine sandy loam, 9 to 15 percent slopes
Pe	Pfeiffer-Rock outcrop complex
Pf	Pico fine sandy loam
PgE	Pinnacles coarse sandy loam, 5 to 30 percent slopes
PhG2	Pinnacles stony sandy loam, 30 to 75 percent slopes, eroded
PkE	Pinnacles coarse sandy loam, very gravelly subsoil variant, 5 to 30 percent slopes
PkF	Pinnacles coarse sandy loam, very gravelly subsoil variant, 30 to 50 percent slopes
Pm	Pits and dumps
PnA	Placentia sandy loam, 0 to 2 percent slopes
PnC	Placentia sandy loam, 2 to 9 percent slopes
PnD	Placentia sandy loam, 9 to 15 percent slopes
PnE	Placentia sandy loam, 15 to 30 percent slopes
PoE	Placentia-Arbuckle complex, 15 to 30 percent slopes
Pp	Plaskett-Reliz complex
Pr	Psamments and Fluvents, occasionally flooded
Ps	Psamments and Fluvents, frequently flooded
RaA	Rincon clay loam, 0 to 2 percent slopes
RaC	Rincon clay loam, 2 to 9 percent slopes
RaD	Rincon clay loam, 9 to 15 percent slopes
RaE	Rincon clay loam, 15 to 30 percent slopes
Rb	Rindge muck
Rc	Rock outcrop-Xerorthents association
SaA	Salinas loam, 0 to 2 percent slopes
SbA	Salinas clay loam, 0 to 2 percent slopes
SbC	Salinas clay loam, 2 to 9 percent slopes
ScE	San Andreas fine sandy loam, 15 to 30 percent slopes
ScG	San Andreas fine sandy loam, 30 to 75 percent slopes
SdF	San Benito clay loam, 30 to 50 percent slopes
SdG	San Benito clay loam, 50 to 75 percent slopes
SeG	San Timoteo gravelly loam, 30 to 75 percent slopes
SfD	Santa Lucia shaly clay loam, 2 to 15 percent slopes
SfE	Santa Lucia shaly clay loam, 15 to 30 percent slopes
SfF	Santa Lucia shaly clay loam, 30 to 50 percent slopes
Sg	Santa Lucia-Reliz association
ShC	Santa Ynez fine sandy loam, 2 to 9 percent slopes
ShD	Santa Ynez fine sandy loam, 9 to 15 percent slopes
ShD2	Santa Ynez fine sandy loam, 5 to 15 percent slopes, eroded
ShE	Santa Ynez fine sandy loam, 15 to 30 percent slopes
SmG3	Shedd silt loam, 30 to 75 percent slopes, severely eroded
SnD	Shedd silty clay loam, 9 to 15 percent slopes
SnE	Shedd silty clay loam, 15 to 30 percent slopes
SnF2	Shedd silty clay loam, 30 to 50 percent slopes, eroded
SoD	Sheridan coarse sandy loam, 5 to 15 percent slopes
SoE	Sheridan coarse sandy loam, 15 to 30 percent slopes
SoG	Sheridan coarse sandy loam, 30 to 75 percent slopes
SpD	Snelling-Greenfield complex, 5 to 15 percent slopes
SpE2	Snelling-Greenfield complex, 9 to 30 percent slopes, eroded
SrA	Sorrento clay loam, 0 to 2 percent slopes
SrC	Sorrento clay loam, 2 to 9 percent slopes
Ss	Sur-Junipero complex
St	Sur-Plaskett complex
TaC	Tangair fine sand, 2 to 9 percent slopes
TbB	Tujunga fine sand, 0 to 5 percent slopes
VaD	Vista coarse sandy loam, 5 to 15 percent slopes
VaE	Vista coarse sandy loam, 15 to 30 percent slopes
VaG	Vista coarse sandy loam, 30 to 75 percent slopes
Vb	Vista-Rock outcrop complex
Xa	Xererts-Xerolls complex
Xb	Xerorthents, sandy
Xc	Xerorthents, loamy
Xd	Xerorthents, dissected

Temp, & Soil ...

Preliminary Report on the Potential for Wine Grapes in the Bradley Ranch Area

A. N. Kasimatis, Extension Viticulturist, Univ. of Calif., Davis

August 7, 1970

This report is based on limited field observations in the area, in the company of Mr. Carl Garrison and farm advisors Rudy Neja and Dave Ririe, as well as information on the well water supplied by Mr. Garrison, and a survey of the available climatic data for the Salinas Valley and adjoining areas, plus the published soil surveys of the King City area.

The results of these studies lead me to conclude:

1. That the soil conditions are quite favorable for the growth of wine grapes as far as depth, texture, slope, fertility and freedom from alkali are concerned. Many successful orchards are grown on similar soils around King City; however, in those areas of the field where the subsoil may be somewhat compact, water management will be important in avoiding saturating the soil profile above the compact zones.

2. Both the water quality and the quantity of water available are excellent for growing wine grapes with sprinkler irrigation.

3. Under climate, there are several aspects to consider, the first of which is the summation of heat during the growing season. Data from the adjoining areas would indicate that this is probably Region III, a moderately warm grape growing region but one capable of growing certain varieties of top quality. Second, as far as frost is concerned, the hazard is probably slightly greater than the commercial vineyard area of Soledad-Greenfield, which did not suffer from the severe frost damaging to the North Coast vineyards in late April 1970. The spring frost hazard is probably about equal to that of King City where the mean date of the last occurrence of 32°F. in the spring is March 28. The potential grape sites which we viewed showed an advantage in minimizing frost damage because of the sloping terrain, with no restrictions on air drainage. Wind is probably much less of a factor in the Hames Valley than in the grape growing areas of the Salinas Valley where commercial vineyards are now quite successful.

4. There are a number of varieties that are recommended by Amerine and Winkler for Region III, plus there are also others that should be considered as having potential in the Bradley area. Before any final choice in variety is made, the needs and the desires of the winery outlet must be considered. Not all varieties recommended are equally desirable by all winery outlets. Great care should be given in the selection of planting stock and only certified wood should be considered for planting as the only means of avoiding virus disease.

5. As far as pests are concerned, phylloxera has little hazard if care is exercised in bringing in clean planting stock, especially if cuttings are used. There is no real need to consider the use of phylloxera-resistant rootstocks at this time if adequate precautions are followed in avoiding introducing this pest. Root-knot nematodes could be somewhat of a problem following the sugar beet crops, and the fields should be assayed from

this standpoint. Since oak trees abound in the area, oak-root fungus does offer a potential disease hazard. The valley oaks are quite susceptible to this disease, but the blue oaks are not known to be susceptible. While it would be safest to fumigate the land as a precautionary measure, this would cost about $500 an acre. The expense may not be entirely necessary, but there is no way to be sure of the presence or absence of this fungus with present methods.

Some of the details on which these conclusions are tentatively based may be listed as follows:

1. Soil. Looking specifically at fields 18, 19, 21 and 22, as drawn on the Soil Conservation Service Conservation Plan Map, they are mapped as Lockwood gravelly sandy loam, and this agrees with the soil survey of the King City area, California, issued by the USDA in 1924. The Lockwood series are derived mainly from alluvial fan accumulations having their source in the siliceous shales of the Monterey formation. The entire profile contains many light-gray shale fragments and is well drained. The Lockwood series are formed from the out-wash of the Santa Lucia soils which are developed in place on siliceous shale bedrock.

   The profile, in brief, may be listed as follows:

0 - 10"	dull brownish-gray, granular sandy loam with a high concentration of shale fragments on the surface as well as throughout this layer.
10 - 50"	dull brownish-gray, compact, non-calcareous, gravelly coarse sandy loam or loam; somewhat prismatic structure, more or less deformed by the large amount of shale fragments; gradually changes to
50" +	extremely gravelly, light colored, non-calcareous soil material consisting largely of a mass of shale fragments.

   Variations occur in some cases where the subsoil has a pinkish cast and is extremely compact. The content of gravel or shale fragments varies greatly. Some areas are practically free of gravel, while in others 50% of the surface soil and subsoil consists of gravel. The topography is smooth, gently sloping alluvial fans and terraces with deeply entrenched drainage ways. The drainage is adequate throughout, though care in water management needs to be exercised where compacted layers occur in the subsoil. While the fertility level is rated as comparatively low and the soil is benefited by fertilizer applications, this is a field crops oriented view. Grapes have comparatively low needs for fertilizer when compared with most field crops. Apricot orchards in the King City area grow well on this soil. The Lockwood series are generally free of alkali and are neutral or slightly acetic in reaction.

2. Water. Water quality of the three wells, based on the analyses supplied, should be considered excellent for irrigating grapes through sprinklers. Well No. 1 analyses show an electrical conductivity of 0.45 millimhos per centimeter, a boron content of 0.17 ppm, a SAR of 0.73, and a safe level as far as residual sodium carbonate. Well No. 2 analyses show an electrical conductivity value of 0.14 millimhos per centimeter, while well No.

3 has a value of 0.59 millimhos per centimeter. These data are all considered very favorable levels. As to quantity of water, the data you supplied show that well No. 1 is capable of 1350 gallons per minute; well No. 2, 2750 gallons per minute; and well No. 3, 2500 gallons per minute; all excellent suppliers for the acreage under consideration.

3. Climate. Looking at heat summation data, I was not able to find any temperature records for Bradley, but only precipitation data. However, a number of stations in the Salinas Valley and in the adjoining areas are reported and these I believe give a fairly good picture of what we can expect from the Bradley area. Figures 4 and 5 depicting the July mean maximum temperature and the July mean minimum temperature for Monterey County tend to substantiate the conclusion that the Bradley-Hames Valley area lies well within grape growing Region III.

Station	Elevation	Heat Summation	Region	Record
Hollister	284 ft.	3056-degree days	III	30 yrs. (1931-1960)
Salinas	74 "	2257 " "	I	" " "
Gonzales	-	2356 " "	I	14 yrs. (prior to 1931)
Soledad	-	2996 " "	II	42 yrs. (prior to 1931)
King City	320 "	3041 " "	III	30 yrs. (1931-1960)
San Antonio Mission	1060 "	3423 " "	III	8 yrs.
Nacimiento Dam	770 "	3757 " "	IV	10 yrs.
Paso Robles	700 "	3318 " "	III	30 yrs. (1931-1960)
Paso Robles FAA	815 "	3503 " "	IV	23 yrs.

As to spring frost hazard, the average date of last 32° freeze in the spring and the average date of last 28° freeze in spring are shown in Figures 10 and 13. For the specific locations:

Hollister - 10% probability of the occurrence of 32 degrees after March 21. 10% probability of 28 degrees after February 11.

Salinas - 10% probability of 32 degrees after April 12. 10% probability of 28 degrees after February 22.

King City - 10% probability of 32 degrees after April 28. 10% probability of 28 degrees occurring after April 13. The mean date of the last spring occurrence of 32 degrees is March 28, while the mean date for the last spring occurrence of 28 degrees is February 24.

San Antonio Mission - 10% probability of 32 degrees occurring after June 2. 10% probability of 28 degrees occurring after May 15.

Lockwood - (1952-1961) Mean date of the last spring frost (32 degrees) May 11.

Nacimiento Dam - 10% probability of 32 degrees occurring after April 29. 10% probability of 28 degrees occurring after March 7.

Paso Robles - 10% probability of 32 degrees occurring after May 6. 10% probability of 28 degrees occurring after April 11. Mean date of the last spring frost (32 degrees) April 6. 28 degrees March 4.

Paso Robles FAA - 10% probability of 32 degrees occurring after April 23. 10% probability of 28 degrees occurring after April 2.

As to wind, the occurrence and severity are probably less than in the Soledad-Greenfield area where grapes are now successfully grown.

4. Varieties. There are a number of varieties recommended by Professors Amerine and Winkler for Region III. For white wine production these include French Colombard, Muscat Canelli, Sauvignon blanc, and Sémillon. For red wines the varieties include Barbera, Carignane, and Ruby Cabernet. I should point out, however, that the demand for Muscat Canelli, Sauvignon blanc and Sémillon is somewhat limited and desired only by certain wineries. Carignane is considered as a standard variety and has limited usefulness. Varieties that might also be considered for the area would include Chardonnay, Sylvaner, Chenin blanc, Cabernet-Sauvignon, Gamay (Napa) and Petite Sirah. These varieties are being successfully grown in other areas rated as Region III and should be tested in the Bradley area.

5. Pests. As to pests, first, phylloxera is a root-attacking pest of grapes only that should not be present in the area and could be introduced only by careless introduction of infested planting stock. This can be avoided by bringing in cuttings which do not have contact with the soil, or by bringing in rootings from areas free of phylloxera. I would certainly question any need for the use of phylloxera-resistant rootstocks at this time. Not only would this increase the expense of planting, but it would offer real limits in planting schedule because of the great scarcity of certified rootstocks. Nematodes might be somewhat of a hazard following sugar beets. This is especially true of the root-knot nematode. However, the fields could be assayed for the presence of these pests. The growth of the sugar beets as seen in the field would certainly not indicate that growth was limited at all. Oak-root fungus could be somewhat of a hazard because of the presence of the oak trees in abundance in the area. The valley oak is susceptible to oak-root fungus but the blue oaks are not. Now while the valley oaks are susceptible, this does not mean to say that the fungus is present. Since the fungus persists in the soil for long periods, there is no known method at present of assaying a field where the trees have been removed for some time. While it might be safest to fumigate the soil before planting grapes as a precautionary measure, this would cost about $500 an acre. This would be expensive insurance that may not be necessary at all.

MONTEREY COUNTY CLIMATIC DATA

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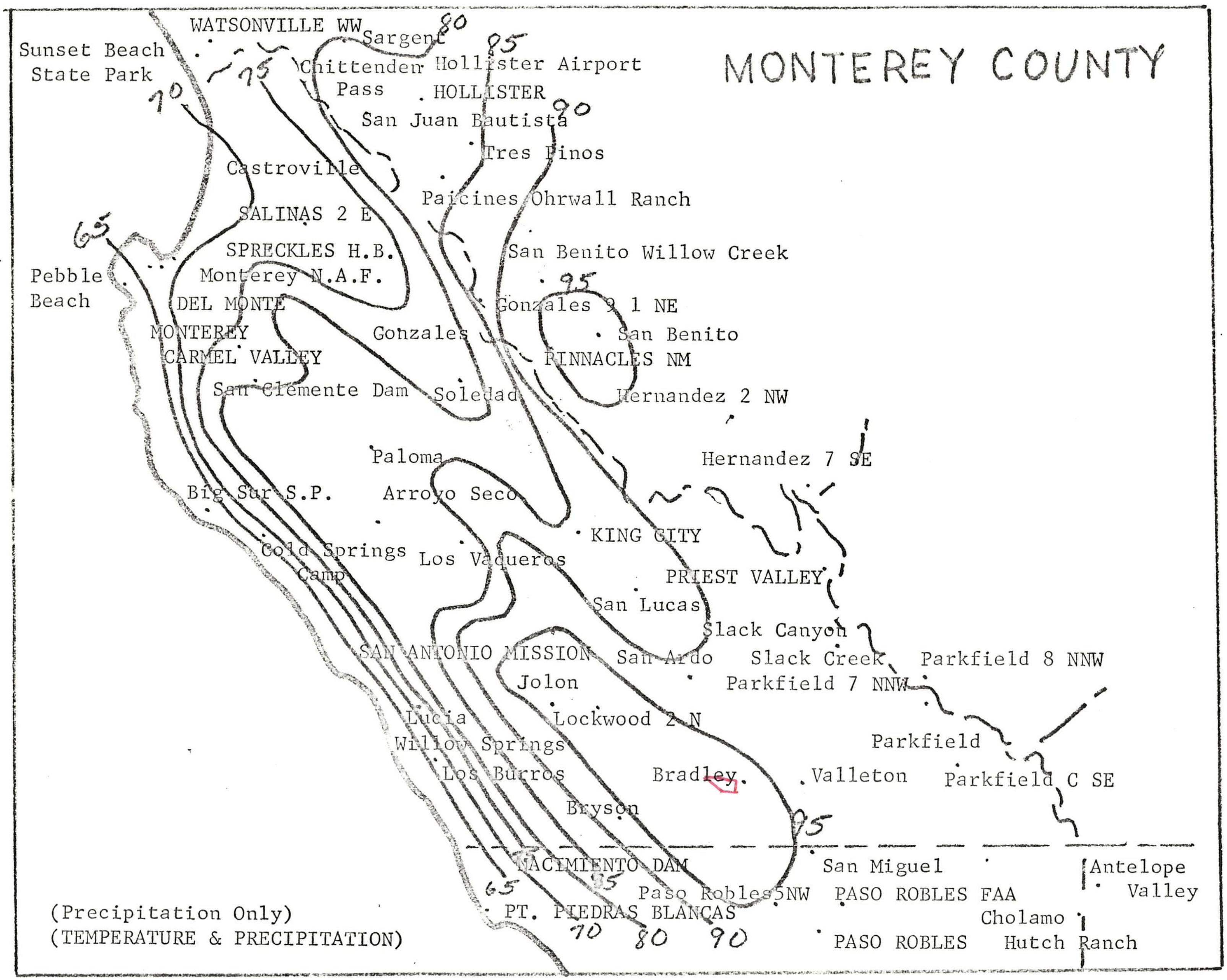

Figure 4. July Mean Maximum Temperature.

Hames Valley - Red
(Approximate Location)

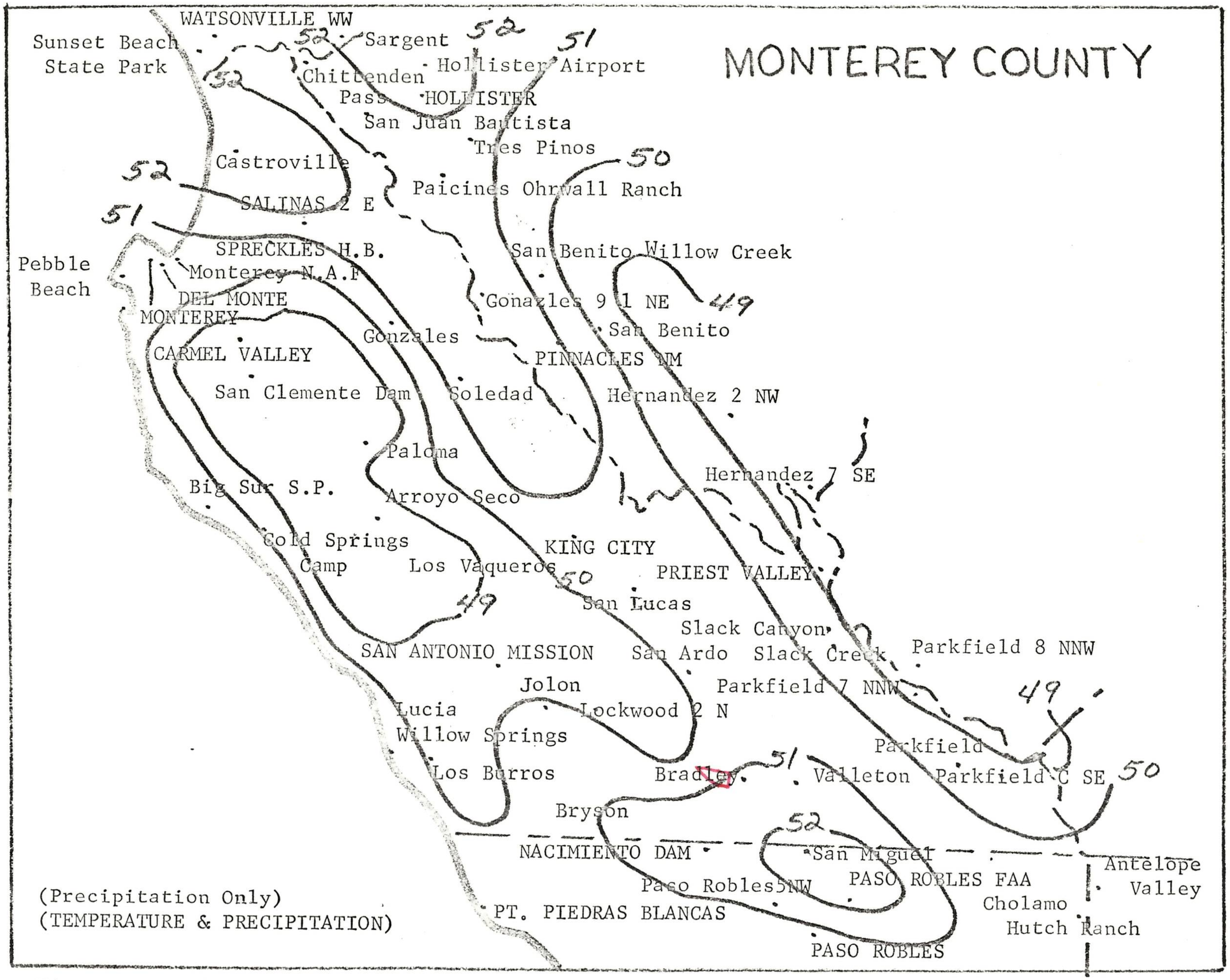

Figure 5. July Mean Minimum Temperature.

Hames Valley - Red
(Approximate Location)

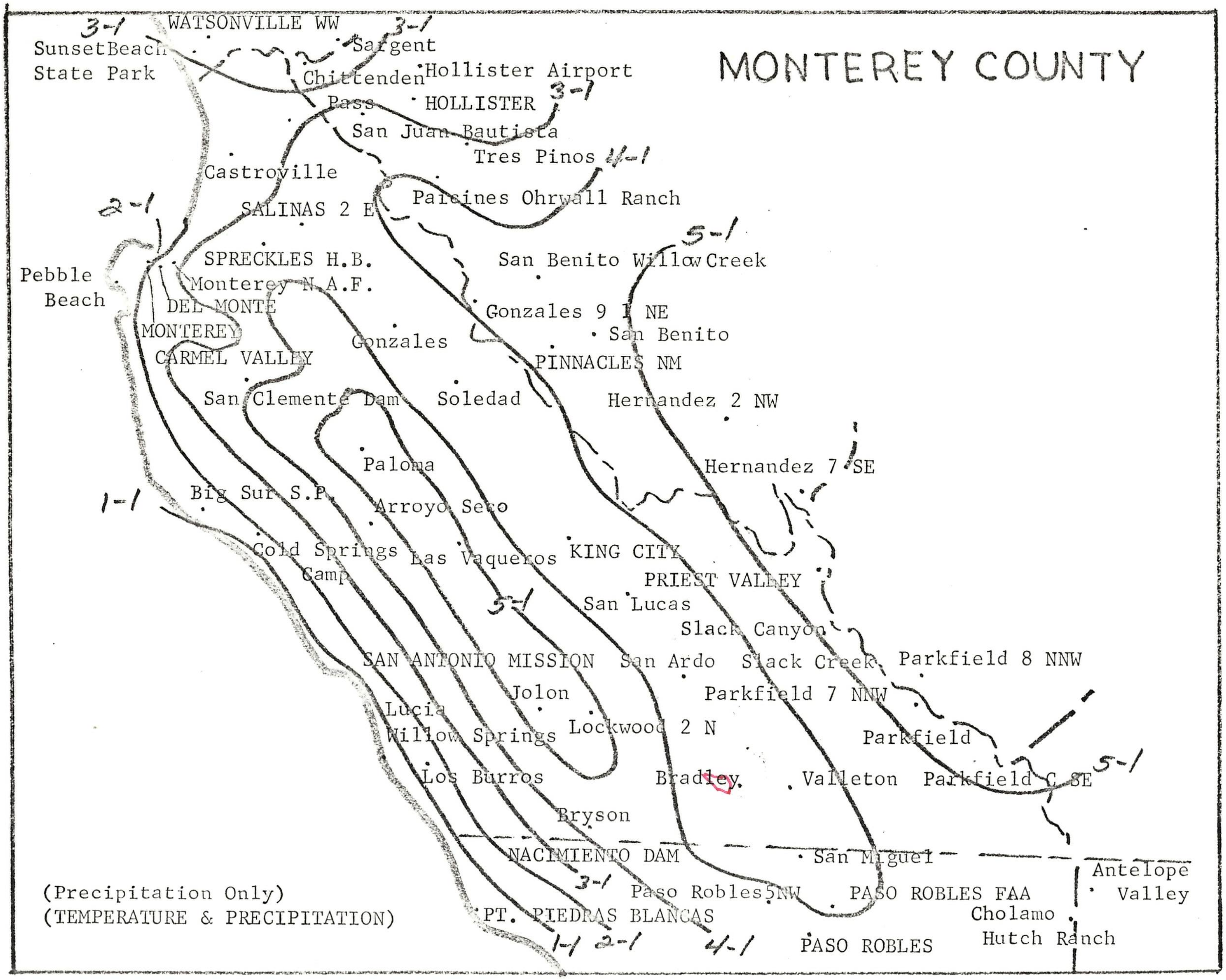

Figure 10. Average Date of Last 32° Freeze in the Spring.

Hames Valley - Red
(Approximate Location)

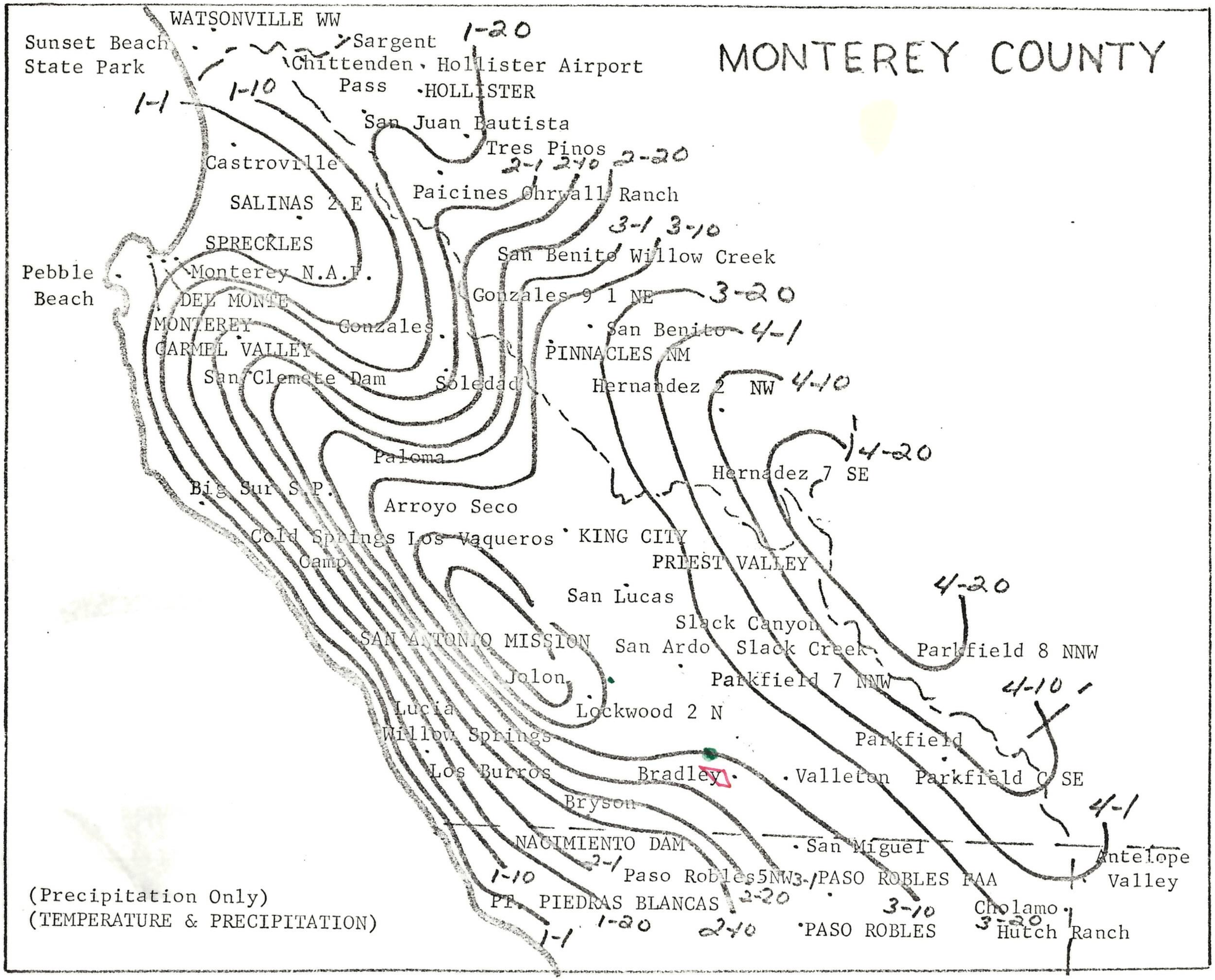

Figure 13. Average Date of Last 28° Freeze in Spring.

Hames Valley - Red
(Approximate Location)