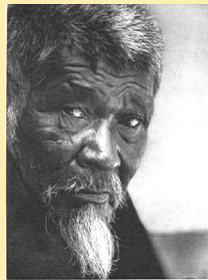


A
CULTURAL AND ECOLOGICAL HISTORY
OF SECRET PASTURE PRESERVE

SONOMA COUNTY, CALIFORNIA

CAVEDALE ROAD, GLEN ELLEN • PARCELS #053-060-084/-002



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DISCLAIMER: While every effort has been made to be accurate, further research may bring to light additional information. Baseline Consulting guarantees that the sources used for this history contain the stated facts; however some speculation was involved in developing this report.

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OVERVIEW

Perched on a mountainside high above Sonoma Valley, Secret Pasture holds a singular place in local history. Its greatest assets have always been its inaccessibility combined with a vantage point over the region. Even today it is not easy to get to; its very remoteness sparks the imagination and contributes to its prominence in local folklore.

Secret Pasture's first human visitors may have been ancestors of the Wappo* tribe, who are believed to have arrived in California more than 10,000 years ago. The best village sites were in lower, flatter areas with permanent water—Secret Pasture, with its slopes and seasonal spring, probably served as an occasional camping and hunting spot.

Every few years, like many First Peoples, the Wappo burned the land near their villages. Regular fires recycled nutrients into the soil, making for healthier plants and animals; cleared out brush so it was easier to move around; and kept pests like acorn worms in check. Fires came through Secret Pasture at least every few decades, spreading from those set near villages and occasionally from lightning strikes.

Most of the plants at Secret Pasture are well adapted to fire. The first rain after a burn leaches chemicals from the charred stems of chamise, the dominant chaparral species at the Preserve, stimulating its roots to sprout. Knobcone pines need fire to reproduce. Like spawning salmon, they die in the process of bringing the next generation to life. Fire kills the parent tree, but also evaporates the resin in their cones, allowing the scales to open and release their seeds. This sequence of burning and renewal was established long before the First Peoples arrived. Under their stewardship it probably happened at more regular intervals, nudging the vegetation into patterns which are still visible today.

As Mexico began colonizing the area in the 1820s and '30s, some of the Wappo joined the missions. Others remained in their homeland, resisting the incursions of the newcomers. Using their mountain territory to its best advantage, the Wappo took Mexican livestock, sheltered fugitives, and generally caused trouble for General Vallejo and his men. A place like Secret Pasture would have offered an ideal base for raiding parties.

*see the 'Folklore' section for the derivation of this name.

Local folklore identifies Secret Pasture as the site of a battle between Wappo warriors and Vallejo's soldiers. Though unverified, such an incident is consistent with the known history of their conflict. In one battle, the Wappo were described as "entrenched in the mountains in what seemed like an impregnable position." It's unknown where that particular skirmish took place, but it's quite plausible that it, or a similar one, happened at Secret Pasture.

After several years of fighting, the Wappo signed a treaty with Vallejo in 1836. Just fifteen years later, another Secret Pasture legend was born under similar circumstances. As Americans poured into California during the Gold Rush, Mexicans found themselves watching foreigners take over their land, just as the Wappo had. Some, like Vallejo, embraced the newcomers. Others resisted.

As the local legend goes, Joaquin Murrieta, outlaw or Mexican guerrilla (depending on your point of view), used Secret Pasture for hiding rustled cattle. As Murrieta is known to have been active in the Mother Lode but not in Sonoma, this is probably not literally true. However, Murrieta coordinated the activities of several groups. One was led by a man named Joaquin Carrillo. General Vallejo had a brother-in-law of the same name who fought for Mexico during the Bear Flag Rebellion and was briefly imprisoned in 1846. If these two Carrillos were indeed the same person, he could well have used Secret Pasture as a hideout. The California Rangers claimed to have killed Joaquin Murrieta in 1853. Joaquin Carrillo was never apprehended. Some consider Murrieta and his men to have been freedom fighters who, like the Wappo, were defending their homeland against foreign invaders.

The next few decades passed quietly at Secret Pasture. During the short-lived 'Quicksilver Rush' of the 1870s, a road was built within a mile of the property. While Americans settled nearby parts of the Mayacamas as early as the 1850s, it was decades before anyone tried to homestead the marginal land around Secret Pasture. In 1889, German immigrant Henry Krager and his wife Isabelle purchased 160 acres at the heart of the Preserve from the federal government. As the 19th-century came to a close, other parts of Secret Pasture were claimed under the Homestead Act, with the last piece being transferred into private hands in 1919.

The only people known to have lived at Secret Pasture were Francis and Gertrude Hathaway, who bought the Kragers' property in 1902. Originally from Iowa, they acquired other properties nearby, until the Hathaway Ranch, as it was known, included about 440 acres, much of it outside the Preserve. Access was initially quite difficult—either by trail up Hooker Canyon, or via Nunns' Canyon Road and then south along the old quicksilver mining track. This improved when Trinity Road was constructed in 1907, and again when the Cavedale Cut-off was completed eight years later (an effort to which Francis contributed \$25). Francis had been a farmer in southern California and at Secret Pasture he took up farming again. Exactly what he and Gertie raised is unknown. They probably had a milk cow or two, some chickens and pigs, and raised hay and perhaps some grain. They may also have cut trees to sell for firewood or charcoal.

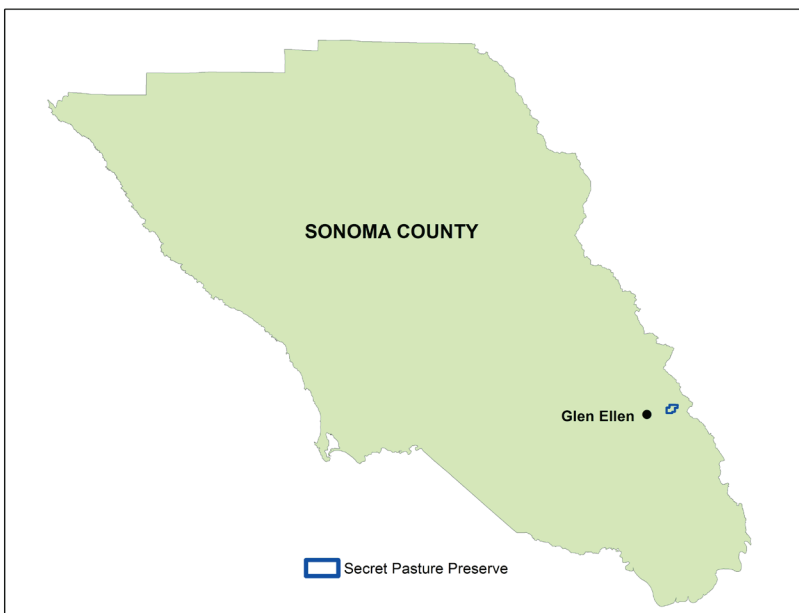
By the 1920s, the area around Secret Pasture had probably not had a serious fire for at least seventy years. The year 1923 was a dry one. After a hot summer, strong winds began to blow in September, creating conditions for a fire to spread quickly. All it took

was a tiny ember, left in a dead log by some bee hunters, to start a blaze that consumed 10,000 acres from Sugarloaf Ridge to El Verano. The Hathaways fled and ended up losing their home and ranch buildings. They never returned to live at Secret Pasture and sold the property less than a year later.

As it always had, the land recovered. Chamise and other chaparral plants came back first and then the knobcone pines. Quiet decades passed. A few bootleggers may have run a still there during Prohibition and, in the late forties and early fifties, the Blake family used it for recreation. In 1954, the Blakes sold it to Elena and Otto Teller. Ten years later, Secret Pasture burned again, under very similar conditions to those in 1923. As it had countless times before, the land began to renew itself when the first rains fell that autumn, and the cycle started once again.

The most obvious recent ecological change at Secret Pasture has been a steady loss of grassland since 1942. At that time, grassland covered over twenty acres of the Preserve; today it comprises less than half as much. Coast oak woodland and Douglas fir forest are filling in the 'pasture' of Secret Pasture. It is not clear exactly what forces are at work. If lack of fire alone is the reason, then grassland acreage should have increased after the 1964 fire, but it did not. Fire frequency may be just as important as fire itself. Perhaps when the interval between burning is too long, oaks and firs are able to gain a foothold in the grasslands and spread. Or some other factors or combination could be at play in this transition.

With his second wife Anne (Elena passed away in 1973), Otto helped start the Sonoma Land Trust in the late 1970s. It seems fitting that the very first property the organization received was 80 acres of Secret Pasture, gifted by the Tellers in 1978. Since then, Secret Pasture Preserve has grown to about 340 acres and the Land Trust has protected nearly 48,000 acres of "beautiful, productive and environmentally significant land in and around Sonoma County." In their own way, Otto and Anne were following in the footsteps of the Wappo and Joaquin Murrieta, using Secret Pasture as a base from which to defend and protect a place they cared for deeply.



TIMELINE

(citations are for the same year as the associated timeline entry unless otherwise noted)

9000 B.C. or earlier: First humans arrive in the vicinity near the end of the last ice age. These may have been ancestors of the *guiluc* people. This tribe spoke the Wappo language and were living in the Mayacamas Mountains, east of Sonoma Valley, when the Spanish arrived (Milliken 1995; Parkman 2010).

c. 1000 B.C.: Ancestors of the *tchokoyem* or ‘Coyote Creek’ people arrive and settle in the area around the present-day City of Sonoma. This is the triblet of Coast Miwok speakers who lived here when the Spanish arrived in the early 19th century. (Milliken 1995. Note that *tchokoyem* is also spelled ‘*chucuien*’ in mission records.)

1810: Spanish soldier Gabriel Moraga and his party pass through the Glen Ellen area on their return from Bodega Bay to reconnoiter the Russian presence there. This is the first record of the Spanish in Sonoma Valley (Sand 1988).

1811: Traveling by boat, Franciscan missionaries visit the *alaguali* village of *cholequebit* by the marshlands near the mouths of Sonoma and Tolay Creeks. One-hundred-twenty people of this Coast Miwok triblet go to Mission San Francisco and Mission San Jose over the next six years (Milliken 1995).

1814: First *tchokoyem* leave or are taken from Sonoma Valley to live at the San Jose Mission. Over the next two years, 135 people of this tribelet are baptized at Missions San Jose and San Francisco (Milliken 1995).

1821: First *guiluc* people leave or are taken from Sonoma Valley to live at the San Jose Mission. As many as 134 people from this tribelet are baptized at Missions San Francisco, San Rafael, and San Francisco de Solano over the next eleven years (Milliken 1995).

1823: Father Jose Altimira passes through the Glen Ellen area during explorations to reconnoiter the site for a new mission. He describes the Mayacamas as “heavily wooded with firewood and some timber.” [probably oaks, madrone and Douglas fir]. A few days later Altimira founds Mission San Francisco de Solano in the lower part of Sonoma Valley (Smilie 1975).

Secret Pasture now sits at the edge of the church’s territory—effectively Mexico’s northern border at this time.

1834: Mariano Vallejo arrives in Sonoma to take control of the mission lands and properties under the secularization process. He claims the best of this property, 66,000-acre Rancho Petaluma, for himself (Smilie 1975).

mid-1830s: Battle between Vallejo’s soldiers and Wappo warriors at Secret Pasture part of larger resistance to Mexican settlement (Jablonowski 2014).

1836: Vallejo signs a treaty with Succara, leader of the Sotoyomis, one of the tribes of Wappo speakers (Smilie 1975).

1845: Rancho Agua Caliente, comprising about 3,000 acres, is confirmed to Lazaro Piña, a soldier serving under Vallejo at the Sonoma garrison (Shumway 1988).

1846: California comes under control of the United States during the Mexican War, on the heels of the Bear Flag Rebellion.

1848: Gold is discovered in the Sierra Nevada in January, sparking the California Gold Rush, which lasts into the mid-1850s.

1850: U.S. Census counts about 560 residents in Sonoma County.

1852: California State Census records about 2000 people in the county.

Early 1850s: Nunn family settles what became known as Nunns' Canyon, about 2 miles north of Secret Pasture. They are probably the first homesteaders of the Mayacamas in the Glen Ellen area (Dawson 2013).

Joaquin Murrieta's brother is murdered and his wife raped by Anglo miners in the Gold Country town of Sonora. This begins his career as a bandit or Mexican patriot, depending on your point of view (Bacon 2001; Latta 1980).

Joaquin Murrieta is said to have stayed at the Justi Ranch in Glen Ellen. Sometime later, Justi discovered some of his cattle missing and finds them at Secret Pasture. Given the danger, he does not try to recover them (Dawson 1998).

1853: Joaquin Murrieta and Three-fingered Jack reportedly killed by Harry Love near Coalinga (Latta 1980).

Henry Krager born in Germany (U.S. Census 1880).

1860: U.S. census records about 12,000 people in Sonoma County.

1861: Isabella Krager born in California. (U.S. Census 1880).

1862: Francis Hathaway and Gertrude Hathaway born in Iowa (U.S. Census 1910. Her maiden name unknown).

1870: U.S. Census records about 20,000 people in the county.

c. 1870: Original Cavedale Road established from top of Nunns' Canyon Road (Frazier 1999. This possibly was related to the 'Quicksilver Rush.' See below.)

1872: Glen Ellen post office established (Dawson 1998).

early 1870s: 'Quicksilver Rush' happens in Sonoma County as mercury reaches a dollar a pound. This is the most likely date for the digging of mine shafts in the Cavedale area. The 'Rush' quickly peters out (Dawson 2013b).

1880: U.S. Census records about 26,000 people in Sonoma County.

W.F. Benson, Deputy Surveyor with the General Land Office, surveys 1.75 miles of section line within the Secret Pasture Preserve. He reports "about thirty people" living in the Township, "all having valuable improvements on the land. Most of their claims lie along the eastern boundary of Agua Caliente Rancho and in the Northern portion of the Township." No dwellings were noted in the vicinity of Secret Pasture Preserve, which is in the central portion of the Township.

Population density in the vicinity is less than two people per square mile.

early 1880s: Maria Goethe claims her homestead site (U.S. Department of Interior 1889).

1885: Isabella and Henry Krager married in California. Francis and Gertrude Hathaway married in Iowa (U.S. Census 1900).

Late 1880s: Hathaways move to California (State of California 1866-1898).

1889: Henry Krager purchases patent for 160-acres of government land covering the heart of Secret Pasture Preserve (Sonoma County Records Office; U.S. Department of Interior).

Maria Goethe establishes homestead which includes the Metallinos portion of Secret Pasture Preserve. Goethe was a German immigrant who's husband, Adolph, had served in the Union Army. They owned and lived in what is known as the 'Casteñada Adobe' on West Spain Street in the city of Sonoma. Adolph died two years earlier, in 1887 (Sonoma County Records Office; U.S. Department of Interior; Dawson 2013c).

1890: Hathaways living in San Luis Obispo (State of California 1866-1898).

1894: Lewis Mayer receives patent for 160-acre homestead, including 20 acres of Secret Pasture Preserve (Sonoma County Records Office; U.S. Department of Interior).

1896: Francis Hathaway living in Santa Monica and working as a farmer (State of California 1866-1898).

1898: Mary Hayes patents homestead which includes 40 acres of Secret Pasture Preserve (Sonoma County Records Office; U.S. Department of Interior).

Francis and Gertrude Hathaway living in San Francisco. He is a carpenter and a bridge builder. Record appears to show that they had lost a child at some point (U.S. Census 1900).

Henry Krager working as a 'barkeeper' (State of California 1866-1898).

c. 1899: Henry Krager dies in his mid-40s (State of California 1898; U.S. Census 1900).

1900: Isabella Krager living alone on Cherry Street in Santa Rosa. Listed as widowed and having one child no longer living (U.S. Census. Record for the child is somewhat ambiguous).

1902: Isabella Krager sells her 160-acre property to Francis M. Hathaway (Sonoma County Records Office).

1904: Hathaway buys 40 acres from Mary Hayes (Sonoma County Records Office).

1904-1910: Mayer homestead changes hands several times, though it may have stayed in the family. Final transaction during this period is a transfer from Johanna Mayer to Therese Mayer (Sonoma County Records Office).

1906: Great San Francisco Earthquake and Fire. Murrietta's head and Three-fingered Jack's hand are said to have been consumed by the flames (Wikipedia 2014).

1907: Trinity Road built from Sonoma Valley floor to connect with Dry Creek Road and Old Nunns' Canyon Road (Frazier 1999).

“New” Cavedale Road established from current intersection with Trinity Road (Frazier 1999).

1910: Hathaway listed as living “off the Fridegar Road” with his wife Gertrude. His occupation is “in farming.” They had been married 25 years and owned their property free and clear (U.S. Census).

1913: Cave Dale Post Office established (Lera 2011).

Cave Dale Resort probably established around this time.

1913-1915: State mining report mentions “Burns Springs” owned by F M Hathaway on the Hathaway Ranch, 3 ½ miles from Glen Ellen. “Not utilized except by occupants.” (California State Mining Bureau. 1914 & 1915).

1915: Cavedale Road completed. F.N. Hathaway is listed as a “public donator” who gave \$25 for the construction of the road (Anonymous).

1919: Elmer Joseph receives a patent for 80 acres from the federal government, all of which eventually becomes part of Secret Pasture Preserve. This is the last parcel of public land at Secret Pasture (Sonoma County Recorders Office; U.S. Department of Interior).

1923: Major wildfire burns Hathaway home and most of Secret Pasture. Hathaways flee to Napa side of the ridge (Sonoma Index-Tribune).

1924: Hathaways sell 400 acres, including most of the Secret Pasture Preserve to E.B. Williams for \$1125 (Sonoma County).

1925: Cave Dale Post Office closed (Lera 2011).

Williams sells 200 acres (all in Secret Pasture) to Mrs. Glenna Davis (Sonoma County).

c. 1930: Bill Basileu reports seeing the smoke from exploding stills ‘at the top of Cavedale.’ Also reports a run in with a bootlegger (Sonoma Ecology Center 2002).

c. 1930s: Secret Pasture is acquired by Oliver Rousseau from Glenna Davis (Sonoma County 1925, 1945).

1926 - 1933: Francis and Gertrude Hathaway living in Modesto (U.S. Census 1930; Ancestry.com *City Directories 1821 - 1989*).

1932: Weislander Vegetation Type map shows approximately 39 acres of open meadow at Secret Pasture. Does not show it as cultivated, suggesting farming was no longer taking place. (Weislander 1935)

1930s: Francis and Gertrude Hathaway die in Stanislaus County, California. Both are in their seventies—he precedes her by several years (Ancestry.com. *California, Death Index, 1905-1939*)

Wildfire in upper Beltane Ranch, may have reached Secret Pasture area (Dawson 2013a).

1942: Aerial photo taken for the war effort shows about 22 acres of grassland at Secret Pasture (U.S. Department of War).

1945: Oliver Rousseau sells Secret Pasture to Milton and Carol Blake of San Francisco (Sonoma County). Milton is a cigar and liquor salesman. The Blakes have three children and live at Oak Hill Farm. They occasionally used Secret Pasture for picnics and camping (Berkland 2011; Sonoma County; U.S. Census; Ancestry.com City Directories).

Wildfire in the vicinity of Secret Pasture (Jablonowski 2014).

1951: Trail or rudimentary road to SE edge of Secret Pasture. Open area shown as covering about 15 acres (U.S. Geological Survey).

1954: The Blakes sell Secret Pasture to Otto and Elena Teller. Her name appears on the deed (Sonoma County).

1964: Nunns' Canyon fire reaches Secret Pasture area. Burns about 10,000 acres and destroys 27 homes. September (Sonoma Index-Tribune).

1968: Trail or rudimentary road now runs across meadow and continues down to Oak Hill Farm. No change shown in open area (U.S. Geological Survey).

1978-81: Secret Pasture Preserve is established through four gifts of land—three from Otto Teller (1978, 1979 & 1981) and one from The Nature Conservancy (1979), totaling 300 acres. The final gift from Otto included a right-of-way across Oak Hill Farm (Vilms 1991).

1996: 'Cavedale Fire' burns to within a half-mile of the Preserve to the southeast (California Department of Forestry).

2010: Open grassland areas reduced to about 9 acres, a decline of about 60% since 1942 (Sonoma County).

2013: Land Trust adds Metallinos property to Preserve, allowing access from Cavedale Road (Sonoma Land Trust).

Vegetation mapping at Secret Pasture establishes current extent of vegetation alliances. Invasive plants include; yellow star thistle, Klamath weed, cherry plum and Armenian blackberry (Warner).

SECRET PASTURE "WAS SLT'S FIRST GIFT OF LAND..." at one time Otto and David Bouverie agreed to donate land to The Nature Conservancy for a preserve. I even recall TNC land stewards living on Bouverie's ranch and remember stories about coyotes dancing in the moonlit meadow. Otto went ahead and gave 80 acres to TNC.

"Years later, in 1978, Otto gave 80 acres to SLT. The following year Otto gave another 80 acres to SLT and TNC deeded their land to SLT as well. One more 60-acre gift followed in 1981 which included the right-of-way... Bouverie didn't follow through with TNC, but subsequently went ahead with Audubon Canyon Ranch."

—Joan Vilms, Sonoma Land Trust Consultant

DETAILED CULTURAL & ECOLOGICAL HISTORY

NATIVE AMERICAN ERA



WAPPO MAN

Early 20th-century.
(Library of Congress,
Edward S. Curtis Collection.
Personal name not recorded)

The first human beings may have visited Secret Pasture more than ten thousand years ago, at the end of the last ice age. These could have been the ancestors of the Mishewal-Wappo*, whom some anthropologists believe were the first humans in California. At the time of contact in the early 19th century, the Wappo occupied the Mayacamas Mountains. Nearby centers of population existed near the modern town of St. Helena and at what is now Sugarloaf Ridge State Park above Kenwood (see 'Timeline' section for more details on the history of First Peoples in the area).

Given its remoteness and available resources, Secret Pasture was probably lightly used, perhaps serving as an occasional hunting camp. The spring, which today tends to dry up in summer, may have been an important source of water for travelers during some parts of the year. Obsidian flakes have been found at one site on the Preserve, which includes an old road bed, however no formal archeological assessment has

been made there or anywhere on the property (Northwest Information Center records. A professional archeologist noted that these flakes can sometimes be created by the wheels of automobiles crushing pieces of unworked obsidian. Further investigation found flakes scattered some distance away from the road). While there likely was a trail near Secret Pasture connecting Sonoma and Napa Valleys, it was probably not the preferred crossing of the Mayacamas—two miles to the north was an easier trail which followed Calabazas Creek up Nunns' Canyon and over the ridge at a much lower point.

The most significant human impact at Secret Pasture during this era was almost certainly the use of fire as a management tool. Being in a remote location, it may not have been targeted for regular burning as areas nearer villages were. Even so, fires were probably more frequent than they have been in the last century, which has seen two major wildfires at Secret Pasture. (See 'Fire' section below for more detail on the advantages and frequency of burning during this era.) Beginning in the 1820s, burning was discouraged by missionaries



OBSIDIAN FLAKES

found at Secret Pasture Preserve.

at the Sonoma Mission. In addition, traditional management practices must have declined as some people joined the missions and disease and conflict took an increasing toll. Ninety percent of Sonoma County’s native peoples were estimated to have died during a smallpox epidemic in the late 1830s, suggesting that intentional burning and traditional management were effectively finished by 1840.

*Tribal members use this name today, which combines a native name and the Spanish name for people who spoke their language. The historical record contains at least a half-dozen names for groups of this tribe, including *sotoyome* and *guiluc*.



WAPPO WOMAN

Early 20th-century.
(Library of Congress,
Edward S. Curtis Collection
personal name not recorded)

HOMESTEADING & SETTLEMENT

Settlement came late to Secret Pasture. Just a few miles to the northwest, the Nunn family settled in the Mayacamas on Calabazas Creek in the 1850s and patented their homestead in 1872. But it was not until decades later that any part of Secret Pasture Preserve was claimed. This was probably due to the land’s being much more inaccessible and marginal for agriculture. The Nunn Ranch was on a well-established route to Napa, while Secret Pasture was literally ‘off the beaten path.’

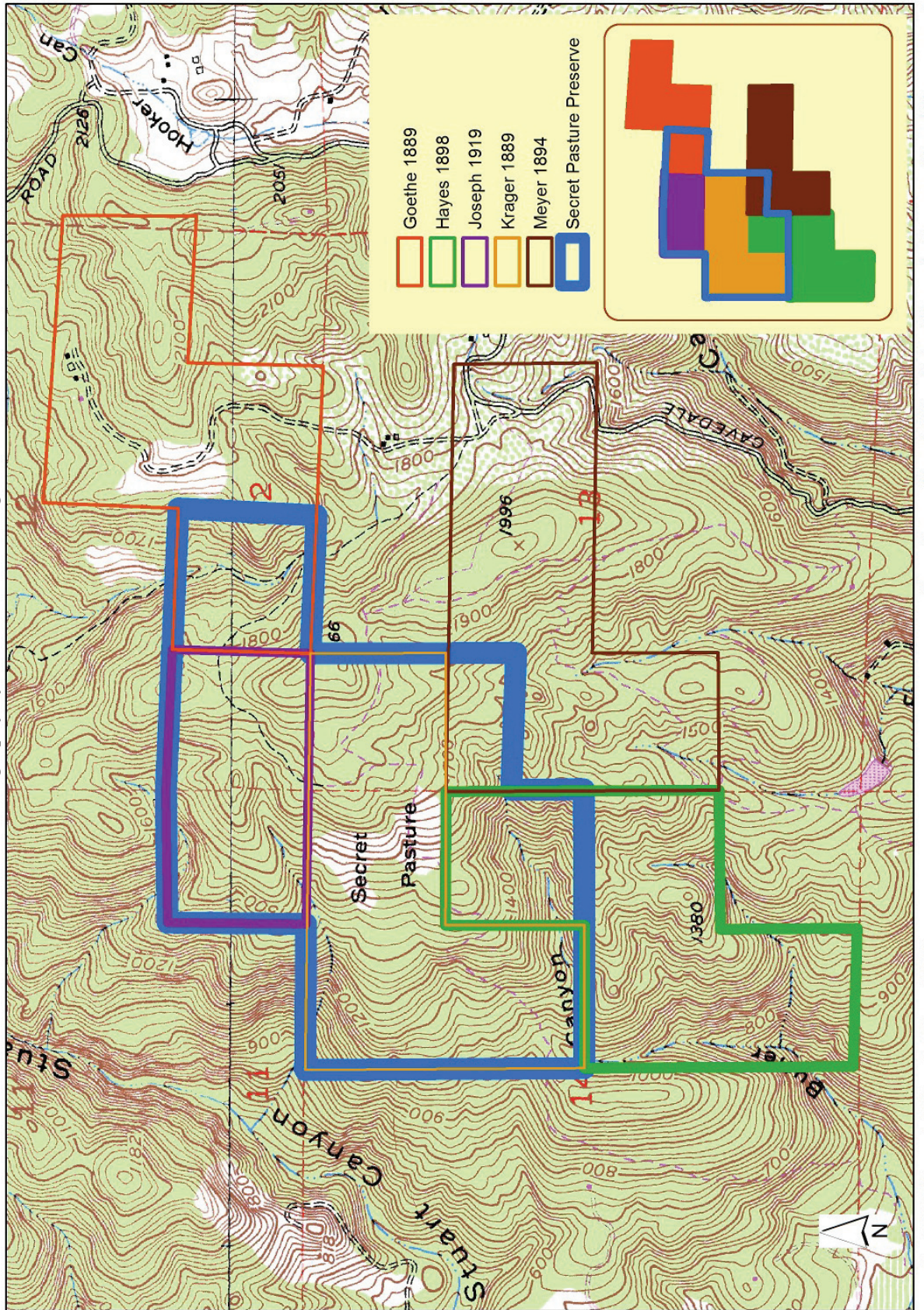
An 1880 survey noted a few houses and fences a mile or so to the north and northwest of Secret Pasture. At the Preserve itself there were no such signs of settlement, nor were there any roads or trails. The property remained unclaimed, part of the “public lands of the United States.” In 1889, Henry and Isabelle Krager purchased 160 acres from the government, including the open grassland pasture and spring. Henry Krager was a German immigrant, while Isabelle had been born in California. That same year, Maria Goethe patented (was granted title) a homestead of 160 acres which included the 40 acres of the Preserve’s Metallinos addition. Goethe was also a German immigrant. Her husband, Adolph, had served in the Union Army during the Civil War and died two years before Maria acquired the property.

Homesteaders were supposed to occupy and improve their claims for five years before being granted title. Goethe’s primary residence seems to have been the ‘Casteñada Adobe’ on West Spain Street in Sonoma and it is unknown if she ever really lived on her Mayacamas property. Likewise, it is unknown if the Kragers ever lived at Secret Pasture—as they had purchased the land outright, they were not required to occupy it.

In the 1890s, other portions of the Preserve were claimed as part of homesteads patented by Lewis Mayer, and another by Mary Hayes. The last homestead that included part of

HOMESTEAD CLAIMS, SECRET PASTURE PRESERVE 1889 - 1919

Source: U.S. Department of the Interior (1889-1919)
 Base maps: USGS Sonoma (1980) and Rutherford (1976) quadrangles
 Cartography by Baseline Consulting



From General Land Office Patent Records, Bureau of Land Management

Secret Pasture was claimed in 1919 by Elmer Joseph. Like the Kragers and Goethe, it is unknown whether any of them lived on their homesteads. Much of the land on these other properties was even more marginal than that at Secret Pasture. After Henry Krager died, Isabelle sold Secret Pasture to Francis and Gertrude (Gertie) Hathaway in 1902. Originally from Iowa, the Hathaways were in their early forties and living in San Francisco when they bought the property.

Access was initially quite difficult. The property could be approached from a rough trail up Hooker Canyon. An easier, but much longer route was up Nunns' Canyon and then south for several miles on a road built in the 1870s. Five years after the Hathaways bought Secret Pasture, Trinity Road was constructed. This allowed more direct access from Glen Ellen by way of upper Stuart Canyon. Even so, there was enough demand for a "cut-off" road to the Cavedale area, that modern-day Cavedale Road was constructed in 1915 using private financing. After Cavedale Road was completed, a spur road was built to the Hathaways' home (this spur is now the main access trail into the Preserve).

The Hathaways bought up other properties, and the Hathaway Ranch, as it became known, eventually included about 440 acres, 240 of which were north of the Preserve.

AGRICULTURE

If local folklore is accurate, the use of Secret Pasture for grazing may have begun as early as the 1850s, when it was used for rustled livestock (see 'Folklore' section). More consistent use for pasture and cultivation of crops may have begun in the 1880s when Henry and Isabelle Krager purchased the property from the federal government. They may have been attracted to the site by the large grassy area visible from the valley floor. It is possible that they expanded this open area by cutting trees. However, it is unknown for certain whether they lived at Secret Pasture or ever practiced agriculture there.



The Hathaways, who bought the 160-acre property from Isabelle Krager in 1902, are the only people known to have practiced agriculture at Secret Pasture. Census records list Francis Hathaway's occupation as 'Farmer' in 1910 and 1920. There is also a reference to the 'Hathaway Ranch' in a publication from that period. Some old agricultural equipment sits where it was abandoned in one of the pastures, suggesting that he was raising crops as well as keeping animals.



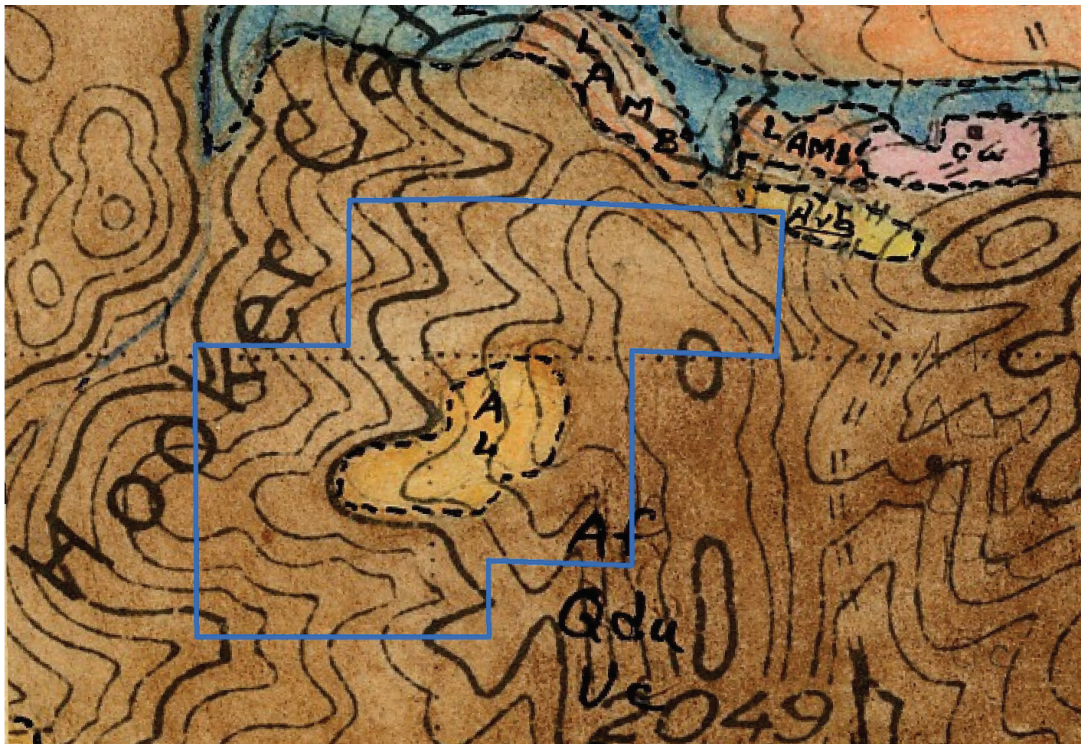
CAVEDALE MONUMENT

acknowledging the funders of the Cavedale Cut-Off. Francis Hathaway is listed as a "public donator" who contributed \$25 to the road's construction.

1915 CUT-OFF.	
BUILT UNDER THE MANAGEMENT OF PUBLIC DONATORS AS FOLLOWS	
F. WATRESS.	RIGHT OF WAY.
CED. P. BECK.	RIGHT OF WAY.
EE. WICKIN.	\$165.00
A.W. LANDIS.	117.00
BEN. HICKIN.	50.00
N. SAKL.	75.00
HARRY JOSEPH.	50.00
CAVE DALE IMPROVEMENT CLUB	50.00
J. D. KNEEO.	35.00
CED. P. BECK.	35.00
F. M. HATHAWAY.	25.00
R. M. LEONHARDT.	25.00
F. GLEWE.	14.00
JOHN FITZGERALD.	12.00
D. W. BUTLER.	8.00
C. A. HENDERSON.	7.00
M. E. HENDERSON.	5.00

Judging by census records for earlier settlers nearby (agricultural schedules for the Hathaway years have not survived), the Hathaways may have been growing hay, and keeping pigs, sheep, chickens, and beef and milk cows. The number of livestock would have been limited by the amount of the pasture and hay (if purchased) available. There is no evidence that the pasture was ever bigger than 40 acres, a size that would not support more than about ten cows, twenty sheep, or some combination, besides any horses. The Hathaways eventually acquired a total of 400 acres in the vicinity. If some of this other land was suitable for grazing, then they could have had a larger herd that was rotated between various pastures. Many settlers in the Mayacamas planted orchards and vineyards, though no remnants of these have been found at Secret Pasture. Once the resort of Cave Dale was established around 1910, its year-round residents and summer guests would have created a nearby market for farm products.

After the Hathaways fled the 1923 fire, which burned their home and outbuildings, they never took up permanent residence at Secret Pasture again. Less than a year later, they sold the property and moved to the Central Valley. A year after that, the Cave Dale Post Office closed, suggesting there were not enough people around to make the operation worthwhile. The departure of the Hathaways probably ended the agricultural use of Secret Pasture.



WEISLANDER VEGETATION MAP, 1932

Nine years after the Hathaways' departure, Secret Pasture is the yellowish area labeled "A" and "L" and was no longer being used for agriculture. Cultivated areas were shown in pink.

The Preserve boundary in blue is a modern addition. Stuart Creek was mislabeled 'Hooker' by the U.S. Geological Survey.

LOGGING & WOODCUTTING

Unlike some areas of the Mayacamas (e.g. Headwaters and Calabazas Creek Preserves, Hood Mountain Regional Park) no evidence for logging, such as stumps or cables, were found at Secret Pasture. There are a number of possible explanations for this:

- There never were enough large, merchantable Douglas fir trees on the property, due to the frequency of fires or other factors.
- Even if there were enough merchantable Douglas fir trees at Secret Pasture, getting the logs off the mountain to a mill would have been very difficult and not worth it.
- The area was logged, but the stumps were destroyed in the 1923 or 1964 wildfires.

A few large Coast live oaks with multiple trunks were found near the Hathaway home site. This condition can be caused by woodcutting as a tree resprouts from its stump. Given their location, the Hathaways may have cut these trees as they developed their homesite, or for firewood.

Large-scale commercial woodcutting, which supplied firewood and charcoal locally and to San Francisco and other parts of the Bay area, was common at the turn of the 20th century. Explanations for the lack of evidence for large-scale woodcutting at Secret Pasture are the same as those for logging: an absence of large, merchantable trees; transporting the wood or charcoal was too difficult; or the evidence burned up in a fire.



COAST LIVE OAK WITH MULTIPLE TRUNKS near Hathaway home site.

The largest of the three trunks measures 24 inches in diameter, consistent with an approximate age of 100 years (plus or minus 25 years. Dawson 2013d) since it sprouted from the stump of the original tree.

FIRE



Fire has been a major force in shaping the vegetation patterns at Secret Pasture Preserve. All the dominant plants on the property have traits which allow them to not only survive fire, but to reestablish themselves and thrive in its aftermath. Even when burned to the ground, chamise chaparral vigorously sprouts from its roots as the winter rains set in. The rain leaches chemicals from the dead, charred stems which stimulate seeds in the soil to germinate. Knobcone pine needs fire to reproduce. Without it, its cones remain sealed with resin and tightly closed. Only high temperatures can vaporize the resin, allowing the scales to open and the seeds to be released. Even Coast live oak are well adapted to fire, having the thickest bark of any California oak (see 'Vegetation changes' for more details on fire adaptations).

Before the middle of the 19th century, fires probably burned more frequently than they do today. Lightning started some fires, but these storms are rare in Sonoma County, so such fires were probably many decades or even centuries apart. Most fires at Secret Pasture were probably started by people, either intentionally or by accident. Sonoma County's First Peoples used fire as a tool to provide a number of benefits: it cleared underbrush beneath oaks and other trees, making it easier to move through the landscape; it recycled nutrients in the leaf litter back into the soil; and it reduced acorn worms and other pests which diminish the value of acorns for food. The net result was to increase the available food for both humans and game animals, which benefited from healthier, lusher grasses and forbs for grazing.

Botanist Steve Barnhart studied long-term fire frequency at Annadel State Park by looking at fire scars in tree rings. He estimated that before the mid-19th century, fires burned an average of once every 7 ½ years. Fire was probably more frequent at Annadel than Secret Pasture, which was more remote from native population centers. During this era, most fires would have been set in the lowlands and more habitable parts of the Mayacamas (such as present-day Nunns' Canyon and Sugarloaf Ridge State Park), where the majority of people lived. Since there was no fire suppression, fires burned until they were extinguished by wet weather or lack of fuel. Even though the Secret Pasture area may not have been directly targeted for burning, it probably burned at least once every few decades. Because fires were so frequent, there was less accumulation of fuel and they burned cooler than modern wildfires.

Intentional burning by native peoples diminished after the establishment of the mission at Sonoma in 1823. Those who lived and worked at the mission no longer practiced

"WE ENCOUNTERED INDIANS PREPARING TO BURN THE LONG GRASS OF THE HILLS."

—Padre Jose Altimira, June 28, 1823.

Journal entry made about 5 miles southeast of Secret Pasture during the explorations which established the Sonoma Mission (Smilie 1975).

traditional land management. In addition, missionaries actively discouraged burning by the people still living in traditional villages. The smallpox epidemic of 1837-1838 probably marked the end of traditional burning practices. Ninety percent of native people in Sonoma County are estimated to have perished at this time. The fact that an 1880 survey recorded knobcone pines, which rarely live much past the age of sixty and cannot reproduce without fire, suggests a fire occurred at Secret Pasture in the first half of the 19th century.

By 1920, seventy or more years had likely passed without a fire at Secret Pasture. While the pasture itself was larger than it is today, other areas would have seen a substantial accumulation of fuel. After sixty years without a fire, half the trees in a stand of knobcone pines are typically dead and few knobcones survive more than a century. Likewise, in the absence of fire, chamise chaparral accumulates dead stems and the individual plants become less vigorous. By the early 1920s, conditions throughout the area were ripe for a catastrophic wildfire.

Rainfall in the winter of 1922-23 was far below normal. By September of 1923, the land was extremely dry. Strong north winds started up late in the month, which further dried things out. A few miles up the ridge, three men from the Napa side went hunting for a wild beehive. Finding one in a dead log, they smoked the bees out with smudge sticks, took the honey and went home. Without realizing it, they left behind a tiny ember in the log. Sometime later, the wind fanned the spark, the dry wood caught flame and the fire quickly spread. Within minutes it was too big for anyone to put out.

By the following day, the fire was sweeping south down the Mayacamas, pushed by a wind now blowing at sixty miles an hour. Francis and Gertrude Hathaway, who lived Secret Pasture, fled the conflagration by crossing the ridge to the east (the fire blocked an escape down Cavedale Road). The Hathaway's home and the outbuildings of their farm

"AFTER THE WIND AND FIRE HAD RAGED all around the upper Stuart Canyon in the Trinity and east Cavedale area, it headed south toward the historic Secret Pasture and Cavedale areas.

"Embers from those fires blew into the upper south side of the canyon, setting fire to the dense forest of Douglas fir on the Hathaway property and destroyed the Hathaway home and outbuildings situated well up on the south side of the canyon.

"From the Secret Pasture area . . . the fire roared down the south Cavedale Road area and into the valley at several points . . ."

—Mrs. James D. Frazier

The 1923 Fire: East of Sonoma Valley



burned. The Hathaways themselves were feared dead until it was discovered that they had taken refuge at a friend's house on the Napa side of the ridge. The fire burned all the way down to Boyes Springs, jumped Sonoma Creek and continued all the way to what is now Arnold Drive. It was only when the wind died down that the fire finally stopped spreading.

The Hathaways never returned permanently to their property. It must have seemed like there was little left. Besides razing their home, the fire had killed almost all the Knobcone pine, burned the chaparral to the ground, and consumed much of the oak woodland and Douglas fir forest at Secret Pasture. Only in a few protected places did Douglas fir and Coast live oak remain living above the ground. The Hathaways sold Secret Pasture the

following summer and moved to the Central Valley.



It didn't take long for the land to begin to come back to life. When the rains returned later that fall, chamise began growing back from its roots, joined by California bay and several species of oak. Sheltered by the chaparral canopy, the seeds of knobcone pine germinated and grew into seedlings. Eventually they emerged into the sunlight and developed into full-sized trees above the chamise. Likewise, the Douglas fir forest began to return, seeded by a few surviving 'grandmother' trees.

**"THE SECOND YEAR THE GRASS WAS THERE,
FOURTH YEAR THE BRUSH WAS BACK."**

—Bill Basileu describing how quickly the vegetation returned after the 1964 fire (SEC 2002).

(Photo: chamise resprouting after a fire.)



By the early 1960s, the vegetation had gone through another complete cycle of fire, recovery and fuel accumulation. Under conditions very similar to the 1923 fire, another major fire burned

through Secret Pasture in September, 1964. There was no home on the property at this time, though a nearby house on Cavedale did burn. Twenty-six other homes were lost in Boyes Springs and elsewhere. One firefighter said that at times the fire was so intense, "the Pacific Ocean couldn't have stopped it." Another described burning chamise as like "an artillery barrage" with flames 200 feet high.

Today, fifty years later, conditions are once more ripe for a fire. Stands of chamise and other chaparral shrubs have grown extremely thick; dead trunks and branches of Knobcones litter the ground while their cones wait for a fire to open them so they can release their seeds; and other forested areas are dense with trees.

FOLKLORE

Local folklore contains at least two stories about Secret Pasture. Neither one can be verified from other sources nor completely dismissed. Both depict it as a hideout for groups in conflict with the dominant culture of the time.

The Mexican-Wappo War

As Mexico began colonizing the area in the 1820s and '30s, some of the Wappo* tribe, who's territory included the Mayacamas and parts of Napa Valley, joined the missions. Others remained in their homeland, resisting the incursions of the newcomers into their land. Using their mountain territory to its best advantage, the Wappo took Mexican livestock, sheltered fugitives, and caused trouble for General Vallejo and his men. A place like Secret Pasture would have offered an ideal base for raiding parties.

Local folklore identifies Secret Pasture as the site of a battle between Wappo warriors and Vallejo's soldiers. Though unverified, such an incident would be consistent with the known history of their conflict. In one battle, the Wappo were described as "entrenched in the mountains in what seemed like an impregnable position." It's unknown where that particular skirmish took place, but it's quite plausible that it, or a similar one, happened at Secret Pasture.

After several years of fighting, the Wappo leader Succara signed a treaty with General Vallejo in 1836. The treaty they signed shows that while Vallejo had the upper hand, he did have to make some concessions. The treaty included the following provisions:

- Every week, Vallejo was to provide Succara with ten head of cattle
- Every new moon, Succara was to bring Vallejo two grizzly bears big enough to fight an average-sized bull
- Succara's brothers were to live at Sonoma, where they would be well treated as long as they behaved themselves
- Succara was to give up any fugitives on his land or "see his relatives shot." [thus his brothers were really being held hostage]
- The Wappo would send no parties of more than thirty men into Sonoma Valley, and only with Vallejo's permission
- Vallejo would send no armed parties into Succara's territory without his permission



TRADITIONAL ARMOR

Northern California

(The Field Museum)

*the name Wappo comes from the Spanish word for "handsome" or "brave." The name included several groups such as the Satiyomi, Caymus, and Huiluc who spoke the same language. The name was bestowed by the Mexican soldiers with some respect, acknowledging their prowess as worthy opponents in war. Today, surviving members of this tribe refer to themselves as the Mishewal-Wappo.

Joaquin Murrieta

Fifteen years after the war between the Wappo and the Mexicans ended, another Secret Pasture legend was born under similar circumstances. As Americans poured into California during the Gold Rush, Mexicans found themselves watching foreigners take over their land, just as the Wappo had. Some, like Vallejo, embraced the newcomers. Others resisted.

As the local legend goes, Joaquin Murrieta, outlaw or Mexican guerrilla (depending on your point of view), used Secret Pasture for hiding rustled cattle in the early 1850s. Charles Justi, an early settler in Sonoma Valley nearby, said Murrieta and some of his men once stopped by looking for a place to spend the night. Pretending not to recognize them, Justi put them up. The next morning they went peacefully on their way. Sometime later, Justi discovered some cattle missing and went off to find the rumored 'Secret Pasture.' After a difficult scramble up the mountainside, he found it. Sure enough, the pasture held a herd of rustled cattle, including Justi's. Because of the danger involved, Justi decided to leave his animals where they were and never did recover them.

Murrieta is known to have been active in the Mother Lode but not in Sonoma, so there is reason to doubt his being in this area. However, Murrieta did coordinate the activities of several groups. One was led by a man named Joaquin Carrillo. Vallejo had a brother-in-law of that name who fought for Mexico during the Bear Flag Rebellion and was briefly imprisoned in 1846. If these two Carrillos were indeed the same person, he could well have used Secret Pasture as a hideout.

According to one source, *El Famoso*, as the most famous Joaquin was known, was a tall blond Mexican who came to California during the gold rush. He was fluent enough in English to pass for an American. *El Famoso* did commit several acts of violence against miners who had raped his wife and murdered members of his family. He may also

“JOAQUIN MURRIETA WAS A SOCIAL FIGHTER. The true story is that the people from Sonora living in California...were the ones who showed the Anglos how to mine the gold, to extract the gold from the earth. Up until then, in the United States there weren't many gold mines. So the Anglos who arrived in California didn't know how to mine the gold. It was the people from Sonora who showed them. The Mexicans here were the last ones to realize that the land wasn't part of Mexico any more. They started to realize it when Anglos came and wanted to take away their mines, their farms, their cattle, their way of living and the little they had.

“There were many Joaquin Murrietas. Many Mexicans were angry during that time and fought, but Joaquin Murrieta lasted the longest because he had more luck and was more organized. Joaquin Murrieta was not a bandit. He was not a killer of North Americans. He was a social fighter, and that's why Mexicans called him a patriot.”

— Antonio Rivera Murrieta, president of “The Association of Descendants of Joaquin Murrieta,” based in Sonora, Mexico (Bacon 2001).

have rustled cows, though his principal activity was running horses to Mexico. At a rendezvous point near Mount Diablo, he and his men gathered wild mustangs (and some not-so-wild horses) and drove them along an 800-mile trail to Sonora, Mexico.

The *Tres Dedos* gang, headed by Three-Fingered Jack, did commit wholesale acts of robbery and murder, and because of this were considered outcast by the other groups. Besides multiple Joaquins, there were at least two Three-Fingered Jacks, Bernardo Garcia and Manuel Duarte. (Many *Californios* lost a finger lassoing cattle when it became caught between the *reata* and the horn of the saddle.) Garcia is known to have spent time in Sonoma, a fact which may have contributed to the Secret Pasture story.

The California Rangers claimed to have killed Joaquin and Three-Fingered Jack in 1853. As proof of their deed, they cut off Joaquin's head and Three-Fingered Jack's hand and put them in jars of alcohol. Because the head did not match descriptions of Joaquin's appearance, some believed he had not been killed. The head and hand were displayed around the state and eventually ended up in San Francisco. There they stayed until they were either buried or burned up during the 1906 earthquake and fire. It appears from available sources that Joaquin Carrillo, Murrieta's lieutenant, never was apprehended.

VEGETATION PATTERNS & CHANGES

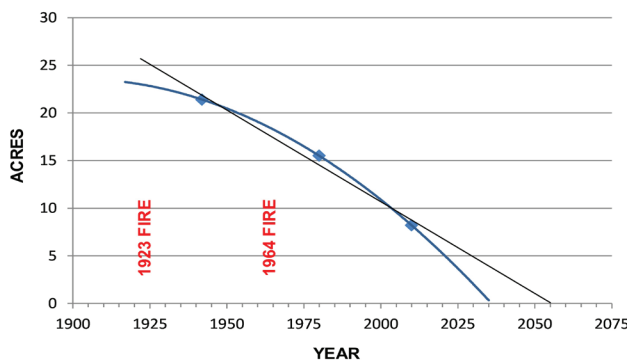
Arranged by Manual of California Vegetation (MCV) Alliances as mapped by Warner, 2013.
(See map in 'Documents & Maps' section)

Annual Brome Grassland (AGS) – is declining in area. This is the habitat type which gave Secret Pasture its name. Now made up largely of introduced grasses, it would have originally been dominated by native annuals and bunch grasses. The area covered by this habitat type has changed dramatically over time; probably controlled by the frequency of fire, the rate of succession, agricultural practices and other factors. Grassland at Secret Pasture occurs almost exclusively on Gouling Cobbly Clay



Loam soil, which covers about 95 acres of the Preserve, so it is possible that this habitat type once covered a much larger area (The General Land Office surveys in the mid-19th century did not report large areas of grassland or grazing areas. However, the survey lines only crossed small areas of what is now grassland and it may have been considered too minor to record).

Agricultural use of this habitat type for pasture may have begun as early as the 1850s, if local folklore is accurate (see 'Folklore' section). Heavier use for both pasture and cultivation of hay and/or other crops may have begun in 1889 when Henry and Isabelle Krager purchased the property from the government (however, no evidence has been found showing that they ever lived on the property or farmed it). The only known



CHANGE IN ANNUAL GRASSLAND EXTENT, SECRET PASTURE, 1942 - 2010

Trendlines: Linear (black); Polynomial (blue)

(Sources: U.S. Dept. of War 1942; Sonoma LandTrust 1980;
Sonoma County 2010)

historical photograph in which Secret Pasture appears was made just prior to this. Taken by Carleton Watkins in 1887 from across Sonoma Valley, it shows a large open area several times larger than what exists there today.

The Hathaways, who bought Secret Pasture from Krager, practiced agriculture there in the early 20th century. The 1923 fire destroyed their farm operation and they sold the property less than a year later. This likely ended the use of Secret Pasture

for agriculture. In 1932, the Weislander Vegetation map showed the open area covering 39 acres, though it appears roughly drawn and may not be accurate.

Aerial photos clearly indicate a significant decline in the size of this grassland over the last seventy years. One reason for this may be a change in fire frequency. In 1942, nineteen years after the 1923 fire, annual grassland covered 21.4 acres. After a slightly shorter interval, an aerial photo taken sixteen years after the 1964 fire shows only 15.5 acres of grassland. Today this area has shrunk to just over 9 acres, a decline of nearly 60%.

The loss of grassland has followed two main paths of succession:

- 1) To Douglas fir. Since 1942, 16% of the grasslands have become Douglas fir forest. This has occurred primarily on upper slopes with western, northwestern and northern aspects.
- 2) To Coast live oak woodland. Since 1942, 41% of the grasslands have become Coast oak woodland. This has occurred primarily on lower slopes with western, southwestern and southern exposures.

(See also 'Grassland Loss' and 'Grassland Conversion' maps in the 'Documents & Maps' section.)

California bay forest (Um ca)— **shows little evidence of change**, though it may be replacing knobcone pine in some areas. The General Land Office surveys in the vicinity of Secret Pasture in the 19th century did not record the presence of California bay. As surveyors were required to note “trees in their order of abundance” it suggests that bay was either not present, or present only in small numbers. The notes for the survey lines running through the Preserve recorded from one to four tree species each, so species which were not common might not have appeared in this record.

Bay can recover quickly from fire. As the MCV states: “The tree’s ability to sprout after fire allows it to grow in areas of frequent fire.” Nine years after the 1923 fire, the Weislander vegetation map recorded bay as the second or third-most abundant species throughout the Preserve, including areas where chamise was dominant. Likewise, today it is common to see bay trees growing in stands of chamise, fifty years after the 1964 fire.

In 2013, “stands of this Alliance are generally too small to map, although they appear relatively common within other alliances” (Warner 2013). Nothing in the record shows large expanses of California bay forest at any point in time. It is possible that wildfires have occurred with enough frequency to keep California bay in balance with other vegetation, and that continued fire suppression could allow bay to become established in bigger stands. (In contrast, the east slope of Sonoma Mountain, which is cooler and moister and has not experienced a large-scale fire in the past century, has shown an increasing abundance of bay. Consequently, sudden oak death, of which bay is a carrier, is quite prevalent there. Dawson, personal observation).

Chamise chaparral (Ad fa)— **appears to have declined since 1932**. Chamise has been consistently reported at Secret Pasture since the 1880 GLO survey, where its presence was recorded along two of the four survey lines. Chamise was shown as the dominant

species at Secret Pasture in 1932, suggesting that it reestablished itself quickly after the 1923 fire.

This is consistent with the Manual of California Vegetation (MCV), which states that following a fire, chamise: “sprouts from surviving . . . buds of a semi-buried lignotuber. In addition, dormant seeds from the seed bank are stimulated to germinate by heat and charate (charred wood containing leachable chemicals that stimulate seed germination) during the first rainy season after a fire. Post-fire dominance comes from vigorous sprouting and some seedling production, and dense stands can develop in 10 years with complete canopy closure after 20 years.”



In 2013, chamise chaparral covered 114 acres, or about one-third of the Preserve (33.8%), making it the most dominant vegetation alliance. It was also present in the knobcone Pine forest, but not in other vegetation types. This suggests that under certain conditions chamise is replaced by Knobcone and that in 1932 more than half of the Preserve could have been chamise (51.9%), which would be consistent with the Weislander record from 1932.

While chamise has several adaptations to surviving fire and thriving in the aftermath, it can go into decline if fire is absent for too long. According to the MCV: “Stands older than 60 years of age produce little new growth as dead stem biomass increases. Ecologists attribute stand stagnation to the accumulation of chemicals in the soil that inhibit decomposition, humidification and nitrification.”

As Secret Pasture has not seen a fire in 50 years, its stands of chamise are probably beginning to reach stagnation in some areas. When fire does reach chamise in this condition, the accumulation of dead stems increases the intensity of the fire. The effect of this, according to the MCV, is to “delay sprouting more than low-intensity fires, because shrubs create few sprouts; also high fire intensity decreases germination and seedling emergence because seeds concentrate at or near the soil surface, rendering them vulnerable to heat kill.”

Field observations suggest that California bay forest or Douglas fir forest may be replacing Chamise chaparral in some areas.

Coast live oak woodland (Qu ag)— **is expanding into grasslands** and possibly other vegetation alliances. Oaks have been consistently reported at Secret Pasture since 1880, when two ‘live oaks’ and two ‘black oaks’ (most likely *Q. agrifolia* and *kelloggii*) were marked as a bearing trees. In addition, all the survey line observations made at that time list “Oak” as the dominant tree.

Three species of oaks were recorded in the 1932 Weislander map: Coast live oak, Leather oak, and Scrub oak (*Q. agrifolia*, *durata* and *dumosa*). While leather oak and scrub oak appear to have been widely distributed, Coast live oak was only recorded in the grassland area near the center of the Preserve. Presumably, the fire would have

SPECIES (current name)	YEAR recorded (by name at time of record, if different. ? = identification uncertain)		
	1880	1932	2013
Black Oak <i>Q. kelloggii</i>	X		X
Live Oak <i>Q. agrifolia</i>	X	X	X
Bay <i>U. californica</i>		X	X
Knobcone Pine <i>P. attenuata</i>	Pine?		X
Douglas fir <i>P. menziesii</i>	X		X
Chamise <i>A. fasciculatum</i>	X	X	X
Manzanita <i>Arctostaphylos spp.</i>	'Chaparral'?	<i>stanfordiana</i> <i>canescens</i>	<i>stanfordiana</i> <i>canescens</i> <i>glandulosa</i> <i>manzanita</i>
Madrone <i>A. menziesii</i>	X		X
Brome grassland (Alliance)		?	X
Eucalyptus <i>E. sp.</i>			X
Scrub Oak <i>Q. dumosa</i>	Oak?	X	<i>berberidifolia</i>
Leather oak <i>Q. durata</i>	Oak?	X	X
Chaparral Pea <i>P. montana</i>		X	X

VEGETATION RECORDED AT SECRET PASTURE PRESERVE, 1880 - 2013

(Sources: Benson 1880; Weislander 1932; Warner 2013)

an approximate age of 150 years). They may have been fairly small in 1932 and not very visible or prominent.

The biggest Douglas firs today are found in areas that probably provided some protection during the fires, such as the lee sides of slopes, folds in the mountainside, grassland edges where the heat was less intense, and the vicinity of the Hathaway home, which was probably more cleared than other areas. Some of these bigger trees exhibit fire scars on their bark. According to the MCV, “the ability of *Ps. menziesii* to survive fire increases with age.” Trees which were big enough to survive the 1923 fire were even

burned less intensely here, allowing live oaks to survive more easily. However its wide distribution today suggests it was underrepresented in 1932. It is possible that, while present outside the grasslands, it was less visible than other species in the aftermath of the 1923 fire.

The largest Coast live oak found during this study measured 34 inches in diameter, making it almost certainly a survivor of both the 1923 and 1964 fires. According to the MCV “Large trees are exceptionally fire resistant, with the thickest bark of any California oak. They generally recover well from a fire, though severely burned crowns, trunks and root crowns may require several years to sprout . . . stands may attain 80-100% of their pre-fire densities within 10 years after a fire.”

It appears that by 1942, there were substantial areas of Coast live oak woodland, particularly to the west of the grassland areas. In 2013, this vegetation type covered nearly one-third of the Preserve (31.8%). Of the grassland lost since 1942, over two-thirds (70.9%) has been replaced by Coast live oak woodland. This conversion has happened predominately on west, southwest, and south-facing slopes and is generally moving upslope.

Douglas fir forest (*Ps me*)—is expanding into grassland and possibly other areas.

Fir were recorded at Secret Pasture in 1880 and 2013 but not in 1932. The largest Douglas firs found during this study appear to be old enough to have survived the 1923 fire (51 inches in diameter, giving



more likely to survive the 1964 fire. These survivors were then able to reseed the burned areas. Much of what is now the largest patch of Douglas fir forest was covered with trees in 1942—presumably many of these were Douglas fir at that time as well.

Since 1942, Douglas fir has moved into grassland areas, though not as quickly as Coast live oak woodland. A little more than one-quarter (28.3%) of the grassland lost since that year has been replaced

by Douglas fir forest. This conversion has happened primarily on west, northwest and north-facing slopes and is generally moving downslope.

Eucalyptus groves (Eu gl)— appear to be stable or very slowly expanding. The largest trees were most likely planted by the Hathaways near their home about a century ago. These trees apparently survived both the 1923 and 1964 fires.

Surrounding these trees, and covering about a half-acre in 2013, is a grove of younger eucalyptus. Most of these probably sprouted after the 1964 fire and are fifty years old or less. Much of this grove is dense enough that it is difficult to walk through.



Knobcone pine forest (Pi at)— appears to be stable in area, though many individual trees are entering senescence.

Knobcone was recorded in the northern part of the Preserve in 1880. Since knobcones are relatively short-lived (typically less than 100 years) and



require fire for germination, this suggests at least one fire occurred in the earlier part of the 19th century, possibly during the final years of the native era (Cones remain closed until a fire vaporizes the resin, opening the cone and dispersing the seeds).

No pines were recorded in 1932. Most Knobcones would have been killed in the 1923 fire. Chamise reestablished itself quickly; in 1932, most knobcone seedlings were probably still hidden under the chaparral canopy and too small to be noticed. Eventually the young trees emerged from the chaparral and succeeded chamise as the dominant vegetation. Supporting this conclusion is the fact that the only Alliance where chamise was recorded in 2013 (besides its own) was knobcone pine forest.

Field observation suggests that in the absence of fire, knobcone pine forest is converting (in some areas) to Coast live oak woodland, Douglas fir forest or California bay forest.

Madrone Forest (Ar me)— was not investigated closely in the field. Madrone was recorded at the Preserve in 1880 and 2013, but not in 1932. As has been mentioned for other alliances, this may be an after effect of the 1923 fire—madrone was likely present but masked by species which recovered more quickly.

DOCUMENTS & MAPS

San Francisco 07057

4-1008-R.

The United States of America,

To all to whom these presents shall come, Greeting:

WHEREAS, a Certificate of the Register of the Land Office at San Francisco, California, has been deposited in the General Land Office, whereby it appears that, pursuant to the Act of Congress of May 20, 1862, "To Secure Homesteads to Actual Settlers on the Public Domain," and the acts supplemental thereto, the claim of Elmer W. Joseph has been established and duly consummated, in conformity to law, for the southeast quarter of the southeast quarter of Section eleven and the Lot five of Section twelve in Township six north of Range six west of the Mount Diablo Meridian, California, containing seventy-nine and eighty-hundredths acres,

according to the Official Plat of the Survey of the said Land, returned to the GENERAL LAND OFFICE by the Surveyor-General:

NOW KNOW YE, That there is, therefore, granted by the UNITED STATES unto the said claimant the tract of Land above described: TO HAVE AND TO HOLD the said tract of Land, with the appurtenances thereof, unto the said claimant and to the heirs and assigns of the said claimant forever; subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights, as may be recognized and acknowledged by the local customs, laws, and decisions of courts; and there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States.

IN TESTIMONY WHEREOF, I, Woodrow Wilson,

President of the United States of America, have caused these letters to be made Patent, and the seal of the General Land Office to be hereunto affixed.

GIVEN under my hand, in the District of Columbia, the TWENTY-NINTH

(SEAL.)

day of SEPTEMBER In the year of our Lord one thousand nine hundred and NINETEEN and of the Independence of the United States the one hundred and FORTY-FOURTH.

By the President Woodrow Wilson
u. P. LeRoy, Secretary.
S. A. C. Samson, Recorder of the General Land Office.

RECORD OF PATENTS: Patent Number 709765

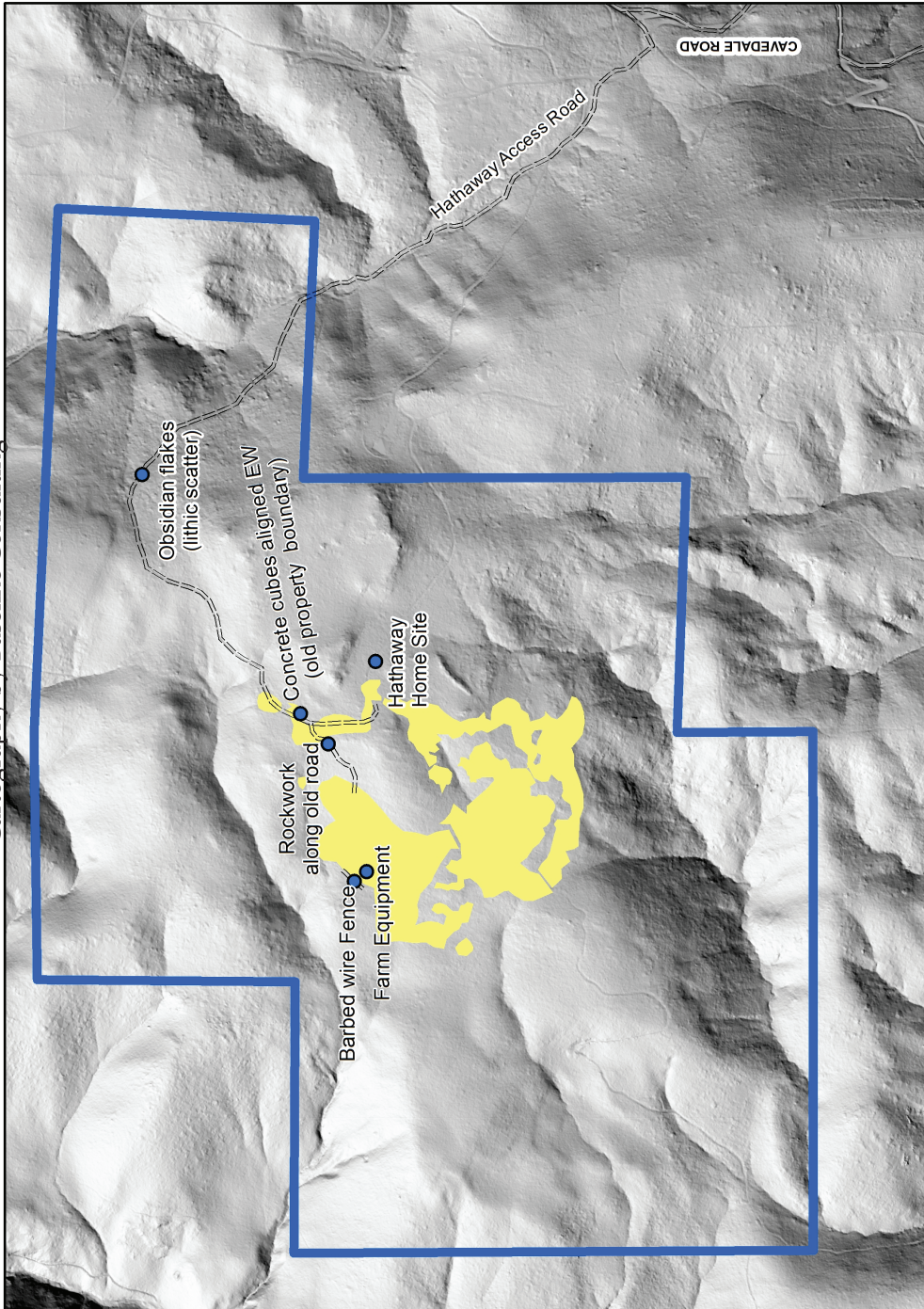
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ORIGINAL LAND PATENT FOR A PORTION OF SECRET PASTURE PRESERVE

CULTURAL RESOURCES IDENTIFIED AT SECRET PASTURE PRESERVE

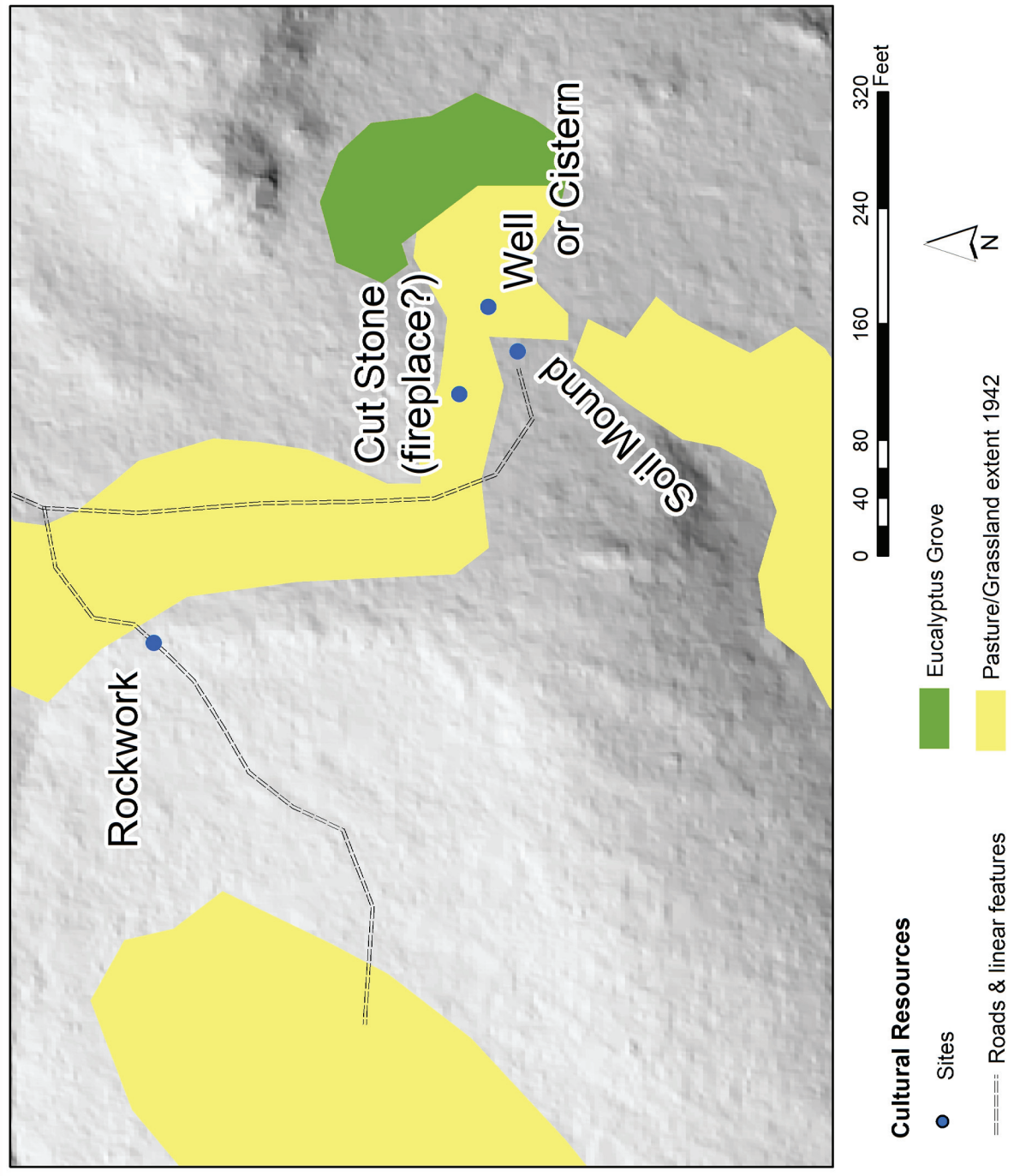
Base map: Sonoma County LIDAR Data (2014)

Cartography by Baseline Consulting



CULTURAL RESOURCES IDENTIFIED NEAR THE HATHAWAY HOME SITE, SECRET PASTURE PRESERVE

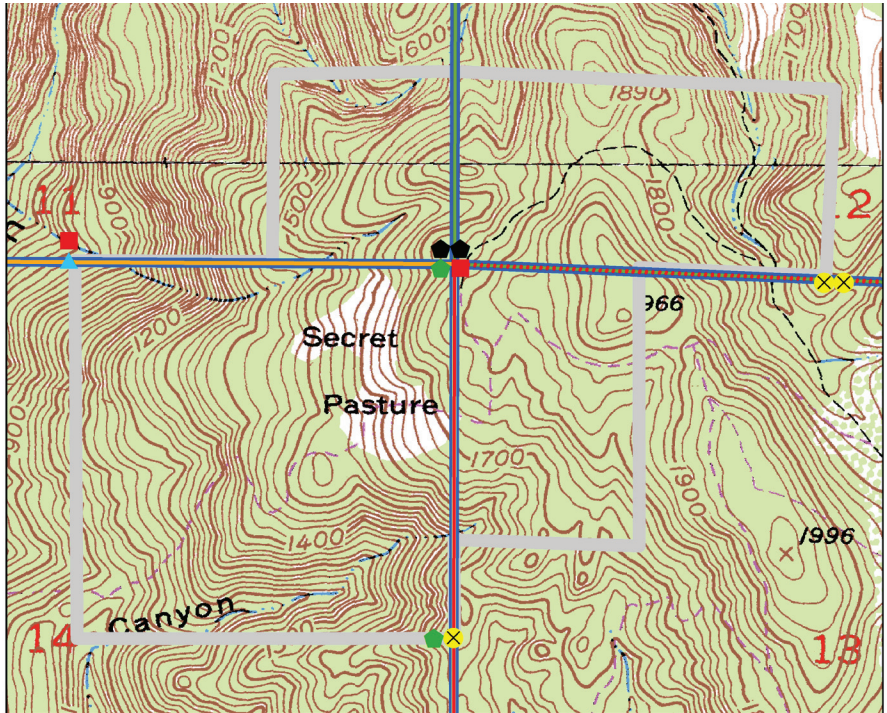
Base map: Sonoma County LIDAR Data (2014)
 Cartography by Baseline Consulting



SECRET PASTURE VEGETATION, 1880 & 2013

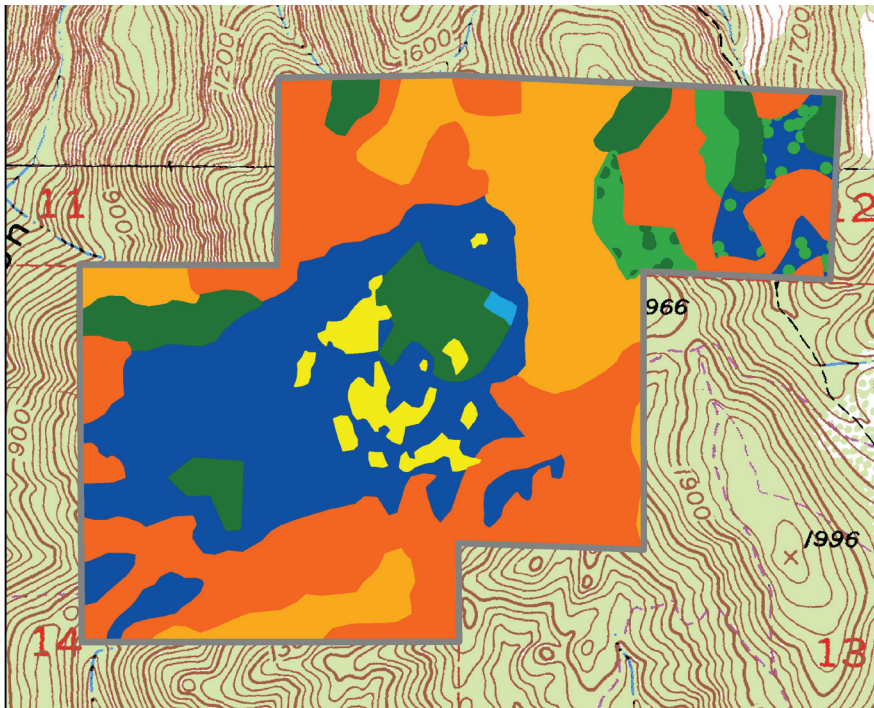
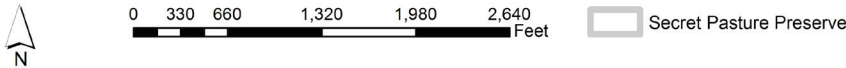
As recorded by the General Land Office (Benson 1880) and Warner (2013)

Base maps: USGS Sonoma (1980) and Rutherford (1976) quadrangles
Cartography by Baseline Consulting



- VEGETATION**
(as recorded by Benson, 1880)
- Point Observations***
- ◆ Live Oak
 - ◆ Black Oak
 - Madrone
 - ▲ Pine
 - ✕ No Trees Recorded (absence of large vegetation)
- Line Descriptions***
- Oak, Chaparral
 - Oak, Madrone, Chamise
 - Oak, Fir, Pine, Chamise
 - Oak, Fir, Madrone, Chaparral

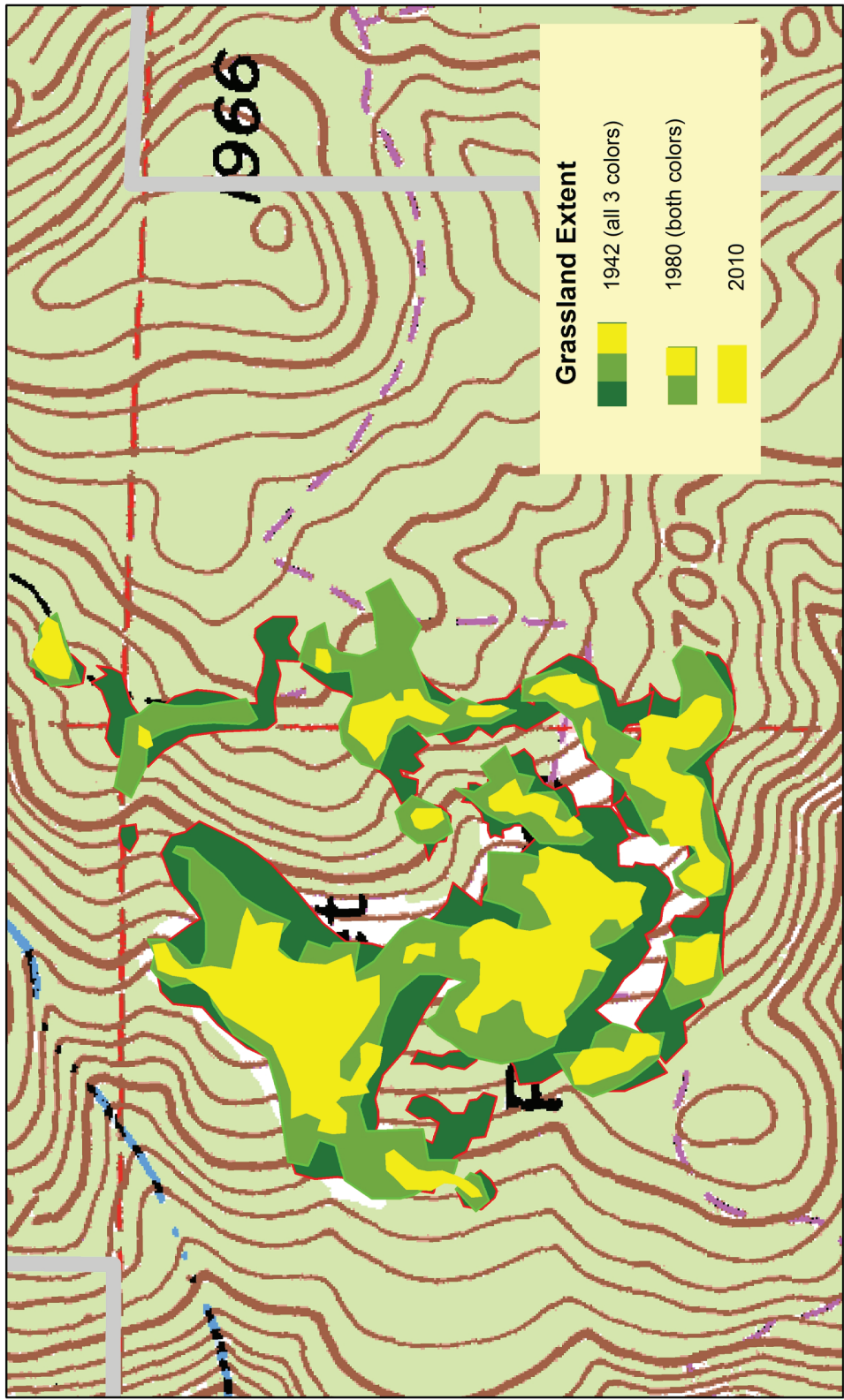
*Depending on the location, surveyors recorded either two or four trees within approximately 200 feet of each survey point. They were also required to record "timber and undergrowth in the order in which they predominate" for each mile of survey line (General Land Office 1855, Hawes 1868).



- Vegetation Alliances**
- Annual Brome grassland
 - Chamise chaparral
 - Coast live oak woodland
 - Coast live oak woodland & California bay forest
 - Douglas fir
 - Eucalyptus grove
 - Knobcone pine forest
 - Madrone Forest
 - Madrone & California bay forest

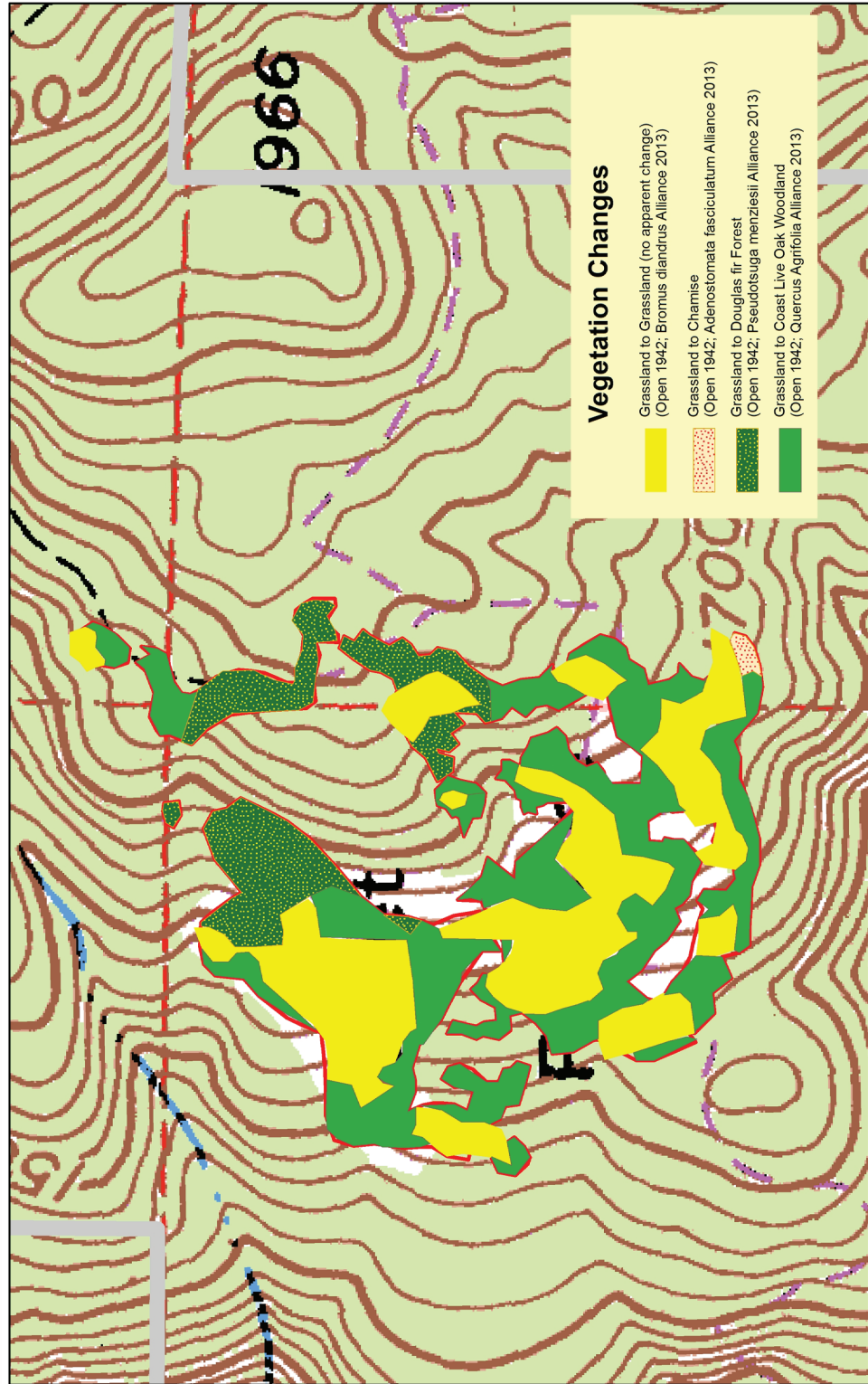
**GRASSLAND EXTENT, SECRET PASTURE PRESERVE
1942 - 2010**

Sources: U.S. Dept. of War (1942); County of Sonoma (1980 & 2010)
 Base maps: USGS Sonoma (1980) and Rutherford (1976) quadrangles
 Cartography by Baseline Consulting



**GRASSLAND CONVERSION, SECRET PASTURE PRESERVE
1942 - 2010**

Sources: U.S. Dept. of War (1942); County of Sonoma (2010); Warner (2013)
Base maps: USGS Sonoma (1980) and Rutherford (1976) quadrangles
Cartography by Baseline Consulting



CONSERVATION & RESEARCH STRATEGIES SUGGESTED BY THE HISTORICAL DATA

Depending on long-range management goals and available resources, the following actions and approaches might be considered for Secret Pasture:

- Consider preserving existing grasslands through removal of small Coast live oak and Douglas fir from grassland edges. Current rate of grassland loss is around 0.25 acre per year. Removal at this rate should maintain the current extent of grassland.
- Complete a cultural resource survey of the Preserve for internal use and for archiving with the Northwest Information Center.
- To further assess the value of its cultural resources, undertake an archaeological investigation of the Preserve.

NOTES ON METHODS

In addition to archival research and gathering information directly from people familiar with the property, four field visits were made to Secret Pasture between April and August 2014. The first was with Georgiana Hale, the Sonoma Land Trust manager for the property at that time. The goals of these visits were to assess current conditions and look for physical clues about past conditions and land-use.

Peter Warner's 2013 Vegetation Survey proved to be an extremely valuable resource in understanding the vegetation patterns and history of the Preserve.

Estimates of the age/size relationship of Douglas fir and Coast live oak growing at the Preserve, relied on data from a study at the Headwaters Property and an unpublished local dataset for oaks (Dawson 2012; Dawson 2013d).

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