



The Shaping of a Natural and Industrial Landscape:
Whiskeytown
National Recreation Area
Historic Resource Study



Theodore Catton and Diane Krahe

The Shaping of a Natural and Industrial Landscape: Whiskeytown National Recreation Area Historic Resource Study

Theodore Catton and Diane Krahe

Presented to Whiskeytown National Recreation Area,
Interior Region 10: California-Great Basin

In Partnership with
the Organization of American Historians/National Park Service

February 2025

Cover Image:

View north over Whiskeytown Lake from the South Shore Drive, April 2022.
The Oak Bottom Marina is in the center of the photo. (Authors' photo.)

Disclaimer: The views and conclusions contained in this document are those of this author and should not be interpreted as representing the opinions or policies of the U.S. Government. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government.

The Shaping of a Natural and Industrial Landscape:

Whiskeytown National Recreation Area Historic Resource Study

Theodore Catton and Diane Krahe

Prepared for

National Park Service
Whiskeytown National Recreation Area
California-Great Basin Interior Region 10
PO Box 188
Whiskeytown, California 96095

In Partnership with the

Organization of American Historians
112 N Bryan Ave
Bloomington, IN, 47408-4141

Task Order: P20AC00729

National Park Service
U.S. Department of the Interior
February 2025

The Shaping of a Natural and Industrial Landscape: Whiskeytown National Recreation Area Historic Resource Study

Theodore Catton and Diane Krahe

Presented to Whiskeytown National Recreation Area,
Interior Region 10: California-Great Basin

In Partnership with
the Organization of American Historians/National Park Service

February 2025

Recommended by:

Approved by:

Contents

Preface.....	xiii
List of Maps and Figures	xi
Introduction	1

CHAPTER ONE

Eight Thousand Years of Occupation and Use

Archeology's Long View and the Cultural Chronology	9
<i>Squaw Creek Pattern, 5,000 B.P. to 3,000 B.P.</i>	13
<i>Whiskeytown Pattern, 4,000 B.P. to 1,500 B.P.</i>	14
<i>Shasta Pattern, Post 1,500 B.P.</i>	15
The Archeological Record in the Clear Creek Drainage	16
Ethnography and the Wintu	20
The Wintu Before Contact.....	23
The Wintu and the Environment.....	26
<i>Fire</i>	28
<i>Fisheries</i>	29
<i>Population Control</i>	32
<i>A Spiritual Connection to Nature</i>	33
The Wintu and First Contact	34
<i>Contact through the Fur Trade</i>	35
<i>Epidemics</i>	37
<i>Aboriginal Population Estimates</i>	38

CHAPTER TWO

Exploration, Colonization, and Conquest

Alta California	43
The Fur Trade.....	45
American Exploration and Manifest Destiny	49
American Settlers and California in the Mexican-American War	50
The Wintu Confront the California Gold Rush	55
First Wintu "Treaty".....	56
Descent into Genocide	60

CHAPTER THREE

The Gold Rush and Placer Mining

Gold Fever	65
The California Gold Rush	67
Perspective on the California Mining Frontier	71
Early Development of Placer Mines in Shasta County	75
Placer Mining Techniques	77
<i>Panning</i>	78
<i>Washing</i>	78
<i>Sluicing</i>	79
<i>Amalgamation</i>	79
<i>Partnering</i>	79
<i>Tunneling</i>	80
The Clear Creek Ditch	82
Charles Camden's Story	85
Hydraulic Mining	91
Environmental Impacts	95

CHAPTER FOUR

The Nearby Copper Belt and Lode Mining

Into Hard Rock	99
Early Lode Mines	100
Lode Mining in the 1880s and 1890s	102
Beginning of Copper Mining	106
The Mountain Copper Company	108
Growth of Copper Mining	111
Copper Smelters	115
The Fight over Smelter Smoke	118
Early Twentieth Century Gold and Silver Mining	122
Gold, Copper, and Zinc Mining in the 1920s	126
Gold Mining in the Great Depression	128
Latter-Day Hydraulic Mining and Dredge Mining	129
Latter-Day Gold Lode Mining	131

CHAPTER FIVE

Lumbering and Forestry

Original Forest Conditions	135
Lumbering in the Gold Rush Era.....	136
Shingletown Ridge	137
Big Bend.....	140
La Moine	141
Arthur Coggins	142
Anderson.....	144
Shasta Bally.....	147
The Forest in the Environmental Era.....	152
Whiskeytown and Fire	155

CHAPTER SIX

**Water Development Part I:
The Making of the Central Valley Project**

Geography and the Seeds of the CVP.....	164
Irrigation to the Fore	169
The Marshall Plan	172
The State Water Plan in the 1920s	174
From State Water Plan to Central Valley Project	175
The Bureau of Reclamation Takes Charge	176
Shasta Dam	178
Iron Canyon Dam.....	180
Trinity River Division	183

CHAPTER SEVEN

**Water Development Part II:
The Making of Whiskeytown Dam**

Addition of Whiskeytown Dam to the Trinity River Division	187
Dams and Fish	190
Reservoirs and Recreation.....	194
Whiskeytown Dam Construction	197
Dedication by President Kennedy.....	201
The JFK Memorial	206

CHAPTER EIGHT

Settlement and Community Development

The New Pioneers	241
Early Mining Camps in Shasta County	245
Whiskeytown in the 1850s	249
Whiskeytown and French Gulch in the 1860 Census	254
Whiskeytown in the 1860s	260

CHAPTER NINE

Ethnic Minorities and Community Persistence

Wintu in the White Economy	267
<i>Kate Camden</i>	269
The Chinese	271
<i>The Chinese in Whiskeytown</i>	277
<i>Chinese Driven out of Redding</i>	279
Community Persistence after the Gold Rush	280

CHAPTER TEN

The Wintu in Transition

Survivors of the Genocide	283
Federal Indian Policy in the 1850s and 1860s	284
Prelude to Allotment	288
Allotment	291
Survival through the Twentieth Century	294

CHAPTER ELEVEN

Transportation

The Horse Age	305
The Tower House	311
The Camden Toll Road	317
Oak Bottom	320
French Gulch's Hotels	322
The Whiskeytown Hotel	324
Last Years of the Tower House	324
The Railroad Age	325
The Automobile Age	329

CHAPTER TWELVE

**Recreation Part I:
Early Days and Establishment of the Park**

The Rise of Outdoor Recreation in American Life and in Northern California	335
The Rise of Water-Based Recreation and Whiskeytown National Recreation Area.....	342

CHAPTER THIRTEEN

**Recreation Part II:
Whiskeytown National Recreation Area**

Development of Recreation Facilities	351
Landscape Restoration.....	355
Management of Whiskeytown Lake for Water-based Recreation	360
The NEED Whiskeytown Environmental School	363
Crystal Creek Boys' Camp.....	365

CHAPTER FOURTEEN

Status Report on Whiskeytown's Cultural Resources

Natural Disasters and Cultural Resource Management.....	371
The Camden-Tower House Historic District in the Carr Fire	373
Cultural Resource Surveys since the Carr Fire	375
An Industrial Landscape	376

Annotated Bibliography	381

Index.....	407

Maps

Map 1. Regional map showing Whiskeytown National Recreation Area and environs.	1
Map 2. Map of Whiskeytown National Recreation Area showing present and historical waterways	18
Map 3. Wintu groups and locations	21
Map 4. The copper belt started just north of the present park	114
Map 5. The relictual forest areas align with checkerboard land ownership in the 1950s when the area was logged.	150
Map 6. Trinity River Division	163
Map 7. Central Valley Project.	165
Map 8. The proposed Iron Canyon dam and reservoir would have flooded the upper Sacramento Valley.	184

Figures

1. Wintu of the McCloud River Area.	209
2. A Chinese placer claim	209
3. Placer mining on Clear Creek.	210
4. Trestle on Clear Creek Ditch.	210
5. Mount Shasta Mine	211
6. Mount Shasta Mine including this 8-stamp mill operation	211
7. Iron Mountain Mine	212
8. Mountain Copper Company smelter plant	212
9. Smoke-killed trees one mile from the smelter plant	213
10. Freight wagons, Shasta	213
11. French Gulch	214
12. Charles Camden	215
13. Charles Camden with his wife and two daughters and two visitors.	216
14. Camden Sawmill	216
15. Levi H. Tower.	217
16. The Tower House	218
17. Stagecoach of the California and Oregon State Company	218

18. Pack teams on the road to Weaverville	219
19. Freight wagons on the road from Shasta to Whiskeytown	219
20. Overview of the Tower House settlement.....	220
21. The Tower House	220
22. The Oak Bottom Hotel	221
23. The Whiskeytown Hotel.....	221
24. Whiskeytown residents on the hotel's porch.....	222
25. American Indians employed by Charles Camden	222
26. Charles Camden with his young family and Kate Camden, their nursemaid	223
27. Kate Camden	224
28. Coggins's Mill	225
29. Logging roads on logged-off slopes	226
30. A giant log on the way to the mill, circa 1956.....	226
31. More giant logs getting trucked out	227
32. View of Shasta Dam under construction.....	228
33. Vista House at Shasta Dam	229
34. Site of Whiskeytown Dam in preparation.....	230
35. Construction of the new Highway 299 bridge.....	230
36. Dedication of Judge Francis Carr Memorial Park.....	231
37. A newly built visitor center	231
38. The Oak Bottom Marina in 1968.....	232
39. The Camden House in April 2022.....	232
40. A surviving fruit tree in the orchard	233
41. Caretaker house in April 2024	234
42. Barn and Shasta Bally in the background.....	234
43. Gates and interpretation on the Crystal Creek Water Ditch Trail.....	235
44. Many hiking trails like this one follow the traces of former water ditches	236
45. Another hiking trail along a former water ditch.....	237
46. The JFK Memorial, 2022	238
47. Interpretive panels describing habitat rehabilitation to benefit chinook salmon	238
48. Cabins at the NEED Whiskeytown Environmental School	239
49. View north over Whiskeytown Lake from the South Shore Drive	239
50. Catholic Cemetery, French Gulch.....	240

Preface

A historic resource study for the National Park Service (NPS) is typically a research and writing project spread over two to three years; this one took five years to complete. The main reason was the pandemic, which delayed our research by a couple of years as we postponed travel and then waited months for university libraries and archives to reopen. We want to thank Superintendent Josh Hoines and Cultural Resource Program Manager Glendee Ane Osborne for their patience and faith in us. We want to extend the same thanks to Paul Zwirecki, Director of Advancement and Strategic Partnerships at the Organization of American Historians, who oversaw the project.

The circumstances of the pandemic influenced our methodology to a degree. Stymied in conducting our field research, we did as much as we could with digital files and online resources to get the project rolling. The park has digitized an impressive amount of its old paper files, which Glendee Ane was able to share with us. We hammered out a report outline in March 2021 before we had had the opportunity to visit the park or any California libraries and museums. At last in April 2022 we were able to conduct our major research trip to Whiskeytown National Recreation Area and various records repositories in California. By then, most, but not all, of the university libraries and archives had reopened to the public. Despite the continued Covid-19 precautions that kept some facilities out of reach, we felt satisfied with the research that we accomplished on the trip. The repositories are listed with annotations in the bibliography.

April is a lovely month to explore Whiskeytown National Recreation Area. The foliage is coming out and there is still some snow gracing the mountaintops. Although the Carr Fire in 2018 burned an appalling 97 percent of the park, many scorched trees survived, and in places they still provide a living-tree canopy. There is a lush growth of green grass sprouting over much of the ground surface. At this time of year the park is not busy; the Sacramento Valley is not yet simmering in heat, so the park is not yet receiving the throngs of people who appear in the months of May through August seeking waterplay and cooler mountain temperatures.

As is our wont, we hiked as many trails and inspected as many historic resources as we could during our visit. The Camden-Tower House Historic District in the northwest corner of the park features the restored house of prominent miner Charles Camden, together with a trail system around Camden's former landholdings. Other cultural features in the area include Camden's toll bridge, his water ditch and sawmill, the El Dorado Mine, and Levi Tower's orchard and gravesite. The Tower House Hotel, which gave the area its name, burned long ago in 1919. For us, the capstone of our walking tour of the historic district was the Crystal Creek Water Ditch Trail, which follows the mid-nineteenth century water development for about one mile of its more than two miles length and gives the

visitor an intimate look at the laborious engineering involved in diverting water. Elsewhere in the park, we hiked remnant portions of the Clear Creek Ditch that once meandered over a distance of some forty miles, carrying water from upper Clear Creek to the diggings below the town of Shasta. The old ditch contours around every gulch and ridge except here and there where the water was once flumed across a larger expanse on a trestle.

Whiskeytown's trail network also makes use of former logging roads that date from the 1950s. When we hiked those trails we knew that the park's logging history was obscure, the least documented episode of resource extraction in this area's history. And yet, the logging era left a profound imprint on the landscape, second only to the creation of the reservoir. So, it was fascinating to walk where the logging trucks once rumbled up and down the sides of Shasta Bally and Kanaka Peak. The steep grades and tight turns on these former logging roads were eye-popping.

We visited all components of the huge twentieth-century Trinity Division water development: the Clair A. Hill Whiskeytown Dam and reservoir and the Judge Francis Carr Powerhouse and penstocks within the park, as well as the upstream Trinity and Lewiston dams and the downstream Keswick Dam and Spring Creek tunnel and penstocks to the Spring Creek powerplant. Two associated cultural resources in the park are the Whiskeytown Cemetery (relocated from the original site that now sits beneath the lake) and the John F. Kennedy Memorial at the damsite. The NPS has an audio station at the Kennedy Memorial where one hears soundbites of Kennedy giving his speech at the dedication ceremony for the completed dam. Kennedy's smooth oratory and his heavy Boston accent when he lands on the word *rosta* (roster) puts the listener there in September 1963 when Kennedy stood before an enthusiastic crowd of some ten thousand people, with sailboats gliding back and forth on the brand-new lake right behind him.

We explored historic places just outside the park that are prominent in this history. The town of Shasta, the "Queen City" of the northwestern mining region in the 1850s, is now preserved in Shasta State Historic Park. French Gulch, once a thriving little mining town like Whiskeytown, still boasts a double row of quaint old buildings preserved in the French Gulch Historic District. Just over the Shasta divide we found Keswick, a rural residential community sprung from a company town that appeared in the 1890s near the Iron Mountain copper mine. The Keswick Smelter is long gone; historic photographs show how the sulfide smoke from the plant once devastated the area, reaching into the present area of the park and reportedly continuing to hamper the natural vegetation on the hillslopes in the northeast corner of the park. One imagines that the historic blight on the landscape around Keswick is still visible today, though in truth it was impossible for us to distinguish the historic blight from the more recent devastation wrought by the Carr Fire.

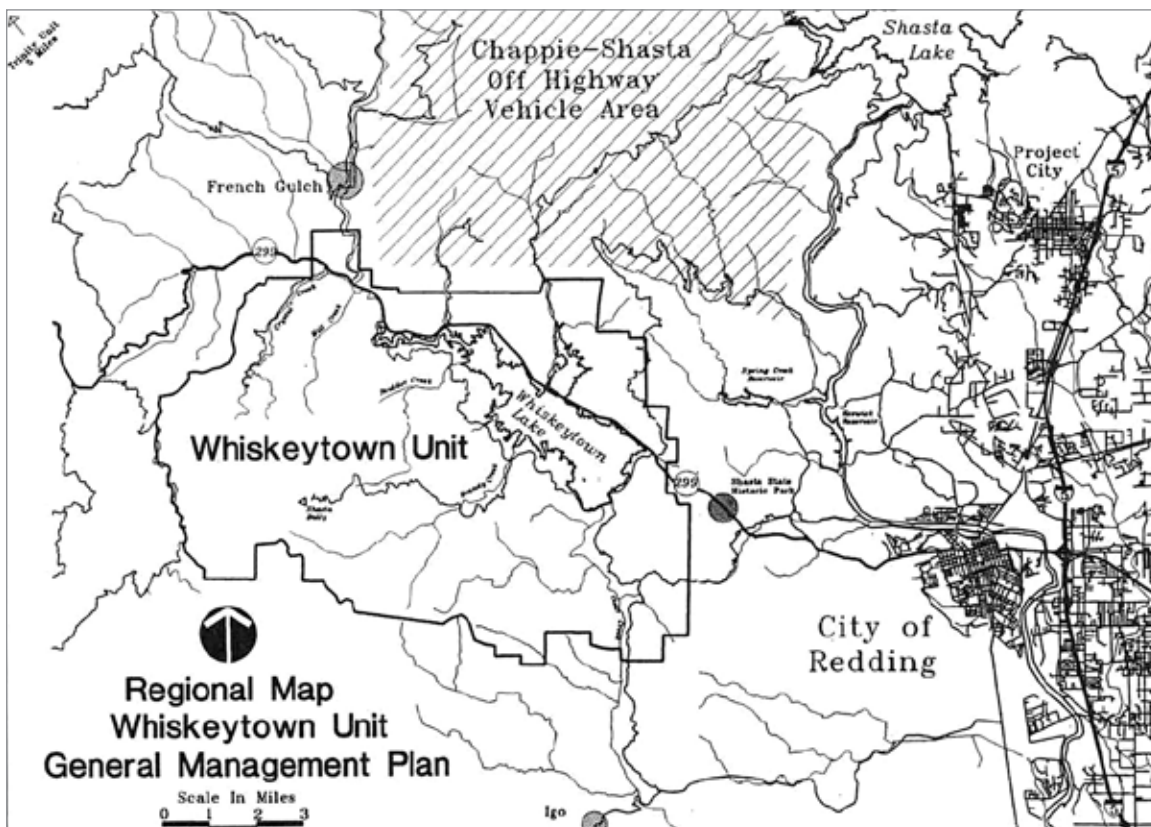
The 2018 Carr Fire started in Whiskeytown National Recreation Area and ultimately burned 229,651 acres. It spread to the edge of nearby Redding, population 92,082. Our Airbnb hosts in Redding showed us where their house had caught fire but the flames

were luckily doused in time. Many other houses in the neighborhood were incinerated. In April 2022 there was a mix of cleared lots and new houses going up where structures had been lost. It was sobering to see that this is what the urban-wildland interface looks like now, in our new age of megafires.

This historic resource study of Whiskeytown National Recreation Area is, at its heart, an environmental history. The authors are environmental historians who have specialized for the past twenty years in researching and writing historic resource studies and administrative histories for the NPS. The history of Whiskeytown is primarily a history that centers around a series of resource-extraction-based human occupations. In pre-contact times the place was occupied by the Wintu and the vital resource that they exploited was salmon. In 1849, the vital resource became gold. Later it was copper. Then it was timber in the forest. And then it was water, which falls on the mountains as rain and snow and is so vital to the agriculture and population that is concentrated in the thirsty valley below. Today the vital resource is not just the mountain water itself but all the recreation that occurs on and around the artificial lake, too. Each succeeding occupation has left its mark on the land and the people. It is a fascinating history. The park's cultural resources are an eclectic mix from all of these different human occupations, but together they tell a story about humans living on the land, reshaping their environment, and holding values that reflect the place in which they live.

Introduction

Whiskeytown National Recreation Area in Shasta County, California, preserves 42,497 acres of rugged and scenic landscape around the Whiskeytown dam and reservoir. Whiskeytown Lake, the focal point of the recreation area, covers about 3,200 acres and sits at an elevation of 1,210 feet above sea level, or about 600 feet above the Sacramento Valley and the nearby city of Redding. Shasta Bally, the tallest mountain in the neighborhood, rises to a summit elevation of 6,199 feet on the south side of the lake. State Highway 299 runs through the park around the north side of the lake and up the valley of Clear Creek past the Camden-Tower House Historic District, where the Camden House and an orchard mark the location of the former Tower House Hotel. Whiskeytown National Recreation Area is developed with campgrounds, picnic areas, boat marinas, and some seventy miles of hiking trails. Over a million people visit the area each year to enjoy swimming, boating, fishing, camping, hiking, and hunting.



Map 1. Regional map showing Whiskeytown National Recreation Area and environs. Note French Gulch and Shasta State Historic Park just to the north and east, respectively. (From *General Management Plan*, 1999.)

The Whiskeytown Dam was completed in 1963. The earthen dam impounds the waters of Clear Creek, providing water storage for irrigation, hydropower, and flood control in California's Central Valley. Built by the Bureau of Reclamation, the dam was the last major construction project in the Central Valley Project's Trinity Division, which takes water from the Trinity River basin and diverts it through a tunnel to the upper Sacramento River watershed by way of the upper Clear Creek drainage. The Trinity Division came to fruition in an era of rising outdoor recreation demand and strong interest in water-based recreation. At the behest of local recreation and water development planners, the U.S. Congress established the Whiskeytown-Shasta-Trinity National Recreation Area in 1965. The area comprises three units, each based around a federal dam and reservoir. The Whiskeytown Unit involved the purchase of privately-owned lands and was assigned to the National Park Service (NPS). As the other two units were both situated within the Shasta-Trinity National Forest, they were assigned to the Forest Service.

While the Whiskeytown National Recreation Area is oriented to outdoor recreation, the establishing legislation explicitly mandates that the unit be administered in accordance with management principles that guide the administration of the whole National Park System. Thus, the park administration at Whiskeytown emphasizes the preservation, management, and interpretation of natural and cultural resources found throughout the 42,497-acre park. Indeed, when the unit was established in 1965 the NPS prevailed on Congress to include much more than the reservoir within the park's boundaries so that the unit would contain diverse wildlife habitat, old-growth forest, and ample opportunity for nature-based recreation as well as opportunities for swimming, boating, and fishing on the lake.

Whiskeytown has a storied past befitting its colorful name. Before the California Gold Rush and the sudden appearance of the mining camp that became Whiskeytown, the area was part of the homeland of the Wintu people, one of the most numerous and prominent of California's many Indigenous peoples. The Wintu subsisted largely on salmon, which were found in abundance in the larger cool mountain streams such as Clear Creek that are tributaries to the Sacramento River. Wintu fishing places and villages once dotted the Clear Creek drainage, and there are archeological resources in the park today that reflect the long Wintu presence in the area.

The Clear Creek drainage became a center of placer gold mining in the early 1850s. Whiskeytown came into existence at the spot where Whiskey Creek once flowed into Clear Creek. Although the townsite at the confluence of the two streams drowned beneath the waters of Whiskeytown Lake in 1963, the park contains many cultural resources relating to the gold mining days. They include many mining sites, extensive remains of water conveyance systems, and the Camden House that belonged to prominent miner Charles Camden.

The California Gold Rush precipitated a period of rapid social, economic, and environmental transformation for the new state of California. The gold rush launched a drive to establish wagon roads through the mountainous lands and to develop crude mining camps into permanent towns. Regrettably, the gold rush formed the context for the genocide of California's Native peoples, as well as later discrimination and violence against the Chinese, who poured into California in the thousands beside tens of thousands of other outsiders from the eastern United States, Europe, and Latin America. The gold rush also took a toll on the natural environment as extensive water diversions for mining purposes played havoc with aquatic and riparian ecosystems. These statewide developments all played out at the local level in and around the present area of Whiskeytown National Recreation Area. Some developments, such as the construction of the Camden Toll Road, left traces on the landscape that remain today. These sometimes barely visible traces of the past are cultural resources, too, even if they do not rise to the level of being listed on the National Register of Historic Places.

In the early twentieth century, Shasta County became a major source of U.S. copper production. One of the largest copper mines in Shasta County's copper belt, the Iron Mountain Mine, was developed just outside the park area. The Keswick Smelter was one of a handful of copper smelters at the center of litigation over the poisoning effects of smelter smoke. The mountain slopes in the northeast corner of the park still show the blighting effects of the smelter's sulfide fumes from more than a century ago. The copper smelters caused a revival of gold mining within the area of the park, since the copper smelting process used the gold-bearing ore for flux. The park contains cultural resources such as the Mount Shasta Mine that reflect this later period of mining history.

Lumbering became a major industry in Shasta County. After decades of lumbering in the forested areas north and east of Redding, lumbering operations moved into the steep terrain on and around Shasta Bally in the 1950s. By the time the recreation area was established in 1965, much of the forest was logged off and the mountain slopes were laced with logging roads. The logged-off areas and logging roads left behind a legacy of accelerated soil erosion that park managers still contend with. A substantial portion of the park's 70 miles of hiking trails follow old logging roads.

President John F. Kennedy came to Whiskeytown in September 1963 to dedicate the dam in a public ceremony. The event occurred only weeks before the president was assassinated. Afterwards, local citizens erected a memorial to Kennedy beside the dam. At the west end of Whiskeytown Lake, adjacent to the Judge Francis Carr Powerhouse, a three-acre memorial park with fountain, pavilion, and overlook was developed by the NPS in 1967. Now more than a half century old, these designed elements together with the dam complex and the powerhouse complex constitute cultural resources associated with the monumental Central Valley Project.

Since the park is now nearly sixty years old, NPS administration of the park is in some ways historical itself. The park's infrastructure—the campgrounds, marinas, roads, interpretive wayside exhibits, overlooks, visitor center, headquarters, and other facilities—are reflective of the larger national stories of the American people's penchant for outdoor recreation and their embrace of the National Park System. One thread in those stories involves the partnership between the NPS and the Bureau of Reclamation in co-managing dam and reservoir sites for water-based recreation.

This historic resource study aims to provide a “comprehensive synthesis” of historical source material that bears on the park's cultural resources. The purpose is to consider the park's cultural resources in context with the national, regional, and local history that gives the historic resources significance. To do that, it is necessary for our historical narrative to “zoom out” well beyond the park boundaries at times, or to widen the lens of our gaze to take in historical forces in a much larger setting. In explaining the historical significance of the dam and reservoir complex, for example, it is necessary to detail the development of the whole Central Valley Project. Another example: in explaining the historical significance of the Camden Toll Road, it is important to understand the general condition of transportation in the state in the 1860s.

The park's historic resources are treated in overview in several other NPS documents. NPS historian Anna Coxe Toogood prepared a historic resource study for the unit in 1978. In contrast to the present study, Toogood's report placed special emphasis on mining history and mine sites located within the park boundaries. Russell Bevill and a team of authors prepared a cultural resources overview for the park in 2001. Bevill et al. surveyed the park's more important cultural resources in Section 3 of their report (pages 11–33). They included the park's mining sites and water conveyances, nine homesteads, one ranch summer camp, one sawmill, the Camden-Tower House Historic District, the dam and reservoir complex, and traces relating to farming, settlement, and the Chinese presence. The park's general management plan, completed in 1999, discussed the following historical topics: prehistoric occupation and use, the Wintu presence, explorers and trappers, mining, logging, agriculture (orchards and grazing), commerce, transportation, recreation and travel, public lands conservation, and federal water development. The plan noted the park's then 84 recorded archeological sites outside of the reservoir area (46 prehistoric, 21 historic, and 17 containing a mix of prehistoric and historic) plus another 20 archeological sites under the lake. Of course, the number of recorded archeological sites keeps growing. The park's cultural resource overview, completed in 2001, counted 116. The park's archeological

overview and assessment, completed in 2018, enumerated 273. Just two years after that, the park's ethnographic overview stated that there were about 300 recorded archeological sites and the number continues to grow as post-Carr Fire surveys reveal still more.¹

The NPS maintains a database for tracking all cultural resources found within the National Park System. The NPS's Cultural Resources Inventory System (CRIS) was created in 2020 to supersede three legacy information systems covering 1) archeological sites, 2) cultural landscapes, and 3) historic structures. The latter, the retired List of Classified Structures, included some 67 historic structures in the Whiskeytown Unit. The present inventory of historic structures in the Whiskeytown Unit in CRIS includes Camden House, outbuildings and grounds; El Dorado Mine roads, stamp mill, water tank, walk and steps, Chilean Mill, shed; Mill Creek Ditch; French Gulch fences; Camden Toll Road; Tower and Camden gravesite stones, fence, and trail; Willow Creek Ditch ruin; Camden Sawmill and mill race; Clear Creek bridge piers and Lower Crystal Creek Ditch; Mill Road; Judge Francis Carr Memorial Park; Whiskey Creek Road and culvert; John F. Kennedy memorial panel; park visitor center, landscaping, and roads. Many of these specific cultural resources are described or mentioned in this historic resource study, but generally the present study treats the cultural resources in overview and does not detail each separate cultural resource. Other NPS documents already do that and references to those documents may be found in the footnotes.

The authors of the present study looked for a single theme that would tie the disparate cultural resources in the park into a single overarching historical narrative. Of course, much of what brings the park's cultural resources together is the mere fact, largely coincidental, that they are located within the 42,497-acre park. But the authors find that viewing the land area of the park through the lens of environmental history does provide a unifying theme for this historic resource study. Environmental history informs us about how people shaped the natural environment and how the natural environment shaped people. Over the years, there have been many types of resource use in the area. Before the gold rush the Wintu and their ancestors harvested the abundant salmon, which they did on a sustainable basis for thousands of years in contrast to the resource extraction that came after. The mining of gold after 1849 was probably the starkest resource extraction that happened here, as many hundreds of miners came in and applied intense efforts toward making off with all that they could of a finite, nonrenewable resource. Lumbering

¹ Anna Cox Toogood, *Historical Resource Study, Whiskeytown National Recreation Area* (California: National Park Service, Denver Service Center, 1978). Russell Bevill and Elena Nilsson, with contributions by Donald L. Hardesty, Denise Bradley, and Lisa Westwood, *Cultural Resources Overview of the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California*, Report prepared for the National Park Service (Chico, CA: Mountain Anthropological Research and USR Corporation, 2001). National Park Service, *General Management Plan and Environmental Impact Statement*, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area (Oakland, CA: National Park Service, Pacific West Region, 1999). Geri D. Emberson, "Ethnographic Overview and Traditional Use Study of American Indian Affiliations within the Whiskeytown National Recreation Area," Report prepared for the National Park Service, 2000.

constituted the next big effort toward extracting a resource from this area. Though relatively brief, the logging activity in the 1950s left an enduring mark on the natural environment. Next came water resource development in the form of the Central Valley Project's Trinity Division. Nothing impacted the environment so much as the creation of Whiskeytown Lake in 1963. At the same time, the establishment of Whiskeytown National Recreation Area rededicated the surrounding area to recreation and nature preservation, putting it under new, long-range management by the NPS. And yet, forces of environmental change far beyond the NPS's control—a warming climate together with a nearly hundred-year legacy of fire suppression—created conditions for the catastrophic Carr Fire in 2018, which once again pummeled the ecosystem with outsized impacts of human origin. It is only a tad anthropomorphic to say that nature in the Whiskeytown Unit has been through four traumatic events since the California Gold Rush, having been mined extensively, then logged off, then partially drowned by the lake, and then mostly burned in the Carr Fire. To this list of four could be added a fifth (but the first in time). When the Wintu were driven out of the area the land was “widowed” (to borrow a phrase coined by the late historian Francis Jennings).² The environment lost its original caretaker. The Wintu's departure was a regime change that impacted the forest in particular. Forest managers came to appreciate the effect the Wintu once had upon the forest only about a century after the Wintu were removed, but over the long run the removal of the Wintu also contributed to the stressed forest conditions that made the Carr Fire so catastrophic.

Within the theme just outlined, a few subthemes emerge. One subtheme is the obvious importance of water, which has been vital in one way or another through every phase of resource extraction in this place. The cultural resources of Whiskeytown National Recreation Area illustrate the human dependence on water in multiple contexts, from exploitation of the salmon run in pre-contact times, to the necessity of water for placer gold mining, to the use of water for downstream irrigation by the Central Valley Project, to the present-day use of Whiskeytown Lake for swimming and boating and lakeside picnicking. Over the years, humans showed amazing resourcefulness in manipulating the natural flow and availability of water. Cultural resources along the Camden Water Ditch Trail exemplify the park's rich heritage in this regard, and interpretive panels along the trail do an excellent job of bringing this theme into focus.

Another subtheme relates to how people lived on the land. Environmental history runs in two directions: it looks at how humans have impacted the natural environment over time, and it also looks at how those environmental changes have had reciprocal effects on culture and society. The story of this area features a series of human population replacements—some of them violent, most of them tied directly to resource extraction, and each one resulting in virtually a total replacement of the population that preceded it. First, miners

² Francis Jennings, *The Invasion of America: Indians, Colonialism, and the Cant of Conquest* (Durham: University of North Carolina Press, 2010)

replaced the Wintu through a process that was both violent and nearly total. While a few Wintu stayed to work in the mines or as domestic servants, the Wintu as a group could not sustain their traditional way of life in upper Clear Creek when mining activity decimated the salmon run. So, the Wintu survivors of the genocide in the 1850s mostly withdrew to other locations in the upper Sacramento Valley where they could continue to fish. Chinese came into the area during the gold rush, only to be driven out by the dominant white population when mining prospects dwindled. As for the white population who came for the mining opportunities, a few stayed on to farm or run roadside businesses, managing to hang on for a relatively long time—two or three generations—but ultimately all the remaining families moved away or were evicted in order to make way for the dam and reservoir and the recreation area. Today there is no significant resident population in the area; however, more than a million recreationists visit each year. Campers and day-users, who come and occupy the park with the welcoming support of the NPS, constitute the last wave of population replacement, and by their sheer numbers they make a large human presence despite being mere visitors. Notwithstanding the modern outdoor recreation ethic of “leave no trace,” the NPS has a challenging job to accommodate so many recreationists as it strives to protect the park’s natural values.

This historic resource study is organized into topical chapters that coalesce around the primary theme of resource extraction and the secondary theme of population replacement. Chapter One describes the people and the environment in pre-contact times before the coming of European Americans. Chapter Two spans the Spanish and Mexican periods and the U.S. conquest of California; it is concerned primarily with population replacement. Chapters Three through Seven turn to the history of resource extraction, starting with the history of placer mining (Chapter Three), continuing with the history of lode mining (Chapter Four), and then moving to a focus on the forest and lumbering in Chapter Five, and then water extraction with the story of the Central Valley Project, the Trinity Division, and the Whiskeytown Dam in Chapters Six and Seven. Chapters Eight through Ten return to the secondary theme of population replacement, with discussion of community development in the gold rush era, race relations, and community persistence. Chapter Eleven tells the story of transportation, and Chapter Twelve concludes with the history of recreation, which features both the latest form of resource extraction and the latest iteration of population replacement.

At the conclusion of this historic resource study the authors provide a status report on Whiskeytown’s cultural resources based on consultation with Glendee Ane Osborne, Cultural Resource Program Manager at Whiskeytown, and our own observations. It is a sad yet significant point that no other unit in the National Park System has had a comparable experience to that of Whiskeytown in the Carr Fire, in which 97 percent of the park area burned and many cultural resources were destroyed. And yet many cultural resources survived, and their treatment post-Carr Fire will be of interest to cultural resource managers elsewhere.

CHAPTER ONE

Eight Thousand Years of Occupation and Use

Archeology's Long View and the Cultural Chronology

Based on archeology, it is believed that human occupation of what is now Whiskeytown National Recreation Area dates back at least 8,000 years B.P. (before the present). The number of recorded prehistoric archeological sites within the park boundaries currently stands at around one hundred. Some sites are classified as “lithic scatters” of stone tools and debitage, others are “habitation sites” with house-pit depressions or fire hearths or other evidence of habitation, and some are “isolates” where a single artifact was recorded. By comparing the archeological resources found at these many sites with similar sites and artifacts found in other areas of northern California and beyond, archeologists gain insight into human cultures as they existed in the remote past. The archeological resources reveal broad patterns of habitation and subsistence, evidence of population movements and population densities, the existence of trade networks, and the diffusion of cultural traditions. Archeologists have proposed a “cultural sequence” or a chronology of culture patterns that were present over broad spans of time to characterize some 8,000 years of human occupation of the whole upper Sacramento River basin, including the upper Clear Creek drainage that is now within Whiskeytown National Recreation Area.

Archeologists have long recognized that California's cultural sequence differs in significant ways from other regions of North America. California's Indigenous peoples never developed farming as did Indigenous peoples in the eastern United States. They did develop elaborate forms of food gathering, food storage, and exchange, all of which allowed them to live on the land in greater population densities than were found anywhere else in North America. Moreover, they formed miniature polities, each with its own territory and social organization. The anthropologist Alfred Kroeber described the polities with the term “tribelet” to distinguish them from the more geographically sprawling Indian tribes that inhabited other parts of the United States. “Although technically they are

hunter-gatherers,” anthropologists Kent G. Lightfoot and Otis Parrish observe, “many Native California communities exhibited traits more typically associated with well-developed agrarian societies. That is, they enjoyed sizable population densities, had relatively sedentary villages, amassed significant quantities of stored food and material goods, and maintained complex political and religious organizations.” Anthropologists refer to such peoples as “complex hunter-gatherers” to distinguish them in the anthropological literature from nomadic peoples or “generalized hunter-gatherers.”¹

It is still an open question when humans first appeared in California, and by extension, when humans may have first visited Whiskeytown National Recreation Area. It is generally thought that humans came to California by various migration routes, including down the Pacific coast by boat. These first colonists, known as Paleoindians, arrived in the Pleistocene when the climate was cooler, the Sierra Range was still capped with glaciers, and the lowlands were home to such now-extinct fauna as the imperial mammoth, giant sloth, tapirs, camels, and saber-toothed cats. Paleoindians moved around in small groups hunting big game. Across the continent, Paleoindian cultures are generally identified in the archeological record by large fluted projectile points and megafauna kill sites. Though Paleoindian cultures were definitely present in California, the evidence is spotty and not well understood. An assemblage of prehistoric mammal bones discovered in Potter Creek Cave in Shasta County in 1878 was long thought to be associated with early human occupation. But carbon dating and reanalysis eventually determined that most of the animal bones were brought into the cave by large carnivores, while humans were only present in the cave from about 6,000 years ago.²

There is archeological evidence from various places in the state that purports to find Paleoindians in California as long ago as 50,000 B.P., even 200,000 B.P., but the evidence is spotty and mostly suspect. In general, the evidence suggests that Paleoindian cultures became firmly established in California only at the end of the Pleistocene and the beginning of the Holocene, or around 12,000 to 8,000 B.P.³

Early cultures in northern and central California, in common with Paleoindian cultures in southern California and the Great Basin, concentrated their energies around large inland lakes and productive wetlands that lingered on the landscape at the end of the Pleistocene. The pluvial lakes, estuaries, and expansive marshes afforded an abundance of terrestrial and aquatic food sources. In the transition from the Pleistocene to the Holocene, as the pluvial lakes and wetlands receded and many species of Pleistocene megafauna went

¹ Kent G. Lightfoot and Otis Parrish, *California Indians and Their Environment: An Introduction* (Berkeley: University of California Press, 2009), 4.

² Michael J. Moratto, *California Archaeology* (Orlando: Academic Press Inc., 1984), 64–65, 70–73; William J. Sinclair, “The Exploration of the Potter Creek Cave,” *University of California Publications in American Archaeology and Ethnology* 2, no. 1 (1904): 1–27; Louis A. Payen and R. E. Taylor, “Man and the Pleistocene at Potter Creek Cave, California,” *The Journal of California Anthropology* 3, no. 1 (July, 1976): 51–58.

³ Moratto, *California Archaeology*, 76–78.

extinct, the early cultures adapted to the changing environment by broadening their subsistence base to include smaller mammals, fish, and edible plants. They extended their resource gathering into upland areas. Thus, the Clear Creek drainage in Whiskeytown National Recreation Area may have seen its first human use sometime in the early Holocene. Stone tools by the end of this period included large foliate points, lanceolate fluted points, and triangulated points with tapering or wide stems, as well as an assortment of scrapers, perforators, choppers, and hammerstones.⁴

Archeologists generally accept the Borax Lake Pattern as a descriptor for the first truly recognizable cultural presence in the upper Sacramento Valley and surrounding mountain areas, including the park. This culture dates to about 8,000 B.P. The namesake Borax Lake site is located at the edge of a dry lakebed in the heart of the North Coast Ranges about 100 miles south of Whiskeytown National Recreation Area. The site shows evidence of three occupations, the first from perhaps 12,000 B.P. to 11,000 B.P., the second from about 8,000 B.P. to 6,000 B.P., and the third from about 5,000 B.P. to 3,000 B.P. Discovered by archeologist Chester Post in the 1930s, the Borax Lake site was excavated no fewer than five times over the next three decades. In the early 1970s, archeologist David Frederickson reexamined the site as part of his pioneering effort to establish a cultural sequence or chronology specific to the North Coast Ranges. He interpreted the earliest occupation of the Borax Lake site to be a variant of the Paleoindian “Clovis Culture” so widespread across the Southwest. Frederickson termed the more distinct middle occupation, with its wider array of stone tools, as the “Borax Lake Pattern.” It is this so-called Borax Lake Pattern culture that has lent its name to the earliest known culture in the upper Sacramento River basin. In the absence of solid evidence of Paleoindians in northern California, the Borax Lake Pattern is the starting point for the cultural chronology that modern archeologists have assigned to the region.⁵

The cultural chronology for the upper Sacramento River basin—and by extension for Whiskeytown National Recreation Area—is divided into four periods with the following assigned names and date ranges: Borax Lake Pattern, 8,000 B.P. to 5,000 B.P.; Squaw Creek Pattern, 5,000 B.P. to 3,000 B.P.; Whiskeytown Pattern, 4,000 B.P. to 1,500 B.P.; and Shasta Pattern, post 1,500 B.P. The cultural chronology was developed by Redding archeologist Elaine Sundahl around 1992 based on her own investigations on the Shasta-Trinity National Forest (some of the investigations lying within the boundaries of the Shasta and Trinity units of the Whiskeytown-Shasta-Trinity National Recreation Area) and on the work of fellow archeologists David Frederickson, Winfield Henn, William R. Hildebrandt, John F. Hayes, and others. Two recent reports prepared for Whiskeytown National

⁴ Lightfoot and Parrish, *California Indians and Their Environment*, 44–46.

⁵ Moratto, *California Archaeology*, 82–85; Elaine Sundahl and Winfield Henn, “Borax Lake Pattern Assemblages on the Shasta-Trinity National Forests, North-Central California,” *Journal of California and Great Basin Anthropology* 15, no. 1 (July 1993): 73–74.

Recreation Area accept Sundahl's cultural chronology, as do William R. Hildebrandt and Michael J. Darcangelo in their 2008 book, *Life on the River: The Archaeology of an Ancient Native American Culture*.⁶

People of the Borax Lake Pattern culture, archeologists tell us, lived in small social groups not much bigger than a nuclear family of father, mother, and children. The groups were mobile, tracking big and small game across mostly upland areas, and harvesting seeds and other easily procured edible plants as the group moved along. Because each group lacked a means to store food and because it had to be mobile to keep itself fed, parents may have intentionally limited the number of children they produced. The population apparently remained fairly constant. The population was sparse, so social groups probably did not have much contact with one another. There must have been larger social gatherings from time to time, allowing people to socialize, find marriage partners, and share their experiences and information.⁷

The climate and natural environment of the upper Sacramento River basin were different from today's. The warming climate that marked the transition from the Pleistocene to the Holocene culminated with an exceptionally warm, dry period known as an altithermal, which persisted from around 9,000 B.P. until around 4,000 B.P. The lowlands were more arid than they are now, while the higher elevations came to support more plant life and animal life than the lowlands did. As there was less snowfall, oak woodlands grew in the foothills and on mountain slopes where conifer forests grow today. The sunnier oak woodlands contained a fair growth of edible plants in the understory. Water sources were more plentiful in the uplands than in the arid lowlands. Rivers in the lowlands were warmer than they are today, so they probably did not support big salmon fisheries as they would in the later Holocene. For all of these environmental reasons, the people of the Borax Lake Pattern culture preferred to inhabit the uplands. They left few traces of their culture in the river valleys.⁸

⁶ Dana L. Holschuh, Laura Burghardt, and Jonathan Damp, "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," report prepared for Whiskeytown National Recreation Area by Harris Environmental Group, Inc., Tucson, AZ, 2018, pp. 22–25; Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, *The Wintu Homelands of Clear Creek: Ethnographic Accounts of Whiskeytown National Recreation Area*, report prepared for National Park Service by Portland State University, Portland, OR, 2020, pp. 16–21; William R. Hildebrandt and Michael J. Darcangelo, *Life on the River: The Archaeology of an Ancient Native American Culture* (Berkeley, CA: Heyday Books, 2008), 13–18. See also Elaine Sundahl, *Cultural Patterns and Chronology in the Northern Sacramento River Drainage* (Redding, CA: Shasta College Archeological Lab, 1992); and Sundahl, "Archaeological Investigations in the Squaw Creek Drainage, Shasta County, California, Vol. 1, Overview," report prepared for the Shasta-Trinity National Forest, Shasta College Archeological Lab, Redding, CA, 1992.

⁷ Hildebrandt and Darcangelo, *Life on the River*, 13–14.

⁸ Sundahl and Henn, "Borax Lake Pattern Assemblages on the Shasta-Trinity National Forests, North-Central California," 86; Hildebrandt and Darcangelo, *Life on the River*, 13–14.

It is believed that the Borax Lake Pattern culture took hold in the upper Sacramento River basin with the arrival of Hokan peoples who migrated into the area from the Great Basin. These newcomers were perhaps the distant ancestors of Chimariko, Okwanuchu, and Achumawi speakers. The Chimariko would come to inhabit a section of the Trinity River basin and would eventually move to the Hoopa Valley in historic times. The Owanuchu would occupy the headwaters of the Sacramento River and would later affiliate with the larger Shasta tribe. The Achumawi speakers would one day make their home in the Pit River drainage where they now comprise several bands of the Pit River tribe.⁹

Squaw Creek Pattern, 5,000 B.P. to 3,000 B.P.

It is thought that around 5,000 years ago a new people moved into the area bringing new technology, modes of subsistence, and living patterns. The chief new technology was the atlatl, a throwing stick that increases the force of a thrown spear or dart. While the atlatl itself was made of perishable wood and therefore left no trace in the archeological record, the smaller projectile points that were used to tip the atlatl's spears and darts are telltale. With the use of the atlatl, the people of the Squaw Creek Pattern culture could hunt smaller game, facilitating a shift to a more diverse subsistence base.¹⁰

Another new technology was the mortar and pestle for grinding up food. The common occurrence of mortars and pestles in artifact assemblages from the Squaw Creek Pattern probably reflects a greater emphasis on acorns in the people's diet. The people of this culture also used a wider variety of specialized tools such as knives made of Medicine Lake obsidian, which was a traded commodity. These people inscribed some of their stone tools with incised, decorative panels. Some of this mobile rock art appears to have been abstract art while other decorations may have been the artist's depiction of a particular landscape or landmark.¹¹

Squaw Creek Pattern peoples continued to inhabit upland areas just as the Borax Lake Pattern peoples had before them, because climatic conditions did not change appreciably and the upland environment remained more hospitable. However, there is archeological evidence that the Squaw Creek Pattern peoples lived in larger social groups, and came together in larger gatherings. It seems probable that they formed multifamily villages

⁹ Sundahl and Henn, "Borax Lake Pattern Assemblages on the Shasta-Trinity National Forests, North-Central California," 86.

¹⁰ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 23.

¹¹ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 23; Hildebrandt and Darcangelo, *Life on the River*, 14–15. The Medicine Lake obsidian source and three other sources in northern California are depicted on a map on p. 66.

in the winter, dispersing into smaller, more mobile groups during the rest of the year. The archeologist Sundahl finds that the Squaw Creek Pattern featured a “forager subsistence economy with greater intensity of use of a single base camp.”¹²

Whiskeytown Pattern, 4,000 B.P. to 1,500 B.P.

The Whiskeytown Pattern is named for a side-notched style of point that is commonly found in sites in the Whiskeytown area of foothills west of Redding.¹³ The points appear to correlate with a shift in foraging strategies connected to a gradual change in climate and a focus on the foothill elevations. The thermal optimum of the early Holocene ended around 4,000 years ago, and as the climate cooled the environment responded. Lowlands became more inviting again as the higher elevations became less hospitable. Rivers cooled, and it is likely that the upper Sacramento River and its larger tributaries began to support plentiful stocks of salmon.

In the cultural chronology for the region, archeologists assign an overlap of a thousand years from the Squaw Creek Pattern to the Whiskeytown Pattern as the archeological record suggests a long period of coexistence between the two patterns. This probably relates to the changing environment, as some social groups stuck to their traditional subsistence rounds in the uplands while others explored a new economic niche tied to the rivers. There was probably some blending of the two subsistence economies, and perhaps a shifting of territories as the population adjusted to the changes in culture and environment.¹⁴

The shift toward riverine environments was modest and gradual. Whiskeytown Pattern peoples fished in the rivers, evident from the appearance of notched net sinkers in the archeological record, but they did not prefer to live along the rivers. Whiskeytown Pattern people placed their habitation sites at lower elevations but kept them some distance from the rivers in the valley or in the foothills. Like the Squaw Creek Pattern peoples, the Whiskeytown Pattern peoples came together in multifamily villages during the winter and dispersed in the warmer months. The Whiskeytown Pattern wrought some other changes in stone tools that are diagnostic of the Whiskeytown sites: a distinctive notching at the base of the points and a larger presence of mortars and pestles, hand stones, and milling stones.¹⁵

¹² Hildebrandt and Darcangelo, *Life on the River*, 14; Sundahl quoted in Deur et al., *The Wintu Homelands of Clear Creek*, 17.

¹³ Sundahl, “Cultural Patterns and Chronology in the Northern Sacramento River Drainage,” 94–98, 103.

¹⁴ Hildebrandt and Darcangelo, *Life on the River*, 15–17; Deur et al., *The Wintu Homelands of Clear Creek: Ethnographic Accounts of Whiskeytown National Recreation Area*, 18.

¹⁵ Hildebrandt and Darcangelo, *Life on the River*, 15–17; Deur et al., *The Wintu Homelands of Clear Creek* 17; Holschuh, et al., “Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area,” 24.

Shasta Pattern, Post 1,500 B.P.

Around 1,500 years ago, the Penutian-speaking Wintu peoples entered the upper Sacramento River basin from the north, and two significant technologies appeared: the bow and arrow, and a more comprehensive approach to salmon fishing. As the Wintu peoples more fully embraced the riverine environment, they also brought a completely new settlement pattern. They lived in permanent villages, emphasized food storage, and did not follow the mobile way of life of the earlier peoples. As the Wintu peoples were more sedentary, they could accommodate a richer material culture. As a result, trade networks intensified.¹⁶

Some archeologists state that two distinct patterns rather than one made an appearance around this time, reflecting on one hand the introduction of the bow and arrow and, on the other hand, the new emphasis on food storage. Furthermore, these archeologists offer different dates for when the patterns emerged. The so-called Tehama Pattern is associated with the bow and arrow and is assigned a sliding arrival date of around 1,800 to 1,500 years ago. The so-called Augustine Pattern is linked to the coming of the Wintu peoples which is posited to have occurred around 1,500 to 1,200 years ago. The two patterns reflected a classic divide in resource-gathering strategies: one representing a forager strategy in which a mobile group expends more energy going to the resource, the other representing a collector strategy in which a sedentary group expends more energy in food processing. As the two distinct patterns merged relatively quickly into one, some archeologists prefer to lump them together and refer to an overall Shasta Pattern starting around 1,500 B.P. Sundahl found that the Wintu peoples, with their permanent villages and food storage, multiplied quickly and soon dominated the salmon resource, so that Tehama Pattern peoples were either displaced or absorbed by the Augustine (or Shasta) Pattern. Hildebrandt and Darcangelo, who review the cultural chronology of the region as a sort of “deep time” preface to their study of the Wintu, dismiss the two coinciding Tehama and Augustine patterns in favor of the so-called Shasta Pattern, and state simply that the Wintu arrived around 1,500 B.P., at which time “several large village sites were established along the Sacramento River and its major tributaries, and evidence shows the introduction of an entirely new set of artifacts.”¹⁷

The Shasta Pattern made a strong imprint on the archeological record. The permanent village sites are marked by house-pit depressions, cooking features, and burial sites. Middens, or waste sites, associated with the village contain the shells of freshwater shellfish, butchered mammal bones, the bones of fish (mostly salmon), and the charred remains

¹⁶ Hildebrandt and Darcangelo, *Life on the River*, 19.

¹⁷ Deur et al., *The Wintu Homelands of Clear Creek*, 18–19; Holschuh, et al., “Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area,” 24–25; Hildebrandt and Darcangelo, *Life on the River*, 17. For more on the debate around the origins of the Shasta Complex, see Alfred Farber, “Alternative Approaches to the Shasta Complex and Adjacent Expressions: Assemblages, Cultural Ecology, and Taxonomies,” *Journal of California and Great Basin Anthropology* 7, no. 1 (1985): 75–88.

of acorns, grey pine nuts, and manzanita berries. The middens not only reveal much about the Wintu diet, as Hildebrandt and Darcangelo remark they “clearly show that mobile settlement systems were a thing of the past after 1500 B.P., as the local population settled into permanent villages made possible by large-scale storage of salmon and acorns as well as interregional exchange of other important commodities.” The bow and arrow led to another distinct change in points (arrowheads). Fishing involved a variety of new tools including bone harpoons and fishhooks.¹⁸

Late in the Shasta Pattern, about 300 to 400 years ago, two types of shell artifacts appear in the archeological record. They are *dentalia* (tooth-shells from mollusks) and clam-disk beads. These items were worn on necklaces by men and used as currency—not only by Wintu but among other groups up and down the Pacific Coast region, too. *Dentalia* were tubular and slightly curved, resembling miniature elephant tusks. Clam-disk beads were small, flat disks with a hole drilled in the center, made from *Saxidomus* clam. The latter were more common among the Wintu.¹⁹

Based on archeological investigations, it seems that the Wintu first established villages along the Sacramento River between present-day Redding and Cottonwood. From there they spread outward as their population grew, forming villages on the upper Sacramento River, the McCloud River, and the Trinity River and their major tributaries. They intermarried with the earlier resident peoples, spreading their language and culture. The Wintu expansion was still in progress at the time of contact with Euromerians.²⁰

The Archeological Record in the Clear Creek Drainage

Archeological investigations in the Clear Creek drainage essentially began with salvage archeology conducted in advance of the Whiskeytown dam and reservoir construction. The salvage archeology project, which included Trinity Reservoir, was directed by Adán Treganza, head of the Department of Anthropology at San Francisco State College.²¹ Concentrating his Clear Creek investigation around the proposed lakeshore of the Whiskeytown reservoir, Treganza recorded 35 prehistoric sites, 24 of which would be covered by the reservoir. One site in the inundation zone was thoroughly excavated,

¹⁸ Hildebrandt and Darcangelo, *Life on the River*, 17; Deur et al., *The Wintu Homelands of Clear Creek*, 18–19; Holschuh, et al., “Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area,” 25.

¹⁹ Elaine Sundahl, “Archaeological Evidence for Wintu Prehistory,” in Alice R. Hoveman, *Journey to Justice: The Wintu People and the Salmon* (Redding, CA: Turtle Bay Exploration Park, 2002), 83.

²⁰ Sundahl, “Archaeological Evidence for Wintu Prehistory,” 83.

²¹ W. D. Hohenthal, “Adán Eduardo Treganza, 1916–1968,” *American Antiquity* 34, no. 4 (1969): 464.

a Wintu habitation site nearby the confluence of Whiskey, Brandy, and Clear creeks containing house-pit depressions and middens and evidence of salmon harvesting. The salvage archeology also revealed pre-Wintu occupation sites of much greater antiquity, evident from the presence of hand stones and milling stones but no mortars and pestles in the artifact assemblages from these sites. In 1960, Adán Treganza and Martin Heicksen published *Salvage Archaeology in the Whiskeytown Reservoir Area and the Wintu Pumping Plant*, the first work of archeology specific to the area.²²

As the NPS acquired land for the recreation area, more archeological surveys took place in the late 1960s and 1970. Some of the surveys were below the damsite and some were at higher elevations within the park, including at Coggins Park on the shoulder of Shasta Bally. Archeologists Keith Johnson and Lucy Skjelstad recorded seven prehistoric sites at this time. Notably, the site recorded as CA-SHA-177, located on the north bank of Paige Boulder Creek, was interpreted to have been a seasonal camp used for hunting by the Wintu people in late prehistory. The site contains house-pit depressions and a midden three feet deep that is overlaid by a thin lithic scatter. Another site, CA-SHA-192 located within the present Camden-Tower House Historic District, also reflected late prehistoric Wintu occupation as well as pre- and post-contact Wintu occupation. The archeological site was determined to be eligible for listing on the National Register of Historic Places.²³

Numerous archeological investigations were conducted in the park in the 1980s. These projects were mostly driven by Section 106 compliance under the National Historic Preservation Act. Some were focused in the area of the Camden-Tower House Historic District, driven by NPS initiatives to rehabilitate the Camden House and develop the area for historic interpretation. Some were connected to Caltrans projects along the Highway 299 corridor. The archeologists involved in these projects included Donald Manuel, Suzanne Baker, Valerie Levulett, N. B. Thompson, Ann King Smith, and Janet Eidsness, among others. Further investigation of the site CA-SHA-192 (renumbered CA-SHA-192/479) revealed that there were much older occupations of the site dating back to perhaps 5,000 B.P. Borax Lake Pattern peoples occupied hunting camps along Clear Creek in summer and fall. Around 2,500 B.P. the seasonal camp was moved to a knoll.²⁴

²² Jerome H. King, William R. Hildebrandt, and Sharon A. Waechter, *Cultural Resources Overview for Northwestern California*, report prepared for Bureau of Land Management (Davis, CA: Far Western Anthropological Research Group, Inc., 2016), 26; Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 45.

²³ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 46.

²⁴ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 47.



Map 2. Map of Whiskeytown National Recreation Area showing present and historical waterways.
 (Courtesy of Harris Environmental Group, Inc.)

The principal investigator in the vicinity of Tower House was Suzanne Baker, founder and principal of Archaeological/Historical Consultants, a cultural resource management (CRM) firm in Oakland. In the early 1990s, Baker was contracted to conduct extensive archeological excavations at the previously recorded sites CA-SHA-192, CA-SHA-195, and CA-SHA-479 to determine new site boundaries and eligibility for listing, since the archeological resources overlapped with the busy Camden-Tower House Historic District and needed protection. Although the investigations at site CA-SHA-195 recovered only a sparse yield of artifacts and found that the site was so heavily disturbed that it was not eligible for listing, nevertheless the work by Baker added to archeologists' knowledge of early prehistory in the area. Based on artifact typology, radiocarbon dating, and obsidian hydration analysis, it is believed that Late Borax Pattern peoples occupied the site as early as 6640 B.P. The site was probably occupied intermittently and seasonally until about 400 B.P. with the most intensive use occurring over a middle period from 3,275 B.P. to 1,710 B.P. Hunting of deer and other large game was the major economic activity at this site, while seed and acorn collecting was also important in the middle period, with fishing being a secondary pursuit. Use of the site fell off considerably after 1,710 B.P.²⁵

In 1993, the NPS contracted for archeological survey of select upland areas in the park to increase knowledge of prehistoric land-use in the park's higher elevations. The archeological team surveyed some 1,300 acres and recorded seven prehistoric sites, including three (CA-SHA-2004, 2005, and 2006) at higher elevations. The sites provided evidence of a variety of foraging activities aimed at both plants and animals and reaching back in time about 3,000 years. The other four sites were at lower elevations along creeks, and may have reflected foraging activities based out of village sites that are now under the lake.²⁶

Archeological surveys within the park have continued up to the present, mostly pursuant to Section 106 compliance. Some were prompted by activities of the utility company, PG&E, and tended to be linear surveys along powerline corridors. Others were tied to prescribed burns and post-fire mitigations carried out by the NPS. Taken altogether, the archeological investigations within Whiskeytown National Recreation Area have exposed an archeological record that extends back thousands of years into the prehistoric past. Many of the archeological resources in the park predate the arrival of the ethnographically-known Wintu.²⁷

²⁵ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 51–52.

²⁶ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 52.

²⁷ Holschuh, et al., "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area," 2, 53.

Ethnography and the Wintu

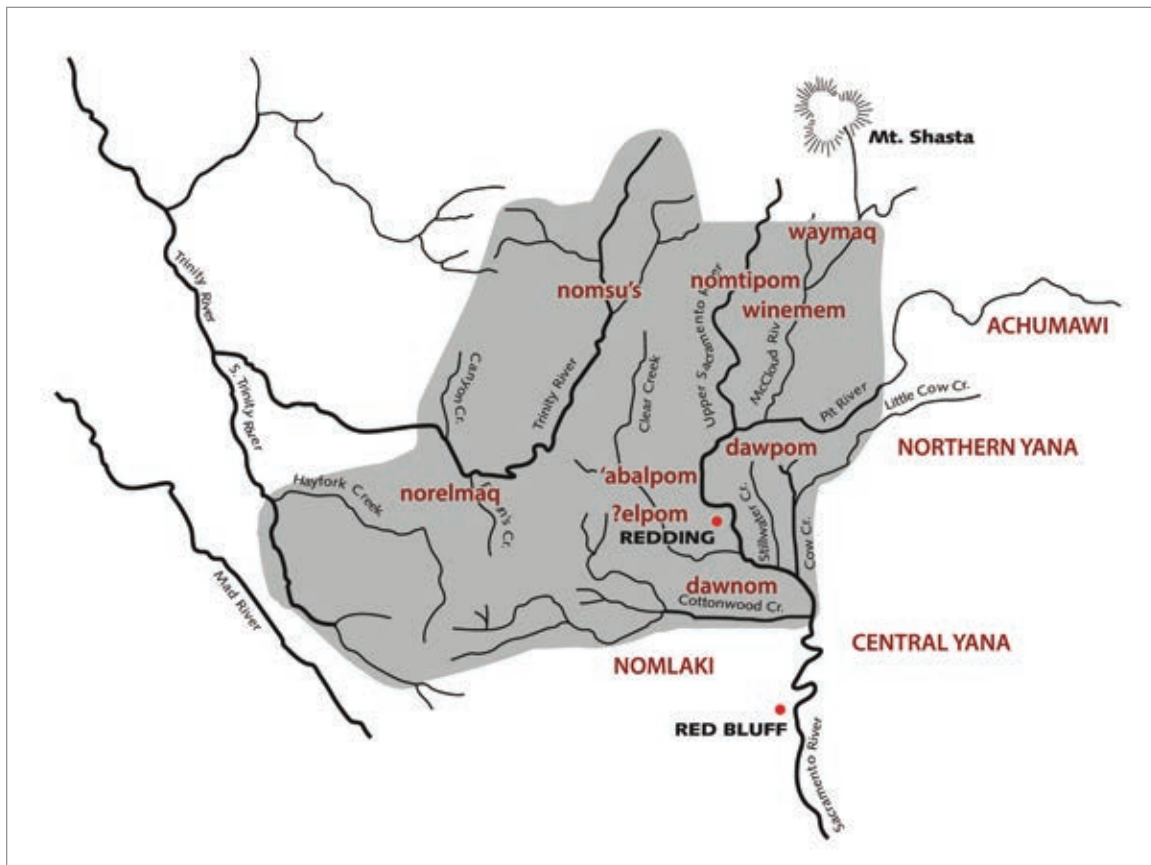
Archeology and ethnography compose two branches of anthropology. While archeologists study the physical artifacts left behind by prehistoric cultures, ethnographers interview living descendants of cultural groups to gather knowledge of past (and present) lifeways. In the cultural chronology of the upper Sacramento River basin, the Wintu occupy a unique position inasmuch as their long presence in the area began in late prehistoric times and has continued through the historic period down to the present. The descriptor “ethnographically-known,” as in “the ethnographically-known Wintu,” is used by anthropologists to highlight the fact that many traditional cultures such as the Wintu are studied by anthropologists through both lines of inquiry, ethnography as well as archeology.

Ethnographic studies of California’s Indigenous people began in the late nineteenth century and proliferated with Alfred Kroeber’s founding of the University of California’s Department of Anthropology in Berkeley in 1901. Kroeber and his colleagues believed the total disappearance of California Indians and their cultures was inevitable, and they prioritized documenting the traditional lifeways of these vanishing people. Kroeber’s project was to reveal to anthropology the amazing diversity of California Indians. As the California Indians were divided into so many separate polities, spoke so many different languages, and lived in such diverse environments around the state, they were a singular puzzle to anthropology. Kroeber’s interest centered on understanding the world of the California Indians before contact with Euromericans. His approach would later be called a “memory culture methodology.” Kroeber and his assistants sought out elders who could speak to what things were like in their childhood back in the mid-nineteenth century. These cultural informants were mined for information they held in their memory. According to this methodology, the ethnographer was not interested in observing the culture in the present day, only in salvaging memories of what the culture was like a half century or more in the past. The supposition in this approach was that information captured in the interviews not only accurately described things in the mid-nineteenth century, it also reflected what the culture was like for perhaps hundreds of years before that.²⁸

Kroeber led an effort to make a comprehensive study of California Indians and map the many native languages and cultures. Kroeber synthesized the amassed ethnographic data in a thousand-page bulletin, “Handbook of the Indians of California,” which was first completed in 1918, revised in 1923, and finally published in 1925. But the work of data collection was far from over. In the next two decades, the Department of Anthropology at the University of California turned out a growing number of Ph.D.s under Kroeber’s

²⁸ King et al., *Cultural Resources Overview*, 25–26; Lightfoot and Parrish, *California Indians and Their Environment*, 72–78. Another potential source on the Wintu, unfortunately not checked for this study, is the Grace Nicholson papers at the Huntington Library, San Marino, CA. As one of the most important collectors and dealers of arts and crafts of California Indians at the turn of the twentieth century, Nicholson put her in contact with many tribal communities and she kept voluminous records.

direction, many of whom focused their work on ethnographic study of a particular California Indian group. Among Kroeber's later graduate students was Cora DuBois, whose outstanding ethnographic study of the Wintu was published in 1935. The work is considered one of the best of its kind in California, and endures today almost a century later as an invaluable source.²⁹



Map 3. Wintu groups and locations.
(Turtle Bay Exploration Park.)

As anthropology continued to develop, later generations of researchers raised concerns about the memory culture methodology Kroeber and his students employed. It seemed to discount how much the aboriginal culture had already changed in the early period of European colonization and in the gold rush era, and it assumed that pre-contact

²⁹ Julian H. Steward, *Alfred Kroeber* (New York: Columbia University Press, 1973), 12–14; Hildebrandt and Darcangelo, *Life on the River*, 27; A. L. Kroeber, "Handbook of the Indians of California," *Bureau of American Ethnology Bulletin* 78 (Washington, DC: Government Printing Office, 1925), 351–63; Cora DuBois, "Wintu Ethnography," *American Archaeology and Ethnology* 36 (1935–1939): 1–148; Frank R. LaPena, "The Wintu," in *Handbook of North American Indians*, gen. ed. William C. Sturtevant, vol. 8, *California*, ed. Robert F. Heizer (Washington, DC: Smithsonian Institution, 1978), 324–40.

or late prehistoric cultures were basically static or had undergone very little change over the preceding centuries. Furthermore, as Lightfoot and Parrish explain, “There was a tendency to conflate or collapse ethnographic observations into a single monolithic account, a problem that makes using this data difficult in research that considers long-term, temporal, or diachronic changes.”³⁰ In short, the ethnographic data collected in the early twentieth century, used judiciously, was a vital complement to the archeological record, but archeology revealed cultural change over time in a way that ethnographic accounts could not.

In the second half of the twentieth century, published studies of Wintu language and oral traditions added another dimension of knowledge about the prehistoric human experience in the vicinity of Whiskeytown National Recreation Area. In the 1966 book *A Bag of Bones: The Wintu Myths of a Trinity River Indian*, Grant Towendolly shared traditional stories of his ancestors with Marcell Masson. In 1989, the University of California’s linguistics series published *Wintu Texts*, in which Alice Shepherd presented dozens of Wintu tales—in both the Wintu and English languages—as told by Grace McKibbin and Carrie Dixon. As anthropology gained a more complete picture of the nearly one hundred separate languages spoken by California Indians before the arrival of the first Spanish missions, Michael Moratto provided a new synthesis of “Linguistic Prehistory” in *California Archaeology* in 1984, providing an updated regional context for the Wintu language.³¹

Around this time, in the late 1970s and early 1980s, the NPS began to deepen its commitment to American Indians and their cultural interest in national park lands. The NPS established an Anthropology Division under the direction of Dr. Muriel Crespi. Later, the Anthropology Division became the Ethnography Program. An early focus of this program was to learn about traditional cultural practices that overlapped with national park lands. Spurred on by the findings as well as by growing tribal activism, the NPS’s longstanding commitment to historic preservation and cultural resources management broadened to include protection of American Indian sacred sites and identification of traditional cultural properties. As park managers came to acknowledge contemporary native people’s traditional ecological knowledge and abiding cultural attachment to the land, they sought formal, authentic identification of the park’s “culturally affiliated tribes.” At Whiskeytown National Recreation Area, the evolution of NPS policy and management through the last decades of the twentieth century led to a series of NPS-contracted reports.

³⁰ Lightfoot and Parrish, *California Indians and Their Environment*, 78.

³¹ Grant Towendolly, *A Bag of Bones: The Wintu Myths of a Trinity River Indian*, edited by Marcell Masson (Healdsburg, CA: Naturegraph Press, 1966); Grace McKibbin and Carrie Dixon, *Wintu Texts*, ed. Alice Shepherd, *University of California Publications in Linguistics* 117 (Berkeley: University of California Press, 1989); Moratto, *California Archaeology*, 529–74. Also see Kenneth W. Whistler, “Wintu Prehistory: An Interpretation Based on Linguistic Reconstruction of Plant and Animal Nomenclature,” *Berkeley Linguistic Society Proceedings* 3 (1977): 157–74; Alice Shepherd, “Notes on the Wintu Shamanic Jargon” and Dorothea J. Theodoratus and Frank LaPena, “Wintu Sacred Geography,” in *California Indian Shamanism*, eds. Lowell John Bean, *Ballena Press Anthropological Paper* 39 (Menlo Park, CA: Ballena Press, 1992), 185–225.

In 2000, Geri Emberson completed *Ethnographic Overview and Traditional Use Study of American Indian Affiliations Within the Whiskeytown National Recreation Area*. In 2001, Russell Bevill and Elena Nilsson of Mountain Anthropological Research and USR Corporation submitted *Cultural Resources Overview of the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area*. New ethnographic and archeological overviews for the park were produced in more recent years. Dana Holschuh, Laura Burghardt, and Jonathan Damp of Harris Environmental Group completed *Archaeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area* in 2018. Douglas Duer, Rochelle Bloom, Katie Wynia, and Jamie Hebert of Portland State University compiled *The Wintu Homelands of Clear Creek: Ethnographic Accounts of Whiskeytown National Recreation Area* in 2020.³²

The Wintu Before Contact

The Wintu people are one of three Wintun-speaking groups who inhabit California's Great Central Valley. Aboriginally, the Wintun-speakers were divided into the Wintu people in the north, the Patwin in the south, and the Nomlaki (also called the central Wintun) in the middle. The three groups' languages were unintelligible to one another, and moreover, there were dialectical variations within each language. Indeed, shared language was not the primary attribute forming the social group. The most important factor in group formation was the family, followed by the village, which constituted a social, political, and economic unit. Beyond the village group, the common tie of language was not a strong unifying factor between Wintu speakers. Members of a Wintu village group in the Trinity River might never encounter members of a Wintu village group located in the upper Sacramento River basin, nor even know of its existence.³³

Around the time of European American contact, the Wintu were divided into nine subgroups or subareas. Kroeber defined the social group inhabiting each subarea as a "tribelet," but it was a loosely coordinated polity that existed over a wider area beyond the village group. The tribelet laid claim to a territory, but even the territorial boundaries of

³² See Geri D. Emberson, "Ethnographic Overview and Traditional Use Study of American Indian Affiliations Within the Whiskeytown National Recreation Area," report prepared under contract for the National Park Service, 2000; Russell Bevill and Elena Nilsson, with contributions by Donald L. Hardesty, Denise Bradley, and Lisa Westwood, *Cultural Resources Overview of the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California*, May 2001, prepared by Mountain Anthropological Research and USR Corporation, Chico, CA for the National Park Service; Holschuh, Burghardt, and Damp, *Archaeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area*, December 2018; Douglas Duer, Rochelle Bloom, Katie Wynia, and Jamie Hebert, *The Wintu Homelands of Clear Creek: Ethnographic Accounts of Whiskeytown National Recreation Area*, 2020, via cooperative agreement between the National Park Service and Portland State University's Department of Anthropology and Office of Applied Anthropological Research.

³³ Duer et al., *The Wintu Homelands of Clear Creek*, 33–35.

each subarea were indistinct. Within each subarea, there might be a principal village with a head chief who exerted some amount of influence over the whole subarea. Du Bois found that “such a sphere of influence was in no way formalized,” and in some cases devolved to a number of subchiefs. “Chieftainship among the Wintu,” Du Bois wrote, was “a loose and extremely malleable institution.”³⁴

The nine Wintu tribelets and their subareas around the time of Euramerican contact were the Nomtipom (upper Sacramento Valley), Winnemem (McCloud River), Dau-pom (Stillwater), Elpom (Keswick), Klabalpom (French Gulch), Nomsus (upper Trinity Valley), Norelmuk (Hayfork), Dau-nom (Bald Hills), and Waimuk (upper McCloud Valley). The last named subarea is considered by researchers to be somewhat problematic. Ethnographic information collected on the Waimuk tribelet and subarea was scant, as the Waimuk people seem to have been merging with the Okwanuchu people. According to one of Du Bois’s informants, the remnant Waimuk joined the Shasta at the time of the Modoc War (1872–1873) and were exterminated by the Modoc in a retaliatory raid. The Waimuk subarea was included in the Wintu territory in the first comprehensive map of California Indian territories made by Stephen Powers in 1877, but it was omitted from the Wintu territory in subsequent maps made by Kroeber, Du Bois, and Wintu artist and ethnographer Frank LaPena in his 1978 entry in the Smithsonian *Handbook of North American Indians*. Deur et al. discussed all the subarea boundaries in great detail in their recent ethnographic study prepared for Whiskeytown National Recreation Area.³⁵

While the Wintu differed from the cultures preceding them in the way they formed villages and relied on food collection and storage, like those earlier cultures the Wintu subsisted entirely on hunting, fishing, and gathering edible plants. They did not practice agriculture. Yet, more in common with farming cultures than hunting and gathering cultures, the Wintu did develop socially stratified communities with hereditary chiefs, shamans, specialized craftsmen, and a division of labor between the sexes that, by some accounts, imposed a greater burden on the women than the men. Because they were sedentary villagers, with political and religious leaders in each village, and were not as egalitarian as generalized hunter-gatherers, anthropologists describe the Wintu culture as a complex hunter-gatherer culture.³⁶

The chief was a hereditary role, though the custom of heredity was not inflexible. Normally, the chieftainship passed from father to eldest son, but if the eldest son was not suitable it could pass to another son, a nephew, a brother, or another male relative. The chief had numerous responsibilities, including settling disputes, organizing large

³⁴ Deur et al., *The Wintu Homelands of Clear Creek*, 36; Du Bois, “Wintu Ethnography,” 34.

³⁵ Hildebrandt and Darcangelo, *Life on the River*, 28; Du Bois, “Wintu Ethnography,” 6–8; Deur et al., *The Wintu Homelands of Clear Creek*, 37–57, and map on p. 34.

³⁶ Hildebrandt and Darcangelo, *Life on the River*, 38; Du Bois, “Wintu Ethnography,” 21–24, 29–34; Lightfoot and Parrish, *California Indians and Their Environment*, 4.

gatherings, and making war. The chief had to be a good talker—an inspirational speaker to his own people, a clear communicator with other groups, and gregarious with everyone in the village to stay informed and well-liked. As Du Bois wrote, “A recommendation for a chief was: ‘he talks to everybody.’” A chief had to be able to get along with the subchiefs. If friction developed, the subchief and his followers might have to go live in a different place.³⁷

Shamans had an important role as intercessors with the supernatural spiritual power. They marshaled their special powers by singing and dancing. Men and women could become shamans. Initiation ceremonies took place in an earthen lodge where the initiates would dance all night until they received their power. Once they acquired the power, shamans were expected to help the village by doctoring the sick and sometimes directing village affairs such as a hunt through prophesy.³⁸

Those who displayed an exceptional talent for making certain objects, such as fishing equipment or bows and arrows, could cultivate a role as craftsmen. Recognized craftsmen were encouraged to produce more of the objects than needed for themselves, and when they did so they were relieved of certain drudge work such as gathering firewood. But the specialization of labor was not total; no craftsman was able to focus exclusively on his craft, nor was any hunter or fisher supplied by a craftsman ever completely excused from making his own hunting or fishing implements.³⁹

Wealth tended to accrue to the chiefs, subchiefs, shamans, and craftsmen in the village. A list of the most valuable items in Wintu material culture might include bow and arrows, elk-skin armor, clam-disk money, and *dentalia*. Other valuable items were the skins of martin, fisher, otter, and bear, and quivers. Woodcock heads and woodpecker scalps, valued for their bright hues, were used in regalia. Also valued were obsidian knives, obsidian-tipped spears, and buckskins. Wealth was demonstrated by having these items in one’s possession or by giving them away. A chief showed off his wealth by having many wives. Moreover, when a chief had many wives he had a lot of women collecting and processing food for the family, and extra food could be traded for material items or currency. Clam beads and *dentalia* were valued chiefly because they worked as currency for purchasing other items. In time of want, currency could be exchanged for food.⁴⁰

The general shape of the Wintu village is known from archeology as well as ethnography. Villages were most often situated on flats beside streams. Village populations probably ranged from twenty to two hundred members. The number of houses could range from five to fifty. Houses were made of bark and were conical in shape, about nine feet in diameter, and composed of vertical poles with smaller stringers lashed together. House pits were

³⁷ Hildebrandt and Darcangelo, *Life on the River*, 38; Du Bois, “Wintu Ethnography,” 30–31.

³⁸ Hildebrandt and Darcangelo, *Life on the River*, 40–41.

³⁹ Du Bois, “Wintu Ethnography,” 21–23.

⁴⁰ Hildebrandt and Darcangelo, *Life on the River*, 38, 41.

one to three feet deep, with the excavated material being banked up around the perimeter to form a raised footing. The exterior was covered with bark or pine boughs. Each house generally contained about three to seven family members. All but the smallest villages usually had a communal earth lodge as well to accommodate larger gatherings.⁴¹

Most Wintu left the main village in spring and summer to move to temporary camps in upland areas for gathering berries, tubers, and seed crops, hunting game, and collecting grasshoppers. In the fall, the people gathered acorns and fished for salmon. Back in the village again, much time was given to food preparation, and those activities along with basket weaving and tool making extended from fall into winter.⁴²

The Wintu and the Environment

With other California Indian peoples, the Wintu sustained a relatively dense population solely on the bounty of plants and animals that they harvested from the wild. It seems that the population remained fairly stable for generation after generation and existed in equilibrium with what the environment could support. In their sedentary mode of living in winter villages, the Wintu developed methods of food processing and storage that gave them modest surpluses—enough so that when a family was down on its luck or when a whole village was pressed for food after an exceptionally hard winter the food supply could be redistributed to carry the family or the village through its time of shortage without much famine. The system of food sharing was primarily local. This was in contrast to other late prehistoric Indian cultures in Mesoamerica and the Mississippi Valley where food distribution systems developed over a wide area, with administrative and population centers drawing a food supply from a hinterland of many farm hamlets. For the Wintu, all the food they consumed came from hunting, fishing, and gathering within a few miles of the winter village.⁴³

There is some debate in anthropology about whether California Indians' intensive harvesting and processing of wild plants actually constituted a "proto-agriculture" that was leading toward farming. The ethnobotanist M. Kat Anderson added fuel to the debate with her important book, *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*, published in 2005. Through extensive ethnographic

⁴¹ Hildebrandt and Darcangelo, *Life on the River*, 43; Du Bois, "Wintu Ethnography," 28–29.

⁴² Hildebrandt and Darcangelo, *Life on the River*, 31; LaPena, "The Wintu," 336–39.

⁴³ Arthur F. McEvoy, *The Fisherman's Problem: Ecology and Law in the California Fisheries, 1850–1980* (New York: Cambridge University Press, 1986), 19; Lightfoot and Parrish, *California Indians and Their Environment*, 4–5, 12; M. Kat Anderson, *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources* (Berkeley: University of California Press, 2005), 1–6; M. Kat Anderson, Michael G. Barbour, and Valerie Whitworth, "A World of Balance and Plenty: Land, Plants, Animals, and Humans in Pre-European California," *California History* 76, no. 2/3 (1997): 12–47.

research, Anderson brought to light the many ways that California Indians practiced horticulture and actually enhanced native plant production by a variety of techniques that included pruning, coppicing, harrowing, sowing, weeding, burning, digging, thinning, and selective harvesting. Anderson characterized the cultural practices as a successful “middle way” between generalized hunting and gathering and a full-blown farming culture.

Anthropologists are careful to distinguish between *horticulture* and *agriculture*, with the latter involving genetic manipulation or domestication of a plant species and concentration on domestic crop production. Kent G. Lightfoot, in *California Indians and Their Environment*, stresses that *agriculture* leads toward a specialty crop (such as Indian corn), whereas the California Indians’ form of *horticulture* did just the opposite, maintaining an emphasis on plant diversity. Maintaining diversity in the subsistence base was key to how California Indians lived at relatively high population density in their environment. Along with food storage, the ability to draw on a diversity of resources afforded them a safety net for getting through hard times. Lightfoot insists that this distinction between horticulture and agriculture is an important one, because it framed how California Indians related to their environment. Rather than being on a trajectory toward farming, they had developed a way of creating a stable food supply without farming. “California Indians,” he writes, “remained welded to their cultural traditions of gathering, fishing, and hunting.”⁴⁴ Anderson has a similar take to Lightfoot’s, describing the Indigenous people’s outlook on nature as a “calculated, *tempered use* of nature” that protected plant diversity while giving them a good measure of food security. “These harvest and management practices,” she says, “on the whole, allowed for sustainable harvest of plants over centuries and possibly thousands of years.”⁴⁵

Acorns were an important food source for the Wintu, as they were for many peoples in the interior of California. Hildebrandt and Darcangelo describe several ways in which the Wintu gathered, processed, and consumed acorns:

When acorns began ripening in the fall, family groups visited the groves for the harvest. Acorns remaining on the trees were preferred over those on the ground, so men would climb the trees and shake off the crop. The unshelled acorns were carried back to the village, where they were processed for immediate consumption or stored in the shell and placed in bark-lined pits. Those to be eaten immediately were cracked, shelled, and pounded using a stone pestle and a hopper (basketry) mortar. . . . Once the acorn meal was produced, it had to be leached of its toxic tannic acids. This was accomplished by placing the meal in a sand pit and pouring water through it for several hours.

⁴⁴ Kent G. Lightfoot, “They Are Not Farmers,” in Lightfoot and Parrish, *California Indians and Their Environment*, 124–40.

⁴⁵ Anderson, *Tending the Wild*, 1.

The leached meal could then be mixed with water and boiled into a thick soup using a basket and hot rocks. Acorn bread was also made by heating a rock-lined pit, covering the rocks with maple leaves, and placing the dough on the leaves. The dough was then covered with more leaves, hot rocks, and earth, and an additional fire was usually built on top. After baking overnight, an acorn loaf with a rich, oily consistency was ready. The bread could keep for months if needed, however it was typical for the Wintu to bake every week or two.⁴⁶

The Wintu's environment supplied them with many types of acorns. Black-oak acorns were the best and were plentiful. Typically, these acorns were allowed to mold, then soaked with pine needles for a week or two until they were sweet, then boiled and eaten as a relish. White-oak acorns were gathered and consumed while still green. They were sweet and needed little leaching. They were eaten principally in a soup. Scrub-oak acorns were found chiefly in the upper McCloud River valley and in uplands. When the preferred crop of acorns was poor, the Wintu had more options: post-oak acorns were found chiefly at higher elevations, and valley-oak acorns in the lowlands. Live-oak acorns were gathered only as a backup food source. These acorns could be preserved for up to eight months in seepage holes covered with bark and rock. If needed, they were boiled in the shell and eaten whole.⁴⁷

Fire

The Wintu employed fire to stimulate plant growth and enhance wildlife populations. Light burning of the forest created forest openings and increased the amount of sunlight reaching the forest understory and floor. Smoke and ash from the fire regenerated the soil. These changes tended to increase plant diversity. Openings in the forest provided more forage for deer and other wildlife and improved hunting. Burning practices were shaped by learning which methods were beneficial and which were not. The Wintu, with other California Indians, conducted light burning under favorable conditions so that the fires would not turn into huge conflagrations, and usually they were successful in limiting the burn area and ensuring that the fire did not burn into the overstory or get so hot that it killed bulbs and seeds in the ground. From a modern forestry point of view, the light burning resulted in small, frequent, low-intensity fires. These were in contrast to large, infrequent, high-intensity fires that might occur where a dense forest understory was allowed to develop over many years and then catch fire under dry conditions—as has happened in recent history. Some anthropologists believe that California Indians, as fire managers, practiced a rotational system of burning so that any given patch of forest did not go overlong without fire. They call the intentional light burning by California Indians “pyro-diversity management,” and they call the forest's fire-return cycle an

⁴⁶ Hildebrandt and Darcangelo, *Life on the River*, 37–38.

⁴⁷ DuBois, “Wintu Ethnography,” 19–20.

“anthropogenic fire regime.” The anthropogenic fire regime was mingled with the natural fire regime of occasional lightning-caused fires. The modified fire regime, affecting the forest over hundreds of years, had potent consequences in shaping the composition and structure of plant communities.⁴⁸

Fisheries

Fisheries were an important resource for many California Indians. Most coastal groups caught smelt and other surf fish. Some coastal groups had access to sheltered bays and inlets from which they harvested shellfish. Inland groups and groups located along California’s north coast harvested salmon. Owing to the abundance of salmon in the Sacramento River, the Aboriginal population of California was larger in the Sacramento Valley than anywhere else in the state. The Wintu were among the native groups most favored by the salmon resource. They lived at the southern limit of the anadromous salmon’s range.⁴⁹

California has two native species of Pacific salmon, the chinook and the coho, as well as one other anadromous fish, the steelhead trout. Only the chinook salmon and steelhead inhabit the waters of the Sacramento River basin. (Kokanee salmon, a landlocked form of the sockeye salmon, has been introduced in Whiskeytown Lake.) The anadromous nature of these fish means that they spend part of their life cycle in the ocean, returning upriver to spawn in the same river or tributary stream from which they came. Salmon make the journey home just once and then they die. Steelhead may make multiple journeys between inland waters and the sea during their lives. Juvenile salmon will swim downriver to the sea when they are still quite young. Steelhead will spend from one to three summers in their freshwater habitat before making the journey to saltwater. Steelhead are also more flexible than salmon in making their way back upstream; they may lay over in a cold pool during a spell of hot weather and resume their journey when conditions improve again. The salmon migrations upstream are more relentless. The migrations are called “runs” and the runs are named after the season in which they occur: spring, fall, or winter. The spring run of chinook salmon up the Sacramento River was historically the largest run—so large, it was said, that horses would be afraid to cross the river.⁵⁰

As stated by environmental scientists Matthew J. Deitch and G. Mathias Kondolf, salmon stocks in California may be considered something of an Ice-Age relic. Salmonids are northern-latitude species that extended their range to California during the Pleistocene when a colder climate prevailed. The cold-water fish survived in California rivers into the

⁴⁸ Lightfoot and Parrish, *California Indians and Their Environment*, 10, 97–102.

⁴⁹ McEvoy, *The Fisherman’s Problem*, 23.

⁵⁰ McEvoy, *The Fisherman’s Problem*, 22; Matthew J. Deitch and G. Mathias Kondolf, “The Incendiary Mix of Salmon and Water in Mediterranean-Climate California,” in *Sustainable Water: Challenges and Solutions from California*, ed. Allison Lassiter (Oakland: University of California Press, 2015), 269–75.

Holocene, in a warmer climate, thanks to the refrigerating effect of California's high mountain ranges, which collect snow in winter and provide a year-long charge of cold water into California's rivers. Without the cooling effect of the snowmelt, California's rivers are too warm. This helps explain why salmon have drastically declined under the influence of water diversions, dams, and a warming climate in the past century and a half and why they remain an endangered species despite conservation efforts to prevent over-fishing and to mitigate environmental changes.⁵¹

Anthropologists have tried to estimate the size of the salmon harvest in prehistoric times. Reviewing these estimates and comparing them against records of commercial harvests in the late nineteenth century, environmental historian Arthur F. McEvoy finds that there is evidence "that Indian harvests were at least comparable to those of the commercial fishers who followed them, and thus that Indian fishing probably did exert significant pressure on the resource." Unlike the commercial fishing industry, however, the prehistoric Indian cultures were able to harvest the salmon in ways that were sustainable for generation after generation.⁵²

One way that California Indians were able to manage harvest levels was by asserting tribal territories and insisting that the tribe had exclusive rights to use resources within the tribal area. If the enforcement of boundaries and exclusive rights was never perfect or complete, it nonetheless established each tribe in the role of steward of the resource in its possession, thus avoiding a "tragedy of the commons" where there was no incentive to conserve. A similar custom of exclusive rights applied at the village community and the family unit levels, as a village might claim a stretch of river next to the village and a family might claim a certain fishing place. The claims to exclusive use amounted to a kind of property claim, though to put it roughly in English common law terms it more closely resembled a land trust than, say, a fungible land title held in fee simple.⁵³

The Wintu fished for salmon both on an individual basis and as a community endeavor. Individual men mostly fished for salmon using a harpoon. Often the harpooning was done from a structure built out in the stream. The "salmon house" was a platform over the water covered with brush; it allowed a man to position himself horizontally over the water, with harpoon at the ready, screened from the sun in a way that made it easier to

⁵¹ Deitch and Kondolf, "The Incendiary Mix of Salmon and Water in Mediterranean-Climate California," 269–70. Various environmental changes in the Sacramento River impacted the salmon. Ronald M. Yoshiyama mentions the following: "unfavorably warm water released from Shasta Reservoir during dry years, polluted irrigation runoff from agricultural lands, toxic wastes from the Iron Mountain Mine, habitat alterations by projects to channelize the river and stabilize its banks, and obstructions by water diversion dams." Ronald M. Yoshiyama, "The Salmon," in *Journey to Justice: The Wintu People and the Salmon*, ed. Robyn G. Peterson (Redding, CA: Turtle Bay Exploration Park, 2002), 95.

⁵² McEvoy, *The Fisherman's Problem*, 22–23.

⁵³ McEvoy, *The Fisherman's Problem*, 30.

see into the water. Another method of fishing was to fish at night using a torch to attract the fish. Often two men worked together in this method, one holding the torch and the other the harpoon.⁵⁴

The communal method of fishing was to string a net made of fiber across the river and then deploy a line of people to wade into the river and drive the fish into the net. Sometimes the drive was conducted at night using torches. Meanwhile, another line of people stationed along the net caught the corralled fish with dip nets.⁵⁵ Communal fish drives were organized with the help of shamans, “whose social role was to mediate between the community and the spiritual forces that infused the natural world.”⁵⁶ Shamans might advise the community on the timing of the fish drive, offer guidance in how the harvest was distributed, and pray for the continued prosperity of the salmon. The religious element in managing the harvest was infused with the shamans’ acute ecological knowledge, which was based on the shaman’s own keen observations of nature as well as the teachings of other shamans who came before.⁵⁷

Another communal method was to construct a temporary fish dam or weir across the river. Alfred Kroeber and T. T. Waterman provided a detailed ethnographic account of the Kepel Fish Dam built by the Yurok on the Klamath River year after year. The construction and use of the temporary dam was a tribal affair that brought together the people of several Yurok villages. The fish dam or weir was designed to obstruct the fish run though not the flow of water. The weir had several openings for the fish and a fish trap was located behind each opening. While the whole complex was a communal effort, each fish trap was the work of several men who were allowed to divide the catch from their particular trap. Construction of the entire fish dam took exactly ten days, being attended by much religious ceremony. The weir was then in operation for ten more days and then it was entirely dismantled. While it stood, it obstructed virtually every salmon from going upstream. Presumably it was taken down after the prescribed length of time so that a portion of the salmon run could proceed to its spawning grounds, reproduce, and sustain the population.⁵⁸

The Wintu built fish dams similar to the one built by the Yurok. The weirs may not have been as large, but they were of similar design.⁵⁹ Fish weirs were potentially quite destructive of the salmon, since they effectively blocked migration and could prevent the fish from reaching their spawning grounds. Ethnographer George Gibbs, traveling with

⁵⁴ Hildebrandt and Darcangelo, *Life on the River*, 34; DuBois, “Wintu Ethnography,” 15–16.

⁵⁵ Hildebrandt and Darcangelo, *Life on the River*, 34; DuBois, “Wintu Ethnography,” 15–16.

⁵⁶ McEvoy, *The Fisherman’s Problem*, 30.

⁵⁷ Florence Shippek, “The Shaman: Priest, Doctor, Scientist,” in *California Indian Shamanism*, ed. Lowell John Bean (Menlo Park, CA: Ballena Press, 1992), 91–93.

⁵⁸ T. T. Waterman and A. L. Kroeber, “The Kepel Fish Dam,” *American Archaeology and Ethnology* 35 (1934–1943), 49–61.

⁵⁹ Hildebrandt and Darcangelo, *Life on the River*, 34–35.

one of the California Indian treaty commissions in 1851, stated that fish weirs “form a frequent cause of quarrel among the bands inhabiting different parts of the rivers.” And yet, Gibbs noted, every group who operated a fish weir made sure that a portion of the fish got through the weir to supply the people upstream and to reach the spawning grounds and reproduce. In this way the Wintu, with other California Indians, managed the salmon fishery so as to maintain the salmon population year after year.⁶⁰

Population Control

One more way in which California Indians avoided overtaxing their resource base was by limiting their own numbers. The culture was formed in a way that kept the population at or near the land’s carrying capacity. The environmental historian McEvoy states that California’s Indigenous peoples had numerous social tools for preventing overpopulation. These included “infanticide, abortion, taboos on intercourse during lactation, meaningful social roles for celibates, and other deliberate controls on human fertility.” McEvoy reports that the Pomo tribe in California’s Central Coast Province “apparently resorted to a number of tactics, from contraception to geronticide[or the practice of killing the elderly], to protect their relatively dense population from exposure to the risk of famine.” McEvoy says there is scattered evidence of “systematic removal of twins, defective infants, or infants of deceased mothers among other California groups.”⁶¹

The California Indians’ seeming ability to control their own numbers and live within the land’s carrying capacity should not be exaggerated. Recent archeology focused on paleopathological evidence—signs of malnutrition, disease, parasites, injuries, and violence found in human skeletal remains—suggests that all was not well in some communities in late prehistoric times. Some archeologists theorize that when California Indian cultures became more sedentary and when human populations became more dense, the changes sometimes led to harder living conditions overall. The stable village, though better assured of a continuous food supply, created a wider division between elites and commoners, with more opportunity for exploitation of labor, social strife, violence within the family or village setting, and warfare between tribes. Paleopathological studies in California’s South Coast Province suggest that the amount of violence grew from 300 A.D. to 1150 A.D. “probably due to political competition, the appearance of the bow and arrow, and fighting over resource shortfalls possibly caused by increasingly unstable climatic conditions that affected productivity.”⁶²

⁶⁰ McEvoy, *The Fisherman’s Problem*, 37–38.

⁶¹ McEvoy, *The Fisherman’s Problem*, 29–30.

⁶² Lightfoot and Parrish, *California Indians and Their Environment*, 86.

Sedentary village life in late prehistoric times may have had another pitfall. As population density increased, so too did problems of sanitation, human waste disposal, and the occurrence of parasites and diseases. Analysis of human skeletal remains reveals evidence of rising levels of poor health.⁶³ (Archeologists find that similar problems developed in late prehistoric farming cultures in the Mississippi Valley.)

Researchers point to another phenomenon they observe in the archeological record, what they call “resource intensification.” This happened wherever the most high-valued or most easily harvested resources became depleted and less optimal resources had to be substituted, requiring more labor to acquire the equivalent amount of sustenance. In numerous instances, the archeological record shows that hunter-gatherers harvested less of the preferred foods and more of the inferior alternatives as cultures stayed rooted in the same place for century after century. Examples include a shift from hunting large mammals to hunting smaller ones and a shift from catching sturgeon to catching smaller fish species. Some researchers believe there was a shift from collecting diverse plant foods to a heavy reliance on collecting acorns and pounding them into flour. As pounding acorns into flour is labor intensive, they point to its production as a prime example of resource intensification. However, other researchers point out that this finding is shaky because archeology cannot do justice to the amount of plant gathering that took place, since plants barely leave a trace in the archeological record. Indeed, some argue that California Indians probably cultivated many wild plant species that are now lost to memory or even gone from the landscape.⁶⁴

A Spiritual Connection to Nature

California’s indigenous peoples had a deep spiritual connection to the land that European Americans in the nineteenth century simply could not appreciate. When the Wintu and European Americans came in contact, the latter found the native peoples’ relationship to the environment hard to understand, admire, or respect. In fact, European Americans generally ridiculed the native peoples’ closeness to nature, branding it as “primitive” and “savage.” The Wintu, for their part, could not appreciate European Americans’ very different sensibilities about the land any more than European Americans could appreciate theirs. The Wintu could perceive almost right away, however, that the flood of European Americans into California during the gold rush threatened to displace them from their territory and exploit their resources in ways that would destroy their way of life. As time passed, the onslaught of alien newcomers struck at the Wintu’s and other California Indians’ very sense of being in the world and brought them to the brink of despair.

⁶³ Lightfoot and Parrish, *California Indians and Their Environment*, 85–86.

⁶⁴ Lightfoot and Parrish, “California Indians and Their Environment,” 81–89.

In the 1920s, a Wintu woman by the name of Kate Luckie was asked what she thought about these matters. She answered:

People talk a lot about the world ending. Maybe this child [pointing to her eldest child] will see something, but this world will stay as long as Indians live. When the Indians all die, then God will let the water come down from the north. Everyone will drown. That is because the white people never cared for land or deer or bear. When we Indians kill meat, we eat it all up. When we dig roots, we make little holes. When we build houses, we make little holes. When we burn grass for grasshoppers, we don't ruin things. We shake down acorns and pine nuts. We don't chop down the trees. We only use dead wood. But the white people plow up the ground, pull up the trees, kill everything. The tree says, "Don't. I am sore. Don't hurt me." But they chop it down and cut it up. The spirit of the land hates them. They blast out trees and stir it up to its depths. They saw up the trees. That hurts them. The Indians never hurt anything, but the white people destroy all. They blast rocks and scatter them on the earth. The rock says, "Don't! You are hurting me." But the white people pay no attention. When the Indians use rocks, they take little round ones for their cooking. The white people dig deep long tunnels. They make roads. They dig as much as they wish. They don't care how much the ground cries out. How can the spirit of the earth like the white man? That is why God will upset the world—because it is sore all over. Everywhere the white man has touched it, it is sore. It looks sick. So it gets even by killing him when he blasts. But eventually the water will come.

This water, it can't be hurt. The white people go to the river and turn it into dry land. The water says: "I don't care. I am water. You can use me all you wish. I am always the same. I can't be used up. Use me. I am water. You can't hurt me." The white people use the water of sacred springs in their houses. The water says: "That is all right. You can use me, but you can't overcome me." All that is water says this. "Wherever you put me, I'll be in my home. I am awfully smart. Lead me out of my springs, lead me from my rivers, but I came from the ocean and I shall go back into the ocean. You can dig a ditch and put me in it, but I go only so far and I am out of sight. I am awfully smart. When I am out of sight I am on my way home."⁶⁵

The Wintu and First Contact

The Wintu and other Indigenous peoples in northern California remained insulated from contact with Europe for some three hundred years after Columbus made landfall in the Caribbean. Not only were they a continent away from Columbus's point of discovery, the Pacific Coast was on the opposite side of the northern hemisphere from Europe, and the

⁶⁵ DuBois, "Wintu Ethnography," 75–76.

North Pacific was one of the last oceanic regions of the globe to be explored by Europeans. Moreover, California was isolated from the rest of North America by vast mountain and desert regions that were lightly populated and difficult to cross.

The Indigenous peoples of northern California did not participate in far-flung trade networks as many other aboriginal cultures of North America did. Though bordered by inhospitable lands, northern California itself was a fruitful environment for human habitation. Hunting and gathering cultures thrived there, evolving complex modes of resource use and population control that allowed them to exist with one of the highest population densities found anywhere on the continent. Reflecting the native society's relative insularity, the population was divided into more than one hundred different linguistic groups, making California the most linguistically diverse area in North America. Shielded by the mountainous terrain and sustained by the abundance of salmon in the rivers, the Wintu and their neighbors in the interior of northern California all lived in relative peace and prosperity without need for making seasonal migrations or mixing with other cultures.

The geographic fixity of the Wintu and other Indigenous groups in the region was truly exceptional. In Aboriginal times, a Wintu person normally spent his or her whole lifetime within ten or fifteen miles of where they were born, while having contact with no more than perhaps one hundred other individuals. Nothing in their cultural experience prepared them for the mass mobility of the California Gold Rush period.⁶⁶

Contact through the Fur Trade

The Wintu have a cultural memory about their first contact with European Americans. Elders living on Clear Creek in the latter part of the nineteenth century passed down a story of how tribal members once observed redshirted Russian fur traders passing through the country several decades earlier—perhaps around the year 1815. As the Wintu had never seen red fabric before, they supposed that the Russians' shirts were made of woodpeckers' scalps (a decorative item they sometimes traded to Shasta Indians for obsidian) and that these people must have killed lots of woodpeckers to make whole shirts from the little scalps. Not until years later did the Wintu see other European Americans and acquire familiarity with their many colored cloths.⁶⁷

⁶⁶ Akins and Bauer, *We Are the Land*, 15; McEvoy, *The Fisherman's Problem*, 24–26. In his book *California through Native Eyes: Reclaiming History*, William J. Bauer, Jr. emphasizes that California's native peoples came to view European contact through prophecy. Oral traditions point to how native prophets and storytellers reinterpreted contact as something that was foretold by native religion. But these oral traditions, mostly recorded in the 1930s, reach only as far back as the 1860s and 1870s when native societies were already disrupted by contact. William J. Bauer, *California through Native Eyes: Reclaiming History* (Seattle: University of Washington Press, 2016), 49–62.

⁶⁷ Dottie Smith, *The History of the Indians of Shasta County* (Redding, CA: CT Publishing Company, 1995), 1.

Another piece of evidence of early contact with European Americans comes from an artifact, an iron blade from a hatchet, that was reputed to have been traded on the McCloud River sometime around 1840. The acquisition by the Wintu of a tool made of iron dates from before the gold rush, but not long before. What is even more telling about this acquired object is the fact that it could have come into the Wintu's possession from any number of sources: Spanish, English, Russian, French, or American. The item may have been traded to the Wintu by another group, communicated "over the same ancient trade routes as dentalium and clam shells," but in any case all those European American nationalities were closing in on the Wintu in the same period.⁶⁸

There is no clear evidence of direct contact between the Wintu and the Spanish missions to the south, only the supposition that contact could have occurred. The Wintu encountered the American fur trader Jedediah Smith on Cottonwood Creek in 1828. Smith recorded in his journal that a party of about ten or twelve men approached his party of trappers with its large horse herd, shouting warnings at the men and shooting arrows into the horse herd, wounding nine horses and two mules. The trappers responded with gun shots, wounding two or three of the Wintu attackers. Smith noted that he saw two men fall and crawl away and that he followed the blood trail of a third man he shot with his own musket, perhaps fatally, as there was a lot of blood.⁶⁹

The Wintu saw more fur traders in the following years. By 1832, when John Work of the Hudson's Bay Company visited the area, the Wintu were accustomed to trading with European Americans. Work's journal describes a handful of visits back and forth between Wintu villages and the trappers' temporary camp. In one entry, he wrote: "Some Indians quite naked came to the camp in the evening and received some trifles as presents. They were not the least alarmed or shy but appeared afraid of the dogs & horses." Some of the trappers then went to the Wintu village. "The women all fled, but the men immediately offered their visitors food."⁷⁰

The fur trade touched practically every corner of North America, and northern California was no exception. However, northern California Indians' contact with European Americans by way of the fur trade came late and was relatively brief and shallow. In other regions of North America the fur trade existed for decades, even centuries, before European Americans invaded the Natives' lands in overwhelming numbers. In those other places the fur trade had a cushioning effect on the meeting of such drastically different cultures. The fur traders were operating at the farthest reach of European power, so the stateless Native peoples retained their independence despite their disadvantages. Europeans and Native peoples were each keen on obtaining something from the other, and

⁶⁸ Hoveman, *Journey to Justice*, 23.

⁶⁹ Smith, *The History of the Indians of Shasta County*, 1.

⁷⁰ Smith, *The History of the Indians of Shasta County*, 3.

therefore they developed ways to accommodate their differences and forge peaceful trade relations. Euromerican fur traders, the French most of all, formed marriage alliances with native women not only for companionship but for the purpose of bridging cultural and language barriers and smoothing the way for more productive trade relations. In those regions of North America where the fur trade came earlier and existed for longer, fur-trade marriages and the mixed-race progeny of those marriages tended to mitigate interracial conflict to some degree.

In northern California, the circumstances of the fur trade were quite different. There the native groups were so numerous and so geographically confined to small areas that the incentives for intermarriage were not present in the same way. Important, too, by the time the fur trade reached California the United States was on the verge of becoming a continental power. In contrast to the European powers, the United States was a settler nation with a policy of pushing Indian tribes out of the way to create space for more white settlement. Fairly suddenly, California became United States territory. When the gold rush occurred there were very few European or American trappers married into the tribes, so when the onslaught of whites began there was no buffer from that mixed-race quarter as often existed in other North American settings.⁷¹

Epidemics

Fur traders did introduce something else in northern California that accompanied the North American fur trade wherever it penetrated: new diseases from the Old World. The Wintu, like Native peoples across the continent, lacked an effective biological defense to microbes that had never been in the indigenous population before. Introduced diseases raced through the vulnerable populations like grassfire in a hot wind; the infections have been called “virgin soil epidemics” for their singular virulence. Precisely when introduced diseases first struck in northern California is not known, but it is believed that such an epidemic or multiple epidemics ravaged the population in the years 1830–1833, and it is certain that one killer disease ran through the population in 1832, as the effects were recorded in the journal of John Work and other sources. The devastating infection in 1832 was likely malaria—brought to the area from Fort Vancouver by fur traders and transmitted from village to village throughout the Sacramento Valley by way of mosquitoes. In one

⁷¹ Christopher Chase-Dunn and Helly M. Mann, *The Wintu and Their Neighbors: A Very Small World-System in Northern California* (Tucson: University of Arizona Press, 1998), 137–38. Though relatively little intermarriage sprung from the fur trade in California, there were exceptions. French fur trapper Michel Laframboise was said to have married a native woman in each tribe. See Smith, *The Dictionary of Early Shasta County History*, 76. Several white employees of John Sutter lived with their native wives at the fort community. See Albert L. Hurtado, *Indian Survival on the California Frontier* (New Haven, CT: Yale University Press, 1988), 62–65.

summer, the disease carried away upwards of 75 percent of the Native population in the Central Valley. The Wintu, along with other California Indians, were shattered by the great loss of life, which to them was inexplicable.⁷²

A description of the astounding depopulation that occurred in that year was recorded in the journal of Colonel J. J. Warner of the Ewing Young expedition the following year:

On our return, late in the summer of 1833 we found the valleys depopulated. From the head of the Sacramento to the great bend and slough of the San Joaquin, we did not see more than six or eight Indians; while large numbers of their skulls and dead bodies were to be seen under almost every shade-tree near water, where the uninhabited and deserted villages had been converted into graveyards.⁷³

Aboriginal Population Estimates

Ethnographers and demographers labored for many years to determine the approximate Aboriginal population of California before it came in contact with European Americans, before it was decimated. Understanding the approximate number is important for several reasons. Firstly, the number matters so that we can recognize the scale of the holocaust that engulfed the population both before and after the onset of the gold rush. Knowing the approximate number who were present in aboriginal times sheds light on the catastrophic number who died from European-borne diseases in the first place, and then by genocide after the onset of the gold rush.⁷⁴

A second reason the number is important is that it helps with interpretation of some of the historical records that reveal something of the Native experience. It is now apparent that many contemporary European Americans observed and wrote about Native cultures without fully comprehending either the magnitude or the horrific nature of Native depopulation. The negative stereotype of the California Indian once held that he was “too cowardly to be warlike,” and that the Native population was by and large passive in the face of colonization and displacement. As historians Sucheng Chan and Spencer Olin wrote in their 1997 volume of collected essays and documents on California history for the *Major*

⁷² Hoveman, *Journey to Justice*, 23.

⁷³ Hoveman, *Journey to Justice*, 23.

⁷⁴ The term “genocide” to describe the destruction of California Indians appeared in the 1970s and has gained acceptance though it remains controversial. For the historiography of California’s genocide, see Brendan C. Lindsay, *Murder State: California’s Native American Genocide, 1846-1873* (Lincoln: University of Nebraska Press, 2012), 1-31, and Benjamin Madley, *An American Genocide: The United States and the California Indian Catastrophe, 1846-1873* (New Haven, CT: Yale University Press, 2016), 1-14. Madley virtually starts his discussion with the definition of genocide that was set out by the United Nations following the Nazi genocide against Jews. “The Genocide Convention does not allow for the retroactive prosecution of crimes committed before 1948, he writes, “but it does provide a powerful analytical tool: a frame for evaluating the past and comparing similar events across time.” Both of these historians agree that the genocide against California Indians started with the gold rush in 1848, with the American conquest of California in 1846-47 constituting a “prelude.”

Problems in American History series, “This incomplete and distorted view derives largely from reports by Euro-Americans who found the Indian population depleted and demoralized after Spanish colonization. . . . The stereotype may also have served to legitimize the harsh and brutal treatment of Indians in the nineteenth century.”⁷⁵ While the psychological effect of such profound population loss may be beyond our comprehension today, nevertheless, to be cognizant of the population loss is to begin to understand the context for the atrocious white-Indian relations of that period.

Still another reason that the Aboriginal population count is important is that it underscores the fact that California Indians managed to thrive in fairly dense numbers in equilibrium with their environment for generations. When European Americans first entered California they arrived with the cultural perception that native cultures dwelt in a wild country having little effect on the natural world they inhabited. European Americans came with an ideology that they were claiming and domesticating an unclaimed, unsettled wilderness. With that mindset, European Americans assumed that native peoples were not only in the way of progress, but that the removal of the native peoples would have no effect whatsoever on the environment. Recent scholarship has disabused us of that misguided perception: modern-day land managers recognize that Native cultures shaped the ecology of California in myriad ways and that the displacement of those Native cultures had a broadly disrupting effect on the ecology. Californians live with the effects of the ecological disruption to this day.⁷⁶

The biology-trained demographer and scientist Sherburne F. Cook became the expert on the Aboriginal population of California during an academic career that spanned from the 1930s to his death in 1974. His last book, *The Population of the California Indians 1769–1970* was published posthumously in 1976. Cook observed that prior population estimates derived from ethnographers in the early twentieth century, principally Alfred L. Kroeber and C. Hart Merriam, who based their analyses on data obtained from cultural informants whose memories did not reach back before the great die-off in the middle decades of the nineteenth century. Using more refined methods and compiling the data region by region, Cook arrived at his estimate of 310,000 California Indians before contact. The number 310,000 remains the generally accepted figure for California’s native

⁷⁵ Sucheng Chan and Spencer Olin, eds., *Major Problems in California History* (Boston: Houghton Mifflin Company, 1997), 29. Bauer has a chapter in *California Through Native Eyes* that directly addresses the old stereotype that California Indians were relatively passive in the face of invasion by Euroamericans.

⁷⁶ McEvoy, *The Fisherman’s Problem*, 39; Anderson, *Tending the Wild*, 358–64.

population. Cook's educated guess that the native population dropped roughly in half in the period from 1830 to 1845, or to about 150,000 at the onset of the gold rush, is also frequently cited.⁷⁷

Even though Cook's numbers for all of Native California are still used, the Aboriginal population estimate for the Wintu has since been revised upward by a considerable amount. Cook included a subtotal of 76,100 for the Sacramento Valley. For purposes of his population count, Cook divided the Wintu into three groups with adjacent territories: the Northern Wintu or Wintun (occupying the upper valley as well as the whole upper Trinity River watershed), the River Wintun (centering on the Sacramento Valley north and south of Red Bluff), and the Hill Wintun (residing in the coastal ranges to the west and a little south of the River Wintun). He assigned population estimates of 5,300; 1,500; and 3000; for these three groups respectively, or 9,800 for all the Wintu combined. A few years after Cook did his work, new data on the Wintu Aboriginal population came to light that Cook apparently never consulted. Jeremiah Curtin, an ethnographer and folklorist who worked for the Bureau of Ethnology in the 1880s, spent time with a Wintu elder named Norel-putis in 1884 and again in 1889. Curtin described Norel-putis in his memoir as one of the most remarkable persons he ever met. He had "mental power of the first quality," and he was a fount of knowledge on Wintu Aboriginal culture. Norel-putis gave Curtin the names and locations of 83 Northern Wintu villages that were in existence on the McCloud River in the 1830s. Five years later, Curtin worked some more with Norel-putis and another Wintu elder, Klencladdy, at which time his two informants gave him the names and locations of another 156 Wintu villages in other drainages. Curtin's field notes were archived in the Smithsonian Institution but were never published. In 1980, Margaret Guilford-Cardell and James Dotta coded the data in Curtin's field notes and put their findings in an occasional paper published by the Redding Museum. Based on Norel-putis's information about the variable size and spatial distribution of villages, the authors estimated a population of 8,195 people in the initial 83 villages and 15,025 people in the latter 156 villages that were listed by Norel-putis. Allowing for the possibility that some of the villages on the McCloud River were only occupied on a seasonal basis (as some Wintu people attested), the authors gave a more cautious population estimate of 6,280 for the smaller population segment. Even then, the total figure for all of the Wintu people came to 21,305, more than double the figure of 9,800 estimated by Cook. Indeed, in Curtin's own estimation (which he made without benefit of the coding and analysis that Guilford-Cardell and Dotta performed

⁷⁷ Sherburne F. Cook, *The Population of California Indians, 1769–1970* (Berkeley: University of California Press, 1976), 12, 42–44. On acceptance of Sherburne's figures, see McEvoy, *The Fisherman's Problem*, 19; Hurtado, *Indian Survival on the California Frontier*, 2; Benjamin Madley, *An American Genocide: The United States and the California Indian Catastrophe, 1846–1873* (New Haven, CT: Yale University Press, 2016), 3.

using the data) the pre-1830s population of the Wintu “could not have been less than 10,000, and might easily have been double that number.” Wintu ethnographer Frank LaPena estimated the number at contact as 14,250.⁷⁸

How many Wintu lived in the upper Clear Creek drainage before contact? There is archeological and ethnographic evidence of five villages existing within the area that were probably inhabited in the early nineteenth century. If the villages contained an average population of 100, that would make a total population on the order of 500. It is only a rough guess, but to suppose that the upper Clear Creek drainage held about one-twentieth to one-fortieth of the total Wintu population does not seem unreasonable. It is commensurate with the size of the area relative to the whole Wintu homeland. The number 500 gives us a general sense of the Aboriginal human population at contact relative to human population figures in the period of the gold rush and after.

The Wintu homeland along the upper Sacramento River was among the most densely inhabited areas in all of California. The Wintu were perhaps the most populous Indigenous people in the Sacramento Valley. According to California’s first cultural anthropologist Alfred L. Kroeber, the Wintu belonged to the largest coherent linguistic group in northern California and were among “the most important in the development and diffusion of customs.”⁷⁹ But the Wintu’s relative strength in numbers did not insulate them from the population collapse that befell virtually all California Indians after 1830. The Wintu lost a staggering percentage of their population to disease in the 1830s and 1840s even before the gold miners came into their country and began to annihilate them.

⁷⁸ Jeremiah Curtin, “Memoirs of Jeremiah Curtin,” in *Wisconsin Historical Publications, Biography Series 2*, ed. Joseph Schafer (Madison: Wisconsin Historical Society, 1940) 331–32, 415; Margaret Guilford-Kardell and James Dotta, “Some Pre-Contact Shasta County Wintu Site Locations: A Correlation of the Previously Unpublished Notes of Jeremiah Curtin and J. P. Harrington with Later Published, Recorded, and Unrecorded Data on the Dawpom, Winemem, Puidalpom, and Waimuk Areas of Wintu Population,” *Occasional Papers of the Redding Museum*, no. 1 (December 1980), 80–82; Chase-Dunn and Mann, *The Wintu and Their Neighbors*, 90–92; LaPena, “The Wintu,” 325.

⁷⁹ McEvoy, *The Fisherman’s Problem*, 27.

CHAPTER TWO

Exploration, Colonization, and Conquest

Alta California

In the geography of the old Spanish Empire, the Pacific Coast of North America was divided into upper and lower California, or Alta California and Baja California. Alta California began roughly at the present U.S.-Mexico border and extended northward, encompassing all of the present state of California. Spanish geographical knowledge of this northern province was quite limited. The Spanish came to know the coastline well but acquired only a sketchy geographical knowledge of the interior mountain ranges, river systems, and California's Great Central Valley. The northern end of the Central Valley remained even more obscure to them. Though they were curious about the Sacramento River, which they called the Jesus Maria, they never explored its northern reaches in the upper Sacramento Valley. An early map showed the river commencing 500 miles away in the Great Salt Lake and flowing directly to the Pacific Ocean. That wild misconception of the river's course was only partially dispelled when a Spanish expedition explored the Feather River and the lower Sacramento Valley in 1808.¹

The Spanish began their colonization of Alta California in the 1760s. The impetus for colonization stemmed from concern that other European imperial powers would move into the area if Spain did not first. In the 1760s, the Russians were in Alaska and the British were on Hudson's Bay and starting to move into the interior of the continent. In fact, neither Russia nor Britain would send expeditions to California until nearly a half century later, which largely explains the lethargy of Spain's advance into Alta California. In 1786, the French naval officer and explorer Comte de la Pérouse visited Alta California, the first non-Spanish European to visit that coast since the English explorer Francis Drake two centuries earlier. The Russians eventually did establish a fortified trading post in California,

¹ Rosena A. Giles, *Shasta County: A History* (Oakland, CA: Biobooks, 1949), 11–14.

Fort Ross, eighteen miles north of Bodega Bay. The year was 1812 and by then it was clear that Russia's position on the Pacific Coast of North America was as tenuous as Spain's, whereas Britain and the United States were the rising powers.²

Visitor-General José de Gálvez devised the plans for colonization. He was an agent of the Spanish monarch, King Charles III. There were three main institutions of Spanish colonization: the presidio, or military post, where soldiers were stationed; the mission, administered by the church and ostensibly a center of religious instruction for Native people but often more like a slave plantation where Native labor was exploited to raise a food supply for the province and make life comfortable for the missionaries; and the pueblo, or town where the small numbers of civilian colonists resided. As the plan for colonization unfolded, the presidios, missions, and pueblos came to stretch up the coast of Alta California to San Francisco Bay, but they never reached the north coast or too far inland.

The Spanish population in Alta California was never large. It numbered around 600 in 1781, and perhaps around 3,000 in 1821. Much of the gain in population across those four decades came not from new colonists but from natural increase among the original colonists. All the missions had a Native population of around 20,000 in the latter decades. To attract more Spanish colonists, the administration added another key institution, the private rancho. The ranchos offered a path for noblemen as well as commoners with means to amass more wealth. On the sprawling ranchos the colonists propagated large herds of cattle and horses and cultivated a pastoral way of life that outwardly appeared relaxed and idyllic. Intermarriage between the more prominent Spanish families helped knit together the sparse population.³

As ranching was the Spanish colonists' chief occupation, they did little prospecting for gold in the Sierras. "The Spaniards had no pressing reason to explore the vast range itself, and to have discovered the gold in its foothills they would have had to be a great deal luckier than the Spaniards generally were in California," wrote the historian Walton Bean. "In Mexico and Peru they had known that gold and silver were present because the Indians had already discovered them and learned to use them. The California Indians had not discovered precious metals; they had had no acquaintance with any metal whatever."⁴

In the fall of 1821, the Spanish mounted an expedition to northern California under the leadership of Captain Luis Antonio Argüello for the purpose of securing the area against foreign interference. The expedition passed up the Sacramento Valley, but the records of the expedition leave it unclear how far north the expedition went. References to "twin peaks" have been interpreted by historians as alluding to Mount Shasta or Lassen Peak, each of

² Chan and Olin, eds., *Major Problems in California History*, 58; Walton Bean, *California: An Interpretive History* (1968; New York: McGraw Hill, Inc., 1973), 51–54.

³ Walton Bean, *California: An Interpretive History* (1968; New York: McGraw Hill, Inc., 1973), 50; Chan and Olin, eds., *Major Problems in California History*, 93–94, 98–102.

⁴ Bean, *California, An Interpretive History*, 56.

which has a prominent side peak from certain aspects, or possibly the two mountains where they were jointly visible on the far horizon. It is unclear, in any case, whether members of the expedition saw the twin peaks or only reported what Indians told them.⁵

During the Mexican War of Independence that began in 1810, Alta California remained a quiet backwater in the long struggle occurring to the south. Its people were largely indifferent or uninformed about the impending change of regime. When Mexico gained independence from Spain in 1821, the new government made California a territory. Later, in 1836, California was elevated to the rank of a “department.” The Mexican governors mostly administered the territory from Monterey and answered to a central government in Mexico City. The governing authority in California was weak with little money and few soldiers to back it up. The government’s primary initiative was to secularize the missions. After the Franciscan priests who ran the missions lost their authority, state power coalesced in a new oligarchy dominated by the rancheros, the proprietors of the ranchos. Initially, families of Spanish heritage whose members were California-born primarily made up the oligarchy. Increasingly, colonists of other national heritage were seeded into the oligarchy as well. Among them was the German-Swiss immigrant John Sutter, born Johann Augustus Suter, on whose California estate the discovery of gold would be made in 1848.⁶

The Fur Trade

The fur trade in California started with the hunting of sea otters and fur seals along the California coast in the 1790s. Americans from New England dominated this maritime fur trade. The Russian American Fur Company, established at Fort Ross, also participated in it. By the time of the Mexican Revolution, the maritime fur trade was waning as the fur-bearing sea mammals were practically exterminated. The Mexican government made the maritime fur trade legal just as it was fading out. American whalers continued to visit the port towns on the California coast for the purpose of trading cowhides and tallow. Several Americans settled in the coastal towns and became naturalized citizens and traders.⁷

In the late 1820s and early 1830s the Rocky Mountain fur trade pushed westward into California. These British and American fur traders came in parties of a few dozen men or more on horseback. The British called the parties “brigades,” and the Americans called them “outfits.” The British fur traders were employed by the Hudson’s Bay Company, which had an outpost at Fort Vancouver on the lower Columbia River, while the American

⁵ Vivian C. Fisher and Arthur Quinn, eds., *The Diary of Captain Luis Antonio Argüello: October 17—November 17, 1821: The Last Spanish Expedition in California* (Berkeley: University of California, 1992), 4–15, 29; Giles, *Shasta County: A History*, 12.

⁶ Bean, *California, An Interpretive History*, 60–65, 83.

⁷ Bean, *California: An Interpretive History*, 74–75, 80–83.

fur traders worked semi-independently for various smaller companies or partnerships, gathering at an annual rendezvous held somewhere in the headwaters where they would dispose of their furs and resupply for the next year. The fur trade expeditions to California mostly came from Fort Vancouver or from wherever the Rocky Mountain rendezvous was held in that year. Once in California, the expeditions generally concentrated on California's great valley and mostly bypassed the pueblos, missions, and presidios to avoid the risk of arrest at the hands of Mexican authorities.

Probably the first of the British and American fur traders to enter California was the intrepid, young Yankee trapper and explorer Jedediah Strong Smith in 1828. A native of New York, Smith was partners with David Jackson and William Sublette in the Rocky Mountain Fur Company. His expedition to California began as a quest to find new beaver country south of the Great Salt Lake, but as the region was too arid to contain much beaver the journey led all the way to southern California. After being questioned and released by the Mexican governor, Smith crossed over the San Bernardino Mountains into the San Joaquin Valley and explored all the way northward up California's great valley until he reached the vicinity of present-day Red Bluff. His exact route through the expanse of mountains north of Red Bluff is not known but it is believed he crossed the Sacramento River from east to west near Red Bluff and made his way from there over the Coast Range to the Hay Fork of the Trinity River. Thus, he likely cut across the southwest corner of today's Shasta County south of Whiskeytown National Recreation Area. It is interesting to observe that Smith's expedition numbered just eighteen men, but the men were driving a herd of some "300 head of half-wild horses and mules." The men gathered the herd in southern California for purposes of trading with Indians in northern California or Oregon.⁸

In northern California, Smith had finally found a beaver country worth exploiting. But he found the traveling through the rough mountains "exceedingly bad." And there was worse to come. Once his expedition left the Sacramento Valley, it began to have tense encounters with Indians. On a handful of occasions Indians shadowed the party and shot arrows into the horse herd. From there the violence escalated. While traveling up the Umpqua River in southern Oregon, Indians attacked and killed all but four of the expedition members in an incident that became known as the Umpqua Massacre. Smith was among the four men who escaped. Smith and his companions made their way to Fort Vancouver where they were glad to accept the protection and succor of their great fur trade rival the Hudson's Bay Company. The Hudson's Bay Company, for its part, interrogated Smith about his experiences in California and in spite of the grizzly end to Smith's expedition, decided to expand its own operations into Mexico's nominally held territory.⁹

⁸ Alice B. Maloney, "Hudson's Bay Company in California," *Oregon Historical Quarterly* 37, no. 1 (March 1936), 11; Ann Hunt, "Trappers in Shasta County," *The Covered Wagon* (1967), 18; Dale L. Morgan, *Jedediah Smith and the Opening of the West* (Lincoln: University of Nebraska Press, 1953), 260–61.

⁹ Morgan, *Jedediah Smith*, 256–79.

The next fur trade expedition to California was led by the Hudson's Bay Company's Alexander McLeod. It began as a burial party to investigate the scene of the massacre on the Umpqua River and bury the remains of the dead and to recover cached furs. Once it accomplished those objectives, the expedition continued south into California with one of Smith's men, John Turner, guiding McLeod back over the tortuous route Smith had taken through the Klamath Mountains. After trapping in the area around today's Stockton, the expedition returned northward via the Sacramento and Pit rivers. McLeod's expedition, like Smith's, was ultimately ill-fated. Crossing Dead Horse Gap in Oregon, it was caught in a late-autumn snowstorm. All the expedition's horses, records, and furs were lost. After its return, a party was sent from Fort Vancouver to recover the furs, but they were found spoiled.¹⁰

About the time that Alexander McLeod was leaving California by way of the Pit River, another Hudson's Bay man, Peter Skene Ogden, was leading the annual Snake River Brigade into California from another direction. Ogden started south from the Snake River plain in Idaho and traveled by way of the Humboldt River. Ogden's journal has been lost so his exploits in California are not well known. It seems that he concentrated on the Feather River country and exited California by way of the pass later known as Beckwourth's Pass, returning to Fort Vancouver in the summer of 1830 eleven months after starting out.¹¹

After McLeod's and Ogden's brigades in 1829 and 1830, there were more fur trade expeditions to northern California by both British and American trappers. The most notable one was a Hudson's Bay Company brigade of a hundred men led by John Work in 1832–1833. Work's journal of his expedition survives in the Hudson's Bay Company archives. Work's brigade left Fort Vancouver in August 1832 and it entered the upper Sacramento Valley that November. It camped for ten days at a site a little below Anderson. While some of the men were employed making canoes for the next leg of their journey, others went out to hunt animals and locate Indians with whom to trade. While the Hudson's Bay men focused their hunting and trading efforts in the valley, it would be reasonable to speculate that with so many men fanning out over the area that at least a few went up Clear Creek, perhaps as far as the national recreation area.¹²

The Indians the men encountered were Wintus. On November 23, 1832, Work made this unusual entry in his journal:

There is a large camp of natives on the other side of the river a good way up opposite where the men are making the canoes. Yesterday they were weeping and making great lamentation. Today two of the young men crossed the river to set some traps & on approaching the above camp observed several fires, six, on

¹⁰ Hunt, "Trappers in Shasta County," 19.

¹¹ Hunt, "Trappers in Shasta County," 19; Alice Bay Maloney, "Peter Skene Ogden's Trapping Expedition to the Gulf of California, 1829–30," *California Historical Society Quarterly* 19, no. 4 (December 1940): 313–14.

¹² Hunt, "Trappers in Shasta County," 22–23.

the first of which the body of an Indian was burning, they did not advance to see whether the other fires were occupied in the same manner. The Indians at the camp were weeping and lamenting as yesterday. Four Indians visited us during the day; these are the first who have ventured near us since we have been here. They were quite naked except a small piece of deer skin with the hair on about the shoulders, they had no arms but staffs or rather rods in their hands, they were much afraid of the dogs, and also of the horses. We could draw no information from them respecting the sorrow and burning of the Indians above alluded to. Gave them some food & a few trifles as presents which they eagerly accepted & went off much pleased.

And on the following day:

Took Kanota & the boy Peevish with me to visit the camp where the Indians were burning yesterday. The Indians had all fled from the camp which had all the appearance of devastation, the most of the huts were burnt, large caches of provisions principally acorns remained but much broken down. We found the place where four individuals had been burnt, some of them not entirely consumed, their skulls remained, the hard parts of which were broken so that there is little doubt they died by violence. There were also different places which had the appearance of graves but perhaps it was where provisions were concealed and receptacles of the dead. The place altogether had a most desolate appearance. During my absence the Indians who came to the camp yesterday reported their visit and by signs made it understood that a few nights ago a party of savages from across the mountains probably the Chastys [i.e. Shastas] had fallen upon the camp above alluded to while the people were all asleep, killed two of them and carried off several into slavery.¹³

The Hudson's Bay Company and American outfits continued sending trappers to Mexican California through the 1830s and into the 1840s. While nominally British and American enterprises, these expeditions often were composed largely of men of French Canadian heritage who were employed by the Hudson's Bay Company or the American Fur Company or other American outfits. Expedition leaders included such semi-legendary trappers as Jean-Baptiste Chalifoux, Maurice LeDuc, and Michel Laframboise.¹⁴ The strong French cultural influence woven into the Rocky Mountain fur trade would eventually play out in French Gulch, where an enclave of French speakers would form in that mining camp in gold rush days and persist in the French Gulch community for decades.

California was at the periphery of the Rocky Mountain fur trade, remote, difficult to access, and not particularly rich in fur-bearing animals. The fur traders did leave one significant mark, however. Work's expedition carried a great deal of sickness among its

¹³ Quoted in Hunt, "Trappers in Shasta County," 23–25.

¹⁴ Leroy R. Hafen and Janet LeCompte, eds., *French Fur Traders and Voyageurs in the American West* (Spokane, WA: Arthur H. Clark Company, 1965–1972; Lincoln: University of Nebraska Press, 1997), 71, 181, 254.

members, as he recorded in his journal, and the prevailing illness, perhaps malaria, was almost certainly communicated to the Indians with whom they traded. It is quite possible that other fur trade expeditions did the same. These contacts either caused or contributed mightily to an epidemic that swept through the Indian population in California and Oregon in the years 1830–1833. The epidemic was particularly lethal for the tribes in the Sacramento Valley in 1833. It was a deadly consequence of the fur traders' epic excursions into the region of which they had little knowledge or appreciation.¹⁵

American Exploration and Manifest Destiny

Starting with the Lewis and Clark expedition, the United States government employed the army in making official, government-sponsored explorations of the West. These explorations had a dual purpose: one, to acquire knowledge about the land and its Native inhabitants; and two, to stake a claim to territory under the Europeans' so-called "Doctrine of Discovery." Because of the U.S. interest in territorial expansion, the Spanish and Mexican governments were averse to U.S. army expeditions that entered Spanish and Mexican territory. The United States contemplated expanding its territory all the way to the Pacific Coast, so the U.S. government sent expeditions into Mexican territory notwithstanding the diplomatic repercussions.

The Wilkes expedition of 1838–1842 was a major U.S. scientific exploration of the Pacific Ocean that stretched into California and even reached the upper Sacramento Valley. Conducted by the U.S. Navy, the expedition consisted of seven ships under the overall command of Lieutenant Charles Wilkes. The fleet set sail from Hampton, Virginia, in 1838 and surveyed parts of the Pacific Coast in the summer of 1841. Wilkes had instructions from the U.S. government to survey San Francisco Bay. While most of the fleet stayed on the lower Columbia River, Wilkes sent one ship, *The Vincennes*, under command of Cadwalader Ringgold, to California. Ringgold took one science officer, six naval officers, and fifty men and went up the Sacramento River in a boat as far as Sutter's Fort. Meanwhile, Wilkes sent a land party under command of Lieutenant George Emmons from the Columbia River southward all the way to the Sacramento Valley. This party crossed into the headwaters of the Sacramento in October and reached Sutter's Fort in November, making junction with Ringgold and his men and returning north with them by sea. James Dwight Dana, a geologist accompanying Emmons, made sketches of Mount Shasta and Castle Crags and later refined his field notes into a report on the geology of Mount Shasta.¹⁶

¹⁵ Hunt, "Trappers in Shasta County," 17; Sherburne F. Cook, *The Population of the California Indians, 1769–1970* (Berkeley: University of California Press, 1976), 12.

¹⁶ Hubert Howe Bancroft, *History of California*, vol. 4, 1840–1845; *Vol. 21 of the Works of Hubert Howe Bancroft*, (San Francisco: The History Company, 1886), 241–45.

When Wilkes returned with his expedition to the United States, he promoted United States expansion to the Pacific coast. His enthusiasm aligned with the times as more and more Americans came to agree that the American Republic should annex the Oregon Country. Further, many Americans wanted the United States to annex the breakaway Republic of Texas, formerly part of Mexico, and perhaps other parts of Mexico as well. In 1845, a new slogan appeared that captured the national mood: “Manifest Destiny.” Believers in Manifest Destiny argued that the democratic vision of the American Republic was so righteous that it gave the United States a unique moral prerogative to expand its borders and absorb other lands and peoples.

In 1845, the U.S. government sent another exploring expedition to California. This one, led by the ardent expansionist and flamboyant Captain John C. Frémont of the U.S. Corps of Topographical Engineers, explored the region around the Great Salt Lake and the headwaters of the Arkansas, Rio Grande, and Colorado rivers—areas lying mostly within the territorial limits of Mexico. Frémont was tasked with searching for a route for a trans-continental railroad, which might terminate either in the Oregon Country or in California. Frémont had under his command sixty-two men including guides who already knew the territory from working in the fur trade. Although it was a scientific expedition, Frémont was prepared to shift toward the cause of national expansion should the opportunity present itself.¹⁷

American Settlers and California in the Mexican-American War

The American-born Pierson Barton Reading, who acquired a Mexican land grant on the upper Sacramento River in 1845, is remembered as the first prominent European American settler in Shasta County, just as the Danish-born U.S. immigrant Peter Lassen, who obtained another large land grant near Red Bluff in 1844, is recalled as the original *rancho* in neighboring Tehama County. But these two pioneers did not come out of nowhere; they were part of an expanding American infiltration of Mexican California that established a foothold in central California first, and only then worked its way north to the upper Sacramento Valley.

As the United States grew increasingly expansionist, Mexico faced a challenge in how it would hold onto its thinly populated northern territory of Alta California. It chose the risky strategy of inviting Americans to become residents, luring them with generous land grants provided that they first swore allegiance to Mexico and converted to Roman Catholicism. The first American to take advantage of the policy was a man named John

¹⁷ Frederick Merk, *Manifest Destiny and Mission in American History* (New York: Vintage, 1963), 77.

Marsh, who settled in Los Angeles in 1836, opened a medical practice, and in a year's time acquired the money to buy a large rancho in the Sacramento-San Joaquin delta inland from San Francisco Bay. While Marsh turned his medical fees toward investing in cattle, another immigrant arrived who was even more self-aggrandizing. This was the Swiss-born John Sutter. Sutter arrived in 1839 and, after completing the minimum one-year residence in California (in Monterey) to qualify for a land grant, he wrangled from the governor not only a giant tract of land in the lower Sacramento Valley but also a political appointment to serve as a regional magistrate, or *alcalde*. Sutter's land grant covered eleven square leagues, or about 83,000 acres. He soon had a farm and ranching operation, employed a large workforce of Indians and vagabond foreigners, and grandly entertained guests at "Sutter's Fort," a military-style stockade and compound. Perhaps for show as much as for actual defense, Sutter's Fort displayed cannons that Sutter bought from the impecunious Russians at Fort Ross.¹⁸

Just as the Mexican government calculated, some of the Americans who settled in Mexican California beckoned others to join them. John Marsh, for one, wrote a letter to friends in Missouri reporting on how favorable California's land and climate were, suggesting that they might emigrate, too. The letter circulated in Missouri, leading to the formation of the first overland wagon train to California in 1841. The party of sixty-eight emigrants left Independence, Missouri, in May and arrived in the Central Valley in November. After a brief stay at Marsh's rancho, the weary new arrivals moved to Sutter's place where they got a much warmer welcome. Sutter's Fort soon became known as a helpful checkpoint for newly arrived overlanders. Several rescue missions set out from there to bring aid to emigrant trains that got waylaid by snow or other obstacles on their crossing over the Sierra Range.¹⁹

The first emigrant train to California in 1841 was known as the Bidwell-Bartleson party for its two elected captains. John Bidwell emerged as the more capable of the wagon train's co-captains, successfully led the party for most of its journey. John Bidwell was a former schoolteacher originally from Chautauqua County, New York. In California, Bidwell became Sutter's private secretary. After four years of employment by Sutter, Bidwell purchased an interest in another rancho at Chico, which he eventually came to control. After California gained statehood, Bidwell became a politician and major farmer. He employed many Indians and Chinese on his farm, making him a somewhat controversial figure as the decades passed. He wrote about California voluminously. Through his valuable writings and personal experiences Bidwell became one of the most well-known pioneers in California history. Although Bidwell's mark on local developments did not

¹⁸ Bean, *California: An Interpretive History*, 83–85; Michael J. Gillis and Michael F. Magliari, eds., *John Bidwell and California: The Life and Writings of a Pioneer 1841–1900* (Spokane, WA: Arthur H. Clark Company, 2003), 73; John A. Hawgood, "The Pattern of Yankee Infiltration in Mexican Alta California, 1821–1846," *Pacific Historical Review* 27, no. 1 (February 1958): 27, 31–33.

¹⁹ Bean, *California: An Interpretive History*, 85–86.

extend as far north as Shasta County, starting in 1843 he made several trips up the Sacramento Valley scouting suitable locations for more ranchos. The first trip Bidwell made in that direction was with Peter Lassen. Among Bidwell's many writings, he left an enduring portrait of Lassen, the trailblazer with a curious penchant for getting lost.²⁰

In the mid-1840s, the overland emigration to California grew apace. It was spurred by various American boosters in California, including John Marsh, and by the publication of Lansford W. Hastings' *Emigrant's Guide*, which made the journey sound deceptively easy. The admission of Texas to the Union also influenced the growing tide of emigration as many Americans now imagined that California would eventually go the same way as Texas by becoming part of the United States. With the United States drifting toward war with Mexico, and with the newly elected U.S. President James K. Polk beating the war drum, emigration to California doubled from 1845 to 1846. One historian's estimate puts the non-Indian population of California in 1846 at about 15,000, including about 1,200 Americans.²¹

Pierson Barton Reading emigrated to California in 1843 with the Chiles-Walker party. In 1844, he went to work for Sutter as a clerk, explorer, and chief of trappers. Once he had completed his year of residency, Reading petitioned the governor and obtained a Mexican land grant of 26,632 acres in the upper Sacramento Valley. Reading named his property Rancho Buena Ventura. According to later testimony by Reading's partner Samuel J. Hensley, given when Reading sought validation of his land title through the U.S. Land Commission, Reading took possession of the property in August 1845. Around that time, Hensley spent ten days with Reading surveying the place for suitable locations for agricultural fields and building sites. Reading did not commence living on his rancho immediately as it was too remote from white settlement. Reading left a Frenchman named Julian to build a house and corral and reside there as a caretaker while he started stocking the place with horses, and then cattle. After a time, Indians burned the place down and killed Reading's caretaker. It was not until 1847 that Reading went to reside at Rancho Buena Ventura, along with a labor force, at which time he rebuilt the house and put forty acres under cultivation.²²

In this period, the territorial governor of California, General Manuel Micheltorena, dispensed land grants with growing abandon as his administration's hold on the California populace grew weaker and weaker. In 1845, there was a revolt against the territorial governor by disgruntled members of the old, landed oligarchy who believed that foreign interlopers were increasingly diluting their power. The rebels took control of Los Angeles. The

²⁰ Gillis and Magliari, eds., *John Bidwell and California*, 75, 100–101.

²¹ Bean, *California: An Interpretive History*, 87; Alice R. Hoveman, with contributions by Frank LaPena, Elaine Sundahl, and Ronald M. Yoshiyama, *Journey to Justice: The Wintu People and the Salmon* (Redding, CA: Turtle Bay Exploration Park, 2002), 25.

²² Helen S. Giffen with Eleanor Lee Reading Templeman (ed.), *Man of Destiny: Pierson Barton Reading, Pioneer of Shasta County, California* (Redding, CA: Shasta Historical Society, 1985), 66.

newer, mostly Anglo recipients of land grants, including Sutter, Bidwell, Lassen, and Reading, naturally sided with their benefactor Governor Micheltorena. Sutter assembled a force of 225 men, comprised mostly of American settlers and Indians who were under their employment, to assist Micheltorena in putting down the revolt. This force joined Micheltorena at Monterey and marched south to confront the rebels. The two sides clashed at Cahuenga Pass, near the San Fernando mission, where the Mexican rebels were victorious. Micheltorena was deposed and sent to Mexico City. The rebels captured Sutter and the rest of the force, but ultimately they were pardoned and allowed to return to their homes. During the campaign, Reading was left in charge of guarding Sutter's considerable estate. Sutter arrived back at his place on April 1, 1845.²³

The following December, Captain John C. Frémont of the U.S. Corps of Topographical Engineers appeared at Sutter's Fort. Ostensibly on an expedition of scientific exploration, Frémont seemed to regard his real mission in California as that of an agent provocateur. From Sutter's Fort, Frémont proceeded onward to the territorial capital at Monterey where, after provoking the governor to the point that the Mexican government made a request that Frémont leave the settled area of California, Frémont defiantly planted a U.S. flag atop a nearby peak. Mexican authorities raised a force of around 200 men to dislodge Frémont by force. Although the U.S. consul in Monterey stepped in and successfully defused the situation, news of the incident traveled north to the Sacramento and Napa valleys, where American settlers responded by taking up arms in what became the Bear Flag Revolt.²⁴

The course of events leading to the American conquest of California remain confused to this day. Frémont took charge of the revolt, assisted by the U.S. Navy's Commodore John D. Sloat and Commodore Robert F. Stockton. It is unclear whether the three military officers acted on secret orders from the Polk administration or on their own initiative, as they knew vaguely by this time that the U.S. and Mexico had just gone to war over Texas. Adding to the intrigue, an agent of the U.S. government, one Lieutenant Archibald Gillespie, arrived with secret dispatches for the military officers, the contents of which have never become fully known. In the final stage of the conquest, General Stephen W. Kearny set out from Fort Leavenworth under direct orders from the War Department and entered southern California by way of Santa Fe, securing American control of New Mexico as well as southern California. The so-called Bear Flaggers seemed to fear that they might be expelled under Mexican rule and therefore desired a swift U.S. takeover. There was also concern on the part of some that if the United States did not act quickly Britain could exploit the unrest and claim California for itself. Pierson Barton Reading, for his

²³ Gillis and Magliari, *John Bidwell and California*, 76–77.

²⁴ Gillis and Magliari, *John Bidwell and California*, 77.

part, joined the Bear Flag Revolt in June as it was just beginning. He served in Frémont's improvised "California battalion" of volunteers until the unit disbanded in May 1847, at which time he headed north to occupy his rancho.²⁵

The decisive military campaign in the U.S.-Mexican War occurred 1,500 miles away in the heart of Mexico. A U.S. army under Major General Winfield Scott made an amphibious invasion from the Gulf of Mexico at Veracruz and marched inland, occupying the capital, Mexico City, in September 1847. In the Treaty of Guadalupe Hidalgo of 1848, Mexico ceded the northern half of its territory to the United States, including Alta California. Meanwhile, the fighting in California ended much earlier, with the Treaty of Cahuenga, signed January 13, 1847.²⁶

The American people, despite being victorious in the war, were divided over the war's outcome. The slavery question loomed over the expansion of U.S. territory. The U.S. House of Representatives tried to forestall national division by passing the Wilmot Proviso, which excluded African slavery from the new territory, but it only deepened sectionalism over the issue. The measure failed in the U.S. Senate.

With Congress in turmoil over the slavery issue, it was unable to form a territorial government for California. It provided for a territorial government in Oregon in the spring of 1848, but deadlocked over establishing territorial governments in California and New Mexico. In the absence of a new territorial government, the area remained under quasi-military rule while it awaited admission to the Union as a state. According to the customs of international law, in conquered territory the occupying forces' commanders served as military or ex-officio governors while local officials continued in office and ran local affairs as before. However, as the gold rush began, the situation on the ground started to change at breakneck speed and the need for a new government could not be delayed.

The several thousand Americans who were now living in California clamored for a provisional government. Meetings in San Francisco and San Jose initiated the movement. Meetings in the new city of Sacramento in January 1849 added more steam. Over the summer, the movement coalesced around a plan to hold a constitutional convention, form a state constitution, and press ahead for statehood. Elections were held even as mining camps were rapidly forming in the foothills of the Sierra Range. Forty-eight delegates convened at Monterey in September 1849 to draft a constitution. Half the delegates came from the new mining regions and the mines' port city, San Francisco. A sixth of the delegates came from the instant new city of Sacramento, located at the junction of the American and Sacramento rivers a couple of miles from Sutter's Fort. The population of the new mining camps in the upper Sacramento Valley numbered was a thousand people in the summer of 1849, but those camps were either too new and unorganized or too far away

²⁵ Bean, *California: An Interpretive History*, 98–106; Giffen and Templeman (ed.), *Man of Destiny*, 66.

²⁶ Lisbeth Hass, "War in California, 1846–1848," *California History* 76, nos 2–3 (Summer–Fall 1997), 345.

to send any delegates. The budding population center in the far north of California still counted for something, though, as all of the region north of present-day Anderson and east of the Trinity Divide was soon designated Shasta County.²⁷

A month after the convention adjourned, Californians voted to ratify the constitution and to elect a state governor, a lieutenant governor, and legislators. The state government formed in San Jose in December 1849 even before California was admitted to the Union. All that remained to be done in California's headlong drive for statehood was for the U.S. Congress to approve it. The Compromise of 1850 accomplished this last critical step. In the bundle of five legislative acts, the California Admissions Act was signed into law on September 9, 1850.

The Wintu Confront the California Gold Rush

Early in the California Gold Rush the northwestern mines acquired a reputation for being more prone to Indian attack than the mining districts in the Sierra Range. Reports of hostilities began with the forty-niners who came streaming down from Oregon, cutting through the hunting grounds of the Klamath, Modoc, Shasta, and Achumawi or Pit River Indians. These tribes in the forty-niners' path contested the invasion of their hunting grounds, sometimes killing a few of the intruders to demonstrate their opposition. The reports of those Indian attacks spread fear among the miners, causing some to leave the region while provoking others to take preemptive action either to drive the Natives away or subdue them with threats of retaliation. As miners poured in, they soon had superior numbers and overwhelming firepower, while the Natives soon learned they were out-matched, so the miners' intimidation tactics were effective.²⁸

One early encounter between the Wintu and a heavily armed force under Frémont's command in April 1846 prefigured how bloody and one-sided the armed conflicts between whites and California Indians were to become. Contemporary reports identified the victims only as "Indians," but from the location it seems likely that the people were Wintu. Inflammatory reports were carried to Frémont at Peter Lassen's rancho that a thousand Indians were gathered near Reading's rancho preparing to attack American settlers. More likely, the Wintu were in fact peaceably gathered on the bank of the Sacramento River for

²⁷ Bean, *California, An Interpretive History*, 126–32.

²⁸ Hurtado, *Indian Survival on the Frontier*, 117–22; Rodman W. Paul, *California Gold: The Beginning of Mining in the Far West* (Cambridge, MA: Harvard University Press, 1947), 94–95.

purposes of catching and processing salmon. Women and children were present and there was a lot of processed salmon at the site, which Frémont's men gladly consumed after they drove off their adversary.²⁹

Frémont attacked the Wintu with a force of just seventy-six men, most of them armed each with a Hawken muzzle-loading rifle, two pistols, and a butcher knife, while some were equipped with cavalry sabers, too. Frémont reportedly ordered an attack without any attempt to parley first, and his men were told "to ask no quarter and to give none." They opened fire upon the Wintu before they were within range of the Wintu's bows and arrows, killing two dozen outright, and then "rushed in with their sabers" as the surprised Wintu scattered. While some of Frémont's men pursued the fleeing Indians into the hills, others stood on the riverbank and picked off the Wintu who were attempting to wade and swim across the river. One participant in the attack later stated that "in less than 3 hours we had killed over 175 of them." Another gave the number killed as 600 to 700 on land, plus another 200 to 300 in the river. If the latter statement is true, notes historian Benjamin Madley, then the slaughter of these Wintu "may have been one of the largest but least-known massacres in U.S. history." In the various eyewitness accounts, there is no mention of losses on the American side, and perhaps there were none.³⁰

First Wintu "Treaty"

Pierson B. Reading with a few Indian helpers went gold hunting near his rancho in April 1848 and discovered gold on Clear Creek about ten miles from his homestead. The discovery site became known as Reading's Bar. Word of the discovery spread and miners began to appear later that year. By the spring of 1849 there were numerous mining camps located on Clear Creek. The largest of the Clear Creek mining camps was One Horse Town, or simply Horsetown. This mining camp was briefly the center of activity in the northwestern mines before it was eclipsed by Shasta. A miner named Alexander Robertson Andrews later wrote a short history of Horsetown for *Overland Monthly*, covering the camp's glory years from 1849 to 1851. It is not clear that Andrews was there in 1849 because he wrote strictly in the third person. But the third-person narrative voice is not uncommon in personal accounts from that period, and it seems that Andrews wrote from personal memory. In any case, his account—first published in 1900 and reprinted in the *Covered Wagon* in 1964—is the most detailed account we have of early miner–Wintu relations in the area.³¹

²⁹ Henry L. Walsh, "'Hallowed were the Gold Dust Trails,'" *The Covered Wagon* (1962), 7; Madley, *An American Genocide*, 43–49.

³⁰ Madley, *An American Genocide*, 43–49.

³¹ Alexander Robertson Andrews, "Horsetown," *The Covered Wagon* (1964), 3–11.

Andrews wrote that the local “Indians” (that is, the Wintu) “were somewhat troublesome to the Clear Creek miners.” In the summer of 1849, the Wintu occasionally stole pack stock or robbed the miners’ camps. The miners soon determined that if they stayed east of the North Fork of Cottonwood Creek, which angles close to Clear Creek about four miles west of Igo, they were not in much danger of being killed. But if they prospected west of the North Fork of Cottonwood Creek, then the Wintu would push them back with deadly threats. “The region west of Cottonwood was understood to be forbidden ground and the Indians seemed determined that the whites should not cross the North Fork,” Andrews recalled.³²

A prospector named Engles broke this fragile peace between the Wintu and the miners when he showed up in Horsetown and bragged that he had discovered a rich gravel bar up the North Fork of Cottonwood Creek before the Indians drove him away. The fast-talking Engles got together an outfit and promised to lead the Horsetown miners back to the gravel bar. But when this group approached the North Fork, Engles ditched his companions and was never seen again. In October 1849, the miners in Horsetown decided they would assemble a party and search for Engles’s supposed gravel bar, taking their chances with the Wintu. This scouting party numbered sixteen men, all mounted and well-armed. Once these men crossed the North Fork, however, they soon found themselves surrounded and outnumbered by the Wintu. They retreated back across the North Fork, whereupon the Wintu “appeared to abandon all hostile intentions.” Still testing the Wintu’s resolve, the men elected to camp right there on the east side of the creek. The Wintu waited for nightfall, then crept closer and shot a few volleys of arrows into the miners’ camp. Two miners were struck by arrows, and they all fled, falling back to Horsetown in a “demoralized condition.”³³

Three or four months passed. That winter, as the population in the miners’ camp turned over with some miners leaving and more arriving, the story of Engles’s gold discovery and the subsequent clash with the Wintus was told and retold, and the allure of making another visit to this nearby “Indian country” gradually grew to a fever pitch. In January or February 1850, the Horsetown miners put together another prospecting expedition numbering twelve men. This time the men were not mounted because the Wintus had stolen all their horses and mules. The miners carried their tools, weapons, and provisions on their backs. Provisions were minimal because they expected to kill game along their way. Each man was armed with pistols, and six men had rifles or shotguns.³⁴

³² Andrews, “Horsetown,” 4.

³³ Andrews, “Horsetown,” 5.

³⁴ Andrews, “Horsetown,” 6.

When the party reached the North Fork of Cottonwood Creek, it halted and chopped down a tree to form a bridge across the creek. Despite the commotion of building the bridge, no Wintu appeared to challenge them. But once they were across the creek, the Wintu suddenly “showed themselves in great numbers and their yells could be heard from the high points every direction.” Defiantly, the prospecting party formed up and moved out. The Wintu kept out of range, sometimes revealing themselves at a distance of 600 or 700 yards, while smoke signals appeared from various points around. The prospectors started to lose their nerve but one in their party, Abraham Cunningham, urged that they continue and the men appointed him their leader. Still encircled, they pushed onward, stopping at what later became known as Watson Gulch to prospect. Moving on from there, they passed by “a great many Indian rancherias, but they were all deserted and not an Indian was to be seen as the prospectors passed through, except a few could be seen occasionally dodging from their concealment a half mile or more away.” As the winter night approached, the prospectors made camp near the rancherias. Cunningham selected good defensive ground for a “small fort,” and the men piled up manzanita and chaparral to screen them from arrows. There was no conflict that night. In the morning, the prospecting party continued onward to a branch of Cottonwood Creek later called Duncan Fork. Cunningham cautioned against proceeding into the narrow canyon, a potential trap, but he was overruled because the place looked promising for prospecting. However, a short distance into the canyon the men saw that the Wintu were approaching nearer than before and it appeared that some Wintu might roll large rocks down on them from above, so the prospectors beat a hasty retreat. They made their second camp on Duncan Fork, building another small fort.³⁵

Now the prospectors were hungry because they had been unable to kill any game. The next morning, they sought a parley. Two of their members, Joseph Voshee and a man named Tomlinson, were elected “commissioners” to negotiate a “treaty.” The men signaled to the Wintu their friendly intentions. Tomlinson and Voshee laid down their weapons and went into a clearing, Tomlinson removing his cloak and using it to gesture to the Wintu to come meet with him. After about an hour of this, some Wintu laid down their bows and arrows and approached the whites. Finally, two Wintu came forward and met Tomlinson and Voshee and accompanied them to the prospectors’ camp. In Andrews’s account of this episode, he asserted that what followed was the “first treaty made with the Indians in western Shasta, probably the first made in Shasta County, by the immigrants of 1849.” Andrews continued:

The two Indians were young men, or just between boyhood and manhood, but they were self-possessed and manifested neither embarrassment nor fear when they came into the white men’s camp. The elder was a fine and intelligent looking fellow for a Digger Indian and was evidently a chief or leader among

³⁵ Andrews, “Horsetown,” 7.

them. He shook hands with the whites when he came into their camp, and then in a striking and impressive manner commenced the delivery of a speech to them. He had a fine tone and powerful voice and every word of his speech was evidently heard and endorsed by the Indians three quarters of a mile distant, as they signified by frequent ejaculations of approbation. The occasion, manner, gesture, and expression of the speaker, together with the surroundings formed a scene rarely witnessed among the California Indians. He spoke as though he felt for his people and their melancholy fate. As understood by the whites he said as follows:

“The white man takes the Indian’s hunting ground and his woman and drives the Indian away. When the bad Indian steals from the white man, the white man kills all the Indians. The Indian can’t fight the white man, he don’t want to fight, he don’t want to kill, he wants the fish, he wants the game, he wants his hunting ground and his women and children. When the white man comes he takes all, he kills the Indian and drives him away.”

On the conclusion of the Indian’s speech the whites explained to him, as well as they could, the object which they had in view, telling him that they were hunting for gold and desired peace and friendship with the Indians. They assured him that they would do everything in their power to have justice done to the Indians, if the Indians would cease their hostility to them, and the young chief, as they supposed the Indian to be, then agreed that his people should be at peace with the whites.³⁶

Following the making of this “treaty,” some of the whites joined some Wintu on a hunt and soon this party returned with three freshly killed deer. After dividing the meat, the Wintu hunters left in good humor, and then the whites eagerly cooked what was theirs and ate their first square meal in three days.³⁷

Andrews’s account reveals much about Wintu–white relations in the early days of the gold rush. These whites were not bloodthirsty Indian hunters. The Wintu, for their part, were wary of the miners yet inclined to accommodate them. The “treaty” served both sides’ purpose of preventing bloodshed. But inevitably the agreement was short-lived, for the miners could not hold up their end of the bargain that the only thing they wanted was gold. In reality, they wanted the Indians’ land. The mining frontier was just another permutation of the whites’ settlement frontier, which demanded “unclaimed land” for the whites’ taking according to their own terms, room for whites to farm, roads secure for commerce, and civic control over all resident peoples. Given the racial attitudes of the time among the whites, that meant either controlling or removing the Indians.

³⁶ Andrews, “Horsetown,” 7–8.

³⁷ Andrews, “Horsetown,” 8.

Descent into Genocide

As gold seekers poured into California, tensions with the Indigenous people escalated and such an accommodation as the one that briefly formed along the North Fork of Cottonwood Creek soon devolved into stealing and violence. The vulnerable Indian population declined precipitously leading some researchers to use the term genocide. Historians do not apply the term lightly. In round numbers, it is estimated that the Native population of California fell from 150,000 in 1848 to maybe 30,000 in 1870. Most of this population collapse occurred through disruption of the Native way of life. Deprived of subsistence, Native people starved to death or succumbed to illness at appalling rates. Many Native women ceased bearing children or were unable to raise infants to maturity. A conservative estimate is that 4,500 Indians in California were killed outright by whites, often in massacres that were perpetrated by gangs of white civilians who operated under the guise of protecting civil order. The white population not only had superior weaponry, it also had the power of the state behind it. The American ideology supporting the nation's westward expansion also held that American Indians were a vanishing race and that the destruction of Native cultures was necessary and inevitable.³⁸

As the historian Brendan C. Lindsay illustrates in *Murder State*, various modes of genocide other than outright killing pushed Native peoples to the brink, leading to cycles of violence that sometimes escalated into campaigns of extermination by whites against Natives. It began with the destruction of the Natives' subsistence base. European American land laws, commencing when California was part of Mexico and continuing with California statehood, gave whites authority to claim Native lands and make the land their own. The new landowners put livestock on the land and pushed out the deer and elk that the Native people customarily hunted for their subsistence.

Miners and prospectors hunted wild game for their own subsistence needs, dismissing the Natives' claims to having an exclusive right to hunt in their own hunting grounds. The whites were not unaware that they were depriving Native people of their necessary sustenance. Indeed, the whites saw the vulnerability of Indian food caches, attacked Indian villages at critical times of year when foods were being processed and stored for later consumption, and systematically destroyed the Indians' stockpiles. Some whites considered the destruction of the Indians' food supplies to be a good strategy to hasten the control and removal of Native peoples. Pierson B. Reading stated that the destitute condition of the Natives living on his land grant was a "very good advantage." He put some of them to work on his ranch. Like most Anglo Americans in California of his social position, he relied on Indian labor because few whites would work for wages when

³⁸ Brendan C. Lindsay, *Murder State: California's Native American Genocide, 1846–1873* (Lincoln: University of Nebraska Press, 2012), 43–69; Richard White, "It's Your Misfortune and None of My Own": *A New History of the American West* (Norman: University of Oklahoma Press, 1991), 337–40.

they might go gold prospecting instead. Reading thought he could convert needy Indians “into useful subjects” and become wealthy off their labor. Meanwhile, any Native people who sought to maintain their independence by killing and eating cattle in place of wild game were branded as thieves. They might be killed for committing this property crime against the livestock owner.³⁹

Mining activity had a direct effect on the Wintu’s food supply as it impacted fish habitat and obstructed fish runs. When miners diverted water out of a streambed to allow them to dig in the exposed gravel, the temporary water diversion could decimate the local fishery. The diggings also put quantities of silt into creeks that smothered fish eggs and muddied the waters. As the mining activity progressed, use of mercury and other chemicals for extracting gold put toxins into the environment that killed fish. The Indians of northern California saw their subsistence base wrecked by white intruders. As one northern Maidu Indian said, “As more whites came, they drained the land.” Since salmon were a staple of the Wintu’s diet, they guarded their fisheries jealously. The Wintus who lived along the McCloud River tried to stop whites from entering the area, and they were successful for a time.⁴⁰

Logging was also destructive of precious Indian fisheries. The slash left on the ground from logging activity would be washed downslope and jammed into the narrow places in the natural drainages, blocking fish passage. Great quantities of sawdust produced from logging activity added to the existing problem of excessive silt from mining activity. When loggers cleared a hillside, heavy rains produced more soil runoff than before. With extra runoff, streambeds filled up and streams became wider. Loss of the tree canopy meant more solar radiation and higher ground and water temperatures. These changes to the environment were consequential for fish, and thus contributed to the destruction of California Indians’ Aboriginal way of life. When the railroad was extended northward from Redding up the Sacramento River, construction of the railroad bed along the riverbanks and across the many tributary streams was very destructive of fish habitat, too.⁴¹

The Wintu and other California tribes tried to defend their hunting and fishing grounds. But when they killed or drove off whites, they suffered severe reprisals. Whites demanded extreme responses whenever a white person was victimized. Instead of requiring an eye for an eye, as often happened when Indians and fur traders clashed, whites on

³⁹ Lindsay, *Murder State*, 179–84; McEvoy, *The Fisherman’s Problem*, 44.

⁴⁰ McEvoy, *The Fisherman’s Problem*, 42–47; Damon B. Akins and William J. Bauer Jr., *We Are the Land: A History of Native California* (Oakland: University of California Press, 2021), 134; Hoveman, *Journey to Justice*, 25–26, 34–37; Geri D. Emberson, “Ethnographic Overview and Traditional Use Study of American Indian Affiliations within the Whiskeytown National Recreation Area, California,” report prepared for National Park Service, Whiskeytown National Recreation Area, May 2000, Cultural Resource Division e-files, WNRA, pp. 43–46.

⁴¹ Hoveman, *Journey to Justice*, 43; Andrew C. Isenberg, *Mining California: An Ecological History* (New York: Hill and Wang, 2005), 98.

the California mining frontier would often attack and lay waste to entire Indian villages. Generally, whites did not try very hard to identify an Indian offender's tribe or village affiliation, much less find the very individual who was responsible. Whites identified virtually all Indians in northern California as "Diggers," a derogatory label demeaning the way the Indians dug up nutritional roots and gathered acorn nuts off the ground. The hate-term "Digger" also conveniently rhymed with another racial epithet well known to whites of that era. Lumping all California Indians together with a single hate-term and negative stereotype made it easier to dehumanize them and kill them indiscriminately. Thus, when whites sought to exact revenge for a transgression by a single Indian, it became the justification to go out and kill numerous Indians, regardless of what tribe they were in.⁴²

The point that Lindsay underscores in *Murder State* is that the gangs who went in search of Indians to kill did so usually with the sanction of the majority-white society and the power of the state backing them up. Usually such groups of Indian hunters were called "militias" or "volunteer companies." Locals often formed the militias but the state government bankrolled them. If the state governor declined to respond to a petition for help with "Indian troubles," then the local white population might take matters into its own hands, take up a subscription, and form a volunteer company. Lindsay emphasizes that Indian hunting in California generally sought and received support through democratic institutions, whether at the state or local level. State law protected white property rights over Indians' life and liberty. Indians could not testify against whites in court, nor could they own land. A state law in 1850 made it illegal to burn the forest—which was, of course, something Native peoples did to sustain their food supply. California Indians lacked protection from the federal government, as discussed below. California's state constitution prohibited slavery, but under California law Indians could be forced into debt peonage that became a form of de facto slavery for many.⁴³

California law ostensibly protected Indians from indiscriminate acts of violence by whites. But there were many loopholes and whites exploited them ruthlessly. There was a law that allowed whites to take Indian children into their homes and use them as house servants. Many white families desired to have an Indian for a house servant, and a virtual slave market developed around kidnapping and trafficking Indian minors. Officials amended the law so that only orphaned children could be indentured. In response,

⁴² Akins and Bauer, *We Are the Land*, 134; Lindsay, *Murder State*, 189; Robert F. Heizer, ed., *They Were Only Diggers: A Collection of Articles from California Newspapers, 1851–1866, on Indian and White Relations* (Ramona, CA: Ballena Press, 1974), xi.

⁴³ Lindsay, *Murder State*, 184, 209, 249; Akins and Bauer, *We Are the Land*, 142. See also William Stobridge, *Regulars in the Redwoods: The U.S. Army in Northern California, 1852–1861* (Norman: University of Oklahoma Press, 1994), which explores the role of the federal army in contrast to what civilians and militias were doing.

unscrupulous men murdered Indian parents so they would have orphans to sell. White men committed these atrocities brazenly, bragged about it, and suffered no consequences.⁴⁴

When the white population in and around Shasta rose in 1851, pressure on the Wintu took a deadly new turn. The local government offered a bounty of five dollars for every Indian scalp brought to town. One miner later attested to seeing Indian bounty hunters leading their mules into the mining camp to collect their bounty, each mule laden with eight to twelve Indian heads.⁴⁵

Possibly because of Shasta County's experiment with an Indian bounty, three separate massacres of local Indians (presumably Wintu) occurred in July of that year. In the first instance, around 800 Native people were gathered about twenty miles south of Shasta on the west side of the Sacramento River. A volunteer company of sixteen armed men led by Captain B. F. Harvey visited the large gathering without disclosing their deadly intent. The Wintu did not immediately flee and perhaps gave Harvey and his men a welcome sign. But at nine o'clock, Harvey's men opened fire on their unsuspecting hosts, killing sixty or seventy and mortally wounding many more. The surprised Wintu fled without inflicting a single casualty on their assailants. Eight days later, Harvey and his men went out again and attacked a Wintu village, killing fifty of the inhabitants and chasing off the rest, again without sustaining a single casualty. On or around that same day, another volunteer company led by James Macklay, who was supposedly himself an Indian, led fifteen men in an attack on another Wintu village, reportedly killing twenty people.⁴⁶

Even in the face of such brutal attacks the Wintu refrained from making war on the whites because they saw they were hopelessly overpowered. But individual acts of desperation or revenge could not be prevented, thus, so-called "Indian troubles" around the northwestern mines mounted. The whites in Shasta, Trinity, and Siskiyou counties petitioned the governor for protection. Governor Peter Burnett, in an address to the state legislature, fanned the fire with his statement "that a war of extermination will continue to be waged between the races, until the Indian race becomes extinct."⁴⁷ The quasi-official militias kept up their deadly assaults on the Indians. Again and again, the militias reported stunning body counts without taking any losses. There was this account printed in the *Alta California* in early 1852:

On Friday last a party of Cotton Wood Indians, went to McKinney's Ranch, a few miles above Reading's, and stole a few blankets, besides committing other thefts. On Saturday a son of Mr. McKinney went in pursuit, but never returned.

⁴⁴ Akins and Bauer, *We Are the Land*, 141–43; White, "It's Your Misfortune and None of My Own," 339. See also Andrés Reséndez, *The Other Slavery: The Uncovered Story of Indian Enslavement in America* (Boston: Houghton Mifflin, 2016), 264–65.

⁴⁵ Madley, *An American Genocide*, 197–98.

⁴⁶ Madley, *An American Genocide*, 198.

⁴⁷ Madley, *An American Genocide*, 186.

His body was found with the head decapitated. A party of men was instantly organized at Cotton Wood and Clarendon Ranch, who on Saturday gave chase to the Indians, surrounded them and killed thirty without losing any of their own number. The prisoners taken were ordered to again go out and kill every Indian belonging to the Rancheria, where McKinney lost his life. On Sunday they returned with the scalps of two Indians.⁴⁸

Near Weaverville, Indians killed a white man named Anderson mutilated his body, and stole his cattle. Colonizers held all of the Indians in the vicinity of Weaverville accountable, and in the following days a company of volunteers formed, set out on its lethal search-and-destroy mission, and practically annihilated an Indian village in reprisal. The *Shasta Courier* reported on the company's exploit:

On Thursday afternoon, the 22d, the scouts discovered the rancheria in a small valley at the base of 3 mountains on the south side of the South Fork of the Trinity River. At midnight the company started from their encampment, Capt. Dixon having divided his force into 3 parties, so as to come upon the Indians from different quarters and surround them. When the day broke, all parties were in the desired positions, and on the signal being given, the attack commenced. Each rifle marked its victim with unerring precision—the pistol and the knife completed the work of destruction and revenge, and in a few moments all was over. Of the 150 Indians that constituted the rancheria, only 2 or 3 escaped, and those were supposed to be dangerously wounded; so that probably not one of those engaged in the murder of the unfortunate Anderson now remains alive. Men, women and children all shared the same fate—none were spared except one woman and two children, who were brought back prisoners.⁴⁹

The genocide gradually subsided after the 1850s. But as the massacres ended, the indiscriminate, nonsensical murder of individuals continued. Norel-putis, an old Wintu chief, lost his two wives in the genocide. Norel-putis and his wives were living at a site called Woodman's in 1864. They all three were employed. One day, white men came and murdered his wives for no apparent reason. Norel-putis probably would have shared his wives' fate had he been with them. We will meet Norel-putis again in a later chapter, for this remarkable man helped his people transition and preserve their culture as well as they might in the aftermath of the genocide. Part of Norel-putis's attempt to preserve the Wintu culture was to tell as much as he could to an ethnographer with the U.S. government, Benjamin Curtin. Curtin, in his memoirs, related Norel-putis's story of his wives' killings and observed, "Had he been killed at that time, our knowledge of Wintu mythology would have been very slight."⁵⁰

⁴⁸ Quoted in Smith, *The History of the Indians of Shasta County*, 32.

⁴⁹ Heizer, *They Were Only Diggers*, 26.

⁵⁰ Curtin, "Memoir of Jeremiah Curtin," 380.

CHAPTER THREE

The Gold Rush and Placer Mining

Gold Fever

“**B**oys, I believe I have found a gold mine!” The words were spoken by James Marshall, the carpenter in charge of building a sawmill on the land grant of Swiss immigrant John Sutter. Gold flakes that Marshall held in his hat also glittered in the raw earth where he and his crew were excavating a tailrace for Sutter’s Mill. The date was January 24, 1848.¹

News of the discovery at Sutter’s Mill soon circled the globe. But not immediately. At first Sutter tried to keep the discovery a secret and postpone the inevitable excitement so Marshall could hold his work crew together and complete the mill construction. But by the end of spring the excitement began to spread. In May and June, hundreds of ordinary folk in San Francisco dropped whatever they were doing to scurry inland and go prospecting. In July and August, the gold fever spread up and down the coast of California and reached into Oregon and British Columbia. By fall, the lure of gold was drawing thousands of argonauts from Mexico, Peru, and Chile. By winter, it was stirring thousands of adventurous souls to action in the United States and around the world.²

Pierson B. Reading, the discoverer of gold in the Shasta area, was one who caught the gold fever early. Reading was a guest at Sutter’s Fort for more than a week in early March, around six weeks after the discovery, but it seems at that time that Sutter was still attempting to keep the find a secret. Reading returned to Sutter’s place one month later after word of the discovery began to leak, this time in company with Edward C. Kemble, the young editor of the *California Star*. Sutter took Reading and Kemble up to the mill site to show them the rumored gold mine. For Kemble, a quick look at the tailrace only confirmed his belief that the gold mine was “humbug,” but Reading was credulous enough to borrow an Indian basket, get down into the excavation, and try a little panning while his companions sauntered around the place awaiting his efforts. When his companions

¹ Rodman Wilson Paul, *Mining Frontiers of the Far West* (New York: Holt, Rinehart, and Winston, Inc., 1963; Albuquerque: University of New Mexico Press, 2001), 13.

² Paul, *Mining Frontiers of the Far West*, 14.

returned and asked, "What success, Major?" Reading answered, "Not enough to buy a drink." But there must have been more gold flakes in the basket than he let on. He was bitten by the gold bug.³

Reading returned to his rancho, gathered some Wintu helpers from the nearby Wintu village on Clear Creek and went panning along the creek. Reading and his party made their discovery on a bar a few miles west of Reading's land grant. The discovery site became known as Reading's Bar, and it would soon give rise to a tent city there known as Horsetown. After scooping up the easy pickings on the gravel bar, Reading took some men and hastened over the divide to the Trinity River watershed in search of more quick riches. He found a second gold-bearing gravel bar on the Trinity River, which soon acquired the same name as the first: Reading's Bar. At some point in Reading's prospecting, he discovered another rich placer where the town of Shasta would shortly appear, this one named Reading's Springs.⁴

Here the record of Reading's exploits becomes somewhat vague. It seems he returned to the Trinity River one year later with a large expedition consisting of "three white men, one Delaware, one Walla Walla, one Chinook, and about sixty Indians from the Sacramento Valley." With those men in his employment, Reading obtained a quantity of gold worth \$80,000. Fresh upon that success, Reading went to San Francisco and teamed up with a ship captain to mount an expedition that would go up the coast to the mouth of the Trinity River and from there up the Trinity River through the Coast Range. Reading had the misimpression that the Trinity River empties into Trinidad Bay and that the unexplored river valley would provide a direct route to the gold fields. In fact, the Trinity River turns north and joins the Klamath River on its path to the sea, so the Coast Range presented a barrier. In any case, the ship was blown off course in stormy weather, so it never arrived at Trinidad Bay let alone the mouth of the Klamath River, which lies forty miles to the north. It made brief landfall, but the men abandoned the expedition. After the aborted sea expedition, Reading took what earnings he still had and traveled back east in 1850 to settle his debts there. After making his discoveries and using his bonanza to pay off his creditors, Reading was content to turn his energies to other pursuits besides mining.⁵

³ Madge Richardson Walsh, "Gold Discovered on Clear Creek," *The Covered Wagon* (1998), 71–72.

⁴ Helen S. Giffen, *Man of Destiny: Pierson Barton Reading, Pioneer of Shasta County, California*, ed. Eleanor Lee Reading Templeman (Redding, CA: Shasta Historical Society, 1985), 71.

⁵ Madge Richardson Walsh, "A Tour of some Historic Sites in Shasta County," *The Covered Wagon* (1999), 75–76; Giffen and Templeman (ed.), *Man of Destiny*, 69–71; Robert O'Brien, *California Called Them: A Saga of Golden Days and Roaring Camps* (New York: McGraw-Hill Book Company, Inc., 1951), 154–55; Rosena A. Giles, *Shasta County: A History* (Oakland, CA: Biobooks, 1949), 31; Walsh, "Gold Discovered on Clear Creek," 72–74.

The California Gold Rush

Reading's gold strike on Clear Creek was the second great gold discovery in California. It ensured that the California Gold Rush would embrace the rugged Klamath Mountains in the northwest corner of California even as the brunt of the gold rush targeted the gold fields on the western slope of the Sierra Nevada. However, as the gold fields in the northwest were harder to reach than those in the Sierra Nevada, and geographically separated in a more geologically complex mountain range, they did not get as much attention from miners until the years 1850–1852. By then, descriptions of the California mines had already settled on a nomenclature focused exclusively on the mines in the Sierra Nevada. Those mines that were approached via the Sacramento River were called the “Northern Mines,” and those approached via the San Joaquin River were called the “Southern Mines.” The nomenclature ignored the incipient gold diggings in the Klamath Mountains which, by 1850, were fully a part of the California Gold Rush. As the historian Rodman Paul observed, “A more accurate system of terminology would have divided the mining territory into three sections: a ‘northwestern’ region to designate this newest region; a ‘central,’ to identify the original districts known as the Northern Mines; and a ‘southern’” for the area accessed by the San Joaquin River. The northwestern mines did not yield as much gold as the other mines ultimately, but they were an integral part of the California mining frontier.⁶

The total number of people involved in the California Gold Rush is hard to determine, and the total number who flocked to the diggings around Shasta is even harder to estimate. In all of California there were around 14,000 people exclusive of the Indian population in the summer of 1848 and perhaps 6,000 more by the end of the year. The non-Indian population at the close of 1848 probably included from 6,000 to 8,000 Americans and several thousand Europeans, Pacific Islanders, and Latin Americans, in addition to the Hispanic people who were already there. The non-Indian population one year later may have risen to somewhere near 100,000, with Americans comprising one half to two thirds of that number. The U.S. Census of 1850 counted 92,597 non-Indians plus approximately 19,000 more in San Francisco and two other counties where the census returns were lost before they were finally tabulated. California became a state in 1850. The state government conducted its own census in 1852 and counted 223,856 persons exclusive of the Indian population. So, it seems that the famous “forty-niners” were the leading edge of a powerful wave of emigration that continued through 1851 or 1852. More and more gold seekers diverted from central California to the northwestern mines as the tidal wave of emigrants crashed over the state.⁷

⁶ Paul, *California Gold*, 91–92.

⁷ Paul, *California Gold*, 23–25.

There were reports that the first mining camp on Clear Creek had a population of nearly 1,000 in the summer of 1849 and that the mining camp at Reading's Springs (later renamed Shasta) had about 600 people that summer. Much of this population trickled away during the hard winter months. The U.S. Census of 1850 enumerated just 378 non-Indians in all of Shasta County, which then included most of what later became Lassen County to the east and Tehama County to the south and some of Siskiyou County to the north. But in that summer of 1850 gold seekers flooded into the area, so the number is not reflective of the population at the end of the year. New mining camps sprouted at several locations. The next U.S. Census in 1860 counted 4,360 persons other than Indians living in Shasta County. But it is likely that a significantly greater non-Indian population resided in the county in 1852–1853 when the gold fields were at peak production.⁸

The majority of gold seekers who arrived in California in 1849 and 1850 came by overland trail. Most of the overlanders came by the northern route. Traveling in wagon trains, they traversed the Great Plains via the Missouri and Platte rivers, crossed the Rocky Mountains through South Pass, and followed the Humboldt River to one of the many forks of the California Trail that went over the mountains to California's Central Valley. One main fork of the California Trail went over Carson Pass and terminated in the central mining region. Another main fork called the Applegate/Lassen Cutoff deviated around the northern end of the high Sierra and followed the Pit River through the mountains to the northwestern mines. (A variant of this latter trail called the Nobles Emigrant Trail, which was not established until 1852, actually brought travelers right to Shasta.) A smaller contingent of overlanders took a southern route across the Great Plains by way of the Old Spanish Trail. This route terminated in Los Angeles, with a final leg extending from there northward to the southern mining region on the Mariposa and Tuolumne rivers.⁹

The northwestern mining region was the least accessible of the three regions. While many miners approached the northwestern mines via California's Central Valley, those who came from Oregon and British Columbia entered the region by way of the Klamath and Trinity rivers. The Trinity mines soon extended to rich diggings on Weaver Creek, a tributary of the Trinity, where the mining camp of Weaverville formed in 1850. As more gold seekers streamed down from the north to the Trinity and Shasta mines in 1850 and 1851, more discoveries were made. Gold placers were located along Yreka Creek and at

⁸ Giles, *Shasta County: A History*, 53–57.

⁹ *Memorial and Biographical History of Northern California* (Chicago: The Lewis Publishing Company, 1891), 74.

Scott's Bar downriver from Scott Valley. These finds drew some of the miners at Shasta, and in 1852 Siskiyou County was formed from parts of Shasta and Klamath counties, with the county seat in the new town of Yreka.¹⁰

A substantial portion of emigrants to California came by sea. Most of these people made a long voyage around Cape Horn and entered California through the port of San Francisco. From there, most of them headed to the mines. If a person was wealthy enough to travel to California by sea, then the person was also likely to pay the exorbitant fare for transport on a river steamboat from San Francisco to the mining regions. Steamboat navigation of California's inland river system arose quickly when the gold rush commenced. There was just one steamboat on the Sacramento River in 1848 and not a shipyard anywhere, but in the next year numerous steamboats from Atlantic ports rounded Cape Horn and travelled to California to get into the lucrative business of transporting miners from San Francisco inland to the mining regions. (Some of the steamboats were disassembled, transported by ship, and reassembled in California; while others made the ocean voyage under their own steam. Two steamboats set out on the ocean voyage and were lost without a trace.) By 1850, there were many steamboats plying the inland waters of California's Central Valley, and river navigation formed an integral part of the mining regions' transportation and supply networks. "Looking at the map of California," wrote one early commentator on the California scene,

it will be seen that the 'mines' occupy a long strip of mountainous country, which commences many miles to the eastward of San Francisco, and stretches northward several hundred miles. The Sacramento river running parallel with the mines, the San Joaquin joining it from the southward and eastward, and the Feather river continuing a northward course from the Sacramento—all of them being navigable—present the natural means of communication between San Francisco and the 'mines.'¹¹

Since the northwestern mining region lay much farther away from the Central Valley's navigable waters, not many miners going to the Shasta mines came via the sea route. For the privileged water-borne traveler, the last leg of the journey to the mines generally involved a stagecoach ride from the river port to the mining camps. As soon as the gold rush was on, stagecoach services sprang up and a primitive road system began to take shape in the Central Valley where there had been only a network of trails before. But stagecoach fares,

¹⁰ Edwin G. Gudde, *California Gold Camps: A Geographical and Historical Dictionary of Camps, Towns, and Localities Where Gold Was Found and Mined; Wayside Stations and Trading Centers*, ed. Elisabeth K. Gudde (Berkeley: University of California Press, 1975), 365; *Memorial and Biographical History of Northern California*, 227.

¹¹ J. D. Borthwick, *The Gold Hunters*, ed. Horace Kephart (1857; New York: MacMillan Company, 1917), 102.

like steamboat fares, were beyond the means of most miners. The mass of miners covered those intermediate distances within the Central Valley on horseback or foot, toting their meager belongings from place to place on muleback or in a swag slung over the shoulder.¹²

The rivers and roads were important for transporting not just people but also supplies of food and equipment to sustain the mining camps. Steamboats ferried supplies inland part way, while pack trains took the supplies the last distance to the mining camps. Pack trains of forty to fifty mules were not uncommon. Each mule carried a load of 300 to 500 pounds. In 1850, the road from Sacramento to Nevada City carried so much traffic on it that, according to one California visitor, the road “presented a greater crowd of teams, hauling goods, etc., than I ever saw on any road in the states.”¹³ Three major towns developed at those points of interchange where the steamboats unloaded their cargo and the pack trains took over. The three supply centers were Sacramento in the central mining region, Marysville in the north (at the head of navigation on the Feather River, the Sacramento’s largest tributary), and Stockton in the south.¹⁴

There was no equivalent supply center for the northwestern mines. The town of Tehama briefly gained that role when it appeared that it would be at the farthest point of steamboat navigation on the upper Sacramento River. But the next year steamboats began to venture farther upriver, and a new head of navigation was established near Reeds Creek. The tiny settlement at Reeds Creek became the town of Red Bluff. The next year, an effort occurred to extend river transport still farther northward, and this effort was undertaken by none other than Pierson B. Reading. He purchased the steamer *Comanche*, a shallow-draft vessel that promised “to run anywhere the ground was damp.” But the boat did not get as far upriver as Tehama. Reading then bought another steamer, *McClelland*, which he refitted and renamed *The Rainbow*. This boat made it up the Sacramento River to Reading’s rancho and the mouth of Clear Creek. But the navigation on the upper river was too difficult to sustain a supply center there, so Red Bluff took the honors of being at the head of navigation. Red Bluff never became a major supply center like Sacramento, Stockton, and Marysville because pack trains were about as cost effective as steamboats in moving supplies northward through the upper Sacramento Valley. Pack trains generally took a direct route up the west side of the river from Sacramento to Red Bluff and onward up to Shasta, while stagecoaches ran up the east side of the valley since that is where the towns and mining camps were.¹⁵

¹² Paul, *California Gold*, 71–72; A C. W. Bethel, “The Golden Skein: California’s Gold Rush Transportation Network,” *California History* 77, no. 4 (Winter 1998–1999): 250–75.

¹³ Franklin Street, *California in 1850, Compared with what it was in 1849, with a Glimpse at its Future Destiny*, in *The Gold Mines of California: Two Guidebooks* (1851; New York: Arno Press, 1973), 32.

¹⁴ Isenberg, *Mining California*, 55–56.

¹⁵ *Memorial and Biographical History of Northern California*, 228; Giles, *Shasta County: A History*, 32–33; Joseph Aloysius McGowan, “Freighting to the Mines in California, 1849—1859,” Ph.D. dissertation, University of California, 1949, 261–62.

A post road was soon built from Red Bluff to the Shasta mines. The Red Bluff Road ran through the mining camps of Middletown, Horsetown, and Cottonwood and ended at Shasta. Starting in 1851, a stagecoach service used this road, sharing the way with the pack trains. The road ended in Shasta because from there across the divide into the Trinity River watershed the way was rougher and steeper. From what is now the Camden-Tower House Historic District, two rough trails led westward to Weaverville and northward to Yreka. Shasta then served as a kind of second-tier supply center for the mining camps in the Trinity River watershed. Large pack trains coming from the south transferred their loads to pack mules for the hazardous trip over the rough trails to Weaverville and Yreka. With a wink and a nod to the bigger supply centers of Sacramento, Stockton, and Marysville, freighters called Shasta the head of “whoa navigation” or the terminal point of wagon transport. For a time, until roads were built, Shasta was as far as wagons could go before steep terrain blocked their way. Shasta served as the supply base for the Trinity mines until the mid to late 1850s when rough roads were completed to Weaverville and Yreka and wagons pulled by teams of oxen began carrying the heavy loads formerly carried by mules. The miner Charles Camden would later capitalize on the situation, building a toll road from Shasta westward to Tower House where the rough roads forked and steeper grades commenced (see Chapter Eleven).¹⁶

Perspective on the California Mining Frontier

Historians have found a great deal to say about the California mining frontier, while they have struggled to come up with a synthesis. Historical studies of the California mining frontier have variously focused on the logistics and technologies that were employed in mining, on the social development of the mining camps, on law, on labor, on women, on the Chinese and other ethnic minorities, on the mining frontier’s disastrous consequences for California’s Native peoples, on the mining frontier’s impact on the environment, and more. There is agreement in these many studies that the California Gold Rush was a seismic event in the shaping of the American West, but beyond this general recognition of its great importance there is no consensus on how to weigh the California Gold Rush in the general scheme of western history.¹⁷

If there is a preeminent scholar of the California mining frontier it is Rodman W. Paul (1912–1987), a Harvard-trained historian at the California Institute of Technology in Pasadena. Paul wrote the first scholarly treatise on the subject, *California Gold: The*

¹⁶ McGowan, “Freighting to the Mines in California, 1849–1859,” 252–53, 264–65.

¹⁷ But see the national gold rush symposium issue of *California History* 77, no. 1 (Spring 1998), especially Malcolm J. Rohrbaugh, “The California Gold Rush as a National Experience,” 16–29; Patricia Nelson Limerick, “The Gold Rush and the Shaping of the American West,” 30–41; and Richard White, “The Gold Rush: Consequence and Contingencies,” 42–55.

Beginning of Mining in the Far West (1947). He expanded on that work with his masterful *Mining Frontiers of the Far West, 1848–1880* (1963). He expanded his scope beyond mining with *The Far West and the Great Plains in Transition, 1859–1900* (1988). In Paul's works, the California mining frontier set the stage for a series of gold bonanzas and mining booms around the West. Paul stressed that each episode saw a period of flush mining production and then decline. The mining booms were not synchronous but rather consecutive (with many miners actually migrating from one mining center to the next). After California in 1848, there was never one "mining frontier" in the West. While no mining boom elsewhere in the West was as impactful as the California Gold Rush, taken together the mining booms around the West exerted more influence than any other western "frontier" (the cattleman's frontier, the sheepman's frontier, the farmer's frontier).¹⁸

Paul was a student of Frederick Merk, who in turn studied at Harvard University under Frederick Jackson Turner. Paul interpreted the mining frontiers in light of Turner's famous frontier thesis. Turner conceptualized America's westward expansion as a moving frontier where pioneering Americans turned wilderness into frontier farm settlements and then into well-settled areas supporting towns and industries. Indeed, Turner envisioned America's westward expansion as waves of settlement, each peopled by a new set of pioneers or civilizers venturing out into the wilderness and gradually taming it. Over time, Turner argued, these westering Americans formed local governments, forged new social institutions, and grew American democracy from the grassroots. Paul addressed his intellectual predecessor head on. Turner's thesis, Paul wrote, "was suggestive rather than specific." It described a settlement pattern that characterized European American settlement in the humid Midwest, perhaps, but not the settlement pattern in the arid West. With Turner's focus on the small independent farmer, free land, and agrarian society, his thesis did not account for the different conditions that pertained west of the 100th meridian where annual rainfall was too sparse in most places to sustain the pioneer farmer. In the mostly arid or semi-arid West it was prospectors and miners who were the pioneers. On the heels of the miners came the merchants, packers, teamsters, and stagecoach operators to supply the miners' wants. The gold and silver riches were found in the West's mountainous areas, and so it was there that the first towns and cities formed. The society created on the mining frontier was different from the one cultivated by pioneer farmers. It was more urban, more dependent on outside capital, more conditioned to cycles of boom and bust. Yes, the mining camps had to form local governments and manage civic affairs, Paul observed, but the mining population was a rough and transient one compared with the settlers on the farming frontier; the mining population was more materialistic than idealistic, more imitative than innovative.¹⁹

¹⁸ Paul, *Mining Frontiers of the Far West, 1848–1880*, 9.

¹⁹ Paul, *Mining Frontiers of the Far West, 1848–1880*, 2–11.

Paul's work focused on the mining industry and all the transportation and other development needed to support the industry. Paul did consider the social and environmental impacts of mining, but those things were not his primary concern. Since Paul's time, those topics have received a great deal of scholarly interest. Newer histories of the California Gold Rush bring out the miners' harsh, even murderous, treatment of Native peoples who stood in their way. There is a better appreciation for how the gold rush brought about a sudden mixing of many peoples in California, including 25,000 Chinese immigrants, and how the mining frontier fomented race conflict not only in California but also across the West. There is, overall, an ambivalence about the mining frontier that stems from contemplation of its many direct and indirect consequences. Historian H. W. Brands went so far as to declare that the year 1848 was the great divide in American history in his book *The Age of Gold: The California Gold Rush and the New American Dream* (2002). Brands was interested in the impact of the gold rush on American culture. He found that the quest for gold elevated the selfish pursuit of happiness as an essential American creed over an older American ethos of social responsibility.²⁰

Environmental historians have emphasized the impacts of the California Gold Rush on California's ecology and natural resources. They have also focused on how environmental consequences from mining impacted other communities located downstream of the mining centers. Environmental historian Andrew C. Isenberg has written the fullest account of the California mining frontier and the environment in his book, *Mining California: An Ecological History* (2005). Isenberg examines not only the environmental impacts of nineteenth-century mining but also the environmental consequences of nineteenth-century flood control, lumbering, and cattle grazing. Most environmental impacts were apparent at the time, but were deemed to be worth the cost since they allowed the accumulation of wealth. While all these forms of resource exploitation followed a boom-and-bust cycle that was first made conspicuous in the California Gold Rush, they all emanated from the nation's drive to industrialize. So, Isenberg argues, the headlong exploitation of natural resources in California and the West was not a distinctively western phenomenon but rather it "exemplified industrializing America."²¹

With that broad perspective on the significance of the California mining frontier, let us zero in on the area around Whiskeytown by first returning to the authority Rodman W. Paul. Of particular interest is Paul's assessment that the northwestern mines region lagged behind the other regions in mining techniques. We quote Paul here at length on what made the northwestern mines region distinctive (notwithstanding a few badly outdated word choices such as "hostile" Indians and "firewater"):

²⁰ H. W. Brands, *The Age of Gold: The California Gold Rush and the New American Dream* (New York: Doubleday, 2002), 490. For another take on the California Gold Rush and its ethos, see White, "The Gold Rush: Consequence and Contingencies," 44–49.

²¹ Isenberg, *Mining California*, 16.

...Its two dominant characteristics were ruggedness and remoteness. Almost the whole of its surface was covered by abrupt mountains and steeply cut valleys....

Because of this irregularity and ruggedness, it proved difficult in the extreme to establish any communications within the section save by winding pack-trails. External communications, between the northwest and the outer world, were only slightly less of a problem....

The problem of communications was rendered the more difficult by the comparative severity of the climate of the northwest. A contemporary said of it: 'The climate is rigorous, the winter rains being long continued and heavy in the valleys, and the snow lying to a great depth for several months on the mountains.'

As if these physiographic obstacles were not enough, still another stumbling block was provided by the presence of hostile Indians. In many of the mining districts of the other two sections the Indians were an occasional local problem between 1848 and 1852, but in only a few was there any real danger after that period. In the northwest, on the other hand, the aborigines were a more competent crew than elsewhere in the state, and by utilizing the very difficult terrain of their native habitat they were able to remain in the field, as a real though sporadic menace, long after their brethren to the south had succumbed to those twin agents of white conquest: firearms and firewater. Their power was not broken until the federal government sent militia and regular troops against them during the American Civil War.

In partial compensation for these hindrances to development, nature endowed the section with resources that were of considerable value. Gold, both in placer deposits and in veins, was scattered along many of the creeks and rivers, and in some of the gulches and hillsides. The rainfall was the heaviest in California, and thanks to it, water and timber—two elements essential for mining—were abundant in the greater part of the northwest. Given these same resources in an area that was most accessible and less troubled by Indians, and progress might have been rapid.

In the Shasta part of the section gold was discovered as early as 1848, and the season of 1849 saw prospecting and mining at a number of points in both Shasta County and the adjacent Trinity mines. No real rush developed until 1850. Beginning in 1850 and continuing for the next three years, the newspapers reported a considerable excitement over the new area. Miners defied Indians and natural environment alike, in order to set up camps along the rivers, while optimistic promoters established villages at several points strategically located to control the flow of trade.

Despite this boom, two of the leading newspapers in the state declared in May 1852 that few people in the heart of California had any clear idea of the nature of the far northern country and its resources. Three years later, in May 1855, one of these journals repeated its earlier statement, and added the

remark that in all probability the majority of its readers did not even know the exact location of Trinity County, which was one of the most important north-western subdivisions.

The press in 1855–56, was in agreement in saying that this lack of interest on the part of the outer world was reflected by a notable sparseness of population within the section itself. The main handicaps cited were the familiar ones of isolation and Indian troubles. On the other hand, by the very fact of having so few people in so large a territory, the northwest was able to offer unexploited, virgin ground at a time when the men of the older sections were reworking the same diggings for the sixth or seventh time. Long after simple placer mining had passed its zenith elsewhere, the newspapers were still reporting fine yields and untouched auriferous soil.

Partly because virgin ground was still available, the miners of the northwest were slow to resort to improved methods. From time to time a loyal local newspaper claimed great mining achievements for its readers, but the consensus of the less biased observers was that mining techniques there were far behind those of the other two sections. The rocker, for example, was still in use on the Klamath River at the end of 1856, a half-dozen years after it had been supplanted elsewhere by the long tom and sluice. The building of canals and flumes for conveying water was inexplicably slow in becoming a common practice, especially when one considers the section's superior water and timber resources.

The area was thus throughout the fifties a retarded mining frontier occupied by a sparse population of men of little wealth and inferior initiative. Apparently it was rich enough to furnish a living with primitive modes of mining, but not rich enough to attract to it men of substantial capital or outstanding ability.²²

Early Development of Placer Mines in Shasta County

Placer deposits run along creeks where water erosion has exposed a gold vein in solid rock and has eroded it out. The eroded gold particles wash into the creek and are carried downstream, suspended in the stream current. Since gold is heavy, it settles out before other suspended material in the water where the current of the stream slows down. The bits of gold sink into the sand or gravel in the stream bed, forming a placer deposit. Miners and prospectors in the California Gold Rush knew two important things about placer deposits. First, wherever a placer is located there is also a lode—a body of ore with gold-bearing veins in it—located somewhere upstream. And second, it is a lot harder to mine gold out of solid rock than it is to pick gold out of a placer deposit. The mass of miners was looking for rich

²² Paul, *California Gold*, 93–97.

placers located close to the source where the largest, heaviest flakes could be found, and they were looking for new discoveries before they got too badly picked over by all the other miners. Naturally, then, placer miners were a restless population continually on the move.

In October 1849 there were 300 to 400 tents pitched on the hillsides around Reading's Bar and already some of the men in that camp reckoned that their best shot was to prospect for a new strike on some other creek nearby rather than dig and pan for gold where so many others were already working. One prospector whose name has been lost to history discovered gold in Whiskey Creek, and by 1850 there was a small mining camp located where Whiskey Creek at that time flowed into Clear Creek. First known as Whiskey Creek, the camp later became Whiskeytown.²³

It was said that the creek got its name from a little mishap involving whiskey spillage. A miner named Billie Peterson was leading a mule with a load of whiskey on its back when a keg worked loose and fell to the ground, busted, and drained the precious contents into the creek. In one version of the story, miners vainly tried to get water from the creek while it still carried a tincture of the spilt whiskey. The miners named the creek Whiskey Creek, and for good measure they named the creek that flowed into Clear Creek from the opposite direction Brandy Creek.²⁴

Other mining camps appeared in the upper Clear Creek drainage within or just outside what is now the national recreation area. Grizzly Gulch, near present-day Oak Bottom, was listed as one of nine principal mining camps in Shasta County in the 1852 state census. A mining camp at Mad Mule Canyon, located on Whiskey Creek just north of the present park boundary was similarly listed in the 1852 state census, as was another mining camp on Whiskey Creek at Mad Ox Ravine. A mining camp at French Gulch, located on Clear Creek three miles north of the present park boundary, was the first camp in the area oriented to lode mining. It had two water-driven quartz mills in 1851.²⁵

Gold production from the Whiskey Creek diggings may have peaked in 1852 as it did elsewhere in Shasta County, but mining continued for several years after that. In the summer of 1854, the mining camp sent out multiple glowing reports, and miners and investors kept coming. By 1855, at least eleven mining companies were operating along Clear Creek and its tributaries between Whiskeytown and Tower House.²⁶

The Whiskey Creek diggings were lucrative. A newspaper report in June 1851 stated that a company of seven men struck a rich ledge (an exposed vein or lode) in Mad Mule Canyon in the Whiskey Creek drainage, taking out \$10,000 of gold in fifteen days from the

²³ O'Brien, *California Called Them*, 156; Giles, *Shasta County: A History*, 191, Al M. Rocca, *Whiskeytown National Recreation Area: A History* (Redding, CA: Renown Publishing, 2010), 27.

²⁴ Rocca, *Whiskeytown National Recreation Area*, 27; Giles, *Shasta County: A History*, 191.

²⁵ Gudde, *California Gold Camps*, 124, 146, 203.

²⁶ Anna Coxe Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California* (Denver: National Park Service, Denver Service Center, 1978), 18.

placer deposit just below the ledge. A single gold nugget from this placer sold for \$900. All of the gold was in coarse pieces. A father and son, working another placer nearby, earned \$8,000 in twenty-five days. The miners in the Whiskey Creek drainage were, on average, reportedly making \$15 to \$30 per day at this time.²⁷

Those were good wages for an independent miner working a placer deposit with his own hands. Rodman W. Paul estimated that the average daily wage of a miner in California in 1848 was about \$20 (about \$800 in today's dollars). In the rich Coloma district two men working a rocker could make \$25 to \$30 per day apiece when the diggings were in peak production. Newspapers reported on miners' daily earnings often, as they were a pretty good measure of a mine's or mining district's productivity. A miner's wage was how much money he was able to clear when he sold his gold. His living expenses had to be deducted from that amount, and on the mining frontier those expenses could be prodigious. Miners' wages declined steadily after the early 1850s. By 1852, the average daily earnings dropped to about \$5. By 1856, the figure stood at about \$3. Living expenses declined during the decade, too, as the mining camps became better supplied, but the drop in living costs did not keep up with the huge decline in wages.²⁸

Placer Mining Techniques

Miners' wages fell as the amount of time and effort that they expended in extracting each ounce of placer gold rose. The rare nuggets were picked up quickly. As soon as the nuggets were all taken, the miners' gold came to look more and more like small grains, and then flakes, and then dust. Mostly it was dust. Fortunately, the gold dust was not scattered evenly through all the other loose sediment in the creek bed, or it would have been much harder to extract. Because the tiny particles of gold were heavy for their size, they worked their way down through the surrounding sediment with each heavy rain or snow melt or earth tremor until they rested on bedrock and could descend no farther. There the tiny particles of gold came to repose in a layer of fine sand where the gold was relatively concentrated. "This layer is the pay streak," writes historian Otis E. Young, Jr. "There with pick and pan a lucky man might in a week take out a fortune in gold dust, while his neighbor a few yards distant on the same stream might encounter only the paltriest show of color for his pains."²⁹

²⁷ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 3. John McWilliams said he made \$10 or more per day mining in the Shasta area in the winter of 1849–1850. See John McWilliams, "Recollections of John McWilliams," *The Covered Wagon* (1995), 4.

²⁸ Paul, *California Gold*, 55, 349–52; Paul, *Mining Frontiers of the Far West, 1848–1880*, 35.

²⁹ Otis E. Young, Jr., *Western Mining: An Informal Account of Precious-Metals Prospecting, Placering, Lode Mining, and Milling on the American Frontier from Spanish Times to 1893* (Norman: University of Oklahoma Press, 1970), 107.

California gold production peaked in 1852. It tapered off slowly over the next decade. By 1863, it had fallen to one third of what it was at peak production. The gold mines in Shasta County followed the same general pattern as the rest of the state. California miners adopted new placer mining techniques when they recognized that they would have to shovel a lot more dirt to obtain a respectable daily yield of gold dust. Innovation only occurred when mining conditions deteriorated, and miners came under increasing pressure to make their strenuous labors pay off. When the going got tougher, men tried new approaches.

When miners struck a new placer gold deposit, the very first technique for finding gold was hardly a technique at all: they went searching and digging for nuggets. There were many cases of ill-equipped early comers digging with their knives and spoons—merely clawing through the uppermost layers of sand and gravel on a bar or in streambank in search of glitter. Most miners carried a pick and shovel, and soon they employed one technique after another to collect the finer and finer particles.

Panning

To sift through dug up material for bits of gold, panning was the most basic technique. The miner would fill a pan with sand and hold it by the surface of the creek, gently swirling the contents while allowing a little water to pass over. With the proper degree of patience, the gold would settle to the bottom while the water would little by little carry away the rest. Panning could not be rushed: fifty pans was a good day's work.³⁰

Washing

Washing was a step up from panning. It involved use of a larger receptacle than a pan such as a cradle or rocker. Water would be introduced at one end of the device, and it would be rocked so that gold would settle out and collect in the riffles built into the bottom of the device. There were various other attachments involving mesh screens and canvas aprons aimed at speeding the washing process. Washing not only had the advantage of handling larger quantities of sand at one time, it also relieved the miner of having to squat in cold running water for hours on end. Water could be hand-carried from the stream to the rocker in vessels, or it could be diverted from the stream to the rocker through a wooden flume or trough.

³⁰ Young, *Western Mining*, 109. For a similar description specific to the northwestern mining region, see John McWilliams, "Recollections of John McWilliams," *The Covered Wagon* (1995), 4–7.

Sluicing

Sluicing was another step up in complexity. Like the rocker, the trough could be fitted with riffle bars to catch particles of gold. Thus equipped and positioned at the right angle on gently sloping ground, the trough became a sluice box. And like the rocker again, the sluice box appeared in numerous forms and with various attachments. One frequently seen tool was the long tom that installed at the upper end of the sluice box to wash very coarse pay dirt. The long tom was a trough that was wide at the bottom and narrow at the top. Water was piped into the narrow top end while men shoveled dirt into the wide section. Another man managed a strainer at the bottom. Once the coarse material was sorted in the long tom, the finer material passed on down to the sluice box.³¹

Amalgamation

Another technique of placer mining was the use of quicksilver or mercury as an amalgam to collect the gold dust. When gold and mercury come in contact, the gold will cling to the mercury and merge with it. When the resulting amalgam is carefully heated, the mercury will evaporate leaving only the gold. This technique was known in the ancient world, and California miners were fortunate that California already had a mercury mine in 1848. Suddenly the gold rush created a market for mercury production, and the mercury mine went into rapid production in 1850. Thus, mercury was affordable and frequently used in placer mining. Generally, tiny amounts of mercury were put on the riffles in rockers or sluice boxes to aid in the collection of gold.³²

Partnering

In the early days of placer mining, one important labor-saving innovation was the formation of partnerships. Miners generally were individualists who set out to make their own fortunes, but while working in the diggings they soon figured out that two or three or four men working in partnership could accomplish more than if they worked singly. For example, it took two men to work a rocker most effectively—one to do the rocking and another to manage the supply of water. It took at least four men to work a long tom effectively, with one feeding water into the top end while two more shoveled in dirt and a fourth managed

³¹ Paul, *California Gold*, 61–62.

³² Young, *Western Mining*, 118–21; Paul, *California Gold*, 58–59.

the strainer. Sometimes an efficient division of labor developed in camp as well, with one man serving as cook, another cutting firewood, another keeping house, and perhaps a fourth partner running for supplies.³³

Tunneling

As miners dug through layers of gravel and sand to reach deep placer deposits, the unconsolidated material at greater depth could be highly compressed, almost the density of hard rock, resistant to anything less than a pickaxe. The deep placer diggings came to resemble lode mines as the deep deposits lying on bedrock were accessed by shafts and tunnels dug through the compacted gravel. The vertical shafts were called gopher holes, while the horizontal drifts or tunnels were called coyote holes. If the shafts or tunnels were very deep, they were reinforced with timber supports. But this was still technically a form of placer mining because the subterranean workings were made in placers, not in solid rock. Excavated entirely with hand tools, coyote holes were usually just big enough for a single miner to worm in and out of. Writers Gene Ellis and Frank Kester, who described Whiskeytown as it looked in 1962 for *True West Magazine*, stated that the many coyote holes left by the miners in the Whiskeytown diggings were as little as three feet in diameter and as much as one hundred feet in length. “There was only room for the miner to lie on his stomach and dig the dirt and rocks into a sack which he shoved in front of him,” they wrote, adding that the workings “were just plain awesome.” When the miner’s sack was full, he had to “back his way out with slow agonizing hip wiggles,” knowing that one dislodged timber by a stray movement of his foot could lead to a cave-in, entrapment, and almost certain death.³⁴

None of the techniques of placer mining described above were invented in the California Gold Rush. Some, such as the use of mercury, were known in the ancient world while others were developed in Spanish America. When the great migration to California occurred, the vast majority of miners were ignorant about placer mining. They had to learn the techniques once they were there. Fortunately, there were enough Spanish Americans in the mix that their knowledge and expertise about placer mining could be shared and disseminated. There were also some Americans, as well as Germans, Englishmen, Welshmen, Cornishmen, Italians, and Hungarians, who had mining expertise. But there were no mining schools in California and no reliable manuals, so the knowledge could only

³³ Paul, *Mining Frontiers of the Far West, 1848–1880*, 25; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 10.

³⁴ Young, *Western Mining*, 110–11; Gene Ellis and Frank Kester, “Uncle Sam Sobers Whiskeytown,” *True West Magazine* (October 1962), 37.

spread by word of mouth. Historian Rodman W. Paul stresses that the mass of miners slowly acquired specialized mining knowledge and that great amounts of labor and resources were wasted as a result.³⁵

All the techniques of placer mining required water. Many creeks dried up in the summer, making it nearly impossible to pan for gold, much less work the diggings by washing or sluicing. At first, the miners followed the simple solution of ceasing operations when there was no available water. Acquiescing to nature, they went somewhere else where water was flowing. Yet they did have another solution and that was to construct dams and ditches and convey water from permanent water sources to dry diggings, thereby manipulating the water supply so they could continue to work the placers in the dry season. As placer mining grew more involved with each passing year, miners eventually resorted to building the necessary waterworks to keep operations going in the dry season.

Ironically, placer miners frequently faced the opposite problem of too much water in the diggings. Particularly in the wet season from November through March, miners were hindered by streams flowing where they did not want them to flow, submerging the creek beds where they wanted to dig. If they did not want to simply wait for the stream to dry up, they had to divert water to expose the creek bed. The common technique was to build a coffer dam and divert the stream flow to one side of the creek channel. The dams were crude—often just logs placed on an angle to push the current to one side, with sticks and willows jammed in the cracks to stop seepage. Once the section of streambed behind the coffer dam dried up, it could be excavated. Then the dam could be dismantled and another one built on the other side of the channel. Before long, miners were not content to expose the beds of small creeks; they built larger dams and diverted entire rivers from their courses. The makeshift character of the coffer dams presaged the shoddy construction that would characterize many water conveyance systems built by miners from the 1850s through the 1870s.³⁶

³⁵ Paul, *California Gold*, 47–49.

³⁶ Paul, *Mining Frontiers of the Far West, 1848–1880*, 21; Isenberg, *Mining California*, 27–29.

The Clear Creek Ditch

A group of miners in Shasta County came together to build a water diversion ditch to establish an all-year water supply for the diggings in the lower Clear Creek drainage. Built in 1855, the long ditch was a large, impressive conveyance system that succeeded in keeping the placer mines going for several more years. Much of the ditch remains visible today, with many of the best-preserved sections lying within Whiskeytown National Recreation Area.³⁷

On April 23, 1853, miners formed a partnership called the Shasta County Mining and Water Company. Their aim was to obtain a supply of water to rework various placer deposits that had been neglected or abandoned. The placers were in the lower section of the Clear Creek drainage at Horsetown, Middletown, Briggsville, Texas Springs, and Lower Springs. It has been suggested that perhaps these miners were motivated by something else besides the pursuit of gold: a desire to hold their budding community in place, create some semblance of a new home, and protect their investments. However, the company lacked capital to accomplish anything until March 1854, when the members voted to raise \$50,000 by issuing 100 shares at \$500 per share and to bring onboard an engineer, E. C. Gillette of Shasta, to develop a plan and make a preliminary survey.³⁸

Gillette developed a plan for constructing a small dam on Clear Creek below Tower House and a water ditch leading from there to the placers. On November 18, 1854, another entity called S. C. Snowck and Company filed a water right claim presumably based on implementing Gillette's plan. The original company folded in the following month before any construction took place. Then two Sacramento investors, John Smith and Jesse Rhodes acquired the latter company's water right and formed the Clear Creek Ditch Company. Gillette completed his surveying in February 1855.³⁹

The plan called for a ditch with capacity to carry ten cubic feet of water per second. This was the estimated minimum summer flow that would be diverted out of Clear Creek. Specifications for the ditch had it four feet wide at the base, six feet across at the top, and three to four feet deep, with a grade of a little more than seven feet per mile. The ditch was to start on the west side of Clear Creek, cross over Clear Creek on a flume, cross over Whiskey Creek and Oro Fino Creek on two more flumes, and contour around the hillsides east and then north of Clear Creek, ending near Middletown. Altogether, nine miles of these ditch works are still clearly visible within the park. Steep topography around the

³⁷ Marit K. Munson and Eric W. Ritter, "The Clear Creek Ditch," Appendix 4 in "An Archaeological Inventory and Evaluation of Select West Redding Land Exchange Parcels, Shasta County," typescript report prepared for the Bureau of Land Management, Redding, May 1993, p. 4.

³⁸ Carlos Alzueta, "Clear Creek Ditch Was the Name, Gold Was the Game," *The Covered Wagon* (1988), 61–62; Munson and Ritter, "The Clear Creek Ditch," 1.

³⁹ Alzueta, "Clear Creek Ditch Was the Name, Gold Was the Game," 62; Munson and Ritter, "The Clear Creek Ditch," 2.

present site of Whiskeytown Dam necessitated one tunnel 460 feet in length. Its exact location is not known, but it is presumed to be under the reservoir or to have been cut away in the excavation for the dam. Lower down, where the ditch contoured around a ridge and headed away from the Clear Creek canyon, it was 300 vertical feet above the creek.⁴⁰

Lateral ditches would take water from the main ditch to the numerous diggings. Based on an archeological survey of the surviving conveyance system, it appears that there were at least ten to fifteen miles of lateral ditches that brought water to Gravel Hill, Horsetown, Jackass Flat, Texas Springs, Squaw Town, Oregon Gulch, and Centerville. There were at least six reservoirs built at the ends of the lateral ditches, probably located at Horsetown, Briggsville, Hill, Middletown, Upper Texas Springs, and Oregon Gulch.⁴¹

Construction of the Clear Creek Ditch began on March 1, 1855, with the first eighteen miles of ditch completed by June, and the remaining twenty-two miles to Middletown completed by late November. Workers excavated the tunnel by hand with the help of occasional dynamite charges. Two-man crews were assigned to each end, attacking the face with hand drills and grubbing out rubble after each dynamite blast. Multiple two-man crews working around the clock sometimes made as little as two feet of headway in a twenty-four-hour period. As the tunnel was just five feet wide and five and a half feet high—hardly enough space in which to stand upright let alone wield a drill—historians have speculated that small-statured Chinese laborers performed the back-breaking work.⁴²

The flumes over Whiskey and Oro Fino creeks were also impressive. Each one was about 600 feet in length and 45 to 60 feet in height. The timber supports were made from massive 12 x 12-inch members. The supports were spaced one rod or five and a half yards apart. The flumes were five and a half feet wide and three feet deep. The company procured timber for these structures locally and cut it to size using the company's own sawmill.⁴³

John Smith described the intake structure for the ditch in the October 20, 1855 issue of the *Shasta Republican* as a low dam “at the head of the Eastern bank of Clear Creek, a few hundred yards above the Tower House.” Smith also stated in the article that Crystal Creek—what he called the Western Fork—was also dammed, “and its waters received into a ditch which then enters the flat below Camden’s mill.”⁴⁴

Once the ditch was completed and water was turned into it, the water was kept at less than full volume for about a year to allow the ditch to develop an impervious coating of sediment and to give the earthen embankments a chance to harden. The company declared

⁴⁰ Alzueta, “Clear Creek Ditch Was the Name, Gold Was the Game,” 62-66.

⁴¹ Munson and Ritter, “The Clear Creek Ditch,” 1-2.

⁴² Alzueta, “Clear Creek Ditch Was the Name, Gold Was the Game,” 63-64; Munson and Ritter, “The Clear Creek Ditch,” 3; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 19.

⁴³ Alzueta, “Clear Creek Ditch Was the Name, Gold Was the Game,” 63; Munson and Ritter, “The Clear Creek Ditch,” 2.

⁴⁴ Munson and Ritter, “The Clear Creek Ditch,” 1.

that when the ditch ran at full capacity it would bring enough water to operate about 150 sluices. In the meantime, miners rejoiced that they now had water in the dry season. The mining camps of Horsetown and Middletown, which were dwindling in size before the ditch construction, were the first to benefit as a lateral ditch was constructed to Horsetown and the main ditch terminated at Middletown. Both camps saw new signs of life in 1856. Middletown received a post office. Horsetown got its own newspaper, the *Northern Argus*. Horsetown, the oldest of the mining camps in the Clear Creek drainage, at that time boasted two hotels, a church, a general store, and a butcher shop.⁴⁵

In 1857, the ditch company attracted two new investors, Cornelius S. Whitney and Washington P. McCleary. Investors then reincorporated the company as the Shasta County Canal Company. With a new infusion of capital, the company built a half dozen more lateral ditches to the cluster of placer diggings south of the town of Shasta. About this time, the company considered building another lateral by way of a long tunnel at an estimated cost of \$30,000. While the proposal signaled confidence in the area's mining future, it brought a lawsuit over water rights. The legal settlement resulted in a \$10,000 fine and an early halt to the project. The company faced another setback the next year when a late winter storm caused \$20,000 in damage to the Clear Creek Ditch.

The construction cost for the whole water conveyance system stood at \$140,000 in 1859, according to the *State Register and Year Book of Facts*. Its total length was given as fifty-three miles. It was one of the largest ditch systems in the northwestern mining region and the eleventh biggest ditch system in the state.⁴⁶ Sometime after 1859, it appears, workers extended the main ditch a few more miles north from Middletown nearly to the present Highway 299W.⁴⁷

How long the ditch remained in use cannot be determined. Carlos Alzueta stated that water continued to run in the ditch until 1882. He did not cite his source for this information. Contrary to Alzueta, NPS historian Anna Coxe Toogood suggested that the ditch may have ceased operation after February 1867. In that month, heavy rains washed tons of sand and gravel into the ditch, and Toogood figured that getting the ditch back in working condition would not have been worthwhile by then. Historians Eric Ritter and Trudy Vaughan found that in 1901 the Princess Hydraulic Mining Company planned to

⁴⁵ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 20.

⁴⁶ *The State Register and Year Book of Facts: For the Year 1859* (San Francisco: Henry G. Langley and Samuel A. Morison, 1859), 282.

⁴⁷ Munson and Ritter, "The Clear Creek Ditch," 2. And see map in Alzueta, "Clear Creek Ditch Was the Name, Gold Was the Game," 63.

reopen the Hope Consolidated placer mine with fourteen miles of water ditch. They suggested that “it is likely the old Clear Creek Ditch was used in part to supply water to the Hope Consolidated Placer Mine.” But they were unable to confirm it.⁴⁸

Charles Camden’s Story

Longtime resident Charles Camden oversaw the construction of ditches around his property in what is now the Camden-Tower House Historic District. Camden’s water conveyance system grew to be five to six miles in length. Primarily built to supply water for Camden’s mining purposes, it also supplied water to his neighbor Levi H. Tower’s orchards and hotel. Camden also sold water to other miners in the area. Centered on an upper section of Clear Creek, the system diverted water from three tributaries: Mill Creek, Crystal Creek, and Willow Creek. The remains of this system are partially preserved in the Camden-Tower House Historic District.⁴⁹

Camden and Tower came to Shasta County as mining partners and enjoyed a long association as in-laws and neighbors after Camden married Tower’s sister in 1852 and Camden built a residence beside Tower’s. Throughout their long association, Camden focused on mining while Tower developed the hotel and stage stop known as Tower House. Tower died in 1865, whereupon Camden absorbed the Tower property into his own estate. The Camden family continued to reside there into the early twentieth century. Camden and Tower’s personal stories are vital components to this historic resource study because the cultural resources within the Camden-Tower House Historic District are their direct legacy. While their personal stories are intertwined, here the focus will be on Camden’s mining exploits through the 1850s. Tower’s development of Tower House as well as Camden’s long connection to the place will be discussed in later chapters.

Most of what is known about Camden comes from his autobiography, letters, journals, and photographs. Camden penned his autobiography in 1900 and his family privately published it after his death. Born in England in 1817, Camden emigrated to the United States in 1834 at the tender age of seventeen. Over the next decade and a half, he led an itinerant life in sharp contrast to the settled life he would choose after coming to California. He worked as a sawyer in Cincinnati, a drayman in New Orleans, a storekeeper in Jackson, a plantation overseer in Louisiana, a railroad surveyor in Chile, and a horticulturalist in Peru, before taking ship to San Francisco in 1849. In San Francisco the following spring, Camden formed a partnership with two new acquaintances, Levi H. Tower and

⁴⁸ Alzueta, “Clear Creek Ditch was the Name, Gold was the Game,” 65; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 24; Munson and Ritter, “The Clear Creek Ditch,” 4.

⁴⁹ Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report, Part I, for Tower House Historic District in the Whiskeytown Unit of the Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California*, report prepared for the National Park Service (n.p., n.p. 2001), 12.

John Hindman, and boarded a brig, *Jacob M. Ryerson*, on a voyage to locate the mouth of the Trinity River. At this point, Camden and his partners' ambitions were centered not on mining gold but on land pre-emption, or what Camden called "town site taking." With others onboard the brig, they took part in laying out the townsite for Unionville, later Arcata, which they imagined would swiftly grow to be the major supply center for the northern mines and rival San Francisco. But as Camden, Tower, and Hindman explored the upper end of Humboldt Bay and inland from there, they encountered parties of returning miners and soon caught the gold fever. After marking a preemption claim to a ferry site upriver from Humboldt Bay, Camden and Tower were drawn with others into blazing a trail from Humboldt Bay to the Trinity mines, leaving Hindman to tend to their interest in the town-site scheme and their future ferry landing.⁵⁰

Camden and Tower moved through the Trinity mining region as a prospecting duo. They traveled with mules, picks and shovels, and a rocker, and here and there they stopped at some diggings and went to work with their rocker on an abandoned claim. As they went along, they acclimated to the rough company of forty-niners who had arrived ahead of them. Here, they ran into a surly lot of miners reticent to "tell how much they were making, all very mysterious and uncommunicative." There, they met "excitable and foolish men" who showed another kind of connivance in attempting to persuade these two greenhorns to join them and trust their "superior knowledge." Camden learned things on this journey through the Trinity diggings that shaped his later success at mining his claim on Clear Creek: choose your associates well, work hard and have patience, and most important of all, stick to your claim and be methodical. Camden wrote in his autobiography, "I ever afterward acted on the saying, 'A rolling stone gathers no moss.'"⁵¹

For part of their trek over the mountains they teamed up with two other parties, or seven men in all, to give themselves better odds in case of Indian attack. As it turned out they did not have any encounters with Indians while coming over the mountains. Once, after reaching Shasta County, some Indians snuck up to their camp and drove off six of their mules. But luckily for them the Indians chased the mules right into the camp of some other prospectors, who instantly suspected trouble and fired warning shots, causing the Indians to give up their chase. So, the mules were recovered after Camden and his companions paid the other prospectors a ransom of \$100 for them.⁵²

Camden and Tower did not travel light on their journey through the Trinity mining region. In addition to their mining equipment, they carried a heavy load of traps, guns, and butcher knives and large quantities of provisions. When they shot a deer, they dried the

⁵⁰ Charles Camden, *The Autobiography of Charles Camden: Being a Synopsis of Main Occurrences in His Life from August, Eighteen Hundred and Thirty-Four up to May Nineteen Hundred, Written by Himself and Privately Published after His Death by His Family* (San Francisco, CA: private printing, 1916), 1–39.

⁵¹ Camden, *Autobiography*, 45–46, 54–57.

⁵² Camden, *Autobiography*, 47–48, 51.

meat and added that to their burden. After spending all summer in the Trinity mining region their supplies began to run low. As the weather turned and Camden and Tower and their seven companions felt the first bite of winter in the mountain air, they held a council about how they would reprovision themselves. Camden was keen to go over the divide into Shasta County, reprovision in Shasta, and continue prospecting around the Shasta diggings. Tower preferred to return to Humboldt Bay, buy more provisions where prices were a lot cheaper, and check in with Hindman on their prospective ferry business. The partners agreed to separate and reunite in a month's time either in Shasta or Weaverville, depending on what Camden found in Shasta County. Once Tower and Camden had decided on their plan, most of their larger group chose to go with Tower while one man named Luckey went with Camden.⁵³

Coming over the divide into Shasta County, Camden and Luckey arrived on upper Clear Creek in early October 1850. There they found a man named Schneider in a tiny eight-by-ten-foot log cabin trying to sell supplies to miners. But the man had no customers because the tributary creeks in the area had run dry and all but two miners had left the diggings for other diggings lower down. Schneider urged Camden and Luckey to stay but they were intent on going to Shasta to resupply. They did oblige Schneider to the extent of purchasing one pound of yellowish sugar from his store for \$1.25—"Sandwich Island sugar, bottom of keg, more like molasses than sugar."⁵⁴

Camden and Luckey strode into Shasta the next day—"town lively, full of people, lots of miners whom we interviewed," Camden wrote many years later—and on information received they proceeded down to Lower Springs and made their camp. The next day they prospected with pick and shovel and a pan, found some color, and left their pick and shovel on the premises as a sign of a claim while they sought out a rocker and a cabin, each rented to them at the rate of a dollar per day. Using the rocker they worked their claim for several days, making decent earnings. But anxious to report something bigger to their partners, they soon gave up working the modest claim in favor of more prospecting. Going around the mostly deserted diggings south of Shasta and digging numerous prospect holes, they found there was gold aplenty but no water. Moving farther up the drainage, they finally located claims for everyone in their extended party on Olney Creek, where they judged there would be water flowing as soon as the winter rains set in. Then, as planned, Camden sent a letter to Tower at the Weaverville post office advising him to come ahead with the others.⁵⁵

⁵³ Camden, *Autobiography*, 46.

⁵⁴ Camden, *Autobiography*, 46.

⁵⁵ Camden, *Autobiography*, 46–47.

When Tower and the others came over the divide into Shasta County, they, too, stopped at Schneider's log cabin store to gather information. Schneider gave Tower the same pitch he had given Camden earlier, but more persuasively. He said that the two miners who remained on upper Clear Creek would gladly show Tower's party some promising places to dig, because the men were anxious to have the company of other miners to afford them more protection from possible Indian attacks. Thus, when Tower's party reunited with Camden and Luckey at Olney Creek, Tower insisted on returning at once to upper Clear Creek. Camden remained at Olney Creek for a short time until he received a favorable report from Tower and went to join him on upper Clear Creek—roughly at the place that was to become known as Tower House. "That was early in November, 1850," Camden wrote. "Little did I then think that neighborhood would be my home until 1900."⁵⁶

No sooner had they decided on spending the winter in that place that Tower headed off with the mule train again, this time to Sacramento. Camden, meanwhile, turned his considerable energies toward building a cabin to shelter the two of them through the coming winter. Tower was away twenty-five days and in that time Camden not only completed the cabin but also mined \$450 worth of gold from their new diggings, according to his recollection. Camden's autobiography is a curious mix of modesty and brag. He was in some ways a humble man. He consistently deferred to Tower when they were partners, and in his autobiography, he modestly gave Tower the credit for establishing the two of them at Tower House. Yet, ever proud of his prodigious work ethic, he seldom missed an opportunity to show off what a hard and capable worker he was—or to criticize the half-hearted work of others. The word "work" is prolific all through his autobiography.⁵⁷

Through the winter of 1850–1851, Camden mined for gold in the placers found along upper Clear Creek and in some of the nearby tributaries. He and Tower hired two employees, paying them \$75 per month plus board. Soon Camden judged it was wise to upgrade from a rocker to the "long tom" technology that had come into use in the central and southern mining regions. Camden, with his two helpers, built a long tom and two sluice boxes from split slabs of cedar, and dug two reservoirs to capture and hold runoff in two gulches before the ephemeral streams dried up in the spring. To use the water in the reservoirs, they likely dug ditches, too. Camden stated that the reservoirs were located "near where 'Pete Cusick' now lives," which, if the same as Pete Cusick's 1891 homestead entry, would mean that Camden's earliest ditch works may have been located in the southwest quarter of the northeast quarter of Section 2, or about three-quarters of a mile east of the Camden House. Of course, they may have been so small that they have disappeared by now. Camden made the dubious claim that his long tom was the first one used in Shasta

⁵⁶ Camden, *Autobiography*, 47. Camden gave the identities of the two miners as "a negro and Jockey Woods." Unfortunately, the name of the Black man is not known. Camden had the racist habit shared by many whites in his day of neglecting to learn or remember the names of Black people.

⁵⁷ Camden, *Autobiography*, 47. See especially the concluding pages of his autobiography on his work ethic.

County, which, if true, would suggest that someone with experience outside of the north-western mining region—not Camden—came up with the idea. Perhaps one of the two employees had that outside experience and Camden learned about it that way.⁵⁸

In the spring of 1851, many more miners began to arrive in the upper Clear Creek diggings. The ever-enterprising Tower sold some of their provisions to the newly arriving miners for a tidy profit; then, as soon as the mud season passed, he took the mule train to Sacramento to resupply again. Later that season, Tower purchased squatter rights to the land where he wanted to build his permanent home. That spring and summer, Camden and the two employees worked the bars on Clear Creek and prospected all the way down to Brandy Creek. Camden focused most of their energy on about a two-mile stretch of the creek below Tower House and made good earnings. Despite the mine's productivity, however, Tower had decided he was no longer interested in mining. He wanted to run a hotel. Camden and Tower ended their two-year partnership without hard feelings. Indeed, the same month they ended their partnership Camden married Tower's sister and they became brothers-in-law. The two employees, meanwhile, were cut loose two months prior to the end of their twelve-month labor contracts.⁵⁹

Now his own miner as well as a family man, Camden cogitated over how “to do mining on a more profitable scale.” He needed water for sluicing, which necessarily would involve construction of a water diversion system. For that he must have lumber for flumes and sluice boxes. Lumber was selling in Shasta for \$75 to \$100 per thousand board feet, more than he could afford to pay. Therefore, he needed to build his own sawmill. After making a survey of ditches he would like to have, he started building the sawmill the following summer, contracting out the entire project so that he could continue mining. The sawmill was complete by February 1853. The last step in getting the sawmill in operation was to install a wooden flume from Mill Creek to provide waterpower to the mill. The lumber for the flume had to be hand sawn. As soon as that was done, the flume was built and the sawmill powered up.⁶⁰

This lower Mill Creek ditch may have been the first completed segment of Camden's water conveyance system. According to former resident Andy Ponti's 1985 interview, the ditch provided water to the mill. Ponti, who lived on the premises in the 1930s, called it Camden's water ditch. Today, the Camden Water Ditch Trail provides an overview and interpretation of this ditch.⁶¹

⁵⁸ Camden, *Autobiography*, 47—48; Peter Cusick homestead entry, U.S. Department of the Interior, Bureau of Land Management, General Land Office Records, serial patent, California, Nov. 23, 1891, <https://glorerecords.blm.gov/details/patent/default.aspx?accession=CACAAA%20015684&docClass=SER&sid=lak4wxr.l0z>.

⁵⁹ Camden, *Autobiography*, 52.

⁶⁰ Camden, *Autobiography*, 52.

⁶¹ Shelly Davis-King, *Bringing Water to the Mines: A Description of the Ditch System Built by Charles Camden in the Tower House District, Whiskeytown National Recreation Area, Shasta County, California* (San Francisco, CA: Architectural Resources Group, 2003), 7.

Camden's autobiography is vague about the next stage of the water conveyance system's construction. He wrote that "between 1855 and 1858 I made the *upper* ditch from Crystal Creek down to the Tower house." With his emphasis on *upper*, it may be inferred that he built the lower ditch from Crystal Creek in the preceding period from 1853 to 1855. The lower ditch, diverting from Crystal Creek and running along the foot of the hill behind Tower House, delivered irrigation water to the Tower House property. Since Tower House was already noted for its garden and orchards in 1853, the ditch was probably partially built by the spring of that year. Camden states in the autobiography that with his expanding water diversion system of ditches and flumes he not only had more water for his own mining purposes, but he also sold water to others.⁶²

Camden's upper ditch from Crystal Creek was his masterpiece. The water diversion from Crystal Creek was located about one mile up Crystal Creek, and today this segment is well-preserved alongside the Crystal Creek Water Ditch Trail. Where the ditch reached the toe of the ridge above the point where Crystal Creek flows into Willow Creek, it was necessary to convey the water to the facing hillside on the other side of Willow Creek. Camden accomplished this crossing with a 900-foot length of pipeline that plunged seventy-five vertical feet down one slope, spanned Willow Creek on a trestle, and went back up the opposite slope, "forming an inverted siphon." The pipeline was made from pine logs with the centers bored out. Camden proudly believed it was "the first work of the kind in the State, whether of wood or iron." As the high ditch contoured eastward from there, at least three flumes ran down the hillside to irrigate fields below. East of Tower House, the water was flumed across Clear Creek on another high trestle.⁶³

Camden recorded that he also built "a high ditch from Granite or Mill Creek to cover the Jackson and other claims." Today, the remains of this ditch are designated as the Upper Mill Creek Ditch. The Upper Mill Creek Ditch is now used as the Clear Creek Vista Trail.⁶⁴

With his water conveyance system in place, Camden continued to mine profitably through the 1850s. Camden thrived on his mining pursuits both financially and emotionally. When he looked back on his life in the year 1900, he reckoned that the decade of the 1850s was the most stimulating and satisfying period of his life.

⁶² Camden, *Autobiography*, 53–54; Davis-King, *Bringing Water to the Mines*, 5.

⁶³ Camden, *Autobiography*, 54. For a close description of the condition of the ditch in 1997 and recommended repairs, see Galen Gritz, "Whiskeytown National Recreation Area Mill Creek and Crystal Creek Ditch Systems Engineering Report," July 23, 1997, prepared by Golden State Survey Engineering, Sonora, CA, file report at WNRA.

⁶⁴ Davis-King, *Bringing Water to the Mines*, 8.

Hydraulic Mining

Hydraulic mining represented the final stage in the mid nineteenth-century goldminers' quest for labor-saving techniques to mine tons of gravel for ounces of gold. The new technique was to run large quantities of water downward through a long hose with a nozzle at the end and to aim the highly pressurized jet of water at a slope to loosen the earth and wash it down hill. With the aid of the powerful jet of water, miners could move much greater volumes of earth through bigger and longer sluices. Each new technique, from panning to washing to sluicing, simply aimed to move more earth with less labor. Each stage in this evolution enabled about a four- to five-fold increase in productivity. One California mining expert in 1867 asserted that if a miner worked for \$4 per day, then the cost of mining one cubic yard of earth by panning was \$20, with a rocker \$5, with a long tom \$1, and with the hydraulic method just \$.20.⁶⁵

But hydraulic mining had a more profound impact on the mining scene than that smooth trajectory of increasing cost efficiency would suggest. The changes wrought by hydraulic mining started with its vast water consumption. In the progression from gold pan to rocker to sluice, every technique used more water and entailed the development of ever-greater water diversion systems for support. Hydraulic mining scaled up the use of water like nothing before. The industrial-strength nozzle in use by the 1870s shot out 1,500 "miner's inches" of water per minute, or about a million gallons per hour. The largest hydraulic mining company in the state used more than fifteen billion gallons of water annually. A single hydraulic mining operation, the Spring Valley mine near Oroville, used thirty-six million gallons of water each day, or about triple the volume of water needed by the city of San Francisco. A hydraulic mining operation used anywhere from 25 to 320 times the volume of water used by a rocker to wash each cubic yard of placer material. These mining operations required the development of dams, reservoirs, and water conveyance systems on an unprecedented scale.⁶⁶

The prodigious use of water accompanied other profound developments. The construction of dams, reservoirs, and ditches on that scale could only be done by companies with large amounts of capital. To attract the necessary capital, mining ventures had to project a reasonable amount of predictability. As historian Andrew Isenberg points out, California miners manipulated water resources not only to redistribute and regularize the water supply to the placer mines, but also "to attract capital investment by imposing predictability on the rivers." As soon as large companies came to dominate the scene, the days of independent mining were practically over.⁶⁷

⁶⁵ Paul, *California Gold*, 154.

⁶⁶ Mary Hill, *Gold: The California Story* (Berkeley: University of California Press, 1999), 118.

⁶⁷ Isenberg, *Mining California*, 24–25.

Hydraulic mining also reshaped California's financial institutions. The state was unfriendly to banks in the first decade after statehood. But as the need for large capital investment in the mining industry manifested, the state adopted new banking laws. Large lending institutions finally found their footing. A stock exchange was established in San Francisco. The new financial institutions facilitated the formation of incorporated companies and public sale of shares of stock. Much needed British investment capital poured into the state. These changes came in the early to mid-1860s.⁶⁸

Hydraulic mining contributed to the making of California water law and the doctrine of prior appropriation. As Isenberg states, "the emergence of the state's extensive hydraulic system required an amenable legal environment." Miners defined water rights when they set up mining districts, and their view of water rights soon carried into state law. The doctrine of prior appropriation treated water as a transportable commodity distinct from the natural water course where the water came from. Whoever was first to put the water to "beneficial use" established a water right ahead of other water users wherever they might be located up or down stream. The doctrine propounded the principle, "first in time, first in right." Time was more important than place; the first one to draw water out of a stream and put the water to use (to "appropriate" it) had a superior water right to an upstream neighbor who was first in line in terms of the natural flow of water. California courts affirmed the principle even when it tended to prioritize mining over other economic interests. The creation of the prior appropriation doctrine was another step toward creating stability for capital investment in the mining industry.⁶⁹

Hydraulic mining played havoc on the natural environment. The most controversial environmental impact was from the millions of cubic yards of dirt washed downslope, which was far more material than the rivers could carry to the sea. As a result, the coarser sediment settled out in the riverbeds, the rivers overflowed their banks, and the floodwaters carried the finer tailings out across good agricultural land where it was deposited as a noxious, farm-killing crust called "slickens." By one estimate, the amount of mined material washed into the Feather, Bear, Yuba, and American rivers was enough to cover the District of Columbia to a depth of nineteen feet. For a decade, farmers fought to end the ruinous inundation of lands downstream from the hydraulic mining operations. They failed in the state legislature, but finally succeeded through the courts with a momentous ruling by Judge Lorenzo Sawyer in January 1884 that ended hydraulic mining. Under a federal law known as the Caminetti Act, passed in 1893, companies could conduct

⁶⁸ Paul, *California Gold*, 182–85.

⁶⁹ Isenberg, *Mining California*, 31–32; Michael Hanemann, Caitlin Dyckman, and Damian Park, "California's Flawed Surface Water Rights," in *Sustainable Water: Challenges and Solutions from California*, ed. Allison Lassiter (Oakland: University of California Press, 2015), 52–82.

hydraulic mining if they met certain environmental safeguards to contain the debris. But most of the water conveyance systems were by then in a ruined state from nearly a decade of weathering and neglect, so few hydraulic mining operations ever resumed.⁷⁰

The destructive effects of hydraulic mining were out of proportion with the amount of gold produced. California's gold placers yielded about \$900,000,000 in gold from 1848 to 1881, but hydraulic mining accounted for less than \$200,000,000 of that; most of the production was achieved with the older techniques of panning, washing, and sluicing during the first dozen years of mining activity. Furthermore, hydraulic mining was more wasteful in extracting the gold; it left much more gold in each cubic yard of auriferous placer material treated. During the period after 1861 when hydraulic mining was the predominant form of mining in California, the hydraulic mining companies formed subsidiary companies for the purpose of mining the tailings. The subsidiary companies used the more labor-intensive techniques of washing and sluicing, often with the help of cheap Chinese labor.⁷¹

The hydraulic mining technique was practically invented in California, although a few prior uses of the technique are known from Spain under Roman rule and in colonial Brazil.⁷² In California, the technique was first used in 1853 when a miner named Edward Matteson attached a nozzle to a flexible, hand-held canvas hose being employed by his partner, Anthony Chabot, to produce a pressurized spray. Several years of quiet innovation followed as miners tinkered with ways to strengthen and enlarge both the hose and the nozzle. Miners experimented with leather and rubber hoses for greater durability before a breakthrough came with the "crinoline hose"—a flexible canvas hose reinforced with iron bands. As hydraulic mining proceeded to scale up the mining industry, the sheet iron hose became the new standard. Meanwhile, nozzles had to grow in size and pressure capacity to accommodate bigger and bigger diameter hoses, from a one-inch diameter in the mid-1850s to pipes of fifteen to thirty inches in diameter in the 1870s. The king of nozzles was the "monitor," also known as the "Little Giant," which came into widespread use after 1870. "It resembles nothing so much as it does a piece of military or naval ordnance," wrote a correspondent for *Century Magazine*. With the help of an enormous counterweight off the back end and a device called a "deflector," the cannon with its mighty jet of water could be turned dexterously by a single man. Yet it shot water at a speed of 150 feet per second, or over 100 miles per hour, with the force to kill a man unfortunate enough to get in its way.⁷³

⁷⁰ Charles Scott Haley, "Gold Placers of California," *Bulletin No. 92* of the California State Mining Bureau (San Francisco: California State Printing Office, 1923), 9–25; Robert L. Kelley, "The Mining Debris Controversy in the Sacramento Valley," *Pacific Historical Quarterly* 25, no. 4 (November 1956): 331–46.

⁷¹ Taliesin Evans, "Hydraulic Mining in California," *The Century Magazine* 25, no. 3 (January 1883): 335.

⁷² Young, *Western Mining*, 129; Evans, "Hydraulic Mining in California," 323; Paul, *California Gold*, 153.

⁷³ Evans, "Hydraulic Mining in California," 325; Isenberg, *Mining California*, 34–35; Hill, *Gold: The California Story*, 114–17.

California's early affinity for hydraulic mining (before the downstream effects became notorious) would never be repeated in other Western states. California presented just the right set of conditions to make large-scale hydraulic mining pay off. Its tall mountains received heavy snowfall, and its hot summers created heavy snowmelt and rushing rivers which in turn created rich placer deposits in deep gravel at the foot of the mountains. It was the combination of deep gravel, elevated topography, and abundant water (once miners manipulated the natural supply) that made hydraulic mining a success. Moreover, hydraulic mining only succeeded for as long as the industry could run roughshod over the downstream environment, so its time was limited.⁷⁴

Hydraulic mining appeared in the placer diggings south of Shasta as soon as the Clear Creek Ditch came into use. This was in the early days, when hydraulicking was still quite small-bore compared with what it later became. The technique was employed in the Horsetown area in 1856 and soon spread to the Texas Springs and Squaw Creek areas, or eleven separate mines in all.⁷⁵ Placer mining in Shasta County mostly ended before hydraulic mining reached its heyday from the mid-1860s through 1883. The main exception was in the Igo mining district to the south, thirteen miles from Redding. Placer gold was mined there in the 1850s, and hydraulic mining occurred there from the 1860s until 1883. Perhaps the largest of hydraulic mining operations in Shasta County in this period was the Hardscrabble mine at Piety Hill, located a quarter mile from Igo. Three sisters who grew up in the area wrote, "We can remember seeing the ruins of some old buildings, and close by was the Hardscrabble hydraulic mine and the big hole at the top of the Clear Creek grade one climbs when traveling from Redding to Igo." Debris from the hydraulic mining operation washed into Clear Creek below Igo. When hydraulic mining resumed with modest environmental protections under the Caminetti Act, a limited amount of hydraulic mining occurred around Igo as well as one other place in the Clear Creek drainage just south of French Gulch a couple miles outside of the present Whiskeytown National Recreation Area. The effects on the slopes at both of these locations are still visible more than a century later.⁷⁶

⁷⁴ Paul, *Mining Frontiers of the Far West, 1848–1880*, 47.

⁷⁵ Powell Greenland, *Hydraulic Mining in California: A Tarnished Legacy* (Spokane, WA: Arthur H. Clark Company, 2001), 49.

⁷⁶ G. Chester Brown, *Mines and Mineral Resources of Shasta County, Siskiyou County, Trinity County* (San Francisco, CA: State Printing Office, 1915), 31; Gudde, *California Gold Camps*, 165; U.S. Geological Survey, *Mineral Resources of the United States, Calendar Year 1906* (Washington: Government Printing Office, 1907), 195; Haley, "Gold Placers of California," 100; R. S. Ballou, "The Story of Western Shasta," *The Covered Wagon* (1964), 15; Elsie L. Hodgins, Edna L. Barr, and Della S. Kidder, "The Story of William Samuel and Mary Elizabeth Kidder," *The Covered Wagon* (1961), 7.

Environmental Impacts

The California Gold Rush impacted the natural environment in myriad ways, tearing up streambeds and hillsides, spreading toxic chemicals, consuming forests, and decimating certain species of fish and wildlife. Placer diggings came to look like so much churned up earth, while prospecting holes pockmarked the surrounding areas. Where hydraulic mining was employed, the process left whole hillsides denuded and gullied. Hydraulic mining, once it became high-bore, produced the most ravaging consequences. In some places the effect created a kind of badlands topography—not unlike the naturally occurring badlands found in other parts of the arid West except that the cutting power of water had produced an effect in weeks or months rather than across geologic ages.⁷⁷ Shasta County was partially spared those impacts, as its gold placers largely played out by the early 1860s. However, Shasta County came to see further devastating effects in the late nineteenth and early twentieth centuries from lode mining, copper smelting, and the dredging of old placer diggings.

When the placers gave out, the town of Shasta and the other towns and mining camps nearby lost most or all of their population. The abandoned buildings in Shasta and the human detritus left in the deserted mining camps added immeasurably to the feeling of a wasteland. Contemporary observers might have partially reconciled themselves to the scene of devastation by believing that what they saw was the price of progress, but even they found the look of the place disquieting.⁷⁸

Elsewhere in the state, the effects of hydraulic mining were truly shocking even to contemporaries. In the valleys of the Feather and American rivers where floodwaters spread mining debris over wide areas, the results were hideous. The correspondent for *Century Magazine* explained to readers in the East that the slimy sediment when it dried would harden into a “creamy-colored substance, yielding no vegetation.” In some areas, the slickens accumulated to a depth of several feet. “A scene of desolation is thus presented to the eye,” this writer continued.

It blinds one to look at it. It fills the air and stifles the nostrils in moving through it. It has converted clear and high-banked streams of former days into sluggish, turbid, and erratic water-courses, flowing on elevated beds between artificial banks. Land formerly luxurious with growing crops is barren as Sahara.⁷⁹

The sediment that poured from the hydraulic mining operations in central California ran down the whole length of the Sacramento River and coated the river bottom with slime, spoiling fish habitat. Species of fish including California’s anadromous salmon needed

⁷⁷ Isenberg, *Mining California*, 51.

⁷⁸ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 25. See the quotation by the eminent mining engineer Rossiter W. Raymond.

⁷⁹ Evans, “Hydraulic Mining in California,” 337.

coarse gravel in the streambed to bury eggs and successfully spawn. Salmon populations were devastated. Salmon stocks in the Feather, Yuba, and American rivers were practically eliminated. In 1878, the state's fish commission estimated that mining debris had reduced the state's salmon habitat by half. While the volume of mining debris in Shasta County was less, degradation of fish habitat occurred there, too.⁸⁰

Mercury pollution was another byproduct of placer mining. Mercury was used as an amalgam in gold mining, and it was carelessly spread to the environment. Mercury use grew with the adoption of hydraulic mining. In the 1870s, California's production of mercury accounted for one third of all mercury in use in the world. Some large hydraulic mining companies used mercury very liberally in their operations; for example, the North Bloomfield Mining and Gravel Company put over a thousand pounds of mercury into its long sluices every twelve days. Some of the mercury was recovered and reused, while some of it went into the rivers. Furthermore, mercury production at the large New Almaden mine near San Jose spewed mercury vapor into the atmosphere, which came back to earth in acid rain and snow. The mercury entered the food chain, concentrating in the bodies of the higher predator species including, of course, humans.⁸¹

Other heavy metals got into the water, soils, and biota straight from the ore after it was surfaced and milled. Abandoned mine and mill tailings carried trace heavy metals that would slowly leach into the environment in runoff for decades after the mining or milling operation ceased. Groundwater would percolate into mine works, pick up trace amounts of metals, and spread them into the environment through acid mine drainage. The extent of this kind of pollution would never be fully known, but it had the potential to remain in the environment for a long time. A large die-off of bullfrog tadpoles in the year 2000 in the Oak Bottom area prompted a study of water, sediment, and invertebrates to test for the presence of heavy metals. This study found that metal concentrations were low in surface water, but were high in sediment samples taken from Whiskey Creek, Clear Creek, and the bottom of Whiskeytown Lake.⁸²

Placer mining consumed large amounts of timber for the construction of buildings, sluice boxes, and flumes. Indiscriminate logging in the mining districts added further to the soil erosion problem. The way the primitive logging practices marred the natural scenery was appalling even to late nineteenth-century Californians, as this description from Hubert Howe Bancroft's *History of California* attests:

⁸⁰ Isenberg, *Mining California*, 46.

⁸¹ Isenberg, *Mining California*, 47–50.

⁸² Thomas May, Ray Wiedmeyer, and William Brumbaugh, "Determination of Elements in Surface Water, Sediment and Invertebrates from the Whiskeytown National Recreation Area," report prepared for the National Park Service by the U.S. Geological Survey, Columbia Environmental Research Center, 2001, WNRA, Natural Resource Division e-files.

The enchanting groves that adorned the sunny slopes were ruthlessly and wastefully sacrificed to the immediate requirements of a houseless population, while the whip-saw was brought into requisition to convert trees into rockers, sluice-boxes, and flumes. When the claim was abandoned, these unlovely relics were left upon the ground, adding to the general disfigurement of the scene.⁸³

At first, miners in the Shasta area purchased sawn lumber from sawmills in the upper Sacramento Valley. Camden built his own sawmill for his water conveyance system and began selling lumber in excess of what he needed for \$50 per board foot. His employees harvested timber locally to supply the mill. The company that built the Clear Creek Ditch also built its own sawmill and harvested trees locally.⁸⁴

As environmental historian Isenberg points out, the many reservoirs built in the Sierras were often built in forested areas, drowning the trees and creating ghost forests. There was no effort to clear the reservoir site ahead of completing the dam as would become standard practice in the twentieth century. Isenberg reports that the dams and ditches built for hydraulic mining operations were often shoddy and subject to failure. A dam built above Independence Hill in Placer County broke in 1855, causing a flood that killed three people. There were breaks and collapses in Shasta County, too. When the lateral ditch was first completed from the Clear Creek Ditch to Horsetown in November 1855, it could not hold water. As soon as the headgate was opened and water flowed into it, the ditch broke and flooded the town. The people of the town were gathered to celebrate the arrival of water, but they got more liquid than they expected. Fortunately, no one was hurt. In another incident at Horsetown in 1858, a cave-in buried two miners while a third man was carried out of the mine in the slurry of debris. This man sprang up, redirected the hydraulic hose to where his fellows were buried, and managed to uncover them with the water jet before they suffocated.⁸⁵

The gold rush took a toll on wildlife. Miners took time away from their pursuit of gold to hunt and procure wild meat for their diet because they had to pay so dearly for vegetables and grain. Quails, rabbits, raccoons, squirrels, and even coyotes went into the miner's pot. Most miners were not too discriminating; just about any warm-blooded creature was worth a try. Some miners in 1851 recorded that they shot and ate a hawk and declared that it tasted better than chicken.⁸⁶

Due to their sheer numbers, miners depleted the wildlife in some places. Camden and Tower's trek from Humboldt Bay over the mountains is illustrative. The men carried hunting rifles and traps and supplemented their supply of provisions with wild meat

⁸³ Hubert Howe Bancroft, *History of California, Vol. 14 of The Works of Hubert Howe Bancroft* (San Francisco: The History Company, Publishers, 1890), 646.

⁸⁴ Camden, *Autobiography*, 52-53; Alzueta, "Clear Creek Ditch was the Name, Gold was the Game," 63.

⁸⁵ Isenberg, *Mining California*, 29; Giles, *Shasta County: A History*, 62.

⁸⁶ *Memorial and Biographical History of Northern California*, 73.

harvested along the way. Sometimes they stopped for a time to dry deer meat. Camden did not record how many deer they took, but he wrote that he and Tower each shot one grizzly bear on their way over the divide.⁸⁷ Deer populations were able to recover, but California's apex predator was headed for extermination. While the nineteenth-century argonauts did not kill off the grizzly bear, which managed to hang on in small numbers in the state until the 1920s, the hunting of bears in the gold rush did start the California grizzly bear on its road to extinction.

⁸⁷ Camden, *Autobiography*, 49.

CHAPTER FOUR

The Nearby Copper Belt and Lode Mining

Into Hard Rock

Nineteenth-century miners did not have to be experts in geology to know the basics. The subterranean forces that caused mountain uplift also caused the uplifted mass of rock to be shot through in places with gold-bearing veins of quartz. Miners understood that in the geologic past the quartz was molten. It penetrated cracks and fissures that created during the uplift. Then it cooled and hardened. The quartz veins ran through the surrounding subsurface rock with at least a degree of predictability, so miners could discover the veins where they “cropped out” on the earth’s surface, and then follow them into the earth and mine them out. This was where mining for gold left the surface and went underground into hard rock. Miners called the gold-bearing quartz a lode. They referred to mining that material as lode mining, vein mining, quartz mining, or hard-rock mining—all terms for the same thing.

Lode mining involved a different set of techniques than those developed for placer mining. An independent miner could pick his way into a lode for a short distance, but soon the mine reached a size where it needed support timbers for support, needed transportation for getting the ore out, and needed a mill to process the mined ore and extract the gold or other precious minerals from the quartz. So, when an independent miner discovered a lode, he soon looked for investors and a company to develop the mine in a big way. Thus, lode mining was mainly a company enterprise, beyond a single individual’s capability. When a mining district turned to lode mining, the independent miners mostly left the area or went to work for a mining company.

Lode mining in and around Whiskeytown began in a “gold belt” that extended from French Gulch eastward to the Old Diggings or Buckeye District (due north of Redding) and southward into the area around Whiskeytown and Shasta. Some of the gold mines were within the present Whiskeytown National Recreation Area. Starting in 1896, lode mining in Shasta County centered in a “copper belt” that lay north of the gold belt.

Virtually none of the copper mines were within the present national recreation area, but the copper mining is pertinent to this historic resource study because it shaped the local economy and impacted the environment over a wide area.¹

Early Lode Mines

Lode mining got off to an early start in French Gulch. Mines in the area included the Washington, Franklin, and Milk Maid mines. Most sources state that the Washington Mine was the first hard-rock mine in French Gulch, but at least one old-timer reported with some authority that the Franklin Mine came first. According to the 1859 *State Register*, the place had two water-powered quartz mills in 1851, both owned by John Syme, one for the Washington Mine and one for the Franklin Mine. According to local historian Giles, one of the milling operations used a waterwheel forty-feet in diameter to run a twelve-stamp mill, while the other used a six-stamp mill, and together they represented a \$100,000 investment. The heavy machinery used in a stamp mill was exceedingly difficult to transport by mule, so the two mills at French Gulch represented a bold and impressive commitment for that time and place. Mining expert G. Chester Brown, writing for the California State Mining Bureau in 1915, stated that the Washington Mine was “located” (staked and recorded) in 1852. As this was the year *after* the mills were reportedly built, one or the other date seems dubious. In any case, French Gulch was the site of the first lode mine in Shasta County—in a time when most miners throughout California were only interested in placer mining.²

A fickle water supply hampered placer mining activity in French Gulch. There were rich placers there, but what attracted most interest in the early 1850s was the quartz vein outcrop. Brown stated, “the first mining operations consisted of sluicing the rich and decomposed material on the outcrop. Some of the oxidized ore was rich, running at times over \$600 per ton in free gold.” Historian Toogood surmised that the attention given to this quartz vein outcrop in French Gulch inspired prospectors to look for others like it in the Shasta-Whiskeytown area. Toogood found in county records that a group of thirteen men,

¹ Toogood describes two small copper mines within the present park area: the Mountain Monarch and Sulphide mines. One contemporary source described the Mountain Monarch Mine as a “copper prospect.” In 1920, it was reported to have an 850-foot tunnel. The Sulphide Mine briefly produced ore before 1913. See Anna Coxé Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California* (Denver: National Park Service, Denver Service Center, 1978), 69–70.

² Henry Carter, “Mines and Miners of Shasta, Trinity, and Siskiyou Counties,” *The Covered Wagon* (1966), 26; *The State Register and Year Book of Facts: For the Year 1859*, (San Francisco: Henry G. Langley and Samuel A. Morison, 1859), 259; Rosena A. Giles, *Shasta County: A History*, (Oakland, CA: Biobooks, 1949), 58; G. Chester Brown, *Mines and Mineral Resources of Shasta County, Siskiyou County, Trinity County*, (San Francisco, CA: State Printing Office, 1915), 60; Philip A. Lydon and J. C. O’Brien, *Mines and Mineral Resources of Shasta County, California* (Sacramento: California Division of Mines and Geology, 1974), 41. The claim that the Franklin mine was first came from Henry Carter and he had his information straight from John Syme, the original mill owner.

which included Charles Camden and Levi Tower, recorded thirteen claims “of 150 feet each in a Quartz Vein discovered by Moise Auling. . . about two miles from Shasta City on the western side of the Mountain known as the dividing Ridge.” The description would place the claims in or near Whiskeytown National Recreation Area. Toogood found no further reference to the claims, which to her suggested that the men abandoned the claims because of the costs and difficulties of lode mining. French Gulch remained a lonely outpost of lode mining in Shasta County for many years.³

For a period, the Washington Mine was the largest producer in the French Gulch District. In May 1853, the Washington stamp mill produced \$2,181 in gold. In the 1860s, other mines in the district eclipsed the Washington Mine but it kept on producing: \$20,112 worth of gold in 1865, \$9,246 in the month of April, 1868, and \$14,571 in the month of June, 1868.⁴

In 1870, the Gambrinus Mine was discovered near Whiskeytown. It would have its heyday a couple of decades later. Brown reported in 1915 that “it was worked in the early days by gophering along the rich surface streaks.”⁵ Today, Highway 299 traverses the Gambrinus Mine’s upper underground workings while the reservoir overlays its lower workings.

Two other early lode mines in Shasta County might be mentioned since they were located just north of the present Whiskeytown National Recreation Area. The Mad Mule Mine was discovered in the early 1850s. Initially only the placers at the foot of the outcrop were worked. Later, perhaps not until the late 1870s (when it was called the Banghart Mine), the lode was mined by a series of adits or access passages. One thirteen-ounce specimen from the mine was exhibited at the Paris Exposition of 1878. Nearby, the Mad Ox Mine was located by N. A. Peckham in 1859, who successfully processed ore with an arrastra until he sold the property in 1876 to Grotefend, Strode & Co.⁶

These promising mines notwithstanding, the development of hard-rock mining in Shasta County declined during the 1870s. The whole state of California faced economic adversities that were so severe the decade became known as the “terrible seventies.” Ironically, the depressed times began with the completion of the first transcontinental railroad in 1869. The rail connection with the eastern United States generated new commerce for California, but it also undercut the state’s homegrown manufacturing base. As the railroad made imports to California cheaper, many startup manufacturing industries in California collapsed. Moreover, the ambitious railroad construction was only achieved at the cost of allowing the Central Pacific Railroad to have a monopoly over California’s rail

³ Chester Brown, *Mines and Mineral Resources of Shasta County, Siskiyou County, Trinity County*, 60; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 48.

⁴ Giles, *Shasta County: A History*, 57–60.

⁵ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 43.

⁶ Lydon and O’Brien, *Mines and Mineral Resources of Shasta County, California*, 45; Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, June 12, 1886, in spiral binding, Shasta Lake Heritage and Historical Society.

transportation. With government aid and acquiescence, the Central Pacific Railroad managed to gain control of virtually all of the state's rail lines. The railroad monopoly included the subsidiary California and Oregon Railroad, which gave Shasta County its first rail connection in 1872. Rail connection made it easier to import heavy-duty mining machinery into Shasta County and to erect quartz mills at remote mines, but the railroad's freight rates were exorbitant.⁷

California's hard times only worsened as the whole United States economy dipped into depression starting in 1873. California's mining industry struggled to find investors. Much of the capital that might have been invested in Shasta County mine development during this period was sucked into speculative ventures in the Comstock Lode, which reached peak production (mostly in silver) in the mid 1870s.⁸

For these reasons (mostly external to Shasta County), the mines in Shasta County were nearly all quiet through the 1870s. Miners in the area knew there was considerable gold ore to be had still, but the difficult work of getting the ore out and milling or refining it had to await better economic times and advances in the techniques of mining and milling.⁹ The *Mining and Scientific Press* provided this overview of the desultory mining operations in Shasta County at the end of the 1870s:

In Shasta county vein mining, inaugurated some time ago and since kept up with fair progress made every year, has moved along in its usual channels of late. Some hydraulic mining has been done in the western part of the county [around Igo], where there is a good deal of pay gravel, with a tolerable chance of obtaining water, the greatest deficiency of the mines there being lack of outlet, which has much impeded operations in what might otherwise have proved successful enterprises. There are no drift mines in Shasta and the shallow placers that consisted mostly of gulch diggings, and once afforded good wages for an army of miners, are now pretty well exhausted, about all that is done in that line at present being a little hand sluicing.¹⁰

Lode Mining in the 1880s and 1890s

Gold mining activity in Shasta County began to pick up in the early 1880s. Miners found one gold vein to extend for a considerable distance just below the surface near Middletown, cropping out in several places, and miners began working the outcroppings

⁷ Bean, *California: An Interpretive History*, 219–24.

⁸ Bean, *California: An Interpretive History*, 228–32.

⁹ "Mining Revival in Shasta," *Mining and Scientific Press*, Feb. 9, 1884.

¹⁰ "Mines and Mining in 1879," *Mining and Scientific Press*, Jan. 24, 1880.

with hand mortars.¹¹ At the Banghart Mine, ore was taken out containing gold in crystalline form in nugget-sized bunches. The nuggets could be freed from the gangue, or waste material, simply by banging on it with a hammer. So, during 1883 the Banghart Mine operated mostly through manual processing without putting much ore through a mill.¹² Other mines that sparked back to life in that year included the Bell and Woodward, West End, and Red Rover mines. Most of the ore from these mines was taken to the Phoenix Mill where the ore was crushed in a ten-stamp mill powered by a water wheel and the gold was recovered by amalgamation.¹³

The Mad Ox Mine was located near the Banghart Mine in the Whiskey Creek drainage seven miles above Whiskeytown. In 1879, miners erected a five-stamp mill driven by a double turbine waterwheel. It ran steadily through the next year and a half. A. Grotenfend of Whiskeytown was the principal mine owner. His company sold the property to a New York company in 1882.¹⁴

The lode that would become the Niagara Mine was located in the 1880s by a prospector named William McGuire. Little did this man know that the lode would eventually yield more than a million dollars in gold when he sold his claim to John Franck for \$10 and a gallon of whiskey. It is not clear if Franck made anything on his \$10 investment by the time the mine changed ownership again. Known at one time as the Black Tom Mine, it became the Niagara Mine by the end of the century. When the mine was idled in 1905, the workings consisted of six tunnels, four of them crosscuts from 150 to 2,200 feet in length, plus an additional 2,000 feet of drifts, stopes, and raises.¹⁵

Prospector F. W. Wheeler discovered the quartz lode that later became the Gladstone Mine sometime in the 1860s. But it did not see much development through the 1870s, and the claim was abandoned. Three other miners, Charles Osborn, Thomas Cummings, and John Morrell located a new quartz claim on this spot in 1887, which they called the Gladstone Mine. In the next two years they dug a 200-foot tunnel that went to a depth of 130 feet below the surface and built a stamp mill with twenty stamps. The mill ran on waterpower for half the year when water available. In 1890, the three mining partners sold the property to a group of investors called the Gladstone Mining Company of Cleveland, Ohio. In 1892, the quartz vein measured at least 1,900 feet in length and 22 feet

¹¹ "Shasta," *Mining and Scientific Press*, Feb. 4, 1882.

¹² "Mining Gold Nuggets," *Mining and Scientific Press*, July 14, 1883.

¹³ "Shasta," *Mining and Scientific Press*, Nov. 3, 1883.

¹⁴ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, March 22, 1879, July 5, 1879, July 12, 1879, January 10, 1880, January 24, 1880, May 15, 1880, January 23, 1881, November 11, 1881, and January 21, 1882, in spiral binding, Shasta Lake Heritage and Historical Society.

¹⁵ Carter, "Mines and Miners of Shasta, Trinity, and Siskiyou Counties," 27; Brown, *Mines and Mineral Resources of Shasta County, Siskiyou County, Trinity County*, 51.

wide in places and was developed to a depth of 900 feet. The main tunnel was driven into the vein from Cline Gulch over a distance of a quarter mile. Despite its promise, the Gladstone Mine ceased operation in the late 1890s due to litigation and uncertainty around the direction of the vein. This mine's glory days still lay in the future.¹⁶

Gold milling in Shasta County remained fairly primitive at this time. Aside from a few stamp mills, miners performed most of the milling in arrastras. The arrastra technology came to California by way of the Spanish tradition of mining and ultimately traces its origins back to the ancient world. The arrastra consisted of a smooth, circular floor space of laid stones with a turn post in the center and horizontal beams extending out from the turn post. The revolving contraption was like a giant spoked wheel turned on its side. Beveled grindstones were suspended on chains from the outstretched horizontal beams with mules were harnessed to an extension on one of the beams. As the mules plodded around and around the outside of the circular floor space, the grindstones dragged across the stone floor, pulverizing bits of ore as they were shoveled onto the floor. Arrastras were easily adapted to make use of amalgamation. Water was added and the ore was ground to the size of middling sands. Miners then added mercury to the mix and the grinding continued until the material was turned to slime. After some time, particles of gold would amalgamate with the mercury and heavy gold droplets to settle through the stone blocks in the floor; then the tailing slime was scraped off the floor into a sluice box with riffles where more gold was extracted before the tailings were finally spewed out as waste material. In the 1890s, several arrastras were still in use in Shasta County. According to one report by the State Mining Bureau, the tried-and-true arrastras remained "the best and cheapest all-round gold-saving appliance we have" wherever "rich veins are worked in the higher mountain regions."¹⁷

In the early 1890s, more mining and milling operations started up. The Dreadnaught Mine, located some five miles east of Whiskeytown outside of the present national recreation area, pulverized its ore in a ten-foot-diameter arrastra with water supplied intermittently from the South Fork of Spring Creek. The Pugh and Lindsay Mine, located a few miles south of Whiskeytown, milled its ore in a Kendall's national rocker. This new machine was in use at several locations in California and was said to produce results as good as a stamp mill. Somewhat akin to the arrastra, it employed a roller on a

¹⁶ Harold W. Fairbanks, "Geology and Mineralogy of Shasta County," in *Report of State Mineralogist for 1892* (Sacramento: California State Mining Bureau, 1893), 45; Ed Lintz, "The Gladstone Mine: A 30 year fascination," *The Covered Wagon* (1995), 27.

¹⁷ Young, *Western Mining*, 71; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 50.

plane to pulverize the ore. The one at the Pugh and Lindsay Mine could mill six tons of ore per day, or six times the daily capacity of the arrastra at the Dreadnaught Mine. In Grizzly Gulch, there was a five-stamp mill that ran on waterpower from Grizzly Creek.¹⁸

The biggest obstacle still facing gold miners in Shasta County in the 1890s was the nature of the ore. Miners classified gold ore into two broad categories, free-milling and complex. Free-milling ore is ore in which the gold occurs in pure form, even if it is found only in small traces. In its pure form, so-called “free gold” can be extracted or “freed” from the ore by the process of amalgamation. In complex gold ore, the gold is chemically compounded with other metals. It must be separated out from other constituent minerals by more complicated techniques involved with smelting. As there were no smelters nearby the Shasta mines, the cost of shipping the ore from mine to smelter was generally prohibitive. The mining industry did have techniques for concentrating gold-ore tailings for shipment to a smelter. At a few of the early stamp mills in Shasta County, miners installed tables after the amalgamation section to turn a portion of the tailings into concentrates for shipment. But even the concentrates from tailings were bulky and costly to transport. As a result, mining operations in the gold belt in Shasta County generally consisted of distinguishing free-milling from non-free-milling ores, focusing almost exclusively on the former. When non-free-milling ores resulted as an incidental byproduct of mine development they were set aside for later processing.¹⁹

The advent of copper mining in Shasta County decisively altered the equation. Copper ore had to be smelted. The complex copper ore also had significant amounts of gold in it. Therefore, when copper mining took off in Shasta County, gold production in the county took off with it. Copper smelters were built, and they used smelting techniques to separate out the gold as well as the copper. Some of the gold produced in Shasta County in the twentieth century was produced as a byproduct of the copper mines, and some of it was produced from those complex ores in the older gold mines, now that ore could be processed economically in the nearby smelters.

Copper mining started in Shasta County in earnest in 1896. In one year, the value of copper production in the county was already greater than the value of gold production.

Mining and Scientific Press noted the stimulus given to the gold mines:

In several portions of the county where properties were abandoned years ago, either because the ores were not free milling or because their treatment was not understood, work is being resumed extensively. New prospect work is also being followed to a greater extent than has been done for many years. Much of this is

¹⁸ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 51.

¹⁹ Lydon and O’Brien, *Mines and Mineral Resources of Shasta County, California*, 41.

due to the impetus given by the Mountain Copper Co. in the purchase and, also, custom treatment of ores. Old dump piles of ore, that were considered waste, have been treated by the newer treatments and found to be of value.²⁰

Historian Toogood enumerated fifty gold mines in operation within the area that is now Whiskeytown National Recreation Area when gold mining picked up in response to the advent of copper mining. She arrived at her number based on a list of all the mines in Shasta County compiled in 1902. As each listing gave the township, range, and section where the mine was located, Toogood was able to identify all those mines (about 22 percent of the total) that probably, or definitely, fell within today's park boundary. More than half of those were concentrated in the southeast quarter of the park. A second, smaller concentration of lode mines was found near Whiskeytown. Toogood noted that there were just three stamp mills in operation within the present park area in 1902, which suggests that miners took most of the ore coming from the mines to smelters in the copper mining districts.²¹

Beginning of Copper Mining

The first copper mine in production was the Iron Mountain Mine and it was located approximately one-half mile northeast of the present park area. This mine, the most important one in the west Shasta copper-zinc belt, remained active until 1963. Other copper mines in this ore belt were farther to the north. Another center of copper mining formed at this time in the East Shasta copper-zinc belt some twenty miles to the east. Altogether, these mines produced more than 703 million pounds of copper or about 54 percent of the copper produced in California. The era of major copper mining in Shasta County lasted from 1896 to 1919.

Two authorities on the mineral resources of Shasta County, Philip A. Lydon and J. C. O'Brien, stated that the advent of copper mining brought "the greatest period of prosperity in mining that Shasta County had enjoyed since—and probably even including—the early years of the gold rush." When Lydon and O'Brien prepared their 1964 report, mining was still a major industry in the county, surpassed only by lumbering. The environmental reckoning over the mining industry had only begun. Subsequent appraisals of the mining industry's influence would be more mixed, laying stress on the mining industry's drastic toll on the environment especially from smelter fumes. The environmental consequences of mining and smelting notwithstanding, the mining industry stimulated immigration, growth

²⁰ "Shasta," *Mining and Scientific Press*, September 17, 1898.

²¹ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 53. NPS mining engineers C. Keith Miller and Luther S. Clemmer whittled the number of mines within the park area down to forty-seven and listed each one by name and location in their 1984 report, "Mineral Resources Inventory, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California," Table 3, WNRA, Cultural Resource Division e-Files.

of other industries, and community development in Shasta County in the early twentieth century, while the great quantity of copper that was extracted from the area contributed to the nation's rising prosperity. The resurgence of mining in Shasta County was so welcome to so many at the time that the boom years 1904–1908 became known as the “New Era.”²²

Gossan overlies the copper ore bodies in Shasta County. Gossan is an oxidized, weathered, iron-rich upper layer on top of the copper-rich sulfide deposit lying beneath. Oxidized pyrites give the gossan a rusty hue. Nineteenth-century miners recognized gossan as a sign of valuable ore lying at depth. Numerous hilltops and slopes in Shasta County exhibited the reddish-brown color, and miners long suspected the presence of silver and copper ores underlying those exposures. However, they also recognized that the richest ore deposits are not always found under the biggest gossan outcroppings. Mining for copper under the gossan caps would not be easy and was not their priority. Moreover, milling the complex sulfide ores was going to be a challenge.²³

U.S. land surveyor William Magee noted the gossan mass on Iron Mountain in the early 1860s. In partnership with Charles Camden, the two located an iron mine in hopes that it would one day yield silver or gold. In 1879 or 1880, a man named James Sallee discovered traces of silver in the gossan in an adjoining ledge, and he became a third partner with Magee and Camden (and finally just Camden after Magee died). In 1886, a stamp mill was erected at the Iron Mountain Mine at a cost of over \$100,000, for the purpose of extracting free silver from the gossan. But the milling was a bust and one year later owners sold the mill, and it was dismantled and shipped to New York. From 1889 to 1893, some 38,000 tons of gossan were mined at the Iron Mountain Mine and custom milled, yielding about eight ounces of silver per ton. In 1894, Sallee and Camden deeded the property to S. F. Cleary of Denver, who represented British interests hopeful about the Iron Mountain Mine's potential as a copper mine. Once the mine's potential was more firmly established, their investment company Mountain Mines Co., Ltd. sold the property to a new entity, the Mountain Copper Company, Ltd., which was capitalized at \$6,725,000. This British-owned company, formed in 1896, was the outfit that developed the Iron Mountain Mine and led the copper mining boom in Shasta County.²⁴

²² L. C. Graton, “The Occurrence of Copper in Shasta County, California,” in Contributions to Economic Geology (Short Papers and Preliminary Reports), *Bulletin No. 1290* of the U.S. Geological Survey (Washington: Government Printing Office, 1909), 71–73; Miller and Clemmer “Mineral Resources Inventory,” 16; Lydon and O'Brien, *Mines and Mineral Resources of Shasta County, California*, 3; Harry E. Bush, “The New Era of Mining in Shasta County,” *The Covered Wagon* (1964), 37.

²³ William F. Kett, “Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California,” *California Journal of Mines and Geology* 43, no. 1 (January 1947): 114; Bush, “The New Era of Mining in Shasta County,” 38.

²⁴ Kett, “Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California,” 108–9, 114; Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 25–26; Giles, *Shasta County: A History*, 172; Lewis E. Aubury, “The Copper Resources of California,” *Bulletin No. 23* of the California State Mining Bureau (Sacramento, CA: State Printing, 1902), 37.

The Mountain Copper Company

Practically the first thing that the British investors did was select a site for a smelter plant. The smelter plant required a site with about five to six acres of level ground. It had to have an adjacent area for dumping slag, it needed a generous and reliable water supply, and it needed a railroad connection. Situating the smelter by the mine was out of the question because the mine was perched at about 2,300 feet above sea level, or about 1,800 feet above the Sacramento Valley. They found a level site well downslope of the mine at about 600 feet elevation that met all the requirements. Still, the steep terrain around Iron Mountain made a challenging environment in which to build the infrastructure for such a large mining and smelting operation. The smelter site was several miles down Slick Rock Creek from the mine site and a little over one mile west of the Sacramento River.²⁵

The water supply came from the Sacramento River by way of a pipe sixteen inches in diameter and 4,500 feet in length. The water intake was near the mouth of Spring Creek and the company installed a pumping station there at large capital expenditure. The railroad connection was furnished by a company-built narrow-gauge railroad that had a third outside rail to accommodate standard gauge rolling stock as far as the smelter. The narrow-gauge track continued all the way to the mine. The railroad was a little over eleven miles long, with three and a half more miles of track laid in spurs and sidings. The line had a maximum grade of 3.75 percent and a maximum curvature of 34 degrees. The steep terrain was challenging and some of the uphill had to be gained by way of a loop built around a prominence called Tin Can Point. Named the Iron Mountain Railway, the line was completed in February 1896. All of this outlay for infrastructure accommodating mining operations went well beyond anything previously done since the construction of the Clear Creek Ditch in the 1850s.²⁶

There was one more thing needed to prepare the smelter for operation: electric power. Initially the company made do with a small stream-driven generating plant to provide electric lighting. Within a year, however, the company had an offer from a group in San Francisco to create a larger powerplant that would provide much more electricity for power-driven machinery. This startup utility company built one powerplant on Battle Creek, and then another on Snow Creek. First organized as the Keswick Light and Power Company, the name later changed to Northern California Power Company. After a few years Pacific Gas and Electric Company took over the company.²⁷

²⁵ R. S. Ballou, "The Iron Mountain Mine," *The Covered Wagon* (1963), 6; Aubury, "The Copper Resources of California," 70.

²⁶ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 110–11, 115–16.

²⁷ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 113.

The site of the smelter plant became the company town of Keswick. The company erected a slew of buildings in a short span of time, including a well-appointed manager's residence and three superintendents' residences; an employee dormitory with dining room, kitchen, and entertainment hall; a separate quarters for domestic help; twenty-five cottages for employees with families; and two office buildings. There were also some buildings connected with the railroad operation, and a stable for the company's horses. After a couple of years, the company added a general merchandise store.²⁸

A town arose immediately to the south of company property. Known as Taylor, the town soon boasted a handful of saloons, a hotel, several boarding houses, a drugstore, a post office, a weekly newspaper, a livery stable, a school, and a church. The town of Taylor had a population of around 1,600 to 1,800 in its heyday.²⁹

Mining operations in the Iron Mountain Mine ramped up quickly. The quantity of ore taken out of the mine was 165,060 tons in 1897 and 221,895 tons in 1898. As the ore came out, large quantities of timber went in to shore up tunnels and stopes. When a section was mined out, a hole was opened from above and loose rock was shot down the hole to fill the cavity and reduce the danger of cave-ins. General Manager William F. Kett called it the "top-slicing method of mining and filling." But the method had a flaw. The fill material became subject to spontaneous combustion. In 1898, the mine experienced several fires that began in those back-filled chambers. Large amounts of water were pumped into the mine to extinguish the fires, but the fires kept burning. Miners could not direct the water to the fires because there was no breathable air in the mine, so no one could go underground to see what was happening. Finally, large fans were deployed at the mine entrance to ventilate the mine and enable men to go in and fight the fire with all the pumped-in water. This was dangerous work. There were frequent power failures, and when the fans shut off the men had to race to the surface ahead of the rapid buildup of sulfur gas given off by the slow-burning sulfide ore. For a while, recurrent fires together with this hazardous fire-control drill became a regular part of the Iron Mountain mining operation, and it was a wonder no one was killed.³⁰

That was not all. On February 28, 1901, the Iron Mountain Mine had a cave-in that entombed eight men. It occurred in the main tunnel 300 feet back from the entrance. Some of the eight victims were pulled from the rubble alive but later succumbed to their injuries.³¹

²⁸ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 111–12.

²⁹ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 113.

³⁰ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 118, 125.

³¹ Giles, *Shasta County: A History*, 180–81.

In 1902, the miners at the Iron Mountain Mine went on strike, backed by the Western Federation of Miners. The strike shut down the mining operation and effectively put another 2,500 people temporarily out of work whose jobs were in some way connected to the mine. After three months the miners ignominiously ended their walkout having failed to win any of their demands.³²

During the first few years of operation, the Mountain Copper Company, Ltd. employed Cornish and Irish miners to work in the Iron Mountain Mine. Spanish and Italian miners soon replaced these workers. General Manager Kett remarked that having two nationalities in the workplace was useful as it set up a competition over which group could endure more. The working conditions were extremely arduous as well as hazardous. The air temperature in the mine at the rock face was 110 degrees Fahrenheit or hotter. At times the rock was too hot to touch. Miners carried dynamite sticks into the mine wrapped in asbestos so the sticks would not explode in the hand before they were set in a drill hole. The men at the rock face worked in relays: ten to fifteen minutes of hard physical exertion in the intense heat followed by a brief period of rest and rehydration in a lower chamber with cooler air.³³

In the early twentieth century the Mountain Copper Company had more than a thousand people on its payroll, far more than any single gold mine operation in Shasta County during the previous century. Besides the many workers employed in the mine, there were hundreds more who worked above ground on the tramways moving the ore from mine to smelter. Many more workers were employed in the smelter, and on the railroad, and in the company's sprawling woodworking operations as lumberjacks, sawyers, timbermen, and carpenters. There was a crew of electricians to maintain all the electrical installations, and there was a medical staff and hospital. There was a chief chemist with a staff of laboratory assistants. There were a number of engineers and mine surveyors. There was a team of managers with a large office staff in Keswick. The company had two catering departments, one in Keswick and one at the mine, each with a staff of male and female employees. The company always had at least one attorney, and it had a handful of consulting engineers who were frequently onsite.³⁴

In the early years, the British-owned Mountain Copper Company tried to make the company town of Keswick something of an outpost of British culture. It built a tennis court near the staff housing that saw considerable use by staff and visitors. It laid out a football field and facilitated the organization of intramural football teams and tournaments. Redding soon had a football field as well, and matches were held between Redding and

³² Giles, *Shasta County: A History*, 181.

³³ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 160–61.

³⁴ Aubury, "The Copper Resources of California," 52; Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 143–56.

Keswick football teams. There was another popular entertainment at Keswick called “Paper Chasing,” a sort of parody of fox hunting, in which one man with his horse was selected as the “fox” to try to outride all the others on horse. The designated fox was given a head start and carried a saddlebag full of crumpled balls of paper, which he had to drop one by one to mark his path as he rode. If he succeeded in getting back to the beginning point with his saddlebag emptied and his lead still intact then he had the glory of besting all his pursuers.³⁵

General Manager Kett arrived in 1905 when there were still many Englishmen on the staff. He wrote many years later,

A number of young men were sent out from England to fill clerical positions on the staff, and some of them arrived complete with yachting flannels, dinner jackets, and similar impediments, accompanied by a mental picture of cruising luxuriously on the Sacramento River, dining in state, and generally living the “life of Riley.” When they saw the actual “wild and wooly” conditions, with the thermometer at 110 degrees almost every afternoon in the Keswick office during the summer, with torrents of rain in the winter, and found themselves compelled to breathe sulfur smoke both day and night, their homesickness and disappointment can better be imagined than described.³⁶

Growth of Copper Mining

The early success of the Iron Mountain Mine drew the attention of investors and led to development of other copper mines in Shasta County in the early 1900s. The California State Mining Bureau singled out Shasta County in its first study of the state’s copper deposits in 1902. State mineralogist Lewis E. Aubury wrote,

The recent exploitation of the copper mines has placed Shasta far in the lead of the mineral producing counties of the State. Its total mineral output in 1900 was \$5,574,026, nearly \$3,500,000 in excess of its nearest rival. Of this output, \$4,166,735 was in copper, the product of the Mountain Copper Mine.³⁷

Aubury explained that the copper deposits were found in two belts, a west and east belt, separated by the upper Sacramento Valley. Within each belt, there were numerous distinct lodes, and already, in 1902, several new mines were in development to exploit these lodes.

³⁵ Kett, “Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California,” 113.

³⁶ Kett, “Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California,” 114.

³⁷ Aubury, “The Copper Resources of California,” 42.

The deposits of the western and eastern districts differed in their mineralogy as well as in the richness of the ores. The lodes in the western districts were more massive but lower grade than those in the eastern districts.³⁸

A little more than a decade after Aubury's report, the California State Mining Bureau published a study of the mines and mineral resources of Shasta and neighboring counties by G. Chester Brown. By then there were some forty-four copper mines located around the county in nearly as many mining districts. Brown stated that the valuable ore deposits in Shasta County were "vastly different from the usual quartz veins as ordinarily understood" because of their enormity and the way the ore bodies gradually transitioned from a rich lode into surrounding waste rock. The veins did not have the typical walls but instead simply faded into the massive sulfides all around them. This was particularly the case with the west copper belt. Brown characterized those ore deposits as "massive deposits of pyrite, chalcopyrite and other sulphides." Brown characterized the ore deposits in the east copper belt as "vein-like deposits of mixed sulphides" containing relatively large percentages of gold, silver, zinc, antimony, and other precious metals.³⁹

The next major copper mine that opened after the Iron Mountain Mine was the Mammoth Mine of the Mammoth Copper Company, a subsidiary of United States Smelting, Refining, and Mining Company. This mine was located in the mountains west of where Shasta Lake came to be. Like the Mountain Copper Company, the Mammoth Copper Company developed the mine on a large scale, with a smelter works located some distance away and a workforce numbering in the high hundreds. The town of Kennett formed around the smelter plant at a location now covered by Shasta Lake. By 1915, the company's holdings consisted of 2,500 acres patented plus numerous claims not patented, and the underground workings aggregated more than 60,000 feet of tunnels and other manways. Like the Iron Mountain Mine, the Mammoth Mine operators tackled large ore bodies—some as much as 800 feet long and 90 feet wide—and the mine employed the same "top-slicing" method of backfilling each stope or chamber after it was mined. But here the empty stopes were so large that miners filled them by caving down the roof rather than pouring loose rock into it. On the surface, one could see where depressions from the cave-ins were crossed by numerous fissures.⁴⁰

The next successful mine operation to emerge in the county was the Bully Hill Mine. Located in the east copper belt, the early success of this mine brought further attention to the ore deposits in the area. In 1902, the Bully Hill Company's holdings covered 450

³⁸ Aubury, "The Copper Resources of California," 65.

³⁹ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 15.

⁴⁰ Bush, "The New Era of Mining in Shasta County," 37; Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 23–24.

acres, with 320 acres patented. The town of Delamar sprang up. The area is now covered by the Pit River Arm of Shasta Lake; the mine site lies just above the lake while the town site is underwater.⁴¹

The Afterthought Mine was the fourth major copper mine in the region. Located twenty-four miles east of Redding in the Shasta Forest Reserve (later renamed the Lassen National Forest) it established the reputation of the east copper belt. By 1915, the Afterthought Copper Company had 1,650 acres of claims, all but 100 acres patented. Underground workings consisted of tunnels totaling 2,200 feet in length, six levels, cross-cuts, raises, stopes, and a 536-foot shaft and a 230-foot winze (or inclined shaft). The company's smelter was near the mine and the place grew into the town of Ingot. Ore was hauled on a branch railroad to Bella Vista in the Sacramento Valley.⁴²

The Balaklala Mine was the last of the big five copper mines in Shasta County. The mine was located at about 2,000 feet of elevation in rough hills west of the Sacramento River. The company's smelter plant was located in the new town of Coram three miles away. Miners delivered the ore to the smelter via a three-mile-long aerial tramway. The Balaklala Mine was known to be a rich mine by around 1905. Though it was the last of the big five to be developed, it kept up production along with the two giants, Iron Mountain and Mammoth, for years after the Bully Hill and Afterthought mines shut down.⁴³

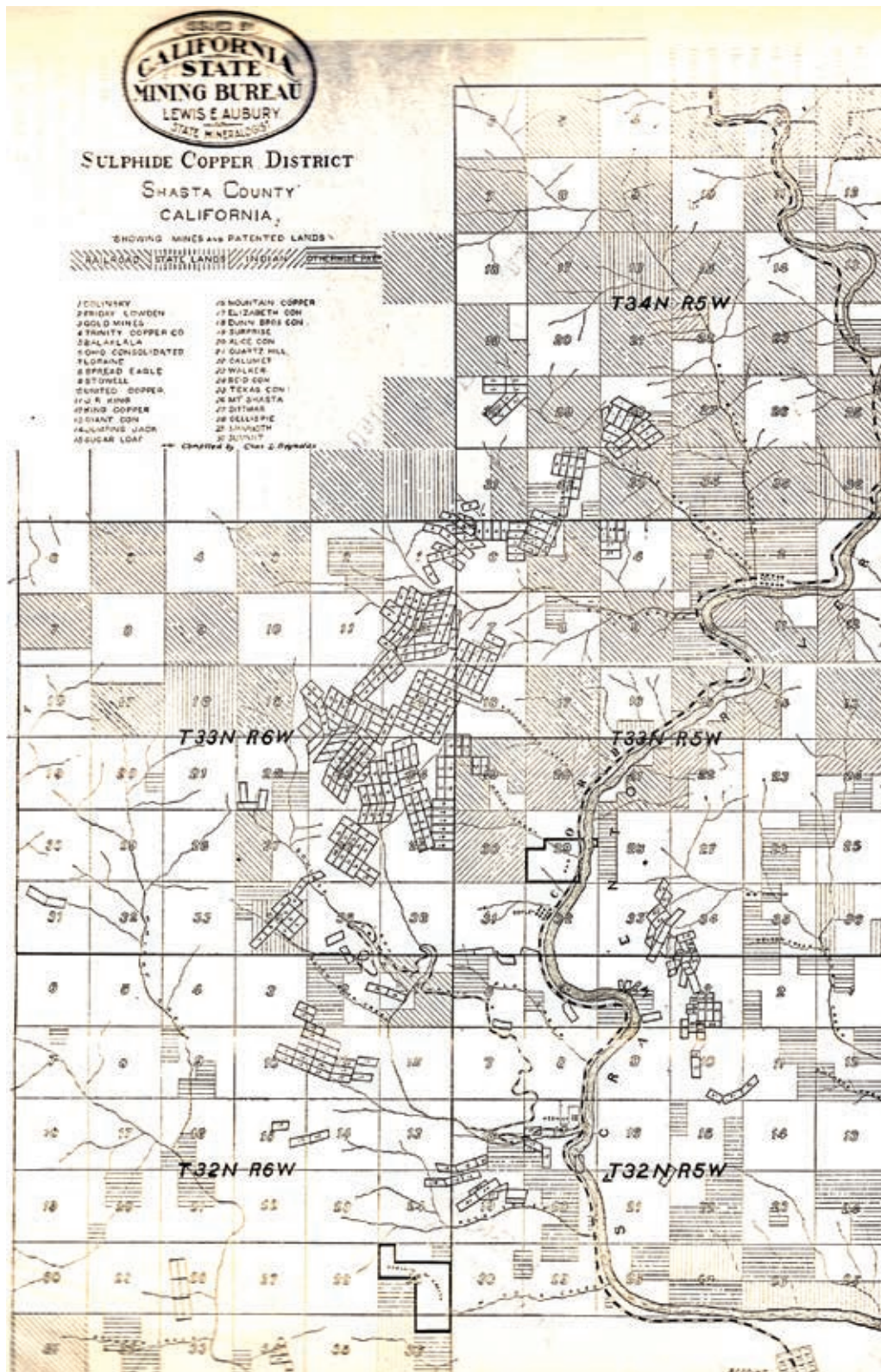
There were numerous other copper mines in operation during the era of peak production from 1896 to 1919. Some were prospects and some produced considerable paying ore. When Brown prepared his report in 1915, most of these mining operations were idle while others were worked by just one to three men. Most of the mining activity was centered at the five major mining properties. Each of those five gave rise to a town that thrived for as long as the mines remained active. Kennett was the largest town with up to 10,000 residents. Interestingly, two of the five towns, Kennett and Delamar, eventually experienced the same fate as Whiskeytown: drowned under a reservoir.⁴⁴

⁴¹ Aubury, "The Copper Resources of California," 49; U.S. Forest Service, Shasta Lake Ranger Station, "Sightseeing on Shasta Lake and a little underwater history" (pamphlet), revised September 2022, https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsm9_008585.pdf.

⁴² Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 16; Bush, "The New Era of Mining in Shasta County," 38.

⁴³ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 17-18; Bush, "The New Era of Mining in Shasta County," 38.

⁴⁴ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 15-29; Bush, "The New Era of Mining in Shasta County," 38.



Map 4. The copper belt started just north of the present park. Note town of Shasta in bottom center.
 (From Lewis E. Aubury, "The Copper Resources of California,"
Bulletin No. 23 of the California State Mining Bureau, 1902.)

Table 1.
Copper Production in Shasta County, 1896–1913

Year	Pounds	Value
1896	1,847,087	\$184,708
1897	13,592,610	\$1,535,966
1898	21,442,000	\$2,465,830
1899	21,835,863	\$3,565,023
1900	25,736,473	\$4,166,735
1901	30,990,781	\$4,881,048
1902	21,515,887	\$2,496,731
1903	16,453,409	\$2,171,497
1904	26,438,145	\$3,439,974
1905	10,830,865	\$1,688,614
1906	22,477,304	\$4,338,121
1907	27,844,364	\$5,568,873
1908	34,878,677	\$4,642,976
1909	58,665,447	\$7,581,114
1910	44,947,950	\$5,725,469
1911	29,539,913	\$3,692,489
1912	25,249,892	\$4,166,232
1913	27,686,436	\$4,291,708
Totals	461,973,103	\$66,603,109

Copper Smelters

The complex sulfide ores that were extracted from the Iron Mountain Mine and other copper mines in Shasta County had to be smelted to separate pure copper from the sulfides. Generally, the smelting process involved placing the ore in furnaces and heating it to such high temperatures that the metals in the ore became molten. Then the metal would react with a “reducing agent” (usually coke or coal) and separate out in a process known as “reduction.” In addition to the reducing agent, a “flux” of some other type of ore was mixed with the sulfide ore to draw impurities out of the molten metal. Within the molten mix, the pure metal sank to the bottom while the impurities floated to the top and skimmed off, making “slag.” The slag cooled and hardened to form the glassy, black material seen in slag piles.

Generally, a preliminary step in the smelting process preceded the actual smelting. Before smelter workers charged the ore into the furnace, the ore was “roasted,” or heated at a lower temperature with oxygen present to burn off a large part of the sulfides and convert metal sulfides into metal oxides. The smelter men found this conversion necessary so that the reducing agent could do its work in the smelting process. Whereas each charge of ore would be subjected to the intense heat in the furnace for only a matter of minutes, the slow roasting of the ore beforehand would go on for weeks.

Because of the pyritic quality of the copper ore in Shasta County, the Mountain Copper Company was a pioneer in “pyrite smelting” of copper ore, which differed in some respects from more usual forms of smelting. The ore from the Iron Mountain Mine, as described by the company’s first general manager, Lewis T. Wright, was a “cupriferous iron pyrite, rich in sulphur and free from gangue.” Under Wright’s direction, the Keswick Smelter tried different methods of roasting the ore, experimented with various charges of coke and flux, and used various combinations of temperature and duration in the smelting process. With the knowledge gained at the Keswick smelter, Wright contributed to a treatise on pyrite smelting. The contribution was significant as the Iron Mountain Mine ranked as one of the biggest copper mines in the nation and the smelter at Keswick was known to produce a high-grade final product.⁴⁵

Initially, the ore from the Iron Mountain Mine was roasted in heavy masonry stalls. There were eighty stalls set into the ground in multiple tiers, with flues to draw air and one long exhaust pipe venting the smoke to a single smokestack. The roasting was problematic because the sulfur fumes were very noxious. Furthermore, the contents in a single stall would sometimes fuse into a solid mass, making it almost impossible to extract. After a few years, the company converted to open-air heap roasting. This method consumed great amounts of cordwood, and the smoke and sulfur-dioxide gas produced were intense. To mitigate the smoke hazard, the roasting beds were located away from Keswick at several points along the Iron Mountain Railway line. Finally, in about 1902, the company erected eight Wright McDougal roasters and gave up open-air heap roasting. These giant roasters were each eighteen feet in diameter and about two stories tall, each one equipped with six hearths. They were arranged in two banks with the smoke from each bank venting through one tall chimney.⁴⁶

Meanwhile, the company experimented with adding a portion of “raw” or unroasted ore to the roasted ore in each charge placed into a furnace for smelting. At the same time, it experimented with reducing the amount of coke in each charge. After a few

⁴⁵ Lewis T. Wright, “Contribution by Lewis T. Wright,” in *Pyrite Smelting*, edited by T. A. Rickard (New York: The Engineering and Mining Journal, 1905), 224-33; Edward Dyer Peters, *The Principles of Copper Smelting* (New York: Hill Publishing Co., 1907), 213-337.

⁴⁶ Kett, “Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California,” 116-17.

years of experimentation, the company settled on smelting all the ore raw without the use of coke, relying solely on a charge of flux to complete the mix. This was the Mountain Copper Company's original contribution to pyrite smelting. The innovation, however, was made for reasons of economy (to reduce expenses for wood and coke fuel consumption), not for purposes of making less smoke. The company continued to roast fines in the Wright McDougal roasters. After a few years, the Wright McDougal roasters were once again roasting raw ore from the mine. The practice of smelting raw without coke and only a silica flux slowed as the richest pyritic ore became mined out.⁴⁷

While roasting the ore generated vast quantities of smoke and fumes, smelting the ore in the blast furnaces contributed to the total air pollution from the smelter works, too. The Keswick Smelter had five water-jacket blast furnaces each capable of smelting 300 tons per day. Four furnaces shared one common smokestack and one furnace had its own smokestack. The plant contained two briquetting machines for compressing fines from the roasters as well as crude fines from the mines into "bricks" for smelting. The hot air in the blast furnaces came from a large oil-burning heat plant. Large Cornersville blowers pushed compressed air through cast iron pipes that passed through an oil-heated chamber. The temperature of the compressed air in the pipes reached 750 degrees Fahrenheit in the chamber and was 450 degrees Fahrenheit as it entered the furnaces. The heat plant vented smoke and fumes skyward as well. Altogether the smelter works vented smoke through ten tall smokestacks plus many smaller ones.⁴⁸

In 1914, the Mountain Copper Company built a mill for processing chalcopyrite ore containing about 2 percent copper. Called the Minnesota Mill, it was located on the railway line halfway from Keswick to the Iron Mountain Mine. It contained rollers, a Hancock jig, and a flotation unit for granulating the ore, mixing it with water, and producing concentrates from slimes. The plant handled 550 to 600 tons of ore per day until it closed in 1919 when the price of copper dropped. Some of the mill product went to the Keswick Smelter while some went to the company's second smelter at Martinez, California. The Martinez plant, built in 1904, was established to take pyrite ore from the Iron Mountain Mine operation to produce sulfuric acid, with copper, silver, and gold being recovered as byproducts of the operation. (Initially, there was a strong California market for sulfuric acid in the making of farm fertilizer; later the sulfuric acid was used in oil refining.)⁴⁹

⁴⁷ Wright, "Contribution by Lewis T. Wright," 224–25; Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 117; J. K. Haywood, "Injury to Vegetation by Smelter Fumes," *Bulletin No. 89* of the U.S. Department of Agriculture, Bureau of Chemistry (Washington: Government Printing Office, 1905), 8–9. At some point, the company regularly used the following quantities in each charge: 1,300 pounds of cured ore, 400 pounds of raw ore, 400 pounds of silica flux, 100 pounds of limestone flux, and 170 pounds of coke. See Ballou, "The Iron Mountain Mine," 8.

⁴⁸ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 111, 119.

⁴⁹ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 121–23, 131.

The deadly sulfur-dioxide gas, eye-stinging smoke, and ear-splitting noise emitted by the smelter works made the site a hard place to work and made Keswick a hard place to live; indeed, by modern standards the place could only be described as a hellhole. Yet many people in that day hailed the industry as it spearheaded Shasta County's "new era." Soon after the Keswick Smelter went into operation more smelters appeared at the other big copper mines in Shasta County. Within a decade there were five smelters in the county, one at each of the major mines. The other four smelters were located at Kennett, Delamar, Ingot, and Coram. Like the Keswick Smelter, these smelters did custom smelting for gold mines with complex quartz ores, contributing to a revival of gold mining in the county. The additional smelters also contributed more deadly air pollution. The great clouds of smelter smoke at the north end of the Sacramento Valley soon triggered a public outcry and spurred a lawsuit by the federal government.

The Fight over Smelter Smoke

The people at the north end of the Sacramento Valley smelled and breathed the smoke. They saw its deadly effects on the forest near the smelters. The town of Redding, with 3,000 residents in 1900, located just five miles from Keswick, was engulfed in the smelter works plume much of the time.. Farmers in the Sacramento Valley south of Redding suspected that the air pollution was precipitating on their farms, damaging their crops.

Agitation over smelter smoke was not peculiar to Shasta County. Farmers in the Deer Lodge Valley in Montana were upset over smelter smoke from the copper smelter works in nearby Butte. Similar outcries came from communities in Idaho and Utah that were downwind of copper smelters in those states. People in northern Georgia were agitating for relief from smoke drifting over the state line from a copper smelter in Tennessee.

In the early 1900s, the U.S. Department of Justice brought a lawsuit against the polluters. Needing a federal cause of action, it chose to build its case around the smoke damage to the U.S. public domain. More precisely, it focused on the killing of forest on national forest lands. There were two states where copper smelters were close to national forests: Montana and California. Therefore, the Justice Department concentrated its effort on the copper smelters in Butte, Montana, and Shasta County, California.⁵⁰

In California, the Justice Department sued the Mountain Copper Company and the Mammoth Copper Company, alleging smoke damage to U.S. property on the Shasta Forest Reserve. It sought damages and an injunction to shut down the smelter works of both companies. The judge decided for the United States for damages and threatened an

⁵⁰ Donald MacMillan, "A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West, 1885–1933," Ph.D. dissertation, University of Montana, 1973, 204.

injunction to shut down the smelters. But on appeal the Ninth Circuit Court of Appeals reversed the lower court's decision. In its defense, the Mountain Copper Company did not deny that the sulfur smoke was killing vegetation, but it maintained that the smoke damage was limited to the Spring Creek Canyon vicinity and that smoke damage effects farther abroad were not proven. It also insisted that there was no way "known to science" to produce copper without producing toxic smoke. The appellant's latter line of argument persuaded the Court of Appeals. It accepted that the United States might be awarded damages for killed trees (a paltry amount) but it could not go farther and shut down mining operations. To do so, the court said, would be "to blot out two great mining and manufacturing enterprises, destroy half of the taxable value of a county, and drive more than 10,000 people from their homes."⁵¹

While it was under threat of injunction, the Mountain Copper Company added a few things to the Keswick Smelter to abate air pollution. Notably, it installed a large sheet-iron dust collector in the main smokestack connected to the blast furnaces. Apparently in response to the lawsuit, it also increased efforts at its Martinez plant to convert sulfur fumes into sulfuric acid and merchandise the product through a subsidiary, the San Francisco Chemical Company.⁵²

The federal government prepared to appeal the case to the U.S. Supreme Court. It needed stronger scientific evidence that smelter smoke was causing damage to the national forest. The scientific study was already under way. J. K. Haywood, a scientist with the U.S. Department of Agriculture, began a study of the problem with an examination of forest health all around the Keswick Smelter. His first paper, "Injury to Vegetation by Smelter Fumes," was published by the Bureau of Chemistry in 1905. Significantly, Haywood found that the smoke damage from the Keswick Smelter extended into what is today Whiskeytown National Recreation Area. "In a westerly direction great damage to a large number of trees was observed all the way to Whiskey Town, about 5 miles from the smelter," he wrote. But Haywood's first study was too localized and narrowly focused on trees to support the government's case if it went to the U.S. Supreme Court. After the U.S. lost the case on appeal, Haywood broadened his study to consider the effects of airborne chemicals and acid runoff in streams.⁵³

Haywood's second paper "Injury to Vegetation and Animal Life by Smelter Wastes," was published by the Bureau of Chemistry in 1910. In this paper, Haywood was interested in analyzing the smelters' environmental impacts cast over a wider area.

⁵¹ *Mountain Copper Co. v. United States*, 142 F. 625 (9th Cir. 1906), pp. 626–28, 641.

⁵² Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California," 111; MacMillan, "A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West 1885–1933," 273–74.

⁵³ J. K. Haywood, "Injury to Vegetation by Smelter Fumes," *Bulletin No. 89* of the U.S. Department of Agriculture, Department of Chemistry (Washington: Government Printing Office, 1905), 8.

Whereas his first study confirmed the tree-killing effect of flue dust, everyone knew that the poisonous fallout of flue dust was confined to a relatively small radius around the smelter. Now he examined four pathways by which microscopic toxins spread through the environment for miles: 1) the uptake of sulfur dioxide and trioxide straight from the atmosphere by tree foliage, 2) the precipitation of airborne chemicals into soil, 3) the washing of chemicals into streams, and 4) the ingestion of these same chemicals by cattle from eating contaminated hay and drinking out of contaminated streams. His emphasis was on the first pathway: the uptake of pollutants by tree foliage. His most important finding was that even a small amount of sulfur dioxide and trioxide in the air will get into the leaves and kill the plant. This was a crucial finding because it linked the damage from smelter smoke to the national forests that were sometimes many miles away. The smelter operators had assumed that tall smokestacks would mitigate the air pollution by putting the smoke so high up in the air that the particulates would dissipate and prove harmless thanks to their small quantities. Haywood's research showed that, to the contrary, the smoke damage carried for a great distance because those small quantities were still deadly.⁵⁴

Haywood's second round of field research mainly addressed the smelter in Butte, Montana, even though the findings applied to the smelters in Shasta County, too. Haywood did not discuss the effects of smelter waste on fish, though his study implicitly showed how chemicals got into the water. Others involved with the case noted that the contamination of streams was an even bigger concern in Shasta County than in Montana's Deer Lodge Valley. In the headwaters of the Sacramento River, pollution denuded whole hillsides of forest. Heavy rains in winter caused floods and freshets. The soil runoff from those denuded areas carried loads of contaminants into the streams that had ruinous effects here and there all the way down the Sacramento Valley.⁵⁵

Impatient with the federal government's slow-moving litigation in the U.S. courts, farmers in the Sacramento Valley formed the Shasta County Farmers' Protective Association and brought their own lawsuit against the Mammoth Copper Company and the Balaklala Consolidated Copper Company in state court. The farmers alleged that pollution from the smelters was causing increasing damage to their crops, and they sought an injunction against the smelter operators. The mining and smelting companies were pugnacious in defending their right to pollute. In a meeting between the contending parties, the attorney for the Mammoth Copper Company told the farmers they were a "flock

⁵⁴ J. K. Haywood, "Injury to Vegetation and Animal Life by Smelter Wastes," *Bulletin No. 113* of the U.S. Department of Agriculture, Bureau of Chemistry (Washington: Government Printing Office, 1910), 8-9, 15, 57-64.

⁵⁵ MacMillan, "A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West 1885-1933," 204, 307.

of cackling geese” who did not have facts to back up their claims of damage. The judge in this case ordered the smelter operators to install smoke abatement equipment (the same as existed at a copper smelter in Utah) or else he would grant the injunction.⁵⁶

The mining companies modified flues, added dust chambers, and constructed baghouses. The baghouse was a compartment which filtered smoke through woolen or cotton bags. The Balaklala Consolidated Mining Company stipulated to the court that it would undertake an additional measure: it would install a Cottrell electric precipitation device in its plant. The aim was to precipitate particles out of the smoke using an electrical current. After a year passed, the company admitted that the device was a failure. The farmers, meanwhile, petitioned the court stating that the other control measures must not have been working either because the smoke was still damaging their crops. In 1911, the court required the Balaklala Smelter to cease operation. The company tried to find other means to bring the plant’s emissions down to an acceptable level, but finally halted the effort and permanently closed the smelter.⁵⁷

The smelter in Kennett stayed in operation after the Balaklala Smelter shut down as it was able to satisfy the court’s minimal smoke abatement requirements. Meanwhile, the Mountain Copper Company idled its smelter plant in Keswick and shipped the smelting ore to its plant in Martinez in the Bay Area. A lawsuit was brought against the Martinez smelter, resulting in an agreement between the court and the litigants for a court-appointed commission to study smelter smoke effects on the environment. In a separate initiative, the governor of California appointed a commission of three senior state officials to lead another scientific study on the environmental impacts of smelter smoke. The emerging science from these and other studies indicated that sulfur dioxide was toxic to plants at much lower concentrations than previously thought. Despite these latter developments, the citizens’ efforts against the smelters in Shasta County only partly succeeded. The U.S. Justice Department quietly dropped its litigation against the smelter operators in Shasta County and Butte, Montana. It did not appeal the Ninth Circuit Court’s decision to the U.S. Supreme Court as intended, making the determination that no U.S. law then on the books would afford the kind of environmental protection sought. In Shasta County, the smelter smoke pollution went away mostly for economic reasons, not for the protection of air quality. The plant operators curtailed operations when the richest copper ore was mined out and the market price for copper in the United States fell after World War I. The Balaklala Smelter was the only plant that fell due to the court order. The Afterthought and the Bully Hill smelters were idled before the suits began, while the Kennett Smelter quit finally in 1919. The Afterthought

⁵⁶ MacMillan, “A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West 1885–1933,” 308; Charles H. Fulton, “Metallurgical Smoke,” *Bulletin No. 84* of the U.S. Department of the Interior, Bureau of Mines (Washington: Government Printing Office, 1916), 85.

⁵⁷ MacMillan, “A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West 1885–1933,” 311–12, 335; Michael Kuker, “Your News: Historical society to present ‘The Rise and Fall of Coram,’” *Record Searchlight* (Redding, CA), February 13, 2016.

Smelter was briefly reactivated, closing finally in February 1920. The record on the Keswick Smelter is not altogether clear, though it seems that the plant ceased smelting around 1913 and never resumed. The Mountain Copper Company ceased mining operations at the Iron Mountain Mine and closed its smelter in Martinez in April 1919.⁵⁸

Early Twentieth Century Gold and Silver Mining

During the period that the copper smelters were in operation, companies reactivated many of the gold mines within the present area of the park and elsewhere in Shasta County. The gold mining industry in the county prospered from the copper mining boom because the copper smelters needed quartz ore for flux and, in the process of using the flux, they could separate out the gold and silver in those complex ores. The smelters paid several dollars per ton for quartz ore regardless of the grade of ore. More importantly, the smelters paid the mines for the gold and silver extracted based on the ore's assay values.⁵⁹

From an examination of mineral production statistics in a sample year, it is clear how much the gold mining industry piggybacked on the copper mining industry in this period. In 1906, a total of 327,482 tons of ore was mined and milled or sent to smelters in Shasta County. Of the total, 262,388, or 80 percent, was copper ore, and the remaining 65,094 tons, or 20 percent, was gold ore. Of the 65,094 tons of gold ore milled or smelted, just 22,897, or 35 percent, was free-milling ore while the rest was complex ore sent to the smelters. Gold, silver, and copper values produced that year amounted to \$5,591,748, with \$4,338,121 of that in copper. Of the \$819,144 of gold produced, just \$290,579 came from the free-milling ore. Of the \$434,483 of silver produced, only \$2,412 came from the mills. It can be seen from these data that the gold mines in general relied heavily on the smelters to realize their production values, although some individual gold mines carried on with their own free milling.⁶⁰

⁵⁸ MacMillan, "A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West 1885–1933," 335; Fulton, "Metallurgical Smoke," 84–87; E. E. Free, "Review: Report of the Selby Smelter Commission," *The Plant World* 19, no. 1 (January 1916): 23–25; Lydon and O'Brien, *Mines and Mineral Resources of Shasta County, California*, 29; Khaled J. Bloom, *Murder of a Landscape: The California Farmer-Smelter War 1897–1916* (Norman, OK: Arthur H. Clark Company, 2010), 22; U.S. Geological Survey, Division of Mining and Mineral Resources, *Mineral Resources of the United States 1913* (Washington: Government Printing Office, 1914), 499–500; U.S. Geological Survey, Division of Mining and Mineral Resources, *Mineral Resources of the United States 1919* (Washington: Government Printing Office, 1920), 209; U.S. Geological Survey, Division of Mining and Mineral Resources, *Mineral Resources of the United States 1920* (Washington: Government Printing Office, 1921), 182; California Conservation Commission, *Report of the Conservation Commission of the State of California* (Sacramento, CA: Friend Wm. Richardson, Superintendent of State Printing, 1912), 144.

⁵⁹ Blossom Hamusek-McGann, Sandra S. Flint, Melinda Peak, and Barry A. Price, "Evaluation of 18 Historic Mines in the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California," report prepared for National Park Service by Applied EarthWorks, Inc. Fresno, CA, May 1999, WNRA, Cultural Resource Division e-Files.

⁶⁰ U.S. Geological Survey, Division of Mining and Mineral Resources, *Mineral Resources of the United States 1906* (Washington: Government Printing Office, 1907), 194–95.

The U.S. Geological Survey, in its annual report on the mineral resources of the United States, recorded the number of producing mines in Shasta County with a breakdown of gold versus copper mines. It is not clear how the U.S. Geological Survey defined producing mines, since prospecting mines did sometimes produce small amounts of paying ore, but the steady reporting by the survey indicated that the number of producing gold mines in the county hovered at around three dozen, while the number of copper mines held steady at four to five until the end of the copper mining boom. The gold mining activity covered several mining districts around the county, with several gold mines lying either within the park area or just outside.

The major gold mine within the area was the Gambrinus Mine near Whiskeytown. Other significant gold mines in the vicinity were the Mad Mule and Mad Ox mines in the Whiskey Creek drainage just north of the park boundary, and the Gladstone, Franklin, Milkmaid, and other mines in the French Gulch District, which was also a little north of the park. There were other gold mines within the park area though they were not big enough producers to warrant mention in most overviews of the county and were probably seldom counted as producing mines in the U.S. Geological Survey's annual reports. These mines included the Mount Shasta, Desmond, West End, and El Dorado mines.⁶¹

The Gambrinus Mine was a steady producer of free-milling gold ore through the first decade of the twentieth century. The lode was said to consist of four parallel veins in a group with a pay shoot of free-milling ore 220 feet in length and 18 inches wide. Around 1910 the Shasta Monarch Mining Company acquired the mine, and a new steam-powered, ten-stamp mill was built with concentrators for reduction of the free-milling ore. Mill tailings were dumped in Whiskey Creek. The Company operated the mine intermittently in 1912 and 1913. Brown reported workings in 1915 consisting of a main tunnel 410 feet long on the vein, a crosscut 110 feet long, and stopes and drifts. In that year the mining operation employed ten men, and the mine equipment consisted of ore cars, tools, shop, and dwellings. The mine was completely shut down in 1916.⁶²

The Gladstone Mine, located outside of the park area in the French Gulch District, was the largest gold producer in Shasta County in this period. Hazel Gold Mining Company bought the mine in 1901. Over the next decade and a half, the mine produced \$3 million in gold (compared with \$80,000 under the mine's previous ownership). When Brown made his report on the Shasta County mines in 1915, the company employed 140 men: 90 in the mine, 40 on top, and 10 in the mill. All of the company's mine and mill works ran on electricity. The mine works consisted of a hoisting plant, compressor plant, electric ore cars, shops, and dwellings. The mill works consisted of a thirty-stamp mill, nine

⁶¹ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 29–60; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 52–62.

⁶² Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 42–43; Glendee Ane Osborne comment on draft report, citing a January 24, 1916, article in *Sacramento Union*.

concentrating tables, and an electroplating plant. Mill tailings were dumped in Clear Creek. Groundwater that seeped into the mine was pumped out of the mine into the creek at about seventy gallons of water per minute. The Gladstone Mine discontinued operations in March 1916. Exploratory work continued until 1924, at which time the equipment was sold and the camp deserted, with little of the camp remaining some fifty years later.⁶³

Table 2.
Richest Mines in French Gulch District⁶⁴

Mine	Value of Ore Mined
Gladstone	\$4,500,000
Washington	\$2,500,000
Milkmaid	\$1,000,000
Niagara	\$1,000,000
Subil	\$600,000
Highland	\$300,000
Summit	\$200,000

During this time, the old Franklin and Milkmaid mines, which adjoined and came under a single ownership, were sometimes known together as the Western Mine, now owned by the Western Exploitation Company. Ore production from 1910 to 1915 yielded \$350,000. Brown reported that the “ore was rich and free, but the vein was small.” In 1915, the company employed fourteen men. The mine equipment consisted of cars, tools, shop, and dwellings, while the reduction equipment consisted of a ten-stamp mill.⁶⁵

No other mines in the area employed more than four men in 1915. The Mount Shasta and Mad Mule mines employed four men each, the Washington Mine employed three, the Truscott Mine had two men working, and the Oro Fino Mine just one. The Niagara Mine, once a big producer, was idle after 1905. The Mad Ox Mine produced little ore after 1911.⁶⁶

⁶³ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 43-44; U.S. Geological Survey, *Mineral Resources of the United States 1916* (Washington: Government Printing Office, 1917), 248; Lintz, “The Gladstone Mine,” 30.

⁶⁴ Anonymous “The History of French Gulch,” no date, Small Towns vertical file, Shasta Historical Society, citing *California Journal of Mining and Geology*, E. E. Erich, 1939.

⁶⁵ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 43-44.

⁶⁶ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 29-60.

As the Mount Shasta Mine was located within the present park area, it has received considerable study by the National Park Service. Toogood provided information on the Mount Shasta Mine from the *Mining and Scientific Press* in her *Historic Resource Study*. Two recent studies, one that considers the eligibility of mining properties for listing on the National Register of Historic Places (2019) and another that treats abandoned mine closures (2021) present more detailed information. The Mount Shasta Mine was opened in 1897, and one year later the property was sold for \$10,000 to three investors from San Francisco. These investors consolidated the property with several other claims and transferred the holdings to a person named O. Howard in July 1898. Howard partnered with Frank Ware, a Shasta County resident and mine developer, who served as mine manager over the next few years when the mine was most productive. The mine development went forward under ownership of the Mount Shasta Gold Mines Corporation, organized in Colorado in 1899, with both Howard and Ware continuing their involvement with the mine.⁶⁷

There were fifteen men employed at the Mount Shasta Mine around this time. Ore was sacked and shipped to the Keswick Smelter. According to one contemporary report, the Shasta Mine sent twenty-five tons of ore each day to the smelter. In the next year, the miners reached a pay chute of low-grade, free-milling ore at about 400 feet of depth. At that time, workers built over the mine shaft a steam-powered hoist with wooden gallows frame and cage in place of a windlass, and erected an eight-stamp mill, also steam-powered. The workforce may have increased to some forty to sixty men, according to the corporation's announced plans. The mine yielded good returns for the corporation for the first few years of the twentieth century. However, the corporation chose to divert some of its capital returns toward speculative ventures in the copper belt, which did not turn out well, and as a result the corporation failed in 1905. The Shasta Mine was idle from then until 1911. After a brief time in receivership, the mine was sold to A. A. Lindsay and Associates of Portland, Oregon for \$35,000. The new owners stated in 1912 that they would embark on extensive mine development with a force of over 100 men. It is not clear how much of that came to pass. The mine property changed hands again in 1913. A watchman was employed there in 1914, and a crew of four men in 1915. It seems to have been maintained mostly as a derelict holding through the rest of the copper mining boom period and on through the 1920s. In 1933, it was reported that the surface improvements were burned down, and the mine filled with water.⁶⁸

⁶⁷ Mark D. Selvertson, Mark K. Walker, and Samantha Dollinger, "Abandoned Mine Closures: Historic Properties Identification and Evaluation Report, Whiskeytown National Recreation Area, Shasta County, California," report prepared for the National Park Service by Anthropological Studies Center, Sonoma State University, November 2021, WNRA, Cultural Resource Division e-Files.

⁶⁸ Mark D. Selvertson, Mark K. Walker, and Samantha Dollinger, "Abandoned Mine Closures"; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 53–54; Brown, *Mines and Mineral Resources of Shasta County, Siskiyou County, Trinity County*, 50; Charles V. Averill, "Gold Deposits of the Redding and Weaverville Quadrangles," *California Journal of Mines and Geology* 29, nos. 1–2 (Sacramento: State Division of Mines, 1933), 38.

Other mines within the park area noted by Toogood were locally significant even if they produced relatively little valuable ore. Each mine made its mark on the cultural landscape and did its bit to pollute the natural environment. In aggregate, the mines perpetuated the area's reputation as a mining region and helped the town of Whiskeytown hang on. The Desmond Mine on Whiskey Creek near the Mad Ox Mine produced small quantities of ore containing limited amounts of free gold combined with gold and copper sulfides. In 1898, the owners built a small water-powered stamp mill to process free gold. The mill operation ended in 1905. The mine saw further workings and then was abandoned sometime after 1913. Toogood noted that the scars of this modest mining operation were still visible sixty-five years later. The El Dorado Mine, located less than a half-mile from Tower House up Mill Creek, was discovered in 1885 and was worked fairly steadily from 1894 to 1919. In December 1915, an article in the *Engineering and Mining Journal* stated that the mine owner, James Connor, was "mining high grade ore and treating it in a two-stamp mill." Although the El Dorado never became a big producer, it would be worked intermittently for decades.⁶⁹

Gold, Copper, and Zinc Mining in the 1920s

Mining activity in Shasta County dropped off after World War I and through the 1920s as declining prices for gold and copper drove down production. As the copper smelters closed, numerous gold mines that relied on them to purchase siliceous ore for flux closed, too. Production of copper ore dropped to a mere fraction of what it was in the boom years, while production of gold ore slumped to about one-fourth of pre-World War I levels.⁷⁰

There was a flurry of interest in recovering zinc from the complex ores in the county. A flotation plant at the Bully Hill mine complex successfully treated high-grade zinc ore from the Bully Hill and Afterthought mines from 1921 to 1927. An aerial tram built in 1925 carried zinc ore from the Afterthought Mine to the Bully Hill plant at Delamar eight and a half miles away. This operation closed in 1927 when the price of copper fell.⁷¹

Toogood documented the minimal activity at mines located within what is now Whiskeytown National Recreation Area. At the Ganim Mine located two miles northwest of Whiskeytown, mine owner Joe S. Ganim and his San Francisco-based Ganim Gold Mining Company reported in 1926 that the mine was producing ore carrying \$15 per ton in gold. The mine complex included a ten-stamp mill, a concentrator, and a small electric light plant. The Index Mine, located on the ridge about one half mile north of Oak Bottom,

⁶⁹ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 56–57, 61.

⁷⁰ Lydon and O'Brien, *Mines and Mineral Resources of Shasta County, California*, 22.

⁷¹ Lydon and O'Brien, *Mines and Mineral Resources of Shasta County, California*, 4, 31.

operated from 1923 to 1926. The mine consisted of two tunnels, one 140 feet long and the other 150 feet long, and at one time it had three men working. The Shasta View Mine, located one and a half miles west of Shasta, was developed in the mid 1920s. The Shasta View Gold Mining Company erected a small stamp mill on the property and in 1925 it intended to build a cyanide plant. The West End Mine, located near the Shasta View Mine, was worked under lease from 1923 to 1926. The operator's equipment consisted of a thirty-horsepower boiler and steam hoist. Water was pumped from the mine by a nine horsepower Hercules gasoline engine that drove a six-inch Mast-Foss rod pump. Workers mined the ore from two veins varying from a few inches to two feet in width.

Two men worked the El Dorado Mine under lease in the early 1920s. At this time the mine development consisted of a main tunnel 450 feet long with a winze sunk fifty feet on the vein and another tunnel 340 feet long with a raise of thirty feet on the ore body. The equipment at the mine site included a two-stamp mill, a blacksmith shop, a bunkhouse, and tools. The mill processed the ore with triple discharge mortar and amalgamation plates operated by an eight-horsepower gas engine. A 1922 state mining bureau report on the El Dorado Mine stated that "the gold occurs entirely in pockets in the quartz."⁷²

The activity at the El Dorado Mine exemplified what geologists called "pocket mining," or the targeted mining of small pockets of free gold ore. As the U.S. Geological Survey's Preston E. Hotz explained in a 1970 paper on the geology of the lode gold districts in the Klamath Mountains, "Gold pockets are small, shallow, relatively high grade deposits of free gold with little gangue. They apparently have little or no lateral or vertical continuity, because little effort was made to explore possible continuity of a pocket once the rich, easily attained gold had been extracted." The Klamath Mountains had many such gold pockets, and so-called "pocket miners" led the modest uptick in mining activity in the Whiskeytown area during the 1920s. Pocket miners typically mined to a depth of no more than twenty-five feet before giving up, and many of those shallow workings were once in the Whiskeytown District. Hotz stated that the more successful pocket miners extracted anywhere from \$2,500 to \$45,000 in gold.⁷³

⁷² National Park Service, "Cultural Landscape Inventory, El Dorado Mine, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, California," 2016, WNRA, Cultural Resource Division e-Files; Dottie Smith, "Remnants of El Dorado Mine Still Exist in Whiskeytown," newspaper clipping dated January 15, 2010 (newspaper not identified) from Whiskeytown vertical file, Shasta Historical Society.

⁷³ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 58; Preston E. Hotz, "Geology of Lode Gold Districts in the Klamath Mountains, California and Oregon," *Bulletin No. 1290* of the U.S. Geological Survey (Washington: Government Printing Office, 1971), 29.

Gold Mining in the Great Depression

The price of gold began to improve with the onset of the Great Depression, and it spiked for a short period when President Franklin D. Roosevelt took the United States currency off the gold standard in 1933. As the price of gold rose, it led to renewed interest in gold mining in Shasta County from all quarters. Spurred by hard times and lack of other work, some people took up mining by hand in the old placer diggings. Others conducted hard rock “pocket mining” in the hope of finding small but rich, undisturbed lodes. Still others set to work on mining low-grade ore deposits or old tailings on an industrial scale where the improved value of gold appeared to make the investment worthwhile. Sometimes the reworking of abandoned mines or placer diggings was accomplished with new mining or milling techniques.

An indistinct amount of placer mining by hand was resumed in the old placer diggings around Whiskeytown and Shasta. Toogood stated that numerous families migrated to California’s historic gold fields to try their luck at panning or to find work in one of the small sluicing operations. According to at least two local newspaper stories, a tent camp called “Hooverville” appeared at the edge of Whiskeytown in the summer of 1932. One article stated that at least one hundred gold panners were scattered along Clear Creek between Oak Bottom and Four Mile House (just below Whiskeytown) and up Whiskey Creek. The inexperienced gold panners worked for wages, some making just \$.50 per day. The newspaper writer profiled one carload of men, women, and children who had just arrived from Michigan. None knew anything about gold panning but were willing to give it a try as they were all “broke and spurred on by necessity.”⁷⁴

Chester Vergnes owned land around Oak Bottom. In 1933, Vergnes informed state mineralogist Charles Averill that four different placer operations were in progress on his property, each one worked by different parties using different mining techniques—presumably all throwbacks to an earlier time. Altogether Averill counted eleven active placer mines in 1933 in the vicinity of Whiskeytown. One operator, the Clear Creek Placer Company, purchased eighty acres on Clear Creek below the present dam site. This company conducted placer mining with the help of a gasoline-powered shovel and mechanical washer.⁷⁵

In 1929, the Mountain Copper Company began mining the gossan deposit that overlay the Iron Mountain Mine. The chief mineral value of the gossan was gold, which assayed at a mere \$1.85 per ton. Workers recovered this small quantity of gold through the cyanidation process. A cyanide plant was erected with a capacity to treat 250 tons of ore daily. After two years of operation the capacity raised to 600 tons per day. Mining of the gossan was mostly done by the open-pit or quarrying method using jackhammers to break

⁷⁴ “Novice Snipers Line Streams in Shasta County,” *Blue Lake Advocate* (Blue Lake, CA), August 13, 1932.

⁷⁵ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 62, 72.

up the gossan ore deposit and steam shovels and large dump trucks to move the ore to the cyanide plant. As the quarry grew, the steam shovels and dump trucks maneuvered on step ledges that spiraled or switch-backed into the giant quarry pit. Some underground tunneling in the gossan was performed as well. The mining of the gossan deposit continued until 1942.⁷⁶

While open-pit mining at the old Iron Mountain Mine took place just outside the present area of the park, there was not much hard-rock mining activity within the park area in the 1930s. Minor activity occurred at the old Oro Fino Mine, located near the derelict Mount Shasta Mine. A new shaft was dug, some buildings were erected, and several wagon loads of ore were taken to the Mountain Copper Company for milling. The mine owner, Edna Behrens Eaton of Redding, stated that the shipments showed gold values ranging from \$4.40 to \$70.40 per ton. Most of the shipments ran \$20 to \$30 per ton.⁷⁷

Toogood described just one new mine in the area in the 1930s, that of the Merry Mountain Diggers. This mine was located less than a mile east of Tower House near the Redding-Weaverville highway. The Merry Mountain Diggers Corporation had a plan to mine surface material on the mountainside “on a large scale, with power shovels,” and to recover the gold by amalgamation and gravity concentration on Wifley tables. The company proceeded with its plan as far as removing a considerable amount of topsoil, and as much as 20,000 tons of low-grade ore was tested. The project was soon abandoned, yet the work that was performed in the 1930s is still visible to anyone who visits the mine site.⁷⁸

Latter-Day Hydraulic Mining and Dredge Mining

While latter-day hydraulic mining and dredge mining are actually forms of placer mining, not lode mining, in terms of the chronology of mining in Shasta County they appeared alongside lode mining.

Hydraulic mining, outlawed in 1884 because it was so destructive to farmlands situated downstream from the mining operation, made a modest comeback under the Caminetti Act of 1893, which allowed a resumption of hydraulic mining if the company made adequate arrangements to contain the debris. In practical terms, mining companies found that installing environmental safeguards to comply with the law was prohibitively expensive in most settings, so the law saw limited use. However, one hydraulic mining

⁷⁶ Kett, “Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California,” 133–37; Lydon and O’Brien, *Mines and Mineral Resources of Shasta County, California*, 44–45.

⁷⁷ Averill, “Gold Deposits of the Redding and Weaverville Quadrangles,” 42; Humusek-McGann, et al., “Evaluation of 18 Historic Mines in the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California,” pp. 6.38 to 6.43.

⁷⁸ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 64–65.

operation took shape on Clear Creek in what is now the park in the late 1890s. The Princess Hydraulic Mining Company acquired property on the east side of Clear Creek in the southeastern sections of the park. In 1898, the company's hydraulic mine had a tunnel 700 feet long and the company was seeking water rights and ditches on "Broad Creek" (possibly Paige Boulder Creek). The park's chief of interpretive services discovered the remains of a ditch on Paige Boulder Creek in 1975. The ditch extended for two miles from a headgate on Paige Boulder Creek to a boulder and concrete abutment located at a considerable height above Clear Creek about one mile below the site of the later environment education camp. The water was carried over Clear Creek in a steel inverted siphon to another boulder and concrete abutment on the other side. From there the ditch continued southward and out of the park. The elevation would have provided the necessary head for hydraulic works. It is not known how long the hydraulic mining operation lasted, but a mention of a single unidentified hydraulic mine in Shasta County in the U.S. Geological Survey report for 1905 may refer to the Princess Hydraulic Mining Company's property on Clear Creek, which would indicate that the mine operated for a number of years.⁷⁹

In a report in 1922, Charles Scott Haley of the California State Mining Bureau tried to encourage a revival of hydraulic mining in select places, particularly in northern California. One such place was French Gulch in western Shasta County. "Just below French Gulch, and including the town of French Gulch, considerable ground on Clear Creek might be worked by hydraulic mining," Haley stated. Haley thought there was room in the valley for the debris so that it would not cause serious problems downstream. "An ideal dumping ground is one like that of the LaGrange, in northern California," he wrote. (The La Grange Mine is in Trinity County.)

The tailing is dumped into a narrow valley about four miles long, which is the property of the company and drains directly into the Trinity River. This river and the Klamath were not included in the prohibition of the debris law. They are not navigable streams, and the damage done by hydraulic mining to the farming interests is practically negligible.⁸⁰

No written record of a hydraulic mining operation in French Gulch in the 1920s or 1930s has been found. But evidence of the operation is clearly visible on the landscape still.

Steam-powered dredges came into use in placer mining in the late nineteenth century after gold placers in the United States were mostly exhausted. Dredges were employed in Alaska where frozen ground was an impediment to hand-digging operations, and they saw use in tropical countries where logs buried in deep gravel formed another

⁷⁹ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 71; Chief, Interpretive Activities to Files, no date, File Crystal Creek Water Ditch, WNRA, CRM Files; U.S. Geological Survey, *Mineral Resources of the United States, 1905* (Washington: Government Printing Office, 1906), 182.

⁸⁰ Haley, "Gold Placers of California," 39, 100.

hindrance to hand work.⁸¹ When the Great Depression spurred a renewal of placer mining in many old diggings left from an earlier mining era, use of dredges took off in California and other Western states where there had been limited call for the technology before.

The first dredge in Shasta County appeared in 1895. Lydon and O'Brien described this primitive dredge:

It consisted of a scoop attached to the end of a shaft about three inches in diameter and twenty-five feet long, mounted between two sections of a boat.

The scoop was lowered into the gravel and pulled up with chains operated by a steam winch, and the gravel was washed in sluice boxes.

Other early dredges employed suction pumps and hydraulic elevators to raise the gravel. By the 1920s, dredges were in use that could work gravel deposits that were seventy to one-hundred feet in depth using a steam shovel or dragline scraper. The most common type of dredge was the bucket-line dredge that ran ore buckets on a revolving chain. These big machines literally turned riverbeds upside down. Lydon and O'Brien stated that the first bucket-line dredge in Shasta County went into operation on Clear Creek near Horsetown in 1906, while the last use of one in the county was in 1951.⁸²

The area that is now within the park saw its first dredge mining in 1937. M. D. Baker mined the gravel in Clear Creek in the southeastern section of the park for a short time using a "power shovel" and a "dry land dredge" to wash the gravel. Another dredge operation appeared on Boulder Creek in the early 1940s. The B. H. K. Mining Company operated a drag-line dredge and processed 174,040 cubic yards of gravel, recovering 1,099 ounces of gold and 152 ounces of silver. The metals were recovered by sluicing in two sluice boxes, one twelve feet long and the other twenty feet long, using mercury. The last dredging operation within the park area took place in 1947. A. R. Potts used a low-powered suction dredge to work a placer deposit on Clear Creek near Oak Bottom. The property belonged to J. J. Hammer of Schilling (Whiskeytown).⁸³ Not far from the park, there were three dredges operating in French Gulch in 1946 and the creek bed still bears the evidence.⁸⁴

Latter-Day Gold Lode Mining

Lode mining continued on a small scale right up to the time when Whiskeytown Dam was built and Whiskeytown National Recreation Area was established. Toogood scoured the published reports of the California Division of Mines as well as the mining books in the

⁸¹ Haley, "Gold Placers of California," 29–31.

⁸² Haley, "Gold Placers of California," 28; Lydon and O'Brien, *Mines and Mineral Resources of Shasta County, California*, 56.

⁸³ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 73–74.

⁸⁴ U.S. Bureau of Mines, *Minerals Yearbook 1946* (Washington: Government Printing Office, 1947), 1364.

county recorder's office to inventory the mining operations that were located within the park area. She stated there were no fewer than twenty-seven claims recorded between 1948 and 1955 in Section 28 and twenty-six claims recorded between 1941 and 1955 in Section 34, Township 32 North, Range 6 West. Most of these claims were prospects. In the opinion of mining engineer John P. Albers, the Whiskeytown District had a "low future potential for gold as compared to the French Gulch-Deadwood district." In the latter district, mining activity by that time was "small-scale...[and] intermittent."⁸⁵

Toogood found just two mining operations in the post-World War II period that were noteworthy. They were the Sunshine Mine and the El Dorado Mine. The Sunshine Mine was located about one mile east of Schilling (Whiskeytown) and just north of the old Redding-Weaverville highway alignment prior to the reservoir, so the mine site is now partially beneath the reservoir. In 1947, the Sunshine Gold Mining Company owned 530 acres of patented land including the Sunshine Mine and other quartz prospects. The company developed the mine with a sixty-foot adit and a concrete dam to form a small reservoir for a water supply to the shallow quartz vein, which the company planned to mine with open cuts using a drag-scraper pulled by a double-drum hoist driven by a Chevrolet automobile engine. The ore was to be dumped into a raise from the adit, drawn into the mine from a chute, and trammed to the mill. Apparently, the mine went into operation soon thereafter and operated for just a year or two. The company stockpiled the ore while waiting for electric power to be connected to its treatment plant. The company's treatment plant consisted of a ball mill, classifier, jig, amalgamator, and flotation cells. It is not known if the mill ever operated. The property appears to have been idle for several years before 1957, by which time it had passed to new owners in Texas.⁸⁶

The El Dorado Mine was the last remaining active mining operation in the area when Whiskeytown National Recreation Area was established. In 1957, Frank C. Bickford and wife Laura purchased the property for their place of residence and Bickford worked in the mine. The El Dorado Mine had a long history, from its discovery in 1885 when Charles Camden still owned the nearby Camden and Tower House properties, through the period of steady production in the early twentieth century when a two-stamp mill was in operation, on through the interwar period when the mine continued to be worked under lease. Bickford himself leased the mine from 1931 to 1936. Over the years, the El Dorado Mine was characteristic of some of the phases of lode mining in the Whiskeytown District. In the early period it was a fully developed "small producer" with its own mill and living quarters.

⁸⁵ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 67.

⁸⁶ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 65–67.

In the interwar period it exemplified the “pocket mining” that sustained the residual population in the old mining district. In its last stage when Bickford returned to the property later in life, the long-lived mine could be described as a hobby mine.⁸⁷

As with many mining districts, the Whiskeytown District cycled through multiple phases of boom and bust and continued to hold a few miners’ interest long after the great majority of miners moved on. The place enthralled some while it disappointed others. Finally, the clanging stamp mills all fell silent. Of all the extractive industries that have come and gone in the Whiskeytown area, mining was the most patently extractive. At enormous human effort—and later with the aid of water-, electric- and gas-powered machines—impressive quantities of gold were extracted, monetized, and sent all over the world to places unknown. In the process of securing the gold, vastly greater volumes of waste rock and tailings were dumped in creeks and left in piles on the ground, while hundreds of mine adits and thousands of prospect holes were left as evidence of more than a century of back-breaking toil.

⁸⁷ Brown, *Mines and Minerals of Shasta County, Siskiyou County, Trinity County*, 41; Smith, “Remnants of El Dorado Mine Still Exist in Whiskeytown.” See also National Park Service, “Cultural Landscape Inventory, El Dorado Mine, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, California,” 2016, WNRA, Cultural Resource Division e-Files, and the site ownership history prepared by Dynamic Corporation (undated) in File El Dorado Mine, WNRA, CRM Files. Frank Bickford was interviewed by Rob Alward, NPS naturalist, on August 10, 1969.

CHAPTER FIVE

Lumbering and Forestry

Original Forest Conditions

The original forest in and around Shasta County was adapted to California's general Mediterranean climate of cool, moist winters and hot, dry summers. This type of climate occurs in only a few parts of the world: around the Mediterranean Sea, and in parts of South Africa, Chile, Australia, and New Zealand. In a Mediterranean climate, forests must be able to survive an annual drought period lasting about half of the year during which there is little or no rainfall and fairly frequent fires brought on by drought conditions. In Aboriginal California, some fires resulted from lightning while others originated from intentional burning by Native peoples who used fire to manage their forest environment. By setting frequent low-intensity fires in the forest understory, Native peoples including the Wintu stimulated new plant growth for food and basketry, created mosaics of habitat for the support of desired wildlife species, and cleared the understory for easier travel and prevention of enemy ambush. Native peoples also shaped the vegetation by sowing seeds, transplanting shrubs and small trees, pruning plants, and irrigating some areas with water diversion works.¹

As the California Gold Rush displaced and decimated the Native population, Native peoples were hindered from carrying out their customary stewardship of the forest. When Indigenous forest management diminished, the forest began to change; openings in the forest filled in, and plant diversity declined. California's European American newcomers scarcely appreciated those forest changes while they were happening, but with the perspective of modern forest ecology and ethnobotany, it is now recognized that California Indians generally managed the forests successfully and that native plant species and habitat types have since declined.²

¹ Laura Litman and Gary Nakamura, "Forest History," *Forest Stewardship Series 4*, Publication 8234 (University of California, Division of Agriculture and Natural Resources, 2007), 1–2. See also M. Kat Anderson, *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources* (Berkeley: University of California Press, 2005).

² Litman and Nakamura, "Forest History," 2.

The NPS has mapped historical forest conditions in the Whiskeytown area using historical data found in General Land Office surveyors' notes. Surveys of the more low-lying areas were performed in the 1860s, while surveys of the upper elevations were conducted in the early 1880s. Surveyors' notes contain valuable observations on the types of trees that were present and the character of forest cover. It seems that the mid-nineteenth century forest in the bottom of the Clear Creek drainage from Oak Bottom down to the present dam site was a mix of oak and pine. Below the dam site, the vegetation turned to scattered pine and oak with a shrub understory. The same transition occurred around Tower House. The higher elevations south of Clear Creek supported a forest of mixed conifer with an understory of montane chaparral, while the mid elevations contained pockets of large hardwoods. The slopes to the north of Clear Creek were mostly covered by shrub vegetation, with pine and oak forest growing on northern exposures.³

Lumbering in the Gold Rush Era

The sudden influx of miners to the area created an instant demand for construction material for wooden buildings, sluice boxes, and flumes. At first, miners did their own cutting and roughly hewed the sawlogs into planks and boards. Soon, small sawmills began to provide lumber for the mining camps. Jonathan Otis launched the first sawmill in Shasta in 1850. His sawmill operation consisted simply of a sawpit where two men cut logs into boards with a straight crosscut saw. By the next year, there were three sawmills in Shasta and one in Whiskeytown. A ten-foot saw cost \$75 and two men working the two-handled, long, flexible whipsaw could produce 100 to 125 feet of boards in a day. Demand for sawn lumber was so great that the sawmills could charge dearly—perhaps \$1 per board foot. The St. Charles Hotel and the Trinity House were built with lumber from one of the new sawmills in Shasta.⁴

The next step in sawmilling was to connect the saw to an arrastra and run the saw by horsepower. A man working with a mule could produce up to 1,200 feet of lumber per day. Much better than an arrastra was to locate the sawmill by a stream and harness water power. A waterwheel was connected by a series of cogs to a large vertical saw, and the sawyers put the sawlog on a trolley and drove it against the constant up-and-down pass of the sawblade. By 1852, there was a smattering of water-powered sawmills across Shasta County, operating as often as the streams had water in them. Timbermen sawed down trees and hauled the sawlogs to the mill using teams of oxen, and at the other end of the process

³ National Park Service, "Historic Vegetation of Whiskeytown: An Analysis of General Land Office Survey Data 1866–1882," WNRA, Cultural Resource Division e-Files.

⁴ Beulah Johnson, *Chips and Sawdust: A History of Sawmills, the Equipment They Used and the Towns That Built around Them* (Redding, CA: Shasta Historical Society, 1978), 1, 70–71.

the sawn lumber was loaded onto wagons and hauled by ox team to the mining camps. The herculean efforts involved in transporting the heavy loads over rough roads meant that lumber costs remained high, perhaps \$200 per thousand board feet.⁵

Charles Camden built his own water-powered sawmill on Mill Creek because he could not afford the price of lumber in Shasta, which ran \$75 to \$100 per thousand board feet in the early 1850s according to his later recollection. Camden's sawmill supplied what he needed to build his flume and trestles for his water diversion project. He also made his own lumber to build his house and his own store in Shasta. Camden's sawmill operated for most of the year but not in summertime when the creek dried up. He sold lumber in the local market for \$50 per board foot.⁶

When the Clear Creek Ditch was built in the mid-1850s, huge quantities of lumber were needed to build its large flumes and trestles over Whiskey and Oro Fino creeks. The company built its own sawmill to assure the necessary wood supply and to control costs. The sawtimber was procured from the nearby forest. Historic photographs of the flume and trestle over Whiskey Creek show the large, plentiful trees in the area and the massive timber supports used in the trestle. In one of the photographs, a cutover section of forest is visible. One imagines that the timber consumed in building the Clear Creek Ditch created gaps in the forest beyond what had already occurred from the construction of wooden buildings in Shasta and Whiskeytown. But these activities hardly depleted the forest cover in the area—as the surveyors for the General Land Office would later attest in their survey notes.⁷

In 1867, N. C. Farrington had a water-powered sawmill on Brandy Creek with a mill dam located on Clear Creek. The following year, Farrington sold this mill and built the first steam-powered sawmill in Shasta County at Churntown in the Old Diggings mining district.⁸

Shingletown Ridge

Early lumbering in Shasta County aimed at supplying local demand, which was found mainly in the mining districts in the western part of the county. As the sawmill operations became more efficient and the timbermen more adept at tackling the transportation challenges, the center of lumbering moved eastward to the well-timbered hills east of the Sacramento River. The trees—mostly sugar and yellow pine—were large and relatively

⁵ Johnson, *Chips and Sawdust*, 1–2.

⁶ Camden, *Autobiography*, 52–53.

⁷ Carlos Alzueta, “Clear Creek Ditch Was the Name, Gold Was the Game,” *Covered Wagon* (1988): 63. Historic photos are on pp. 60 and 65.

⁸ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800's Volume 1,” extracts from the *Shasta Courier* newspaper, March 16, 1867, April 12, 1867, and September 26, 1868, in spiral binding, Shasta Lake Heritage and Historical Society, Shasta Lake, Calif.

accessible to mill sites. The place was about thirty miles east of Shasta on the other side of the Sacramento Valley. A logging camp appeared called Shingletown, and the plateau where the logging was centered became known as Shingletown Ridge. Besides providing lumber to the mining districts, the sawmills that popped up around Shingletown Ridge were significant because the logging there foreshadowed the rise of a second major extractive industry in Shasta County. Indeed, one hundred years later, northern California would rank just behind Oregon and Washington in the nation's production of soft lumber, and Shasta County would be at the center of the lumbering industry in northern California. The story is pertinent to Whiskeytown National Recreation Area because Shasta County's evolving timber industry would one day circle back to the Clear Creek drainage. At the height of lumbering in Shasta County in the 1950s and 1960s, much of the forest within Whiskeytown National Recreation Area would be heavily logged. Until then, the lumbering industry focused on other areas in Shasta County starting with Shingletown Ridge.

The Vilas-McCumber Mill, built in 1851, was the first sawmill operation located on Shingletown Ridge. The mill was water-powered and used a vertical straight saw that only cut on the upstroke. This poor design feature made it slow to operate, leading some to call the mill an "up today and down tomorrow mill," or a "muley." Nearly thirty years later this mill was remodeled and refitted with a circular saw.⁹

The Old Dry Mill, built in 1855, was the second mill located on Shingletown Ridge. It was powered by an enormous overshot waterwheel fifty feet in diameter and thirty inches wide at the rim. The axle on the waterwheel drove an iron cogwheel that was itself twenty feet in diameter. This big cogwheel engaged a smaller cogwheel six feet in diameter that turned a shaft inside the mill.¹⁰

One or two years later, Rudolph Klotz, a Prussian immigrant, bought the Old Dry Mill near Shingletown. After a few years of turning out lumber he expanded the operation to include a sash and door factory. At first, he sold his factory products to home builders in Shasta County. Later, with his brother Dan, Klotz began rafting some of his mill product down the Sacramento River to reach more distant markets. In another enterprising move, Klotz partnered with Sylvanus Leech to build the Eureka Mill on Battle Creek. Constructed in 1871, it was the second steam-powered mill in Shasta County. Sawlogs were transported to the mill from Shingletown Ridge on a horse-powered railroad, and lumber was carried from the mill most of the way to Red Bluff in Tehama County on an elaborate flume. Klotz became known as Shasta County's first timber baron.¹¹

⁹ Fred Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

¹⁰ Fred Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

¹¹ Fred Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society; Beth Shuford, "Logging in Shasta County," *The Covered Wagon* (1957), 35; "Rudolph Klotz, 1832–1885," <https://freepages.rootsweb.com/~shastaca/genealogy/bios/klotzrudolph.html>.

When hydraulic mining began in the mid to late 1860s, the construction of flumes and trestles for bringing water to the mines boosted demand for lumber. Some hydraulic mining companies built their own sawmills. One new sawmill appeared on lower Clear Creek in 1866 to serve the needs of hydraulic mining development around Igo and Ono. A second sawmill was built on lower Clear Creek in 1881 by J. W. Wright. The first steam-powered sawmill in the county, it was located about three miles up the creek. Meanwhile, seven more sawmills appeared around Shingletown Ridge between 1860 and 1872. With the new railroad completed to Redding in 1872, the mills were better able to sell their product outside of Shasta County.¹²

The growing efficiency and economy of scale in the lumbering industry was reflected in the price of lumber. Whereas Charles Camden could not afford the going price of \$75 to \$100 per thousand board feet in the early 1850s, the price of lumber from the county's mills dropped to around \$10 to \$12 per thousand by the early 1880s.¹³

Annual production by all the Shingletown mills doubled over the next quarter century, from one million shakes in 1880 to two million shakes in 1905. In the year 1899, the lumbering industry cut four million board feet of timber and produced 750,000 shakes and 10,000 posts. All of this product was carried either by flume to Red Bluff or by wagon to Anderson or Cottonwood. The wagon trip took anywhere from one to three days. A typical wagonload consisted of 8,000 board feet of yellow or sugar pine. The wagons were equipped with massive axles and wheels and were pulled by long teams of oxen. Some 300 teamsters were employed in the business of hauling lumber from the Shingletown mills to the valley.¹⁴

In 1901 and 1902, several Shingletown mills began using steam-powered traction engines instead of oxen to haul their heavy loads to the valley. The traction engines were mostly equipped with three wheels, one in front and two in back, and were capable of pulling six to ten wagons in a train. The traction engines used the same dirt roads as before; only a few bridges had to be reinforced to take the greater weight. Residents of the area complained that the new mode of transport raised great clouds of dust during the dry summer months, but that did not prevent the modernizing, labor-saving deployment of more traction engines. Around this time the Southern Pacific Railroad built a spur line from Anderson to Cottonwood, shortening the trip by a few miles.¹⁵

¹² Fred Heinzl, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society; Johnson, *Chips and Sawdust*, 2; Peggy Thompson, "Igo and Ono," typescript, May 15, 1972, from Small Towns vertical file, Shasta Historical Society.

¹³ Anonymous, "The Lumber Story," no date, typescript, from Lumber notebooks, Shasta Lake Heritage and Historical Society.

¹⁴ Heinzl, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

¹⁵ Heinzl, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

The Sierra Flume and Lumber Company became the first company to pursue consolidation of the industry. Having entered the scene in 1879 with a primary interest in the flume connecting the Shingletown mills to the Sacramento River near Red Bluff, it set about buying up the Shingleton mills and owned most or all of them by the end of the 1880s.

Big Bend

Perhaps in response to the threat of monopoly, sawmills started up in two other areas of Shasta County at Big Bend and Fall River. In 1892, the Sierra Flume and Lumber Company shut down all its mills. The company's timber holdings on Shingletown Ridge eventually passed into the Shasta Forest Reserve, proclaimed by President Theodore Roosevelt in 1905, now known as the Shasta-Trinity National Forest.¹⁶

The big copper mines started up just as the lumbering industry began to expand beyond Shingletown Ridge. In the late 1890s, the Mountain Copper Company acquired 2,680 acres of timber land in the Big Bend section of the county where the Pit River makes a large bend. The company needed to secure a supply of cordwood for fuel for its steam boilers, railroad engines, and roasting ovens. The company turned to cutting down trees in the spring and summer and floating the logs down the river sixty-five miles to a landing near Keswick. The log drive took most of a month and had to be completed before the fall rains set in. They repeated this operation each year until 1901, when the company converted from wood fuel to oil.¹⁷

Other timber operations began in the Big Bend area around the same time. Similarly to Shingletown, one lumber company gained dominance through its construction of a long flume for floating its wood products to market. The Terry Company's flume carried sawn lumber from its mill to Bella Vista, from which point the lumber was floated down Cow Creek to the Sacramento River. The Terry Company acquired considerable timber land and built the flume in 1897. The flume perched on a trestle over one-hundred feet off the ground in many places and ran for a distance of thirty-two miles. It required a force of repairmen and a team of "flume jacks" to coax the lumber down the flume at five troublesome points where the grade slackened. The flume jacks were permanently stationed at the five "slack grades." They lived in shacks built on stilts beside the flume. The flume remained in operation until 1922.¹⁸

¹⁶ Heinzl, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

¹⁷ Kett, "Fifty Years of Operation by the Mountain Copper Company, Ltd., in Shasta County, California," 117–18.

¹⁸ Ethel Saxon Ward, "Pioneering in Lumber Transportation," *The Covered Wagon* (1964), 32–36; Silas Lyons, ed., *Shasta County Memories: A Photographic History, 1800s–1930s* (Redding, CA: Record Searchlight, 2009), 47.

La Moine

Around the turn of the century the lumbering industry spread out across Shasta County. The developments at La Moine are most significant in the lumbering industry's next growth period. La Moine was not the commanding center of the industry the way Shingletown Ridge once was, but in the years 1900 to 1922 it became "the scene of one of three largest lumber operations in all of Shasta County."¹⁹ More to the point, the family dynasty at the center of the lumbering business at La Moine would eventually relocate to the Whiskeytown area.

The lumbering industry tended to be both dynastic and migratory, a peculiar trait. So-called timber barons often founded or followed in a family line of timber men, and the families often migrated with the industry as it moved from region to region. So it was with the Coggins family of Maine. Three brothers, Lowell, Samuel, and Clifford Coggins, moved from Maine to California in the 1870s and took up operation of a planing mill in Chico. As the railroad extended its line from Redding northward, the Coggins brothers established a sawmill at Igerna in Siskiyou County. The family business at Igerna grew to encompass a box factory and a planing mill in addition to the sawmill.²⁰

While pursuing their interests at Igerna, the brothers started acquiring timber land elsewhere in northern California. Their timber holdings centered on an area west of Slate Creek in Shasta County. The brothers named the place La Moine after their hometown in Maine. The town of La Moine, California, was founded where Slate Creek joins the Sacramento River, and it grew into a sizeable company town. The brothers lived with their families in La Moine even as they continued to oversee the operations in Igerna.²¹

A fourth Coggins brother, Charles, joined the others and together they formed the LaMoine Lumber and Trading Company. In 1900, the company was incorporated with a capital stock of \$300,000 in \$10 shares. Clifford Coggins led construction of a box factory at La Moine, with sawtimber coming from the surrounding hills. Soon the La Moine plant included a sawmill at higher elevation in the Slate Creek drainage and a three and a half mile flume connecting the mill and the factory.²²

In 1903, the Coggins brothers embarked on another expansion of their enterprise beyond the existing operations at La Moine and Igerna. It would consist of large sawmill on Tom Neal Creek. The site had to be prepared by construction of a wagon road to the mill

¹⁹ William N. Roy and David W. Braun, "La Moine Lumber and Trading Company: Narrow Gauge Logging on the Shasta-Trinity Divide," *Columbia River and Pacific Northwest Timberbeast*, Special Issue 28–29 (2013): 6.

²⁰ Pete Schweigert, "Arthur Coggins: Energy is Watchword," *Record Searchlight* (Redding, CA), August 26, 1978.

²¹ Roy and Braun, "La Moine Lumber and Trading Company," 7; Arthur Lowell Coggins, "Looking Back," *The Covered Wagon* (1978), 6–7.

²² Roy and Braun, "La Moine Lumber and Trading Company," 8.

site, followed by construction of a narrow-gauge railroad from the mill site two miles into the prime timber land. The venture proved too costly and the company ran out of money. The brothers had to relinquish majority control of the company stock and eventually they were pushed out of the business by the new owners. Yet the La Moine Lumber and Trading Company kept its name and stayed the course with the new development at Tom Neal Creek, which became the focus of operations from 1904 to 1912. This plant eventually came to include a second mill at higher elevation. The narrow gauge railroad was extended for several miles along the Shasta-Trinity county divide.²³

The lumbering industry in Shasta County ebbed after 1912. People in the industry attributed the decline to a shortage of available timber. Most of the timber land in Shasta County still in the public domain was put into national forests by the Theodore Roosevelt administration. The U.S. Forest Service was not anxious to arrange timber sales. The Red River Lumber Company bought most of the privately held timber lands in the Big Bend and Fall River areas. This company had plans to haul logs to its mill in Westwood in Lassen County, but the high costs of hauling logs over the pass in the Cascade Range caused the company to reconsider. As the company would not sell the land or the timber, numerous sawmills in Shasta County were put out of business.²⁴

Arthur Coggins

Arthur Coggins, son of the oldest Coggins brother Lowell, was born September 29, 1888 in Chico. It was soon after he was born that his father's clan made its move to Igerna in Siskiyou County. Arthur attended a one-room grammar school in Igerna and graduated at age fourteen in 1903. He then went to the Mt. Tamalpais Military Academy in San Rafael for high school. While at the academy he was assigned to guard duty in the aftermath of the great San Francisco earthquake of 1906. After graduating from the academy, Coggins attended the University of California at Berkeley for one year and then transferred to Yale University in Connecticut to pursue a degree in forestry. In 1911, Coggins returned to La Moine, California, with his Ivy League diploma in hand intent on working his way up in the family business. But by then his father and three uncles had lost control of the business so the prospects were not what the young scion of the family had anticipated. Arthur Coggins had to accept a job as a clerk working for one of the new company managers.²⁵

²³ Roy and Braun, "La Moine Lumber and Trading Company," 10–11, 24–27.

²⁴ Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society; Anonymous, "The Lumber Story," no date, typescript, from Lumber notebooks, Shasta Lake Heritage and Historical Society.

²⁵ Garth Sanders, "Lumber 'Legend' Dies," no source or date, WNRA, Cultural Resource Division e-Files; Schweigert, "Arthur Coggins: Energy is watchword."

In 1912, Arthur Coggins married his college sweetheart, May Macullar of Boston, and the newlywed couple rented a company house in La Moine for \$5 per month. The lumber town was a world apart from where May came from, but she adapted. The famous writer Jack London and his wife stayed at the La Moine Hotel during the Londons' extended trip to northern California, the writer no doubt being drawn there by the rough character of the place. More memorable for May was the night her husband thought he heard an intruder, grabbed his Winchester, opened the front door, and took two shots in the dark to scare the intruder away. In the morning, Arthur and May discovered that he had accidentally killed a hog in front of the house. Not only that, but the hog's owner, an Italian by the name of Les Ferrari, swore he was going to kill whoever had killed his hog. Arthur stepped forward and said, "I killed your hog, Les." The Italian replied, "That's all right, Mr. Coggins; I make salami out of him anyway."²⁶

Soon Arthur Coggins gave up his job in La Moine and joined two investors in starting a new lumbering venture in Placerville. In spite of their best efforts, the business bumped along for three years and entered a death spiral. Coggins later recounted that he and May "walked out with the clothes on our backs. We left everything we had."²⁷

Next, the couple leased a chromium mine in Dunsmuir near the Shasta-Siskiyou county line. They entered a contract to mine 1,000 tons of ore for \$10 per ton. World War I had begun by this time and the armaments industry needed chrome as an alloy in producing steel. Coggins saw an opportunity. Husband and wife both worked in the mine with their own hands; they also hired workers and paid them twenty-five cents an hour, which Coggins claimed was seven cents an hour more than the railroad paid shopmen in Dunsmuir. Riding the wartime surge in the price of chrome, the couple did well with their mining venture and were able to put away a nest egg. They returned to La Moine where Coggins took a job as a mill manager, and in a few years, when the time was right, they bought a lumber mill in Ashland, Oregon. There, Coggins set on a path to rebuild the family legacy in the lumbering industry. His new firm was the California-Oregon Box and Lumber Company. All through the Great Depression, he managed to grow the company in spite of economic adversities. His company operations came to include a planing mill, a box mill, and several sawmills in the woods.²⁸ In 1938, he was honored to join a handful of other successful businessmen in a conference with Commerce Secretary Daniel C. Roper on "Little Business."²⁹

²⁶ Arthur Lowell Coggins, "Looking Back," 6-7.

²⁷ Schweigert, "Arthur Coggins: Energy is watchword."

²⁸ Schweigert, "Arthur Coggins: Energy is watchword."

²⁹ "Roper Invites 18 to Business Meet," *Berkeley Daily Gazette*, January 28, 1938.

Coggins's business floundered with the coming of World War II. The war brought on a labor shortage that crippled his operations. Selling the business "for a song" as he put it, he and May moved back to northern California, purchasing a home on Clear Creek in what would become Whiskeytown National Recreation Area.

Arthur Coggins was now in his mid-fifties. He was a well-seasoned businessman, having seen his business endeavors rise and fall through several boom-and-bust cycles. He was learned and opinionated. While a resident of Oregon he considered making a run for political office, but ultimately demurred. He had an abiding interest in renewable resources. Once he tried farming alfalfa on a square-mile section of desert land in Nevada, tapping what he described as an "underground river" for irrigation water. The project did not work out as planned, but that disappointment did not dim his enthusiasm for renewables and innovation.

He made his new home beside Clear Creek, beginning a new chapter in his life. The place was to remain his home for the next thirty years. His legacy for the landscape of Whiskeytown National Recreation Area would be decidedly mixed. By this stage of his life, he thought of himself a dedicated conservationist, holding strong views on what made good forestry practice. Yet some of the devastating logging roads that came to lace Shasta Bally in the coming years were of his making. Before we get to Coggins' logging operations on Shasta Bally, however, we will follow the lumber industry in Shasta County to its new roosting place after World War II in the town of Anderson.³⁰

Anderson

Demand for lumber products rose in World War II as the army needed great quantities of lumber for construction of army camps buildings. When the war concluded, the demand for wood products only increased as returning servicemen drove a surge in new home construction. Local historian A. M. Rocca states that high demand for wood products drew timber interests to Shasta County from far and wide. "The reason was simple," he writes. "Shasta County stood squarely 'where the valley meets the mountains,' a prime location for the establishment of sawmills and other wood processing plants." There was available land in the valley for situating large plants and accommodating a growing population, and there was abundant timber in the mountains. There were stands of second growth pine on Shingletown Ridge and Big Flat where the forest had returned since the first time it was logged. And there was much more timber available in the national forests in areas that had never been logged before.³¹

³⁰ Sanders, "Lumber 'legend' dies;" Schweigert, "Arthur Coggins: Energy is watchword."

³¹ A. M. Rocca, *Where the Valley Meets the Mountains* (Carlsbad, CA: Heritage Media, 2001), 81; Johnson, *Chips and Sawdust*, 62.

In 1945, the Deschutes Lumber Company of Mowich, Oregon, became the first lumber company to build a large new plant in Anderson. In the next four years, seven more mills appeared in the area. Anderson became the new manufacturing center for a resurgence of the lumbering industry in Shasta County. Fifteen years later, the plants in the county would employ 2,300 workers and show a combined annual payroll of approximately \$12,120,000. Lumbering would form the largest sector of the economy in Shasta County until the 1980s.³²

The Deschutes Lumber Company acquired 110 acres on the edge of Anderson for its plant, and acquired 20,000 acres of timber land to supply the mill. Over the next year and a half, the company harvested 25 million feet of timber to put through the mill. It added another 4,000 acres of timber land to its holdings. In October 1947, Deschutes sold out to Ralph L. Smith Company of Kansas City. The new owner doubled the size of the plant, adding a second band mill, a planing mill, two stream turbines, dry kilns, and storage shed, as well as a two-story office building. In 1950, the Ralph L. Smith Company had 450 employees on its payroll in Shasta County.³³

The Red River Lumber Company was an old company out of Minnesota and a dominant force in the lumber industry in northern California since the early twentieth century. With its main plant in Westwood, it still held more timber lands than any other company in Shasta County. In the period after World War II, the old family-owned business began to break up. The Shasta Forest Company was formed to act as a holding company for the various breakaway companies, but it could not prevent the old company's dissolution. Near the end of 1947, company management decided to sell off the Red River Lumber Company's timber holdings, spurring further growth of the lumber industry in the county. The Ralph A. Smith company bought nearly three fifths of the timber land for sale, making it the most influential lumber company in the county at that time.³⁴

In 1948, a New York-based company called U.S. Plywood Corporation entered Shasta County with a new plant north of Redding. The plant cost \$2 million, and when it opened it was the largest plywood plant in the nation. The company introduced a new product, particleboard, made from compressed wood chips and sawdust, which it called Novoply. Production of Novoply started in 1950. The plant employed 125 people. In the

³² Holly Detherow, "Logging in the North State Family and Regional History," *The Covered Wagon* (2012), 112; John D. Lawson, *Redding and Shasta County: Gateway to the Cascades* (Northridge, CA: Windsor Publications, 1986), 89; Anonymous, "The Lumber Story," no date, typescript, from Lumber notebooks, Shasta Lake Heritage and Historical Society.

³³ Anonymous, "The Lumber Story," no date, typescript, from Lumber notebooks, Shasta Lake Heritage and Historical Society; Johnson, *Chips and Sawdust*, 63.

³⁴ Fred Heinzl, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

following years, U.S. Plywood expanded its operations in Shasta County to include four other sawmills. It then employed 850 people and produced 10 million board feet of lumber per year.³⁵

By 1950, other new lumber companies in Shasta County included Gossett Brothers, with a planing mill in Cottonwood; Del Loma Lumber Company, with a mill north of Anderson; and the Paul Bunyan Company, an offshoot of the Red River Lumber Company, with a mill at Panorama Point. In the mid-1950s, more lumber companies appeared on the scene: Redding Pine Mills with a major plant south of Anderson, Anderson Moulding Company with a factory in town, and the Lorenz Lumber Company with a large operation in Fall River.³⁶

Shasta County became the center of lumbering in California as the state emerged as the nation's third largest producer of softwood lumber products behind Oregon and Washington. Timber harvest volumes in California rose from about 2 billion board feet in 1940 to 6 billion board feet in 1960. Private lands supplied about 75 percent of the harvest volume, while federal and state lands supplied the rest.³⁷

According to Shasta County lumber broker Bob Middleton, interviewed during his retirement in 1972, there were fifty-eight plants and mills within a fifty-mile radius of Redding when the Red River Lumber Company put its timber lands up for sale in 1947. Most of these mills were considerably smaller. They included a number of "rough green" mills that cut timber and sold it to other finishing mills before it was even dried.³⁸

Besides its sheer growth, the lumber industry changed fundamentally in many other respects in the postwar era. Jobs in the mills and in the woods became much more automated. As one veteran of the lumber industry noted, "Push-button automation...freed workers for mental tasks, but many also lost their jobs." Railroad logging disappeared and truck logging took its place. Truck logging gave access to higher, steeper forested areas that had never been logged before. Logging practices changed to take account of conservation goals. The Forest Service became a significant partner for the industry, making federal timber available under carefully regulated timber sales.³⁹

³⁵ Fred Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society; Lawson, *Redding and Shasta County*, 90.

³⁶ Fred Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

³⁷ Todd A. Morgan, Charles E. Keegan III, Thale Dillon, Alfred L. Chase, Jeremy S. Fried, and Marc N. Weber, "California's Forest Products Industry: A Descriptive Analysis," General Technical Report PNW-GTR-615 of the Pacific Northwest Research Station (Corvallis, OR: USDA Forest Service, 2004), 2; Litman and Nakamura, "Forest History," 4. See also Edward Peterson, "The Story of Anderson," *The Covered Wagon* (1962): 11–21.

³⁸ Fred Heinzel, "Lumbering in Shasta County," no date, typescript, from Lumbering vertical file, Shasta Historical Society.

³⁹ Lawson, *Redding and Shasta County*, 92.

Shasta Bally

Arthur Coggins operated at the periphery of the amped-up postwar lumber industry. He did not have much contact with the big, modern, industrial plants that sprang up around Anderson, nor did he become a player in the board meetings of the bigger companies. What is known about Coggins's logging operations is mostly drawn from two newspaper articles about him, which were written from interviews with him in old age, and two histories that include brief descriptions of his mills.⁴⁰ The general outline that emerges from these sources is that Coggins acquired around 15,000 acres of timber land overlapping the park area and logged it from the late 1940s to the 1960s. But there is uncertainty around the specific details relating to Coggins's sawmills, and the progression of timber cuts over the landscape is entirely undocumented. The only thing known with certainty is that Shasta Bally and other mountainous lands were brought into Whiskeytown National Recreation Area in the 1960s and early 1970s as logged-off lands, and Coggins was a lumberman who logged some of the area.

Coggins had two small sawmill companies and a landholding company while he lived on Clear Creek. The two sawmill companies were likely held consecutively, each one involving its own sawmill. According to local historian Dottie Smith who got her data from informants in the mid-1990s, the first enterprise was named the Clear Creek Lumber Company and Coggins built the sawmill in 1946, owned it for about two years, and then sold it to Frank Crawford. This sawmill was located south of the junction of Highway 299 and Trinity Mountain Road to French Gulch. Coggins's second lumber company was the Shasta-Trinity Lumber Company. Smith stated that the second mill, built in approximately 1949, was smaller than the first—employing just six workers—and stayed in operation until about 1960. She described this mill as capable of sawing thirty-two-foot-long timbers and lumber, “a premium marketable length,” with the work done by special order.⁴¹

As late as 1966, Coggins was still logging within the authorized area for Whiskeytown National Recreation Area. In April of that year he applied to the Shasta County Board of Supervisors for a use permit for logging and road construction. The NPS asked the Board of Supervisors to deny the permit because it would cause erosion

⁴⁰ We attempted to find a record of his logging operations in lumber company records or industry periodicals but found almost nothing.

⁴¹ Dottie Smith, “Historic Data Inventory of the Shasta County Interlakes Special Recreation Management Area,” report prepared for the Bureau of Land Management and the Forest Service, 1995, copy at Bureau of Land Management office, Redding, CA.

problems downstream. Coggins countered that he always abided by the State Forest Practice Act of the State of California and the NPS did not yet own the land at issue. The Board of Supervisors granted the permit.⁴²

In a profile of Arthur Coggins written for the *Record Searchlight* from an interview in 1978, writer Pete Schweigert stated that Coggins started “three lumber corporations—the Northern California and Clear Creek Lumber companies, both in French Gulch, and the Shasta-Trinity Lumber Co. in Keswick.”⁴³ The Northern California Lumber Company was the landholding company. Coggins mentioned in his short article for *The Covered Wagon* that he had “sawmills at French Gulch and a planing mill in Keswick,” and the latter presumably belonged to the Shasta-Trinity Lumber Company.⁴⁴ The second newspaper article about Coggins, written at his passing, did not mention the sawmills in French Gulch but it did state that Coggins acquired 15,000 acres of holdings for his logging operations.⁴⁵

Beulah Johnson’s *Chips and Sawdust*, published by the Shasta Historical Society in 1978, does not mention Coggins’s logging operations in the Clear Creek drainage, but the end of her book features a partial list of “sawmills that operated in Shasta County in the past.” One listing, “Coggins, Art—1940—French Gulch & Keswick,” suggests that Coggins might have gotten started earlier than the year 1946. Yet the year 1940 seems too early as his business in Oregon only faltered due to labor shortages at the start of World War II. It is perhaps significant to this chronology that Lowell Coggins, the father of Arthur Coggins, died in 1941 and left an estate of \$120,000 (over \$2.5 million in today’s dollars) mostly for his son. The inheritance is probably what enabled Arthur Coggins to buy timber land and start a new lumber company in the Clear Creek drainage.⁴⁶

A second listing in Johnson’s book, “Clear Creek Lbr—1956—Clear Creek,” appears to corroborate Smith’s information, even though the year does not match up. And a third listing, “Crawford Lumber—Clear Creek” (no year) seems to corroborate Smith’s assertion that Coggins sold his first sawmill to Frank Crawford.

Perhaps the most reliable source on Coggins’s mill, because it is a contemporary source, is a brief article in the *Blue Lake Advocate* on April 20, 1946, which stated that Arthur Coggins was installing a 20,000-foot-per-day mill at French Gulch. This article also mentioned that Coggins owned large tracts of timber in Trinity County.⁴⁷

⁴² Shasta County Board of Supervisors, Book II, January 1966 to July 1967, p. 308, <https://www.shastacounty.gov/media/12131>.

⁴³ Schweigert, “Arthur Coggins: Energy is Watchword.”

⁴⁴ Coggins, “Looking Back,” 7.

⁴⁵ Garth Sanders, “Lumber ‘Legend’ Dies,” no source or date, WNRA, Cultural Resource Division e-Files.

⁴⁶ Johnson, *Chips and Sawdust*, 69; “3 Generations to Share in Estate,” *Oakland Tribune*, February 21, 1941.

⁴⁷ *Blue Lake Advocate* (Blue Lake, CA), April 20, 1946.

How much land in the park did Coggins own? How much did he log? According to a master deed list compiled by the National Park Service for Whiskeytown National Recreation Area, the federal government acquired 2,592.3 acres from Coggins's Northern California Lumber Company for the park. All but seven acres were acquired by purchase in fee, nearly all of that amount in 1972, while the remaining seven acres were acquired by condemnation in 1974. More park land was acquired from Coggins's lumber company than from any other single private landowner. But much or even most of Coggins's timber land was outside the park area. In Schweigert's profile of Coggins, the writer stated that Coggins "plucked up all the timberland he could afford on the Buckhorn Range, mostly running south from where Highway 299 intersects the Shasta-Trinity county line at Buckhorn Summit." It seems that Coggins' timber lands centered a little to the west of the park and extended into the western edge of the park.⁴⁸

Coggins described his logging operations to Schweigert in general terms, highlighting the conservation measures he took and insisting that the logged area that he left to the National Park Service represented an example of good forest management. Coggins informed Schweigert that he only logged every other section of land he owned. Coggins also stated to Schweigert, "I never cut a tree less than 22 inches in diameter at the stump. . . . I let the little ones grow." Coggins disagreed with the Forest Service's allowance of clearcutting on a thirty- to forty-year cutting cycle, saying the cycle was too short and "they should follow a 100-year cycle and take out trees as they mature."⁴⁹

Coggins also commented to Schweigert his disappointment that the National Park Service was allowing heavy brush growth to take over around the base of Shasta Bally. He said he favored manual brush-clearing methods over spraying with herbicides, and stated that his crews had piled the brush and burned it. "We fired it in the winter when the snow was falling," he told Schweigert.⁵⁰

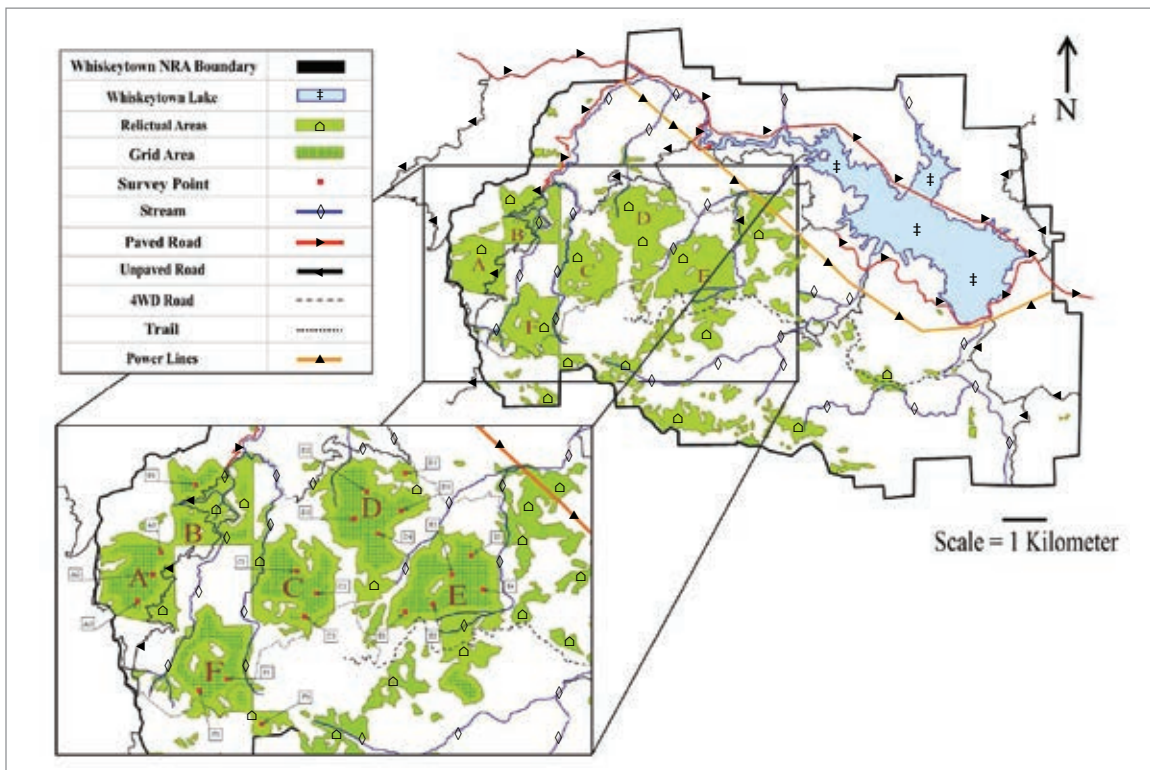
Coggins's assertion that he refrained from logging every other section of timber land appears to be true, evidenced by the existence of "fire-excluded relict forests" located on the western and southern flanks of Shasta Bally that a team of scientists studied and reported on in 2010. The team focused on six areas that basically conformed to a checkerboard of square-mile sections. It remains in doubt, however, whether Coggins ever actually owned all those lands. According to a 1955 map, those sections were part of the checkerboard of sections owned by the Southern Pacific Land Company. And yet, according to the park's master deed listing, the National Park Service acquired just 2,081 acres for the park from the Southern Pacific Land Company. Those six square-mile sections amount to about

⁴⁸ Master Deed Listing, January 26, 1994, WNRA, Lands Division e-Files. The park acquired an additional 131.09 acres directly from Arthur Coggins. These lands were acquired in six installments, one in 1967 and the rest in 1971 or 1972.

⁴⁹ Schweigert, "Arthur Coggins: Energy is Watchword."

⁵⁰ Schweigert, "Arthur Coggins: Energy is Watchword."

3,840 acres—more acreage than either Coggins or the Southern Pacific Land Company disposed of in the early 1970s to make the park. It is not clear, then, who owned those six sections when the sections around them were logged, but the fact remains that Coggins stated that he logged every other section only, and the statement conforms to the logging pattern found on the western and southern flanks of Shasta Bally.⁵¹



Map 5. The relictual forest areas align with checkerboard land ownership in the 1950s when the area was logged. (From Carlos M. Leonzo and Christopher R. Keyes, “Fire-Excluded Relict Forests in the Southeastern Klamath Mountains, California, USA,” *Fire Ecology* 6, no. 3 [December 2010]: 62-76.)

Who else besides Coggins logged the forest on Shasta Bally? In the park’s files are some deed records of private inholdings on the eastern flank of Shasta Bally that were sold to the United States between 1967—1970. Notable is one grant deed from Trinity Logging

⁵¹ Carlos M. Leonzo and Christopher R. Keyes, “Fire-Excluded Relict Forests in the Southeastern Klamath Mountains, California, USA,” *Fire Ecology* 6, no. 3 (2010): 65. The Southern Pacific Land Company developed out of the Southern Pacific Railroad Land Department to manage mostly checkerboard land holdings that derived from huge land grants made to the railroads in the nineteenth century. The Southern Pacific Railroad sold its vast land holdings to raise capital as needed. After World War II, however, when land values rose, the Southern Pacific Land Company ceased selling off its lands and turned to leasing them to logging, grazing, and mining interests instead, usually under strict controls to protect their productivity and value. So, it would seem that both Coggins and the Southern Pacific Land Company eschewed the cut-and-run approach to logging, and either—or both—could have been responsible for leaving alternative sections on Shasta Bally uncut. On the Southern Pacific Land Company, see Richard J. Orsi, *Sunset Limited: The Southern Pacific Railroad and the Development of the American West 1850–1930* (Berkeley: University of California Press, 2005), 127–29, 375–76.

Company covering most of five logged-off sections, or roughly 2,000 to 3,000 acres, high on the eastern flank of Shasta Bally. Trinity Logging Company was listed in Redding's 1951 business directory with George W. Notley Jr. as president and Mervin E. Notley as vice president. George W. Notley Jr. signed the grant deed in 1967. He passed away in Redding in 1994 at the age of seventy-seven. It would appear that the Notley family shares credit with Coggins for logging some of the high-elevation area in the park.⁵²

According to the park's master deed listing, Trinity Logging Company sold 2,576 acres to the government in 1967 and 1969. At least three other logging companies sold land to the government for park land. U.S. Plywood sold the next largest increment, 1,923.3 acres, in 1970. Western Xmas Tree sold 157.5 acres. Kimberly Clark (successor to the Ralph L. Smith Company) offered up 80 acres through an exchange. The per-acre price paid for these lands suggests what condition the forest was in. The Southern Pacific Land Company got the best price for its land at \$458 per acre. Western Xmas Tree received \$400 per acre. Coggins was paid between \$300 and \$365 per acre. Trinity Logging Company received just \$159 per acre and U.S. Plywood just \$103 per acre. By comparison, a new lumber company in Shasta County, Sierra Pacific, paid about \$400 per acre at this time for "over 16,000 acres of well-stocked, cut-over land." The timber land in that case was "for all practical purposes, in one block, well-roaded, and for the most part, high-site-growing land" with 30,000 MBF of merchantable conifer timber and 27,000 MBF of "pre-merchantable" timber. Evidently, Coggins's land was more or less a match with that description, whereas the land owned by Trinity Logging Company and U.S. Plywood was much less desirable, no doubt because it was logged off.⁵³

The thin historical record on lumbering operations on Shasta Bally does not reveal when the logging roads were built or who built them. Coggins's conservation measures notwithstanding, the logging roads built on Shasta Bally were environmentally harmful. Later inventory by the National Park Service would disclose that there are more than 600 miles of logging and mining roads in the park. A scientific report in 2004 stated:

Road construction as well as fires remove the stabilizing vegetation and expose slopes to further hydration and erosion. The result is that these roads have created areas highly prone to down slope movement. This may occur as slow creep or as catastrophic slope failure and debris flows. 70% of down slope movement occurs within the first year after a fire, both from the fire roads and from the denuding of the slopes from fire.⁵⁴

⁵² Grant Deed, recorded September 5, 1967, WNRA, Cultural Resource Division e-Files.

⁵³ Master Deed Listing, January 26, 1994, WNRA, Lands Division e-Files; J. Bud Tomascheski, *Sierra Pacific, a Family History: From a Forester's Perspective* (Arcata, CA: Creative Type, 1991), 109–10.

⁵⁴ Sid Covington, "Whiskeytown National Recreation Area Geologic Resources Management Issues Scoping Summary," April 20, 2004, WNRA, Natural Resource Division e-Files.

Coggins was responsible for at least a portion of the roads at high elevation on Shasta Bally. Coggins's granddaughter averred that he got the cut out with truck logging, though she did not rule out the possibility that there might have been some use of mules still in the 1950s saying, "these were tough people."⁵⁵

On the ridge running south of Buckhorn Bally, just within the present area of the park, Coggins left a preserve of five acres because he believed the trees there were representative of the healthiest and tallest trees in the area. When Schweigert interviewed Coggins, the area was designated by the National Park Service as "Coggins Park." Coggins told Schweigert his story about the place:

It was located at the end of our logging trail, and I had a wooden fence built around it. There were racks there where hunters had been hanging deer for a hundred years, and I planned on building a rescue cabin there. A friend and I had laid the foundation and built a small toilet. We had hauled rocks up from Drunken Gulch and had planned on building a fireplace, so we left our equipment up there. Well, the next time we went up there, someone had shot up everything, even the wheelbarrow and the concrete sacks. I got mad and left the place and never went back.⁵⁶

The Forest in the Environmental Era

Forest values changed with the rise of environmentalism in the 1960s and 1970s. Environmentalism brought a heightened public grasp of ecology and the array of impacts that human civilization was having on the biosphere, including air and water pollution, habitat loss, biodiversity decline, extinction of species, and rising CO₂ levels in the atmosphere (although public awareness of human-caused climate change was minimal then). Environmentalism focused attention on the value of forested areas and the protection they provide watersheds and wildlife. Environmentalism cast a new, negative light on the proliferation of logging and logging roads in steep terrain where operations could lead to sharp increases in soil erosion, imperiling fish habitat downslope. The environmental movement also drew attention to deforestation around the world. Expanding cities and towns and increasing agricultural land use were threatening global resources such as the Amazon rainforest and threatening the extinction of iconic forest animals such as the tiger and orangutan in Southeast Asia and the gorilla in equatorial Africa.

As environmentalism brought new consideration of forest values, those changes in forest values layered on top of an older commitment to forest conservation for securing the nation's timber supply and for protecting national parks, fish and wildlife, and

⁵⁵ Janet Landles, conversation with the authors, April 2022.

⁵⁶ Schweigert, "Arthur Coggins: Energy is Watchword."

wilderness recreation. At the beginning of the environmental era, Congress enacted three laws affecting forests and forest policy still in the mold of the older conservation movement. Each of the laws set new bounds on forest exploitation in northern California. First, the Multiple-Use Sustained-Yield Act of 1960 directed the Forest Service to manage national forests for their recreation and wildlife values as well as their timber values for logging. Second, the Wilderness Act of 1964 established a National Wilderness Preservation System for the protection of wilderness values. And third, the Act to Establish the Whiskeytown-Trinity-Shasta National Recreation Area provided not only for water-based recreation on three reservoirs but also provided for the acquisition of adjacent forest lands—a generous 40,000 acres in the case of the Whiskeytown Unit—to accommodate hiking, horseback riding, and camping.

National forest management on the Shasta-Trinity National Forest in western Shasta County and on the Lassen National Forest in eastern Shasta County went through an even larger change in the 1970s as officials passed other environmental laws. The National Environmental Policy Act of 1970 required all federal agencies to weigh the environmental consequences of all federal undertakings on all federal lands. Thus, the Forest Service had to weigh the environmental effects of timber sales on national forests. The National Forest Management Act of 1976 set the Forest Service on a new course, assigning the agency responsibility for conserving biodiversity and shielding endangered species. It took more than a decade for the Forest Service to figure out its complicated new mandate and to reimagine the national forest as a conservatory for biodiversity, or what one scholar has termed an “eco-factory.” The Forest Service had to be pushed into its new mode of operation by its own scientists and by the external pressure of lawsuits and endangered species listings—notably the listing of the Northern Spotted Owl, whose range extended down the Cascade Range all the way to northern California including Whiskeytown National Recreation Area. Eventually, in the early 1990s, the Forest Service adopted what it called “ecosystem management” as a new framework for managing the national forests.⁵⁷

The boom times for the lumber industry in Shasta County ended abruptly at the close of the 1970s. People in the lumber industry blamed new environmental regulations for the economic downturn. They noted that the Forest Service was less inclined to sell timber, and when it did make federal timber available for logging it marked up the price to account for the greater administrative demands that now attached to federal timber sales. Moreover, advocates for the lumber industry noted, the state of California took parallel measures to protect the environment. State forestry and state-owned timber management mirrored the federal level. It seemed that for the lumber industry in northern California, federal and state

⁵⁷ Richard Freeman, “The EcoFactory: The United States Forest Service and the Political Construction of Ecosystem Management,” *Environmental History* 7, no. 4 (October 2002): 632–58.

timber was off the market just when it was most needed. “The forest products industry crashed to earth in the early 1980s, falling like a lightning-struck snag and sending shock waves through the Redding business community,” wrote local historian John Lawson.⁵⁸

An economic study by the Forest Service’s Pacific Northwest Research Station offered a more nuanced assessment of what happened to the forest products industry in California during this period. The team of forest economists argued that “through the 1970s and 1980s, the predominant factors influencing California’s forest products industry were market conditions.” The lumber industry’s total annual cut in California “generally increased during good market years and declined during years with weak markets.” Market conditions remained favorable all through the 1970s due to a strong performance by the housing construction industry. The lumber industry’s total annual cut in California exceeded 5 billion board feet in 1972 and averaged 4.7 billion feet through the decade. However, strong market conditions ended in 1979. As interest rates rose, housing starts fell, and California’s timber harvest shrunk by half in the early 1980s. When housing starts began to go back up, lumber prices remained low because the value of the U.S. dollar stayed high, reducing U.S. exports and increasing Canadian imports. Moreover, new alternatives to plywood shook the plywood industry in Shasta County. Plywood production in the 1980s was one quarter of production for the previous two decades.⁵⁹

While overall market conditions for wood products actually improved in the mid- to late 1980s, the lumber industry in Shasta County still faced adversity. Lumber companies faced a shortage of timber at the end of the 1970s. The timber supply was adequate for a short period in the mid-1980s because not much logging occurred in the recession of the early 1980s. But in the late 1980s the restricted timber availability on federal and state lands began to bite. In northern California, protection of old growth for northern spotted owl habitat and other restrictive actions led to an 80 percent reduction in the total annual cut on the national forests. State environmental regulation drove down the amount of logging on private lands, too. Across the state, timber harvests in the 1990s fell to half of what they were in the late 1980s.⁶⁰

At the beginning of the twenty-first century, forest values and forest policy underwent a second wave of change that was perhaps as profound as the environmental awakening in the 1960s and 1970s. Society, weary of conflict over the environment and wary of overly simplistic prescriptions, was less apt to look for environmental villains and more apt to treat the world’s environmental ills as a collective challenge for everyone. Environmental policy moved in the direction of finding common ground among all “stakeholders,” or building

⁵⁸ Lawson, *Redding and Shasta County: Gateway to the Cascades*, 92; Detherow, “Logging in the North State,” 119.

⁵⁹ Morgan et al., “California’s Forest Products Industry: A Descriptive Analysis,” 3.

⁶⁰ Morgan et al., “California’s Forest Products Industry: A Descriptive Analysis,” 3–4.

consensus to accomplish environmental goals. The new approach was termed the collaborative model. While working professionals on all sides of the issue moved toward the collaborative model (albeit with holdouts in the ranks who decried the approach as a sellout) the lay public sometimes failed to understand the changing science or track its policy implications. Or, weary and overwhelmed, the public was simply benumbed by it all. Holly Detherow, a member of an old timber family in Shasta County, pointed out in her article for *The Covered Wagon* that “Many Americans protest the cutting and management of forests, but they are blind to the fact that the wood their daily life requires has to come from somewhere.”⁶¹

Whiskeytown and Fire

One of the critical issues in forest policy in the early twentieth-first century was how to respond to the growing problem of wildfire in the American West. Forest managers had to deal with two intertwining conditions. In part, they were dealing with an unnatural buildup of flammable forest understory resulting from more than half a century of fire suppression. Ponderosa pine forests were especially prone. Since the advent of an effective fire suppression policy in the early to mid-twentieth century, ponderosa pine forests had undergone a structural change. In place of an open understory swept by frequent, low-intensity ground fires, those forests now had a dense understory of small trees and underbrush that formed “fuel ladders” for ground fires to burn upwards. The change in structure made the ponderosa pine forest less fire resistant, and more susceptible to big, hot conflagrations that reached into the forest crown and killed all the trees. By the early twenty-first century, there was a strong desire to reduce unnatural fuel buildups and restore forest structure to what it once was before the era of all-out fire suppression.

But the growing problem of wildfire in the American West had another cause, too: climate change. While it was well-known that heat and drought had featured in much of the American West’s climate for a long time, climate science showed that the wildfire problem resulted, in part, from human-influenced changes to the planet’s atmosphere that were causing hotter, drier weather for longer intervals. Weather records showed the region had been warming since the 1950s and trending warmer more sharply than at any time in the past six centuries. With rising temperatures, streams fed by snowmelt flowed earlier in the spring and ran dry earlier in the summer. Periods without rain lengthened. These changing climate conditions obviously pointed toward more fire risk. Across the western United States fires indeed became more numerous, scorching more acres, and burning more intensely. So, the challenge for forest managers rested partly on returning

⁶¹ Detherow, “Logging in the North State,” 120.

forest structure to what it was in the past, and it rested partly on making forest ecosystems maximally resilient to survive climate conditions in the future.

The change in forest policy could be seen in the fire management plans that the NPS prepared for Whiskeytown National Recreation Area in 1985, 1993, and 2004. The successive plans mainly featured a progression toward more expansive use of prescribed fire to reduce fuel loads. In the environmental impact statement for the 2004 plan, the NPS analyzed four alternatives: 1) no action, 2) an emphasis on prescribed fire, 3) an emphasis on mechanical treatments, and 4) a mix of approaches including a continuation of fire suppression (the preferred alternative, which was selected). Prescribed fire aimed at reducing fuel loads through controlled burning. It had the advantage of mimicking natural fire, thereby producing fire's beneficial effects of nutrient cycling and forest seeding. However, prescribed fire carried risk of getting out of control, and it created smoke pollution. Mechanical treatment involved the use of machinery to remove, mulch, or slash and burn smaller trees and underbrush to thin the forest and recreate the desired structure. Safer and more effective than prescribed burning in some respects, it posed other risks such as inadvertently spreading forest pathogens and introducing invasive plants, short-circuiting the nutrient cycling that occurred with fire, and scorching the soil where slash piles were incinerated. To these two management actions could be added the older "let burn" strategy of careful allowance of natural wildfires (only those ignited by lightning, not by humans) as long as the fire did not pose a threat to human life or property and remained controllable. When wildfires in Yellowstone burned out of control in 1988, many concluded that the NPS's "let burn" strategy was problematic. In Whiskeytown's final fire management plan of 2004, the NPS backed away from use of that management tool, committing itself to the suppression of all wildfires in the area.⁶²

The NPS's fire management plan for Whiskeytown National Recreation Area aimed to reduce the risk of "high-severity wildland fire," meaning heat-intense fires that would destroy a forest and reach a size to be out of control. With that aim in view, it was important for the fire management plan to be compatible with fire management plans for adjoining lands since fire management was now a more interagency endeavor. At the same time, the fire management plan needed to adhere to the NPS's distinct management objectives, particularly its overarching objective to prevent impairment of resources. To that end, the plan focused on "restoring high elevation logged plant communities." The park administration was especially interested in understanding the role of natural fire in the high elevation ponderosa pine forest on the slopes of Shasta Bally.⁶³

⁶² National Park Service, *Fire Management Plan, Environmental Impact Statement, Whiskeytown National Recreation Area, Whiskeytown, California* (Washington, DC: National Park Service, 2004), 26–35.

⁶³ "Fire Management Plan, Final Environmental Impact Statement, Whiskeytown National Recreation Area, Shasta County, CA; Notice of Approved Record of Decision," *Federal Register*, October 22, 2004, <https://www.federalregister.gov/documents/2004/10/22/04-23742/fire-management-plan-final-environmental-impact-statement-whiskeytown-national-recreation-area>.

By 2004, there was a growing body of scientific literature on the role of natural fire in various forest types. Ponderosa pine forests came to figure prominently in the literature because they extend over a wide area of the American West, and, as noted above, they were especially vulnerable to unnaturally severe fire from fuel loading.⁶⁴ Yet not all ponderosa pine forest are the same, and the NPS wanted to avoid overgeneralizing about the situation in Whiskeytown National Recreation Area and making false assumptions about the ponderosa pine forest on Shasta Bally. So, in 2006, it engaged a team of scientists to study the ponderosa pine and mixed conifer forest there.

The ponderosa pine forest in Whiskeytown National Recreation Area is uniquely situated where the vegetation of the Klamath Mountains meets the vegetation of the Sacramento Valley. The ponderosa pine and mixed conifer forest on Shasta Bally held special interest because it included sections of “fire-excluded relict forest” alternating with sections of logged, second-growth forest. The sections of “relict forest” had not been logged or extensively grazed as had most forests of this type at similar elevation throughout the Klamath Mountains. According to the study’s authors, Carlos M. Leonzo and Christopher R. Keyes,

Relict forests are rarely occurring ecosystem remnants, often believed to be representative of forests that once dominated historic landscapes. . . . Where they exist, these fragments often figure prominently in biological conservation planning. . . and study of their structure and function can guide the management of younger regrowth forests or older forests that have been heavily impacted by human activities. Relict forests represent an imperfect target for managing forests under the specter of changing climate, but they do serve in this role for many agencies. For fire-evolved forests impacted by fire suppression, using historic conditions as a strategic reference inevitably leads to restoration strategies that reduce stand densities and fuel loads and presumably enhance their resilience in the face of future threats and stressors.⁶⁵

The relict forest stood in contrast to the alternating sections where second-growth forest had come back after logging. Ponderosa pine made up 76 percent of the trees in the relict forest and just 17 percent of the trees in the second-growth forest, where white fir, Douglas fir, and tanoak predominated.⁶⁶

Leonzo and Keyes cautioned about how to treat the encroaching second-growth forest. Mechanical treatments for fire management in those adjoining stands had the potential to disturb the relict stands by encouraging the spread of pathogens and invasive

⁶⁴ Becky K. Kerns, Walter G. Thies, and Christine G. Niwa, “Season and severity of prescribed burn in ponderosa pine forests: Implications for understory native and exotic plants,” *Ecoscience* 13, no. 1 (2006), 44-45.

⁶⁵ Leonzo and Keyes, “Fire-Excluded Relict Forests in the Southeastern Klamath Mountains, California, USA,” 63.

⁶⁶ Carlos M. Leonzo and Christopher R. Keyes, “Second-Growth Encroachment in Relictual Forest Ecosystems at Whiskeytown National Recreation Area, California,” 2007, WNRA, Natural Resource Division e-Files.

species. The biggest threat to the relict stands was from wildfire, which could explode into high-intensity fire if those second-growth stands remained untreated. So, they concluded, fuel reduction treatments still seemed justified notwithstanding the NPS's desire to preserve the relict stands. Their risk assessment was prescient, because a major wildfire did threaten these stands in 2008, and the even greater Carr Fire in 2018 destroyed most of the relict forest in the park.⁶⁷

Scientific studies about wildfire and the appropriate forest treatments for specific forest types continued. Several scientific monographs appeared on wildland fire in California.⁶⁸ As rising concern over megafires entered the discourse, a science paper in 2013 tried to affirm that climate change was driving an increase in forest fire severity across the whole western United States.⁶⁹ Another science paper in 2015 aimed at providing more nuance again. The latter paper distinguished between “fuel-limited fire regimes” and “climate-limited fire regimes.” The ponderosa pine forest, with its open understory, characterized the fuel-limited fire regime; wetter coastal forests of mixed conifer and redwoods characterized the climate-limited fire regime. The paper submitted the hypothesis that the legacy of fire suppression – unnatural buildups of fuel in the understory – produced more intense fires where a fuel-limited fire regime pertained historically. The ponderosa pine forest in the Klamath Mountains bioregion was distinctive because it bordered on the climate-limited fire regimes found in the coastal ranges.⁷⁰

In 2007, the NPS initiated forest restoration strategies in the Brandy Creek drainage. It identified three small areas or “treatment units,” about twenty acres in total, where the forest structure and composition showed relict forest in imminent transition to a different forest type marked by a dominance of shade tolerant tree species. In one of the three units, for example, young Douglas fir was invading the historic forest of black oak and mixed conifer. Without treatment, the black oak would die off while the Douglas fir would form the new forest canopy with tanoak dominating the midstory. The prescription was to thin the forest around selected black oak and selected mature ponderosa and Douglas fir to release those trees from neighboring competition and thereby increase their

⁶⁷ Leonzo and Keyes, “Fire-Excluded Relict Forests in the Southeastern Klamath Mountains, California, USA,” 63; Leonzo and Keyes, “Second-Growth Encroachment in Relictual Forest Ecosystems at Whiskeytown National Recreation Area, California,” 2007, and Nelson Steffin to Jason Fallon, March 28, 2019, Natural Resource Division e-Files, WNRA.

⁶⁸ Neil G. Sugihara, *Fire in California's Ecosystems* (2006), David Carle, *Introduction to Fire in California* (2008), Stephen Pyne, *California: A Fire Survey* (2016).

⁶⁹ Phillip J. van Mantgem, Jonathan C. B. Nesmith, MaryBeth Keifer, Eric E. Knapp, Alan Flint, and Lorraine Flint, “Climatic stress increases forest fire severity across the western United States,” *Ecology Letters* 16 (2013): 1–6;

⁷⁰ Zachary L. Steel, Hugh D. Safford, and Joshua H. Viers, “The fire-frequency-severity relationship and the legacy of fire suppression in California forests,” *Ecosphere*, January 21, 2015, at <https://doi.org/10.1890/ES14-00224.1>.

vigor. The aim was to preserve elements of the relict forest to promote greater ecosystem resilience in the future. The NPS chose areas of high visitor use so that it could interpret its forest restoration strategies for the public.⁷¹

The historic Carr Fire, one of the most destructive fires in California's history, started on July 23, 2018, inside the park, ignited by sparks flying off a travel trailer when a tire blew out while the trailer was humming along Highway 299 near the Camden-Tower House Historic District. The fire spread from dry grass into an area of scrub forest, and three days later weather and topography conspired to turn the spreading fire into an out-of-control inferno. Burning for more than a month, the Carr Fire grew into a megafire. At its most intense, it created its own weather. Wind speeds in the fire's vortex reached an estimated 165 mph, the equivalent of an F3 tornado. In terms of acreage burned, it was California's seventh largest wildfire on record. It burned over 39,000 acres in the park, practically the whole area that was not lake surface. Spreading to the edge of Redding, it burned a total of 229,651 acres by the time it was 100 percent contained on August 30, 2018.⁷²

The fire destroyed over 100 structures inside the park and over 1,000 homes outside the park. It took the lives of two firefighters and four civilians. Within the national recreation area five employee residences were destroyed and many cultural resources were lost. The historic Whiskeytown Store and Post Office, which had been moved to the intersection of Highway 299 and Trinity Mountain Road, was destroyed. The Camden-Tower House Historic District was partially spared. Fire crews saved the Camden House, the barn, and tenant house, but the orchard was gone. All wooden structures at the El Dorado Mine were consumed. Elsewhere in the park, ten camper cabins at an environmental education camp were lost as were nine buildings at a former correctional facility, the Crystal Creek Boys' Camp. The fire scorched marina facilities and numerous boats at Oak Bottom and damaged water treatment systems at Whiskey Creek and Brandy Creek.⁷³

⁷¹ C. R. Keyes, J. F. Plummer, S. Alton, C. Chambers, R. Glebocki, R. Jensen, H. Kuljian, C. Madden, C. Merideth, J. N. Peach, V. Shen, and K. Wright, "Brandy Creek Forest Restoration Demonstration Project, Whiskeytown National Recreation Area (California)," April 24, 2007, Natural Resource Division e-Files, WNRA.

⁷² National Park Service, *Carr Fire After Action Review* (2018), https://wildfiretoday.com/documents/CARR_Fire_AAR.pdf.

⁷³ Whiskeytown National Recreation Area administrative history draft report.

CHAPTER SIX

Water Development Part I: The Making of the Central Valley Project

The most profound alteration of the landscape in Whiskeytown National Recreation Area came with the construction of the Whiskeytown Dam project from 1960 to 1963. Construction of the project began at the dam site on Clear Creek in August 1960. To prepare the dam site, a crew began drilling and blasting on the slopes above the creek to expose bedrock for anchoring the embankment dam. In the next month, another crew commenced clearing the reservoir site, felling trees, and bulldozing the woody debris into immense piles for burning. The job of preparing the reservoir site for inundation included demolition of the remaining buildings in Whiskeytown, relocation of a few structures, and careful removal of graves in the Whiskeytown Cemetery, as well as realignment of a stretch of Highway 299 to higher ground. Meanwhile, workers bored a spillway tunnel at the dam site and a much longer diversion tunnel, 2.4 miles in length (the Spring Creek Power Conduit), was bored eastward from the reservoir site to connect with Keswick Dam and Powerplant. The excavated material from the tunnels was piled up for use in Whiskeytown Dam. Two and a half years in the making, Whiskeytown Dam was completed in February 1963. When filled to capacity that summer, the reservoir covered more than 3,200 acres at the heart of the planned 42,497-acre Whiskeytown National Recreation Area. A manmade lake came to exist where the gold diggings once were. Following a century of mineral extraction and lumber extraction, the land area was now being exploited in yet another capacity: to move and store water for the towns, cities, and food growers located in the Central Valley.¹

Whiskeytown Dam (renamed Clair A. Hill Whiskeytown Dam in the early 1990s) is part of the Trinity River Division of the Central Valley Project (CVP). The Trinity River Division takes water from the Trinity River on the Pacific Slope and diverts it through a tunnel into the Clear Creek drainage of the upper Sacramento Valley, thereby augmenting the supply of water for the CVP. There are three main dams in the Trinity River Division:

¹ Al M. Rocca, *Whiskeytown National Recreation Area: A History* (Redding, CA: Renown Publishing, 2010), 69–70; Eric A. Stene, “Trinity Division: Central Valley Project,” project history prepared for the Bureau of Reclamation, 1996, 7–8.

Trinity Dam, which forms Clair Engle Lake on the upper Trinity River; the smaller Lewiston Dam, which creates an afterbay for Trinity Dam in the much smaller Lewiston Lake; and Whiskeytown Dam within the greatly augmented Clear Creek drainage. The eleven-mile-long diversion tunnel that takes the captured Trinity River water under the divide is the Clear Creek Tunnel. At the outlet of the Clear Creek Tunnel the water plunges downslope through penstock pipes and turbines in the Judge Francis Carr Powerhouse and thence into the upper end of Whiskeytown Lake. At the lower end of Whiskeytown Lake, the Spring Creek Power Conduit (or Tunnel) conveys water from the lake through a tunnel under another low divide to the Spring Creek Powerplant above Keswick Dam and Reservoir. Other outflow is conducted through the Whiskeytown Dam spillway into Clear Creek.²

The Trinity River Division, while impressive in its own right, has historical significance through its association with the massive CVP, a sprawling complex of some twenty big dams and reservoirs, eleven major powerplants, and 500 miles of interconnecting conduits and canals.³ The CVP spans the whole length of California's Great Central Valley, redistributing the water of two major rivers, the Sacramento and San Joaquin. Whiskeytown Dam is rightly viewed as part of that much larger public works project.⁴ The purpose, planning, and design of Whiskeytown Dam are all embedded in the larger history and geography of the whole CVP.

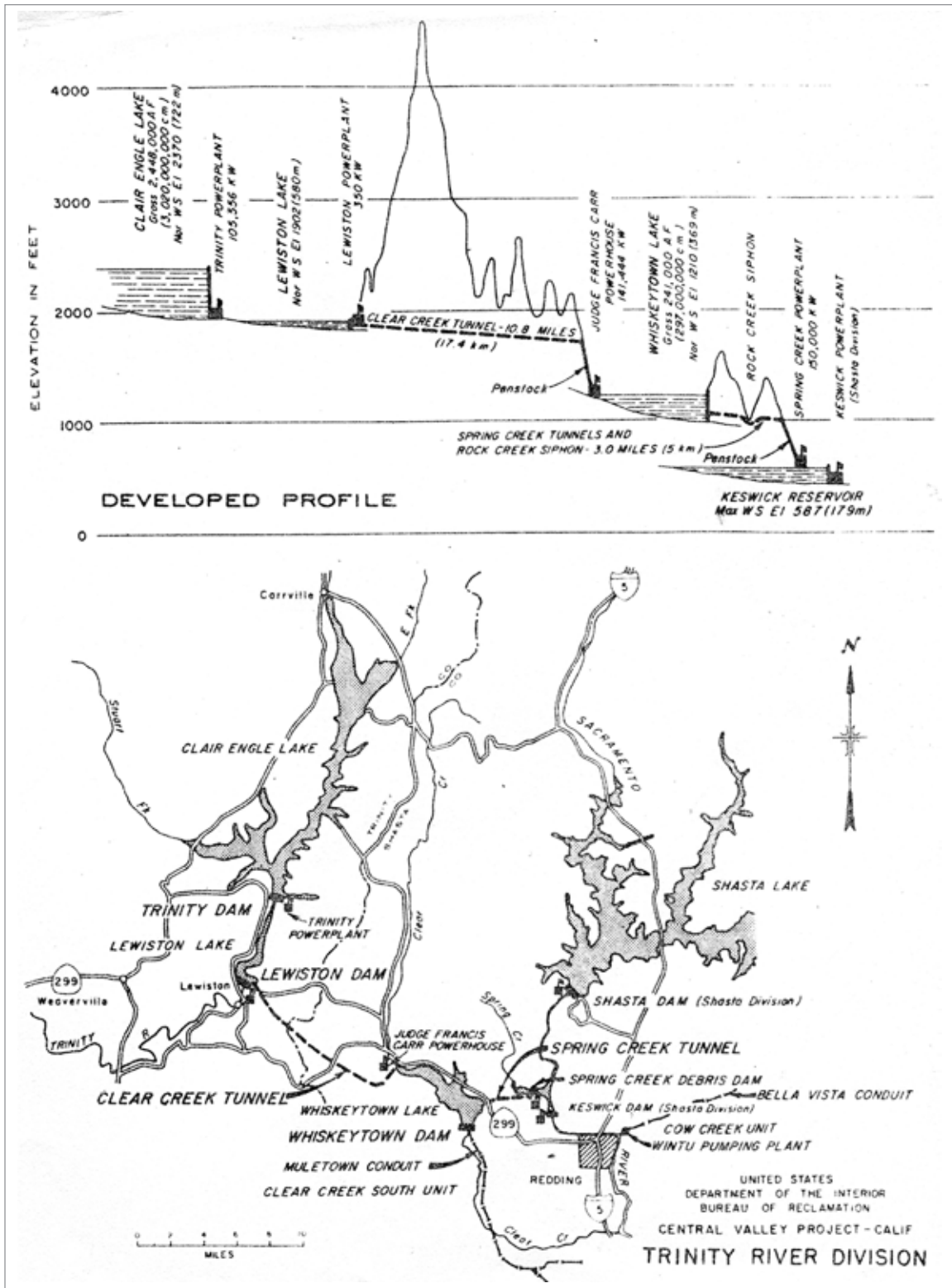
Constructed mostly during the middle decades of the twentieth century, the CVP is almost without peer in its scope and ambition. It has inspired awe among critics and defenders alike. The CVP provides irrigation to approximately one-third of California's prime agricultural lands. Since California's fertile Central Valley already made an impressive contribution to the nation's food production in the early twentieth century, the CVP was hugely consequential. Today, the U.S. Bureau of Reclamation boasts that the CVP distributes some 5 million acre-feet of water a year to some of the most productive agricultural lands found anywhere in the world; as a result, the CVP has created economic benefits over the course of its existence that have repaid the federal government's \$3 billion investment one hundred fold. The Bureau of Reclamation claims moreover that the CVP generates 5.6 billion kilowatt hours of electricity annually, enough to meet the needs of about 2 million people.⁵

² Karana Hattersley-Drayton, "Historical Resources Evaluation Report (HRER) for the Judge Francis Carr Powerhouse Substation, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area," report prepared for Western Area Power Administration, August 15, 2017, and Trinity River Division (map and statistics), August 1980, WNRA, CRM Files, File: Central Valley Project.

³ Bureau of Reclamation, "Central Valley Project: General," <https://www.usbr.gov/projects/index.php?id=506>.

⁴ Frank Sumrak, "Whiskeytown Lake: Its Role in the Central Valley Project," *The Whiskeytown Generator* 3, no. 1 (1988): 1.

⁵ Michael C. Robinson, *Water for the West: The Bureau of Reclamation, 1902–1977* (Chicago: Public Works Historical Society, 1979), 67; Bureau of Reclamation, "Central Valley Project: General," <https://www.usbr.gov/projects/index.php?id=506>.



Map 6. Trinity River Division.
(Source: Bureau of Reclamation, 1971.)

But the CVP's critics have focused on the unintended environmental and social consequences. Donald Worster, the dean of environmental historians who wrote his magnum opus *Rivers of Empire* in the 1980s just as the environmental reckoning over dams acquired force, intoned that "few parts of the American West, or for that matter of the world, have been changed so thoroughly as the Great Valley of California." Worster viewed water development in California as the main driver in turning the West into a "hydraulic society" in which power and wealth are concentrated at the top instead of being evenly distributed through the population. The process of becoming a hydraulic society reached a climax in the political machinations around the CVP. Consequently, Worster wrote, the "ecological and social transformation of the Great Valley is one of the most spectacular, and most revealing episodes of the American West."⁶ Contemporary environmental writers, who view the CVP in the wake of concerted efforts since the 1990s to mitigate fish loss and other environmental stresses, are only slightly more sanguine. They caution that the CVP and all California's water systems still face unprecedented demands resulting from climate change and population growth.⁷

This chapter and the next discuss the history of the CVP seeking to contextualize Whiskeytown Dam and all its associated features: Whiskeytown Lake, the Judge Francis Carr Powerhouse, the Spring Creek Conduit, the displaced Whiskeytown Cemetery, and other elements of the built environment in Whiskeytown National Recreation Area that relate directly to the Trinity River Division. The two chapters begin with a description of the larger geography of the Central Valley. For present purposes the upper Sacramento Valley is given more attention than other parts of the Central Valley to the south, and Whiskeytown Dam's parent Trinity River Division is highlighted where it enters the story of the CVP. These two chapters end with a detailed construction history of Whiskeytown Dam and associated features within Whiskeytown National Recreation Area, and then a recounting of President John F. Kennedy's historic dedication of the dam in October 1963.

Geography and the Seeds of the CVP

California's Central Valley, also known as the Great Valley or Great Central Valley, extends about 500 miles down the center of the state. The valley is a level plain surrounded by mountain ranges on all sides except for a single opening on the west side where the valley drains into San Francisco Bay. The Central Valley is really two large river basins combined

⁶ Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1985), 7, 11.

⁷ David Carle, *Water and the California Dream: Historic Choices for Shaping the Future* (Berkeley, CA: Counterpoint, 2016), 173–78, 233–41; Allison Lassiter, ed., *Sustainable Water: Challenges and Solutions from California* (Oakland: University of California Press, 2015), 1–9.

In the low-lying Delta region, the rivers at one time braided into many channels, forming a maze of islands and sloughs, a vast tidal salt marsh of around a million acres. Before the coming of Europeans, fifty different Indigenous tribes used this rich habitat for hunting and fishing. Under the influence of white settlement, the Delta was mostly drained and converted to rice farming. The low elevation of the Delta is significant to the story of California water management because, under certain conditions, salty tidewater will infiltrate well inland, much to the detriment of agriculture. One of the CVP's functions is to regulate flow of the Sacramento and San Joaquin rivers in this vicinity to hold brackish tidewater at bay.⁸

The climate and soils found in the Central Valley combine to make it an exceedingly rich plain for raising crops. California's Mediterranean climate of mild, wet winters and hot, dry summers provides for a long growing season with abundant sunshine. The climate in some parts of the valley allows crops to grow year-round. The valley is a vast plain of alluvial deposits from the surrounding mountains, so the soils are rich and diverse, supporting many types of farming. By the mid twentieth century, California produced some 300 different agricultural commodities, including the nation's entire supply of almonds, artichokes, figs, nectarines, and olives. At the same time, it produced a third of the nation's fruit and a fourth of the nation's vegetables.⁹

Because there is scant rainfall in summer, irrigation was the key to this agricultural cornucopia. Agriculture in the Central Valley progressed through three stages after California became a state. First there was cattle ranching, then dry farming of small grains, and finally specialized and intensified irrigation farming. The latter two stages of agricultural development in the Central Valley were abetted by railroad connections and the nearby port of San Francisco, which provided ready access to remote markets both foreign and domestic. The last stage, irrigation farming, first appeared on a relatively small scale in the Central Valley in the late nineteenth century as dry farming of wheat and barley began to face competition from other grain regions.¹⁰

The climate and geography that made the Central Valley so rich for farming also made it susceptible to flood disaster. To the east of the Central Valley the Sierra Nevada and Cascade ranges can receive a huge annual snowfall that melts in the spring, as can the Klamath Mountains around Whiskeytown. The snowmelt feeds into numerous tributary streams that discharge into the Sacramento and San Joaquin rivers. The effect on local creeks and the Sacramento River can be extreme; the volume of flow in the Sacramento

⁸ Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington: Island Press, 1997), 26–27; Workers of the Writers' Program of the Work Project Administration, *The Central Valley Project* (Sacramento: California State Department of Education, 1942), 10–11.

⁹ Walton Bean, *California: An Interpretive History* (New York: McGraw-Hill Book Company, 1973), 493.

¹⁰ Bureau of Reclamation, "Central Valley Project: General," <https://www.usbr.gov/projects/index.php?id=506>; Robert Kelley, "Taming the Sacramento: Hamiltonianism in Action," *Pacific Historical Review* 34, no. 1 (February 1965): 22.

River can grow by a factor of 100, from 6,000 to 600,000 cubic feet of water per second. “In effect,” writes historian Robert Kelley, “a hundred Sacramento rivers rush down the valley, trying to get to the sea through a space that is relatively narrow.” Historically, whenever the river reached flood stage it overtopped its banks and spilled out into broad estuaries. “The intensity of flood conditions in the Sacramento Valley,” Kelley asserted, “is greater than in any other river valley in the United States.”¹¹

The most unusual weather events have unleashed flooding in the Central Valley on a biblical scale. In the winter of 1861–1862, an atmospheric river dumped one hundred inches of rain on parts of the state in a matter of weeks. The rain came on top of an exceptionally deep snowfall on the western slopes of the Sierra Nevada Range. With nowhere for all that precipitation and meltwater to go but out through the bottleneck where the rivers joined, the deluge turned about half of the Central Valley into a temporary shallow inland sea. Government surveyor William H. Brewer described the incredible scene:

Nearly every house and farm over this immense region is gone. There was such a body of water—250 to 300 miles long and 20 to 60 miles wide, the water ice cold and muddy—that the winds made high waves which beat the farm houses in pieces. America has never before seen such desolation by flood as this has been, and seldom has the Old World seen the like.¹²

The widespread flooding in 1862 killed an estimated 4,000 people and half a million cattle and sheep.¹³

The debris from hydraulic mining, already extensive by 1862, may have worsened the flooding. Certainly, as the amount of hydraulic mining grew in the next two decades the beds of the Sacramento River and its tributaries became choked with debris, exacerbating the flood risk and inhibiting river navigation. Even after hydraulic mining stopped in 1884, debris from past mining operations persisted. The force of the river pushed the existing debris piles inexorably downstream to the sea, but the “apex” of the debris field descended the valley only gradually—a few miles each year. In 1911, an estimated 300 cubic yards of debris from hydraulic mining on the American and Feather rivers still clogged the river system above Sacramento. It was said that the bed of the Yuba River in that year remained eleven feet higher than when mining began.¹⁴

¹¹ Robert de Roos, *The Thirsty Land: The Story of the Central Valley Project* (Stanford, CA: Stanford University Press, 1948), 15; Kelley, “Taming the Sacramento,” 22–23.

¹² Brewer quoted in B. Lynn Ingram and Frances Malamud-Roam, *The West without Water: What Past Floods, Droughts, and other Climatic Clues Tell Us about Tomorrow* (Berkeley: University of California Press, 2013), 31.

¹³ Ingram and Malamud-Roam, *The West without Water*, 28–35.

¹⁴ Kelley, “Taming the Sacramento,” 27–28.

In the economic depression of the early 1890s, mining interests found common cause with agricultural interests in seeking federal help for dredging the Sacramento River while allowing a revival of hydraulic mining under new environmental regulations. The mining interests claimed they could resume hydraulic mining in a responsible way through the construction of small dams to contain the debris in the hills before moving downstream into the river system. The Caminetti Act of 1893 established the California Debris Commission to restore navigation on the Sacramento River and recommend flood control measures. Composed of three presidentially appointed officers of the U.S. Army Corps of Engineers, the commission was also charged with issuing permits for hydraulic mining operations provided that the mining companies set up adequate safeguards for containing debris. In practice, the proffered safeguards proved to be unworkable and hydraulic mining did not see much of a revival under the act. But the Caminetti Act did launch the government-directed effort to rehabilitate the river. The federal commission worked with the state government to improve navigation and flood control. California established two new offices: the Office of Debris Commissioner and the Office of Commissioner of Public Works. Over the next two decades, the federal and state water engineers succeeded in several initiatives. They oversaw dredging of a nine-foot channel for navigation as far inland as Stockton. Upstream on the Sacramento River they built wing dams, which directed the river current into main channels to use the natural scouring power of the current to flush debris downstream. Federal and state water engineers also drew up a plan for a canal bypass system to join the Sacramento and San Joaquin rivers at a point several miles eastward of the Delta. While the canal project awaited funds (it would not begin until it was incorporated into the CVP), the engineers oversaw construction of a system of flood control levees in the Delta. The flood control works proved their mettle as California experienced a series of wet years in 1902, 1904, 1906, 1907, and 1909.¹⁵ Although there were washouts, the levees mostly held and were built higher. Altogether the Central Valley came to have some 1,500 miles of levees.¹⁶ All of these public works formed important precedent for the CVP, because they demonstrated to a skeptical state legislature and citizenry the efficacy of investing public funds and placing trust in the expertise of government engineers. But the public works involved to this point were mere chicken scratch compared with what was to come.

¹⁵ Kelley, "Taming the Sacramento," 29, 31, 38–39; Martin D. Mitchell, "Land and Water Policies in the Sacramento-San Joaquin Delta," *Geographical Review* 84, no. 4 (October 1994): 417–18.

¹⁶ Clair A. Hill, "Water of Life: The Sacramento River," *The Covered Wagon* (1997): 8.

Irrigation to the Fore

If navigation and flood control were important underlying justifications for the making of the CVP, it was a desire for more irrigation that formed the CVP's overarching purpose. To bring meaningful irrigation to the Central Valley would involve a much more comprehensive and expansive system of water development projects built at public expense. The visionaries who began to conceive of such a project in the early twentieth century faced a much harder sell than the advocates of flood control did. In the American political culture of that day, irrigation development was not regarded as a proper function of government. Throughout the nineteenth century, public land policies were oriented to the ideal of a democracy founded upon a citizenry of small farmers. It was the nation's hope that much of the vacant public domain would be turned into small, independent, individually owned farmsteads. If crops needed irrigation, that work belonged to the farmer. When it became apparent that the West's arid lands could only be farmed through the development of extensive irrigation works, Americans clung to the idea that small, independent farmers would somehow carry that out. Accordingly, Congress and the states attempted a range of half measures aimed at promoting homesteading under arid conditions. At the federal level, Congress passed the Carey Act of 1894 to encourage states to partner with private companies and farmers in the development of large-scale irrigation works. The results were disappointing. Meanwhile, in California, the experiment in farmer-led irrigation development proceeded under an 1887 state law known as the Wright Act.¹⁷

C. C. Wright was a lawyer and state legislator from Modesto, a farming community south of Stockton where irrigation already existed on a limited scale with water diverted from the Tuolumne River. Small dams in the foothills took some of the water in that catchment into irrigation canals that brought the water to Modesto-area farms. While the farmers in Wright's district had made a good start on irrigation works, an insufficiency of unclaimed water impeded them from doing more. Under California's hybrid water law, water rights were a mix of appropriative rights based on the doctrine of prior appropriation (owning a quantity of water that has been put to use before anyone else) and riparian rights based on land ownership (owning waterflow as an appurtenance to land situated along a waterway). Between the mining districts in the hills and big riparian landowners in the valley, the farmers felt shut out from access to unclaimed water. These circumstances led many California farmers to agitate for reforming the law, but in Wright's view either system—riparian or prior appropriation—could fall prey to monopolistic interests. His idea was to encourage farmers to come together to form irrigation districts. Irrigation districts would be democratic, each farmer having one vote regardless of how much land

¹⁷ Norris Hundley Jr., *The Great Thirst: Californians and Water, a History* (1992; Berkeley: University of California Press, 2001), 113–15.

he owned. With the Wright Act the state would grant irrigation districts the power of eminent domain to obtain appropriative water rights from riparian owners. Wright hoped that the scheme would break monopoly control of water resources and allow farmers to develop large irrigation works on their own without relying too heavily on outside capital investment. After the law passed, irrigation districts did form and develop along the lines intended, but not on the scale hoped for. During the 1890s, the new irrigation districts managed to reclaim about a twentieth of the two million acres deemed prime agricultural lands suitable for irrigated farming. That was too slow for some.¹⁸

While the experiment with farmer-led irrigation districts sputtered along in California, a national movement was slowly building to organize irrigation of the West's arid lands with federal help. William E. Smythe, a Nebraska journalist and early crusader, who founded the National Irrigation Congress and the journal *Irrigation Age* in 1891, led the movement through the first half of the decade. While looking to federal legislation to frame national policy, Smythe's vision for bringing large-scale irrigation to the West still assumed that it would take the form of private enterprise under state supervision and federal sanction. But by the mid-1890s, conspicuous failures in California and a general hesitancy on the part of the western states to use the Carey Act cast that vision into doubt.¹⁹

George W. Maxwell, a California lawyer and irrigation crusader with Smythe, took over leadership of the movement in the late 1890s. Maxwell used his connections with western railroad companies to obtain much-needed financial support for the movement. Through the National Irrigation Association, which Maxwell formed in 1899, he promoted the idea that the federal government should undertake reclamation projects funded through sales of public lands.²⁰

The idea of federal reclamation received a boost from the report of the distinguished engineer Hiram M. Chittenden of the U.S. Army Corps of Engineers. Tasked with making a survey of potential reservoir sites in the upper Missouri River Basin, Chittenden stated in his report to Congress that only "public agencies" should direct the envisioned dam projects. Furthermore, he underscored that the dams would serve multiple uses: storing flood waters, helping with downstream navigation (through timely discharges of water), and supplying water for irrigation for domestic and industrial use. The irrigation

¹⁸ Hundley, *The Great Thirst*, 99–103; Worster, *Rivers of Empire*, 107–11; Bean, *California*, 278–80; Robinson, *Water for the West*, 9.

¹⁹ David P. Billington and Donald C. Jackson, *Big Dams of the New Deal Era: A Confluence of Engineering and Politics* (Norman: University of Oklahoma Press, 2006), 19–20; Robinson, *Water for the West*, 13–14; Hundley, *The Great Thirst*, 116–17.

²⁰ Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890–1920*, (1959; Pittsburgh, PA: University of Pittsburgh Press, 1999), 9–11; Robinson, *Water for the West*, 14–15.

movement seized on Chittenden's report to promote not only the idea that dam building was a federal responsibility, but also the notion that water resource development served several purposes at once.²¹

Historian Samuel P. Hays argued in his classic work, *Conservation and the Gospel of Efficiency*, that this rather straightforward idea—that “water is a single resource of many potential uses”—was in fact the conceptual breakthrough that led to the Progressive conservation movement of the early twentieth century. It was crucial because it forged unified thinking and action across diverse fields of science and resource development that were previously unconnected and, in some cases, obscure. Water development brought together hydrologists, geologists, agronomists, foresters, and engineers. (Later, wildlife biologists, ecologists, and recreation managers would be involved, too.) These many scientists, especially ones working in government agencies, developed a synergy in the administration of Theodore Roosevelt from 1901 to 1909. Hays challenged the old view of the Progressive conservation movement that it was mainly about protecting land and resources that rightfully belonged to “the people” against greedy exploitation by “the interests.” Rather, Hays argued, it was about harnessing science and technology to develop the nation's resources in the most efficient way to strengthen the nation. Thus, the anti-monopolist ideology that animated the irrigation crusade in the 1890s became subsumed in a wider movement of bureaucratically orchestrated resource development.²²

Hays finds that the Progressive conservation movement began with the Reclamation Act of 1902, because the act provided for bold federal action whereas before private enterprise was largely responsible for any development. The act put the revenue from public land sales toward a revolving fund to finance federal reclamation projects in sixteen states and territories in the West. The reclamation projects would bring arid lands under irrigation. Reclamation lands would be opened to entry under the Homestead Act, but with each homesteader obligated to repay a proportionate share of project construction costs in ten years. Within each reclamation project area, no homesteader could acquire water rights to more than 160 acres.²³

The Reclamation Act established the Reclamation Service within the U.S. Geological Survey. The Reclamation Service became an independent agency within the Department of the Interior in 1907, and then elevated to bureau status as the Bureau of Reclamation in 1923. Despite the bold vision animating federal reclamation, early reclamation projects under the program were largely a disappointment. In the first place, several years of survey work had to proceed the initiation of actual construction projects. Once

²¹ Robinson, *Water for the West*, 14; Billington and Jackson, *Big Dams of the New Deal Era*, 20; Hundley, *The Great Thirst*, 117.

²² Hays, *Conservation and the Gospel of Efficiency*, 1–6.

²³ Robinson, *Water for the West*, 16–19.

construction began, the novel arrangements for repayment of construction costs proved to be problematic. The reclamation fund was never a robust funding source. The federal agency remained small and weak until the Great Depression of the 1930s, when a confluence of two factors, federal spending for economic relief and advances in dam engineering, vaulted the Bureau of Reclamation into prominence and set the stage for the CVP.²⁴

The Marshall Plan

A comprehensive plan for water development in the Central Valley was first articulated in a 1920 plan put forward by Col. Robert B. Marshall of the U.S. Geological Survey. Marshall was involved in surveys and topographical mapping of California starting in the 1890s. He became Geographer of the Pacific Division in 1907 and Chief Geographer of the U.S. Geological Survey in 1910. He did a brief turn as Superintendent of Parks, overseeing administration of all the national parks before the creation of the National Park Service, resuming his former post of Chief Geographer in 1917. He resigned from federal service in 1919 to devote all his energies to promoting his plan for water development in the Central Valley. The plan, which he proposed as a California state water project, would cost more than the total cost of all the federal reclamation projects in the West built to that time. He described his ambitious scheme in a twelve-page pamphlet titled “California’s Greatest Opportunity,” which California State Irrigation Association published in 1920. The plan became known as the Marshall Plan.²⁵

Marshall asserted that the Central Valley was the “largest, richest, and most fertile body of indifferently used or unused land in the United States—perhaps in the world.” His plan would “help make the Valley of California the world’s greatest garden.” He estimated that there was enough water flowing in the Sacramento and San Joaquin rivers to put three feet of water on 12 million acres. In fact, that promise amounted to 36 million acre-feet of irrigation water, or four times the volume that the CVP actually manages today.²⁶

Marshall pitched his plan mainly in terms of providing future opportunity, but the plan addressed current supply needs, too. Already in 1920, the state had to find new sources of water to sustain current levels of agricultural development. In the first two decades of the twentieth century, most new irrigation in the Central Valley was accomplished through gas-powered wells, which pumped groundwater out of an aquifer, rather

²⁴ Jeanne Nienaber Clarke and Daniel McCool, *Staking Out the Terrain: Power Differentials among Natural Resource Management Agencies*, (Albany: State University of New York Press, 1985), 92–96; Billington and Jackson, *Big Dams of the New Deal Era*, 3–12; Donald C. Swain, “The Bureau of Reclamation and the New Deal, 1933–1940,” *Pacific Northwest Quarterly* 61, no. 3 (July 1970): 137.

²⁵ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, at 139 (1956).

²⁶ Bureau of Reclamation, “Central Valley Project: General,” <https://www.usbr.gov/projects/index.php?id=506>.

than by diverting surface water flow into irrigation canals. Gas-powered wells proliferated in the lower San Joaquin Valley after 1913. It was soon determined that groundwater pumping was drawing down the aquifer faster than the aquifer was replenished. As the wells went deeper to reach the aquifer, the cost of pumping increased. Then a series of dry years commenced in 1917. The water table in the lower San Joaquin Valley began to drop. When surface flow in the Sacramento and San Joaquin rivers dwindled, saltwater seeped into the Delta again. Towns and farms in the region started to suffer from saltwater intrusion and drought. River navigation was imperiled, too, assuming “a grave aspect” according to a state government report.²⁷

Marshall argued that the San Joaquin Valley needed to have water from the Sacramento Valley. Water engineers observed that the Sacramento River basin had about two times the volume of surface runoff as the San Joaquin River basin, while the San Joaquin Valley had about two times the amount of irrigable land as the Sacramento Valley. The Marshall Plan would address the imbalances by turning the Sacramento River into the San Joaquin River. Moreover, it would turn water from the Kern River, a tributary of the San Joaquin, into southern California via a tunnel through the Tehachapi Mountains. And to offset the diversions of the Kern River waters from the San Joaquin, in northern California it would divert waters from the Klamath River basin (later changed to the Trinity) into the upper Sacramento.²⁸

The Marshall Plan called for a high dam across the Sacramento River in Iron Canyon, near Red Bluff, as well as a series of smaller dams on tributaries down the length of the Sierra Nevada Range. A grand canal would take water from the reservoir above the Iron Canyon damsite and run down the east side of the valley below the tributary dams. Another canal would extend down the west side of the valley, with side canals leading to farmlands north of San Francisco Bay and the city of San Francisco. The dams and reservoirs in the Sacramento River basin would control the flow of water for navigation and flood control and provide storage for irrigation and city water supplies.²⁹

Although many elements in the Marshall Plan changed before it became the Central Valley Project, it formed the basic blueprint for water development on a statewide basis. As one historian wrote, “Chief value of the Marshall Plan was that it stirred an active

²⁷ Lawrence B. Lee, “California Water Politics: Depression Genesis of the Central Valley Project, 1933–1944,” *Journal of the West* 24, no. 4 (1985): 63–64; Workers of the Writers’ Program of the Work Project Administration, *The Central Valley Project*, 41; *State Water Problems Conference Report* (Sacramento: California State Printing Office, 1916), 79.

²⁸ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, at 146 (1956).

²⁹ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, at 144–47 (1956).

interest in the state's water problems and suggested a daring solution." State engineers took up water development planning on a large scale, with California voters gradually won over to the idea.³⁰

The State Water Plan in the 1920s

The high cost of comprehensive water development posed a formidable challenge. In 1921, the California Senate passed a bill that would have adopted the Marshall Plan as the state water plan and funded construction, but the California Assembly voted it down. The plan was then put to a vote in a statewide initiative, where it suffered a second defeat. There were two more initiative elections in 1924 and 1926, with the measure falling short of a majority vote each time. Meanwhile, the state legislature provided funds for state engineers to conduct technical studies and make refinements to the proposed state water plan. California state engineer Edward Hyatt oversaw these studies and was responsible for revisions to the plan through the decade.³¹

During the 1920s, interest grew in the development of hydroelectric power. The rising technology added another element to multipurpose water development planning. In 1925, proponents of the state water plan formed the Central Valley Project Association. The group championed hydroelectric power, arguing that the production and sale of power by the state could offset the high construction cost of water development. Meanwhile, Pacific Gas and Electric (PG&E), California's powerful utility company, became the state water plan's most formidable opponent. PG&E did not want to see the state or the federal government involved in the public power business, then largely entrusted to private companies. PG&E tried to raise fears that the project was too big for the state's coffers, while the Central Valley Project Association countered that the power company's real concern lay in its narrow interest in keeping the state out of the public power business. The public power controversy muddled the whole water development picture, making the pros and cons of the state water plan more complicated for the public to understand. On the other hand, it recalled the earlier battles of the Progressive Era in which "the people" appeared pitted against "the interests."³²

³⁰ De Roos, *The Thirsty Land*, 21; Lee, "California Water Politics," 64, 69–74.

³¹ Lee, "California Water Politics," 64–66.

³² Roos, *The Thirsty Land*, 21; Lee, "California Water Politics," 67.

From State Water Plan to Central Valley Project

In 1931, the state published the state engineer's latest iteration of the state water plan, and what was now called the State Water Project was once again put to the people. California was then in the depths of the Great Depression. Farm income had fallen by half in two years. Bank failures were rampant. With unemployment rates surging across the nation, California was host to an estimated 100,000 jobless, unhoused itinerants from other states. Some argued that in the depressed economy the state government had no business embarking on a massive public works project; others suggested that it would be just the thing to provide jobs and economic relief.

About the same time that the State Water Project was receiving renewed attention, a federal-state commission on the proposed Boulder Dam project and the proposed Central Valley Project concluded its work with favorable recommendations on both projects. The CVP was a large piece of the State Water Project, and now the commission considered the idea of federal involvement in the project. The federal-state commission, known as the Hoover-Young Commission, recommended that the federal government construct the Boulder Dam and the CVP and the state would operate the facilities and repay the capital costs with interest. Governor James Rolph endorsed this proposal, despite being a fiscal conservative who started from the position that economic relief was a responsibility of private charities or local government. Given the condition of the economy and depressed state tax revenues, he recognized that the state had no real prospect of building the ambitious CVP without federal help. So, he surprised many by joining those promoting public works projects as a form of economic relief. The Republican governor held to that position even when the Democratic Party swept into power in the national election of 1932 on the promise of providing much more federal relief than the Republican Hoover administration did. Rolph wired President Franklin D. Roosevelt shortly after he took office, requesting federal assistance for the CVP. The Republican-controlled state legislature fell in step, passing a bill to authorize a bond issue to raise \$170 million for the project. The total amount of state bonds was to be reduced by the amount of funds in federal aid as soon as it appeared.³³

The state law, called the Central Valley Project Act, provided for public production of hydropower. This was a pill that Republicans in the state legislature had to swallow, because the Roosevelt administration in Washington insisted: "No public power, no federal aid." PG&E lobbied against the bill and lost. But the utility company did not give up. It launched a public campaign against the CVP, arguing that the project would bankrupt the state. It succeeded in getting a referendum on the Central Valley Project Act placed on the next election ballot. The referendum vote took place on December 19, 1933. Despite low

³³ Lee, "California Water Politics," 65–66; Roos, *The Thirsty Land*, 21–24.

voter turnout, it succeeded by a narrow margin. Voters in northern California prevailed over voter opposition in southern California, centered in Los Angeles, where many residents thought they had little to gain from state support of agriculture in the Central Valley.³⁴

The Central Valley Project Act authorized construction of four main features of the CVP. These were: a dam and powerplant on the Sacramento River at Kennett (the future Shasta Dam), a dam and powerplant on the San Joaquin River at Friant (the future Friant Dam), a transmission line, including substations and other works, between Kennett and Antioch (in the Delta), and the Contra Costa, Madera, and Friant-Kern canals. The state was unable to start on these projects, however, because Californians were reluctant to purchase bonds creating too little revenue. PG&E's campaign against the CVP probably contributed to the public's leering. The state had to await federal aid.³⁵

With the CVP's authorization, hydroelectric power generation became integral to water development. The hydropower component laid the foundation for the later Trinity Division and the Whiskeytown Dam because hydroelectric power helped facilitate and pay for the transfer of water from one basin to another, in this case the transfer of water from the Trinity River over the mountain to Clear Creek. With the addition of hydropower, water conveyance systems could include sections where the water was pumped uphill; they did not have to be "gravity-fed," or oriented strictly downhill. Marshall's idea of transferring water between basins was still novel in 1920; with the rise of hydroelectric power such transfers became more feasible and ambitious. As early as 1926, water developers began to contemplate diverting water from the Trinity River basin into the Sacramento River basin.³⁶

The Bureau of Reclamation Takes Charge

In 1931, the U.S. Army Corps of Engineers endorsed the California's state water plan and recommended that the federal government help construct Kennett (Shasta) Dam. In the same year, the Bureau of Reclamation offered its approval, too, and suggested that "the federal government through the Bureau of Reclamation may be the most appropriate agency to undertake the execution of this project."³⁷ These two agencies became rivals for control of California's water resource development.

The Corps of Engineers was much the older of the two agencies, dating back to the Revolutionary War period. Its civil works program revolved around river and harbor improvements and flood control works. From an early period in the nation's history, when

³⁴ Lee, "California Water Politics," 66–67.

³⁵ Roos, *The Thirsty Land*, 25; Hundley, *The Great Thirst*, 252–57.

³⁶ "Dams will Divert Trinity Through Tunnels to Keswick," *Redding Record-Searchlight*, Aug. 1, 1953.

³⁷ Billington and Jackson, *Big Dams of the New Deal Era*, 273.

the U.S. Congress looked favorably on making “internal improvements,” it charged the Corps of Engineers with designing and building structures on the nation’s navigable waterways. It did so through periodic Rivers and Harbors Acts. The civil works program made the agency a magnet for pork-barrel spending and a darling of Congress, particularly after Congress expanded the civil works program to include flood control works. The Corps of Engineers’ civil works division grew into a large government bureaucracy with offices in most states.

The Bureau of Reclamation was a much smaller, younger agency limited geographically to the western states. Despite some early challenges with its reclamation projects, the agency was mission-oriented with an esprit de corps. It was the more modern of the two agencies, more adept with hydropower development, and it was two steps ahead of the Corps of Engineers in building recreation into its reservoir sites, starting in the 1930s. As an agency of the Department of the Interior, it worked well with the National Park Service.

With the impetus of the New Deal’s central planning and federal relief spending initiatives, both the Corps of Engineers and the Bureau of Reclamation were prepared to step up operations. But the smaller Bureau of Reclamation had much more to gain. The coming two decades would mark this agency’s heyday.³⁸

As the New Deal took shape in 1933, the Corps of Engineers recommended that \$7.7 million in federal funds should back the Kennett Dam construction and that the federal government provide as much as 30 percent of the total cost of the state water plan. In 1934, it increased the recommended contribution to Kennett Dam to \$12 million. In 1935, Congress’s House Committee on Rivers and Harbors approved the plan for the Corps of Engineers to work on Kennett Dam because it involved flood control and navigation on the Sacramento River. At that point they assumed that the Corps of Engineers would take the lead on Kennett Dam in the upper Sacramento Valley while the Bureau of Reclamation would lead on Friant Dam and the canals in the upper San Joaquin Valley where there was no navigation. But in September 1935, President Roosevelt signed an executive order directing \$20 million from emergency relief funds to the Bureau of Reclamation for construction of irrigation and reclamation works “in accordance with reclamation law,” and two months later Roosevelt approved the “Central Valley development” as a “Federal Reclamation Project” and signaled that the Bureau of Reclamation would be the lead federal agency for the entire project. The Corps of Engineers attempted to wrest control back but failed. The president’s prerogative to use emergency relief funds for civil works was challenged in court and struck down by the Supreme Court in 1936. Congress affirmed the president’s decision in the Rivers and Harbors Act of 1937, which

³⁸ Clarke and McCool, *Staking Out the Terrain*, 96–97.

stipulated that the \$12 million previously recommended for expenditure toward the CVP would be expended “in accordance with the said plans by the Secretary of the Interior instead of the Secretary of War.”³⁹

Although these developments resolved the matter of which federal agency would have the lead in the CVP, it presented a problem. The wording of the president’s executive order, naming the CVP a “Federal Reclamation Project,” assumed significance because it invoked the 160-acre limitation on water use for irrigation embedded in reclamation policy and was meant to guard against monopolistic control of irrigation projects. The land ownership pattern in the Central Valley followed big tracts of agricultural land that far exceeded the 160-acre limitation. Most of the irrigable land was in tracts too big to be eligible under the law. Moreover, in all of the acreage comprising tracts greater than 160 acres, over half was owned by just 6 percent of the landowners. While state officials were glad to receive federal aid for the CVP, the federal-state project now had to contend with that ill-fitting provision stemming from the Reclamation Act of 1902.⁴⁰

Shasta Dam

With federalization of the CVP, the name of the dam at Kennett changed to Shasta. Construction of this massive dam began in 1938 and ended in 1945. Positioned in the upper end of the Sacramento River watershed, it would provide 4.5 million acre-feet of water storage for the CVP and allow controlled releases of water to assist with navigation and flood control on the lower Sacramento River and tidewater intrusion in the Delta. Shasta Dam has additional significance for Whiskeytown National Recreation Area because of its relative proximity. Located within Shasta County, Shasta Dam is about ten miles northeast of Whiskeytown Lake, as the crow flies. After completion, Shasta Dam became the guide for the subsequent development of dams in the Trinity River Division, including Whiskeytown Dam.

Shasta Dam fits squarely in the tradition of big federal dams constructed during the New Deal. It is among a handful of dams profiled in a joint Corps of Engineers and Bureau of Reclamation study authored by historians David P. Billington and Donald C. Jackson. As the authors note, the New Deal undergirded what is known as the big dam era when the

³⁹ Eric A. Stene, “The Central Valley Project: Controversies Surrounding Reclamation’s Largest Project,” 5–6, <http://www.riversimulator.org/Resources/USBR/ReclamationHistory/SteneEricA.pdf>.

⁴⁰ Billington and Jackson, *Big Dams of the New Deal Era*, 274–75; Hundley, *The Great Thirst*, 260–61. Large and small landholders tussled over the acreage limitation for decades. Some found ways to circumvent it. For a period, the acreage limitation was branded as un-American or Communist and the Bureau of Reclamation suspended enforcement. Congress enacted the Reclamation Reform Act in 1982, raising the acreage limitation in the CVP to 960 acres. Circumvention continued, however. See Eric A. Stene, “The Central Valley Project: Controversies Surrounding Reclamation’s Largest Project,” 8–12, <http://www.riversimulator.org/Resources/USBR/ReclamationHistory/SteneEricA.pdf>.

federal government embarked on a large-scale program of building large, multiple-purpose dams throughout the United States (with concentrations of those dams in the arid West and humid South). Billington and Jackson speak to the interactions between politics and engineering that made the big dam era possible. They contend that the large federal dams of the 1930s are noteworthy not so much for their innovative designs as for the ambitious scale of production. If there was innovation, they say, it was found in the way the federal government organized dam construction to pump money into the economy and to put people to work.⁴¹

Shasta Dam is a concrete gravity dam with a very stout base-to-height ratio. It has a maximum base thickness of 580 feet and a height of 602 feet. It is 3,460 feet long at the crest. With its thick base and massive dimensions, it required six million cubic yards of concrete to build. So big was the job that the Bureau of Reclamation made the procurement and supply of concrete into a separate construction contract. Rock aggregate used in the concrete was brought to the damsite by a 9.5-mile-long conveyor belt. Some 12 million tons of material was carried over the system, enough to fill 244,000 railroad cars and make up a train over 2,000 miles long. Once the concrete was mixed onsite, it was hoisted in eight-cubic-yard buckets and carried aloft in an elaborate aerial cableway system for dumping at the required spot.⁴²

While the federal government suspended work on many dam projects during World War II, construction of Shasta Dam went forward to secure hydroelectric power for war production. Due to chronic labor shortages and a labor strike in 1943, as well as supply chain issues, construction fell behind schedule. The damming of the river was completed in 1945, and water impoundment began. However, the power-generating plant was not completed until 1950, five years behind schedule. It had a rated capacity to produce 375,000 kilowatts annually (since upgraded from that).⁴³

As in the case of Whiskeytown Lake, workers had to clear the reservoir site. Forest had to be removed and roads had to be rerouted prior to water impoundment. While dam construction was underway, two Civilian Conservation Corps (CCC) camps and one contractor crew cleared the forest. Another contractor removed graves from several small burial places in the area. The Bureau of Reclamation established two cemeteries on government land to receive the human remains. A total of 301 burial remains were exhumed, 118

⁴¹ Billington and Jackson, *Big Dams of the New Deal Era*, 6–8.

⁴² Billington and Jackson, *Big Dams of the New Deal Era*, 275–82; “Shasta Dam Scrapbook,” *The Covered Wagon* (1988): 6–10.; Mary Crowe, “Shasta Dam,” *The Covered Wagon* (1986): 11.

⁴³ Eric A. Stene, “Shasta Division, Central Valley Project,” project history prepared for the Bureau of Reclamation, 1996, 13–14; Billington and Jackson, *Big Dams of the New Deal Era*, 282–85.

white and 183 Wintu. But there were irregularities in the way the Wintu graves were exhumed, and not all Wintu homes and burial sites located within the area were fully accounted for, leaving bitter feelings that persist to this day among the displaced Wintu.⁴⁴

Before Shasta Lake was formed, smelter fumes had already denuded much of the area of its forest cover. With dead trees covering whole mountainsides, the area was prone to excessive soil erosion. That meant Shasta Dam would be susceptible to an unusually rapid rate of siltation. To counter that effect, the Bureau of Reclamation undertook forest restoration in areas above the reservoir fill line. One method used to catch soil during the spring runoff, slow the rate of siltation, and prepare denuded slopes for reforestation was to take military-surplus steel mats produced for use on improvised airfields and lay them on the exposed areas. James K. Carr, who would later be instrumental in the creation of Whiskeytown National Recreation Area, oversaw this work as a young engineer in the Bureau of Reclamation's Chico office in the years immediately following World War II.⁴⁵

Keswick Dam, which serves as the afterbay for Shasta Dam, was built between 1941 and 1950. Like the much bigger construction project upstream of it, labor shortages and a labor strike during World War II slowed construction of Keswick Dam. The government suspended the construction contractor's work on Keswick Dam for a period in 1942–1943 and again in 1948. The project was completed in 1950, with the Keswick Powerplant going into production on March 31, 1950.⁴⁶

Once completed, the Shasta Dam complex formed the keystone to the entire CVP. Shasta Lake stores water in the upper Sacramento River basin for controlled releases to the south. The Shasta Powerplant utilizes a portion of the water for hydroelectric power production. Keswick Dam, located nine miles downstream of Shasta Dam, controls river fluctuations from the Shasta Powerplant. Thirteen years after the completion of the Keswick Dam, the Keswick Reservoir would also catch water from the Trinity River diversion through the Spring Creek Power Conduit. The Spring Creek Powerplant and the Keswick Powerplant together generate about 417,000 kilowatts annually.

Iron Canyon Dam

Iron Canyon Dam never got beyond the proposal stage. It is significant to Whiskeytown National Recreation Area because the dam proposal aroused strong opposition in Shasta County and spurred action on the Trinity River Division and Whiskeytown Dam. If built,

⁴⁴ Stene, "Shasta Division, Central Valley Project," 17–18; Marc Dadigan, "U.S. Celebrates Dam; Wintu Say It Is 'Scar That Will Never Heal,'" *Indian Country Today*, Sept. 20, 2013, updated Sept. 13, 2018, <https://ictnews.org/archive/us-celebrates-dam-wintu-say-it-is-scar-that-will-never-heal>.

⁴⁵ Lawson, *Redding and Shasta County, Gateway to the Cascades*, 73–74.

⁴⁶ Stene, "Shasta Division, Central Valley Project," 18–21.

the Iron Canyon Dam would have flooded a huge area of the upper Sacramento Valley between Red Bluff and Redding. The direct alternative to the Iron Canyon Dam was to build several dams on tributary streams, including Whiskeytown Dam on Clear Creek. The alternative was more expensive than building one dam on the mainstem of the Sacramento River, but it preserved the valley floor for farming. The tributaries plan was eventually selected in place of the proposed Iron Canyon Dam.⁴⁷

The Iron Canyon damsite attracted interest as early as 1902. The Reclamation Service, studying the area in conjunction with the Forest Service, the Geological Survey, and the state of California, viewed the area around the damsite as a potential federal reclamation project. With each subsequent investigation, the proposed dam got higher and the proposed storage reservoir larger. Marshall highlighted the location in his 1920 water development plan, suggesting that a high dam constructed in Iron Canyon could form a huge storage reservoir capable of supplying most of the irrigation water needed in the Central Valley. The state water plan in the 1920s basically took Marshall's idea of a big dam in the north and substituted the Shasta damsite in place of the Iron Canyon damsite.⁴⁸

As the Shasta damsite acquired favor, the Iron Canyon damsite was not renounced; it was only set aside. By 1930, the state's plan in the Upper Sacramento Valley consisted of a large reservoir at the Kennett (Shasta) damsite, after which there would probably be a "maximum importation" of water from the Trinity River effected through a "Trinity River Diversion." One idea for the diversion project was to dam Clear Creek and establish a "Whiskeytown Reservoir." In a 1930 memorandum on the proposed Whiskeytown dam and reservoir, state engineer J. D. Galloway stated that "no reservoir is required at the Iron Canyon site near Red Bluff." But elsewhere in the memorandum he noted that considerable water enters the Sacramento River between Kennett and Red Bluff and "some of this water cannot be regulated by Whiskeytown and Kennett reservoirs." So, Galloway's dismissal of the Iron Canyon Dam notwithstanding, the state engineers' prevailing thought was that "there should be no suspension of efforts to locate a suitable storage site" of more than a million acre-feet at Iron Canyon.⁴⁹

The Iron Canyon dam proposal ignited a classic contest between upstream and downstream interests. Irrigators in Tehama County below Red Bluff stood to gain from the project, while upstream farmers in Shasta County had everything to lose as water would

⁴⁷ This Iron Canyon Dam is not to be confused with a relatively small Iron Canyon Dam built on Iron Canyon Creek in Shasta County by PG&E in 1965.

⁴⁸ Walker R. Young, "Report on Iron Canyon Project—California," in Paul Bailey and Walker R. Young, *The Development of the Upper Sacramento River* (Sacramento: California State Printing Office, 1928), 80–81; Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, at 144–47 (1956).

⁴⁹ J. D. Galloway, "Engineering Advisory Committee Sacramento River Basin Investigations," July 1930, and Fred H. Tibbits, Sacramento Advisory Board, State Water Resources Investigation, to A. D. Edmonston, Deputy State Engineer in charge of Water Resources Investigation, September 30, 1930, WNRA, CRM Files, copies in File: Central Valley Project.

inundate their farms and they would be forced to relocate. Communities with a stake in flood control and navigation who were downstream sided with the irrigators in Tehama County, while sportsmen's groups with a stake in preserving wildlife habitat and the free-running river took the side of the threatened landowners upstream. In the 1920s and 1930s, Judge Francis Carr led the opposition to the dam. Carr supported other features of the CVP including Shasta Dam, Keswick Dam, Friant Dam, and the canals in the San Joaquin Valley, but he strongly opposed Iron Canyon Dam.⁵⁰

The dam's opponents received a jolt when the project was included as an authorized project for the Corps of Engineers in a U.S. House bill that would become the Flood Control Act of 1944. Many townspeople in Redding joined in opposing the project after learning that the Corps of Engineers proposed an even higher dam, which it called Table Mountain Dam, at virtually the same location of the proposed Iron Canyon Dam. Table Mountain Dam would enlarge the intended reservoir to the extent that stored water would back up in the valley all the way to the outskirts of the town of Redding. The so-called Table Mountain Reservoir would involve construction of protective dikes around the edge of Redding, while it would totally eliminate the towns of Anderson and Cottonwood.⁵¹

The fight over the proposed dam and reservoir was a political test for Congressman Clair Engle, who would later spearhead the legislation behind the Trinity River Division and Whiskeytown Dam. A resident of Tehama County who began his political career as a young district attorney in the 1930s, Engle, a Democrat, was appointed to the U.S. House of Representatives in 1943 following the death of Republican Congressman Harry L. Englebright. He faced the controversy over the reservoir while running his first election campaign in 1944 to hold his seat in Congress. Though sensitive to the perspective of his Shasta County constituents, he was a strong advocate for the CVP just like his political mentor, Judge Francis Carr.

While the people of Shasta County tried without success to get Engle to fight the dam, they suffered another loss when their longtime leader, Judge Carr, died suddenly of a heart attack in August 1944. The bill with the authorization for Table Mountain Dam passed the Senate in September and was signed into law by Roosevelt in December.⁵²

In 1945, another individual came to lead opposition to the Iron Canyon–Table Mountain Dam project. He was James K. Carr, one of Francis Carr's seven talented offspring, several of whom would make their mark on Shasta County and Whiskeytown National Recreation Area in coming years. James K. Carr would eventually be an undersecretary to the Secretary of the Interior in the Kennedy administration. Trained in civil engineering and employed by the Bureau of Reclamation since the 1930s, he was by this

⁵⁰ Patrick Carr, "Saga of the Iron Canyon/Table Mountain Dam Project," *The Covered Wagon* (2017): 70–73.

⁵¹ Carr, "Saga of the Iron Canyon/Table Mountain Dam Project," *The Covered Wagon* (2017): 75–78.

⁵² Carr, "Saga of the Iron Canyon/Table Mountain Dam Project," *The Covered Wagon* (2018): 52–59.

time serving as assistant to regional director Charles F. Carey. Carr now worked from inside the bureau to defeat the Iron Canyon–Table Mountain Dam by making the tributaries plan into a preferred alternative. Working with his friend Oliver Carter, a judge and now a state senator representing Shasta County, the two men persuaded the California state legislature to adopt the tributaries plan, effectively nixing the Iron Canyon–Table Mountain Dam despite its authorization at the federal level. As a result, the Trinity River Division began to receive much more serious consideration.⁵³

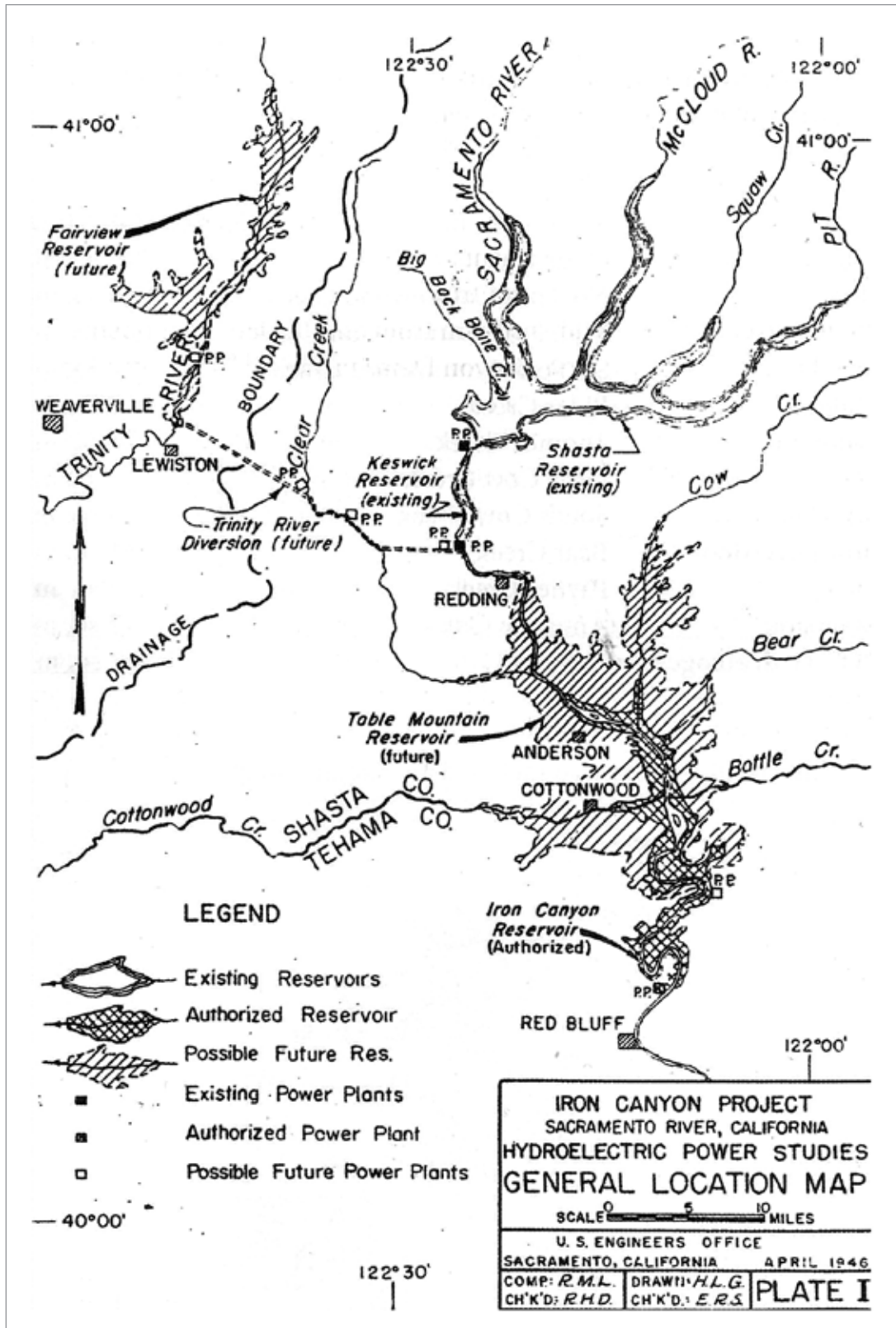
Trinity River Division

Under formal study since 1923, the Trinity River diversion was added to the state water plan in 1931. The Bureau of Reclamation began intensive study of the project in 1943 and completed its feasibility report in 1951. The bureau held a public hearing in Weaverville in 1952. Congress authorized the project, adding it to the CVP, in 1953. A push by Shasta County to add Whiskeytown Dam to the Trinity River Division culminated in hearings before Congress in 1954 and 1955, followed by re-authorization of the project with water development on Clear Creek included. The Bureau of Reclamation made some final investigations, executed construction contracts, and commenced construction in 1956.⁵⁴

Trinity River Division planning reflected the Bureau of Reclamation at the height of its influence and power. The project involved a different set of considerations and priorities than previously. Power and water for irrigation were the project's principal benefits, while fish and wildlife conservation and recreation were of rising importance. Flood control and navigation were relatively minor considerations in the Trinity River Division. The Corps of Engineers was not involved. When the state backed out of the project in 1945, the Bureau of Reclamation forged ahead undaunted. The bureau turned to other agencies in the Department of the Interior for support: the National Park Service and the Fish and Wildlife Service, as well as the Forest Service (which is not in the Department of the Interior but is treated as such by the House and Senate interior oversight committees). Those sister agencies conducted their own investigations of the project at the bureau's behest, focusing on recreation and fish and wildlife, and provided their own lengthy reports with favorable recommendations, buttressing the project's prospects for approval and funding.

⁵³ Carr, "Saga of the Iron Canyon/Table Mountain Dam Project," *The Covered Wagon* (2018): 60–65.

⁵⁴ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 907 (1956); Committee on Interior and Insular Affairs, *Central Valley Project Documents Part Two*, House Doc. No. 246, 787 (1957); Stene, "Trinity Division: Central Valley Project," 3–4.



Map 8. The proposed Iron Canyon dam and reservoir would have flooded the upper Sacramento Valley. The proposal gave impetus to building multiple dams on tributaries instead.
 (From Patrick Carr, "Saga of the Iron Canyon/Table Mountain Dam Project," *The Covered Wagon* [2017]: 65-80.)

The Trinity River Division had to pass muster according to the formula that Congress had developed earlier for public works projects of the Corps of Engineers. The Bureau of Reclamation had to demonstrate a benefits-to-costs ratio of better than one-to-one to justify the outlay of federal funds. After all the investigations and feasibility studies, the Trinity River Division was characterized not as a stand-alone project but as a modification of the CVP. Benefits would be spread over the whole CVP, and costs would be recouped from a wider project area. On that basis, it was presented as having a robust benefits-to-costs ratio of 3.07 to 1. Congress's formula also required that the Bureau of Reclamation allocate project benefits and costs according to the various project benefits and show which costs would be "reimbursable" or subject to probable repayment. In this instance, around 90 percent of project benefits were allocated to irrigation and commercial power and deemed reimbursable, while around 10 percent of project benefits were allocated to navigation, flood control, and fish and wildlife and deemed non-reimbursable.⁵⁵

The Bureau of Reclamation's plan for the Trinity River Division in 1952, before the addition of Whiskeytown Dam, called for the following elements: Trinity Dam and Reservoir, Trinity powerplant and switchyard, Lewiston diversion dam and reservoir, Lewiston powerplant, Tower House tunnel, Tower House powerplant and switchyard, Tower House diversion dam and reservoir, Matheson tunnel, Matheson powerplant and switchyard, transmission lines and substations, and Keswick switchyard additions. The Tower House tunnel would have run on a tangent from the Lewiston Reservoir to the vicinity of Tower House for eight miles compared with the eleven-mile length of the Clear Creek Tunnel that was actually built. Then the Matheson tunnel would have continued along that same tangent for another nine miles, terminating at the upper end of the Keswick Reservoir. The capital cost of the Trinity River Division without Whiskeytown Dam was valued at \$207,334,000. Included in the cost of construction was \$14,497,000 for expansion of the steam electric powerplant in the Delta area of the CVP.⁵⁶

Trinity Dam, located on the upper Trinity River, would impound up to 1,800,000 acre-feet of water. (Only about a third of that capacity would be diverted to the CVP; some stored water would be released down the Trinity River, some stored space would be held in reserve for extreme flood stage, and some water in the reservoir would always remain at a level below what could be released through the dam, the so-called dead pool.) The powerplant had a design head of 313 vertical feet, with capacity to generate 75,000 kilowatts. Lewiston diversion dam and reservoir, which was the afterbay for Trinity Dam and the diversion structure for the Tower House tunnel, would impound another 2,000 acre-feet of water while the powerplant would generate another 2,000 kilowatts. According to the 1952

⁵⁵ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 868 (1956).

⁵⁶ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 867 (1956).

plan for the Trinity River Division, the Tower House tunnel would convey the stored water from the Trinity River watershed to the CVP. The 1952 plan put the Tower House tunnel's capacity at 1,700 cubic feet per second. The Tower House powerplant (which would have been located a few miles north of the Judge Francis Carr Powerhouse in the vicinity of Tower House) had a design head of 556 feet and would generate 66,000 kilowatts. The Tower House diversion dam (never built and superseded by Whiskeytown Dam) was planned as a small concrete dam across Clear Creek to capture the waters of Clear Creek along with the big charge of water from the Trinity River and control releases into the Matheson tunnel. The Matheson tunnel (never built, as Whiskeytown Lake took its place and shortened the distance to the Keswick Reservoir by way of the Spring Creek Power Conduit) was projected to have a capacity of 1,700 cubic feet per second. The Matheson powerplant was to operate under a design head of 641 feet with a capacity of 73,000 kilowatts.⁵⁷

In 1952, the Bureau of Reclamation estimated that the Trinity River Division would deliver another 1,010,000 acre-feet of water to the CVP. Around 600,000 acre-feet would come directly from the Trinity River watershed, while the remainder would come from enhanced coordination of storage and release from Central Valley reservoirs and fuller utilization of erratic natural stream flows in Central Valley streams. The commercial power generated by the Trinity and Lewiston dams would be used in Trinity County; the power production from the Tower House and Matheson powerplants would feed into the CVP power grid.⁵⁸

To these Trinity River Division developments would be added the Whiskeytown Dam, Francis Carr Powerhouse, and associated works, which are the subject of the next chapter.

⁵⁷ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 863-64 (1956).

⁵⁸ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 862 (1956).

CHAPTER SEVEN

Water Development Part II: The Making of Whiskeytown Dam

Addition of Whiskeytown Dam to the Trinity River Division

Credit for the making of Whiskeytown Dam belongs to Clair A. Hill. A native of Redding, Hill was a civil engineer and expert on water resources. Born in 1909, Hill studied forestry at Oregon State University before graduating from Stanford University in 1934 with a degree in civil engineering. He worked for a brief time for Standard Oil Company and then the California Department of Transportation before returning to his hometown and starting his own engineering firm, Clair A. Hill and Associates. During World War II he served in a bomb disposal unit in the Aleutian Islands, returning to Redding after the war to resume his private business. In 1949, he was appointed to the California Water Commission and served for the next thirty years. Hill followed developments concerning the Trinity River Division keenly. He believed that adding a big dam on Clear Creek to enhance the project's water-supply and power-generating potential for Shasta County would improve the project design. In 1953, he presented his idea of a dam on Clear Creek below Whiskeytown to the Shasta County Board of Supervisors, which asked him to draw up a plan. Hill also presented his idea to the Redding City Council and the Redding Chamber of Commerce. In June 1954, Hill completed his plan for the Shasta County Board of Supervisors, and in September the board hired him as a consultant to advise the board and represent the county's interest while the matter was before Congress. He led the local effort to get Whiskeytown Dam added to the Trinity River Division.¹

Congressman Clair Engle, whose district included Shasta County, sought congressional re-authorization of the Trinity River Division in more explicit terms than before in 1953. He introduced a bill, H.R. 123, for this purpose. The House Committee on Interior

¹ Joseph E. Patten, "History of Clair A. Hill Whiskeytown Dam and Reservoir," *The Covered Wagon* (2006): 80; Shasta County Department of Water Resources, "Summary Report," typescript prepared by Joseph E. Patten, October 1956, copy at Redding Public Library, Redding, Calif.; Ben C. Gerwick, "Clair A. Hill," *Memorial Tributes* 10 (2002): <https://nap.nationalacademies.org/read/10403/chapter/25>.

and Insular Affairs held a hearing on the bill in Redding on April 16, 1954. The committee heard testimony from Hill as well as the state engineer and local officials. Neither Hill nor Engle was prepared to describe Whiskeytown Dam at this juncture, but they wanted the legislation to allow for such a structure. Hill suggested that the legislation should be worded to accommodate “possible changes in project details if engineering studies should show it to be desirable.” Congressman Engle agreed and underscored what Hill said to his fellow committee members, saying “any legislation that goes through on the Trinity should be sufficiently flexible to permit our taking advantage of all the improvements that engineering makes possible in the construction of the project.”²

As Hill developed his plan for Whiskeytown Dam he communicated his ideas to James Carr, then manager of the Chico office of the Bureau of Reclamation and in close communication with Engle. Carr traveled to the Washington D.C., to consult with the House Interior Committee. Engle incorporated Hill’s and Carr’s ideas into his bill for re-authorization of the Trinity River Division, which became H.R. 4663. The bill was written in such way that it still did not specifically mention Whiskeytown Dam, but the language provided the kind of flexibility that Hill and Engle discussed in the hearing. Carr probably drafted the language. It called for “such controls and conservation of Clear Creek flows as the Secretary determines proper to carry out the purposes of the Act.” H.R. 4663 passed both the House and Senate and was signed into law by President Eisenhower on August 12, 1955 (69 Stat. 719).³

The Bureau of Reclamation was not immediately persuaded by Hill’s plan for Whiskeytown Dam. After Congress re-authorized the Trinity River Division with allowance for works of one kind or another on Clear Creek, the Bureau of Reclamation conducted further evaluations of what it called Clear Creek Alternates. The alternates largely revolved around the best route for tunnels or conduits for diverting water from one watershed to the other. One route—the most direct and least expensive for conveying water from Trinity Reservoir to the CVP—would have eliminated Lewiston Dam as well as Whiskeytown Dam and instead involved a single long tunnel from the north end of Trinity Lake to the north end of Keswick Lake at Corum, about a mile below Shasta Dam. Since the conduit would begin on the Papoose Arm of Trinity Lake, it was called the Papoose Alternate. It would have been a lot cheaper to build, but it would have meant no utilization of Clear Creek for water supply or hydroelectric power. As such, it provided no benefits to Shasta County. Furthermore, it would have eliminated anticipated benefits to Trinity County. Citizens of Trinity County reluctantly gave their support to the Trinity River diversion only because

² Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 877 (1956); Patten, “History of Clair A. Hill Whiskeytown Dam and Reservoir,” 81.

³ Patten, “History of Clair A. Hill Whiskeytown Dam and Reservoir,” 81–82; Committee on Interior and Insular Affairs, *Central Valley Project Documents Part Two*, House Doc. No. 246, 783–87 (1957).

they were promised hydroelectric power and recreation benefits. The constant-level Lewiston Lake would be especially enticing for recreation. So, officials eliminated the Papoose Alternate.

The Whiskeytown Dam Alternate offered many advantages. The dam and reservoir would provide more water and much greater flexibility in power operations. The power-generating capacity of the whole Trinity River Division was increased significantly. The lake formed by the dam would provide recreational benefits. It would also provide regulated cold-water releases in lower Clear Creek for fish, and nominal flood control. Moreover, the length of the lake would substitute for about four miles of tunnel, a cost savings.⁴

The Whiskeytown Dam Alternate was selected and incorporated into the Trinity River Division as described in the Bureau of Reclamation's *Trinity River Division, Central Valley Project, A Report on the Plan of Development*, issued in February 1957. In this final plan, the Tower House tunnel became the Clear Creek Tunnel, the Tower House powerplant became what is now the Judge Francis Carr Powerhouse, and the Matheson tunnel and powerplant became the Spring Creek Power Conduit and Spring Creek Powerplant. The projected gains in water supply and power generation are shown in the following table:

Table 3.
Power Plant, Original Plan and 1957 Plan⁵

Feature	Original Plan	1957 Plan
Trinity Reservoir capacity	1.8 mil. acre-feet	2.5 mil. acre-feet
Whiskeytown Lake	-	250,000 acre-feet
Trinity Powerplant	75 MW	69 MW
Tower House/Judge Francis Carr Powerplant	66 MW	130 MW
Matheson/Spring Creek Powerplant	75 MW	143 MW

As Trinity River Division planning moved toward final authorization, PG&E tried to get control of the hydroelectric power component. It proposed that it build the powerhouses and all the transmission lines and purchase the “falling water” from the government. It offered to pay the government \$3.5 million per year for the use of the falling water. PG&E lobbied Congress as well as the Shasta County Board of Supervisors, the Redding City Council, and the Redding Chamber of Commerce. Congressman Engle was adamantly opposed to it, and all the local entities resisted PG&E's offer as well. However, PG&E's failed bid did influence the project in one other respect. The Bureau of Reclamation took PG&E's advice to enlarge the diameter of the tunnels and penstocks by a considerable

⁴ Patten, “History of Clair A. Hill Whiskeytown Dam and Reservoir,” 84.

⁵ Patten, “History of Clair A. Hill Whiskeytown Dam and Reservoir,” 83.

amount, which more than doubled the maximum flow and thereby increased the peaking capacity of the powerplants. Power peaking refers to turning up the volume of flow through the turbines to match times of peak energy demand.⁶

Dams and Fish

The CVP project developed against a backdrop of imperfectly known tradeoffs between economic development and environmental consequences. Dams were known to block migratory fish runs and to alter natural water flows in ways that affect fish habitat, but proponents of the dams argued that a certain amount of fish loss could be mitigated through fishery protection features built into the dam systems. Dam projects often pushed the idea that, despite alterations to fish habitat, fish loss in one place could be replaced by fish propagation in another place, especially with the aid of fish hatcheries. Those assumptions were modified in the mid- to late twentieth century when environmental awareness grew, and anadromous fish populations showed unacceptable levels of decline. The relationship between the CVP and fish conservation changed markedly when Congress enacted the Central Valley Project Improvement Act of 1992. In the period leading up to the construction of Whiskeytown Dam, however, the prevailing view was that the CVP was making adequate provision to protect fisheries.

There are two species of anadromous salmonids indigenous to the Central Valley: chinook or king salmon and steelhead trout. Salmon begin their life cycle in inland waters, swim out to sea as juveniles, live for one to six years in the ocean, and return to their home waters as adults to spawn and then die. Different stocks of salmon make their return migration upriver in different seasons. Historically, the spring-run salmon stock was by far the most abundant. These adult salmon migrated all the way up small tributary streams swollen by spring snowmelt to reach spawning areas located in the headwaters of the Sacramento and San Joaquin River basins. They laid up through the hot summer in higher-elevation pools kept cool by snowmelt and spawned in the fall. Dam construction decimated those spring-run salmon stocks, including Shasta Dam, that blocked access to myriad headwater streams.⁷

Many winter-run salmon stocks aimed for the upper reaches of the Sacramento and San Joaquin River basins and were likewise cut off from their spawning grounds by dams. A remnant of the winter run survives today on the main stem of the Sacramento River

⁶ Patten, "History of Clair A. Hill Whiskeytown Dam and Reservoir," 84; "Dams will Divert Trinity Through Tunnels to Keswick," *Record Searchlight*, August 1, 1955; Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 892–93 (1956).

⁷ Deitch and Kondolf, "The Incendiary Mix of Salmon and Water in Mediterranean-Climate California," in *Sustainable Water: Challenges and Solutions from California*, ed. Allison Lassiter (Oakland, CA: University of California Press, 2015), 272–73.

directly below Shasta Dam where cold-water releases from the dam keep water temperatures in the Sacramento River artificially low through summer. This remnant is called a “tailrace fishery” because its existence in that spot is, ironically, dependent on the cold-water releases from the dam.⁸

Fall-run salmon stocks entered inland waters when river temperatures dropped in mid- to late fall, and they swam upstream to spawning grounds in the lower reaches of the river basins. The fall run persisted in relatively greater numbers after the construction of dams because those areas remained largely accessible, although other environmental changes such as sedimentation on spawning beds, changes in water flow, and degradation of water quality reduced the fall-run salmon stocks overall.⁹

Steelhead trout also make seasonal runs, but the juveniles rear for longer in freshwater before going out to sea, and unlike salmon they may return to spawn and return to sea multiple times in the lifecycle. In their upriver migrations they are adept at timing their efforts to take advantage of temporary increases in water flows. Historically there were summer-run and winter-run steelhead trout in the Central Valley but only the latter survive today. Winter-run steelhead trout may enter spawning streams in summer, fall, or winter and will spawn a few months later in winter or spring.¹⁰

As the CVP took shape, fish conservation efforts followed the Fish and Wildlife Coordination Act of 1934 and amendments to the law from 1946 and 1958. The Bureau of Reclamation and the Corps of Engineers consulted with the Bureau of Fisheries, later the Fish and Wildlife Service, on ways to mitigate fish loss. The construction agencies conducted studies of fisheries in each affected stream, weighed the economic value of anadromous fisheries against other fish and wildlife benefits in their plans and proposals, and added developments such as fish hatcheries into the CVP as needed.

In 1942, the Bureau of Reclamation built the Coleman Fish Hatchery near the town of Anderson on Battle Creek to mitigate the loss of salmon and steelhead habitat in the Sacramento River basin above Shasta Dam. Reared hatchery fish were to offset the loss of natural production. Fish production at the hatchery began in 1943, and the operation under the Fish and Wildlife Service began in 1948. The Bureau of Reclamation built two more hatcheries, the Lewiston Hatchery on the Trinity River and the Nimbus Hatchery on the American River, and turned them over to the California Department of Fish and Game for operation.¹¹

⁸ Deitch and Kondolf, “The Incendiary Mix of Salmon and Water in Mediterranean-Climate California,” 273.

⁹ Deitch and Kondolf, “The Incendiary Mix of Salmon and Water in Mediterranean-Climate California,” 273.

¹⁰ “Steelhead Trout,” Northern California Water Association, <https://norcalwater.org/efficient-water-management/salmon/steelhead-trout/>.

¹¹ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part Two*, House Doc. No. 246, 414–15 (1957).

Mitigation for Shasta Dam also included construction of a fish trap at Keswick Dam. Adult salmon and steelhead swimming upriver were caught in the trap and hauled to the Coleman Fish Hatchery for spawning. The fish trap, part of the Keswick Dam structure, consisted of a concrete conduit through the dam with a five-by-five-foot sliding gate across it.¹²

Another mitigative action, fisheries scientists and managers thought, was to release cold water held in the bottom of a reservoir to cool a river's temperature downstream of a dam when cold water fish were stressed by warm temperature. In this way, cold water fisheries could be maintained or even introduced in streams where natural habitat conditions were previously marginal. Such was the thinking that went into fish and wildlife coordination for the Trinity River Division project. A report by the Bureau of Reclamation in 1952 stated that "a small loss in wildlife values" from dam construction would be "more than balanced by the improvement to the fishery in Trinity River and Clear Creek" from life-giving releases of cold water during the warmer months.¹³ Commissioner of Reclamation Wilbur A. Dexheimer wrote in his report to the House Interior Committee: "The fishery resources of the Trinity River Basin are an asset to the Trinity River Basin as well as the whole north coastal area. Accordingly, the Trinity River development has been planned with a view to maintaining and improving fishery conditions." He assured the committee that the project would operate "so as to insure the preservation and propagation of fish and wildlife" by way of cold-water releases in the Trinity River and in Clear Creek below their respective diversion points.¹⁴

The Bureau of Reclamation contended that the Clear Creek fishery without the Trinity River diversion was of nominal economic value. The natural creek came near to drying up by the end of each summer. Fall-run chinook salmon went up the creek to spawn when there was sufficient fall run-off to revive minimum needed flow, but even then the migrating fish could only get as far as the twelve-foot-high Saeltzer Diversion Dam, located 6.8 miles above the creek mouth. In this lower stretch of Clear Creek maximum water temperatures could approach 90 degrees Fahrenheit in summer, making it hard for spawn to rear there before making their journey to the sea. Resident fish in this reach included

¹² Dottie Smith, "Construction on Keswick Dam Began in 1941 and Reached Completion in 1950," *Redding Record Searchlight*, September 20, 2013.

¹³ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 865 (1956).

¹⁴ Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 909–10 (1956).

Sacramento squawfish, suckers, carp, and other coarse fish. The economic value of this small salmon run was estimated at \$5,800 annually, while the economic value of the resident fishery was placed at \$1,900 annually.¹⁵

Before adding Whiskeytown Dam to the Trinity River Division, it was expected that the proposed diversion of Clear Creek would indeed injure the small anadromous fishery in the lower reach of Clear Creek, but the loss would be negligible. The proposed schedule of releases down Clear Creek would be less than the natural flow, and water temperatures in late summer would remain high. There might be a modest benefit for salmon spawning due to reductions in stream velocities in years of high fall runoff. Overall, the Bureau of Reclamation estimated that the salmon run would decline about 10 percent. Meanwhile, there would be a small gain through the making of a resident warm water fishery in the forebay above the Clear Creek diversion. The new fishery would be worth about \$500 annually. Strictly from an economic viewpoint, the creation of a new warm water fishery in the forebay would offset the small decline in the Clear Creek salmon run.¹⁶

When Whiskeytown Dam was added to the project the outlook for the anadromous fishery on Clear Creek remained dim, but the possibilities for other Clear Creek fisheries brightened considerably. Releases from Whiskeytown Lake would provide a temperature control for waters in the creek downstream, which would allow a first-class trout fishery to develop there. More significantly, building the dam would present an opportunity to create a fishery in Whiskeytown Lake. The California Department of Fish and Game soon formulated a plan for stocking the lake. For the first two years it would stock the lake with cold water species such as rainbow trout and brown trout. (Non-migratory kokanee salmon were later added.) Once those species were established, it would add warm water species including largemouth bass, smallmouth bass, and bluegill. The National Park Service and the Forest Service, in a joint study, estimated that the economic value of fishing at Whiskeytown Lake would amount to \$70,000 in 1965 and would triple over the next fifty years as recreation increased.¹⁷

¹⁵ Committee on Interior and Insular Affairs, *Trinity River Division, Central Valley Project, California: Letter from Secretary of the Interior Transmitting the Report and Findings on the Trinity River Division of the Central Valley Project, California, Pursuant to Section 9 (A) of the Reclamation Project Act of 1939* (53 Stat. 1187), House Doc. No. 53 at 167–68 (1953).

¹⁶ Committee on Interior and Insular Affairs, *Trinity River Division, Central Valley Project, California: Letter from Secretary of the Interior Transmitting the Report and Findings on the Trinity River Division of the Central Valley Project, California, Pursuant to Section 9 (A) of the Reclamation Project Act of 1939* (53 Stat. 1187), House Doc. No. 53 at 172–73 (1953).

¹⁷ “Joint Study by Department of the Interior, Department of Agriculture,” appendix in *A Report on the Proposed Whiskeytown-Shasta-Trinity National Recreation Area* (Washington: Bureau of Outdoor Recreation, U.S. Department of the Interior, 1963), 21–22.

Reservoirs and Recreation

While Trinity River Division was under development, public policy on recreational use of reservoirs was evolving. There was an obvious connection between big dam projects and outdoor recreation: dams formed artificial lakes, often in regions where there were no natural lakes of comparable size, and people flocked to the reservoirs to enjoy swimming, boating, fishing, and other forms of outdoor recreation. Water-based recreation has a long history in American outdoor life going back to lakeside and seaside resorts in the nineteenth century, but it was only with the rise of big federal dam projects coupled with the great boom in outdoor recreation in the mid-twentieth century that recreation at reservoir sites became a central feature of the nation's outdoor recreation landscape.

Reservoir-based recreation began as an incidental use of federal dam and reservoir projects. The federal laws authorizing federal dam projects—the Reclamation Act of 1902, the many Rivers and Harbors Acts, the many Flood Control Acts—stipulated the multiple purposes of federal dam projects. Federal dams were constructed for reclamation (irrigation), water supply, hydroelectric power, flood control, and navigation purposes, but not for recreation. Recreational use might be accommodated, but it could not be treated as a “benefit” for purposes of investigating, planning, and justifying federal water development projects. It could not be a factor in determining a favorable benefits-to-costs ratio that was the threshold requirement for any federal dam project's authorization. Congress held the line on that policy until 1965, when it enacted the Federal Water Project Recreation Act (Public Law 89-72), which provided that recreation could be a project purpose. The Federal Water Project Recreation Act was enacted two years after the completion of Whiskeytown Dam, so it did not apply to Whiskeytown Dam and Lake. But the law was a landmark change in public policy that was on the verge of taking hold when the Trinity River Division and Whiskeytown Dam were in development.

The federal government's efforts to coordinate recreation with other dam purposes started at Boulder Dam (Hoover Dam) in the mid-1930s. The Bureau of Reclamation and the National Park Service entered a dialogue about how to manage anticipated recreation use on Boulder Lake (Lake Mead). Discussions culminated in a memorandum of agreement between the two agencies, establishing Boulder Dam National Recreation Area (Lake Mead National Recreation Area). The Bureau of Reclamation operated and maintained the dam while the National Park Service managed public recreation on and around the reservoir. The arrangement became a prototype for other selected Bureau of Reclamation reservoir sites. As sister agencies in the Department of the Interior, the Bureau of Reclamation and the National Park Service were strongly encouraged to work together.

Their shared interest in accommodating recreation outweighed the difficulties of an awkward fit between the two agencies with very different missions and philosophies of natural resource management.¹⁸

The Corps of Engineers and the National Park Service made a faint-hearted attempt to forge a similar relationship. The experiment centered at Denison Dam and Reservoir (Lake Texoma) on the Texas-Oklahoma state line. The National Park Service worked on a plan for recreation development from 1943 to 1949 but never implemented it. By mutual agreement the experiment ended.¹⁹

In the Flood Control Act of 1944, Congress authorized the Corps of Engineers to construct minimal recreational facilities at its reservoir sites. However, there was an expectation that in operating such facilities the Corps of Engineers would have the assistance and cooperation of state and local parks departments and private entities. Some Corps of Engineers reservoirs did see the development of state or county parks or private marinas, providing examples for Shasta County to consider when it began to formulate recreation plans for Whiskeytown Lake in the 1950s. By and large, recreation development at the Corps of Engineers reservoirs fell far short of what was needed as recreation demand surged in the two decades following World War II.²⁰

Recreation use of CVP reservoirs was initiated by the Bureau of Reclamation in 1942 and was turned over to the National Park Service in 1945, only to be handed off again to the Forest Service when Shasta Lake became part of Shasta National Forest.²¹ Meanwhile, the National Park Service moved on to other CVP reservoir recreation studies under a broad agreement with the Bureau of Reclamation executed in 1950. In its report on the Trinity River Division reservoirs, completed in December 1951, the National Park Service found that the Trinity and Lewiston reservoirs had fine recreational potential, especially for use by overnight campers “seeking a more isolated, primitive, or wilderness type of recreation” compared with camping sites at Shasta Lake, which was twenty miles by air or forty-three miles by road from Trinity Dam. Like other reservoir-based recreation

¹⁸ Jonathan Foster, *Lake Mead National Recreation Area: A History of America's First National Playground* (Reno: University of Nevada Press, 2016), 46–51; Douglas Dodd, “Boulder Dam Recreation Area: The Bureau of Reclamation, the National Park Service, and the Origins of the National Recreation Area Concept at Lake Mead, 1929–1936,” *Southern Historical Quarterly* 88 (Winter 2006–2007): 443–46.

¹⁹ United States Department of the Interior, National Park Service, *Report on Recreational Resources of the Denison Dam and Reservoir Project, Texas and Oklahoma* (Washington: Government Printing Office, 1943), 10, 43, 64, 94–97; U.S. Army Corps of Engineers, Tulsa District, “History of Lake Texoma,” <https://www.swt.usace.army.mil/Locations/Tulsa-District-Lakes/Oklahoma/Lake-Texoma/History/>; Bob Janiske, “Pruning the Parks: Lake Texoma Recreation Area (1946–1949),” June 30, 2010, <https://www.nationalparkstraveler.org/2010/06/pruning-parks-lake-texoma-recreation-area-1946-19496110>.

²⁰ Flood Control Act of 1944, P.L. 78-534, 58 Stat. 887.

²¹ Bureau of Reclamation, *Central Valley Project Studies, Problem 23, Recreational Administration* (Washington: Government Printing Office, 1947), 5–47.

areas, the Trinity and Lewiston reservoirs would mostly serve the small local population. The National Park Service report did not discuss Whiskeytown Lake because Whiskeytown Dam was not yet proposed.²²

The National Park Service study contributed to a detailed report by the Secretary of the Interior, which was submitted to the House Interior Committee in 1953. That report stated that the Trinity River watershed was endowed with many fine recreational assets offering a wide variety of activities for the vacationist particularly for valley residents seeking cooler temperatures in summertime. Fishing, hunting, mountain climbing, and camping were all popular activities enjoyed by thousands. Recreational facilities already contributed to the local economy and yet the area's recreational resources could be developed much more, the report stated.²³

The Bureau of Reclamation, largely by way of the National Park Service studies, touted the recreation benefit that would accrue as a result of building the Trinity River Division dams. But the bureau scrupulously avoided raising the subject of recreation in congressional hearings or treating recreation as a project benefit in its own feasibility studies, because recreation was not an authorized function for a federal water development project – that is, not before the 1965 act was passed. Notwithstanding that important limitation in federal law and policy, the Bureau of Reclamation did succeed in communicating the recreation potential to the local populace in Trinity and Shasta counties.²⁴

As soon as the plan for Whiskeytown Dam was formed, Shasta County initiated a planning study for Whiskeytown Lake recreation. The county hired a planning director to work with the Planning Commission on a recreation development plan. Issued in 1958, the plan described a county park with three units: Brandy Creek Park, Oak Bottom Park, and Whiskey Creek Park. How the plan for recreation development progressed further to become the unit of the national park system established in 1965 is discussed in Chapter Twelve.

²² Committee on Interior and Insular Affairs, *Central Valley Project Documents Part One*, House Doc. No. 416, 866 (1956); Committee on Interior and Insular Affairs, *Central Valley Project Documents Part Two*, House Doc. No. 246, 401–02 (1957); National Park Service, “Proposed Trinity and Lewiston Reservoirs, Trinity River Division, Central Valley Project (Ultimate Plan), Trinity County, California,” report prepared for the Bureau of Reclamation, December 1951, WNRA, CRM Files, copy in File: Central Valley Project.

²³ Committee on Interior and Insular Affairs, Trinity River Division, Central Valley Project, California: Letter from Secretary of the Interior transmitting the Report and Findings on the Trinity River Division of the Central Valley Project, California, Pursuant to Section 9 (A) of the Reclamation Project Act of 1939 (53 Stat. 1187), House Doc. No. 53 at 19-20 (1953).

²⁴ Patten, “History of Clair A. Hill Whiskeytown Dam and Reservoir,” 84.

Whiskeytown Dam Construction

Construction of Whiskeytown Dam took place from 1960 to 1963. It was part of the larger construction effort to build all the works of the Trinity River Division and accomplish the long-anticipated diversion of waters from the Trinity River basin to the Sacramento River basin. Upstream in this system, construction of Trinity Dam started in 1956. Diversion of the Trinity River commenced seven years later when all was complete. The major components of the construction effort were Trinity Dam, Whiskeytown Dam, and Lewiston Dam, as well as the two tunnels: the Clear Creek Tunnel and the shorter Spring Creek Power Conduit (also called the Spring Creek Tunnel).

Work at the Trinity Dam damsite started on June 4, 1956, and the dam was virtually complete at the end of 1959, three and a half years later. The contractor for building the dam was Trinity Dam Contractors, a joint venture of Guy F. Atkinson Company, M. J. Bavanda, Charles L. Harney, Inc., Ostrander Construction Company, A. Teichert and Son, Inc., and Trepte Construction Company. When completed, the dam stood as the highest earthfill dam in California.²⁵

Next in the construction sequence was the Clear Creek Tunnel. The contractor was Shea-Kaiser-Morrison, a joint venture of the Shea Company, Henry J. Kaiser Company, Morrison-Knudsen Company, Inc., Macco Corporation, and Raymond Concrete Pile Company. After some initial delays, work commenced in September 1957. Ventilating the long tunnel for workers, who were excavating from both directions, proved to be one of the greatest challenges. The tunnel is 11 miles long and has a diameter of 17.5 feet. Workers holed through on July 28, 1960.²⁶

Construction of Whiskeytown Dam came next. Gibbons and Reed Company of Salt Lake City obtained the construction contract to build it, and the work began in August 1960 with drilling and blasting on the slopes at either end of the damsite. The Bureau of Reclamation's design plan called for an embankment dam that would rise 270 feet above the creek bed and extend about 2,500 feet along the crest. The dam builders had to excavate the bottom and sides of the damsite down to solid bedrock and prepare the site to take some 4.5 cubic yards of fill.²⁷

Preparing to work in the bottom of the creek bed, the company dug an outlet tunnel to divert the waters of Clear Creek to create a dry bed. The outlet tunnel was nineteen feet in diameter and lined with concrete. At a midpoint in the tunnel, the water would

²⁵ Stene, "Trinity Division Central Valley Project," 4, 14.

²⁶ Stene, "Trinity Division Central Valley Project," 6–7; Lawson, *Redding and Shasta County*, 77.

²⁷ Rocca, *Whiskeytown National Recreation Area*, 69.

enter a gate chamber and funnel through two large steel pipes. Once the dam was built, the outlet tunnel would serve as a conduit for discharging cold water from the bottom of the reservoir into Clear Creek below the dam.²⁸

A second tunnel, the spillway tunnel, was dug in tandem with the outlet tunnel. The spillway tunnel was twenty-one feet in diameter. It was 1,200 feet in length, with a 250-foot vertical drop over its course and a point of discharge below the outlet tunnel. At the upper end was a vertical shaft ninety-two feet tall with a “bell-mouth” shape at the top or opening where the water would pour in from all sides when the reservoir was filled to the brim. This spillway, called a “Morning Glory Inlet,” resembles the bell shape of the morning glory flower.²⁹

The outlet and spillway tunnels together formed a bilevel system for passing water through the dam. It was based on the principle that cold water has a higher density than warm water and would lie at the bottom of the reservoir, and that tapping the cold water to run into Clear Creek would benefit cold water fish. Commissioner of Reclamation Floyd E. Dominy stated that it was the first bilevel outlet for fish conservation designed and implemented by the bureau anywhere in the nation, a worthy distinction for Whiskeytown Dam.³⁰

Gibbons and Reed Company and a partner by the name of McConstruction Company built the two tunnels. Work on the tunnels began on October 11, 1960. The workers holed through the outlet tunnel on February 24, 1961, and completed excavation of the spillway tunnel on July 25, 1961. Rock from the tunnels was stockpiled for use in the main dam structure.³¹

Gibbons and Reed Company had to excavate down to solid bedrock to anchor the embankment dam. At the bottom of the creek bed the company found bedrock at two-foot depth, but in other places along the dam axis it found “deep weathering of granite” that required some thirty feet of excavation to reach solid bedrock. The company dug a thirty-foot-wide trench to reach that depth. Once down to reliable bedrock, it drilled holes to a further depth and injected them with pressurized grout, forming a “grout curtain” to limit water seepage under the dam’s footings. This was a standard element of embankment dam design. (Its importance would be demonstrated by the Teton Dam failure in 1976, which was blamed on a poorly made grout curtain.) The entire swath of ground that was to be covered by the embankment dam had to be stripped of unstable material that would be prone to shift or settle under the immense weight of the fill. The excavation continued through most of 1961.³²

²⁸ Rocca, *Whiskeytown National Recreation Area*, 69.

²⁹ Rocca, *Whiskeytown National Recreation Area*, 70.

³⁰ “New California Dam to Condition Water for Fish,” *Lubbock Avalanche Journal*, June 16, 1960.

³¹ Stene, “Trinity Division: Central Valley Project,” 7.

³² Stene, “Trinity Division Central Valley Project,” 8.

As workers excavated the damsite, another contractor, Fred Drayer, Inc., worked on clearing the whole reservoir area of trees and brush and anything else that could work loose and create problems when the reservoir was filled. Large-diameter oak and gray pine trees were hauled off for salvage and all other trees and brush were bulldozed into huge piles for burning. Due to heavy rains in the winter of 1961–1962, the contractor had to postpone much of the burning until the following spring.³³

Altogether about five and a half square miles of land area had to be cleared. Whiskeytown, by then considered historic though it was not protected under law, stood near the center of the area and had to be razed. Most of its remaining buildings were bulldozed. The old Whiskeytown Cemetery was relocated below the dam construction site. This sensitive job was carried out under a contract with Madera Funeral Home owned by R. L. Moe and Joseph B. Mashburn. Graves were carefully removed and reburied in a new plot south of the damsite.³⁴

Piling up of the rock material to make the embankment dam was carried out through most of 1962 and into 1963. In an embankment dam of rock material, workers first build a core dam of the most impervious material to minimize seepage and then added a semi-pervious layer of material banked on either side to add strength. Gibbons and Reed thought it could complete the entire construction project in two years and eight months, but the work stretched to three and a half years—about the same length of time it took to build Trinity Dam. A nearly two-month labor strike in May and June 1962 slowed Gibbons and Reed’s progress. The work stoppage came on top of the previous challenge of digging so deep to reach bedrock. The company completed work on the dam on February 7, 1963.³⁵

Gibbons and Reed Company also won the contract to build Lewiston Dam. The company began work on that dam in 1961 and completed it in 1963.³⁶

The Bureau of Reclamation built the powerplant at the outlet of the Clear Creek Tunnel. This was the part of the Trinity River Division that PG&E wanted to build and operate but was refused. The original plant was built from 1960 to 1963. It included two enormous penstocks that carry the water from the tunnel opening 200 feet downhill to the power-generating turbines inside the powerplant. A substation building was added to the plant subsequently. The complex, originally called the Clear Creek Powerplant, was

³³ Rocca, *Whiskeytown National Recreation Area*, 72; Lawson, *Redding and Shasta County*, 77.

³⁴ Rocca, *Whiskeytown National Recreation Area*, 72; Lawson, *Redding and Shasta County*, 77.

³⁵ Rocca, *Whiskeytown National Recreation Area*, 72, Stene, “Trinity Division, Central Valley Project,” 8.

³⁶ Stene, “Trinity Division, Central Valley Project,” 9.

renamed the Judge Francis Carr Powerplant by an act of Congress in 1964, honoring the Shasta County luminary who had fought for the CVP from an early stage of its development in the 1920s and 1930s.³⁷

At the east end of Whiskeytown Lake, the Spring Creek Power Conduit (also called the Spring Creek Tunnel) was built under contract by Winston, Green, and Drake Construction. The contractor began work on the tunnel in June 1960 and completed the work in the summer of 1963. The Spring Creek Power Conduit or Tunnel is 2.4 miles long and has a diameter of 18.5 feet.³⁸

In April 1966, Bureau of Reclamation Commissioner Dominy was on hand to dedicate the powerplant as a symbol of the Trinity River Division, which was itself a kind of capstone of the CVP, and to break ground for a planned three-acre park with fountain, pavilion, and overlook adjoining the powerplant. The National Park Service designed the park and Job Corpsmen from the Toyon Conservation Center built it. The memorial park was dedicated in another ceremony held in August 1967.³⁹

One more construction item, ancillary to the Trinity River Division but paid for with project funds, involved relocation of a five-mile stretch of Highway 299 to higher ground to make way for the reservoir. This new segment of highway had to cross the Whiskeytown Creek gulch on a high bridge that involved some innovation. Three bridge sections were assembled on site and moved into position to rest atop tall concrete piers. The two end sections were built on terraced ground at either end and towed by cables horizontally out over the gulch to rest with one end on a pier, and the middle section was built on ground below the bridge level and lifted by crane onto the piers. The method of construction saved on cost by avoiding need for high-intensity steel girders. Impressive as the high bridge was at the time, a year later the tall piers were mostly submerged in the lake.⁴⁰

Water from the Trinity River began diverting through the Clear Creek Tunnel on March 25, 1963.⁴¹

³⁷ Stene, "Trinity Division, Central Valley Project," 7; Karana Hattersley-Drayton, "Historical Resources Evaluation Report (HRER) for the Judge Francis Carr Powerhouse Substation, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area," report prepared for Western Area Power Administration, August 15, 2017, WNRA, CRM Files, File: Central Valley Project.

³⁸ "Whiskeytown Dam Project Given Start," *Eureka Humboldt Times*, September 21, 1960; Rocca, *Whiskeytown National Recreation Area*, 72.

³⁹ Stene, "Trinity Division, Central Valley Project," 7; Karana Hattersley-Drayton, "Historical Resources Evaluation Report (HRER) for the Judge Francis Carr Powerhouse Substation, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area," report prepared for Western Area Power Administration, August 15, 2017, WNRA, CRM Files, File: Central Valley Project.

⁴⁰ "Unusual Bridge Built Over Canyon," *San Rafael Daily Independent Journal*, June 21, 1962; National Park Service post on Facebook, February 22, 2021 at <https://www.facebook.com/WhiskeytownNationalRecreationArea/posts/1961-black-and-white-photo-showing-construction-of-whiskey-creek-bridge-on-highw/2152528441547916/>. See also the Determination of Eligibility for the bridge that was prepared by CALTRANS.

⁴¹ Lawson, *Redding and Shasta County*, 78.

Dedication by President Kennedy

President John F. Kennedy visited Whiskeytown Dam on a tour of some western states in September 1963. The presidential visit and dedication ceremony drew a crowd of perhaps 10,000 people and has been long remembered by area residents, especially as the visit came just weeks before Kennedy was assassinated.

Kennedy and Interior Secretary Udall were strong supporters of federal water development. Following in the mold of FDR and the New Deal, the president supported the multiple-purpose framework of water resources development as well as the push for comprehensive river basin planning through federal and state cooperation. He also supported the emerging emphasis on recreation development and sought to balance water resource development with rising concerns over environmental protection and wilderness preservation. When Kennedy was in the Senate, he opposed the Echo Park Dam that would have flooded part of Dinosaur National Monument, and he joined other senators in claiming that the Bureau of Reclamation was overzealous in its plans to build dams. As president, Kennedy gave high priority to expanding the national park system while also touting a traditional conservation program that emphasized efficient use of natural resources.⁴²

Kennedy laid out his conservation principles in a message to Congress on March 1, 1962. While he signaled his support for wilderness protection in that address, two months later Kennedy tacked toward natural resource development at the White House Conference on Conservation, where water resource policy was near the top of the agenda.⁴³

Kennedy made two tours of the West to promote his conservation initiatives, both at the behest of Secretary of the Interior Stewart Udall. The first was in August 1962, the second one in September 1963. Both times, Kennedy and Udall hoped to use the tour as an opportunity to showcase the administration's conservation agenda and to improve the president's standing with western voters. In 1962, Kennedy hoped to influence midterm elections and tip several closely contested House seats to the Democrats. In 1963, he was looking ahead to his own re-election campaign in the following year.⁴⁴

In May 1963, the White House announced plans for the president's conservation tour in the fall, stating that the president would visit selected reclamation sites, recreation sites, and wildlands in the West. Unstated, of course, was that the travel itinerary would be carefully arranged to make the most of good photo opportunities and to reach populations that were important to Kennedy's re-election prospects.

⁴² Thomas G. Smith, "John Kennedy, Stewart Udall, and New Frontier Conservation," *Pacific Historical Review* 64, no. 3 (August 1995): 333, 337.

⁴³ Smith, "John Kennedy, Stewart Udall, and New Frontier Conservation," 340–41.

⁴⁴ Smith, "John Kennedy, Stewart Udall, and New Frontier Conservation," 343–44, 351–52.

Secretary Udall, who accompanied the president on both tours of the West, worked with White House staff to develop a list of “conservation projects” that the president might visit and use as backdrops for his speeches. The sites included Grand Coulee Dam (celebrating its thirtieth anniversary), and the proposed Oregon Dunes National Seashore (the bill to establish the site was headed for a close vote in Congress). Several of California’s leading Democrats urged the White House to put Whiskeytown Dam on the president’s itinerary to bring attention to the CVP. Representative Harold T. “Bizz” Johnson, who took over Clair Engle’s seat when Engle joined the Senate in 1959, made the request, but presidential advisor Kenneth O’Donnell informed him that a visit to Whiskeytown Dam was not possible because of the president’s already “heavy schedule.” But the jockeying for a presidential visit continued. A letter from Laurence Carr, chairman of the Democratic County Central Committee in Shasta County, whose brother James was now an undersecretary in the Department of the Interior, apparently won the day.⁴⁵

In his letter to Stanley Mosk of the Democratic National Committee, Laurence Carr addressed both the significance of Whiskeytown Dam for conservation and the importance of a presidential visit to northern California for Democratic Party fortunes:

The Whiskeytown unit represents the last unit of the Trinity River Project, which is the largest addition to the Central Valley Project. In dollars, it cost more than the initial Central Valley Project itself. Not only has this been an outstanding addition to the Central Valley Project, but it is largely due to the efforts of Senator Engle. It was Clair’s pet project, and he insisted upon its approval before his House Committee would approve any other western reclamation projects.

If the President seeks to call attention to the conservation activities of this administration, and to assist Senator Engle in his reelection, no single ceremony could add more to his trip, considering its theme.⁴⁶

This second of Kennedy’s western state tours finally took shape as a five-day, eleven-state tour to several dams, national parks, and recreation areas, as well as college campuses, a nuclear facility, and a military base. The president gave a total of fifteen speeches, often giving as much attention to foreign policy as he did to conservation. He left Washington on the morning of September 24 shortly after the Senate ratified the Nuclear Test Ban Treaty. His itinerary took him to Wisconsin, Minnesota, North Dakota, Wyoming, Montana, Washington, Oregon, California, and Nevada.⁴⁷

In Redding, many weeks before the presidential visit, the Whiskeytown Dedication Committee formed to plan a dedication ceremony for the dam. In August, the committee inquired with the White House as to the possibility that Whiskeytown Dam could be put on

⁴⁵ Rocca, *Whiskeytown National Recreation Area*, 83.

⁴⁶ Laurence W. Carr to Stanley Mosk, September 4, 1963, Cultural Resource Division e-files, WNRA.

⁴⁷ Smith, “John Kennedy, Stewart Udall, and New Frontier Conservation,” 352–53.

the president's schedule. Suddenly, on September 6, Laurence Carr notified the committee that a White House staff group headed by Associate Press Secretary Andrew Hatcher would arrive on Air Force One the next day to meet with them and consider the site. Carr and members of the committee met their White House guests at the Redding Airport and took them in two cars to Whiskeytown Dam, stopping enroute at Shasta College's football field (today the Shasta High School Athletic Field) where they proposed to hold the ceremony. But when Hatcher saw Whiskeytown Lake with Shasta Bally rising beyond, he insisted that the ceremony must take place not at the college football field but at Whiskeytown Dam. The next day, the Bureau of Reclamation provided Hatcher with aerial photos of the damsite. Three days after that, on September 12, word came that Whiskeytown Dam was officially on the president's schedule.⁴⁸

Some quick preparations were necessary. The president would arrive by helicopter. An area extending from the east edge of the dam to about its midpoint had to be sealed with blacktop to allow a helicopter landing and takeoff; small rocks could be sent flying in the helicopter's wash and cause damage or injury. A large parking area had to be prepared. A stage for the ceremony had to be built. At this point in time, Whiskeytown Lake was so new that no one had yet put a sailboat on it. There must be sailboats in the scene to demonstrate recreation use. The Alturas Sailboat Club was enlisted to provide sailboats.⁴⁹

The day before his visit to Whiskeytown Dam, Kennedy flew from Seattle to Redding on Air Force One and then by helicopter to Lassen Volcanic National Park for an overnight stay at the Manzanita Lake Lodge. Here he was accompanied by Secretary of the Interior Udall, Press Secretary Pierre Salinger, Presidential Advisor Kenneth O'Donnell, and California's Governor Pat Brown. The party arrived at the lodge shortly before sundown. While a park naturalist led Udall and members of the press corps on a nature trail around the lake, Kennedy retired to his room early for a much-needed rest. In the morning, the press photographed Kennedy feeding a deer and heard him remark that the park superintendent had "the best job in the world." Then the party departed for its next stop, Whiskeytown.⁵⁰

⁴⁸ Sid Cowgill, Whiskeytown Dedication Committee Minutes, August 22, 1963; Roger Kent to Laurence W. Carr, September 6, 1963; Project Manager to Regional Director, September 8, 1963; Laurence W. Carr to Robert Anderson, September 12, 1963; James K. Carr to Laurence W. Carr, September 12, 1963, all in Cultural Resource Division e-files, WNRA.

⁴⁹ Project Manager to Regional Director, September 8, 1963, and Laurence W. Carr to Robert Anderson, September 12, 1963, Cultural Resource Division e-files, WNRA; "J. F. K. Gets Rousing Welcome at Whiskeytown Dam," *Redding Record-Searchlight*, September 28, 1963, reproduced in *The Covered Wagon* (1980), 56.

⁵⁰ Diane L. Krahe and Theodore Catton, *Little Gem of the Cascades: An Administrative History of Lassen Volcanic National Park*, report prepared for the National Park Service, September 2010, p. 164, <http://npshistory.com/publications/lavo/adhi.pdf>.

The president's helicopter flew directly from Lassen to Whiskeytown Dam, arriving at 9:55 a.m. on September 28. As the president climbed down from the helicopter, he could see four other helicopters had already landed in a row along the crest of the dam. Other dignitaries and officials who were present included Congressman Bizz Johnson, Senator Alan Bible of Nevada, Brigadier General Arthur Frye of the Corps of Engineers, regional directors of the Bureau of Reclamation, National Park Service, and Forest Service, and many local elected leaders. An enthusiastic crowd of perhaps 10,000 people assembled. The president paused on his way to the temporary stage to peer into the hole of the Morning Glory Spillway as an engineer with the Bureau of Reclamation explained its form and function.⁵¹

The crowd was well entertained while it waited for the president to arrive. There were hotdog stands and high school bands. A former resident of Whiskeytown, Paul McDermott, dressed like a prospector of olden days and ceremoniously led a mule out onto the dam and tipped a whiskey barrel off the mule's back into the lake, performing a symbolic re-enactment of the incident that gave Whiskeytown its name. Members of the Redding Sport Parachute Club parachuted into the lake and were retrieved by boats. And five sailboats belonging to members of the Alturas Sailboat Club sailed to and fro at the toe of the lake in everyone's view.⁵²

In his opening remarks, Kennedy quoted lines in a poem by Stephen Vincent Benet celebrating American place names. The poet did not mention Whiskeytown, the president quipped, "but I think he could add it to the roster, because the name of this community tells a good deal about the early beginnings of this State and country." He spoke in praise of early conservationists and referred to the rising importance of national recreation areas. Then he addressed the significance of Whiskeytown Dam:

We witness today the completion of a project which symbolizes the goals to which we are committed. Whiskeytown Reservoir is not the largest structure on the Trinity River, but its completion is significant because this is the last of the Trinity project dams. The impoundment part of this vast undertaking is now completed, and in that sense this dam stands not only as the work of the men who built it, but of all the men over the years who have fought for it and brought it to the attention of the State and Nation. With the Trinity division completed and the upper reaches of the Sacramento now harnessed, Shasta County and its neighbors are assured of water and power. They can enjoy new chances for recreational use, and new access to open space. And of great importance, the flow of two watersheds can now be regulated for the benefit of the farms and

⁵¹ Donna-Rae Standley and Al M. Rocca, "John F. Kennedy and His Visits to Shasta County," *The Covered Wagon* (2014): 73.

⁵² "J. F. K. Gets Rousing Welcome at Whiskeytown Dam," *Redding Record-Searchlight*, September 28, 1963, reproduced in *The Covered Wagon* (1980): 55–56. See also the park's oral history interview with Paul McDermott. A resident of Whiskeytown before the dam was built, McDermott moved to Grizzly Gulch where he lived the rest of his life on three acres under a life tenancy agreement with the National Park Service. On the day of Kennedy's visit the Secret Service was not aware of the reenactment until McDermott appeared on the dam.

cities in the lower valley. For too long this water ran unused into the sea. For too long surplus water in one area was wasted, while there was a deficit nearby. Now, by diverting these waters to the eastern slope, we can irrigate crops on the fertile plains of the Sacramento Valley and supply water also for the municipal and industrial use to the cities of the south.

And while running their course, these waters will generate millions of kilowatts of energy and help expand the economy of the fastest growing state in the nation. In these ways, Whiskeytown Reservoir and the Trinity division will add to our natural beauty and will show that man can improve on nature, and make it possible for this State to continue to grow. So I congratulate all of you.⁵³

The speech reflected the times. In 1963 it was the dawn of the environmental era. The American people were awakening to the enormous challenges besetting humanity, and which still defy solution now sixty years on: overpopulation, pollution, water scarcity, urban sprawl. Kennedy touched on the rising importance of recreation and the value of having “new access to open space.” At the same time, this was the age of science, when the American people had a glowing pride and confidence in modern medicine, the space program, and the green revolution—and giant federal water development projects. Kennedy said that the Trinity River diversion showed that “man can improve on nature,” a phrase that would strike many today as a sign of human folly.

No president dedicated more federal dams than Kennedy. The pace at which big dams were reaching completion came to a climax while Kennedy was president. Kennedy dedicated one more dam after Whiskeytown: Greers Ferry Dam in Arkansas, on October 3, 1963.

Carla Bloxham of Arcata, California, was fifteen years old in 1963. She and her mother drove over the mountains from Arcata with a carload of others to see the president dedicate Whiskeytown Dam. Like nearly everyone else in the crowd, they parked in the Whiskeytown Lake vista parking lot and boarded a shuttle bus to ride the rest of the way to the dam. At the end of the president’s speech, Kennedy stepped down off the platform to shake hands in the crowd. Bloxham’s mother stuck out her hand, “froze like a statue, and didn’t move until quite a few seconds after he had passed.” Bloxham remembered that for days afterward “we were all on a natural high. We shared our experience with everyone back home in Arcata. This was something I would and always did remember . . . I saw, in person, the President of the United States!”⁵⁴

⁵³ “John F. Kennedy, 1963, Remarks at the Dedication of the Whiskeytown, California, Dam and Reservoir, September 28, 1963, copy in Cultural Resource Division e-Files, WNRA.

⁵⁴ Standley and Rocca, “John F. Kennedy and His Visits to Shasta County,” 71–72.

The JFK Memorial

The assassination of President Kennedy on November 22, 1963, occurred just seven weeks after the president's dedication of Whiskeytown Dam on September 28. In the words of Jim Milestone, the shocking event gave the people of the Redding area "an emotional whip-lash." Soon eighteen residents of Redding came together and formed the Kennedy Memorial Fund Committee with the goal of establishing a local memorial to the slain president. James Carr's brother Laurence Carr was in the group. John Crotto, a local business owner, became the committee chair. Rudy Balma, a longtime member of the Redding Rotary Club and brother of the Redding police chief, was put in charge of the committee's design group. Donations poured in from some five hundred donors. Two months later, the committee commissioned a young Italian artist, Roberto Ciabani, who was then a resident of Medford, Oregon, to design the memorial and produce the art. His starting commission was \$2,500, equivalent to about \$25,000 in today's dollars.⁵⁵

Born in Florence, Italy, in 1939 and just twenty-five years old when he created his work for the memorial, Ciabani was later to return to Italy where he would enjoy a successful career as a painter, sculptor, engraver, mosaicist, and illustrator. His commissioned artwork for the Kennedy Memorial Fund Committee soon drew howls of dismay from members of the Redding arts community, however. In June 1964, the *Redding Searchlight* published a series of photos of the artist's work in progress. The newspaper reported that it was "Ciabani's plan to depict Kennedy's life through a series of bas relief panels in an edifice 12 feet high by 6 feet wide." While the largest of the panels depicted Kennedy behind a podium at the dam site, the other panels were fairly abstract, one showing Peace Corps workers dressed in togas, another featuring a Roman centurion shielding the Statue of Liberty. Two weeks after the *Redding Searchlight* published the photos, it began reporting some people's reactions. Don Boyd, head of Shasta College's art department, was quoted as saying that Ciabani "is not a sculptor. . . . He is a painter but has had little training and little experience even at that." Bertram Oldham, an art instructor at Shasta College, echoed Boyd's disdain, as did Richard Hornaday, art advisor to the Redding Elementary School District. Mary Forina, a professional sculptor, was quoted: "It's better that we junk what has been done so far than to have a poor work that is an insult to all of us."⁵⁶

Committee chair Crotto, asked by a *Record Searchlight* reporter how the committee selected Ciabani, could only respond that he had no idea. "He came into one of our meetings," Crotto said. "I don't know how he got there." Crotto went on to say that he would halt Ciabani's efforts if that was indeed what the people wanted. But out of respect for the

⁵⁵ Milestone, *From the White House to Whiskeytown*, 43; *Record Searchlight*, July 10, 1964; Ed Huey, "A Brief History of the John F. Kennedy Whiskeytown Memorial," July 2003, WNRA Cultural Resources Division e-files.

⁵⁶ Ed Huey, "A Brief History of the John F. Kennedy Whiskeytown Memorial," July 2003, WNRA Cultural Resources Division e-files.

project's many donors, he thought perhaps the matter should be put to a vote first. The committee held an emergency meeting on July 10, after which Crotto announced he had told the artist to stop work pending further review by a subcommittee of the committee. Six members agreed to travel to Medford on July 13 to evaluate Ciabani's efforts. Ciabani received the committee's temporary order to stop work on the very day that he was set to cast seven relief panels.⁵⁷

After the subcommittee's visit to the artist's studio in Medford, the Kennedy Memorial Fund Committee reconvened on July 14 and voted to continue the project with Ciabani. The artist agreed to make a few minor changes; for instance, in the panel with Peace Corps workers wearing togas, one of the four figures would wear contemporary clothing. Apparently one or two of the original seven panels were nixed—the memorial has just five bas relief panels plus one more small panel with some embossed text.

The memorial faced more opposition. On learning of the committee's decision, Karen Kirtley, who lived outside the town of Shasta Lake, launched a campaign to block the memorial. She told the *Redding Searchlight*, "It would be a shame if Mr. Ciabani's work is used." In Kirtley's view, the memorial design did not do justice to the workforce that had built the dam. Those who had worked on Whiskeytown Dam included her husband, a surveyor with the Bureau Of Reclamation. Kirtley told the newspaper she would present her opposing view to the Redding Civic Arts Commission at the next meeting on July 28 to seek the commission's support in stopping the memorial project. However, Kirtley never made her presentation; the July 28 meeting was canceled as too many members were away on vacation. Kirtley said she was disappointed and thought the commission's next meeting in August would be too late to effect change, and so the effort to stop the memorial lapsed.⁵⁸

In September 1964, the steel frame for holding the bas relief panels was delivered to the site and a rock base of native stone was constructed. The Shasta County Board of Supervisors voted to approve changing the name of Paige Bar Road to John F. Kennedy Memorial Drive. James K. Carr presided at the dedication of the John F. Kennedy Memorial on October 11, 1964.⁵⁹

Years later the NPS installed an audio exhibit beside the memorial. At the push of a button, visitors can hear a recording of Kennedy's remarks at the dedication, including his quotation of opening lines from the Stephen Vincent Benét poem and his savoring of the place name Whiskeytown as well as his summation of the CVP project and water conservation.

⁵⁷ Ed Huey, "A Brief History of the John F. Kennedy Whiskeytown Memorial," July 2003, WNRA Cultural Resources Division e-files.

⁵⁸ Ed Huey, "A Brief History of the John F. Kennedy Whiskeytown Memorial," July 2003, WNRA Cultural Resources Division e-files.

⁵⁹ Ed Huey, "A Brief History of the John F. Kennedy Whiskeytown Memorial," July 2003, WNRA Cultural Resources Division e-files.

Figures



1. Wintu of the McCloud River Area. Virtually all Wintu of the Clear Creek drainage were driven out of their homes and dispersed, some joining the Wintu of the McCloud River area.

(From Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Herbert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000.)



2. A Chinese placer claim. This photo was taken in 1894 at a mining claim near the town of French Gulch. The man is shoveling dirt into a sluice box. (Whiskeytown NRA; Hubbard collection.)

Figures



3. Placer mining on Clear Creek. Most placer mining occurred next to water, since water was needed to “wash” the gold dust out of the gold-bearing sand and gravel.
(Whiskeytown NRA photo: #1491_E41_02.)



4. Trestle on Clear Creek Ditch. Placer mining came to involve extensive water conveyance systems. To convey water from upper Clear Creek to the many diggings in lower Clear Creek, miners built the Clear Creek Ditch. Wherever the ditch intersected a major tributary stream the water had to be flumed across the intervening ravine on a trestle.
(Whiskeytown NRA photo.)

Figures



5. Mount Shasta Mine. When mining operations began at this site around 1900, the mine employed about fifteen miners. Ore was sacked and shipped to the Keswick smelter for flux and custom milling.
(Whiskeytown NRA photo: #B-SHE2.)



6. At peak production, the Mount Shasta Mine works included this 8-stamp mill, and the mining and milling operation employed perhaps 40 people.
(Whiskeytown NRA photo.)

Figures



7. Iron Mountain Mine. This major copper mine, located just outside the present boundary of the park, gave rise to the company town of Keswick. (Whiskeytown NRA photo: SHS #1-24.)



8. Mountain Copper Company smelter plant. The smelter at Keswick, along with other copper smelters in Shasta County, generated drastic air pollution, which led to years of litigation between farmers, the government, and the smelter operators. (Photo from Aubury, 1902.)

Figures



9. Smoke-killed trees one mile from the smelter plant.

Blight from the smelter fumes left a lasting mark on south-facing slopes that now lie within the northeast edge of the park.
(Photo from Haywood, 1910.)



10. Freight wagons, Shasta.

The town of Shasta became a transportation and shipping hub, the transfer point for moving freight by pack train to Weaverville, Yreka, and other mining centers.
(Whiskeytown NRA photo.)

Figures



11. French Gulch.

The mining town thrived during the second half of the nineteenth century – much the same as Whiskeytown did.
(Whiskeytown NRA photo: SHS #117-24.)



12. Charles Camden.

Successful prospector, miner, and developer, Camden became one of the prominent citizens in the area.
(Whiskeytown NRA photo.)

Figures



13. Charles Camden with his wife and two daughters and two visitors.
A hard-working and principled English immigrant who found his way to Shasta County in 1850 at the age of thirty-three, Camden was a paragon of the self-made man.
(Whiskeytown NRA photo.)



14. Camden Sawmill.
Camden built the sawmill so he would have an ample supply of sawn lumber for constructing water conveyances.
(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)



15. Levi H. Tower.

Partnered with Camden in 1850, one year later Tower gave up mining to devote his energies to his hotel and other business ventures.

(Whiskeytown NRA photo.)

Figures



16. The Tower House. With its orchards, ornamental plantings, and fountains, the Tower House became renowned as a refined and relaxing place to “rusticate.”

(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)



17. Stagecoach of the California and Oregon State Company.

Numerous stagecoach lines ran to Shasta, and a few extended beyond Shasta to Tower House.

(Wikimedia Commons.)

Figures



18. Pack teams on the road to Weaverville.

The Tower House was strategically located at the foot of this mountain road, making it a valuable stage stop where teams could be augmented, exchanged, or simply rested before and after going over the mountain.

(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)



19. Freight wagons on the road from Shasta to Whiskeytown.

The road passed over a low ridge, which was called the Shasta Divide.

Camden improved this section when he built his toll road.

(Whiskeytown NRA photo: SHS #27-86.)



20. Overview of the Tower House settlement.
(Whiskeytown NRA photo: #66CZhTyA.)



21. The Tower House.

The horse-drawn carriages are lightweight vehicles that probably came from Shasta or some other point nearby.
(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)

Figures



22. The Oak Bottom Hotel.

Hotels were popular places for local gatherings and celebrations as well as way stops for travelers.
(Whiskeytown NRA photo: #b3jPhdPw.)



23. The Whiskeytown Hotel.

The hotel stayed in business through multiple owners until Whiskeytown was vacated to make way for Whiskeytown Lake.
(Whiskeytown NRA photo.)



24. Whiskeytown residents on the hotel's porch.

Not only was the hotel the social hub of the community, it was a place where the rare group photograph might be taken.
(Chico State University, digital/collection/coll11/id/22890.)



25. American Indians

(tribe not identified) employed by Charles Camden, washing laundry.
(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)



26. Charles Camden with his young family and Kate Camden, their nursemaid.
(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)



27. Kate Camden.

Employed by the Camdens from about age nine, she apparently straddled a line between indentured servant and beloved member of the family. She died in her twenties and was buried on a hill near the Camden place.

(Whiskeytown NRA photo: Camden-Tower House Historic District collection.)



28. Coggins's Mill. Lumberman Arthur Coggins built this mill in French Gulch to serve his logging operations on and around Shasta Bally in the mid-twentieth century. The photograph suggests that Clear Creek was dammed or diverted to form a pond for floating and storing logs.
(Whiskeytown NRA photo: SHS #79-40.)

Figures



29. Logging roads on logged-off slopes.

Many lands that were acquired in the 1960s and early 1970s to make Whiskeytown National Recreation Area were logged off before being sold to the NPS. Many old roadcuts still pose a problem for erosion and reforestation, while others have been converted to recreational hiking and horse trails.

(Whiskeytown NRA photo.)



30. A giant log on the way to the mill, circa 1956.

Don Blanchard of Don Blanchard Logging later became president of Crystal Creek Logging, Inc. and partnered with Art Coggins on the sawmill operation in French Gulch in the 1960s.

(Whiskeytown NRA photo: Winnie Crossley collection.)



31. More giant logs getting trucked out.
(Whiskeytown NRA photo: P-17-005-164.)



32. View of Shasta Dam under construction from the Vista House.
(Library of Congress photo.)



33. Vista House at Shasta Dam.
(Library of Congress photo.)

Figures



34. Site of Whiskeytown Dam in preparation. Note the depression where the Glory Hole is located.
(Whiskeytown NRA photo: Bureau of Reclamation photo.)



35. Construction of the new Highway 299 bridge over Whiskey Creek, 1963.
(Whiskeytown NRA photo.)

Figures



36. Dedication of Judge Francis Carr Memorial Park.
The fountain in the foreground has since been removed.
(Whiskeytown NRA photo.)



37. A newly built visitor center.
(Whiskeytown NRA photo.)

Figures



38. The Oak Bottom Marina in 1968.
(Whiskeytown NRA photo.)



39. The Camden House in April 2022.
(Authors' photo.)



40. A surviving fruit tree in the orchard. Caretaker house and barn in the background. April 2022.
(Authors' photo.)

Figures



41. Caretaker house in April 2024. Note the regrowth on the hillside in the background.
(Authors' photo.)



42. Barn and Shasta Bally in the background. April 2022.
(Authors' photo.)



43. Gates and interpretation on the Crystal Creek Water Ditch Trail. April 2024.



44. Many hiking trails like this one follow the traces of former water ditches. April 2022.
(Authors' photo.)



45. Another hiking trail along a former water ditch.
The ponderosa pine was scorched by fire and survived. April 2022.
(Authors' photo.)

Figures



46. The JFK Memorial, 2022.

The memorial was built by local initiative following Kennedy's assassination. The assassination occurred only seven weeks after Kennedy stood near this spot to dedicate the dam. (Authors' photo.)



47. As the interpretive panels describe, this stretch of Clear Creek below Whiskeytown Dam has undergone habitat rehabilitation to benefit chinook salmon. April 2022. (Authors' photo.)

Figures



48. Cabins at the NEED Whiskeytown Environmental School, April 2022.
(Authors' photo.)



49. View north over Whiskeytown Lake from the South Shore Drive, April 2022.
The Oak Bottom Marina is in the center of the photo.
(Authors' photo.)



50. Catholic Cemetery, French Gulch. Shasta Bally in background, 2024.

The cemetery, which is no longer in use or easily accessible, has the graves of many Catholic Irish, German, and French immigrants who lived here in the mid to late nineteenth century.

(Authors' photo.)

CHAPTER EIGHT

Settlement and Community Development

The New Pioneers

Miners were the pioneers of the western mining frontier. They pushed into Native-occupied lands and pushed the Natives out wherever they went. And like pioneer settlers before them they claimed the “unsettled” lands for European American settlement. But the California miners were different from their settler-pioneer forebears in the English colonies or in the early American Republic. Those pioneers of former times had pushed westward into the backcountry of Virginia and Pennsylvania, the bluegrass country of Tennessee and Kentucky, the Ohio Valley, the piney woods of southern Appalachia and the Ozarks, clearing the land as they went to raise corn, run livestock, grow their subsistence, and build new homes on the frontier. The California miners differed from them in that they were essentially wage workers of an industrializing society who were dependent on a whole community of others—traders, teamsters, farmers, financiers—to keep them supplied while mining. The miners pushed into Native-occupied lands as pioneers of an industrializing nation, bringing the seeds of industrialization and urbanization with them. Farmers and ranchers followed on the heels of the miners, but in California the new farms and ranches were immediately enmeshed in the project of industrialization initiated by the mining frontier. The farmers and ranchers grew food for the mining camps while they shared in the development of transportation networks that would tie inland mining regions to seaports while quickly bringing the new state of California into the national and world economy.¹

The mining camps were protocities in this rapidly evolving landscape. The mining camps lacked the population of true, full-fledged cities, but like cities in the eastern United States they sprouted businesses, industries, professional services, local governments, judicial courts, newspapers, schools, and churches as soon as they reached a certain size and level of semi-permanence. Like cities, the larger mining camps drew capital investors

¹ Rodman W. Paul, *Mining Frontiers of the Far West* (New York: Holt, Rinehart, and Winston, Inc., 1963; Albuquerque: University of New Mexico Press, 2001), 2–3; Andrew C. Isenberg, *Mining California: An Ecological History* (New York: Hill and Wang, 2005), 10–12.

and real estate developers who anticipated making strong capital returns in the state's fast-growing economy. As the mining frontier's major supply centers and the larger mining camps did grow into cities, California became more urbanized relative to its population than other places in the United States. By 1900, when 40.4 percent of Americans lived in cities of 2,500 people or more, 52.3 percent of Californians lived in such urban places. As historian Andrew C. Isenberg maintains in *Mining California*, "Cities organized vast spaces in the West, drawing to themselves capital, labor, and resources and dictating economic enterprises in far-flung hinterlands."²

The mining camps were urban communities in the making, but they were peculiar in many ways. They began as exclusively or predominantly male communities devoid or nearly devoid of women and children. The miners were mostly an itinerant workforce, footloose and individualistic. They might be interested in organizing a local government and establishing law and order, but few of them were attentive to building a permanent community. They were usually willing to leave the place as soon as mining prospects looked better somewhere else. Generally, it was the merchants and saloon keepers in the mining camps who took the initiative to make the place into a permanent town. Often these same people were the few in the community who were married with children. The small number of women in the camp might band together to steer the community toward a more permanent footing. Efforts to build community therefore usually intertwined with prevailing middle-class cultural norms that centered around Victorian notions of womanhood and respectability. Aligning themselves with clergymen, the town's middle-class women battled to bring about a moral order in the community that they found conspicuously lacking.³

The mining camps were chaotic, boisterous communities. Built upon the lust for gold, they were hotbeds of exploitation. Thievery and mistrust abounded. Assaults and murders were not uncommon. Social life in the camps centered on drinking and gambling. Prostitution flourished. The hard edge of life in the mining camps made racial tensions worse. As the number of Anglo Americans in California soon overwhelmed the Hispanic population, the latter found themselves marginalized and mistreated. The new state and its white inhabitants treated Indians like sub-humans. California's citizenry became fiercely anti-Chinese, purging the Chinese minority from their communities and workplaces.⁴

Isolation was another peculiar characteristic of the mining camps. Virtually everywhere the mines were located in mountainous terrain. Transportation and travel to and from the mines were hazardous endeavors. Dusty roads turned to mud in the rainy season, and when spring freshets came there were many road and bridge washouts. The *Shasta*

² Isenberg, *Mining California*, 12.

³ Richard White, "*It's Your Misfortune and None of My Own*": *A New History of the American West* (Norman: University of Oklahoma Press, 1991), 302–4.

⁴ White, "*It's Your Misfortune and None of My Own*," 302–9.

Courier reported an astounding number of road accidents and drownings around Shasta and Whiskeytown over the years. Difficulties of access notwithstanding, wagons and mule trains lumbered up the mountain roads hauling mammoth pieces of mining and milling equipment and tons of supplies to keep the mines going. It took from thirty to fifty wagons to transport the giant machine parts that went into building a quartz mill. Sometimes the construction of a mill required the use of specially designed wagons or the reinforcement of bridges to bear the extraordinarily heavy loads.⁵

At no time did Whiskeytown's isolation seem so ominous, perhaps, as it did when forest fires threatened to engulf the town. Whiskeytown's fire brigade was called out to fight nearby forest fires three summers in a row starting in 1886. The scariest season came in 1887 when forest fires raged around Tower House, French Gulch, and southward in the mountains to Cottonwood, blockading travel, cutting telegraph communication, and creating much anxiety. In late August the forest fire encroached on Whiskeytown and imperiled the town for the next ten days. On September 3, the *Shasta Courier* published this account:

Just ten days ago the alarm of fire was sounded, and a heavy clang of solid steel shovels told that our old brigade was quickly advancing to the scene of battle. No sooner was one dwelling freed from danger than we were called to another, until on the fifth day, our line took their stand before the fiery front, almost on the edge of town. For a time the red flames seemed determined to lick the skies, but the same determination which distinguished that gallant band in the last fire, characterized them in this; and not until the black and smoldering hills told that all the danger was gone, did they leave their post. . . .⁶

A central irony of the western mining frontier was that miners kept so little of their hard-earned money; most of it slipped through their fingers into the hands of the towns' merchants, saloon keepers, and brothel owners. Charles Camden was an exceptional miner for his ability to spend, save wisely, and prosper, and he kept at it through the middle third of his life. Meanwhile, Levi Tower was a typical member of the merchant class. Tower reckoned that it would be much easier to get ahead by selling goods, carrying freight, and running a hotel business than it would be to get rich off a gold mine. So, he soon gave up mining and never looked back, succeeding quite well with his hotel. But the distinction between miners and merchants was not as clear as the comparison of Camden and Tower might suggest. Many local merchants invested their money back into the mines. Augustus Grotefend, for example, started out in Shasta as a grocer, grew his wealth by buying and

⁵ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper in spiral binding, Shasta Lake Heritage and Historical Society, Shasta Lake, Calif.; Paul, *Mining Frontiers of the Far West*, 7; Mark Wyman, *Hard Rock Epic: Western Miners and the Industrial Revolution, 1860–1910* (Berkeley: University of California Press, 1979), 3–5.

⁶ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, September 3, 1887, in spiral binding, Shasta Lake Heritage and Historical Society.

selling business properties in town, and eventually became a part owner in the Mad Ox Mine property on Whiskey Creek. Most of the original investors in the Clear Creek Ditch were Shasta business owners who wanted to see the mines prosper so the town would continue to thrive.⁷

In the Turnerian view of western history the mining camps, untidy as they were, formed the vanguard of American civilization's westward movement, advancing the reach of American democracy and taming the wilderness. The dean of western mining historians, Rodman W. Paul, subscribed to the Turner thesis with caveats. While it was true that the miners quickly formed mining districts and established local governments, the primary purpose was to adjudicate mining claims. Paul wrote:

If the mining West seemed at times to be preoccupied with its own affairs, the reason was simply the remoteness and immensity of that vast, difficult, and lovely land. Here, to return to the words of Turner's famous essay, "American social development" had to begin "over again." An impatient crowd of prospectors, miners, speculators, traders, gamblers, and saloon keepers found no existing institutions in each new region that they entered, and thus had to create, amidst hurry and confusion, just enough economic, social, and political controls to permit each one to seek his fortune as an individual and yet enjoy some of the benefits that came only with organized society. The result was a curious blending of the new and the familiar, of innovation and imitation.⁸

Paul went on to demonstrate that there was a lot more imitation than innovation in the mining camps. Paul argued that most of the innovation came in the technology of mining, not in frontier governance or community formation. And while Paul focused mainly on the mining aspects of the California mining frontier, later historians provided a more critical view of California's newly evolved political and social environment. "All told," wrote Elliott West in his addition to an expanded edition of Paul's classic work, "Western mining camps were arguably the most wretched living spaces in America."⁹ The underlying quest for gold tended to commodify everything that might be held dear, from sexual relations to homemaking to stewardship of the land. Various historians have concluded that the treatment of California's Indians in the 1850s and 1860s was so bad it amounted to genocide.¹⁰

⁷ Anonymous, ed., "The Diary of August Grotefend, 1849–1853," *The Covered Wagon* (1993): 29–31; Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, June 12, 1886, in spiral binding, Shasta Lake Heritage and Historical Society; Carlos Alzueta, "Clear Creek Ditch Was the Name, Gold Was the Game," *The Covered Wagon* (1998): 61–62.

⁸ Paul, *Mining Frontiers of the Far West*, 7.

⁹ Elliott West, "Breaking and Building Communities," in Paul, *Mining Frontiers of the Far West*, 208.

¹⁰ Brendan C. Lindsay, *Murder State: California's Native American Genocide, 1846–1873* (Lincoln: University of Nebraska Press, 2012) 1–31. See Chapter Two.

Early Mining Camps in Shasta County

The first large mining camp in Shasta County was located near the mouth of Clear Creek where the creek emerges from the hills. Known at first simply as the Clear Creek Diggings, the camp numbered perhaps 300 to 400 men in October 1849. The winter of 1849–1850 was very wet, and the men prospected in all the surrounding gulches while water ran in the usually dry streambeds. A man named Engle claimed to have ventured a little further to the west where he made a rich strike before being driven back by Indians. He went out a second time and did not come back. That created some excitement in the camp. Later that winter, a party of about sixteen men set out to test Engle's information. They prospected west of Eagle Creek, which flows southward off the south side of Shasta Bally. Indians attacked and several of the prospectors were struck by arrows, one fatally. After this incident, another party of twelve prospectors went heavily armed with pistols and a few rifles, crossed Eagle Creek, and proceeded as far as Cottonwood Creek. They met with some Wintus, had a parley, and came to an understanding with them that the whites and Indians would not harm one another since the whites "were hunting for gold and desired peace and friendship with the Indians." Some whites later claimed this to be the first "treaty" with Indians in Shasta County.¹¹

In the spring of 1850, prospectors fanned out from the Clear Creek Diggings and established new camps or settlements at Texas Springs, Middletown, Muletown, Jackass Flat, Sheets Gulch, Buljin Gulch, and Briggsville. The camp at the Clear Creek Diggings became known as One Horse Town because it was, for a short time, the head of wagon navigation. Soon the name was shortened to Horsetown.¹²

Meanwhile, up the hill at Reading Springs, another mining camp grew from small beginnings in the winter of 1848–1849 into a "busy village of tents," as new arrivals from Oregon added to the population. When the jostling over mining claims became unruly, the people elected Dr. Benjamin Shurtleff to serve as alcalde, or mayor, under the Mexican form of government. The alcalde had authority to administer justice in all civil and criminal cases. Shurtleff later claimed he was scrupulous in following English law and calling a twelve-man jury for every case brought before him, and in this way he spared the community the vigilantism that arose in other mining camps. A fire destroyed the courthouse in 1853 so the records are lost, but other pioneers' reminiscences bear Shurtleff out.¹³

¹¹ R. S. Ballou, "The Story of Western Shasta," *The Covered Wagon* (1964): 13–14; B. F. Frank and H. W. Chappell, *History and Business Directory of Shasta County* (Redding, CA: Redding Independent Book and Job Printing House, 1881) 13–14.

¹² Ballou, "The Story of Western Shasta," 14.

¹³ Benjamin Shurtleff, "Shasta," *The Covered Wagon* (1957): 6.

The residents of Reading Springs had a few log cabins under construction by the time that winter set in, but most of them were so busy prospecting they still slept in tents or out in the open under blankets when the winter rains began on November 2. As the rain or snow barely let up for the next two and a half months, the harsh winter weather winnowed the population considerably. Many found the living conditions too miserable to endure and desperately sold everything they had to pay for transportation to Sacramento or San Francisco. Despite the population loss, the camp emerged in the summer of 1850 as the larger of the two main mining camps. In June 1850, the camp was renamed Shasta or Shasta City after the mountain to the north (whose name derived from the Russian word *Tcheste* for white, pure, chaste).¹⁴

Shasta County was one of the original counties formed when California became a state. As noted in Chapter Two, the movement for statehood in California began soon after the conclusion of the war with Mexico and just as the California Gold Rush began to ensue. The U.S. Congress, wracked by the issue of whether to admit slavery in the newly conquered Mexican territory, was unable to pass legislation to organize a U.S. territory in California, so the movement to form a civil government raced ahead with the expectation that California would leapfrog a period of territorial status and would shortly become a state. A state constitutional convention was held in Monterey in September 1849, and a legislature was elected in November and seated in December 1849. California was admitted to the Union as a free state in the Compromise of 1850, enacted on September 9, 1850.¹⁵

In the first county election, held in September 1850, the people elected A. Z. McCandless as assembly member, W. R. Harrison as county judge, and Jesse R. Robinson as county clerk.¹⁶ The following February 1851, the elected officers met at Reading's Ranch and organized the Court of Sessions. This body, authorized under a state law, served as a provisional county government until a County Board of Supervisors formed. The court's first order of business was to move the county seat from Reading's Ranch to Shasta. Reading fully supported the move. The Court of Sessions continued to run local government affairs until 1855, when another act of the state legislature created a five-man board of supervisors to take its place. The County Board of Supervisors proceeded to establish

¹⁴ *Memorial and Biographical History of Northern California* (Chicago: The Lewis Publishing Company, 1891), 226–28. The origin of the name Shasta is murky. Most sources point to a Russian language origin, but some say the usage began with naming the Shasta tribe, not the mountain.

¹⁵ Bean, *California: An Interpretive History*, 126–34.

¹⁶ Shurtleff, "Shasta," 8. A note at the end of this article states that it was reprinted from an article published in *Overland Monthly* about 1900. See also Henry L. Walsh, "'Hallowed were the Gold Dust Trails,'" *The Covered Wagon* (1962): 8; Anonymous, ed., "The Diary of August Grotefend, 1849–1853," 29; Linnea Holmquist, "The Shurtleff Mansion," *The Covered Wagon* (1964): 27; D. Smith, *The Dictionary of Early Shasta County History* (Cottonwood, CA: D. Smith, 1991), 2; Frank and Chappell, *History and Business Directory of Shasta County*, 20.

election precincts and townships, to provide for its own support through license fees and a poll tax, to manage the minimal expenses of government such as paying officials' salaries, to maintain a county courthouse and jail, and to authorize road building.¹⁷

In the early 1850s, Shasta grew from a tent city into a town. Typical dwellings consisted of simple four-walled structures, three made of logs and a fourth made of stone complete with a fireplace and chimney. Shurtleff built a large home for himself and his family on the hill overlooking the town. Built in 1851, the two-and-a-half story house was long and narrow with a gable roof. A row of massive square wooden columns framed the front gable end, giving it the dignified look of a mansion. Other original wooden buildings in town included two general stores and three hotels. The hotels were the Globe, the St. Charles, and the Trinity House. By 1853, there were four more hotels: the El Dorado, the Shasta, the Old Dominion, and the Kossuth. All of them burned down in a fire that swept through the town in June of that year. Following the fire, many buildings were rebuilt with brick.¹⁸

Shasta became the "Queen City" of the northern mining region. Its numerous hotels and merchandise stores signaled that it functioned as a supply center for other outlying mining camps. A writer for the *Shasta Courier* explained that the town was located at the head of "whoa navigation"—meaning that it stood at the transfer point where the wagon road from Sacramento ended and the steep and narrow pack trails over the mountains began. "There was then no Colusa, Red Bluff, or other town on the Sacramento River north of the city of Sacramento," Shurtleff would recall many years later. "There being no wagon road north of Shasta, all supplies to the Trinity, Salmon, Scott, and upper Sacramento River mines, were packed over the mountains by mules. This made Shasta a great distributing center and a wholesale town." If one early newspaper report is to be taken as fact, roughly two thousand pack mules were used in the pack trains going from Shasta to Weaverville and Yreka and points beyond. The supply system prevailed until the trails to Weaverville and Yreka were each improved to the point that wagons could use them. Shasta's position was also undercut by the development of a third mountain road that went from the end of the Sacramento Valley northward through the Shasta Valley to Yreka. However, Shasta also succumbed to the boom-and-bust cycle common to all mining towns when the placer mines began to play out. "Even before that system of mountain roads was completed," Shurtleff wrote, "Shasta's occupation as a commercial center had gone. As early as 1857, the heavy wholesale houses felt the shock of declining trade."¹⁹

¹⁷ Shurtleff, "Shasta," 8; Mabel Moores Frisbie and Jean Moores Beauchamp, *Shasta: The Queen City* (San Francisco: California Historical Society for the Shasta Historical Society, 1973), 25–26.

¹⁸ Frisbie and Beauchamp, *Shasta: The Queen City*, 17–26; Linnea Holmquist, "The Shurtleff Mansion," *The Covered Wagon* (1964): 25.

¹⁹ Shurtleff, "Shasta," 8–9.

How many people resided in Shasta in its heyday? The population peaked during the stretch of years between census counts so it is difficult to say. One California newspaper puffed that Shasta reached a peak population of around 10,000, but Shurtleff wrote that this oft-quoted figure was grossly overblown. He noted that the population of the entire county stood at just 4,350 in 1860 and did not pass 10,000 until 1890. More telling than the census data were the vote tallies registered in the town of Shasta itself. In the national presidential election of 1856, Shasta recorded 601 votes. The highest vote tally occurred in 1855 when there were 683 votes. Shurtleff noted that a well-settled agricultural community in that era would poll about one vote to every five inhabitants. But in California the ratio of votes to population skewed higher because the population contained a higher percentage of adult males with the right to vote. In the presidential election of 1852, the ratio of votes to population in California was one to three and a half. Using the same multiplier for the 1855 vote in Shasta gave a population figure of 2,391 for that year. On that basis, Shurtleff made a reasonable guess that the population of Shasta may have peaked sometime before then at around 2,500.²⁰

The mining camp in French Gulch came into existence probably in the early 1850s. According to tradition, a party of French fur trappers passed down the old trail in 1851, prospecting as they went, and discovered gold in the creek bed near the present townsite of French Gulch. The town was originally located at the mouth of Dutch Gulch but when it became evident that the new buildings stood on rich placer ground the town was moved a thousand feet north. For a time, the place was called Morrowville after a miner; later it became French Gulch in honor of the discoverers.²¹

The mining camp that became Weaverville was established in 1849 or 1850 and was named for George Weaver, a prospector who built the first cabin. The mining district on Weaver Creek was soon the busiest in Trinity County. Yreka grew from a mining camp that was established in May 1851. Yreka became the county seat of Siskiyou County when it was formed from parts of Shasta and Klamath counties in March 1852.²²

Smaller mining camps sprang up elsewhere in western Shasta County. Old Diggings, or the Buckeye Mining District, located a few miles north of Reading's Ranch, was active by the late 1850s. The place was listed in the *State Register* as having a steam-driven mill with two stamps in 1858. The mining camps of Igo and Ono, located on a fork of Clear Creek southwest of Redding, appeared not long after the numerous other camps on lower Clear Creek. Ono was called Eagle Creek before it became Ono. Post offices were established in

²⁰ Shurtleff, "Shasta," 9.

²¹ Anonymous, "The History of French Gulch," typescript, no date, in Small Towns vertical file, Shasta Historical Society. French Gulch was registered as a state historical landmark in 1935; the state's website claims that the town was founded in 1849. "French Gulch," <https://ohp.parks.ca.gov/ListedResources/Detail/166>.

²² Gudde, *California Gold Camps*, 365, 380.

Igo in 1873 and in Ono in 1883. The relatively late appearing Igo and Ono mining districts became centers of hydraulic mining in Shasta County in the late nineteenth century and then dredge mining in the 1930s.²³

Whiskeytown in the 1850s

Prospectors started the mining camp that became Whiskeytown about 1850. They were interested in basing themselves at the spot where Whiskey Creek flowed into Clear Creek from the north and Brandy Creek flowed into Clear Creek from the south. The first name given the camp was Franklin, or Franklin City, presumably after the Franklin Mine. While some accepted the name, others referred to the place simply as Whisky Creek (no “e”). Around 1852 or 1853 the camp became known as Whisky Creek, and by 1858 it had become Whiskeytown. The colorful name for the town apparently derived a memorable incident at the creek that occurred earlier, probably in 1850. A man named Billie Peterson was taking his pack mule across Whiskey Creek when a barrel of whiskey slipped off the mule and smashed in the creek bed, draining its contents. The miners gave the creek its familiar appellation and the town’s name followed. Another explanation was that Whiskeytown got its name from the considerable imbibing that occurred there, but the specificity of the first story, especially with the name of the prospector being identified, makes it the more compelling story.²⁴

In the early 1850s, the camp was the first in a string of camps and waystations along Clear Creek above the so-called Clear Creek Divide—the dividing ridge between Shasta and the basin that now holds Whiskeytown Lake. (The pack trail from Shasta to Weaverville went over the dividing ridge rather than going up the narrow and steep Clear Creek Canyon to the south, and contemporaries called the summit of the ridge the Clear Creek Divide.) For travelers on the pack trail, the string of camps offered a choice of rest stops after the five-mile trek over the divide from Shasta. There was an establishment before Whiskey Creek at Four Mile House, then the Whiskey Creek camp at around the five-mile mark, then a camp called Fortunate (later Oak Bottom). Two miles past Fortunate was Tower House, situated where the pack trail began its climb over the dividing ridge between Shasta and Trinity counties.

²³ Gudde, *California Gold Camps*, 165, 250, 252.

²⁴ Dottie Smith, “Whiskeytown Earned Its Name as a Drinking Town,” *Record Searchlight*, April 9, 2010. Articles in the *Shasta Courier* in 1853 referred to “the town of Franklin, on Whisky Creek.” An article in the *Shasta Republican* and cited by the *Shasta Courier* in 1858 referred to Whiskytown (or Whiskeytown). See Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper in spiral binding, Shasta Lake Heritage and Historical Society.

The Whiskey Creek camp began as a cluster of miners' and prospectors' cabins and a supply store or two. In 1852, Benjamin Mix built a hotel there. Mix called the place Franklin City and named his hotel "Mix's Franklin Hotel." In July 1853, Mix placed an ad in the *Shasta Courier* as follows:

MIX'S FRANKLIN HOUSE, WHISKY CREEK

The undersigned would inform the public that the Hotel, pleasantly situated in Franklin City, on Whisky Creek, six miles north of Shasta, on the Yreka and Weaverville road, is now open for the reception of travelers, boarders, and customers generally. The table is constantly supplied with all the varieties of meats and vegetables procured in this Market. While the Bar is furnished with almost every kind of liquors in the very best quality. There is also a good and secure CORRAL attached to the establishment, always supplied with an abundance of hay and barley, for the accommodation of packers, travelers, etc. The subscriber has no hesitation in promising full satisfaction to all who may patronize him.²⁵

It was customary for hotel keepers to host "grand balls" to raise their profile in the wider community, and Mix did so the following November. His advertisement of the ball in the *Shasta Republican* ran as follows:

Benjamin Mix would inform the public and lovers of Dancing, that he will give a GRAND OPENING BALL at his new Hotel at Whisky Creek. . . on which occasion he would be most happy to see his friends and acquaintances.²⁶

Mix's advertisement went on to name his many friends and acquaintances in Shasta and places beyond. Following the event, the *Shasta Republican* recorded:

Notwithstanding inclemency of the weather of Wednesday afternoon, the attendance at Mr. Mix's hotel was very large, and everything passed off in the most agreeable manner. The music was excellent, the repast sumptuous, and everybody was in perfect good humor and enjoyed themselves to as full an extent as could be desired. About forty ladies graced the scene with their presence.²⁷

Mix's hotel and grand opening ball brought attention to the camp, but of course it was news of the mines and the promise of better earnings that induced people to move there. A miner employed at the Mad Ox Mine who wanted to see Whisky Creek grow into a bigger and better supply center put his thoughts in a letter to the editor of the *Shasta Courier* in March 1853:

There are but few of us at work here at present, and we are all making fair wages, washing over the dirt for the third or fourth time. Some are making \$10 and \$12 to the hand. . . . Our living is not of the best. Beef aint to be had short of

²⁵ Albert F. Ross, "Whiskeytown," *The Covered Wagon* (1982): 39.

²⁶ Quoted in Anna Coxé Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, Denver: National Park Service, Denver Service Center, 1978, 33.

²⁷ Quoted in Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 33.

Shasta. Horse Beans and Musty Pork is our principal living. The last named article, which costs us fifty two cents a pound, the rag pickers would growl at it, but we poor devils have to gaf it. . . . We work hard and have to pay more than any other class of men for whatever we eat. . . . I think if there are any man in town out of a job, they could find a show about here. The ground is not half so much dug up in the lower mines, and if it was half as much prospected I have not the least doubt there would be some splendid diggings discovered.²⁸

Whisky Creek remained a rough place. About this time Alex Murdock established a trading house, corral, and butcher stand in the camp, but his new business did not last very long; on April 6, 1853, Murdock was shot dead at a card table in the Trinity House in Shasta. The murderer, James Noland, was immediately apprehended, and a twelve-man jury was appointed that day. Noland was tried in the so-called People's Court and the jury rendered a verdict of guilty with a recommendation that Noland be hanged by the neck until dead at 6 o'clock that very evening. The punishment was carried out accordingly. Murdock's property at Whisky Creek was sold at a constable sale in front of the courthouse in Shasta later that month.²⁹

There was more violence and lawbreaking. In May 1854, Four Chinese miners were killed near Four Mile House. Rather dubiously, Indians were blamed for the murders. In July 1855, a safe was stolen from Mix's hotel containing \$1,500 in gold dust. In December 1855 there was a stagecoach holdup on the road between Shasta and Whisky Creek. The two Wells Fargo express drivers refused to surrender and escaped on their mules. The robbers pursued, and when the express drivers eventually circled back and returned to the stagecoach, they found the gold dust they were transporting had not been stolen. In March 1858, two Whisky Creek miners, a German by the name of John A. Feldbusch and an Italian known only as Louis were found murdered near their cabin, both stabbed to death. It was known that these two mining partners had been doing well with their claim and likely had a sizeable stash of gold hidden on their property.³⁰

In spite of the hazards and hardships, Whiskeytown grew to have a resident population of about 150 by the middle or end of the decade. As usually happened in the longer-lived mining camps, a few wives of miners became residents and used their feminine influence to make the rough society of miners somewhat more civil. Even if women had no right to vote and only feeble standing in the law, they were able to exercise influence through numerous social institutions: church, school, the local newspaper, and even the

²⁸ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper in spiral binding, March 28, 1853, Shasta Lake Heritage and Historical Society.

²⁹ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper in spiral binding, April 6, 1853, April 9, 1853, Shasta Lake Heritage and Historical Society.

³⁰ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper in spiral binding, May 6, 1854, July 21, 1855, Dec. 22, 1855, April 17, 1858, Shasta Lake Heritage and Historical Society.

local hotel. Benjamiin Mix, the proprietor of Whiskeytown's first hotel, knew the importance of getting a good turnout of the ladies each time he hosted a grand ball. According to one newspaper, Mix's balls were the most popular events of their kind in Shasta County.³¹

Some women corresponded with local newspaper editors to spread their influence. Newspaper editors shared women's interest in improving the civil society so the town would attract more families and find more stability. The editor of the *Shasta Courier* published a lively correspondence between a woman in Whiskeytown and a woman in Shasta. The letters served not only to relieve the letter writers' mutual loneliness and provide them each some female companionship, they were pointedly moralistic. As one correspondent openly stated to the other (and to all the newspaper's readers), "Let us talk as we feel, to let our effusion flow unchecked in its own channel, controlled only by the nimbleness of our pens. In this way we can mutually aid each other in neutralizing the effects of the bad habits and loose morals of California, and in attaining the highest need of praise as deserving wives."³²

Mix's hotel burned down in August 1858, dealing a blow to the community as well as a \$10,000 loss to Mix. The people of Shasta and Whiskeytown took up a collection to help Mix rebuild. A new hotel was completed early in the following year, which Mix advertised with a Washington's Birthday Ball in February, and then an Independence Day Ball in July. However, he was unable to pull off either event due to declining health. Mix sold his property in 1861 to George P. McGuire of French Gulch, who renamed the establishment the Whisky Town Hotel. McGuire sold it two years later to Pauline Brown of Oak Bottom. Brown hired Oliver P. Woodward to manage the hotel and eventually sold it to him in 1873. He changed the name of the establishment to Woodward's Hotel. The stately building was still standing ninety years later when the area was condemned to make way for a reservoir.³³

If the hotel was truly the center of Whiskeytown's cultural life in the 1850s, the town-builders wanted more. Church and school were generally regarded as the two key institutions for attracting families and securing a town's permanence. In the camp's early days there were so few children in the population that the residents had no inclination to invest in a school. A first school house was built at a cost of \$200 and opened in Whisky Creek in 1855, but apparently it was not a success.³⁴

³¹ Ralph Mann, *After the Gold Rush: Society in Grass Valley and Nevada City, California, 1849–1870* (Stanford, CA: Stanford University Press, 1982), 34–48; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 32–34.

³² Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper in spiral binding, March 24, 1855, Shasta Lake Heritage and Historical Society.

³³ Ross, "Whiskeytown," 48–49; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 143.

³⁴ Sources differ on the Whiskeytown's school's beginnings. Early Whiskeytown resident Sydnie Marshall Apperson Baker, who was five years old in 1854, stated that she went to the first school in Whiskeytown in 1855 and her teacher was Ed Conkright. Because her father was the teacher in Horsetown, her account seems credible. See "An Interview with Sydnie Marshall Apperson Baker," *The Covered Wagon* (1971): 40.

If indeed the school failed, then it followed the pattern set in Shasta where the first school opened in August 1853 but closed the following May, unable to pay its bills. Shasta's first school qualified as a public school under state law and received state funds, but not enough to sustain it. After its closure, another school opened in Shasta with the help of the Methodist Episcopal minister and his wife, the Rev. and Mrs. H. B. Sheldon. This second school was a semi-private venture though it still garnered a small stipend of public funds. Before the first school year was half complete, citizens clamored for a school building, which was built by private subscription at a cost of \$1,200, and which sank this second school irretrievably in debt. Finally, a third school was established in Shasta, this one supported by a new school tax. A school district was formed with boundaries extending all the way to Whiskeytown, and a school marshal was appointed who canvassed the district and enumerated 163 children of school age. It is not known if any children were sent from Whiskeytown to Shasta for school; the five-mile hike each way would have been a considerable hurdle.³⁵

William Samuel Kidder taught school in Whiskeytown in 1859. This young man with a bright future in the Baptist ministry was then twenty-four years old. Born in England and raised in the state of New York, Kidder first settled in Shasta County at Piety Hill (Igo) in the previous year where he was taken into the fellowship of the Piety Hill Baptist Church. In 1860, following his year in Whiskeytown, he moved to French Gulch where he taught school again while becoming more and more active in the ministry. Later, in 1864, he would volunteer for the Union Army and serve with the Seventh Regiment of California Volunteers in Arizona.³⁶

The school district hired Miss A. Hathorn to teach at Whiskeytown for the school term commencing in January 1860. A month into the new term, the *Shasta Courier* noted that she had just ten pupils attending when the district records showed there were twenty-six school-age children in the area. It is unclear how the school fared that year or in the years following. A pair of local historians combed the Shasta newspapers from the period and listed all those who taught at Whiskeytown from 1855 to 1900, suggesting that the position was filled only sporadically in the 1850s and 1860s. A "school report" in the *Shasta Courier* in 1878 stated that the Whiskeytown public school had eighteen students enrolled that year.³⁷

³⁵ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 38–39; Cliff M. Bisbee, "Cradle Days of Shasta Schools," *The Covered Wagon* (1955): 17–19.

³⁶ Elsie L. Hodgins, Edna L. Barr, and Della S. Kidder, "The Story of William Samuel Kidder and Mary Elizabeth Kidder," *The Covered Wagon* (1961): 5–9.

³⁷ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 38; Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, November 9, 1878, in spiral binding, Shasta Lake Heritage and Historical Society. At the end of this volume, the authors list school teachers as follows: 1855: Miss A. Hawthorn [sic], 1855–1856: Edwin T. Bailey and Ed Conkright, 1858–1859: Rev. William Kidder, 1866–1867: Ella Gage Carter, 1877–1879: F. P. Primm, 1879–1886: C. E. Parkinson, 1886–1888: Lillie Herd, 1888–1890: R. T. Taylor, 1891: Agnes Bystle, 1891–1894: Kate A. Brincard, 1894–1895: Kate E. Crocker, 1896–1897: Professor Rollins, 1897–1898: Leroy Birch and Professor Rollins.

Regular church services came to Whiskeytown about the same time the school started up. The camp was probably visited by itinerant Methodist ministers before then in the early to mid-1850s. The ministers would have organized a camp meeting probably on someone's farm, and they might have preached to the assembled flock under a suitable shade tree or a brush arbor built for the occasion. Perhaps Whisky Creek was visited by Catholic priests as well, for the Catholic Church was established in Shasta by 1853 and among the priest's duties was to perform an occasional mass at outlying mining camps. About the time that the Whisky Creek camp became known as Whiskeytown some residents founded a Baptist church in the community. First called the Whiskey Creek Baptist Church, the name did not sit well with some of the temperance-minded parishioners, so the name was changed to the Mount Shasta Baptist Church.

Kidder helped to raise the profile of the church in Whiskeytown during his year there working as a schoolteacher. While conducting the school session at French Gulch in the following year, Kidder helped found new Baptist Church organizations at Eagle Creek (Ono) and Red Bluff.³⁸

Historian Ralph Mann described the minister's role in community formation in his social history of two California mining towns:

Churches and congregations attempted to fulfill their expected parts. Ministers tried to act as moral arbiters, and churches supplied bases of operations for reform by sheltering temperance clubs and Sabbatarian meetings. And middle-class women constituted the foundation of church support; their subscription campaigns, suppers, auctions, and fairs became common features of camp life.³⁹

Whiskeytown and French Gulch in the 1860 Census

We can learn a lot about non-Indian communities during the California Gold Rush by examining census data. The U.S. Census of 1860 recorded that there was a non-Indian population of 4,360 persons in Shasta County. (American Indians generally were not counted in the U.S. census because they were not U.S. citizens. Most American Indians did not receive U.S. citizenship until passage of the Indian Citizenship Act of 1924.)

Unfortunately, in the 1860 census there is no clear segmentation of the data for Whiskeytown or any other community within Shasta County—the tally was all run

³⁸ Don M. Chase, *Pioneers: Sketches of Pioneer Days in Shasta, Tehama, Trinity and Siskiyou Counties with Emphasis on the Beginnings of Religious Organizations* (Redding, CA: published by the author, 1945), 3–5; Veronica Satorius, compiler, *Between the Lines: The Catholic Church in Shasta County, California 1853–1977* (published by the author, 1978), 1–10; Henry L. Walsh, “Hallowed Were the Gold Dust Trails,” *The Covered Wagon* (1962): 9–10.

³⁹ Mann, *After the Gold Rush*, 47–48.

together. However, by close examination of personal names and other clues found on the original handwritten census sheets (which have been preserved on microfilm and now available online), it is possible to isolate the census data pertaining to Whiskeytown and all of upper Clear Creek with a high degree of confidence.

The census for Shasta County is contained on 128 standard-form sheets, with each sheet containing 40 lines for listing individuals' names and personal data. Starting with the first sheet, the census taker for Shasta County numbered each separate dwelling sequentially as he came to it and wrote the names of the occupants of the dwelling in a column to the right. At the top of each sheet, the census taker filled in the post office and the date. Just five post offices were used for the whole county: Shasta, Horsetown, French Gulch, Millville, and Cottonwood. The census taker began his effort in the town of Shasta on June 1, and took two months to complete the census, listing and numbering exactly 1,300 dwellings across the county. On June 6 and 7, he crossed over the divide from Shasta to Whiskeytown and made the rounds in the town. He listed the post office on those sheets as Shasta. Toward the end of June, he conducted his census in upper Clear Creek starting in French Gulch and proceeding downstream to Tower House and Oak Bottom but excluding Whiskeytown since he had visited it earlier. On those sheets the post office is given as French Gulch.

For purposes of this study, the authors concluded that dwellings 268 through 325 in the census comprised Whiskeytown, while dwellings 696 through 794 comprised French Gulch and dwellings 795 through 831 comprised the balance of the population in upper Clear Creek. While we have a high degree of confidence in these number ranges, we must admit to uncertainty over the exact cutoffs of each number range because the census taker filled out all forty lines on every sheet, even when he changed locations or started a new day. So, for example, if the census taker completed his census of Whiskeytown on June 7 with half the sheet empty, he filled the remaining lines with other dwellings wherever he may have gone on the next day. Consequently, our analysis of the census data for French Gulch and Whiskeytown may have left out or put in a few extra dwellings, but the statistical effect of such an error would be minor.⁴⁰

In 1860, Whiskeytown had a population of around 183 residents with buildings mostly strung out along one main street. The businesses and community buildings included the hotel, the church, and the school, as well as a few traders' merchandise stores. The town was mostly residential, with numerous small cabins. The town of French Gulch may have had a population of around 326. The census taker counted 434

⁴⁰ A few recognizable names were key to our identifying of these number ranges. The names of W. S. Kidder, Charles and Marie Joseph, John Morrell, Pauline Brown, and Charles and Philena Camden, all known residents of French Gulch or upper Clear Creek, appear in the French Gulch number range. The names of William Kesler, Ludwig Behrens, Samuel Cooper, and Ah Yang, all known residents of Whiskeytown, appear in the Whiskeytown number range. Two persons who were inexplicably not recorded in the 1860 census were Levi Tower and Benjamin Mix.

individuals living in the upper Clear Creek drainage above Whiskeytown. The last 108 names in this tally are presumed to be the population found below French Gulch around Tower House and Oak Bottom.⁴¹

The demographics of Whiskeytown and French Gulch were similar. Both towns were made up of a largely itinerant population of single, working-aged men, most of whom were in their twenties and thirties. Whiskeytown had 155 adults and 28 children, a ratio of five and a half to one. French Gulch had 272 adults and 54 children, a ratio of five to one. Among Whiskeytown's adult population, there were 136 men and just 19 women. In French Gulch the numbers were almost as lopsided: 241 men and 31 women. In the whole upper Clear Creek drainage four-fifths of the men gave their occupation as miner. The census recorded that there were 373 miners, 31 laborers, 9 farmers, 7 traders, 6 clerks, 5 merchants, 4 blacksmiths, 3 carpenters, 3 physicians, 2 millers, 2 gardeners, 2 groomers (persons who groomed horses), and a single teacher, cook, baker, hotel keeper, shoemaker, stonecutter, and stage driver. (Only one woman was listed with an occupation; she was a trader who owned a store and later a hotel.)

Both Whiskeytown and French Gulch had large numbers of foreign-born adults, but the proportion of foreign-born in French Gulch was significantly higher. Whereas in Whiskeytown about two-thirds of the population was foreign-born, in French Gulch it was more than four-fifths. The high proportion of foreign-born in Whiskeytown and French Gulch in 1860 was consistent with other mining camps in California's northwestern mining region. In Rodman Paul's study of the California mining frontier, he found that nearly everywhere in the state in 1860 the foreign-born amounted to at least a third of the population including the farming population outside of the mining towns. In the southern mining region, the foreign-born constituted a majority of the population and in the northwestern mining region they made up from three-fifths to two-thirds of the population. Paul drew two conclusions from these census data: first, that after the initial flush years of the gold rush most of the mining districts were more foreign than "American," and second, that native-born Americans tended to concentrate in the richest section, namely the central mining region, while the less advantaged foreign-born gravitated to the less lucrative areas.⁴² One could add that within each county a higher percentage of native-born Americans lived on farms than in mining towns, skewing the proportion of foreign-born in the mining towns higher. So, the fact that the adult population of French Gulch was four-fifths foreign-born should not be surprising.

⁴¹ The cutoff between French Gulch and the Tower House-Oak Bottom population corridor is based on there being two distinct groupings of Chinese. As the census taker began with the Chinese in French Gulch, so it is presumed that he began with the Chinese in the lower community. Recognized names such as Kidder and Camden fall in with this division starting at dwelling 795.

⁴² Paul, *California Gold*, 109.

Both Whiskeytown and French Gulch had sizeable populations of Chinese miners, all of whom were male. In Whiskeytown, the census taker counted twenty-five Chinese; in French Gulch, he enumerated eighty-seven. In both towns the Chinese occupied dense living quarters and lived separately from the native- and foreign-born whites. In dwelling 297 in Whiskeytown, the census taker listed no fewer than eighteen Chinese men. Perhaps dwelling 297 was more like a small encampment than a single dwelling like other buildings in the town. In Shasta, for comparison, the Chinese lived apart at the south end of Main Street in an area called “Hong Kong.” The Chinese community in Shasta may have numbered 400 to 500 at its peak in the 1850s; only a fraction remained in 1860. When Shasta’s Chinatown was in full flower, the buildings consisted of around thirty to forty wood and cloth houses, a hotel, several stores and gambling venues, and a joss house. Whiskeytown’s Chinese quarter would have been far smaller than the one in Shasta, but dwelling 297 was probably something different from a four-walled log cabin.⁴³

In French Gulch, the census taker began his census in the Chinese quarter with dwelling 696, in which he listed thirty-two resident Chinese men, again suggesting that the “dwelling” was really a multi-dwelling complex of attached or semi-attached residences. The next five dwellings in his enumeration were occupied by seventeen Chinese men, while dwelling 702 had another nineteen residents all to itself.

Much farther along in the census taker’s enumeration, dwelling 795 was home to another fifteen Chinese men. It appears that this was a separate Chinese camp located south of French Gulch, perhaps in Grizzly Gulch or around Oak Bottom or possibly up Whiskey Creek. The men’s ages were all recorded as being from twenty to thirty except for two men whose ages were given as thirty-five and thirty-seven. The thirty-five-year-old man’s name was listed as We Chin—perhaps the same miner known as Qui Chin who, with nineteen other Chinese men, bought a mining property at Oak Bottom in 1868.⁴⁴

Most of the miners who lived in Whiskeytown and French Gulch sought the company of their fellow countrymen. Seven Portuguese speakers, three from Portugal and four from the Azores, a Portuguese colony, lived in two dwellings in French Gulch. As three of the men shared the last name Frates and two shared the last name Joseph, it is possible they were all an extended family. They lived in two dwellings: one shared by the three older men who were all miners, the other shared by the four younger men who were all laborers. There was another pair of dwelling units in French Gulch populated by an extended family of German-speakers by the name of Frank. Frederick Frank of Baden, a merchant, lived in one dwelling with his wife Elizabeth of Bavaria and three small children. Four more Franks, perhaps Frederick’s younger brothers, lived in another dwelling along with one Frank Geyer of Hessen. The five men, ages nineteen to twenty-nine, included a carpenter, a

⁴³ Frisbie and Beauchamp, *Shasta: The Queen City*, 67.

⁴⁴ Dottie Smith, “Oak Bottom Renewed Weary Travelers,” *Redding Searchlight*, undated newspaper clipping, Shasta Lake Heritage and Historical Society.

clerk, a butcher, and two miners. Elsewhere in upper Clear Creek, possibly in Oak Bottom, four young men from Prussia and Württemberg lived in dwelling units 820 and 821 in the census, while another man from Prussia and a woman from Bavaria lived in dwelling units 815 and 816. Together, these four dwelling units may have constituted a “little Germany” within the larger settlement.

In Whiskeytown there were three dwellings in a row with German tenants. In one lived a young couple and their three small children and a single man. In the next lived a young single mother of two. In the third was another couple and a single man from Württemberg plus two other single men from New York. A few dwellings down from this cluster, there were three more dwellings in a row occupied by eight Spanish and Portuguese speakers from Spain, Mexico, Portugal, and the Azores. In fact, there were a total of fifteen men from the Azores living in Whiskeytown in 1860.

In Whiskeytown, Germans and Portuguese were the two most numerous ethnic groups from Europe. In French Gulch, the biggest contingent of foreign-born were the Irish, followed by the Chinese, Germans, and French. The Irish, too, chose to live together. As they were English speakers like the native-born Americans, it demonstrated that not only shared language but also common heritage pulled people together. There were some eighty-two people in French Gulch who were born in Ireland. In one part of the town, ten miners, all but one born in Ireland, lived in five consecutive dwelling units, presumably forming an ethnic enclave or extended Irish “family” of some sort. They may have all lived in a row of cabins, or in a single boarding house, sharing meals. (The one non-Irish in this group was a young man born in New York in the mid-1830s; he may have been of Irish parentage.)

Native-born Americans tended to live with people of the same state or section. Three men from Georgia occupied three residences that were presumably in a row: dwelling units 817, 818, and 819. John Hodge, a stonecutter from Kentucky, and L. Polchair, a laborer from Louisiana, shared another dwelling unit, as did G. F. Baker and J. P. McMillin, miners from Tennessee and Arkansas. With the nation at the brink of civil war, Southerners sought out other Southerners.

Out of 241 men residing in French Gulch just 28 men lived with wives and children. Only five of these twenty-eight men were native-born; all the rest were foreign-born. Eighteen of the foreign-born men who lived with families came from Ireland, two from France, one from England, one from Germany, and one from Poland. Given what we know about the importance of the married women and their husbands in pushing for community permanence, the dominant position of the Irish in this subgroup is significant. Most of the family men in French Gulch held occupations other than miner. They included two butchers, three traders, a merchant, a blacksmith, a laborer, and a baker. One man had four children and no wife. The family of the baker appeared to comprise three generations.

The small yet influential minority of women in Whiskeytown differed from the one in French Gulch in one vital respect: it was nearly two-thirds native-born whereas the women in French Gulch were nearly three-quarters foreign-born. Among the nineteen women residing in Whiskeytown in 1860, nine were born in Northern states, three in Southern states, two in Ireland, four in Germany, and one in Switzerland. Their average age was twenty-nine. Among the thirty-one women of French Gulch, eight came from Northern states, eighteen from Ireland, three from Germany, and two from France. Their average age was thirty. In the scattered population along upper Clear Creek from Tower House to Fortunate, there were nine women: four from Northern states, one from a Southern state, three from Ireland, and one from Germany. Their average age was thirty-two.

As noted above, only one woman in all of upper Clear Creek was listed in the census with an occupation. She was Pauline Brown, a trader, with \$300 in real estate and \$200 in personal wealth. Both placed her in the eighth percentile of adult residents in terms of combined wealth. She was a German from Bavaria. It may be noted that some people described their occupation as “trader” while others preferred “merchant.” In general, the distinction was one of scale. The term trader denoted an individual with small stocks and a small income. For some, trading was a seasonal or part-time occupation alongside mining or prospecting. Male traders dressed like miners and lived with miners; merchants were more apt to identify with the professional or middle class.⁴⁵ Brown’s identification as a trader may have reflected the challenge she faced as a woman making her own way in a world of men. A few years after she was recorded in the census, she would purchase the hotel in Whiskeytown.

Just as the census mostly disregarded women’s occupations, it was silent on marital status and routinely listed a husband and wife in that order, implying that the former was head-of-household. Rarely, the census listed a woman as the head-of-household. There were three single female heads-of-household in upper Clear Creek, presumably widows: Mary LaFontaine of France, the mother of four children, and Ann McCarty of Ireland, mother of three, and Anna Dorsch of Bavaria, mother of two. Two eighteen-year-old females lived with their parents. One sixty-two-year-old woman and her seventy-year-old husband lived in what was apparently a three-generation household. All of the remaining women were wives and homemakers. The women who were married or widowed had an average of two children.

A couple of families had male boarders. In one instance, the widow Mary LaFontaine was listed as head-of-household with her four children plus a twenty-eight-year-old man, Frank Colen, a miner born in Canada. In another instance, Charles Camden was listed with his wife and two daughters plus a man named T. S. Stephenson living in the

⁴⁵ Mann, *After the Gold Rush*, 20.

same dwelling. Stephenson was nineteen years old in 1860, a laborer, born in England. In some mining communities many families took boarders into their homes to help with expenses. It appears that only a few families in upper Clear Creek did so.

The census data offer a picture of how Whiskeytown and French Gulch compared and differed from one another. In many ways they were similar mining towns in which young, single, male miners made up a large majority of the population. In both towns, families with children were in the minority. The ethnic makeup of the two towns was also similar, as they both had significant numbers of Chinese who lived apart as well as significant numbers of Irish, Germans, Portuguese, and other ethnic minorities. Where the two towns differed was in the ethnic makeup of the small populations of married women: in French Gulch they were mostly Irish, German, and French whereas in Whiskeytown they were mostly Anglo-American.

The 1860 census provides a freeze-frame of Whiskeytown's changing population as it entered its second decade. It may be assumed that there was continued high turnover in the population as people moved on in pursuit of other opportunities, yet more and more families came and stayed for a while. The large population of single young men (or married men unaccompanied by their wives, as the case might be) probably continued to give the town a restless character that held over from its early days as a mining camp. Yet the population did include a couple dozen families. The relatively small number of married women and men in the population probably exerted an outsized influence on the project of community formation in Whiskeytown just as that set did in other mining towns.

Whiskeytown in the 1860s

Residents of Whiskeytown were deeply interested in the presidential election of 1860 and the threat of disunion. Around eighty men showed up to hear speeches made on behalf of the Northern Democratic Party candidate for president, Stephen Douglas. In September 1860, the *Shasta Courier* confidently predicted that the Whisky Creek precinct would vote for Douglas. In the national election that November, Shasta County voted narrowly for Douglas while the whole state voted narrowly for Republican Party candidate Abraham Lincoln. After the Southern states seceded from the Union and the Civil War began, Union Leagues were organized in many communities. Members signed a pledge to uphold the U.S. constitution and laws. The *Shasta Courier* announced in 1863 that Union Leagues had formed in Shasta, Millville, Whiskeytown, Tower House, French Gulch, Horsetown, Janesville, and Piety Hill. A Copperhead Democrat (a Northern Democrat in favor of making a negotiated peace with the Confederacy) went to Whiskeytown and made a two-hour speech to an assembled crowd. He was answered by a citizen of the town who

declaimed that the only enemies the Lincoln administration had to fight “were the rebels in front and the Democratic party in the rear.” The crowd approved of the retort and the meeting was adjourned.⁴⁶

As placer mining declined in the area, Whiskeytown lost some of its population. Many of the miners left for other mining regions, especially the new placer diggings in Washoe and Humboldt Counties, Nevada. To discourage more population loss, the citizens of Whiskeytown adopted a plan for systematically prospecting the surrounding hills to find lode strikes nearer to hand. They organized two companies, divided up the terrain between them, and put their resources toward always keeping a minimum of two experienced prospectors in the field prospecting for leads. The strategy appeared to bear some fruit. Six months later, it was reported that each company had located several promising leads.⁴⁷

The collective strategy signaled something. The citizens of Whiskeytown who invested in the two companies were not just keen to pool their resources to get results, they were also willing to stay in the area and bridge the transition from placer to lode mining. Lode mining required more organization, technology, and capital investment than placer mining did, and would certainly entail a further shift toward working for wages. The miner’s calculus was that wage work would be steady work, so the miner would not have to move as often.

Among the promising new developments near Whiskeytown was a lode strike about a mile distant at a place called Saw Mill Flat. A shaft was sunk twenty feet deep into the gold-bearing lode and a water-powered arrastra was built. A year later, a miner who identified himself only as “Pick” wrote a letter to the editor of the *Shasta Courier* giving a colorful account of the Saw Mill Flat workings. His rustic letter also gives a feeling for the economic mood in the town as the days of pick-and-pan mining definitely drew to a close:

Having noticed your call for knowledge of the mining interests, and myself feeling that it is good to let others know what little is within the scope of my researches, which, by the way extend to this flat alone. Saw Mill Flat is not unknown to fame. For long years it has been mined but only in the primitive manner. Everyone trying it have been content to make a small cut into some place on the edge, work out a few dollars and when it became apparent that that hard work and capital were necessary to get to the bottom and open out the real wealth of, on the flat, the project, would be abandoned for lighter jobs elsewhere. It was left to Messrs. Robinson, Williams & Ketchum to find the lead. Over a year ago the purchase from Col. Wingate, his orchard, on the flat, and immediately went in under it, letting the fruit trees tumble into their ground-slucie, and finding that they had covered ground that paid largely. The

⁴⁶ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Sept. 8, 1860, May 30, 1863, Aug. 29, 1863, in spiral binding, Shasta Lake Heritage and Historical Society.

⁴⁷ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Aug. 8, 1863, Feb. 6, 1864, in spiral binding, Shasta Lake Heritage and Historical Society.

Company have an excellent ditch that supplies them with an abundance of water, and they are now living at home with comfortable incomes for light labor. Their claim will last them for years, and enable its owners to require capital sufficient for the comforts of life, after mining shall cease to have charms for them.

On the same flat—Messrs Farrington, West & Company have been working during the present winter and have been making good wages, though I cannot say they are fairly in. In fact, it is my belief that from ten to twelve hundred dollars could be well expended in the opening and putting it in good economical order. This amount judiciously expended in cutting a bed rock sluice way, the building of a reservoir, purchase of a ditch that lays convenient, and the erection of hydraulic machinery, would make it a claim second to none in the country. I do not know but it may be the intention of the company to improve the claim as I have intimated; and it is certain that if Nate [Farrington] takes it into his head to do so it, the thing is as good as done.

The amount of the weekly harvest of dust from this flat, I have no means of determining, but can very safely say it will be made much greater than it is ere many months. The truth is, we all have been too saving in outlays to make poor dirt pay, but enterprise is creeping in among us, and we hope soon to be able to say to you that we are going it with a rush and with satisfactory results. Some of us here believe that the Robinson claim might wash treble the amount of dirt per day with the same labor and water they now use. We shall see what we shall see.⁴⁸

Other commentators noted the shift from placer to lode mining in the area. Usually, they were quick to observe the significance of a rich lode mine for the future of Whiskeytown or Shasta. On October 7, 1865, the *Shasta Courier* announced “Another Strike” near Whiskeytown:

Whiskeytown was thought to be dead. It is in evidence now that it but slumbered. In the latter part of the week, the indefatigable Nate Farrington, reported in that burg that he had discovered a rich ledge within a few miles of the town. Overtures were made by a company of men to be shown up. Nate accepted the proposition, and showed them what appears to be the best defined and richest ledge yet discovered in this country. It is located about five miles from Shasta, on the west side of Clear Creek, between Kanaha and Dog Gulches. At one place, where the lode crosses a gulch tributary to Dog Gulch, it is well defined and two feet wide. One pound and two ounces of the rock, taken promiserously, was pounded in a mortar and realized ten cents. The lode is now claimed as far as it can be traced, and the companies are arranging to go to work. Farrington found another rich ledge a week later.⁴⁹

⁴⁸ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Feb. 18, 1865, in spiral binding, Shasta Lake Heritage and Historical Society.

⁴⁹ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Oct. 7, 1865, in spiral binding, Shasta Lake Heritage and Historical Society.

Further commentary on the mood in Whiskeytown was provided in an article in the *Shasta Courier* printed on December 2, 1865:

The people of this little burg and once famous mining camp are waking up once more and showing the true spirit and enterprise. Besides the Knickerbocker, they have discovered some half dozen lodes which show gold in the croppings in sufficient quantities to justify working and they all feel jubilant in the belief that when they once get a mill on the Knickerbocker, the charm will be broken when industry and the wealth of the other lode will bring about them mills innumerable. The companies engaged are working independently of any capital except their own brains and muscles, and have determined to buy their mills with rock they are placing on top of the ground. It is the only true way to do business. It is sure. It is independent, and admits of no such word as fail. It does away with all this croaking about capital to work quartz lodes.⁵⁰

Whiskeytown and its environs continued to experience a high number of murders and robberies. No fewer than seven highway robberies occurred on the road from Shasta to Weaverville between 1860 and 1870 as reported by the *Shasta Courier*. In one instance, three road agents brazenly stood in a line across the road south of Tower House and robbed two citizens of Whiskeytown as they were returning home from French Gulch. In another instance, two road agents approached Charles Camden as he was sitting by a spring on the side of the road and demanded his money. When he replied that he had none, they assaulted him, knocked him insensible, ransacked his pockets, and stole what he had—about thirty dollars. In two other cases, a lone highwayman pulled a pistol on a lone traveler and demanded the person's money or his horse. Near the divide between Whiskeytown and Shasta, a white man stopped several Chinese as they were walking on the road and robbed them of all their money. In another highway robbery, two Americans and a Spaniard robbed four Chinese within plain sight of Whiskeytown. It was believed that this trio of robbers had committed other robberies in the vicinity over the past year.⁵¹

There were also robberies in town. William Kesler, a merchant, claimed that a Chinese man stole \$700 from his till. He chased the man all the way to his cabin but was unable to recover the money. A. Nicolets, a bar keeper at Four Mile House, said the place was broken into and \$200 was taken from his carpet sack.⁵²

⁵⁰ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, Dec. 2, 1865, in spiral binding, Shasta Lake Heritage and Historical Society.

⁵¹ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, March 24, 1860, May 28, 1864; Sept. 10, 1864; Oct. 8, 1864; Nov. 4, 1865; Sept. 28, 1867; Dec. 4, 1869; in spiral binding, Shasta Lake Heritage and Historical Society.

⁵² Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, Oct. 27, 1866; July 18, 1868; in spiral binding, Shasta Lake Heritage and Historical Society.

Three murders and one attempted murder in the Whiskeytown vicinity were reported by the *Shasta Courier* over the decade. The attempted murder involved one white man stabbing another white man for taking up with his wife. All three murder victims were Chinese men. One was murdered by a fellow Chinese man who was arrested, tried, and hanged for the crime. In the other two instances, officials discovered the victim's body but no culprit was ever found. Charles Camden discovered one of these murder victims.⁵³ In view of the park's close interest in Charles Camden, the story in the June 11, 1864, issue of the *Shasta Courier* is quoted here:

On Monday last, on the road to Whiskeytown and about a mile and a half from this town, Mr. John [sic] Camden, collector of tolls on the turnpike running north, when about eighty rods north of his dwelling, discovered on the pike some bullets and signs of blood. He immediately summoned to his aid Mr. Behrens, of Whiskeytown, who was passing about that time, and the two proceeded to follow the blood traces. Following down the mountain side into a gulch or dry water course, they discovered the dead body of a Chinaman partially concealed under a sort of arbor formed by the chaparral, there growing luxuriantly. The Sheriff was immediately notified, and Justice Danielson proceeded to summon a jury to inquire into the cause of death, etc. The jury found deceased to be a Chinaman, and that his death was caused by a heavy instrument in the hands of some person or persons unknown. The head of the deceased had been broken in, and the skull so fractured that death must have immediately ensued. One of the pockets of deceased was wrong side out. No effects of value were found upon him. Some time after the inquest had adjourned, a Chinaman, claiming to be a partner of deceased, came into town and said the deceased started from camp on Clear Creek for town on Sunday, and must have arrived at the place of the murder about sundown, and that he had about sixteen dollars on his person. The Chinese took the body of deceased into their possession, and no doubt performed the usual funeral rites.⁵⁴

There were numerous fatal accidents and serious injuries reported in the *Shasta Courier*, too—so many, in fact, that it would seem to reflect a truly hazardous environment. Over the decade seven people, all adults, lost their lives while trying to cross swollen creeks. One little girl fell into a fire and suffered fatal burns; another little girl fell down a mine shaft and died. One man was attacked by a loose boar belonging to the butcher in Whiskeytown.

⁵³ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, Jan. 9, 1864; June 11, 1864; June 21, 1866; March 5, 1870; in spiral binding, Shasta Lake Heritage and Historical Society.

⁵⁴ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, June 11, 1864.

There were two serious sawmill accidents, one fatal. One man accidentally shot himself though not fatally, and three different men caused themselves serious injury by falling off their horses while intoxicated.⁵⁵

If the town and its environs were still in some ways a part of the wild West, in other ways the place was steadily becoming more domesticated. Several small farms now existed in the upper Clear Creek drainage. Erastus and Lydia Shattuck Dickinson homesteaded in the area now occupied by the Francis Carr Powerhouse.⁵⁶ Several residents, including Levi Tower, planted orchards or vineyards in the 1850s, and a decade on these plantings were producing annual crops. The Joseph family of France, who moved to French Gulch in the late 1850s, established a small cattle ranch and fruit farm one mile above the town. They raised cattle and grew apples and pears. A. J. Van Wie bought a 160-acre farm from Franklin Vandeventer at Oak Bottom in 1856 and planted 30 acres of fruit trees. When the General Land Office conducted township and section surveys in the area in the late 1860s, the surveyor noted the many fine vineyards and orchards in the upper Clear Creek drainage. The farms were small because there was not much level land to till, but the crops of vegetables were in a thriving condition. “Ten years ago,” one surveyor wrote, “this Township was considered a rich placer gold mining district, but at this time, as a general thing the mines are considered as exhausted, and the business of mining is almost entirely abandoned by the residents within the Township.” That overstated the matter somewhat, but it nonetheless reflected the fact that the mined landscape was now largely farmland. How the people lived on the land was changing.⁵⁷

⁵⁵ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Dec. 15, 1860; April 21, 1861; Aug. 1, 1863; Nov. 28, 1863; Jan. 9, 1864; Feb. 6, 1864; Feb. 4, 1865; Dec. 23, 1865; Feb. 10, 1866; June 30, 1866; Dec. 22, 1866; May 25, 1867; Nov. 12, 1870; in spiral binding, Shasta Lake Heritage and Historical Society.

⁵⁶ C. H. Sunde, “The Thompson Family,” *The Covered Wagon* (2003): 95–98.

⁵⁷ Sister Jeanne Sullivan, “A French Family in French Gulch,” *The Covered Wagon* (1973): 44–45; Dottie Smith, “Oak Bottom Renewed Weary Travelers,” *Redding Searchlight*, undated newspaper clipping, Shasta Lake Heritage and Historical Society; Park Service, “Historic Vegetation of Whiskeytown: An Analysis of General Land Office Survey Data 1866–1882,” WNRA, Cultural Resource Division e-Files.

CHAPTER NINE

Ethnic Minorities and Community Persistence

Wintu in the White Economy

The miners' efforts to drive out or exterminate the Indigenous people was layered on top of an older pattern of Indian-white relations in California established by the Spanish missions. This was the peaceful absorption of Native peoples into the white economy. The employment of Native people's labor began as part of the Franciscan missionaries' strategy for converting them to Christianity. Over time, the Spanish missions came to revolve around the exploitation of Native labor while the Franciscan priests came to enjoy the leisure and social status that came with controlling the Native people. When Americans and other non-Hispanics began to settle in the Central Valley during the Mexican period, they sought to emulate the Spanish missions by absorbing Native peoples into their sprawling rancho operations. John Sutter established the model that some later copied with varying success. Sutter employed Indians in raising crops and tending livestock. He paid wages and provided European American-style clothing and other goods for purchase. Most Native laborers on Sutter's large estate engaged in wage work on a part-time basis while also pursuing traditional food gathering and processing, blending two ways of life. Sutter's community of New Helvetia accepted intermarriage between whites and Indians. By 1846, when Sutter conducted a census of Indians living in the country between the Mokelumne and Feather rivers, he counted 2,768 "tame" and "wild" Indians, placing 395 in the first category. Of these, 103 worked for Sutter and the rest had ties to other white settlers.¹

When Pierson B. Reading arrived in California and went to work for Sutter, he soon saw the opportunity to exploit Native labor for himself when he acquired his own land grant. In a letter to a friend, he likened the Native labor at Sutter's place to African slave labor in the American South. "The Indians of California make as obedient and humble slaves as the negroes in the south," he wrote, adding that they were "mild and inoffensive in their manners

¹ Albert L. Hurtado, *Indian Survival on the California Frontier* (New Haven, CT: Yale University Press, 1988), 55–67. urHur

and easily taught the duties of the farm.” In other words, Reading thought that the ideology of paternalism that Southern plantation owners used to justify their enslavement of Black people could readily be adapted to conditions in California. After Reading obtained his own rancho, he was pleased to inform his friend that he found two Native villages on his land each with a population of about 150 men, women, and children. “I am confident that by treating them kindly I can easily convert them into useful subjects, and at the same time improve their condition as human beings,” he stated. Rather than wishing to drive them away, Reading aimed to befriend these people and put them to work for him.²

The Wintu had no experience with African slavery, of course, but Reading did. He had once been a New Orleans cotton broker. He thought he must show the Indians that he was stern as well as benevolent. Soon after he settled on his rancho, the son of a chief was caught stealing from him. Reading had the boy tied to a wagon wheel and whipped in front of his father. Whippings were later given to other boys on his rancho simply for running away. In this way he sought to control the Indians’ labor. In return, he offered the Indians protection as the area became increasingly lethal for them with the influx of more and more miners.³

Reading had numerous Indians with him when he discovered gold at Reading’s Bar. He had another large party of Indians with him when he made his prospecting expedition into Trinity County in 1849. That party included sixty Indians from the Sacramento Valley as well as one Delaware, one Walla Walla, and one Chinook. A party of forty-niners coming from Oregon encountered Reading and the Indians and protested to Reading against his use of Indian labor. As the situation was threatening, Reading and his party left the diggings and returned to the rancho.⁴

By 1851, Reading employed as many as five hundred Natives. As tensions rose between the Wintu and the miners, Reading became known as a friend of the Indians and a mediator of disputes. That year, when Reading learned of the appointment of three U.S. commissioners to negotiate treaties with all California Indians, Reading wrote to the commissioner assigned to meet with the tribes in the Sacramento Valley, urging that he come quickly. “Indian troubles arise in the first place from aggressions made by the Whites,” Reading advised the commissioner, at the same time offering his assistance in bringing the Wintu together to parley. Reading’s initiative led to the making of the Treaty of Cottonwood Creek, discussed in Chapter Two.⁵

² Hurtado, *Indian Survival on the California Frontier*, 75; Alice R. Hoveman, *Journey to Justice: The Wintu People and the Salmon* (Redding, CA: Turtle Bay Exploration Park, 2002), 24–25.

³ Hurtado, *Indian Survival on the California Frontier*, 74; Hoveman, *Journey to Justice*, 27.

⁴ Giffen, *Man of Destiny Pierson Barton Reading*, 70.

⁵ Giffen, *Man of Destiny Pierson Barton Reading*, 76; Hoveman, *Journey to Justice*, 28.

Kate Camden

One Native person who worked in the white economy during this period is known only by her American name, Kate Camden. She was born in or about 1844, and died in 1871 at the presumed age of twenty-seven. It is possible Kate was Wintu, but it is more likely she came from another California or Southwest Indian tribe. Around 1853 or 1854, Kate was brought into the household of Charles and Philena Camden, residents in upper Clear Creek, as a domestic servant. What became of Kate's Native family is not known. We know little about the circumstances around Charles and Philena taking Kate into their home; we know more about the legal and social context. Under the California law known as the Act for the Government and Protection of Indians, whites could indenture California Indians if they were orphans, or if not orphans, with the consent of the parents. Ordinarily Indian children were indentured when they were found to be in desperate circumstances, but many children were ensnared simply so whites could command their labor. Thousands of Native children were pulled into indentured servitude in the 1850s. Historians place the number of Indians held in indentured servitude at somewhere between 10,000 and 20,000 state-wide. Some of these unfree persons worked as farm laborers and others as domestic servants. In northern California, many indentured servants were women and children who worked in the home, like Kate.⁶

Charles and Philena Camden acquired Kate in 1853 following the birth of their first child, Ada. Charles described Kate in a letter to his niece:

We have a little Indian girl whom we have had with us four months and who takes a great deal of care of the baby, we call her Kate, she is about 10 years old as near as we can judge. She was perfectly wild or at least had never seen any civilized life before we got her, but she very quickly learns to work and is a great deal of help to me. I am learning her to read and [illegible], she is very much pleased with her clothes and a good warm dry house. She already speaks the English language.”⁷

Charles Camden's did not record his thoughts about the enslavement of so many California Indians, but like most other Californians of his time he probably would have bridled at calling Kate's situation “enslavement.” Rather, taking minors into the home as indentured servants was regarded more like a system of welfare for the indigent. Yet, in taking responsibility for Kate and making the most of her labor, Camden could draw on considerable firsthand experience with African slave labor in the South, which he had acquired first as a

⁶ Michael R. Peterson, “Cultural Resources Inventory Report for Rehab Katy Camden Gravesite,” report prepared for National Park Service, Whiskeytown National Recreation Area, September 2015, Cultural Resource Division e-files, WNRA; Damon B. Akins and William J. Bauer, *We Are the Land A History of Native California*. (Oakland: University of California Press, 2021), 142–43; Hurtado, *Indian Survival on the California Frontier*, 130.

⁷ Laura Christman, “The Story of Kate Camden: Native American in a Gold Rush Family,” Whiskeytown National Recreation Area, <https://www.nps.gov/whis/kate-camden.htm>.

sawmill operator and then as a plantation overseer. As a young English immigrant in the 1840s, moving from place to place in the South with his older brother, Camden was once offered a job as a slave overseer. At first he declined, finding the idea of becoming a “slave driver” to be “repugnant.” But then he accepted the offer of supervising the plantation while the owner was away. He held that caretaker position for one year in 1843. During that time, he “worked with” (his words) about forty to fifty enslaved people. How he got them to work he did not say, but there can be little doubt that Camden truly did work alongside those bondspeople, because he did in his sawmill operation and that was how he later worked with his own hired help in his mining endeavors on Clear Creek. Given Camden’s prior experience with slavery and considering his intense personal work ethic, it may be assumed that he saw his relationship to Kate Camden as, in some sense, contractual.

Philena Camden mentioned Kate in her private journal in January 1855 in a way that suggests the girl was treated, in some respects, as a member of the family. A friend of Charles, Mr. Clark, came for a visit and presented a doll apiece to young Kate and Ada Camden, Charles’s and Philena’s daughter, who was then less than two years old. Later in life, Philena would say that Kate was the family’s “nursemaid” although she was just a few years older than Ada and the Camden’s second daughter Grace.

In 1859, Charles and Philena Camden took their two daughters and “the Indian girl Kate” on a trip to England. The parents left the children with Kate in the custody of a friend while they toured England and France for several months. It was around this time that the Camdens had a family portrait made. In the photo, the diminutive Kate stands between the two seated parents holding Grace in her arms while Charles holds Ada on his lap. Kate’s hair is bobbed in a way that reveals she is an Indian girl. Another photo of Kate was taken at a later date after she was fully matured. In the latter photo her long hair is tied back in European American fashion. She looks at the camera with a serious air.⁸

The very dearth of information about Kate Camden is itself revealing. Though she was given the Camden’s surname—a common practice for Indians who were taken into European American households—nevertheless she was not enumerated with the others in the Camden household in the 1860 federal census. She was recorded in the 1870 federal census, by which time she was living and working as a domestic in Shasta in the home of Adoram and Donna Coleman. The Colemans were a respected couple in the community; Adoram Coleman was a hardware dealer, while Donna Coleman was a schoolteacher. Kate may have been about twenty-six years old by this time. Her transition from the Camden household to the Coleman household might be explained by a couple of different circumstances. Under the law, Kate was emancipated from her indentured servitude when she

⁸ Christman, “The Story of Kate Camden.”

reached adulthood. Also, the Camdens changed their winter residence to Oakland in the late 1860s though they still came back to Clear Creek each summer. If Kate Camden was given any say in the matter, she may have preferred to stay put in her familiar environs.⁹

Kate Camden died on December 1, 1871, and was buried on a hill near the Camden house. The gravesite is known through oral history and archeology to have been a Wintu encampment area from the historic period, possibly used by Wintu as well as Chinese who worked for the Camdens. Since Kate Camden died during winter, the Camden family was likely at its winter residence in Oakland at the time of her burial. However, Charles Camden likely paid for the headstone positioned over her grave. Her headstone reads, "In Memory of Kate Camden (Indian) Died Dec. 1, 1871, age 27 years. Poor Katie Rest." The orientation of the grave indicates that she was buried in a Christian manner with the headstone facing east. The circumstances surrounding the choice of burial site, the manner of burial, and the inscription on the headstone are multicultural, reflecting a life lived in two worlds. If Kate Camden was not Wintu by birth, she must have associated with Wintu during her nearly twenty years of servitude and residence with the Camdens and the Colemans. Today, her gravesite is considered Wintu cultural patrimony and, in that sense, Kate Camden is Wintu.¹⁰

The Chinese

Among the foreigners who entered California during the gold rush, the Chinese endured the hardest conditions and suffered the most racism. The Chinese in California were mostly contracted laborers involved in a labor system that whites disparaged as "coolie labor." In the whites' view, "coolie labor" was perhaps one rung above abject slavery but several rungs below the whites' own "free labor." The Chinese immigrants' lowly labor status, together with their Asiatic culture and religion, set them apart from white Americans, European immigrants, and Hispanics who made up the rest of the non-Indian population. From the Chinese point of view, the contracted labor system was not as degrading as the whites imagined. The contracted laborer received transportation halfway around the world and job placement in a foreign land in exchange for a few years' wages. Once in California, the contracted laborer was basically in control of his own day-to-day movements and his own time outside of work. Most Chinese in California were involved in

⁹ Peterson, "Cultural Resources Inventory Report for Rehab Katy Camden Gravesite." For speculation about a "Katie" who lived in Cottonwood who appeared in the 1860 census, see Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, pp. 193–95.

¹⁰ Michael R. Peterson, "Cultural Resources Inventory Report for: Rehab Katy Camden Gravesite," Sept. 2015, and Michael R. Peterson, "Consultation pertaining to Rehab Katy Camden Gravesite project," Dec. 2, 2015, Cultural Resource Division e-files, WNRA.

a labor contract by choice (very few were kidnapped and forced into the system as many whites thought). If the terms of labor were harsh, they were also hard to enforce. Desertion was prevalent. So, contrary to the stereotype of “coolie labor,” the Chinese in California made their own choices—but under tough constraints. As one recent historian of the Chinese migration has stated, “To paraphrase Marx, Chinese migrants made history, but not under circumstances chosen by themselves.”¹¹

To place the Chinese in Shasta County in context, it is necessary to look at the global scene and take a brief foray into recent historiography. Most Chinese immigrants in the United States, and indeed throughout the Americas, came from two coastal provinces in southern China, Guangdong and Fujian. There, overpopulation, natural disasters, and political strife drove many thousands of poor or displaced people—mostly men—to go abroad in search of income to send or take back home. Prior to the California Gold Rush, the Chinese emigration from these two impoverished provinces took the form of contracted labor. The system for exploitation of Chinese contracted laborers developed rapidly in the 1840s in response to a changing labor market in the Americas as the new republics in South America and the British colonies in the West Indies abolished African slavery. At first, the great mass of Chinese immigration to the Americas consisted of indentured plantation laborers, or “coolies,” who substituted for slave labor when slave labor ended.

Americans responded to Chinese migration within the context of the national debate over the future of slavery in the American South. Northern abolitionists abhorred the introduction of this new form of quasi-slavery in the Western Hemisphere, and they sought to prevent its entry into the United States. From the late 1840s through the 1880s, the U.S. Congress passed laws aimed at preventing the “coolie system” from taking root on American soil. As a result, most Chinese migrant laborers entered California under a watered-down contract labor system known as a “credit ticket agreement.” In this arrangement, employers advanced a Chinese migrant laborer the cost of transportation from China to the United States, and then the migrant was obligated to pay off the debt by a monthly deduction from his wages—ostensibly without any other controls on his labor. In the early 1850s, six Chinese companies or “benevolent associations” arose for handling the migration from southern China to the United States to comply with U.S. law. All six organizations made their headquarters in San Francisco, and they became known to contemporary Americans as the Six Companies. To the rest of the non-Indian population in California, the existence of the Six Companies was proof that Chinese labor was not free labor, that the Chinese operated within a system that was foreign and nefarious.¹²

¹¹ Elliott Young, *Alien Nation: Chinese Migration in the Americas from the Coolie Era through World War II* (Chapel Hill: University of North Carolina Press, 2014), 4. See also Mae Ngai, *The Chinese Question: The Gold Rushes and Global Politics* (New York: W. W. Norton and Company, 2021).

¹² Shih-shan Henry Tsai, *The Chinese Experience in America* (Bloomington: Indiana University Press, 1986), 3–7; Arnoldo De León, *Racial Frontiers: Africans, Chinese, and Mexicans in Western America, 1848–1890* (Albuquerque: University of New Mexico Press, 2002), 10–14; Young, *Alien Nation*, 46–50.

Historians have interpreted these unique circumstances in different ways. Some have argued that the credit-ticket arrangement did screen the United States from the nastier forms of “coolie labor” found in other places such as the West Indies and Peru, and as a result the Chinese experience in the United States was strictly one of “free and voluntary” migration. In this view, the Chinese in California were not so-called “coolies,” and when they were defined as such the term was inaccurate and pernicious. Other historians have argued that while there were differences between the contract labor system used in many Latin American places and the credit-ticket system used in the United States, Canada, and Mexico, those were distinctions of degree rather than kind. Historian Elliott Young has emphasized that the experience of Chinese migrant laborers is best understood when it is observed as a transnational phenomenon; indeed, thousands of Chinese entered the United States illegally under labor contracts made outside the United States. Pertinent to the experience of Chinese in Shasta County is Young’s summation of how contemporary Californians viewed the Chinese with wider concerns that then prevailed around slavery:

The distinction between a coolie and a free laborer was ideological. *Coolie* was not a legal term but rather a vague notion of cheap and easily exploitable labor that was almost inextricably linked to Asians, and particularly to Chinese and [Asian] Indians. In the popular imagination, all Chinese in California were seen as “coolies,” whether or not they were contract laborers.¹³

In January 1850, there were 787 men and two women from China living in San Francisco. Over the next year and a half, about 11,000 Chinese emigrated to California. Most of them were young men between the ages of fifteen and forty, and most of them went to the gold fields. The first Chinese in Shasta County arrived in 1852, and by the end of the year they numbered perhaps 3,000 in the county. At first, white Californians viewed them as an exotic but useful racial minority, for the Chinese were willing to work in abandoned diggings without directly competing with other miners for new claims. But as the gold depleted, the whites came to regard the Chinese as unwelcome competitors who threatened to undermine their own position as free laborers.

Much of what is known today about the Chinese in Shasta County in the nineteenth century comes from census data and contemporary newspaper accounts. Many years ago, members of the Shasta Historical Society compiled “Chinese Chronicles of Shasta County,” mostly from the numerous articles printed in the *Shasta Courier*. Local historian Dottie Smith published a short treatise, *The History of the Chinese in Shasta County*, in

¹³ Young, *Alien Nation*, 46.

1995, which featured another compilation of contemporary records. There are also two short histories, one written in 1946 and the other about 1940, both without footnotes but evidently using many of the same newspaper stories.¹⁴

The Chinese came to California as sojourners, expecting to return to China when they had made enough money. This fact alone made them suspicious people to the whites, who at least paid lip service to the larger national purpose of settling the American West and forming permanent communities. The Chinese lived frugally, which the whites also found intimidating because it seemed that the Chinese miner did not need much to keep himself going. They inhabited tiny living quarters, sometimes several men sharing one room in which narrow bunk beds lined the walls. Some Chinese men had no more individual living space than a 7 x 2½ -foot bunk bed. They grew much of their own food in gardens outside their homes. The vegetable gardens grown by the Chinese were the envy of many whites, who called them China Gardens. In those small semi-private spaces, they might also keep a hog in a hog pen or ducks in a little aviary.¹⁵

Chinese miners dressed in simple attire: in winter, blue denim trousers tucked into American-made boots and a long blue denim overblouse that reached down to the hips; in summer, short pants and sandals and a large sun hat made of straw, conical in shape and tied under the chin with a cord. Men wore their hair in a braided pigtail or queue. As the queue carried cultural significance, it became an object of scorn for anti-Chinese whites, with some making a “sport” of cutting off a Chinese man’s queue.¹⁶

When the Chinese traveled on foot, they carried their minimal belongings in two woven baskets hung at opposite ends of a long bamboo pole slung across the shoulders. As they mostly traveled in large groups for safety, the sight of fifty or one hundred Chinese trotting in single file along a road or trail made a strong impression. “How these little, weakly looking hombres manage to carry such loads over such mountains as we have in this region,” marveled a writer for the *Shasta Courier*, “is what we cannot precisely comprehend. However, we suppose it is done by some sort of legerdemain, as it is well known that the Chinese can do almost anything through the instrumentality of certain mystic Sciences.” Such descriptions belied not only whites’ racism toward the Chinese but also an element of fear that the Chinese held mystical powers. One of the slang terms for the Chinese was “celestials.” The whites did not understand the spiritualism of the Chinese and therefore they found it vaguely menacing.¹⁷

¹⁴ Shasta Historical Society, “Chinese Chronicles of Shasta County,” *The Covered Wagon* (1985): 53–68; Dottie Smith, *The History of the Chinese in Shasta County* (Redding, CA: CT Publishing Co., 1995), vii–viii; William Hart, “The Chinese in Shasta and Weaverville,” *The Covered Wagon* (2006): 18–25; A. W. Houston, “Chinese Gold Diggers,” *The Covered Wagon* (May–June 1946): 37–38.

¹⁵ Smith, *The History of the Chinese in Shasta County*, xi; Houston, “Chinese Gold Diggers,” 37.

¹⁶ Smith, *The History of the Chinese in Shasta County*, xi; Houston, “Chinese Gold Diggers,” 37–38; Shasta Historical Society, “Chinese Chronicles of Shasta County,” 55.

¹⁷ Houston, “Chinese Gold Diggers,” 37; Shasta Historical Society, “Chinese Chronicles of Shasta County,” 57.

The Chinese gave close attention to the treatment of the dead. As sojourners, no Chinese expected that their life would end in California. It was part of their belief system that if they should die prematurely in California their remains must be returned to the land of their ancestors to have peace and joy in the afterlife. The expectation was that their bones and earnings would be shipped back to China. So, the Chinese buried their dead in shallow, temporary graves in a cemetery exclusively for their own people, providing the deceased with a temporary resting place until the bones would be disinterred and sent home. One local account stated that a Chinese undertaker would periodically come up from San Francisco, remove the bones of all the recently deceased, wrap each person's bones in a square piece of cloth, and tag each bundle with a small board in preparation for shipment back to China.¹⁸

The transitory nature of the burial notwithstanding, burial ceremonies began with a funeral procession to the cemetery. A hired musical band would lead the procession playing mournful music. The mourners walking behind the band would toss hundreds of tissue papers in the air to flutter to the ground, each one pierced with a hole in the middle. The many holes were to confound the Devil in trying to follow the deceased to his grave.¹⁹

The Chinese were devout in their religious beliefs. Each Chinese abode exhibited a spiritual shrine decorated with red and white prayer pennants painted with black and silver characters. A Chinese prostrated himself before the shrine each time he entered the abode. The smell of burning incense was usually in the air. There was a red brick prayer furnace located in the Chinese cemetery in Shasta. The prayer furnace was used only for funerals. A fire was built inside, and tinsel flowers decorated with peacock feathers and small statues were set on both sides of the door. Red tissue papers printed with prayers were pushed through a slit in the furnace so that the draft from the fire would carry the prayers upward. Near the furnace was a shrine with a marble slab where mourners could leave food for the deceased. Early on, some elaborate meals were left on platters there, but the practice faded away as disrespectful whites or Indians came and snatched up the prepared food.²⁰

The Joss House in Shasta stood on the main street in town. As described by local historian William Hart,

The Joss House of Shasta was almost as plain as the other buildings were except that on each side and above the doorway were paintings of jade green dragons on heavy silk. At each side of the doorway were also gilded gods in whose honor the smoke of incense continually arose into the already odorous air. One can almost imagine the mixed odors from dried fish, oils used for preserving cured fish, and the pungent incense augmenting it all in a very disagreeable smell to the occident. Inside the Joss House was a large Buddha with half-closed eyes

¹⁸ Smith, *The History of the Chinese in Shasta County*, x–xi.

¹⁹ Smith, *The History of the Chinese in Shasta County*, x.

²⁰ Smith, *The History of the Chinese in Shasta County*, x.

seated on a table. A few impressive pictures of dragons embroidered in gold, red, and silver thread on pure silk were placed in advantageous positions around the walls. During the ceremony “punk” [incense] sticks were burned in honor of the gods. After each ceremony liquid foods were placed before the Buddha in small Chinaware dishes, which usually were blue-green inside and blue with green flowers on the outside. These dishes were placed in a small box containing sand to the depth of about an inch. In the bottom of each dish was a tiny hole invisible to the eye, but large enough to permit the liquid to escape. When the Chinamen assembled for another meeting, the liquid would have all drained into the sand, but it was their belief that Buddha had consumed the food and would send them good fortune.²¹

The Chinese in California faced a variety of discriminatory laws. In 1852, the California legislature enacted a law that taxed all foreign miners \$3 a month. The tax purportedly applied to all foreigners equally, but its real design was harassing the Chinese. There were few actual tax collectors, but the law created a cover for unscrupulous whites to pose as tax collectors and extort money from Chinese miners.²²

In 1858, the California legislature passed a law that made it illegal for a Chinese or Mongolian to enter the state. Four years later, the California Supreme Court struck down the law as unconstitutional. Meanwhile, the Chinese already living in California faced increasing hostility. In 1859, the Chinese were largely driven out of Shasta.

In the 1870s, a controversy arose around another discriminatory California law. The law required all male prisoners to have their heads shaved. It was widely understood that the law was maliciously directed toward Chinese men with their queues. The law was struck down by the California Supreme Court as unconstitutional but not before it raised a dispute between the United States and China over the mistreatment of Chinese in California.

For all the racism directed against them, the Chinese had a modicum of fraternization with the white community. They were said to be very generous during Christmas and other holidays, often giving the whites gifts such as silk handkerchiefs, embroidered scarves, candies, and firecrackers. At Igo, the Chinese gave the white children bags of candy or nuts and presented the women with bracelets or dishes. During Christmas in Shasta, every white family received a bowl containing a Sacred Lily of China bulb surrounded by white quartz—a lucky charm. The Chinese imported sacks of the lily bulbs and placed them in bowls around the Joss House as well. Apparently wild descendants of the exotic lily still flourish around Shasta, a reminder of the annual gifting.²³

²¹ Hart, “The Chinese in Shasta and Weaverville,” 21.

²² Smith, *The History of the Chinese in Shasta County*, vii–viii.

²³ Smith, *The History of the Chinese in Shasta County*, xii.

The Chinese in Whiskeytown

There were twenty-five Chinese miners in Whiskeytown in 1860, according to the U.S. census. This community may have been in or on the edge of the town, or it may have been up Whiskey Creek. There was a mention in the *Shasta Courier* of a “large Chinese camp located about a mile up Whisky Creek.” There was another mention in the paper, in connection with a robbery in Whiskeytown, of two Chinese apprehended “in a cabin a short distance from town.”²⁴ A longtime resident of Whiskeytown, Sydnie Marshall Apperson Baker, was interviewed in 1930. “Indians and Chinamen were there in great numbers,” Baker stated. “The first wagon load of Chinese I ever saw I thought were women on account of their queues.” As Baker was generally recalling his early years, it seems he was referring to the Chinese who were there in the late 1850s or 1860s, though it could have been a later time.²⁵

Being Chinese in Whiskeytown was hazardous. Because they were a vulnerable minority, denigrated and marginalized by the majority population, Chinese miners were frequently targeted by highwaymen. A Whiskeytown correspondent for the *Shasta Courier* remarked in 1864, “the roads have not been safe for Chinese travelers within three or four miles of our town for some months, and many of them have been relieved of their surplus cash, and boots and shoes not surplus.” One Chinese person was found dead, evidently the victim of a robbery that suddenly turned homicidal.²⁶

On the night of March 2, 1870, an unnamed Chinese person of Whiskeytown was murdered and his partner, We Tick, was severely wounded by a third partner, Ah Ying. According to We Tick’s testimony in court, Ah Ying rose from his bunk in the dark, lit a candle, and attacked him with a dagger and a hatchet. We Tick fought off his attacker and made his escape, but the other partner was not so lucky. After Ah Ying butchered one man but failed to subdue the second, he went to the nearby Chinese camp (probably the one up Whiskey Creek) and announced that We Tick had committed the murder and was on the run. But We Tick soon located the dead man’s brother and convinced him otherwise—that it was Ah Ying, not he, who was the guilty party. The dead man’s brother then got some friends and went in pursuit of Ah Ying. They found him hiding out with the Chinese in French Gulch. The brother of the deceased shot Ah Ying in the back as he tried to escape. Ah Ying was badly wounded but not killed. The county sheriff took him into custody, putting him in jail in Shasta to await trial.

²⁴ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Oct. 27, 1866; Jan. 27, 1867; in spiral binding, Shasta Lake Heritage and Historical Society.

²⁵ “An Interview with Sydnie Marshall Apperson Baker,” *The Covered Wagon* (1971): 40–41.

²⁶ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, June 11, 1864, in spiral binding, Shasta Lake Heritage and Historical Society.

Ah Ying recovered from his wound and sat in jail for more than a year. In the May 1871 trial, a motive for Ah Ying's murderous actions was never established. A court-appointed defense attorney entered a plea of insanity. Perhaps the stress of Ah Ying's living conditions caused him to have a psychotic break. The trial went on for several days as the court heard the testimony of different Chinese witnesses. The jury found that the defense attorney "handled the case with skill and tact," but in the end the jurors rendered a verdict that Ah Ying was guilty of committing murder in the first degree. The judge sentenced him to hang. But the judge stayed the execution while a tribunal heard arguments over the appropriateness of capital punishment in the case. There was no reversal. On January 13, 1872, Ah Ying was hanged in the jail yard in Shasta, nearly two years after committing the crime.²⁷

On March 20, 1873, a Portuguese man of Whiskeytown named John Cresatine was shot and mortally wounded while lying on his bed in his cabin. Suspicion immediately fell on three Chinese: Un Geung, Ah Chung Jake, and a third unnamed person. The three were arrested and jailed. At trial, the case against the three Chinese was weak. Cresatine was evidently struck by a volley of shots through the cabin window, after which the perpetrator or perpetrators broke into the cabin and stole some things. But nothing could be pinned on the three Chinese with certainty. After a "long and wearisome trial" the jury deliberated for twenty-four hours but could not reach a unanimous verdict. Nine stood for acquittal and three for conviction. The Chinese prisoners were freed, having spent two terrifying months in jail.²⁸

Anti-Chinese sentiment grew in Whiskeytown in the early 1880s. Anti-Chinese whites in Whiskeytown and elsewhere raised a variety of complaints: squeamishness about the nearly all-male Chinese society in their midst, concern about the Chinese miners' opium use, resentment that they took their wealth back to China, but most of all a fear that the Chinese presence depressed wages for the whites. In April 1883, there was a meeting of the Miners Protective Union at the schoolhouse in Whiskeytown at which several members discussed "stopping the hiring of Chinamen in the mines of this and other counties." The following June, a representative of the Anti-Chinese Society held a meeting in Whiskeytown, followed by another in Shasta. The longtime resident of Whiskeytown,

²⁷ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, March 5, 1870; April 2, 1870; May 6, 1871, Jan. 13, 1872; in spiral binding, Shasta Lake Heritage and Historical Society.

²⁸ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, March 20, 1873; April 9, 1873; June 28, 1873; in spiral binding, Shasta Lake Heritage and Historical Society.

Sydnie Baker, remembered that “there was strong talk of making them leave their diggings.” Baker did not state what year or decade this recollection was from, but it could have been from around this time.²⁹

Anti-Chinese feeling grew into a mass movement aimed at driving the Chinese out of communities and blocking further immigration of Chinese by U.S. law. The latter aim was achieved by passage of the Chinese Exclusion Act of 1882. After passage of the federal law, Chinese populations in Whiskeytown and French Gulch persisted but in dwindling numbers.

Chinese Driven out of Redding

In Redding, the anti-Chinese movement built to a climax in 1886. A town meeting took place in January in which anti-Chinese advocates gained majority support and put through a vote to form a “Committee of Forty” who would inform the Chinese that they must leave town, and take whatever action was required to enforce the order. The town meeting then adjourned and the Committee of Forty met in secret session to formulate a plan.

Supposedly the plan was to force the Chinese to leave on short notice, but to allow five Chinese to stay behind for clearing remaining valuables from the vacated homes and getting these valuables to their rightful owners. As the plan unfolded, however, no such five were appointed. Instead the committee appointed six of its own members to stand watch and prevent any Chinese from returning and looting the premises. The forced departure was effected on February 6, 1886. Mysteriously, a fire started that night and burned the whole place to ashes.³⁰

With all the hostility directed at them in the 1870s and 1880s, some Chinese returned to China, others moved out of state to mining districts in other western states, and still others took refuge in more sizeable Chinatowns such as San Francisco’s. San Francisco’s Chinatown had an estimated one-fourth to one-fifth of all Chinese living in the United States in the 1870s. Yet some of California’s remote Chinese communities hung on. The Chinese built a joss house in Weaverville in 1874, replacing an earlier structure that had burned down. More than seventy years later, after attitudes changed and the Chinese Exclusion Act was repealed, California appointed Weaverville resident Moon Lim Lee as trustee of the site, and in 1956 the state designated the Weaverville joss house a state historic site. The official website states that the Chinese Taoist temple is still a place of worship and is the oldest continuously used Chinese temple in California.³¹

²⁹ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, April 26, 1883; June 7, 1883; in spiral binding, Shasta Lake Heritage and Historical Society; “An Interview with Sydnie Marshall Apperson Baker,” *The Covered Wagon* (1971): 41.

³⁰ “The Press Files of 1886 Tell How Redding Ousted the Chinese,” undated newspaper clippings in Local History Vertical Files, Shasta Historical Society.

³¹ “Weaverville Joss House State Historic Park,” https://www.parks.ca.gov/?page_id=457.

Community Persistence after the Gold Rush

Both Whiskeytown and French Gulch hung on as residential communities when the gold mines faded. They remained fairly stable communities through the end of the nineteenth century. The advent of the automobile age in the early twentieth century gave both towns a new lease on life as tourism and recreation kept a few businesses going even as most mines closed. Small residential populations persisted through the mid-twentieth century, and Whiskeytown could likely have lived on to look much the same as French Gulch today if it had not been condemned for construction of the Whiskeytown dam and reservoir, which led to Whiskeytown's disappearance under Whiskeytown Lake in the early 1960s.

In the late nineteenth century, the Woodward's Hotel continued to be the center of town life as it had been when Benjamin Mix owned it. The hotel sponsored a semi-annual grand ball or dinner that was usually one of the town's major social events of the year. Sometimes the event was around Christmastime, other times it was held in celebration of St. Patrick's Day or President's Day or the Fourth of July. The hotel also hosted weddings, club meetings, and political gatherings.

In 1896, the hotel served as a polling place in the hotly contested national election of that year. The *Shasta Courier* reported that the Prohibitionist Party received the most votes in Whiskeytown. But the Prohibitionists' electoral victory notwithstanding (or maybe because of it) a "gang of anarchists" gathered at Woodward's Hotel that evening, got drunk, and left town on a mission to go down to Rock Creek and burn down a Native sweathouse located there. The newspaper account, obviously poking fun at the people of Whiskeytown, stated that local authorities were alerted and the "Shasta Home Guards" as well as the "Whiskeytown Invincibles" were called out to prevent mob violence. But before the rowdies from Whiskeytown were intercepted by the local authorities, they had already been stopped in their tracks and dispersed, reportedly by an old Indian woman who stood in their path and threw rocks at them.³²

The post office for Whiskeytown was in the hotel lobby, so town residents often met at the hotel when collecting their mail. For much of the town's history the hotel proprietor or hotel proprietor's wife was the postmaster or postmistress. The Whiskeytown post office was established in 1856, with Benjamin Mix appointed as first postmaster. The name of the post office was Whiskey Creek until 1885, when it became Stella, but many people still called the settlement Whiskeytown. In 1909, the post office closed and the unpopular name Stella went away. In 1917, the post office reopened, but as the Post Office Department would not allow a post office to be named "Whiskeytown," the people chose the name Schilling instead, in honor of the town's former postmaster John F. Schilling. In 1931, the

³² Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, Nov. 3, 1896, in spiral binding, Shasta Lake Heritage and Historical Society.

post office closed again. It reopened in 1952, and this time the Post Office Department did not oppose the people's will when they voted to name their post office Whiskeytown. Dorothy Herman was the town's last postmistress while her husband Gus ran the hotel.³³

The name Whiskeytown always attracted publicity, good and bad. In 1910, a temperance campaigner with the Anti-Saloon League by the name of Ida L. Alexander held a public meeting in Whiskeytown. The meeting was well attended and Alexander received a warm welcome. Several people signed her petition to hold a special election to vote Shasta County dry. Alexander asked the friendly audience how it was that the town had such an "awful" name. John F. Schilling politely responded to her question by pointing out that there was also a Brandy Creek and Whiskey Creek as well as a Lager Beer Mine, a Bacchus Mine, and a Gin Fizz Mine in the area.³⁴

The Whiskeytown Women's Improvement Club formed sometime around 1920. The club met in the schoolhouse to discuss topics of interest. Sometimes the club was little more than a sewing circle; at other times it took up a cause. It lasted through more than three decades and probably helped the community survive during a critical period in the 1920s when many longtime residents moved to Redding. The club's main interest was civic service to family and community. Club members later said that the club's mission was to care for the community and to have fun. The club put on skits, potluck dinners, dances, and music events. For these events, they would put all the desks in the schoolhouse against the wall and sell box lunches to raise money for the community. The Whiskeytown Women's Improvement Club spearheaded the effort to establish a post office and make the name of the town official at long last.³⁵

By the 1940s, Whiskeytown had fewer than twenty occupied homes. It gained a bit of population in the late 1950s when people moved in to work on the dam.³⁶ A travel writer for *True West Magazine* visited Whiskeytown in 1962 when the population was less than a year away from evacuation for the reservoir. The old Whiskeytown Cemetery, which occupied a grassy knoll shaded by several old locust trees north of the hotel, was about to be relocated to its present site below the dam. But the travel writer found the residents reconciled to the town's fate. The travel writer wrote:

³³ Ross, "Whiskeytown," 55–56; *Blue Lake Advocate*, May 2, 1931; "The Fifties," *The Covered Wagon* (1980): 35; Dottie Smith, "Whiskeytown Earned Its Name as a Drinking Town," *Record Searchlight*, April 9, 2010.

³⁴ *Chico Record*, June 26, 1910.

³⁵ Danica Romeyn, "Whiskeytown Women's Improvement Club," *The Covered Wagon* (2015): 150–51.

³⁶ Romeyn, "Whiskeytown Women's Improvement Club," 147.

We in our atomic world, poised at the new frontier of outer space, will never know the happiness or wonderful simplicity that made these miners the exuberant lot they were. . . . When the quiet waters settle over this remote old mining camp, the requiem of the Argonauts will be whispered by the mountain winds that blow across the surface of the Whiskeytown Lake.³⁷

The present Whiskeytown Cemetery began with around a score of simple gravestones marking the relocated graves when the dam was built. In the 1990s, this new cemetery with its old and rather celebrated name became a popular if quirky place to be buried. The cemetery spread in all directions from the original gravestones. Today, many if not most of the gravesites are adorned with plastic flower bouquets and a variety of other ceremonial leavings, some quite colorful. Numerous grave markers indicate the burial places of war veterans who fought in World War II, the Korean War, or the Vietnam War. One former superintendent of Whiskeytown National Recreation Area is buried there.

³⁷ Gene Ellis and Frank Kester, "Uncle Sam Sobers Whiskeytown," *True West* (Sept.–Oct. 1962): 38.

CHAPTER TEN

The Wintu in Transition

Survivors of the Genocide

What happened to the Wintu who were forced out of their homes during the gold rush? Where did they go? How did they survive? Those questions can only be answered in a general way. The survivors of the genocide hid, relocated to safer territory, or worked as laborers for the whites. As the Wintu population was driven from their homes, most village groups inevitably broke up. Later, when circumstances allowed, surviving Wintu groups and families recombined finding their way back to their group or forming new associations. Many Wintu groups broke up and never reassembled, but the Wintu culture survived.

Within the Whiskeytown National Recreation Area there were at least three Wintu villages that are known through archeological and ethnographic evidence.¹ One village was located at Whiskeytown, another at Grizzly Gulch, and another at Tower House. There were also Wintu villages at Shasta and French Gulch, making a total of five Wintu villages in and around Whiskeytown National Recreation Area. We can model the population in the upper Clear Creek drainage from the general population data recorded in previous chapters. Each Wintu village may have had a population of around 100 people in precontact times, for a combined population in the upper Clear Creek drainage of around 500. This total population may have dropped in half to 250 through the effects of virgin soil epidemics in the 1830s and 1840s. The population may have dropped another four-fifths through genocide in the 1850s and 1860s, from 250 to perhaps 50 survivors in 1870. In light of population estimates of the Wintu people estimating their total number in the hundreds around this time, the fraction from the upper Clear Creek drainage may have been smaller. Whatever their number, presumably most of these Wintu survivors from the upper Clear Creek drainage found their way to Wintu or other Native groups who were still in the upper Sacramento Valley in the 1870s. No specific village group of the upper Clear Creek

¹ Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, 59.

drainage was able to reconstitute itself, but despite the terrible winnowing of Wintu numbers, a few Wintu of the Clear Creek drainage did manage to survive, and a cultural memory of the Wintu's traditional occupation and use of the Clear Creek drainage survived with them.

If the story of Wintu survival in the upper Clear Creek drainage is obscure, we know much more about the larger Wintu population and how it traveled the difficult road from the California Gold Rush to modern times. That is the story presented in this chapter. Today, ten different Wintu tribal governments or organizations, plus another six non-governmental entities, all assert an interest in Wintu ethnographic resources found within the park. If we try to infer what happened to the Wintu survivors of the upper Clear Creek drainage by reading their story backwards from the present, we may assume that most of those survivors merged with today's Winnemem Wintu (a group historically centered on the McCloud River) while others found their way into Native groups located elsewhere around the upper Sacramento Valley basin. The story of the Wintu people in transition from 1850 to the twenty-first century is the historical context from which all of those dispersed Wintu interests today emerged. At the end of the chapter, we look at some of the ways the modern-day Native groups interact with Whiskeytown National Recreation Area.

Federal Indian Policy in the 1850s and 1860s

Federal Indian policy evolved in the first half of the nineteenth century to serve the interests of white settlement and national expansion. Federal Indian policy held that American Indians' way of life was incompatible with the advancing settlement frontier. Therefore, all American Indian tribes must "remove" (migrate) westward under the aegis of U.S.-Indian treaties, with the treaties securing land cessions from the Indians in return for federal protection and support from the U.S. government. At the same time, federal Indian policy in this period roundly rejected the frontiersmen's view that Native peoples who stood in the way must be exterminated. Rather, it took the view of missionaries and humanitarians who said that Native peoples must be provided the necessary space and time to adopt "civilized" ways so they could ultimately be "assimilated" into the American nation.

In the mid to late 1840s, when the United States committed to expanding its territory to the Pacific, the strategy of Indian removal faltered (there was nowhere for them to migrate) and federal Indian policy was thrown into crisis. In a short span of years around 1850, federal Indian policy pivoted to a new strategy of creating Indian reservations. In theory, tribes would be confined to smaller areas, put under civilian administration in a new

Department of the Interior, and actively taught the “arts of civilization” by schoolteachers and demonstration farmers stationed with each tribe on the reservation. The new government policy, reformers insisted, was the American Indians’ “alternative to extinction.”²

The quickening pace of westward expansion challenged the reservation policy everywhere, but nowhere so much as in California where the gold rush overwhelmed the Native population. Compounding the problem was the fact that California’s quick advance to statehood tipped the initiative for managing Indian affairs away from federal to state control, and the state’s white populace was decidedly hostile to creating Indian reservations that would restrict opportunity for gold mining. Furthermore, Congress was absorbed with resolving sectional differences through the Compromise of 1850, so it gave little focused attention to the problem of Indian affairs in California.³

Congress appropriated funds for federal Indian commissions to negotiate treaties with tribes in all of the new American territory. Three commissions were established for California, Texas, and Oregon. Only the Oregon commission had authority to negotiate land cession treaties, as there was growing sentiment in Congress that the tribes in all former Mexican territory had no land title, so there was no necessity for the U.S. government to extinguish Indian title in those lands. The purpose of the California commission was indistinct, and California’s new U.S. senator, John C. Frémont, worked directly with the new Department of the Interior and Commissioner of Indian Affairs Luke Lea to define what the California commission would set out to accomplish. Frémont argued that the California Indian tribes were far too small and numerous to each have their own reservation and agent assigned to them. Instead, he proposed a division of the land into three regional jurisdictions with one agent in each region. He suggested that one agent be located at Reading’s rancho to cover all Native groups in the Sacramento Valley westward to the coast, another agent placed near Kings River to administer Native groups in the San Joaquin Valley and surrounding territory, and the third in Los Angeles to preside over the Native groups in southern California. All California Indians would be placed under the supervision of a superintendent based in Sacramento.⁴

Accordingly, the U.S. government appointed three agents, O. M. Wozencraft, Redick McKee, and George W. Barbour. Wozencraft was assigned to the northern part of the state. He was a recent emigrant to California and former delegate to the state constitutional convention. For several months, the commissioners lacked sufficient instructions to do much of anything. In 1851, they were tasked to make treaties with the many Native

² Francis Paul Prucha, *The Great Father: The United States Government and the American Indians* (Lincoln: University of Nebraska Press, 1984), 108, 111–12, 129; Robert A. Trennert, *Alternative to Extinction: Federal Indian Policy and the Beginnings of the Reservation System, 1846–51* (Philadelphia, PA: Temple University Press, 1975).

³ Prucha, *The Great Father*, 129–31; Albert L. Hurtado, *Indian Survival on the California Frontier* (New Haven, CT: Yale University Press, 1988), 125–31.

⁴ Hurtado, *Indian Survival on the California Frontier*, 128.

groups to bring them into relations with the Office of Indian Affairs. It was at this point that Pierson B. Reading wrote to Wozencraft urging that he come promptly to make a treaty with the Wintu. Wozencraft proceeded north as the other two commissioners branched out in other directions. Altogether, they would make eighteen treaties aimed at creating eighteen Indian reservations in the state. Before proceeding on their mission, they published their intentions in the *Daily Alta California*. With genocide already happening around the state, they pointed out that there was “no farther west” for the removal of California Indians, so the only choice was between “domestication” and “extermination.”⁵

On August 16, 1851, U.S. Indian agent Wozencraft put his seal to a treaty with the chiefs, captains, and headmen of six enumerated “tribes or bands,” which included Wintu. Nine Native leaders made their marks on the treaty. It was concluded at Reading’s rancho with Brevet Major J. McKinstry and two civilians present as witnesses. By this treaty, the Indian groups acknowledged the United States to have full title to the land by right of its treaty with Mexico and committed to pursuing peaceful relations with the U.S. government and U.S. citizens. The U.S. committed to establishing a reservation for the so-called tribes or bands to occupy, to aid in their subsistence with disbursements of cattle and flour, to encourage them “in acquiring the arts and habits of civilized life” by furnishing them with various named supplies of clothing material, livestock, and farm implements, and to establish an agency staffed by a blacksmith, a wheelwright, a carpenter, a farmer and two assistants, and schoolteachers. The treaty was called the Treaty of Cottonwood Creek.⁶

The reservation took in the east side of the upper Sacramento Valley from around Red Bluff northward to the Pit River. Wozencraft’s idea was to lure the Native inhabitants from the mountains to the lowlands where they would provide agricultural labor for the whites and be easier to control. Miners would soon occupy all the foothills—where the gold placers were found—“forming a formidable Cordon, or barrier” between the Indians’ new home and their erstwhile mountain retreat. Once on the reservation, Wozencraft imagined, the Indians would have no place to hide stolen livestock or to flee after making a raid.⁷

Wozencraft described the reservation and the conditions surrounding the treaty in a report to the Commissioner of Indian Affairs:

The reservation made in the Cotton Wood treaty is a very favorable one for the Indians, being about thirty-five miles square; embracing within its boundaries an amount of good tillable soil, sufficient to support the numerous Indians now living within its limits, and those in the adjacent Nevada, Shasta, and coast ranges. This reservation is the head of the great Sacramento valley, surrounded

⁵ Alice R. Hoveman, *Journey to Justice: The Wintu People and the Salmon* (Redding, CA: Turtle Bay Exploration Park, 2002), 28; Hurtado, *Indian Survival on the California Frontier*, 135.

⁶ The treaty is quoted in full in Rosena A. Giles, *Shasta County: A History* (Oakland, CA: Biobooks, 1949), 43–45.

⁷ Hurtado, *Indian Survival on the California Frontier*, 136–37.

by the above mentioned range of mountains. It is supposed there may be gold within, it having been found, as usual, in the main streams, viz: the Sacramento and Pitt rivers. There are no improvements on it, nor does any white man live within it. The Indians living adjacent to it, particularly on the McCloud fork of the Pitt river, are very troublesome. Marauding bands are continually passing down from their mountain fastnesses, sweeping the country of its stock; and on several occasions going into the town of Shasta and firing the buildings and property. But a short time prior to my visit there they had captured an entire train of pack mules, with their cargoes, and killed the muleteers. . . . It will be indispensably necessary that the Indians should be protected from those claiming to be civilized beings. To effect this, there should be a military post established at Major Reading's, this point being so very far removed from any settlements.⁸

While white ranchers seemed to have much to gain from the Indian treaties, they came to oppose them when they read the provisions that encouraged the tribes to take up white methods of farming and ranching because that would only deplete their Indian labor and place the reservations in economic competition with them. The eighteen reservations encompassed about 7.5 million acres, or about 7 percent of California's total land area. Miners opposed the reservations because they did not want those lands closed to mining and prospecting. With so much popular opposition to the reservations, the state government opposed the treaties and the U.S. Senate refused to ratify them. The eighteen California Indian treaties were set aside.⁹

With the treaties rejected, the administration of President Millard Fillmore tried another strategy. It proposed gathering all California Indians on five smaller temporary reservations of just 25,000 acres apiece where the government could offer them protection and instruction. Congress gave its approval, appropriating a modest \$250,000 for removing and supporting the Indians. The first California superintendent, retired Navy lieutenant Edward F. Beale, established the first reservation at Tejon at the southern end of the San Joaquin Valley and concentrated all his efforts there. In 1854, President Fillmore replaced Beale with Thomas J. Henley, former postmaster of San Francisco. Henley expanded the number of reservations to four. One of these was the Nome Lackee Reservation in Tehama County, which was supposed to serve the Wintu together with other tribes in the Sacramento Valley.¹⁰

Some Wintu and people of other Indian groups moved to the reservation; many more declined. As hundreds of Indian people continued to be killed by whites every year—some in organized attacks on villages, many others in isolated murders—the

⁸ Quoted in Hoveman, *Journey to Justice*, 29.

⁹ Hurtado, *Indian Survival on the California Frontier*, 138–41; Prucha, *The Great Father*, 130–31; Damon B. Akins and William J. Bauer Jr., *We Are the Land: A History of Native California* (Oakland: University of California Press), 146–47.

¹⁰ Hurtado, *Indian Survival on the California Frontier*, 142–45; Akins and Bauer, *We Are the Land*, 147.

reservations seemed to promise safe haven. But in fact, the Indian killing did not stop at the reservation boundary as marauding whites went onto the reservation to steal government-issued livestock and kidnap Indians for indentured servitude. Moreover, as Native people had to fear dying from disease or starvation as much as they might fear the prospect of dying at the hand of white killers, many of them could only view the reservations as death traps. Those people decided to take their chances with remaining on the land they knew and continuing to make their subsistence rounds despite the great danger.¹¹

By the end of the 1850s there were perhaps 3,000 Indians living on the Nome Lackee Reservation. The government claimed it had 15,000 acres under cultivation in hayfields and some forty Indian men employed on the government farm. But the farm operation did not come close to feeding the whole population. Rather, most of the resident population avoided starvation by continuing their traditional subsistence rounds to augment the food supply. Indeed, the reservation was too small to provide the necessary subsistence base, so the resident population had to conduct some of their hunting and gathering off the reservation.¹²

During the Civil War, as the federal government's commitment to Indian affairs flagged, its efforts on the Nome Lackee Reservation completely fell apart. In 1863, an inspector found no one in charge and whites squatting on the land. A former agency farmer was interviewed who admitted to selling all the moveable property and thirty tons of hay for back wages. About this time many of the remaining Indian inhabitants on the reservation were moved to the Round Valley Reservation, and a reported two-thirds of them perished in the transition. The Appropriations Act of 1863 authorized the sale of the Nome Lackee Reservation. The gradual breakup of the reservation through land sales began a few years later and continued over the next decade, with the reservation eventually being abolished.¹³

Prelude to Allotment

President Ulysses S. Grant's Peace Policy promised a new start for the administration of Indian affairs, but it only brought more misery for American Indians. Turning to missionaries for help in Indian assimilation and assigning the various Christian church denominations to the various tribes and regions of the country, the federal government placed

¹¹ Hurtado, *Indian Survival on the California Frontier*, 147–48.

¹² Hurtado, *Indian Survival on the California Frontier*, 150–51.

¹³ Hoveman, *Journey to Justice*, 34. A more detailed account of the reservation history has been published in various forms: Michael Stoddard, *The Nome Lackee Indian Reservation and Vincent Geiger* (Red Bluff, CA: Andrew Osborne, 1961); Susan Allen, "The Nome Lackee Indian Reservation," *Wagon Wheels* 17, no. 1 (February 1967): 21–34; Donald Lindsay Hislop, *The Nome Lackee Indian Reservation 1854–1870* (Chico, CA: Association for Northern California Records and Research, 1978).

Episcopalians in the service of California Indians. Church organizations aimed to indoctrinate Indians with Christian teachings and morals, and as part of the effort they sought to suppress Native religious practices.¹⁴

As California Indians suffered this latest assault on their culture, they were drawn to the “Ghost Dance,” a new religious movement that started among the Walker Lake Paiutes. Believers in the Ghost Dance understood that the end of the world was near, that whites would disappear, and the Indian dead would then return among the living. Throughout California Native peoples drew solace from the Ghost Dance in its various forms. Alice R. Hoveman found that the Northern Wintu learned a form of the Ghost Dance from a man named Paitla, a resident of Cottonwood, in 1872. The Northern Wintu called it the “Southland Dance” or the “Coming from the South Dance.” According to Hoveman, “Paitla and other men like him were more familiar with the new Bole-Marú cult involving dreamers, which had been developed among the Patwin (southern Wintun) by the prophet Lame Bill.” These religious teachers visited the different villages and offered to teach new ceremonies if the local leader would call a meeting.¹⁵

The Ghost Dance produced a Native religious revival of sorts, but it also put another strain on white-Indian relations as the white population became wary whenever large numbers of Wintu or other California Indians gathered. The revival was also directly counter to what the Episcopalians were attempting to accomplish. Grant’s Peace Policy faded, and the Episcopalians were withdrawn from California Indian affairs in the early 1880s.¹⁶

In the meantime, another federal presence developed on the McCloud River that was not a part of the Office of Indian Affairs but came to have a more direct bearing on the Wintu: a government fish hatchery. In 1872, the U.S. government dispatched Livingston Stone to find a suitable location for a salmon breeding station, the first of its kind in the nation, whose purpose would be to raise salmon fry for restocking declining salmon stocks in the Atlantic Ocean. Stone learned from a Central Pacific Railroad agent that Indians regularly gathered at the junction of the McCloud and Pit rivers in the fall to spear salmon after they spawned. Stone described the scene when he and his entourage first approached the spot at the end of his long journey by rail, stage, and then foot:

At a distance of about 2 miles above the mouth of the river we came upon several camps of Indians with hundreds of freshly caught salmon drying on the bushes. Salmon could also be seen in the river in such numbers that we counted 60 in one spot as we stood at the water’s edge.¹⁷

¹⁴ Prucha, *The Great Father*, 152–66.

¹⁵ Hoveman, *Journey to Justice*, 40.

¹⁶ Hoveman, *Journey to Justice*, 41.

¹⁷ Quoted in Hoveman, *Journey to Justice*, 35.

The Wintu conducted fish drives at this place. Directly across the river was a Wintu sacred rock that shaped like the heart of a salmon. Having exploited this salmon run and lived in balance with their principal food source for generations, the Wintu opposed the U.S. government building its first fish hatchery there. Stone later reported:

They had until this time succeeded in keeping white men from their river, with the exception of one settler, a Mr. Crooks, whom they murdered a few weeks after I arrived. Their success thus far in keeping white men off had given them a good deal of assurance, and they evidently entertained the belief that they should continue, like their ancestors before them, to keep the McCloud River from being desecrated by the presence of the white man.

Undeterred, Stone and his crew proceeded to set up camp and communicate that they wanted to build a station. The Wintu “assembled in force” on the opposite bank of the river and shook their weapons threateningly, but Stone called their bluff and held his ground, and at nightfall the Wintu withdrew. The tension continued until the Wintu were satisfied that Stone and his crew were only there to take spawn, not to harvest salmon. In exchange for the spawn, Stone gave the Wintu food and medicine.¹⁸

On December 8, 1875, President Grant signed an order that set aside 280 acres of land on the McCloud River as a government reservation for fish culture. In 1878, a U.S. post office was established at the station, which was named Baird for the first U.S. Commissioner of Fisheries, Spencer F. Baird. The station grew into a small town. Stone experimented with fish culture, creating corrals for the spawning adult salmon partly inspired by the Indians’ method of building fish traps with brush fencing. Once the salmon spawned, the eggs were packaged for shipment to places as far away as New Zealand. Soon, however, the fish hatchery’s main goal was to replace depleted stocks in the Sacramento River and its lower tributaries, which had been devastated by hydraulic mining debris flows.¹⁹

Several Wintu went to work for the hatchery. At first, they received half the pay that white workers did, but when Stone found what spirited workers they were he revised the pay scale so that there was no racial discrimination. Instead the best workers received an added 25 to 50 cents per day on top of the standard base wage.²⁰

In 1883, the salmon run did not appear. The probable cause was the construction of the railroad between Redding and Baird, which involved blasting a roadbed beside sections of the river. The more specific and potent factor in its demise, Stone thought, was the redirected use of explosives by some Chinese railroad construction workers to kill thousands of fish for consumption by the camps. There were an estimated 3,000 to 6,000 Chinese working on the railroad, and some Chinese reportedly made a large business

¹⁸ Hoveman, *Journey to Justice*, 37.

¹⁹ Hoveman, *Journey to Justice*, 39.

²⁰ Hoveman, *Journey to Justice*, 41–42.

selling the fish to the camps. When the salmon run collapsed, the hatchery closed and did not reopen until 1888. Gill nets strung across the river several miles downstream from the hatchery also contributed to the decline or prevented its full recovery. The salmon run recovered somewhat in the late 1880s, but the fishery was markedly diminished and the Wintu connection to it was irreparably damaged. The Wintu sacred rock in the shape of a salmon heart was blasted away with railroad construction through the site in 1886. This section of river was subsequently drowned behind the Shasta Dam.²¹

Allotment

Individual land allotment was always the ultimate aim of the federal government's reservation policy. As early as the 1850s, federal officials insisted that Indians would be taught to take up homesteads in the manner of white homesteaders, becoming individual landowners on their path to U.S. citizenship. According to their vision, as Indian peoples learned the "arts of civilization" they would convert to the white settlers' way of life and give up their tribal affiliations. Individual land allotment would then allow the dissolution of Indian reservations and the dismantlement of the Office of Indian Affairs as Indian peoples merged into the American masses. American Indians, of course, proved to be much more inclined to preserve their own culture and maintain their tribal affiliations despite federal policy, so land allotment gradually went from being an ideal, applied experimentally in a few locations, to being a coercive and sweeping policy aimed at breaking up the Indian reservations and hastening "assimilation." The decisive turn came with passage of the General Allotment Act (or Dawes Act) of 1887.

For reservation tribes, the Dawes Act was yet another step in the long history of being dispossessed of their homelands. For a landless tribe like the Wintu, however, the allotment policy gave hope of obtaining at least a fraction of the land base that they were denied some thirty-five years earlier when the Treaty of Cottonwood Creek was not ratified.

By the 1880s, the once numerous Wintu were vastly depleted. Without a reservation in a land rapidly coming under private ownership by white ranchers, many Wintu lived on private land at the permission of the white landowners. Norel-putis, the chief of the northern Wintu in the 1880s, was reduced to living in a small tent just high enough to crawl into. His tent was pitched near a ferry crossing on the Sacramento River where he lived at the sufferance of the landowner, a Mr. Reed. This was the old chief's humble abode when Jeremiah Curtin, a member of the Bureau of Ethnology, befriended him in the 1880s.²²

²¹ Hoveman, *Journey to Justice*, 43–44; McEvoy, *The Fisherman's Problem*, 50–51.

²² Anne Kathryn McTavish, "The Role of Critical Cartography in Environmental Justice: Land-Use Conflict at Shasta Dam, California," master's thesis, San Francisco State University, 2010, p. 39; Jeremiah Curtin, "Memoirs of Jeremiah Curtin," in *Wisconsin Historical Publications, Biography Series 2*, ed. Joseph Schafer (Madison: Wisconsin Historical Society, 1940), 331, 342, 380.

Norel-putis spent several days in October 1884 and again in September 1885 orating to Curtin about his people's culture and history, usually in the presence of the old chief's nephew Mike (no last name recorded). Three years passed before Curtin was able to make another visit to northern California. When Curtin returned and looked for Wintu Mike and Norel-putis at Reed's ferry, Reed told him they could be found fishing on the McCloud River by the hatchery. Curtin located Norel-putis and another man, Klencladdy, who joined in Curtin's third, multi-day session of interviewing Norel-putis about Wintu culture. Norel-putis and Klencladdy were the two oldest men in the Wintu tribe. Norel-putis was reputedly a hundred years old when he died in 1894, which would make him already fifty years old when Pierson B. Reading acquired his Mexican land grant in the mid-1840s.

On this occasion, in November 1888, Norel-putis told Curtin that his people were homeless and needed the government's help, and he asked if Curtin could convey their situation to the U.S. president. Curtin, probably thinking of individual land allotments, responded by telling them to count how many of their people were living and to write a petition stating their condition, and then he would take their request to higher authorities in the U.S. government.²³

When Curtin next returned in October 1889, Norel-putis handed him the petition that he had prepared under Curtin's advisement and addressed to President Benjamin Harrison. It was signed by Norel-putis and thirty other representatives of the Wintu and Yana tribes. It was written in longhand by an unnamed attorney who met with the assembled Indians at the home of a sympathetic white rancher who Curtin remembered only as "Bob." The petition, also known to history as the "Norel-putis 1889 letter," was an eloquent narrative of how the Wintu and Yana tribes had been decimated and robbed of their land. Now their lives were precarious:

If one of us at this time stands at a fence and looks into a field, a man cries out what are you looking at you Indian? Be off, don't hang around here. If our women go to gather acorns a white man drives them away saying: "Those are my acorns, don't you take those acorns I want them for my hogs."

From being a people many thousand in number, strong, happy, rich, we have been turned into a people a few hundred in number, a poor, weak remnant without land, without money, without education, without credit, looked down upon by men who slew our kindred and possess our ancient home.²⁴

The letter ended with the following plea:

Obtain for us some small sufficient share of land out of that which was once our possession.

²³ Curtin, "The Memoirs of Jeremiah Curtin," 413–15.

²⁴ The handwritten document is reproduced in *Winnemem Wintu Salmon Restoration Plan, McCloud River*, cawaterlibrary.net/wp-content/uploads/2017/05/Shasta_winnemem.pdf.

Obtain for us some means of beginning to live like white men on that land and some means of instructing our children so they may live after us in decent fashion.

We ask this as payment for the land we lost and the blood of our kindred which has been shed.

Should you our high chief be unable to obtain this justice which would be of small cost to the American Nation but precious to our peoples then we beg you to inform us so we may see our position and know at last that for us there is neither justice nor equality in this white man's Republic.²⁵

President Harrison received the petition by the Wintu and Yana and forwarded it to the Commissioner of Indian Affairs, who assigned the matter to U.S. Indian Inspector A. M. Tinker. Tinker visited the area in August 1890, conducting several interviews and councils. His report found that the homeless Wintu and Yana "consisted of some 125 families . . . scattered all about that section of the country, within a radius of from 75 to 100 miles, in many cases along river banks and generally in single families." He characterized them as "quiet, industrious and good working people—doing all they can to improve their condition and secure permanent homes for themselves and families." He argued that they were good candidates for receiving land allotments from the public domain under the government's allotment policy, reporting "that they nearly all speak English and to all appearances are worthy of aid from the Government; that they have been self-supporting for a long time—not receiving any aid from the Government whatever; that they do not want to remove to and settle upon a reservation; but that seeing the public lands disappearing rapidly they desire to take allotments of land in severalty."²⁶

The following summer of 1891, the Indian Office sent Special Agent Michael Piggott to locate and survey allotments for the Wintu and assist Wintu individuals with their applications. For help with working with tribal members, Piggott obtained the assistance of Mike Reed, a Wintu, who was probably the same "Wintu Mike" known to Curtin. For help with surveying the allotments, Piggott hired Robert L. Reading, a son of Pierson B. Reading. Piggott began his assignment in the Redding vicinity, but the project grew to include making public domain allotments for many non-reservation Indians in Oregon and Nevada, too. Altogether in the three-state area Piggott made 1,140 allotments over an eighteen-month period. By 1893, the Department of the Interior had approved 453 of those allotments. The exact number assigned to Wintu was not reported, but presumably it was around the number 125 cited by Tinker or perhaps higher if there were more Wintu

²⁵ *Winnemem Wintu Salmon Restoration Plan, McCloud River*, cawaterlibrary.net/wp-content/uploads/2017/05/Shasta_winnemem.pdf.

²⁶ Hoveman, *Journey to Justice*, 47–48.

survivors than first accounted for. Each allotment contained 80 or 160 acres. The Wintu's allotments were concentrated along the McCloud River. Some of the allotments were not made or finally approved until early in the twentieth century.²⁷

Each allotment carried a trust patent that was supposed to protect the Indian title for a minimum of twenty-five years. However, the Office of Indian Affairs faced relentless pressure from westerners and the U.S. Congress to curtail the federal government's guardian-ward relationship with Indians and make Indian trust lands available for sale to non-Indians. Under the Burke Act of 1906, most trust patents were converted to "fee" status, making the allotment subject to taxation and allowing the Indian owner to sell. As the allottees were mostly poor, some too poor to pay the property tax on their land, most of the allotments soon passed to non-Indian ownership either by direct sale or by way of tax default. That was a pattern of further land loss that unfolded across Indian country.²⁸

Survival through the Twentieth Century

There are more specialized studies than this report that provide a full account of how the Wintu navigated culture change amidst major shifts in federal Indian policy through the twentieth century. In *Journey to Justice*, Alice R. Hoveman devotes about half of her historical narrative about the Winnemem Wintu of the McCloud River to the last century. Although her account focuses on the Winnemem, she includes recent political developments among other Wintu groups as well. And it must be reiterated that modern-day Wintu interests in Whiskeytown National Recreation Area are distributed among several Wintu groups. Douglas Deur et al., give a whole chapter in their book-length report on Wintu ethnography for Whiskeytown National Recreation Area to "Contemporary Tribes and Tribal Organizations." Deur et al. list no fewer than ten tribal governments and tribal organizations that communicate with Whiskeytown National Recreation Area, plus another six non-governmental entities that in some way represent Wintu interests.

²⁷ Department of the Interior, Office of Indian Affairs, *Report of the Commissioner of Indian Affairs to the Secretary of the Interior, 1893* (Washington: Government Printing Office, 1893), 24–25; Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, p. 197.

²⁸ Hoveman, *Journey to Justice*, 56; Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, p. 198.

Deur et al.'s report provides brief historical background for each separate tribal entity. This excellent report, which was prepared for the NPS just a half decade ago, is based on extensive research and interviews.²⁹

Keeping in view this large number of Native groups with an interest in Whiskeytown National Recreation Area, it should come as no surprise that the Wintu story in the twentieth century is not only entwined with federal Indian policy, but is also entwined with the struggle of all California Indians, and the struggles of Native groups across northern California in particular. The major theme that emerges in the Wintu's twentieth-century journey is the struggle for "federal recognition" or "federal acknowledgement" (both mean the same thing). A federally recognized tribe is afforded certain rights, protections, and standing under the long-held federal Indian trust doctrine and its corollary, that tribal nations possess limited sovereignty within the United States. Federal recognition affords a tribe distinct advantages that a non-federally recognized tribe does not have—and all the more so over the last half century as our modern society has grown more bureaucratic and litigious. Unfortunately, the preceding history of Indian-white relations in California in the nineteenth and early twentieth centuries left most groups of California Indians landless or almost landless by about 1930. More to the point, most California Indian tribes were not federally recognized, or else they had only a tenuous hold on federal recognition, placing them at a distinct disadvantage in late-twentieth and twenty-first century America.

Through the twentieth century, federal Indian policy lurched back and forth between two vying and contrasting policies. One policy aimed at terminating tribes and assimilating Indians into American culture based on individual U.S. citizenship. The other policy aimed at sustaining tribes and tribal cultures. The Termination policy of the 1950s and early 1960s marked the last time that the U.S. government tried to insist on individual assimilation and to extinguish tribalism. The Indian Self-Determination and Education Assistance Act of 1975 finally ended the Termination policy and signaled renewed federal support of tribal sovereignty—but with a primary focus on federally-recognized tribes. For the Wintu and many other California Indian tribes who lacked a reservation or ratified treaty or other instrument of federal recognition, the going was tougher.

Among the ten tribal entities listed in Deur et al.'s ethnographic report on the Wintu, just four are now federally recognized—all by tortuous routes that underscore what a difficult road they have traveled in the twentieth century. The Redding Rancheria was

²⁹ Hoveman, *Journey to Justice*, 50–76; Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, pp. 210–23. The ten contemporary tribes and tribal organizations are: Redding Rancheria, Nor-Rel-Muk Nation (Hayfork Band), Winnemem Wintu Tribe, Wintu Tribe of Northern California and Toyon-Wintu Center, United Tribe of Northern California, Inc., Wintu Educational and Cultural Council of Northern California, Inc., Pit River Tribe of California, Quartz Valley Indian Community, Shasta Tribal Organizations, and Greenville Rancheria.

established by federal statute in 1922 with federal recognition conferred on the members of the rancheria collectively. The rancheria was made up of “homeless” Indians of the Wintu, Yana, and Pit River tribes who were brought together in one place where they formed a “tribe” only in the sense that they were a single community occupying land in federal trust. The Redding Rancheria was terminated by U.S. statute in 1959. As the residents were no longer wards of a federal guardianship at that point, the land was parceled out and allowed to be sold off. Then, as federal Indian policy swung the other way again, the Redding Rancheria was reinstated and the former residents once again became a federally recognized tribe under a court ruling in *Tillie Hardwick v. United States* in 1983.

Paralleling the Redding Rancheria story somewhat, the Greenville Rancheria was established in the early 1920s and the Northern Maidu occupants thereby acquired the status of a federally recognized tribe. In this case, the land base for the rancheria was cobbled together from some earlier small reservations of land dating from the 1890s. This tribal group was likewise terminated in 1959 and the rancheria dissolved. And, as in the case of the Redding Rancheria, the Greenville Rancheria was restored and the Northern Maidu were once again federally recognized through the *Tillie Hardwick* ruling in 1983. (Altogether, the *Tillie Hardwick* decision restored seventeen rancherias and their respective Indian communities to their former status before Termination.)

The Quartz Valley Indian Community acquired a tiny reservation and federal recognition in the late 1930s. This was during the Indian New Deal when federal policy aimed to revive tribal self-governance. This small Indian community is comprised of Klamath, Karuk, and Shasta Indians. The U.S. government terminated the reservation of approximately 600 acres in 1960, and the land was sold. The reservation boundary was reinstated by the same 1983 court ruling, and the tribe has been slowly reacquiring the land since then.

Lastly, the Pit River Tribe waged a long struggle for federal recognition under somewhat different terms. First, it gained standing to file a claim with the Indian Claims Commission (ICC) in 1959. As the claim involved the nineteenth-century U.S. taking of tribal lands without due compensation, the case brought before the ICC implied a federal acknowledgement that the tribe had a homeland in the nineteenth century and that the tribe continued to exist in the twentieth century. The Pit River Tribe then adopted a formal written tribal constitution in 1964. It finally won federal recognition in 1976 through the Department of the Interior’s Office of Federal Acknowledgement.

California Indians’ twentieth century struggles over federal recognition placed them at the forefront of the Red Power movement in the late 1960s and 1970s. There were several underlying reasons. One was the fact that in the Termination Era of the 1950s and early 1960s federal policy was to relocate unemployed Indians from rural Indian reservations to cities (often with the heartless inducement of a one-way bus ticket and a small cash grubstake), and thousands of those displaced Indians ended up in San Francisco and Los

Angeles where many turned to political activism. Such was the case when a group of eighty-nine Indian activists living in the San Francisco Bay area occupied Alcatraz Island in November 1969, starting a civil-rights action that would last for a year and a half. The occupiers' demands included establishment of a center for Native American studies to educate young Indian people about their history and culture, a Native American spiritual center for teaching them traditional medicine and religion, a Native American ecology center for training them in resource management, and a Native American museum. The occupiers played to the national media, bringing Hollywood stars to their support. In setting up tribal self-governance on Alcatraz with media outreach to the rest of America, they cleverly promised to establish a "Bureau of Caucasian Affairs."³⁰

The American Indian occupation of Alcatraz led to similar actions by two tribal groups in Shasta County. In the first action, activists in the Pit River Tribe staged an occupation on federal land to call attention to the tribe's landlessness. Previous to this the Pit River Tribe had won a judgment from the Indian Claims Commission that awarded Northern California tribes money instead of land. The Pit River Tribe refused its share of the government's \$29.1 million settlement offer, holding to its claim of 3.5 million acres. In the spring of 1970, Tribal Chairman Mickey Grimmell met with the organizers of the Alcatraz occupation to discuss strategy for how to stage an occupation. Unfortunately for the Pit River activists, Shasta County was a long way from major media markets. In June 1970, the Pit River activists first attempted to occupy a popular campground in Lassen Volcanic National Park. When they were blocked from entering the park, they occupied a nearby campground owned by PG&E instead. After this occupation fizzled, they regrouped and occupied a site called Four Corners on the Shasta National Forest where they set up camp in a Quonset hut and prepared for a long occupation. On October 27, 1970, a combined force of Forest Service and Park Service rangers, federal marshals, and state troopers confronted them and demanded that they vacate. The activists stood their ground, and the two sides clashed in a brief melee where the law enforcement officers quickly got the upper hand using mace and police sticks. There were a few injuries and more than two dozen arrests, and the occupation ended.³¹

In another action, on May 20, 1971, a group of fourteen Wintu activists led by Chris Ryan occupied a sixty-one-acre federal property near the town of Shasta Lake known as Toyon. The Bureau of Reclamation had used the site for its construction headquarters during the construction of the Shasta Dam. Previous to that, the site served as a makeshift rancheria for Wintu since the 1850s. In 1963, this federal property transferred to the Bureau of Land Management (BLM) and the buildings were repurposed to house the Toyon Job Corps Center. In 1971, discussions were underway between the Bureau of

³⁰ Theodore Catton, *American Indians and National Forests* (Tucson: University of Arizona Press, 2016), 111–13.

³¹ Catton, *American Indians and National Forests*, 114–17.

Indian Affairs (BIA) and Wintu leaders about returning the BLM site to the Wintu and establishing a Wintu Historical and Cultural Center. Since the Wintu group was not a federally recognized tribe, however, the BIA put a pause on the land transfer until the tribe was organized. At that juncture, Chris Ryan and his group took direct action and occupied the site to ensure that the land deal would not fall through. During the group's occupation of the property, it was discovered that \$16,000 of BIA funds for the project were misappropriated. The late Wintu artist and ethnologist Frank LaPena would later defend this pre-emptive action by Ryan and his group, stating that "the Toyon occupation was a central event in recent Wintu history." It bought precious time for the tribe and proved to be an important catalyst. Six months after the occupation started, the Toyon Wintu Center was incorporated. Two years later, the federal government agreed to hold the land in trust for eight more years, pending the Wintu group's bid to be federally recognized. In 1988, as the group was still not federally recognized, the government took steps to evict the Wintu from the government property. But the Wintu refused to leave, and the government did not force the issue. Today, the Wintu Tribe of Northern California has the Toyon Wintu Center, a 501 (c) (3) non-profit corporation, with corporate offices at Shasta Lake. Although it is not a federally recognized tribe, it has forged government-to-government relations with the State of California and the City of Shasta Lake.³²

Another reason that California Indians came to the forefront in American Indian affairs in the 1960s and 1970s was that the history of genocide in the California Gold Rush era forced a racial reckoning in the state of California at a time when other states remained apathetic toward American Indian affairs. The California state legislature passed laws that were almost, one might say, acts of atonement for what the legislature had done more than a century earlier in supporting genocide and pushing the U.S. Senate to quash the eighteen federal Indian treaties, which would have provided a land base and federal Indian trust status for about half of California Indian tribes. In 1963, the California state legislature found that California Indian culture was not "sufficiently understood" nor "adequately chronicled," and it directed the Department of Parks and Recreation to keep a record of archeological sites throughout the state. In 1969, it came to light that pothunters were looting a historic Yurok village site in Humboldt County called Tsahpekw. In response, the Department of Parks and Recreation invited a team of archeologists from San Francisco State University to excavate the site and recover archeological resources before they were lost—even though the site was known to contain human burial remains. The controversy around the dig led activists in the Yurok, Hupa, Karuk, and Wiyot tribes to come together and form the Northwest Indian Cemetery Protective Association (NICPA). Before long,

³² Frank LaPena, "Introduction," in *Journey to Justice: The Wintu People and the Salmon*, by Alice R. Hoveman (Redding, CA: Turtle Bay Exploration Park, 2002), 16; Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, "The Wintu Homelands of Clear Creek," report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, p. 215–16.

NICPA forced the state legislature to impose a moratorium on the disturbance of Indian burial sites that were less than two hundred years old. NICPA also caused the U.S. Army Corps of Engineers to abandon a dam project that would have flooded Indian burial sites. Buoyed by those successes, NICPA lobbied Governor Jerry Brown for stronger protections, and in 1976 the governor established the Native American Heritage Commission, charging it with the responsibility to identify, catalog, and protect Indian cultural resources. The state legislature passed the California Native American Cultural, Historical, and Sacred Sites Act, which called for state protections that led directly to similar action at the federal level two years later when Congress passed the American Indian Religious Freedom Act.³³

Still another reason that California Indians claimed national attention in the late 1960s and 1970s was because they had so little land in trust status. Consequently, many California tribes relied on national forests and other public lands for their primary traditional use areas. Many northern California tribes held the belief that the high-country peaks in the Klamath Mountains were sacred for the important role they played in the vision quests of their medicine people. When the Six Rivers National Forest released a plan for logging operations and road development of high-country areas in 1976, several tribes sued to stop the development. The fight over the proposed Gasquet-Orleans Road (G-O Road or “Go Road”), taken all the way to the U.S. Supreme Court, became a catalyst for a growing nationwide movement to protect Indian sacred sites.³⁴

Political fallout over the G-O Road litigation pushed the Forest Service as well as the NPS and other federal land managing agencies to develop a more enlightened approach toward Indian sacred sites and traditional uses. The NPS had more work to do than other federal land managers since it had another role as keeper of the National Register of Historic Places. The NPS’s Dr. Patricia L. Parker was the agency lead on NPS Indian policy. In the late 1980s, she was asked to write a report for Congress on the funding needs for historic preservation on tribal lands. Parker’s report, *Keepers of the Treasures: Protecting Historical Properties and Cultural Traditions on Indian Lands*, led to a tribal grants program administered by the NPS. In 1993, Congress amended the National Historic Preservation Act, authorizing tribal governments to establish tribal historic preservation offices on a similar basis to state historic preservation offices. Parker managed the tribal grants program and assisted tribes as they began appointing their first Tribal Historic Preservation Officers (THPOs).³⁵

³³ Catton, *American Indians and National Forests*, 135–37; Theodore Catton, *To Make a Better Nation: An Administrative History of the Timbisha Shoshone Homeland Act*, report prepared for the Rocky Mountain Cooperative Ecosystem Unit and Death Valley National Park (Missoula: University of Montana, 2009), 14–15.

³⁴ Catton, *American Indians and National Forests*, 138–44.

³⁵ Catton, *To Make a Better Nation*, 16–17.

On a parallel track, Parker collaborated with her husband Tom King, an employee of the Advisory Council of Historic Preservation, on *National Register Bulletin* 38, “Guidelines for Evaluating and Documenting Traditional Cultural Properties.” The traditional cultural property, or TCP, was a new entity designed to recognize community values that were being overlooked by the usual methodologies employed by archeologists and architectural historians doing CRM. The TCP designation was aimed primarily at addressing cultural sites important to Indian communities, but it was not exclusively for them.³⁶

There were other catalysts for change. The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) jolted museums and the whole archeology profession to take better account of Native perspectives. President Clinton signed a trio of significant executive orders, including one that spurred much progress on tribal consultation and created a new architecture for government-to-government relations between federal agencies and federally recognized tribes. The NPS established an American Indian Liaison Office. The Forest Service created an Office of Tribal Relations.³⁷

It was another California Indian tribe, the Timbisha Shoshone, who brought the NPS face to face with an Indigenous group who were vitally interested in re-establishing traditional use rights inside a national park. The Timbisha Shoshone have occupied Death Valley from time immemorial. Like the Wintu and other California tribes, they cared for the land by regularly setting fire to the scrub vegetation in the valley, cleaning riparian areas, and pruning and seeding fruit and nut bearing trees. They mingled resource gathering activities with spiritual practices, honoring the places that were the sources of life. In 1982, the Office of Federal Acknowledgement granted the Timbisha Shoshone’s petition for federal recognition. In 2000, Congress passed a law that provided for a reservation of 377 acres for the tribe in the heart of Death Valley National Park.³⁸

The Karuk Tribe inhabits the rugged Klamath River drainage in Siskiyou and Humboldt counties. Although the tribe gained federal recognition in the 1980s, it has very little tribal land. In a determined yet precarious fashion, the tribe leverages its tribal sovereignty to partner with the Forest Service and protect its traditional use rights on the Six Rivers National Forest. Some years ago, when the Forest Service began spraying herbicides to control spotted knapweed and other invasive plants, the Karuk perceived the poisons in the environment to be a threat to their very cultural survival. Alarming data pointed to a decline in female fertility and an increase in miscarriages in the small Karuk population. Consequently, the Karuk found that it was imperative to stop the Forest Service’s use of herbicides, and they approached the matter as one of tribal sovereignty. The tribal council

³⁶ Catton, *American Indians and National Forests*, 145.

³⁷ Catton, *American Indians and National Forests*, 151–55, 176–98; Catton, *To Make a Better Nation*, 17–18.

³⁸ Catton, *To Make a Better Nation*, 19–20, 76–78, 88.

passed a resolution declaring that the Karuk Tribe is a “historic sovereign aboriginal People” and that the tribe is dedicated to preserving the ecological integrity of the watershed; therefore, it opposed any and all use of pesticides in the area.³⁹

Most American Indians, like the Karuk, hold tribal sovereignty very dear, invoking their sovereign power for the protection of their land as much as their people. For them, tribal sovereignty is a life force that survives as long as their people survive as a distinct cultural entity. They know in their bones that sovereignty is nothing if it is not the power to protect.

The Winnemem Wintu have been refused federal recognition. It is their contention that the U.S. government did recognize their people in the Treaty of Cottonwood Creek of 1851 but reneged. In 1851, the tribe ceded its Aboriginal territory in exchange for a reservation and federal protection, but the U.S. Senate refused to ratify the treaty and the U.S. government failed them. On its website, the Winnemem Wintu declares that “the lack of federal recognition jeopardizes the tribe’s continued existence in the Mount Shasta area and has cut off federal benefits that are provided to tribes with federal recognition and which the federal government previously provided to the Winnemem Wintu.” Elsewhere on the website, the Winnemem Wintu state that they are the “Middle Water People” (the indigenous inhabitants of the McCloud River watershed) and that salmon are integral to their lifeway. “As salmon people and middle water people,” they declare, “we advocate for all aspects of clean water and the restoration of salmon to their natural spawning grounds.”⁴⁰

In the mid 2000s, the Winnemem Wintu joined the decade-long litigation over how the CVP would be modified to save endangered salmonids in the Sacramento and San Joaquin river basins. The tribe wanted the salmon restored in the McCloud River, where it had been absent ever since the completion of the Shasta Dam. Presenting its own salmon restoration plan to the court, the tribe offered its unique “spiritual, cultural, and practical” ideas—the “practical” part engaging most directly with the science-based alternatives advanced by other parties in the litigation.⁴¹

In 2022, an experimental lot of 40,000 chinook salmon hatchery eggs were placed in the waters of the McCloud River. When the eggs hatched and the tiny juveniles became present in the waters, they were hailed as the first salmon to inhabit the waters in some eighty years. In the spring of 2023, federal and state officials joined with Winnemem Wintu tribal leaders in signing an agreement that officially gave the tribe “a seat at the table” for managing future salmon recovery. The effort begins with the hope that the hatched juveniles will imprint on the waters of the McCloud River and survive the long journey to the

³⁹ Kari Marie Norgaard, “The Politics of Invasive Weed Management: Gender, Race, and Risk Perception in Rural California,” *Rural Sociology* 72, no. 3 (2007): 450–77.

⁴⁰ “Winnemem Wintu Tribe, Journey to Justice,” <http://www.winnememwintu.us/>.

⁴¹ Winnemem Wintu Tribe; “Winnemem Wintu Salmon Restoration Plan McCloud River,” https://cawaterlibrary.net/wp-content/uploads/2017/05/Shasta_winnemem.pdf.

sea. Initially, when the adults return after a few years to spawn, they will be trapped and trucked around the dam. The tribe hopes eventually to scale up the recovery plan by returning wild salmon from New Zealand back to the McCloud River—wild salmon that are descended from stock taken from the McCloud River and introduced in New Zealand waters nearly a century and a half ago—and by facilitating the salmon’s passage around Shasta Dam with the construction of “volitional” passageways, or new stream courses that the salmon can take to circumvent the dam.⁴² More immediate to Whiskeytown National Recreation Area, Winnemem Wintu and other Wintu groups are now involved with salmon restoration in lower Clear Creek.

Wintu have other concerns within the park around traditional plant use. Of the more than one hundred species of native plants still used by Wintu, a large number are found within the park. Some Wintu say they would like to see the park develop a written gathering policy for traditional plant use in the park. Such a plan might allow for pruning and other forms of tending the plants as well as harvesting them.

Wintu also have concerns about protection of archeological sites in the park. Wintu regard the whole landscape of Whiskeytown as spiritual, but they have not singled out any particular site within the park as a sacred site. They regard Shasta Bally as culturally significant because of its height; however, they do not advocate clearing the summit of all the communications equipment there. In 2009, the NPS prepared an environmental assessment over potential removal of the communication facilities sitting atop the summit of Shasta Bally. At that time the Wintu shared with the NPS that Shasta Bally has always been important as a spiritual gathering place with fasting or vision quest sites on it; however, those cultural sites are not confined to the very top of the mountain. The NPS determined that clearing the summit was not a practical option given the importance of this high point for telecommunications in the region. With regard to the Wintu, the NPS found that continued leasing of the summit for communications facilities would not impact any known ethnographic resources. “Access to the summit would continue and the NPS would continue to preserve and protect all known cultural resources in the park,” the NPS’s environmental assessment stated.⁴³

The contemporary Wintu view of Whiskeytown National Recreation Area is well characterized by Deur et al. in their report, “The Wintu Homelands of Clear Creek.” They write:

For contemporary Wintu people, Whiskeytown NRA remains a place of unique importance. . . . The landscapes and the natural and cultural “resources” of Whiskeytown are understood to be profoundly important, even sacred, to some

⁴² Damon Arthur, “California, Federal Agencies, and Native Tribe Sign ‘Historic’ Agreement to Aid Salmon,” *Record Searchlight*, May 2, 2023.

⁴³ National Park Service, *Shasta Bally Summit Communications Facilities Environmental Assessment* (Whiskeytown, CA: Whiskeytown National Recreation Area, 2009), 80.

tribal members today. This is a land that was once occupied, touched and even modified in many ways by the ancestors. The plant communities still found on NPS lands descend from plants tended by the ancestors and enlivened by generations of reciprocal care and support. Using medicines, foods, or materials harvested from these sites today allows tribal members to connect to these deeper relationships and connections—between species and across generations. The animals within Whiskeytown also manifest this longstanding relationship between parallel communities—humans and their non-human kin—over countless generations. The spiritual powers of certain landscapes still exist, full of potency and potential. Tribal members can still visit the relatively undeveloped portions of Whiskeytown NRA and “see the landscape as the ancestors saw it” as some say, or even engage these ancestors in myriad ways. In this respect, Whiskeytown is not seen as a material landscape that has been cleared of its original peoples: it is seen as a living landscape, imperiled by development and the “disrespectful behavior” of certain reckless visitors, but still animated by ancient powers and lifeforms, linked inextricably to Wintu ancestors.⁴⁴

To return to the historical perspective on Wintu occupation and use of the area, as that is the perspective taken by this historic resources study, it should be clear that the Indigenous people of the Clear Creek drainage never gave up their cultural connection to the area even after they were forcibly removed from it. Though the people were uprooted, scattered, and decimated when whites took over their homeland in the mid-nineteenth century, some fraction of them managed to survive. It should be no surprise that there is no extant historical documentation around any of the survivors’ individual journeys. The cultural memory of their habitation of the area was passed down from generation to generation, and it survives today among Wintu residing in various places and who identify as Wintu through various group affiliations.

⁴⁴ Douglas Deur, Rochelle Bloom, Katie Wynia, and Jamie Hebert, “The Wintu Homelands of Clear Creek,” report prepared for National Park Service, Whiskeytown National Recreation Area, 2000, Cultural Resource Division e-files, WNRA, p. 224.

CHAPTER ELEVEN

Transportation

The Horse Age

The California Gold Rush coincided with America's rapid advance from the horse age to the railroad age. American expansionists in the 1840s envisioned a transcontinental railroad reaching to the Pacific Coast and linking up with new sea lanes across the Pacific Ocean to the fabled China market. They foresaw a robust future American trade with the Far East, which would pass through the Golden Gate, enriching California as well as the whole United States. Consistent with that vision, investors in California set to work on railroad development in 1854. But another fifteen years would pass before the Central Pacific and Union Pacific railroads were joined at Promontory, Utah, in 1869 and California truly entered the railroad age. In the meantime, it remained in the horse age. While Californians restlessly awaited the transcontinental railroad, they constructed a frontier transportation system within the state using a network of navigable waterways, overland trails, and improved wagon roads.

Shasta was said to be at the head of "whoa navigation." Everyone who lived in the horse age was familiar with the shout of "Whoa!" to slow one's horses on a downgrade. West of Shasta, wagons and stagecoaches could not be operated safely because the way was too steep. So, freight wagons had to be unloaded in Shasta and loaded onto pack horses to make the onward trek over the mountains to Weaverville or Yreka.

The funny term "whoa navigation" was also a sly reference to the head of navigation on the Sacramento River. In the horse age, river transport was the cheapest way to move bulk freight. Steamboats carried bulk freight inland on the Sacramento River as far as they might. The city of Sacramento formed because most steamboats unloaded their freight at that point. Overland transportation carried the freight onward from there to the mining camps. So, Shasta's position at the base of the mountains in the northwestern mining region mirrored, in a humble way, Sacramento's position at the head of river navigation in California's central mining region.

The logistics of horse-drawn transportation turned the town of Shasta into a transfer and supply center. In 1857, the editor of the *Shasta Republican* estimated that around 6,000 tons of freight were offloaded in Shasta each year. Some of that freight was redistributed to pack trains and carried onward over the mountains, and some of it was imported by the town's merchants to stock their stores and sell to the local populace.¹

The town thrived on passenger traffic as well as freight. Besides serving as a transfer point at the head of "whoa navigation," Shasta also served as a hub for stagecoach routes linking the different mining centers in Shasta County. In 1858, more stages served Shasta than any other town of its size in the state according to the *Shasta Courier* and the *Shasta Republican* as reported in the *Sacramento Union*. The town received "two and sometimes three [stagecoaches] from Red Bluff, one from Horsetown, one from Churntown and Buckeye, one from Pit River, one from French Gulch and one from Weaverville, making seven arrivals daily, and occasionally eight." As each stagecoach might carry around ten passengers, there could be eighty people coming to town by stagecoach on any given day. Some of those people came to town to tend to business, while others came to transfer to one of the trunk lines connecting with points north and south.²

West of Shasta in the early to mid-1850s there were no improved wagon roads, only pack trails. Most pack trails simply developed where Native inhabitants had already made a foot trail. The trail between Shasta and Weaverville was called the Trinity Trail before it was improved into a wagon road in the late 1850s. Pierson B. Reading was said to have "blazed" the Trinity Trail on a return trip from Trinity County in 1849 or 1850, but it was no doubt already a foot trail, perhaps only in need of some brushing here and there to get a mule train through. A fully loaded pack mule could ascend and descend a trail about as well as a human could, so there was not much call to alter an existing trail's route until it was upgraded for use by horse-drawn vehicles.³

The California-Oregon Trail was the most well-known trail through Shasta County in 1850. It was used by trappers in the 1830s and by emigrants and gold seekers in the 1840s. It gradually evolved into a passable wagon road in the 1850s though it continued to

¹ Joseph Aloysius McGowan, "Freighting to the Mines in California, 1849–1859," Ph.D. dissertation (University of California, 1949), 263.

² Edwin Scott, comp., *California to Oregon by Trail, Steamboat, Stagecoach, and Train 1850–1887* (Pasadena, CA: produced as a class project, by the printing students of Pasadena City College, 1976), 29.

³ Edna Behrens Eaton, "Charles Camden and the Camden Toll Road," *The Covered Wagon* (1960): 11. The literature on the California Gold Rush is filled with tributes to the pack mule. Here is one by local historian May H. Southern, herself the daughter of a French Gulch pioneer, who interviewed old-timer George Furman of French Gulch in 1930: "At that time Shasta was the big distributing point for all points north," said Furman, "And James Loag was one of the leading packers." He said he had seen two hundred mules in one train. The bell mare always led. The packsaddle was called an 'Aparajo.' It was very heavy weighing about a hundred pounds. The sides were flexible so they would fit the mule's back and were easily strapped. These mules were so well trained they recognized their own saddles. They too were faithful pioneers of the gold trails. If it were not for their aid, the gold would probably be in the hills yet. Three hundred pounds was an estimated load for a mule." See May H. Southern, "George Furman," *The Covered Wagon* (1970): 36.

be called a “trail.” The California-Oregon Trail began in Jacksonville, Oregon, and crossed the Siskiyou Mountains to Yreka. Approaching the Shasta area, it went under what is now Shasta Lake, crossed the Sacramento River near Cow Creek at a ford, later a ferry crossing, and passed near the mouth of Cottonwood Creek before exiting Shasta County to the south. The well-traveled wagon road became a stage road in 1861.⁴

There was a branch of the California-Oregon Trail that was established to avoid the rugged terrain of the Sacramento Canyon. It went through eastern Shasta County where the terrain was gentler, but it added several miles to the route. It turned off the main trail south of Yreka, passed around the north and east side of Mount Shasta, followed the Fall River to its confluence with the Pit River, went up Hat Creek to Old Station, and came down Bear Creek past what became Shingletown to a crossing of the Sacramento River at Emigrant Ferry north of Anderson.⁵

For reaching Yreka from the south, an alternative trail was developed between Shasta and Yreka. It turned off of the Trinity Trail at Tower House, followed Clear Creek up to French Gulch, crossed over the Trinity Divide, and struck the Trinity River at “Sherman and Pendalton’s Ferry, six miles below the well-known Verrys Ranch.” From there it proceeded north over Scott Mountain and down Scott Valley to Yreka. The trail was generally known as the Shasta to Yreka Trail or just the Yreka Trail, though it was often identified as the trail over Scott Mountain or the trail through Scott Valley. After it was improved in 1857, it was known as the California-Oregon Stage Road, the Oregon Road, and the Sacramento to Oregon Trail.⁶

During the Pacific Railroad Survey in 1855, Lt. Henry L. Abbot of the Corps of Topographical Engineers surveyed this trail, proceeding southward from Yreka to Shasta. Although he wanted to survey the original route of the California-Oregon Trail along the Sacramento River, he was forced to deviate from that route and proceed through Scott Valley to obtain forage for his “broken down animals.” He found the route from Yreka via Scott Valley to Shasta problematic for development as a wagon road, much less for a railroad. He pronounced the ascent and descent over Scott Mountain “very abrupt for a wagon road,” and he found the pass over the Trinity Mountains even more forbidding. He wrote:

At the point where the [Trinity] river first bends abruptly to the west, the trail leaves it and crosses the Trinity mountains, the divide between it and Clear Creek. A spur from the main ridge, lying between two immense ravines, extends about six miles toward the Trinity River. The trail winds up the steep end of this spur, until at an elevation of two thousand feet above the water is

⁴ Mona Wilder, “Early Trails of Shasta County,” *The Covered Wagon* (1971): 55.

⁵ Wilder, “Early Trails of Shasta County,” 58.

⁶ Scott, comp., *California to Oregon by Trail, Steamboat, Stagecoach, and Train 1850–1887*, 12; McGowan, “Freighting to the Mines in California, 1849–1859,” 253–55; Dottie Smith, “Registered Historic Places in Shasta County,” 1996, manuscript, Shasta Lake Heritage and Historical Society.

gained, and then follows along the top of the main ridge, through a forest of pine and oak. The descent of 2,543 feet to Clear Creek is exceedingly abrupt. Although much labor has been expended upon the trail, this mountain is a great obstacle to travel.⁷

As the overland transportation system was powered by horses and mules, they were designed around the draft animals' capabilities and needs. On overland trails, way stops sprang up at intervals of about twenty-five miles or less, the distance a wagon could travel in a day, to take care of the tired animals as well as the human travelers along the journey. Called "ranches," the way stops were equipped with corrals or stables and were well supplied with water and feed for the animals. Reading's ranch served as a way stop on the California-Oregon Trail. As the region became more settled, way stops were more often called hotels, inns, taverns, or houses than ranches, but these way stops, no matter how modest, always had corrals or stables attached. Often a country inn employed a groom or stable boy to take care of the guest animals overnight. On well-traveled roads, a country inn might keep horses ready to offer in exchange for the traveler's stock animals in case they were lame. When a way stop was located at the foot of a mountain, such as Tower House was, it might be called upon to supply one or two pairs of extra horses, which were attached to the four-horse team for the short haul over the mountain. Reciprocally, the place would take extra horses from teams that had just crossed over the mountain from the other direction. Providing animal care and offering replacement or extra stock was an integral part of the hotel business. Growing hay for animal feed might form another integral part of the operation.⁸

Wagon roads were of course designed for horsedrawn vehicles. They usually evolved from well-used pack trails, which were narrower, steeper, and had tighter turns. When a pack trail was improved into a wagon road, it required a bit of reengineering where it went through steep terrain. Not only did the trail have to be smoothed and widened to accommodate wheeled vehicles, it also had to be rerouted here and there so that grades were not too steep for horse and mule teams to pass. Uphill and downhill grades had to be no greater than about 5 percent for a horse team could pull a loaded wagon uphill and brake the same load going downhill. On the downhill, each of two men on the wagon had a handbrake that rubbed a shoe against the wheel but it was actually the horses or mules in the harnesses that did most of the braking. Mules did better than horses at braking because their front-end anatomy was better suited for it. No matter which type of animal was in the

⁷ Beatrice W. Nielsen, "The Saga of a Trail," *The Covered Wagon* (1969): 32.

⁸ R. H. Cross, "The Early Inns of California—Shasta County," March 1, 1941, typescript, Shasta Historical Society.

harnesses, however, it was of utmost importance that the driver did not lose control. If the braking effort should fail, then the team would panic and attempt to outrun the runaway wagon, a situation that usually ended in disaster on a sharp curve farther down the road.⁹

When a road was improved to the point that stagecoaches could use it, the road was called a stage road. The first bona fide stage road in Shasta County was the improved road that went from Colusa, near Yuba City, up the west side of the Sacramento River all the way to Shasta. From the present site of Cottonwood, the stage road passed west of Reading's Rancho Buena Ventura and followed the base of the foothills to Clear Creek. It crossed Clear Creek and continued north to Canyon Creek (in present Redding) and went up Canyon Creek to the present location of Highway 299W and St. Joseph Cemetery, where it turned west and climbed the final distance to Shasta. A daily stage was established on this road in 1852.¹⁰

Stage roads were another step up in road development in California in the horse age. Stagecoaches were not as rugged as wagons, but they were built to go fast. The two-, four- and six-horse teams were made to trot at a good clip if road conditions permitted. A visitor from Nebraska wrote of her stagecoach ride from Redding to Delamar in 1907:

There was a report like unto the crack of a rifle and the horses gave a bound and were away on a dead run. We were lifted bodily out of our places and set down again as suddenly, panting for breath. The breakneck speed was kept up for miles over a stretch of valley level as a floor, across the Sacramento River and on to where the road branches to Delamar.¹¹

The stagecoach's speed was important not only for conveying passengers, but also for carrying the mail. In the dawning railroad age, there was an expectation and need for faster communications. The invention of the telegraph brought much faster communications between major cities, but as telegraph required the installation of telegraph wires regular mail remained the fastest form of communication over much of the United States long after the telegraph first appeared. Express mail came to narrow the gap between regular mail and telegraph communications. In 1857, Congress passed the Overland California Mail Act to encourage the formation of an express route from St. Louis to San Francisco. In 1860–1861, the U.S. government briefly experimented with the Pony Express until a transcontinental telegraph line could be completed. Meanwhile, within California numerous express companies sprang up to provide faster mail service between the mining camps. The express

⁹ Don Jackson, informal interview by authors, April 2, 2022. Mr. Jackson is a docent at the Jake Jackson Museum and Trinity County History Center in Weaverville and grandson of Jake Jackson, who was once a stage driver on the Redding to Weaverville stage route.

¹⁰ Wilder, "Early Trails of Shasta County," 56–57.

¹¹ Teresa Maxwell Carey, "A Stage Ride to Pineland," *The Covered Wagon* (1995): 60.

services soon consolidated into the California Stage Company in most of the state, but numerous independent companies continued to operate in Shasta, Trinity, and Siskiyou counties through the 1850s.¹²

Shasta was the hub for most of the express services in northern California. In 1851, Cram, Rogers, and Company offered the first express mail service between Shasta, Weaverville, Yreka, and Jacksonville. The company picked up mail in Sacramento through another express company, Adams and Company. The vital connection between Shasta and Sacramento was soon taken up by Taylor's Sacramento and Shasta Semi-Monthly Express, and then by Gregory's Sacramento and Shasta Semi-Weekly Express. Adams and Company extended its operation north to Shasta from 1853 to 1855, and the Pacific Express Company held a dominant position for a couple years after that. Wells Fargo and Company started in San Francisco and Sacramento in 1852 and served the area northward to Marysville. In the mid-1850s it expanded further north to compete with Pacific Express Company. Two other express companies that served the Shasta area in the mid- to late 1850s were the Alta Express Company and the Freeman and Company. Additional express companies had more limited runs between select mining camps in the Shasta area. These included the Bald Hills Express, the Buckeye Express, and Brown's Express. By 1860, most of these express companies faded away as Wells Fargo and the U.S. Post Office handled most of the mail.¹³

Wells Fargo conjures up the image of a stagecoach rattling over a dusty road behind a six-horse team, but not every express company operated with stagecoaches; some employed riders like the Pony Express and some used pack mules. Expressmen had to be honest and brave as well as hardy individuals because they carried the miners' gold dust in addition to their letters in the mail, making them a target for highway robberies.¹⁴

Highway robberies were occasionally reported on the road through Whiskeytown. This vivid account of one highway robbery near Shasta reflects the hazards of the expressman's job:

Strong boxes containing the gold were shipped from the mines to Redding by stage and were always accompanied by an armed Wells Fargo messenger. From Redding the gold was shipped by train.

On the evening of May 10, 1892, the Redding-Weaverville stage was on its way to Redding. When it was just a short distance east of Shasta on the old Sacramento River-Middle Creek road, a highwayman, with a gun leveled on the

¹² Bean, *California*, 206; Robert D. Livingston, "Early Expresses in Shasta, Trinity, and Siskiyou Counties," *Western Express: Research Journal of Early Western Mails* 47, no. 2 (June 1997): 6-31.

¹³ Livingston, "Early Expresses in Shasta, Trinity, and Siskiyou Counties," 6-31.

¹⁴ Livingston, "Early Expresses in Shasta, Trinity, and Siskiyou Counties," 6.

stage driver, stepped out of the brush and held up the stage, but not securing what was expected and hoped for in that hold-up the stage was allowed to go on and no damage or injury was done.

Then on May 14, 1892, when the stage reached Henderson Gulch about one or one and a half miles east of Shasta, it was held up again. At Henderson Gulch the road makes a deep hairpin or V curve. The robbers, hidden on one side of the gulch, could plainly see the stage as it rounded the curve and could see the messenger sitting inside. When the stage reached their hiding place one man stepped out and with a muzzle loader aimed at the driver commanded him to "Stop." Of course, the driver did stop. Then at the robber's command he threw out the strong box and as the box fell Buck Montgomery, the Wells Fargo messenger, shot the robber. At that moment a second robber appeared and with a revolver shot the messenger and fired several more shots into the stage.

As the first robber fell his muzzle loader was discharged and the buckshot penetrated both knees of John Boyce, the driver, and a few of the shot hit Mr. Suhr, a blacksmith from the Gladstone Mine who was sitting beside Mr. Boyce on the driver's seat. The impact of the shot and the lunge of the four frightened horses as they started to run pulled Mr. Boyce off the driver's seat into the boot of the stage in front of the seat but he held on to the reins. Mr. Suhr tried to tend brake but they were unable to slow down the frightened horses.

However, they soon met Doctor and Mrs. B. E. Stevenson driving their buggy team. Dr. Stevenson sensed at once what had happened when he saw the stage and the galloping horses. He pulled to one side of the road and as the lead horses came up he lashed them across their faces with his buggy whip turning them in toward the bank, thus enabling Mr. Boyce to get them stopped.¹⁵

The Tower House

Levi H. Tower built the Tower House in 1852 to accommodate travelers on the Trinity Trail. Tower's hotel was well situated for business, being near where the trail to Weaverville began to climb over the mountain and also near the junction where the trail to Yreka branched off and followed Clear Creek to French Gulch and then climbed over the Trinity Divide. The Tower House was a landmark in the early days of Shasta County; besides providing an important way stop for travelers it was a popular social center for local residents. The Tower House was soon recognized for its beautiful flower gardens, orchards, and popular balls. It became a stage depot for the California Stage Company in 1858. Although Levi Tower died prematurely in 1865, struck down by typhoid fever, the Tower House continued to serve the public until the place burned down in 1919.¹⁶

¹⁵ Grace Grattan Masterson, "The Ruggles Stage Robbery," *The Covered Wagon*.

¹⁶ Smith, *Registered Historic Places in Shasta County*, 128–30.

Levi Tower was born September 19, 1819, in Cumberland, Rhode Island, the sixth of eight children by Jason and Philena (Howard) Tower. Levi Tower left Cumberland and went to Springfield, Massachusetts, where he worked as a machinist in the U.S. Armory for several years and later had his own machine shop. When news of the California Gold Rush reached Springfield, Tower decided to test his fortune and make the journey. A sendoff printed in the *Springfield Republican* on the day of his departure characterized Tower as a “worthy young citizen of Springfield” and “an excellent mechanic.” But it interjected a note of skepticism saying “We wish him more success than we fear he will get.” In January 1849, at the age of twenty-nine, Tower boarded the *Edward Everett* in Boston. The ship sailed around Cape Horn to San Francisco, arriving there in June.¹⁷ While Tower was in San Francisco he formed his partnership with Charles Camden and John Hindman and the three men joined an expedition to Humboldt Bay. Tower and Camden’s subsequent adventures looking for gold in the Trinity mines and crossing over the mountains into Shasta County are described in Chapter Three.

Through his partnership with Camden, Tower discovered that his calling in California was not as a gold miner but rather as a logistics coordinator, entrepreneur, and developer. Soon after reaching Shasta County in the fall of 1850, Tower traveled to San Francisco to attend to business. He took ten mules with him to bring supplies from Sacramento back to the northern mines. On his return to Shasta County, he peddled the supplies and invested the profits in building the Globe Hotel in Shasta. The following February 1852, Tower made an amiable split with his partner Camden, who by this time was focused on placer mining in upper Clear Creek. As an indication that their business partnership had transformed into a close friendship, Tower bought a modest hotel property and made his new home where Camden was mining, while Camden built a cabin for himself close to Tower’s new house.¹⁸

The property Tower bought was called the Free Bridge House for its location beside a toll-free bridge spanning Clear Creek. The house and bridge were owned by two partners, Samuel Francis and John Gilmore. The property covered 160 acres and included other appurtenances such as outbuildings and corrals. It appears to have been the same property that Camden described in his autobiography as Schneider’s trading post. NPS researcher Anna Coxe Toogood suggested that Schneider moved on sometime after Camden encountered him in November 1850, while local historian Dottie Smith concluded that Francis and Gilmore acquired Schneider’s trading post by preemption. It is noteworthy that Samuel Francis and John Gilmore were both listed in the 1850 census for Shasta

¹⁷ Joel N. Fowler, “Levi H. Tower of the Tower House,” *Gold Rush Stories: The Pioneer Valley and the California Gold Rush*, <https://camcca.wordpress.com/levi-h-tower/>.

¹⁸ Anna Coxe Toogood and David G. Henderson, *Historic Structure Report: Tower House Historic District, Historical and Architectural Data Section, Whiskeytown National Recreation Area, California* (Denver: National Park Service, 1973), 22-23.

County whereas Schneider was not. In any case, Tower bought the property in two transactions, one with Francis for \$575 in April 1852 and the other with Gilmore for \$912 a month later. The total sum Tower paid for the property, \$1,487, would have amounted to about \$59,000 in today's dollars.¹⁹

Tower immediately began renovations to enlarge and improve the Free Bridge House into a more impressive hotel, which he named the Tower House. As Camden recalled, the original building was only a log house containing a bar, a dining room, and a room for lodgers. Any lodgers at that time would have been single male prospectors, presumably. Tower hired carpenters from San Francisco and built onto the original structure. By the fall, the bigger building was taking shape. It was a stately three-story structure with twenty-one rooms. It included a new kitchen and dining room. An article in the *Shasta Courier* in March 1853 indicated that the new hotel was now complete. An advertisement for the Tower House in the *Shasta Courier* in March 1854 stated that the Tower House had taken the place of the old Free Bridge House at the same location and was "prepared to entertain customers in a style not surpassed by any hotel in Northern California." This ad also stated that the garden was producing fresh fruits and vegetables for the table and that the corral was well supplied with an abundance of hay and barley for the horses.²⁰

Around the time that Tower decided to buy the property and go into the hotel business, he persuaded two siblings to come from Rhode Island and join him there. The two were his younger sister and brother, Philena and Jason (named for their mother and father, respectively). The younger siblings were then about thirty and twenty-eight years old. Philena Tower was soon introduced to Charles Camden, and they quickly became betrothed. Meanwhile, Levi Tower was engaged to Mary Jane Shuffletown of Fairfield, Iowa. The two couples were married in a double wedding ceremony on November 11, 1852. Jason Tower may have been present for his brother's and sister's double wedding ceremony or he may have arrived afterwards; by 1854 he was involved in running the hotel business with his older brother Levi. Completing the new arrangements, Levi Tower granted his sister a plot of land around the log cabin Charles Camden had built as well as a right to use the water from his irrigation ditches.²¹

The double wedding ceremony made news in northern California as reported in multiple newspapers. It was conducted in Camden's log cabin, Philena's new home, which stood in the garden area of the Tower House. Charles and Philena Camden were to enjoy a

¹⁹ Toogood and Henderson, *Historic Structure Report*, 23; Dottie Smith, "Levi H. Tower 1820(?)–1865," Shasta County, California, <https://cagenweb.org/shasta/bios/towerlevi.html>; Janie Edwards, "1850 Census Index, Shasta Co., CA," *RootsWeb*, <https://freepages.rootsweb.com/~shastaca/genealogy/cen1850.html>. Samuel Francis remained in Shasta County, serving as a captain in the state militia during the Civil War; Kimberly Johnston Dodds, comp., "Lyon Light Infantry" [roster], 2009, https://calindianhistory.org/wp-content/uploads/2015/09/05_28_1863_AGDeadOffice_SHA_01-Lyon-Light_10_22_10.pdf.

²⁰ Toogood and Henderson, *Historic Structure Report*, 26–27.

²¹ Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report*, 10.

long and fruitful marriage. Levi and Mary Jane Tower were not so fortunate; they were divorced two years later in what is believed to be the first registered divorce in Shasta County. Younger brother Jason Tower returned to the Tower family home in Cumberland, Rhode Island, in 1854 or 1855.²²

Reportedly, Levi Tower spent a whopping \$60,000 on improvements (about \$2.2 million in today's dollars), a figure that obviously included the hotel building but also reflected his large investment in the grounds and various outbuildings. He put considerable thought, care, and capital investment into the gardens, orchards, and landscaping. It was said that he procured young trees for the orchards at great expense—some purchased from nurseries in Oregon and others procured on the East Coast and transported over the Isthmus of Panama. The orchards produced apples, pears, peaches, plums, cherries, apricots, and nectarines. A description of the place in 1858 stated that there were more than a thousand fruit trees and four hundred grape vines on the property, with thirty acres fenced and under irrigation. A watercolor painting of the Tower House, perhaps made around 1860, shows young orchards maturing both to the north and south of the complex of buildings. Tower's landscaping touches included "a broad avenue of walnut trees leading up from Clear Creek to the Tower House," and fountains in the front yard, whose sparkling arcs of water could be kept in constant play. The water for the fountains came from springs in the adjacent hills and was carried through lead pipes buried in the yard. There was also a hydrant with a fifty-foot hose and a three-quarter inch pressure nozzle that could shoot a jet of water 100 feet high. The numerous outbuildings included a carriage house, a blacksmith shop, barns, and sheds. Camden's house stood beside the Tower House, and Camden's sawmill and stables were nearby, so that the whole complex consisted of at least seven substantial buildings and perhaps more.²³

In 1853, Tower partnered with two Shasta men, N. C. Farrington and Caleb Wingate, to improve the Trinity Trail for wagon use as far west as Tower House. Farrington and Wingate owned a store in Shasta and a sawmill on Whiskey Creek, so they wanted to improve the way over the Shasta Divide and down to Whiskeytown. Tower was keen to improve the way from Whiskeytown onward through Oak Bottom to his place. While Tower, Farrington, and Wingate spearheaded the effort, they may have secured other investors. They invested \$2,000 in hiring a crew of a dozen men to widen and smooth the existing pack trail so it was passable for teams. By November, it was possible "for a team to draw a full load of hay over the road," and to haul lumber from the sawmill to Shasta. Horsedrawn carriages could get from Shasta all the way to Tower House, although the way

²² Smith, *Registered Historic Places in Shasta County*, 128. The earliest known newspaper account mentioning Jason Tower is in the *Shasta Courier* on March 1, 1854. Scott, comp., *California to Oregon by Trail, Steamboat, Stagecoach, and Train 1850–1887*, 12; McGowan, "Freighting to the Mines in California, 1849–1859," 14.

²³ *Memorial and Biographical History of Northern California*, 644–45; Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report*, 14–15.

from Oak Bottom westward remained challenging. The most difficult stretch was beyond Grizzly Gulch where the old Trinity Trail reached its greatest height above Clear Creek. Here, “the hillside was brush covered, steep and rocky,” and the short distance “had to be taken cautiously by man and beast.” By 1856, the road was improved beyond Tower House to French Gulch, and it was well traveled by wagons and stagecoaches.²⁴

The improved road brought business to Levi Tower’s hotel, but it also brought competition. Within a couple of years of clearing the route to his hotel, Tower saw four new hotels appear along the twelve-mile stretch of road from Shasta to his place. From east to west, they were Nicholas Maher’s Four Mile House located four miles from Shasta, Benjamin Mix’s popular hotel in Whiskeytown, the Oak Bottom House at Oak Bottom, and Brown’s House at the mouth of Grizzly Gulch. Tower’s hotel managed to rise above the rest thanks to its beautiful gardens and orchards and sturdy reputation, but the Tower House’s steady business was not enough to relieve Tower of all the debt he incurred in developing his property. As a result, Tower faced increasing financial difficulties as the decade wore on.²⁵

Tower’s financial reverses began with the loss of his first big investment in the Globe Hotel, which burned in a fire that swept through Shasta in 1853. Following that setback, Tower began charging a toll for use of the bridge over Clear Creek that had come with his property. That year he mortgaged his Tower House hotel to Isaac Swab for \$2,000. Less than a year later, on February 28, 1854, Tower mortgaged his Tower House property to more lenders for a total of \$18,186 in additional loans. He borrowed \$2,500 from another lender the next month, and another \$12,385 from several more lenders in May 1855. Finally, he took out one more loan against the property from William Shock three months after that. In November 1856, he borrowed \$2,000 from his brother-in-law Charles Camden against a different property listed as Tower Ranch, located on the Sacramento River. The next year this property was sold at public auction to pay back some of his debts. Finally, in the fall of 1858, Tower filed for bankruptcy in district court. Charles Camden then bought the Tower House and the Tower Ranch and leased them back to Tower.²⁶

Tower’s financial woes did not diminish the public’s high regard for the Tower House. The place was renowned for its beautiful gardens, good service, and entertaining balls. “Every one who has heard of Shasta has heard of the Tower House,” proclaimed the *Shasta Courier*, “but possibly every one does not know that there you can always find pleasant and agreeable society, attached thither by the known comforts and pleasantness of the place.” As much a resort as a roadhouse, it was praised as a fine spot for a person to

²⁴ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 26; Nielsen, “The Saga of a Trail,” 33.

²⁵ Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 13; Nielsen, “The Saga of a Trail,” 35–36; Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report*, 16.

²⁶ Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report*, 16.

“rusticate” or escape from the hurly-burly of town life for a while. The Tower House’s prestige was reflected in the local politics. Levi Tower was elected to the County Board of Supervisors when that governing body was formed in 1855, and the County Board of Supervisors created the Tower House Electoral District, making the Tower House a polling place. By the late 1850s it was also a stage stop and a telegraph office. In 1861, the Union Democratic Senatorial Convention met there. In 1864, the Soldiers Aid Society of Whiskeytown, French Gulch, and the Tower House, a ladies’ society organized for the support of the Union war effort, held a Christmas festival at the Tower House as a fundraiser for the U.S. Sanitary Commission.²⁷

After Levi Tower died of typhoid fever in 1865, the hotel that bore his name stood for another fifty-four years. While Camden became the principal owner of the property after 1858, he had no desire to run a hotel business. Grant I. Taggart managed the hotel for Camden and Tower in the early 1860s until Taggart acquired a lucrative contract to carry the U.S. mail between Shasta and Weaverville and launched into the express business instead. (Taggart was so successful in his new line that he soon purchased the stock and buildings owned by the California Stage Company on this northern route. In 1875, he also bought out the Northern California Stage Company with its service between Shasta and Yreka.) When Taggart moved on from the hotel business and Tower died, Camden again had to decide what to do with his late brother-in-law’s hotel property. As Camden related in his autobiography, “for two years I rented the hotel to unsatisfactory tenants and then, in disgust, sold it.” In 1868, the Camdens began spending their winters in Oakland so that their growing children could attend school there and Camden could be close to his

²⁷ Smith, *Registered Historic Places in Shasta County*, 129; Toogood and Henderson, *Historic Structure Report*, 45–46, 51; Toogood, *Historic Resources Study, Whiskeytown National Recreation Area, California*, 134; Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report*, 15; Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Aug. 1, 1863, and Dec. 3, 1864, in spiral binding, Shasta Lake Heritage and Historical Society. There is this fine description of the Tower House in 1861, from the journal of Richard G. Stanwood, who “rusticated” there on his way to and from making an ascent of Mount Shasta: “One day at dawn (at Shasta) and we are off again, very hot, dusty, and unpleasant till about four, when we reached the Tower House, a delightful spot with the finest orchard I have seen in the state, though not the largest, and plenty of beautiful shade trees. Got some nice peaches, and starting again, took an outside seat with the driver, Jim Comstock, whom I found to be a right clever fellow.... On the return trip, after making the ascent of Mount Shasta at Yreka, I went early to bed and was waked at two a.m. the 24th of August, to start for home. I took an outside seat and after I got fairly waked up enjoyed it, though the air was chilly enough. We got to the Tower House at ten that night, took supper and went to bed. Next morning, the 25th, were up early and took a walk through the orchard, which is one of the finest in the state. The fruit is principally apples and peaches. All the trees were loaded down with splendid fresh looking fruit. We did full justice to them for at Yreka it had been so scarce and high, prudence had compelled us to be abstemious. One of the men was going troutling and I took a pole and went with him. I got one as soon as I put my line in, and had ne’er another bite. Though I waited patiently for over an hour. We were charmed with the locality and our excellent accommodations and fine fare, and decided that the Tower House was the best place to stop at we had seen in our travels. Rode into Shasta on the Weaverville stage in the afternoon.” Quoted in R. H. Cross, “The Early Inns of California—Shasta County,” March 1, 1941, typescript, Shasta Historical Society.

business interests in San Francisco. While the Camdens still returned to their home on Clear Creek each summer, and maintained the extensive orchards that Tower had planted, their association with the hotel ended.²⁸

The Camden Toll Road

Road improvement was nominally a government responsibility in California during the gold rush, but neither the state nor county governments had money for it. The California state legislature passed laws in the early 1850s to allow the construction of private toll roads over public land, but private capital was slow to respond. Most wagon roads built in the early 1850s were free because toll collection did not appear to be economically feasible. However, by the late 1850s, some toll road companies began to form, and road development gathered steam. In 1860, the Shasta Turnpike Road Company filed a declaration that it intended to improve “the present County road” between Shasta and Four Mile House (the first four miles of road that Farrington, Wingate, and Tower had constructed some seven years earlier). The company had a capital stock of \$2,000 divided into nine shares. The company officers were Caleb Wingate, H. A. Curtiss, and R. C. Babcock. Although not evident from the declaration, Charles Camden would soon emerge as the moving force behind the toll road.²⁹

Other road development was underway by this time to facilitate wagon and stage-coach travel between Shasta and Weaverville and between Shasta and Yreka. William Lowden of Weaverville started work on improving the Trinity Trail between the Tower House and Weaverville as early as 1852, but he seems to have made slow headway on his project before 1857. Lowden completed the road and began charging a toll in 1858.³⁰ Major road work on the mule trail between Shasta and Yreka was started in 1857. When completed, it became known as the California–Oregon Stage Road.³¹

Numerous reports in northern California’s newspapers attest to the growing interest in road improvements during this time:

²⁸ A. Jay Hertz, “A Group of Northern California Expresses,” *Western Express: Research Journal of Early Western Mails* 11, no. 4 (October 1961): 23–25; Camden, *Autobiography*, 57.

²⁹ Caltrans, *A Historical Context and Methodology for Evaluating Trails, Roads, and Highways in California*, prepared for Cultural Studies Office, Division of Environmental Analysis, California Department of Transportation (Sacramento: California Department of Transportation, 2016), 60–62; Toogood, *Historical Resource Study, Whiskeytown National Recreation Area, California*, 157.

³⁰ W. H. Colby, “A Century of Transportation in Shasta County 1821-1920,” *Occasional Publication* No. 7 (1982), Association for Northern California Records and Research, Chico, CA., 32. See also R. A. Cage, “The Lowden Empire: A Case Study of Wagon Roads in Northern California,” *The Pacific Historian* 28, no. 2 (Summer 1984), 33-48.

³¹ Smith, *Registered Historic Places in Shasta County*, 46.

- The *Sacramento Union* reported on January 20, 1857: “The trail from Shasta to Weaverville is daily traveled, although it is in bad condition. . . . The California Stage Company continues to run their stages to French Gulch, but due to the great amount of snow on Trinity Mountain, most of the traffic is forced to use the Sacramento River trail, which has been kept open all winter. . . . The travel over Trinity and Scott Mountains continues closed to mules and their packs.”
- The *Sacramento Union* reported on February 24, 1857: “Roads between Marysville and Shasta are very bad. The trail between Shasta and Yreka is passable. Trail to Weaverville is used every day but is not good.”
- The *Sacramento Union* reported on April 6, 1857: “Trails to Weaverville and over Trinity and Scott Mountains are open and in good shape with daily use and the stage has resumed from Shasta to French Gulch.”
- The *Shasta Courier* reported in successive issues over the summer of 1857: “Twenty-five men are at work on the Sacramento River road from Shasta to Yreka. . . . A good road has been completed from French Gulch in Shasta County to the foot of Trinity mountain. . . . A wagon road is about to be opened to the top of Trinity mountain. From the summit of Trinity mountain to Trinity Center, a good road will soon be completed by Mr. Bates and others. From that point to the foot of Scott Mountain, an excellent road has already been made. . . . Tri-weekly mail has resumed over this road to Yreka and teams with freight wagons are making regular trips. . . . Mr. Lowden reports that work is progressing on his road between here and Weaverville.”
- The *San Francisco Daily Alta California* reported on May 1, 1858: “California Stage Company will today start a line of daily stages from Sacramento to Shasta. The same company will also start daily stage from Shasta to Weaverville on this same date. Telegraph line, Shasta to Weaverville is under construction.”
- The *Shasta Republican* reported on August 23, 1858: “At this time there are two stage lines between Shasta and Yreka; one on the Sacramento Route, owned by J. Loag and runs by Buckeye, Pit River, Soda Springs and Shasta Valley; the other owned by J. E. Carr, runs through French Gulch, across Trinity Mountain, through Scott Valley and over the divide to Yreka. On each route there will be a few miles by Mule back.”
- The *Sacramento Union* reported on May 21, 1860: “The stockholders of the Shasta Yreka Turnpike Company have given their road to the California Stage Company under the condition that the company at once proceed to finish it across Scott Mountain and widen the road over Trinity Mountain.”³²

With the Shasta Turnpike Road Company completing its road only as far as Four Mile House, and Lowden developing his toll road from Weaverville only as far as the Tower House, that left about eight miles of primitive road from Four Mile House to the Tower

³² Scott, comp., *California to Oregon by Trail, Steamboat, Stagecoach, and Train 1850–1887*, 22–31.

House still needing a sponsor to upgrade it. The County Board of Supervisors cast about for someone to take it on. Camden was skeptical that building a toll road up Clear Creek would ever pay off, but he finally agreed to undertake the project in return for a twenty-five-year franchise. Later, he got the County Board of Supervisors to extend the franchise to fifty years. He hired laborers and began the work in 1861.³³

To be a paying concern, there had to be an efficient way to collect tolls. Camden wanted the whole twelve miles of road from Shasta to Tower House so he could collect a toll as people left Shasta and when they passed his place at the Tower House. In 1863, he bought the first four miles of road over the Shasta Divide from the Shasta Turnpike Road Company for \$6,500, changed the name of the company to the Camden Turnpike Company, and named the road the Camden Toll Road. He built a toll gate and a toll keeper's house about one mile out of Shasta, and another toll gate at the Tower House. In 1864, he covered the bridge across Clear Creek with wood siding and a shingle roof. In 1867, he built a new, higher bridge across Whiskey Creek to secure the bridge against freshets. He placed mileposts made of sandstone along the road. Altogether Camden invested \$20,000 in the toll road venture.³⁴

The County Board of Supervisors approved of the following toll rates:

Table 4.
Camden Toll Road Rates³⁵

2 horses and wagons	Loaded \$.50	Empty .25
4 horses and wagons	Loaded .75	Empty .37½
6 horses and wagons	Loaded 1.00	Empty .50
8 horses and wagons	Loaded 1.25	Empty .75
1 horse and buggy	.25	
2 horses and buggy	.37½	
1 man and horse	.12½	
Pack animals	Loaded .08	Empty .04
Footman, each	.10	
Sheep and hogs each	.03	
Cattle and loose animals		.05

³³ Eaton, "Charles Camden and the Camden Toll Road," 11.

³⁴ Scott, comp., *California to Oregon by Trail, Steamboat, Stagecoach, and Train 1850–1887*, 38; Dottie Smith, "Parts of 1860s-era toll road still exist," *Redding Searchlight*, Nov. 27, 2009.

³⁵ Eaton, "Charles Camden and the Camden Toll Road," 11.

Camden held the franchise and kept collecting tolls until his death in 1912. According to a history of northern California published in 1891, the toll did remunerate Camden while the road “aided in the settlement and development of the county.” This celebratory history stated that the road “was a great undertaking.... It winds its way through and over the mountains, in some places cut out of solid rock, and forms many loops and abrupt turns. The whole road is an easy grade, is kept in good condition and affords its far-seeing and wise projector and builder a nice income in tolls.”³⁶ A local historian writing in 1960, before Whiskeytown Lake and the rerouting of Highway 299 covered or destroyed much of the old road, wrote that the Camden Toll Road:

wound round the hillsides, down into ravines without bridges, around sharp bends, and along steep inclines. Beyond the toll house the road climbed toward the top of the Shasta Divide. Part way to the top a spring above the road furnished water which was piped down to a watering trough to supply man and beast with a drink of cold mountain spring water. Beyond the summit, the road dipped down to Whisky Creek, Brandy Creek, and Clear Creek, and the once active mining camp of Whiskeytown. Further on came Oak Bottom, a stopping place on the level land along the creek and with mammoth oaks along the road. Then a few miles away was the covered bridge across Clear Creek near the Tower House and the end of the road.³⁷

Oak Bottom

Oak Bottom was a popular stop on the Shasta to Weaverville road for many years. The first Oak Bottom House was built by John Howell in 1850. It was located near the mouth of Boulder Creek in a mining camp called Fortunate, two miles west of Whiskeytown. It was named for the oak forest in the area and as the place became a popular overnight stop for teamsters the name of the settlement changed to Oak Bottom.³⁸

In 1851, Howell sold his place to Josiah Roop. In 1852, Josiah Roop sold the Oak Bottom House and 160 acres on the north side of Clear Creek to Franklin Vandeventer. Probably with each new owner more land was put under cultivation or turned into pasture. Vandeventer later claimed it was the oldest “ranch” in Shasta County north of Shasta. In 1856, Vandeventer sold his Oak Bottom “ranch” to A. J. Van Wie for \$3,000, who held the property for the next twelve years. Van Wie is credited with planting fruit orchards and

³⁶ *Memorial and Biographical History of Northern California*, 644.

³⁷ Eaton, “Charles Camden and the Camden Toll Road,” 11.

³⁸ Dottie Smith, “Oak Bottom Renewed Weary Travelers,” *Redding Searchlight*, undated newspaper clipping, Shasta Lake Heritage and Historical Society; Nielsen, “The Saga of a Trail,” 33.

vegetable gardens. Van Wie's deed of sale in 1868 listed those improvements along with an irrigation ditch about 300 yards long bringing water from Boulder Creek to an orchard on the south side of Clear Creek, and "barns, outhouses, sheds, and fences."³⁹

In 1868, Van Wie sold the property to Chinese miner Qui Chin and nineteen other Chinese for \$5,100. According to local historian Dottie Smith, whatever hopes the Chinese had around the hotel business soon fizzled "because the white men avoided their business. Four years later, in 1872, Qui Chin sold to Dennis Desmond for a mere \$300."⁴⁰ This judgment is possibly misplaced. An article in the *Shasta Courier* from 1876 refers to another property investment by Chinese miners in the Oak Bottom area around the same time. According to that report,

Several years ago a Chinese Company paid several thousand dollars for a mining claim on Clear Creek near the Oak Bottom House, and have mined the ground successfully ever since. Ah Gee, the leading partner in the company, and superintendent of the mine, was a man of more intelligence than is usually found among the class of Celestials that visit this country, and he had numerous friends among the Paleface Race. . . .⁴¹

This article went on to report that Ah Gee was killed in a mudslide that went through the Chinese camp and swept several men into Clear Creek. While all the others survived the event, Ah Gee was caught in the raging creek and disappeared. Notwithstanding the fact that one source gave Qui Chin as the head of the company and the other source listed Ah Gee, it is possible the two companies were one in the same, in which case the Van Wie property was purchased for mining purposes rather than for the hotel business. In any case, no corroborating evidence was found confirming that the Chinese ever ran the Oak Bottom House as a hotel.

Starting in 1872, Oak Bottom became associated with two generations of the Desmond family. Dennis Desmond Sr. and Bridget Harrigan Desmond were both born in County Cork, Ireland, in the early 1820s. Emigrating to the United States after they were married, they located initially in Massachusetts, where they had their first child, and then in French Gulch in the late 1850s, where they had four more children born between 1860 and 1868. They had four sons, Tim, Dennis, John, and Jeremiah, and finally a daughter,

³⁹ Dottie Smith, "Oak Bottom Renewed Weary Travelers," *Redding Searchlight*, undated newspaper clipping, Shasta Lake Heritage and Historical Society; Toogood, *Historic Resources Study, Whiskeytown National Recreation Area, California*, 138.

⁴⁰ Dottie Smith, "Oak Bottom renewed weary travelers," *Redding Searchlight*, undated newspaper clipping, Shasta Lake Heritage and Historical Society.

⁴¹ Ileene Blattner Norton and Susan Norton Short, "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, March 11, 1876, in spiral binding, Shasta Lake Heritage and Historical Society.

Johanna, who did not survive childhood. The four sons all remained in the area, all being buried in the St. Joseph Cemetery in Redding. The parents and daughter were buried in the Catholic cemetery in French Gulch.⁴²

Just fourteen months after Dennis Desmond bought the Oak Bottom property, the Oak Bottom Hotel burned down and the family lost virtually everything it had, the family members barely escaping the fire with their lives. One child had to climb down from a second-story window on a pole. A historic photograph of the Oak Bottom Hotel shows that it was a substantial two-story building with chimneys at each gable end and a covered porch and second-story balcony along the front facade. A subscription for the relief of the family was started in Shasta and \$5,000 was raised.⁴³

It seems that after the fire the Desmonds elected not to rebuild a full-size hotel, though they would still accommodate overnight guests at their ranch. Many years later the sons considered building another “hotel” but demurred. Dennis Desmond Sr. died in 1890. The eldest son Tim moved away in 1895. The remaining brothers, Dennis Jr., John, and Jeremiah, operated the property primarily as a ranch while still entertaining many passersby in their home. Over the years the Desmond homestead became renowned as “a popular stopping place.” An article in the *Shasta Courier* in 1899 stated, “One of the best homestead and business locations on the road between Shasta and Weaverville is the Oak Bottom place above Whiskeytown. Here the Desmond brothers have a hotel stand, corral and feed depot, and also an orchard and vegetable garden.” The Desmonds could always be found, the article said, and always with a welcoming demeanor. “The Desmonds are diamonds,” it reported, “and belong to the pioneer, as well as present era, and need no fixing or polishing.”⁴⁴ The remaining Desmond brothers resided at Oak Bottom until their mother died in 1904; then they sold the place, moved to Redding, and purchased the Redding Feed Company.⁴⁵

French Gulch’s Hotels

For many years the leading hostelry and showplace of French Gulch was the Empire Hotel. Built in 1853 by a man named Stoddard, it was said to be as fine as any hotel in Shasta at that time. One elegant feature of the Empire Hotel that was eventually salvaged from the

⁴² All seven family members are listed at Find-a-Grave.com.

⁴³ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, Aug. 9, 1873, in spiral binding, Shasta Lake Heritage and Historical Society.

⁴⁴ Ileene Blattner Norton and Susan Norton Short, “Whisky-Town 1800’s Volume 1,” extracts from the *Shasta Courier* newspaper, May 16, 1895; July 20, 1895; Aug. 7, 1897; Aug. 26, 1899; in spiral binding, Shasta Lake Heritage and Historical Society.

⁴⁵ “Dennis Desmond,” <https://www.findagrave.com/memorial/60063271/dennis-desmond>.

building and reused (surviving to this day in the French Gulch Hotel) was the bar in the Empire Hotel's saloon, which was brought from England around Cape Horn and transported from Shasta to French Gulch by horse and wagon. From 1856 to 1858, the operators of the Empire Hotel were S. F. Southern and S. P. Black. Southern's daughter, May Southern, later recalled that in those years the California Stage Company used the place as a stage stop. Passengers disembarked from the coach and were picked up by George L. Greathouse's mule passenger train to continue their trip over the Trinity and Scott mountains to Yreka. G. L. Greathouse and S. F. Southern were brothers. In 1858, the stage road was completed to the top of Trinity Mountain and through Trinity Valley, rendering the stage stop in French Gulch unnecessary. Thereafter the Empire Hotel was sold to Arieta Woll. According to one account, a fire swept through the town on a June day in 1864 that destroyed some twenty buildings including the Empire Hotel. But by other accounts it seems that the Empire Hotel survived this fire and was finally torn down in 1931. It was said that the charge for daily room and board at the Empire Hotel remained \$1 from 1854 until 1906, when the price was raised to \$1.25, which brought a strong protest by the resident miners.⁴⁶

In 1885, Richard Henry Feeney settled in French Gulch and built the Feeney Hotel. Local historian Dottie Smith believed that the Feeney Hotel began as an addition to the existing Batavia House, which was built in 1853. Be that as it may, the original Feeney Hotel was a two-story wooden building with a one-story annex, the main part containing thirty-four compact rooms for boarders and overnight guests. The Feeney family owned and operated the hotel until the late 1940s when they sold it to new owners, and it was renamed the French Gulch Hotel. This building was included with six others in French Gulch in a listing on the National Register of Historic Places in 1972, and it remains standing today. The frame building measures 120 feet wide by 90 feet deep and sits on piers on a flat-rock foundation. A covered portico with turned wood columns adorns the side facing the street. The French Gulch Hotel's saloon contains the bar that originally stood in the Empire Hotel.⁴⁷

⁴⁶ Anonymous, "The History of French Gulch," typescript, no date, in Small Towns vertical file, Shasta Historical Society; R. H. Cross, "The Early Inns of California—Shasta County," March 1, 1941, typescript, Shasta Historical Society.

⁴⁷ R. H. Cross, "The Early Inns of California—Shasta County," March 1, 1941, typescript, Shasta Historical Society; Dottie Smith, *Registered Historic Places in Shasta County*, 47. Smith disputes Cross's 1885 date of original construction. "Built in 1853 as an addition to the Batavia House. Upon completion contained 34 8' x 9' rooms, plus outside corrals, stables, and sheds. Owned by H. E. Willey in 1881. In 1885, a new saloon was built in the front section of the hotel (present location) by Richard Feeney. In 1888, the remainder of the present hotel was built by Feeney and renamed the Feeney Hotel." See Smith, *Dictionary of Early Shasta County History*, 59.

The Whiskeytown Hotel

Oliver P. Woodward bought the Whiskeytown Hotel in 1873, renamed it the Woodward's Hotel, and continued to operate it until his death in 1897. It was a reputable establishment with several rooms on two floors. A photograph from the 1890s shows a shaded second-story porch running around two or maybe three sides of the building. After the death of Oliver P. Woodward, his son Oliver P. Woodward Jr. took over the property and ran the hotel until 1903. Ownership of the hotel passed from Oliver P. Woodward Jr. to his sister Susan in 1903, and when she died one year later the property devolved upon her husband John F. Schilling and daughter Grace Schilling. In 1915, the Schillings sold the hotel to Jeremiah Ford. Ford and a man named Louis Foster then operated the hotel until 1928, when it was sold to George C. Gilchrist.⁴⁸

One afternoon in November 1932, when Gilchrist was proprietor, a fire started in the backyard and threatened the building. The fire destroyed chicken houses and a blackberry patch before it was subdued. A state fire truck was called to the scene and reportedly helped to put the fire out.⁴⁹ Gilchrist at some unknown date sold the hotel to its last owner, Gus Herman, who had it when the Whiskeytown Dam was built and the town was flooded.⁵⁰

Last Years of the Tower House

On March 6, 1869, the *Shasta Courier* announced that Andrew Cusick had purchased the Tower House from Charles Camden. "The Tower House has long been noted as the most pleasant place of summer resort in this portion of the State, and we presume Andy will render it still more attractive if possible," the newspaper stated.⁵¹

Andrew Cusick owned the property for around a dozen years. Born in County Cavan, Ireland, in 1834, he came to Shasta County in 1857 and remained a resident of the county until his death in 1912. He married Margaret Moran of Wisconsin in 1871, and they had seven children, at least four of whom were born while they owned the Tower House. The *Cultural Landscape Report* for Tower House Historic District mentions a "cottage built in 1881 for Andy Cusick." In their later years, Andrew and Margaret Cusick operated the Middle Creek Hotel near Shasta.⁵²

⁴⁸ Ross, "Whiskeytown," 49.

⁴⁹ *Blue Lake Advocate*, Nov. 26, 1932.

⁵⁰ Ross, "Whiskeytown," 50.

⁵¹ Toogood, *Historic Resources Study, Whiskeytown National Recreation Area, California*, 136.

⁵² "Andrew Cusick," at <https://www.findagrave.com/memorial/260305432/andrew-cusick>; Historical Research Associates, Inc. and Amphion Environmental, Inc., *Cultural Landscape Report*, 28.

The Tower House did not get much play in the *Shasta Courier* or other publications while Cusick owned it or in the years after. The Tower House's reputation as a popular resort seems to have diminished. A *History and Business Directory of Shasta County* published in 1881 makes no mention of the Tower House, nor did it appear in the directory's advertisements where ads did appear for Dennis Desmond's Oak Bottom House, H. E. Willey's French Gulch Hotel, and Oliver Woodward's hotel in Whiskeytown. A historical compendium of the region, *Memorial and Biographical History of Northern California*, published in 1891, ended its sketch of Charles Camden by noting, "This sketch would not be complete without a further account of the Tower House and of its original founder and former proprietor." However, the lengthy passage that followed focused entirely on the 1850s.⁵³

A partial list of owners of the Tower House property after Andrew Cusick is as follows. Meinard Shafter deeded the property to John Shed, August 15, 1885. John and Mary Shed deeded it to Howard Shields, March 11, 1898. Jerome S. Childs deeded it to Edith G. Childs, August 14, 1901. Edith G. Childs deeded it to John A. Nordin on October 14, 1903. Chester Vergnes leased the property to Fritz Oding starting on May 1, 1911, and sold it to him April 13, 1914. The evident gaps in the chain of ownership notwithstanding, the Tower House property changed hands a minimum of eleven times from when Camden sold it in 1869 until it burned down in an accidental fire in 1919.⁵⁴

The Railroad Age

California's first railroad was built by the Sacramento Valley Railroad Company from Sacramento northward twenty-two miles to Folsom in the mid-1850s. The company folded before the line reached the intended destination of Marysville, then the state's third largest city. Two successor companies formed during the 1850s and early 1860s to pick up the effort and extend the line to Marysville. In 1863, an "association" of seventy businessmen formed with the ambition to build a line from Marysville all the way to Portland, Oregon. The California legislature lent support to the endeavor. The Californians in this group convened at Marysville and took steps to form the California and Oregon Railroad Company on June 1, 1863. The organization was incorporated on June 30, 1865. A partner company, the Oregon and California Railroad Company was incorporated in the next month in Oregon with headquarters in Jacksonville.⁵⁵

⁵³ Frank and Chappell, *History and Business Directory of Shasta County*, 52, 63, 71; *Memorial and Biographical History of Northern California*, 644.

⁵⁴ Each of the transactions noted here are in abstracts, each with a citation to the courthouse record. The abstracts are in Cultural Resource Division e-Files, WNRA.

⁵⁵ John R. Signor, *Rails in the Shadow of Mt. Shasta* (Burbank, CA: Howell-North Books, 1982), 1–3.

On July 25, 1866, the U.S. Congress enacted a bill granting lands to assist in the construction of the railroad line from Portland to a junction with the Central Pacific Railroad in California. As with the first transcontinental railroad, the line joining California and Oregon was to progress from both directions at once under separate but coordinated management. The effort in Oregon was soon dominated by San Francisco businessman Benjamin Holladay, who oversaw completion of the line from Portland southward to Roseburg, Oregon, from 1867 to 1872. Meanwhile, the railroad construction effort in California was controlled by the “Big Four” of the Central Pacific (Collis P. Huntington, Mark Hopkins, Leland Stanford, and Charles Crocker). The line reached Red Bluff on December 6, 1871, and Redding on September 1, 1872. Construction ceased at both ends in the Panic of 1873.

When construction on the California to Oregon railroad was finally resumed in the mid-1880s, Henry Villard of the Northern Pacific Railway Company took control of the Oregon interests while the Southern Pacific Company, successor to the Central Pacific, assumed direction of the California end of the line. Railroad construction north of Redding commenced in 1882. The California and Oregon lines finally linked up at Ashland, Oregon, in 1887.⁵⁶

The year 1872 was pivotal for Shasta County, when the county obtained its first railroad connection. As the line was built from the south, Cottonwood was the first town in Shasta County to be reached. The railroad company built a depot on the opposite (north) side of Cottonwood Creek and the town’s business district immediately moved to be close to the depot. The railroad company established another depot a farther north and the town of Anderson sprang up there. The railroad company built another depot where its line temporarily ended, and Redding grew up there. The town was named Redding for B. B. Redding, the railroad company’s land agent. (There was already a settlement at this location named Reading in honor of Pierson B. Reading. Local sentiment swung behind restoring the original name. The California legislature changed the name from Redding back to Reading in 1874 but as the railroad company stuck with Redding the California legislature changed the name once more to Redding in 1880.)⁵⁷

B. B. Redding laid out the new town center around the railroad depot. As local historian Dottie Smith explained, “The original outer streets were named North, South, East and West, and the inner east/west streets were named for the counties where tracks

⁵⁶ Signor, *Rails in the Shadow of Mt. Shasta*, 3–5; Smith, *The Dictionary of Early Shasta County History*, xiii.

⁵⁷ Smith, *The Dictionary of Early Shasta County History*, xii; Hazel McKinn, ed., *Shasta County History: An Original California County* (Shasta, CA: Shasta County Book Commission, 1985), 16-17.

had already been laid prior to reaching Redding: Placer, Yuba, Sacramento, Butte, Tehama, and ending with Shasta.” As the northern terminus of the railroad for more than a decade, Redding became the busiest and most important town in Shasta County.⁵⁸

The rise of Redding sounded the death knell for the gold rush town of Shasta. As soon as the railroad arrived, Shasta businessmen began moving their businesses down the hill to the new railroad town. Another devastating fire in the town of Shasta in 1878 destroyed many homes and businesses. As the town was in decline, most of the destroyed buildings were not rebuilt. Redding was incorporated in 1887, and the county seat was moved from Shasta to Redding in 1888.⁵⁹

When construction of the railroad resumed in the mid 1880s, it led to the formation of more new towns farther up the line. Delta was the first new town north of Redding. It was laid out like Redding and new businesses flocked to it from Redding and Shasta. However, it was not to last; when tracklaying continued north in 1885, the town rapidly faded away. Another town, Dunsmuir, in Siskiyou County, became a division point on the railroad with switchyard, roundhouse, and turntable. Located on the upper Sacramento River, it endured into the twentieth century and later became a center for tourism.⁶⁰

Railroad construction north of Redding in the 1880s provided many jobs. There were an estimated 2,000 men employed in building the line north of Delta in the winter of 1885–1886. Ninety percent of the workforce was Chinese. Stone masons from Slavonia worked on bridges and culverts ahead of the Chinese track-laying crews.⁶¹

The railroad stimulated the logging industry in Shasta County as cordwood was used to power the steam engines while track ties were used in laying track (see Chapter Five). As the coming of the railroad lowered the cost of freighting, the railroad was also a great stimulus to farming and ranching in California’s Central Valley. Wheat farming was the first form of agriculture to take off. Vineyards and fruit orchards followed in the 1870s and 1880s. Cattle and sheep ranching also benefited. Cattle growers in California found their herds greatly diminished by cycles of flooding and drought in the 1860s. They were on a road of recovery in the 1870s and 1880s, reaching a second heyday in the 1890s. Sheepmen faced similar setbacks to their flocks of sheep, with a single drought in 1871 reducing the number of sheep by 20 percent. Yet despite those losses the state of California rated second in the nation in wool production after Ohio and in 1890 it rose to top place.⁶²

⁵⁸ Smith, *The Dictionary of Early Shasta County History*, xii.

⁵⁹ Smith, *Registered Historic Places in Shasta County*, 115-16; Dottie Smith and Trudy Vaughan, “Remembering Judge Eaton,” Publications of the Shasta College Museum and Research Center No. 3 (Redding, CA: Shasta College, 2003), 15-16.

⁶⁰ Smith, *The Dictionary of Early Shasta County History*, xiii; Signor, *Rails in the Shadow of Mt. Shasta*, 5.

⁶¹ Signor, *Rails in the Shadow of Mt. Shasta*, 5.

⁶² Bean, *California*, 271–76; Rodman W. Paul, *The Far West and the Great Plains in Transition, 1859–1900* (New York: Harper & Row, 1988), 187–88, 211–12.

In Shasta County, the cattlemen drove their herds from the valley to the mountains each summer to remove them from the parched conditions in the valley. John Grattan was one cattle rancher who drove his herd up Clear Creek to summer range near Trinity Center every year in the 1880s and 1890s, around fifty miles. His daughter Grace occasionally accompanied her father on the cattle drive, and in old age in 1963 she left a reminiscence of the experience. The start of the drive used the Camden Toll Road through present-day Whiskeytown National Recreation Area. Grace Grattan Masterson's description of that portion of the drive is quoted here in full:

... Everyone was up by three o'clock, or earlier, the next morning to feed the horses and eat a substantial breakfast. Then everything ready, including midday lunches for the men, they were on their way by four o'clock.

This early in the morning they made good time, passing through Shasta and on through the Toll Gate, one mile beyond Shasta, the beginning of the Camden Toll Road, extending eleven miles to the Tower House. As the cattle passed through the gate the toll keeper made his count. This my father had already done as the cattle were let out of the corrals and pasture. I remember that for many years the toll for cattle was eight cents per head. Later it was raised but how much I do not remember. On the front wall of the toll house was a large sign stating the amount of the toll for cattle, horses, single and double teams, the freight teams of from six to perhaps sixteen horses, the old "bell teams" of the past.

The drive continued on past the old watering trough and over the Shasta-Whiskeytown Divide, then a rest, usually at New York Flat, and lunch time for the men. As I remember it New York Flat was a short distance toward Shasta from Whiskeytown. The late Mrs. Augusta Strode told me years ago that the name was given to the little flat because a group of men from New York made their headquarters there in the early days and prospected along the gulches in the area.

After rest and lunch they went on and crossed the bridge over Whiskey Creek and on through the locust shaded street of Whiskeytown. Then came Oak Bottom, the hotel and home of the Desmond family, where the good meals prepared by Mrs. Desmond were well known to everyone who traveled that way.

A few miles farther and through the narrow covered bridge over Clear Creek, past the Charles Camden home with its white picket fence, lawns, flowers and shade trees, the two-story Tower House, and the end of the toll road, a turn to the right, an orchard on the south side of the road, and an immense oak tree on the north side that has doubtless been a landmark there for centuries.

Then three miles along Clear Creek to the town of French Gulch where the cattle were put into the Fox-Empire Hotel corrals for the night and the men put up at the hotel. Hay was placed about in the corrals for the stock.

After breakfast the next morning they were on their way for perhaps the hardest day's drive over Trinity Mountain. ...⁶³

⁶³ Grace Grattan Masterson, "Cattle Drives of the Eighties and Nineties," *The Covered Wagon* (1963): 18–19.

The railroad era in Shasta County culminated with the development of copper mining and smelting in the late 1890s and early 1900s. Railroads were practically essential for moving ore from mine to smelter and for shipping the refined smelter product to markets back east. It should be noted, however, that even as the railroads and copper mining brought heavy industry to Shasta County, many elements of the horse age continued to exist in this modernizing world. Charles Franklin Reed, a longtime resident of Keswick, recalled what it was like to arrive with his family in Redding by covered wagon in the year 1897 and then to go from there to the new company town of Keswick:

When we arrived at Redding, California, it was interesting to see the freight wagons with trailers loaded with merchandise and various supplies leaving the city of Redding for the distant mining towns of Shasta, Whiskeytown, Minersville, French Gulch, and Weaverville. There were as many as ten horses pulling these wagons.

The driver was astride the wheel horse, driving with a jerk line, which was attached to the bridle of the lead team. Over the harness of the lead team was the usual circle of bells. Also, we would notice the old grizzled miners with two or three burros headed on prospecting trips into the hills, their picks, shovels, blankets, gold pans and grub loaded on the burros. Travel between these towns was by stage, with horses always on the run. When carrying gold bullion valuables, there would always be a guard with a double-barreled shotgun loaded with buckshot riding on top of the stage.

When leaving Redding, we stopped and camped on the banks of the Sacramento River for two or three days, and then drove on to Keswick, where the ore smelters of the Mountain Copper Company were operating. When we arrived in the smelter town of Keswick, we were unable to find a vacant dwelling and found it necessary to put up our tent which was quite large, 12 by 20, in which we lived for several months until we were able to purchase a lot and enough lumber to build a small house.⁶⁴

The Automobile Age

Californians were early adopters of the automobile. In Los Angeles County, car registrations quintupled in the 1920s as the price of a Ford Model T came within reach of a middle-class income. In 1925, one in every three urban residents of Los Angeles had a car, which was more than double the national average. "Los Angeles," wrote historian Walton Bean, "became the most thoroughly motorized and motor-conscious city in the world." Car ownership spread rapidly up the West Coast in the 1930s. By 1940, the states of

⁶⁴ Charles Franklin Reed, "Autobiography of Charles Franklin Reed of Keswick, 1880–1962," *The Covered Wagon* (2000): 50–51.

California, Oregon, and Washington had the highest rates of car ownership in the United States, with one car per three people in town and city alike. Across middle America the ratio was one in four, on the East Coast it was one in six, and in much of the South it was one in nine.⁶⁵

The first gas-powered automobile in the world was invented in Germany in 1885. The first auto built in the United States debuted in Springfield, Massachusetts, in 1893. The first auto to be driven in Shasta County appeared in 1901. This auto was owned by the Sweepstakes Mining Company and was garaged at Reid's Stable in Redding. Presumably the company bought the car to shuttle company officials back and forth between the railroad depot in Redding and the mining property in Trinity County. To make the drive possible, a local mechanic overhauled the vehicle to double its horsepower from four to eight, increased its ground clearance, and mounted a cover plate on the bottom of the chassis to protect against rocks and dust thrown up from the road surface.⁶⁶

Although the gas-powered car or "horseless carriage" was a revolutionizing invention, it only replaced the horse and buggy gradually over the space of about one generation. Three factors worked against the rapid spread of the automobile early on: first, a popular mistrust of the new technology; second, the need for large public investment in road improvements to make the car serviceable over a wide area; and third, the initial high cost of each machine. As the first Ford Model T cars rolled off Henry Ford's revolutionary assembly-line plant in 1910 they were strategically priced low at about \$900, the equivalent of about \$28,000 in today's dollars. By 1920, the cost of a Model T had been lowered to less than \$400. Prior to the advent of the Ford Model T, the car was a rarely seen commodity outside of large cities. Many Americans regarded the "horseless carriage" with a bit of disdain as a plaything of the rich even as they perceived its future importance. It was a telling sign of the times when the Barnum & Bailey Circus came to Redding in 1908 with a new final act: a "dare-devil" "automobile exhibition" in which acrobats performed their feats above two circling automobiles.⁶⁷

Another car appeared in Redding in July 1902. This one, perhaps only the second car imported into Shasta County, was purchased by the Northern California Power Company so that the superintendent could get around more efficiently. The superintendent made frequent trips between Redding and Shingletown, and the little one-passenger car

⁶⁵ Bean, *California*, 378; National Park Service, *A Study of the Park and Recreation Problem of the United States* (Washington: Government Printing Office, 1941), 13, 51.

⁶⁶ Al M. Rocca, *Shasta County in the Early 20th Century: The Coming of the Automobile and Other Events, 1900–1910* (Chico, CA: Renown Publishing Company, 2015), 18–19.

⁶⁷ Rocca, *Shasta County in the Early 20th Century*, 91.

cut his travel time in half. Whether or not this was actually the second car in the county, it was a fixture on Redding's downtown streets and thereby gained a reputation as Redding's first "resident" auto.⁶⁸

The citizens of Shasta County, like Americans everywhere, responded to the new technology with mixed emotions. Various early impressions about the dawning automobile age were captured in local newspapers. The newspapers carried numerous stories about road accidents and collisions between cars and horse-drawn vehicles. The greater speed of cars was awe-inspiring to some and appalling to others. When people made long-distance trips by car, they often reported on the ease or difficulty of the trip for the newspaper's scrutinizing readers. Poor road conditions were one obvious impediment to auto travel. The risk of mechanical breakdowns was another. Reliable car repair services were few and far between; indeed, an automobilist might seek help at a blacksmith shop and find that the blacksmith was ignorant about the car or outright hostile toward it. When ordinary people who were accustomed to caring for horses and maintaining horse-drawn vehicles contemplated doing their own routine car maintenance, they often balked at the idea as they found the upkeep of such a machine to be a mysterious and daunting prospect.⁶⁹

Slowly the existing system of wagon roads would be extensively upgraded to accommodate the new automobile. Until this time, road development was viewed as a local enterprise undertaken by individual citizens or sometimes groups of citizens at the behest of county government. In the automobile age, a more extensive type of road development would have to be taken up by higher authority. The federal and state governments would have to be more involved. In fact, many citizens who were not car owners came to agree that it was high time to improve the roads, not only for automobiles, but also for the general safety of all vehicle traffic including horse-drawn wagons and buggies.

The push for greater public investment in roads started in the late nineteenth century. It started in cities with an early focus on city streets and grew outward to include farm-to-market roads and then long-distance highways. The initial push came from bicyclists rather than automobilists. The League of American Wheelmen was an early instigator. A "good roads" movement grew into a nationwide cause. As automobile ownership spread and automobile clubs formed in city after city, the auto clubs joined in lobbying for better roads. Automobile clubs formed in Los Angeles and San Francisco in 1900, and a club formed in Weaverville in 1909. That year, the California legislature authorized a bond issue to commence work on a system of paved state highways. Voters approved the bonds in the next year's general election.⁷⁰

⁶⁸ Rocca, *Shasta County in the Early 20th Century*, 27.

⁶⁹ Bean, *California*, 375; Rocca, *Shasta County in the Early 20th Century*, 16, 18–19, 22, 29–33.

⁷⁰ Bean, *California*, 376; Rocca, *Shasta County in the Early 20th Century*, 119.

The quality of roads in Shasta County and all of northern California was below the standard found in southern California. Public investment was sorely lacking. A petition was circulated in Redding in 1904 to put oil on all of Redding's dirt streets to control the dust but no action was taken. Roads outside of Redding were treacherously narrow and needed constant grading to remove wheel ruts and pot holes. The local newspapers were replete with stories of wheeled vehicles colliding or running off the road. One such story in the late spring of 1908 described a frightful accident on Camden's Toll Road near the Tower House:

C. D. McPhail and George Hall, commercial men traveling for Sacramento firms, had a spectacular mishap Thursday afternoon while driving from Redding to this place [French Gulch]. At Dickerson's Point, between Tower House and Oak Bottom, they met "Butch" Ehrman driving a big freight team. There was barely space enough in the road for the two conveyances to pass, McPhail and Hall taking the outside and coming to a stop. They crowded their horses and buggy very close to the edge of the road. Hall got out to lift the hind wheels a trifle to one side so that Ehrman's big freighter would have all the room possible. McPhail remained in the buggy and held the reins.

As Ehrman's team came by, the buggy horses backed a trifle. The road gave way and the vehicle, horses and driver went over the 30-foot embankment into Clear Creek below. McPhail was thrown from his seat and landed in the rocks twelve feet from the water's edge, the team and buggy caroming on him as they made a roll-over tumble into the creek proper.

The horses were in a peculiar tangle when they came to a standstill in the water. The pole of the up-turned buggy was over the back of one animal. One horse was headed downstream and the other upstream, but both were powerless to move. The buggy was a wreck.

McPhail escaped without breaking any bones, but he was bruised and battered like a coal-oil can that has been used by a French Gulch charivari party. He could scarcely walk when he rounded himself up to help save the horses.

Three miners chanced to come along. They volunteered to help the stranded commercial travelers. One of them stripped off and waded out to the marooned buggy team. He managed to loosen the tugs and disentangle the horses. Neither animal was hurt in the least and one of them was hitched to the pole of the buggy and pulled what was left of the vehicle to the shore. . . .

Grateful to the miners who had lent timely aid, Hal and McPhail invited all hands to a "lay out" in French Gulch in the evening. The commercial men did handsomely and the miners were equal to the occasion.⁷¹

One month after this accident was reported, another accident involving two automobiles made big news in Shasta County. A White Steamer touring car with seven passengers, on tour from Oakland, went out of control as it descended a hill alongside the Pit River. The

⁷¹ *Searchlight*, May 31, 1908, quoted in Rocca, *Shasta County in the Early 20th Century*, 84–85.

driver managed to steer the vehicle into the embankment rather than go off the other side of the road into the river. But as the car went up the embankment it rolled, and four passengers got thrown clear while the other three passengers got pinned under the car. No one was killed and the injured were all taken to hospital, but before the overturned car could be removed from the roadway a second car carrying two people nearly slammed into it, steering into the embankment instead. The two in the second car did not incur injuries. The incident stirred some local excitement that Shasta County's mountain roads were not safe for motor vehicles.⁷²

Agitation to improve the road between Shasta and Weaverville began one year before these events, in 1907. Citizens of Weaverville lobbied the state government to develop a "lateral" state highway across the northwest sector of the state that would connect their flagging mining community with Redding to the east and Humboldt County to the west. This was the future State Highway 299. As a preliminary step, the Trinity County Board of Supervisors voted to buy the Lowden Toll Road provided that the Shasta County Board of Supervisors voted to buy the Camden Toll Road, thus making "a free thoroughfare from Weaverville to Redding." Following the vote of the Trinity County Board of Supervisors, the Trinity County Development Association appointed a committee to go before the Shasta County Board of Supervisors to urge that it take similar action. Apparently this appeal fell on deaf ears. The Shasta County Board of Supervisors did not acquire the Camden Toll Road for another five years, by which time it was the only toll road left between Trinity Center and the Sacramento River.⁷³ After the Camden Toll Road at last became a public road in 1912, the Trinity County Board of Supervisors once more petitioned the state government for the "lateral" highway—although this time it called for the highway "to go from Redding to Shasta, thence to Whiskeytown, Tower House and French Gulch," then to Weaverville, and then northward through Trinity Center to Yreka.⁷⁴

In 1916, California voters approved another bond issue for state highway development. Three years later, the California Highway Commission allocated 10 percent of those funds or \$1.5 million to construct a "Redding-Eureka lateral highway." In March 1919, the *Blue Lake Advocate* reported that road work on the "Redding Lateral" was to begin soon. The first unit of the lateral highway was to be completed from Redding to Tower House. It

⁷² Rocca, , *Shasta County in the Early 20th Century*, 86–87.

⁷³ The Shasta County Board of Supervisors had attempted to take control of the Camden Toll Road about 1895. The Board of Supervisors claimed at that time, arguing its case through the county district attorney, that the franchise had expired and Camden was collecting tolls illegally. But the effort failed, and the franchise was allowed to continue. (Glendee Ane Osborne comment on draft report.)

⁷⁴ *Red Bluff News*, Jan. 25, 1907; *Sacramento Daily Union*, March 16, 1907, *San Francisco Call*, March 23, 1912; *Sacramento Daily Union*, July 23, 1913.

would pass through Shasta and Whiskeytown. The grade was not to exceed 7 percent. The contractor for the road construction project, F. Rolandi of San Francisco, was reported to be scouting for laborers.⁷⁵

One month later the *Blue Lake Advocate* reported that the work had commenced. Three camps were established at Shasta, Whiskeytown, and Tower House, and two more camps were in preparation. The camps were “segregated on lines of nationality.” The first camp was made up mostly of Spaniards, the second one of Italians, and the third one of Swedes.⁷⁶

Construction costs mounted, but so did the public’s appetite for public investment on road development. Federal assistance to states for highway development, initiated by the Federal Aid Road Act of 1916, was hugely augmented by the Federal Highway Act of 1921. Automobile clubs teamed with the Federal Bureau of Public Roads to monitor the state’s spending on state highway development. Their investigation found that by November 1921 the California Highway Commission had spent \$207,509 on the Redding lateral highway project, a 38 percent cost overrun on the \$150,000 allocation, and the work was only completed from Redding to the Shasta County line. The finding underscored the challenge of building automobile roads in mountainous terrain, which was still a fairly novel engineering endeavor at that time.⁷⁷

The 1920s proved to be a golden age for road building. Despite its high cost, the Redding lateral highway was completed during the next few years. In 1927, the segment from Redding to Weaverville was designated as State Route 20. In 1934, it became U.S. Highway 299. In 1964, the whole lateral across the northern part of the state was designated State Route 299.⁷⁸

⁷⁵ *Blue Lake Advocate*, March 22, 1919.

⁷⁶ *Blue Lake Advocate*, April 12, 1919.

⁷⁷ *Stockton Independent*, Nov. 13, 1921; Richard F. Weingroff, “From 1916 to 1939: The Federal-State Partnership at Work,” *Public Roads* 60, no. 1 (Summer 1996), <https://highways.dot.gov/public-roads/summer-1996/1916-1939-federal-state-partnership-work>.

⁷⁸ *Press Democrat*, January 21, 1927; “Road Map of the State of California, 1934,” at “California State Route 299,” at <https://www.raremaps.com/gallery/detail/53667/road-map-of-the-state-of-california-1934-state-of-california-division-of-highways>; https://en.wikipedia.org/wiki/California_State_Route_299.

Recreation Part I: Early Days and Establishment of the Park

The Rise of Outdoor Recreation in American Life and in Northern California

Today's dominant land use of Whiskeytown National Recreation Area, outdoor recreation, is a distinctly modern development. The miners in California's gold rush era could not have imagined the contemporary scene, in which a few thousand outdoor recreationists drive to Whiskeytown National Recreation Area on any given weekend to enjoy camping, hiking, horseback riding, and hunting, as well as boating, fishing, and swimming in Whiskeytown Lake—all for the healthful benefits of outdoor exercise and the sheer pleasure of breaking away from their workweek routine. Not only would the nineteenth-century miner have found the sight of the lake and the throngs of people at Oak Bottom or Brandy Creek unimaginable, he would have found the very idea of outdoor recreation a puzzlement.

Outdoor recreation is so much a part of modern life it would not seem to require introduction. Yet “outdoor recreation” was hardly a recognizable term when the National Park Service was established in 1916. During the nation's first century, few Americans availed themselves of outdoor recreation opportunities anywhere, so the public need for recreation facilities was virtually nil. Even when Congress took the farsighted action in 1872 to establish Yellowstone National Park as a “pleasuring ground” for the whole people, nature-based leisure activities such as recreational camping remained in their infancy. Many more years would pass before large numbers of Americans began to enjoy outdoor recreation in the national parks. However, in the half century after the creation of the nation's first national park, or approximately from the 1870s through the 1920s, outdoor recreation did begin to emerge as a significant factor in American life. Only then did the federal government acquire its present role as the nation's leading provider of recreation resources.

Outdoor recreation's place in contemporary America has roots in the gradual emergence of outdoor recreation among the middle class over the last two centuries. In the period of the California Gold Rush, enjoyment of outdoor recreation was mostly a luxury of the upper class. In the United States of 1850, a relatively small middle class of yeoman farmers, merchants, doctors, lawyers, teachers, and clergymen began to spend a part of their wealth on leisure activity, including outdoor recreation, in emulation of the social elites. As more middle-class citizens began pursuing outdoor recreation opportunities, the first middle-class resorts appeared. Early resorts tended to be lakeside, seaside, or hot springs resorts, all with an emphasis on relaxing around water. But there were also mountain and pastoral resorts. When people spoke of "rusticating" at the Tower House, they were describing an early form of outdoor recreation—spending leisurely days at an attractive place in the country. As early as the 1860s, residents of the Sacramento Valley escaped to the nearby mountains to enjoy fishing, hunting, and berry-picking, all with the collateral aim to take a break from the scorching summertime temperatures in the valley.¹

The completion of the first transcontinental railroad in 1869 opened the door for Easterners to recreate in California and the American West. Passenger fares from coast to coast were not out of reach of the middle class. In the 1870s, easterners became interested in making a visit to Yosemite, rugged though the trip still was. In the 1880s, luxury hotels sprang up along the Central and Southern Pacific Railroad in southern California. Railroads were so integral to the travel industry in the railroad age that the companies financed most early hotel development in the national parks.²

Middle-class city dwellers led the way in seeking and promoting outdoor recreation. The urban populace was much more inclined to seek outdoor recreation than the rural populace was. Some of the reasons behind that difference in aspiration were obvious. For the city dweller, outdoor recreation afforded a decisive change of scenery from the urban landscape, and therefore a more refreshing break from daily routine. A great many rural folk made their living by working outdoors, so playing outdoors did not hold the same appeal. Farmers, ranchers, forest workers, and miners all spent their working days fully engaged with the natural environment; therefore, they had little desire to commune with nature in their leisure time

¹ Cindy S. Aron, *Working at Play: A History of Vacations in the United States* (New York: Oxford University Press, 1999), 5–7; Foster Rhea Dulles, *A History of Recreation: America Learns to Play* (1940; New York: Appleton-Century-Crofts, 1965), 3–21, 203–9; Holly Maupin Kosmider, "Life on the Homestead: The Maupin Family of the Bald Hills," *The Covered Wagon* (1990): 30–31.

² Aron, *Working at Play*, 139–44; Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880–1940* (Washington: Smithsonian Institution, 2001), 21–26; Earl Pomeroy, *In Search of the Golden West: The Tourist in Western America* (New York: Alfred A. Knopf, 1957), 139–41, 143, 146, 167–70; Anne F. Hyde, "From Stagecoach to Packard Twin Six: Yosemite and the Changing Face of Tourism, 1880–1930," *California History* 69, no. 2 (Summer 1990): 154–69; Alfred Runte, "Pragmatic Alliance: Western Railroads and the National Parks," *National Parks and Conservation Magazine* 48 (April 1974): 14–15.

Other reasons that outdoor recreation gained an early footing among the urban populace may be less obvious to us today. Most adult city dwellers in the 1870s, 1880s, and 1890s were born on a farm. For them, outdoor pursuits such as hunting, fishing, and camping were a way to reconnect with their earlier life experience. Popular writing about the outdoors reflected the fact that the whole nation was not long removed from pioneer days. Famous frontiersmen like Daniel Boone, Davy Crockett, and Kit Carson assumed their legendary status in this era, which reflected and added to the growing allure of the outdoors. Recreational camping came to enjoy broad appeal as it harkened back to that earlier time. As the nineteenth century drew to a close, a cult of wilderness arose around America's westward experience. When Americans marked the close of the western frontier after the 1890 census, it stimulated more yearning to see nature in the wild. City dwellers were far enough removed from the old pioneering stage of American life that they felt nostalgia for it. They liked getting outdoors to re-experience the sounds and smells of their childhoods.³

By the turn of the twentieth century, city dwellers had still more reasons to join the outdoor movement. Urban living was stressful. Middle-class city dwellers increasingly worked for large, impersonal corporations. By 1900, most middle-class males punched a time clock, served a hierarchical business organization, conformed to a corporate culture, and performed some specialized type of work that grew tedious through repetition. Most were deskbound all day. All these things induced anxiety, alienation, and lassitude. City dwellers took up sports like golf, tennis, basketball, and indoor swimming to maintain fitness in the urban environment. The two-week vacation ceased to be a luxury and was considered a necessity to keep one's mental and physical health in shape. Going camping was a relatively inexpensive activity, so it provided a way for people of more modest means to enjoy a break from the city grind.⁴

At the beginning of the twentieth century the federal government still had only a small role as a recreation resource provider; the task was mostly left to the private sector. But the government was making a start through the establishment of national parks and national forests. The first of these land reserves was also the most important one. In the Yellowstone Park Act of 1872, Congress created an enormous reservation in the Wyoming Territory and laid the foundations for a national policy on outdoor recreation. The park was to remain under federal administration: "set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people." However, Congress did not want to put any public funds toward national park development. Instead, private capital would develop the national park under careful oversight by the Secretary of the Interior. In 1890,

³ Roderick Frazier Nash, *Wilderness and the American Mind*, (1967, New Haven, CT: Yale University Press, 2001), 141–60; Aron, *Working at Play*, 163–64, 173–75; G. Edward White, *The Eastern Establishment and the Western Experience: The West of Frederic Remington, Theodore Roosevelt, and Owen Wister* (New Haven, CT: Yale University Press, 1968) 46–51; Terence Young, *Heading Out: A History of American Camping* (Ithaca, NY: Cornell University Press, 2017), 49–92.

⁴ George Hjelte, *The Administration of Public Recreation* (New York: The MacMillan Company, 1940), 4–5.

Congress established more national parks: Yosemite, Sequoia, and Kings Canyon National Parks in California, all designated under essentially the same terms as Yellowstone. In 1899, Congress proclaimed Mount Rainier National Park in Washington, and over the next decade and a half it designated about a dozen more.⁵

Meanwhile, the federal government founded the National Forest System as well as national parks. Large forest reserves were set aside in the West primarily for the purpose of protecting watersheds and the U.S. timber supply, though some recreational use of these public areas quickly developed. Unlike national parks, the national forests could be established by executive order. In the early 1900s, President Theodore Roosevelt quadrupled the size of the National Forest System, expanding it from 43 million acres to about 174 million acres.⁶

All of these federally reserved lands were remote, mostly undeveloped, and hard to access for outdoor recreation in the late nineteenth century and the first decade of the twentieth century. For the 3,000 residents of Redding in 1901, for example, there was not one national park or national forest within a day's travel. The townspeople might go to Tower House in what would one day be Whiskeytown National Recreation Area, or they might go to the popular resort of Drakesbad at the base of Lassen Peak in what would one day be Lassen Volcanic National Park. The surrounding hills and forests of Shasta County were mostly accessed for mining and logging purposes, not for public recreation. But conditions were changing. The time would come when most outdoor recreation across the nation would occur on federal lands.

Congress established the U.S. Forest Service in 1905 to administer the National Forest System, and it formed the National Park Service in 1916 to administer the National Park System. Even as these agencies were established, however, the federal role in providing outdoor recreation opportunity remained ill-defined. The Forest Service approached recreation as a public use to be accommodated alongside other national forest uses. In the year the NPS was established, the Forest Service launched a recreation program of campground development and summer home-site leases, signaling its intention to sideline the upstart NPS and assume first place as the nation's leading provider of outdoor recreation. It encouraged construction of federal highways through the national forests to improve public access to lakes and scenic areas. When Congress passed the Federal Aid Road Act in 1916, Chief of the Forest Service Henry S. Graves, wrote to one eager Californian, "You of course appreciate that the passage of this law means much in northern California." In 1917, Graves hired Frank A. Waugh, a professor of landscape architecture, to prepare an in-depth study, *Recreation Uses in the National Forests*. By 1925 the agency had 1,500 public campgrounds. While welcoming the car culture with its many roads and campgrounds, the

⁵ Kings Canyon was originally called General Grant National Park.

⁶ Douglas Brinkley, *The Wilderness Warrior: Theodore Roosevelt and the Crusade for America* (New York: Harpers Collins, 2009), 803–5.

Forest Service also started a system of wilderness preservation in the early 1920s. Forty years ahead of the Wilderness Act, the Forest Service recognized that preserving an area's roadless condition, or more precisely, barring motorized access to an area, was the essence of modern wilderness.⁷

The fledgling NPS in the 1920s took a more highbrow approach to recreation. Proponents of the national park concept argued that they provided a vital form of public recreation, but it was a rarified form. National parks were places to find inspiration in nature. These proponents insisted that the purpose of recreation in the national park setting was to engage the "contemplative faculty," or to be stimulated by a sense of wonderment. By that measure, park managers supported some types of recreation development but discouraged others, framing the argument around what they deemed to be "appropriate use." For example, golf courses might be a good thing in a more prosaic outdoor setting, but it was questionable whether golfing was an "appropriate use" in a national park.⁸

The young NPS struggled to define and defend "national park standards," to prevent new national parks from being established willy-nilly. The agency's first director, Stephen Mather, wanted the National Park System to contain only the nation's superlative scenic areas. He wanted national parks to offer up inspiration rather than mere places for outdoor recreation. He tried to safeguard the national park idea against weak park proposals that would dilute the national park brand to the point that it would lose significance.⁹ Mather's most effective defense of national park standards was to deflect those weak park proposals into other channels. In 1921, he organized the National Conference on State Parks, and through the rest of the decade the NPS championed state parks as a complement to the National Park System. State park movements had arisen in just a few states much earlier, but were struggling in most others. NPS patronage encouraged the spread of state park movements in the 1920s, especially in the South where they did not exist before.¹⁰ The advent of state parks was important to the later development of recreation at Corps lakes, since many Corps recreation reservoirs would one day feature state parks on their shorelines.

⁷ Hal K. Rothman, "'A Regular Ding-Dong Fight': Agency Culture and Evolution in the NPS-USFS Dispute, 1916–1937," *Western Historical Quarterly* 20, no. 2 (May 1989): 147, 151; Gerald W. Williams, *The USDA Forest Service: The First Century* (Washington: United States Department of Agriculture, Forest Service, 2000), 42–45; Young, *Heading Out*, 93–172; *Blue Lake Advocate*, July 22, 1916. See also Paul Sutter, *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002).

⁸ Joseph L. Sax, *Mountains without Handrails: Reflections on the National Parks* (Ann Arbor: University of Michigan Press, 1980), 20; Theodore Catton, *National Park, City Playground: Mount Rainier in the Twentieth Century* (Seattle: University of Washington Press, 2006), 98–99, 105–6.

⁹ Carl E. Krog, "'Organizing the Production of Leisure': Herbert Hoover and the Conservation Movement in the 1920s," *The Wisconsin Magazine of History* 67, no. 3 (Spring 1984): 208; Robert Shankland, *Steve Mather of the National Parks* (New York: Alfred A. Knopf, 1954), 184–200, 221–22.

¹⁰ Ney C. Landrum, *The State Park Movement in America: A Critical Review* (Columbia: University of Missouri Press, 2004), 76–79.

By the 1920s, the NPS and the Forest Service were tussling over which one would be the nation's de facto lead agency for national outdoor recreation policy. In this contest the NPS came out on top. The NPS proved that it had closer ties to the travel and tourism industries, chambers of commerce, and the state parks movement than the Forest Service did, so it was better positioned to look after the whole nation's outdoor recreation needs.¹¹

Competition between the Forest Service and the NPS also stemmed from the fact that new national parks often got carved out of national forest lands. So it was with Lassen Volcanic National Park. In 1905, President Roosevelt proclaimed Lassen Peak Forest Reserve (later renamed Lassen National Forest). The following year, one hundred citizens of northern California petitioned the president to consider creating a national park around Lassen Peak. The movement to establish a national park soon acquired the backing of Congressman John E. Raker of Susanville. Lassen Peak erupted on May 30, 1914, and again more spectacularly on May 19, 1915, providing just the impetus that was needed to secure congressional action on Congressman Raker's national park bill. The Lassen Volcanic National Park Act of 1916 established a park of about 80,000 acres. While the new park administration was faced with the usual scrabble for public funds to build an access road and develop the area, it nonetheless worked with two different resort owners to provide accommodations for an immediate trickle of park visitors.¹²

It was around this time that outdoor recreation started on its long upward trajectory as a significant feature in American life. As always, the growth of outdoor recreation was driven by a few key economic, social, and demographic factors. Sometime between 1910 and 1920 the United States crossed over into being a majority urban nation, with more than half of Americans now living in cities or towns of a size to be classified as nonrural. Urban culture became ascendant in the 1920s, and middle-class city dwellers continued to be at the leading edge of the outdoor recreation movement. City dwellers found they had more leisure time as the eight-hour workday became standard and the two-week paid vacation became a benefit of many wage-earning jobs. Many more people became car owners, while new paved highways enabled them to undertake more weekend car trips and interstate travels. The growth in outdoor recreation produced a rising demand for public recreation sites, leading to public discourse at all levels of government over where and how recreation sites should be provided. From 1924 to 1929, the Coolidge administration held

¹¹ Rothman, "A Regular Ding-Dong Fight" 141–61; Ronald A. Foresta, *America's National Parks and Their Keepers* (Washington: Resources for the Future, Inc., 1984), 30–46.

¹² Diane L. Krahe and Theodore Catton, *Little Gem of the Cascades: An Administrative History of Lassen Volcanic National Park*, report prepared for the National Park Service (Missoula: University of Montana, 2010), 19–58.

five national outdoor recreation conferences. The conferences helped shape the perception of public interest in outdoor recreation and laid the groundwork for strong federal leadership in outdoor recreation development in the next decade.¹³

Demand for outdoor recreation resources grew during the Great Depression as people had more leisure time even if they had less income. The first two Franklin D. Roosevelt administrations (1933–1941) brought a cavalcade of conservation and land planning programs and initiatives, many of which included strong components of recreation planning and development. The NPS, through its work with the Civilian Conservation Corps and other federal relief agencies, grew into a more robust bureau with a larger, more diversified staff. The NPS acquired various ancillary responsibilities in addition to the administration of national parks, such as regional recreation planning, historic preservation, tourism promotion, and assistance with state parks development. One new responsibility germane to the future Whiskeytown National Recreation Area was the exploratory partnership the NPS pursued with the Bureau of Reclamation. As discussed in Chapter Six, Congress established the first national recreation area around Boulder Lake and Boulder Dam (later renamed Lake Mead and Hoover Dam), mandating that the NPS and the BOR experiment with shared administration of the dam and reservoir complex. It was a pilot project for other national recreation areas at dam sites. Traditionalists in the NPS looked askance at the experiment since it represented the kind of dilution of national park standards that Mather had fought against. But to modernists in the NPS it was only a part of the NPS's growth into a more multi-faceted agency.¹⁴

Following upon the Boulder Lake and Boulder Dam precedent, the NPS was tasked with managing recreation development at Shasta Lake when the Shasta Dam was nearing completion in 1945. There was no national recreation area established there yet, so the NPS made limited efforts toward developing infrastructure and primarily provided plans and oversight of construction of the Vista House adjacent to the dam. This building, designed to accommodate tourists interested in visiting the massive dam, had a refreshment bar, souvenir display, and sales counter. The facility was leased to a concessionaire to operate. Meanwhile, the NPS kept recreational facilities on the new Shasta Lake to a minimum. According to a reminiscence by Dick Strandlund, one of the private developers on the lake in the early 1950s, little else was built when the reservoir first filled other than a large dock at the west end of the dam, from which Grayline Tours operated three excursion boats. In Strandlund's view, the NPS was too restrictive, but when the Forest Service took over recreation management at Shasta Lake in the late 1940s entrepreneurs like himself

¹³ Krog, ““Organizing the Production of Leisure,”” 199–218. Terence Young, in his book *Heading Out*, argues that camping reached its heyday or “cultural pinnacle” in the 1920s. Sheer numbers of campers would grow, but relative to the growing population size the numbers slowly declined. By the same measure, attention to camping in the national media declined after this period. Young, *Heading Out*, 298–300.

¹⁴ Johnathan Foster, *Lake Mead National Recreation Area: A History of America's First National Playground* (Reno: University of Nevada Press, 2016), 46–51; Dodd, “Boulder Dam Recreation Area,” 443–46.

recognized an opportunity there. “The development of the reservoir behind the great Shasta Dam into the water recreation mecca of the north state was accomplished by ‘mom and pop’ entrepreneurs,” Strandlund wrote. “Most of us simply wanted to build our own businesses and become our own bosses. We wanted to get away from city life and raise children in a healthy environment.” Strandlund opened a camp store; others developed guest cottages and boat marinas.¹⁵

In 1950, one hundred years on from the California Gold Rush, there was still scant recreation development in the upper Clear Creek drainage, but that was soon to change. The plan to build the Whiskeytown Dam was about to transform the landscape around Whiskeytown again, more dramatically this time than ever before. Whiskeytown was about to be drowned by an artificial lake, and the NPS was tapped to formulate plans for recreational development of the federal reservoir site when the town was no more. But even at that late date, few people living in Shasta County could have imagined the numbers of recreationists who would be visiting the new federal reservoir just a few decades hence.

The Rise of Water-Based Recreation and Whiskeytown National Recreation Area

The nation’s outdoor recreation domain stood at a critical juncture after World War II. The American people were poised to enjoy more vacations and outdoor recreation than ever before. Use of national parks would increase dramatically in the coming two decades, imposing heavy burdens on the national parks’ aging infrastructure. Though it was less in the public eye, water-based recreation on lakes and reservoirs would surge also, creating need for planned development of recreation facilities at hundreds of new, undeveloped reservoirs like Shasta Lake in 1945 and Whiskeytown Lake some years later.

The demand for more recreation facilities at federally owned reservoirs paralleled the more widely publicized crisis in national parks, where campgrounds and picnic areas became overrun by unprecedented numbers of recreationists. The crisis of outdoor recreation in the national parks was covered in national magazines such as *Harper’s Magazine*, *Atlantic Monthly*, and *The Nation*.¹⁶ Meanwhile there was no national media coverage of the recreation onslaught at federal reservoirs. Because they were relatively new on the landscape and were not yet recognized as part of the national outdoor recreation domain, so their overuse was not a national news story. In 1955, Congress and the Eisenhower administration responded to the public’s concern for the national parks by approving

¹⁵ Dick Strandlund, “A Slice of Shasta Lake’s Recreation History,” *The Covered Wagon* (1988): 26–27.

¹⁶ Bernard De Voto, “Let’s Close the National Parks,” *Harper’s Magazine* (Oct. 1953): 49–52; Devereux Butcher, “Our National Parks in Jeopardy: Resorts or Wilderness?” *Atlantic Monthly* 207 (Feb. 1961): 45–51; Kirke Wilson, “Conservation or Recreation: Our Swarming National Parks,” *The Nation* 198 (April 20, 1964): 391–95.

Mission 66 for the National Park Service—a well-publicized, ten-year construction program projected to cost \$124 million.¹⁷ (It would actually run much more.) The next year, the government initiated a similar program on the national forests called Operation Outdoors. But there was no similar program for the several hundred dam and reservoir sites owned and operated by the BOR and the U.S. Army Corps of Engineers even though, by some estimates, the federal reservoirs were already hosting more visitors than either the national parks or the national forests. In 1944, Congress mandated the Corps of Engineers to develop public recreation facilities at all of its reservoir sites, but the law was worded in a way to encourage state and local governments to take the initiative while the Corps of Engineers would merely coordinate those efforts. As for the BOR, Congress had already directed the NPS to plan and coordinate recreation development at BOR reservoir sites. As a result, neither of the two primary dam building agencies addressed the recreation challenge with any enthusiasm. And yet recreational use of federal reservoirs began to surge even at those reservoirs lacked even minimal recreation facilities.

The growing problem of unmanaged recreation at federal reservoirs finally received national attention from the Outdoor Recreation Resources Review Commission (ORRRC), which was commissioned in 1958 and completed its extensive reporting five years later. As the ORRRC outlined, recreational demand was exploding in many parts of the nation, and nowhere was the explosion more evident than on the numerous manmade lakes created by federal dams over the previous three decades. The ORRRC's report featured a graph showing the phenomenally steep rise of recreation at all Corps of Engineers reservoir projects—from 16 million recreational visits in 1950 to 109 million in 1960. The nearly seven-fold increase in visitor numbers rested on top of a near doubling of the Corps lakes in existence—from around 150 lakes in 1950 to nearly 300 in 1960. Still, that equated to more than a three-fold increase in recreational activity per area, which was a greater intensification of use than was found even in the national parks in that period.¹⁸

Behind the explosion in water-based recreation was a set of technological advancements in the motorboat. Before World War II, the motorboat was essentially a rowboat with a small outboard motor mounted on the stern. After World War II, boat-engine manufacturers began to offer more powerful outboard engines, and boat manufacturers made bigger boats to accommodate bigger engines. As motorboats picked up speed, the sport of water-skiing took off. The new popularity of water-skiing in turn drove up demand for more horsepower. In the 1950s, boat manufacturers introduced fiberglass boats, which were lighter than boats made of wood or aluminum, which further increased the motorboat's speed.¹⁹

¹⁷ "Mission 66 Gets Underway," *American Forests* 62 (March 1956): 23.

¹⁸ Outdoor Recreation Resources Review Commission, *Water for Recreation—Values and Opportunities*, 6.

¹⁹ Peter Smythe, "Your New Boat," *Motor Boating: The Yachtsman's Magazine* (Jan. 1969): 98.

By the 1960s, motorboats came in all sizes. The small runabout, or “car-topper,” could be as little as ten feet long. The small cruiser divided into two size classes, depending on whether it could be trailered. The medium cruiser might be thirty to forty feet long with a 200 to 300 horsepower engine—a big enough vessel to carry a whole family. Finally, the large cruiser or motor yacht could range up to 100 feet or more in length. Most classes of boat were affordable for average Americans.²⁰

According to data kept by the National Association of Engine and Boat Manufacturers and Outboard Boating Club of America, there were 2.5 million recreational boats in the United States in 1947, and 5.5 million more in 1960. But those numbers did not account for the growth in the average boat’s size and horsepower. According to the same source, the recreational boating business quadrupled in nine years, becoming a \$2.5 billion industry. In California, recreational boating mushroomed alongside the state’s population. While recreational boating was most prevalent in coastal cities like San Diego, many boaters trailered their boats to one of the new reservoirs. At the new reservoir behind the state-built Folsom Dam near Sacramento, an estimated 600,000 recreationists appeared in the second year after the lake was opened to the public; the state could not build boat ramps fast enough to accommodate the surge of boaters. The Cachuma and Santa Marguerita reservoirs in Santa Barbara County and the Nacimiento Reservoir in Monterey County also saw heavy use. In 1956, the California state legislature appropriated \$100,000 for a statewide recreation study of the state’s large reservoirs. In 1957, the state legislature established a state agency for the protection of recreational boaters. In 1959, California began to require registration of recreational boats and to institute other boater safety measures.²¹

Even before the ORRRC completed its work, many recreation planners across the U.S. saw the growing importance of federal reservoirs in meeting the nation’s burgeoning recreation resource needs. However, Congress still declined to name recreation as a “project purpose” in federal water development projects, chiefly because recreational use of federal reservoirs was still deemed to be a local interest, not a national interest. “Project purpose” was a crucial term of art in federal water projects policy because the federal dam building agencies had to show a benefit-to-cost ratio of better than one-to-one for a project to get authorized, and most projects were justified by combining the benefits of multiple project purposes. Many water resource development watchers suspected that if recreation were to be added to the mix, it would lead to many projects getting authorized that would otherwise fail to clear the bar. The Eisenhower administration, like many administrations that came before, was leery of Congress authorizing too many federal water development

²⁰ Smythe, “Your New Boat,” 98.

²¹ Outdoor Recreation Resources Review Commission, *Water for Recreation—Values and Opportunities*, 9; Shasta County, “Recreation Plan, Whiskeytown Reservoir, Shasta County, California,” 1958, typescript, Shasta Historical Society; Parimal M. Rohit, “A Crash Course on the History of Boating Laws,” *The Log: California’s Boating & Fishing News*, Feb. 5, 2015, <https://www.thelog.com/local/a-crash-course-on-the-history-of-boating-laws/>.

projects that were better left to states, municipalities, or the private sector. As a result, the obvious recreation benefit that often would accrue with the creation of a federal reservoir continued to be soft-pedaled to Congress. So it was with the Trinity Division project, where voluminous planning documents running into the hundreds of pages barely highlighted the recreational values.²²

Starting in 1945, the NPS was enlisted to prepare more than a dozen project or reconnaissance reports for the Central Valley Project; however, the intent behind all those planning documents was that all of the proposed recreational facilities would be built by state or county parks departments, not by the NPS. The proposed recreation areas would become state or county parks rather than national recreation areas. This approach was supposed to guard against saddling the federal government with recreation sites that would primarily serve a local rather than national need.²³

The problem with that formulation was that most state parks departments did not have the financial resources to develop recreation resources on the scale that was needed. The point that the ORRRC made very clear was that the national parks and national forests were getting hammered by burgeoning recreation demand, so it was very much in the national interest to expand the national outdoor recreation domain by including federal reservoir sites and developing recreation facilities with federal funds. If adequately developed, federal reservoir sites would soak up considerable recreation demand, relieving some of the pressure on those other priceless national assets, the National Park System and the National Forest System. It happened that the proposal to build Whiskeytown Dam and Reservoir materialized just as the ORRRC brought that point to light. As a result, the NPS's initial plan to establish a state or county park at Whiskeytown Lake was transformed into a plan to establish a national recreation area administered by the NPS.

The NPS initiated its planning for Whiskeytown Lake under the Eisenhower administration, when it was still assumed that the state or county would perform actual development of recreation resources. The first recreation development plan advanced by the NPS called for three small units, each one to have camping, parking, and boat launching facilities. The proposed land base would amount to 5,280 acres. The California State Parks Department studied the plan and decided it was not interested, claiming that the area was not scenic enough. The Shasta County Board of Supervisors then took up the proposal with enthusiasm, accepting the NPS idea of three units (at Brandy Creek, Whiskey Creek, and Oak Bottom), but scaling back the acreage to about 1,500 acres, and then to just 300 acres. NPS recreation planners insisted that the three units needed to encompass enough area to accommodate picnic sites, water systems, sanitation facilities, boat ramps, parking

²² Committee on Interior and Insular Affairs, Central Valley Project Documents Part Two, House Doc. No. 246, at 397 (1957).

²³ Jim F. Milestone, *From the White House to Whiskeytown: An Administrative History of the Creation of Whiskeytown National Recreation Area* (Whiskeytown, CA: National Park Service, 2003), 13.

areas, and hiking trails. The NPS also advised that there had to be adequate development of road access and conservation landscaping. To meet those goals, the NPS sought the cooperation of the Bureau of Land Management (BLM) to make federal lands held by BLM available for park purposes, and it sought the cooperation of the BOR to modify the “take line” around the reservoir to include private land holdings needed for park purposes. Despite an apparent willingness on the part of BLM and BOR to help with meeting these “minimum requirements,” Shasta County was reluctant to accede to the expanded park concept out of concern that it would cost too much. It is unclear how the proposed county park would have taken shape finally if the plan had been allowed to proceed.²⁴

With the advent of the Kennedy administration, recreation development at federal dam and reservoir sites finally began to receive its due, and the plan for Whiskeytown was transformed accordingly. As the Democratic presidential candidate in 1960, John F. Kennedy signaled his support for more federal water development projects. After the election, the first major policy statement on water was proposed in Senate Document 97, which President Kennedy endorsed, and which contained a directive to consider recreation as a potential project purpose at all new dam projects. Where it was appropriate to do so, recreation benefits were to be factored into the standard benefit-cost calculus that underpinned every federal dam proposal. Although the directive spoke to project planning rather than managing recreation at existing projects, Senate Document 97 marked the first time that recreation was elevated to a project purpose equal to conventional purposes such as water storage, hydroelectric power, and flood control.²⁵

Kennedy supported conservation and became a champion of the federal government’s role in providing more recreation opportunity on federal lands generally. Patrician and urbane, Kennedy’s own outdoor recreational preferences ran toward saltwater, sailing, and swimming. Secretary of the Interior Stewart Udall found the president to be personally uninterested in mountains, lakes, and rivers when they toured the West together to trumpet the cause of conservation. But as Udall recognized, Kennedy grasped the meaning of outdoor recreation for everyday Americans intellectually. He saw the need to provide more green space for the nation’s growing population, especially for the millions living in big cities in the eastern half of the country. Kennedy also looked with favor on federal water projects and directed his administration to renew the decades-old effort to reform the entire multiple-purpose framework of water resources development.²⁶

²⁴ Milestone, *From the White House to Whiskeytown*, 15–18.

²⁵ Herman Roger Hamilton, *Human Dimensions of Water Resources Policy: The United States Army Corps of Engineers’ Role in Natural Resources and Recreational Management* (PhD diss., Louisiana State University, 1998), 211.

²⁶ John F. Kennedy, Remarks on the White House Conference on Conservation, May 25, 1962, <https://jfklibrary.org/asset-viewer/archives/JFKWHA/1962/JFKWHA-099-005/JFKWHA-099-005>; Thomas G. Smith, “John Kennedy, Stewart Udall, and New Frontier Conservation,” *Pacific Historical Review* 64, no. 3 (August 1995): 329–62.

The act to establish the Whiskeytown--Shasta-Trinity National Recreation Area emerged alongside three other legislative acts involving land and water conservation that were conceived in the Kennedy years and finally enacted in 1965 and signed into law by President Johnson. First, the long-held goal of comprehensive river basin planning was addressed in the Water Resources Planning Act. Second, the goal of realizing the full potential of reservoirs for recreation was met in a separate act, the Federal Water Project Recreation Act. Third, the important Land and Water Conservation Fund Act established a source of federal grant money for purchasing lands for conservation. The Kennedy administration took this key recommendation from the ORRRC and came up with the idea to supply the fund through revenues from offshore oil and gas leasing, thus ensuring that the fund would be robust and long-lasting. Kennedy championed the fund as a means for establishing recreation areas where they were most needed. Since a large fraction of federal reservoirs were located within fifty miles of metropolitan areas, they were an excellent match for the rising recreational demand as he saw it. The Land and Water Conservation Fund became an important resource to enlarge the land base at many of those locations.²⁷

The legislation to establish the Whiskeytown-Shasta-Trinity-National Recreation Area moved on a similar timeline with these three important acts. When it became clear that the Kennedy administration would support the establishment of a national recreation area, the Shasta County Board of Supervisors asked Congressman Harold T. Johnson of their district, a Democrat, to write a bill. Senator Thomas H. Kuchel, a Republican, took up the matter in the Senate and introduced a bill in January 1962. Johnson introduced a bill in the House in February 1963. Both bills had to be reintroduced in later sessions. Congressional hearings occurred in the summer and fall of 1965, and the final bill was passed and signed into law near the end of the year.²⁸

The legislative history of the establishing act is richly detailed in the publication *From the White House to Whiskeytown: An Administrative History of the Creation of Whiskeytown National Recreation Area*, by former superintendent Jim F. Milestone. As Milestone makes clear, policy developments in the Kennedy years were crucial in the making of the national recreation area, but so was the personal involvement of Shasta County's native son, James K. Carr, who was undersecretary for the Department of the Interior while Kennedy was president. A former engineer and administrator with the BOR, Carr was already deeply versed in the CVP when he joined the Kennedy administration. Carr initiated the idea of making a national recreation area around the federal reservoirs in the Trinity Division, pushed his initiative on the NPS, and nursed it along through the legislative process. Without Carr's personal intervention, Milestone concludes, 'Whiskeytown would

²⁷ Henry P. Caulfield, Jr. interview by Martin Reuss, Oct. 7, 1986, in Henry P. Caulfield Jr. Papers, Personal Papers Collections, Office of History, U.S. Army Corps of Engineers, Fort Belvoir, VA.

²⁸ Milestone, *From the White House to Whiskeytown*, 29–44.

be a lake and narrow county park surrounded in development.” Instead, Carr’s vision of an expansive national recreation area containing mountains as well as lakes came to pass. And it was not through Carr’s efforts alone; the people of Redding and Shasta County recognized the golden opportunity when Carr went to Washington.²⁹

Carr recounted his story of the making of the national recreation area in an interview in 1979. Carr said his vision for the area stemmed from his childhood experience of organized camping with the Boy Scouts at Brandy Creek, and also from his distinct memory of returning to the area with his brother Laurence when they were young adults. “You know,” his brother remarked to him at that time, “if they had anything in the Eastern states like that, they’d make a national park out of it.” His brother’s remark stuck with him over the years and motivated him when, in 1961, he was in a position to act. During a stint serving as Acting Secretary of the Interior soon after his appointment, Carr requested the NPS to consider a national recreation area at Whiskeytown Dam. When the regional director in San Francisco who was assigned to oversee that task gave a negative report, Carr leaned on NPS Director Conrad Wirth to take another look. Wirth asked Assistant Director Ben H. Thompson to visit the area. An NPS stalwart, Thompson was the last surviving member of the famous young trio of biologists who wrote *Fauna of the National Parks of the United States* (1933), one of the most influential works in NPS history. In the late 1950s, he was head of the division of recreation resources planning. According to Carr’s recollection, Thompson got in touch with some people in Redding who gave him a tour, after which he phoned his boss in Washington to say: “Connie, grab it! It’s a beautiful area.” Director Wirth came around to it, and after Secretary Udall visited the area on October 14, 1961, he too agreed with Carr that it should be a national recreation area.³⁰

The proposed Whiskeytown-Shasta-Trinity National Recreation Area took in the Shasta Reservoir plus the two largest federal reservoirs in the Trinity Division along with the smaller Lewiston Reservoir, the afterbay for the Clair Engle (Trinity) Reservoir. Encompassing around 250,000 acres in total, it was divided into three units, one to be administered by the NPS and two to be administered by the Forest Service. Most of the land in the Shasta and Trinity units was already in federal ownership, lying within the Shasta-Trinity National Forest. Most of the land in the Whiskeytown Unit was in private

²⁹ Milestone, *From the White House to Whiskeytown*, 46–47.

³⁰ Milestone, *From the White House to Whiskeytown*, 18; “Benjamin H. Thompson (1904–1997),” <https://protectnps.org/centennial-biographies-2/benjamin-h-thompson-1904-1997/>. See also James K. Carr, interview by Bill Minton, Sept. 22, 1979, WNRA, Cultural Resources Division e-files. The same may be found in James K. Carr, “A Brief History of the Whiskeytown National Recreation Area, September 22, 1979,” *Covered Wagon* (2004): 60–65.

ownership. Due to concerns over acquiring so much private land, the proposed area for the Whiskeytown Unit was reduced from about 44,000 acres in 1961 to about 40,000 acres in 1965. Today the unit covers 42,496 acres.³¹

The proposal enjoyed strong local support despite private property concerns. In April 1962, Shasta County held a referendum election on the question of federal versus local development of the recreation resources around Whiskeytown Lake. The vote was approximately 12,000 to 5,000 in favor of federal direction.³²

The proposal involved five federal agencies. Besides the NPS and the Forest Service, it required the cooperation of the BOR mainly in revising its take line around the reservoir, and it needed the help of the BLM in working out a large land exchange with the Southern Pacific Railroad. The Bureau of Outdoor Recreation, a new federal agency established in the Kennedy administration, was prepared to assist the NPS and the Forest Service with land acquisition using the Land and Conservation Fund. The Bureau of Outdoor Recreation soon took over from the NPS as lead agency in developing the proposal and it secured effective cooperation from the other federal agencies.³³

The proposal allowed for hunting and fishing within each unit in accordance with state and federal laws, but it authorized the Secretary to designate zones and establish periods when no fishing or hunting would be permitted for purposes of public safety, administration, or public use and enjoyment. The lands within the recreation area were to be withdrawn from mineral entry; however, the Secretary was authorized to allow limited mining under permit.³⁴

When the Whiskeytown-Shasta-Trinity National Recreation Area was established, the Whiskeytown Unit (conventionally referred to as the Whiskeytown National Recreation Area) joined a growing list of units in the National Park System that were oriented toward recreational values. Those areas included not only several reservoir sites but also national seashores and national lakeshores. All of those units in the National Park System shared, and still share, a common management objective: to enhance the national outdoor recreation domain consistent with the administration of the National Park System. Whiskeytown National Recreation Area's central purpose, as articulated ten years ago in its Foundation Document, remains essentially the same today as it was at its founding: to

³¹ *Whiskeytown-Shasta-Trinity Recreation Area: Hearing Before the Subcommittee on Parks and Recreation of the Committee on Interior and Insular Affairs United States Senate*, 89th Cong., 1st sess., 38–39 (1965) (statement of Harold T. “Bizz” Johnson, U.S. Representative from the Second District of California).

³² Milestone, *From the White House to Whiskeytown*, 24.

³³ Milestone, *From the White House to Whiskeytown*, 26–27, 46–47.

³⁴ *Whiskeytown-Shasta-Trinity Recreation Area: Hearing Before the Subcommittee on Parks and Recreation of the Committee on Interior and Insular Affairs United States Senate*, 89th Cong., 1st sess., 13 (1965).

provide “opportunities for recreation in both a lake-based and scenic mountain setting while conserving the scientific, natural, historic, and cultural values for the enjoyment and inspiration of present and future generations.”³⁵

³⁵ National Park Service, *Final Master Plan, Whiskeytown Unit, Whiskeytown/Shasta/Trinity National Recreation Area* (Denver: National Park Service, Denver Service Center, 1976), 1–2; National Park Service, *Foundation Document, Whiskeytown National Recreation Area, California* (Whiskeytown, CA: National Park Service, 2014), 4.

CHAPTER THIRTEEN

Recreation Part II: Whiskeytown National Recreation Area

Development of Recreation Facilities

The National Parks Service (NPS) did not wait for establishment of the Whiskeytown-Shasta-Trinity National Recreation Area to begin development of recreation facilities. In 1962, the NPS entered into a memorandum of agreement with the Bureau of Reclamation (BOR) that gave the NPS “responsibility for the recreational planning, development, administration, and management of the Whiskeytown Reservoir Area.” The Forest Service signed similar agreements with the BOR concerning the Trinity and Lewiston reservoirs. The NPS obtained \$400,000 of development funds from the BOR to construct “minimum facilities.” The justification for this early start on development was that experience showed that recreational use of federal reservoirs would cause resource damage if minimum recreation facilities were not provided.¹

The NPS developed a master plan in 1964, which mostly followed its earlier plan for Shasta County. Recreation facilities were to be developed at three locations on the shores of Whiskeytown Lake at Brandy Creek, Whiskey Creek, and Oak Bottom. Contractors performed construction. At Brandy Creek, the NPS built a bath house with a concession facility, vault toilets, a visitor contact station, and a boat launch ramp, and it brought in sand for a swimming beach. At Whiskey Creek, the NPS put in vault toilets and a boat launch ramp. At Oak Bottom, it constructed a bath house with concession facility, four vault toilets (two for a picnic area and two for a campground, which were yet to be developed), a picnic shelter, a visitor contact station, and a boat launch ramp, and it prepared a swimming beach.

¹ Jim F. Milestone, *From the White House to Whiskeytown: An Administrative History of the Creation of Whiskeytown National Recreation Area* (Whiskeytown, CA: National Park Service, 2003), 25–26; Whiskeytown National Recreation Area administrative history draft report.

In addition to the shoreline developments, the NPS built an information center (visitor center) on Highway 299 where the traveler first gains a view of Whiskeytown Lake. The modest building included a lobby, restrooms, and an office. The site included a covered walkway and shelters overlooking the lake and Shasta Bally and an ample parking area. The small size of this visitor center reflected the area's focus on recreational use, notwithstanding the NPS's longer-range plan to provide interpretive and educational programs along with administrative support for public recreation once the area became a unit of the National Park System.²

In 1964, still one year before the national recreation area was established, the NPS moved its staff headquarters from a Bureau of Land Management (BLM) office in Redding into a former BOR field office on site (the present headquarters area). The BOR field office building was erected in 1960 when construction of the Whiskeytown Dam was started. To prepare the building for longer-range use as a park headquarters the NPS made various improvements including making a space for visitor contact, adding a women's restroom, and installing sidewalks around the building and a canopy over the main entrance. Around this time, the NPS developed plans for on-site staff housing, too. According to the master plan, five members of the staff would live on site: the maintenance supervisor, the chief ranger, and three rangers assigned to the Brandy Creek, Whiskey Creek, and Oak Bottom development areas. Altogether three employee residences and three duplex units were approved for construction. Five of the six buildings were located by the main administration building and the sixth was located on the road leading to the boat dock. Years later, the employee residences were converted to staff office buildings.³

Following the establishment of the national recreation area in 1965, the NPS proceeded with more recreation facility development according to the master plan. Campgrounds and picnic areas were developed at Brandy Creek and Oak Bottom, and a picnic area was developed at Whiskey Creek. The campground at Brandy Creek consisted of a single linear road with forty-eight parking spaces for trailers (later reduced to thirty-eight spaces) and a sanitary dumping station. Not yet equipped with running water or flush toilets, the campground did not see much use during its first decade. The campground at Oak Bottom was developed with a 105-unit walk-in camping unit and accompanying parking area for seventy-five vehicles and 100 trailer spaces on an asphalt surface. In 1973, the NPS made a major upgrade to the Brandy Creek and Oak Bottom development areas when it installed sewage treatment plants at each one for a total cost of \$600,000.⁴

² Whiskeytown National Recreation Area administrative history draft report.

³ Whiskeytown National Recreation Area administrative history draft report.

⁴ Superintendent's Annual Reports for 1972 and 1973, Harper's Ferry Center, NPS history files, Harper's Ferry, W.Va.

By the mid-1970s, there were two fully developed marinas at Brandy Creek and Oak Bottom. The marina at Brandy Creek had slots for eighty sailboats and other vessels, a snack bar, and boat rentals. At Oak Bottom there were thirty-six moorage spaces, a snack bar, and a boathouse with tackle shop.⁵

In 1976, the NPS completed its *Final Master Plan*, which called for much more campground development. Whereas the existing campgrounds at Brandy Creek and Oak Bottom were located on the shoreline of Whiskeytown Lake where small county parks were once planned, the *Final Master Plan* took a more expansive view of the national recreation area and sought to provide opportunity for land-based recreation throughout the 42,500-acre park, not just opportunity for water-based recreation on the 3,000-acre lake. The NPS aimed to increase the overnight camping capacity, convert some of the area's day use to overnight use, and facilitate more backcountry use.⁶

The largest new development area that was envisioned in the *Final Master Plan* never came to pass. The NPS found a relatively level area of 85 acres near the mouth of Boulder Creek where it planned to develop 400 drive-in camp sites for cars and trailers plus two group camps with a capacity for twenty-five people per site. The plan called for clearing eroded decomposed granite out of the mouth of Boulder Creek and constructing 800 feet of beach in the cove there. Up the creek a little distance there was to be a picnic area and parking area for day use of the swimming beach. Water was to be pumped from Boulder Creek, sewage was to be handled by the sewage plant at Oak Bottom across the narrow width of the lake, and electricity was to be provided by underground cables. There was to be no boat launch facility in the Boulder Creek development area, though moorage was expected to occur along the shoreline.⁷

The rest of the new campground development aimed at providing dispersed camping and most of it was built as planned. There was already an unofficial popular group camping site at the mouth of Dry Creek. Following the *Final Master Plan*, the NPS built a loop road there to facilitate unloading of equipment and it built a parking lot for sixty vehicles. In place of the unofficial camping area, the NPS designated one group site for up to 100 people. Two more group camps were developed on Crystal Creek Road and on Shasta Bally Road, the latter designated as Sheep Camp. Each one had a capacity for 25 people. (These were the only group camp sites identified in the *Final Master Plan*, but others were soon developed along the same concept in upper Brandy Creek and upper Boulder Creek and at Coggins Park, Peltier Bridge, and Horse Camp.) The *Final Master Plan* also called for vehicle camps to be provided “wherever convenient, small,

⁵ Al M. Rocca, *Whiskeytown National Recreation Area: A History* (Redding, CA: Renown Publishing, 2010), 94–95.

⁶ National Park Service, *Final Master Plan*, 2–3, 34–37.

⁷ National Park Service, *Final Master Plan*, 38–40.

level-forested areas can be found with a year-round water source,” and primitive back-country camp sites were to be provided “in wooded flat to moderately sloped sites, with water available from a creek or spring throughout the dry season, to meet the needs of horsemen and hikers.”⁸

Road and trail development were also part of the plan to provide more opportunity for land-based recreation. The area already had an abundance of roads and trails built for mining and logging. Many of these backroads were on steep grades and created erosion problem. These backroads were mostly one-lane dirt roads. Some were graded and drained while others were simply graded with no proper drainage. In developing the area for recreational use, there was a need was to improve some of the many backroads for recreational use and to obliterate others.⁹

The NPS wanted to develop one paved road around the south shore of Whiskeytown Lake from Dry Creek to the Carr Powerhouse so that visitors could drive all the way around the lake. A suitable logging road was selected and improved. In 1973, the mostly one-lane road, still unpaved, was opened to the public for the first time; however, one section of it remained traversable only by four-wheel drive vehicles. It remained in that condition when the *Final Master Plan* was completed in 1976. Later, the so-called South Shore Drive was widened to two lanes and made passable for two-wheel-drive vehicles for the whole length, but the plan to pave this road was set aside.¹⁰

With the many backroads in existence, the NPS did not develop a trail plan for the unit. Instead, hiking trails were developed piecemeal, making use of the existing miners’ roads and logging roads to the greatest extent possible to avoid cutting new trails and causing further disruption to the ecology.¹¹

Some roads in the national recreation area were state or county owned and had to be brought under NPS jurisdiction after the area was established, a step that would not be accomplished for many years.¹² Highway 299 traversed the north edge of the area and would remain under state jurisdiction. However, the NPS did exert influence over management of the state and county roads in the area, and it had a vital say on proposed changes to Highway 299. In the mid-1970s, the California Division of Highways planned to make Highway 299 into a four-lane divided expressway. The only concession to the national recreation area would be to keep the four lanes together from the eastern boundary to the Tower House junction. The state’s plan for the highway called for overpass junctions at

⁸ National Park Service, *Final Master Plan*, 42–44.

⁹ National Park Service, *Final Master Plan*, 37.

¹⁰ National Park Service, *Final Master Plan*, 44–45; Superintendent’s Annual Report for 1973, Harper’s Ferry Center, NPS history files.

¹¹ National Park Service, *The Shasta-Trinity Trail Plan and Environmental Assessment* (Whiskeytown, CA: National Park Service, 2005), 5.

¹² Superintendent’s Annual Report for 2000, Harper’s Ferry Center, NPS history files..

John F. Kennedy Memorial Drive, Whiskeytown Road, Oak Bottom, the Power Station Road, and the French Gulch Road. The NPS strongly opposed the four-lane plan. “Impacts of this plan on the Whiskeytown unit would be enormous,” the NPS stated in its *Final Master Plan* for the national recreation area. “This further destruction of the natural environment of a national recreation area is unacceptable, and should not be permitted.” It went on to detail what was at stake:

Traffic speed through the area would be greater and with a higher road noise level; the existing steep, ugly scars from the present road widening are visible from most parts of the unit and would be greatly enlarged; huge overpass structures would have to be built, supplying more dominating manmade structures and further scarring to the hillsides; and finally adding masses of erodible material from the cuts and fills to the situation of the lake. At the French Gulch Road intersection, the proposed elevated overpass structure would be on the very edge of the Tower House Historic District. The construction and presence of this interchange would endanger the old and sensitive building, plantings, and atmosphere of the historic zone.¹³

Arguably, the prevention of a four-lane expressway past Whiskeytown Lake was the single biggest impact that the national recreation area had on the landscape. To modern sensibilities the two-lane highway is an acceptable intrusion on recreational values; a four-lane expressway with overpasses, on the other hand, would be hard to reconcile. When public recreation emerged as the area’s new dominant land use, it spurred new development such as campgrounds and marinas, but it also prevented other development such as the proposed expressway.

Landscape Restoration

The landscape around Whiskeytown Lake, while scenic and generally appealing, was also ravaged by one hundred years of mining and logging activity. Part of creating recreational opportunity in the area involved landscape restoration to bring back natural values that formed an important underpinning to outdoor recreation and visitor enjoyment.

The NPS pointed out various ravages to the landscape in its *Final Master Plan* for Whiskeytown National Recreation Area. Along the north edge of the area, on hillsides above the lake and highway, the poisoning effect of smelter smoke in the early twentieth century was still evident in the dearth of large trees. The slopes were covered by a

¹³ National Park Service, *Final Master Plan*, 45.

brushland of manzanita, toyon, and poison oak with scattered oak and pine trees standing above the brush. The south-facing slopes tended to dry out in the summer, retarding natural forest regeneration.¹⁴

On the hillsides south of Whiskeytown Lake there were scars from “badly managed logging.” Forest cutting and poorly engineered roads left behind a legacy of unnaturally high rates of soil erosion. The NPS noted that the effects “were not readily apparent” from the highway across the lake, a tacit acknowledgement that the ravages to the landscape were primarily viewed through the lens of outdoor recreation and visitor enjoyment—at least in the national recreation area’s early years.¹⁵

All over the area one could find the leftover diggings, borings, and other earthworks from a century of mining and prospecting activity. The modifications to the ground surface included shafts, adits, prospect holes, mine dumps, ditches, berms, leveled areas, and road cuts. There was also much mining industry detritus lying on the land: stream-deposited tailings, ruins of miners’ buildings, trash scatters, and in at least one site recently resurveyed, large metal scraps from a stamp mill.¹⁶ Many of these remains from the days of mining posed safety hazards to recreationists. Leaching from abandoned mines put toxins into the environment.

The NPS pursued various actions to restore the landscape to a more natural condition. Tens of thousands of ponderosa pine seedlings were planted. The plantings were made in at least three areas, one on a north-facing slope of Shasta Bally that had been heavily logged (Section 16), another on former logging roads and skid roads in the Crystal Creek drainage (Section 18), and a third in the vicinity of the Brandy Creek development area where many hazard trees were removed. Hazard tree removal was itself a major program at Whiskeytown National Recreation Area, which aimed at protecting visitor safety rather than restoring a natural landscape, but the two aims were not unrelated since many hazard trees were prone due to excessive soil erosion in the area from past mining and logging activity.¹⁷

¹⁴ National Park Service, *Final Master Plan*, 9.

¹⁵ National Park Service, *Final Master Plan*, 9.

¹⁶ Sean Simpson, Great Basin Institute, “Post-Carr Fire Archaeological Inventory at Whiskeytown National Recreation Area, Shasta County, California,” draft report prepared for Whiskeytown National Recreation Area, September 7, 2022, 44–61. Stamp mill parts were identified at Site 2021-WHIS-220, p. 56.

¹⁷ Superintendents’ Annual Reports for 1979, 1981, and 1988, Harper’s Ferry Center, NPS history files.

The NPS rehabilitated sections of Clear Creek where placer mining activity had left behind piles of sterile gravel and an unnaturally thin vegetative cover in many areas. Restoration work included dredging streambeds that were clogged with silt and debris, riprapping embankments, and removing invasive plants where they had made serious inroads in blighted areas.¹⁸

The many miles of logging and mining roads contributed to an unnaturally high rate of soil erosion. After very wet winter storms, the amount of soil washed into the lake could be so enormous as to clog stream outlets and create new mudflats. Soil erosion was checked to a small degree by installing drainage culverts along select roads. Besides helping with road maintenance, the culverts controlled runoff and prevented resource damage. But putting in culverts was labor intensive work; only a few thousand feet of culvert were installed in the mid-1970s. One imagines that most or all of this work was directed toward rehabilitating the road that would become the South Shore Drive. Meanwhile, a real solution to the soil erosion problem called for something far more extensive. What was ultimately needed was to obliterate a large percentage of the 300-odd miles of old logging and mining roads in the area, and that comprehensive effort would have to await a future time.¹⁹

In the Camden-Tower House Historic District, the NPS took measures to restore the historic fruit orchard. The NPS rehabilitated the historic water ditch by Camden's sawmill and restored sections of the Clear Creek and Crystal Creek water ditches so that visitors could hike alongside them and observe the historic engineering from their original construction.²⁰

Landscape restoration efforts became a more comprehensive NPS program to preserve natural conditions. In NPS policy, preserving natural conditions meant restoring to the extent possible the full panoply of ecological relationships that once existed before they were disrupted by human activities. By the late twentieth century, the more comprehensive program was sometimes called ecosystem restoration, or more generally, natural resource management. Some of the top natural resource management issues at Whiskeytown National Recreation Area included forest fire management (see Chapter Five), fish and wildlife management, invasive species management, cleanup of abandoned mine sites, and testing and monitoring of water, soil, and biota to identify mining contaminants such as mercury that might still be present in the environment.

¹⁸ National Park Service, *Final Master Plan*, 9; Superintendent's Annual Report for 1975, Harper's Ferry Center, NPS history files.

¹⁹ Superintendents' Annual Reports for 1973, 1974, and 1975, Harper's Ferry Center, NPS history; Sid Covington, "Whiskeytown National Recreation Area Geologic Resources Management Issues Scoping Summary," April 20, 2004, WNRA, Natural Resources Division e-files.

²⁰ Superintendents' Annual Reports for 1981 and 1982, Harper's Ferry Center, NPS history files.

Wildlife management issues generally related in some way to recreational use. Black bears could become habituated to the presence of campers and picnickers and could be attracted to their food and garbage. With its growing number of recreational visitors, Whiskeytown National Recreation Area developed a “bear problem.” The popular term was a misnomer: bear management always revolved around managing people more than controlling individual bears. With so many people recreating in the bears’ habitat, they had to be taught how to contain food smells so that bears would not be drawn and habituated to human food sources. In 1988, rangers trapped and relocated twenty bears that had taken to raiding the campgrounds. The long-range management response, however, was to educate park visitors on how to take proper precautions while in bear country, and to make human food and garbage harder for bears to access. Bear numbers—and the frequency of incidents—fluctuated over time and managers acknowledged that the “bear problem” would never be completely solved, so that misleading term was finally set aside in favor of “bear management.” Meanwhile, the state managed bear hunting outside the Whiskeytown National Recreation Area; the NPS did not allow bear hunting within the area. In 1975, rangers suspected that bears were hunted illegally in the Mill Creek area, but no arrests were made.²¹

The park administration did allow hunting of other kinds of wildlife. Wild hogs were not a native species and were harmful to the environment, so they were hunted. Deer were prone to overpopulation, so they were hunted occasionally. The park administration permitted hunting of these species in certain places and at certain times of the year, and in the case of deer, only in some years.²²

Sometimes Whiskeytown National Recreation Area had one or two nesting pairs of bald eagles. The nests were easily disturbed if people were overly curious or if noise levels were too high. Protective zones were designated around active bald eagle nests to improve the chances for successful reproduction and rearing of eaglets.

Fish management was rather a special case of natural resource management because the lake was manmade. The lake’s fisheries were a valuable recreational asset. Fish management saw a blend of efforts, some by the California Department of Fish and Wildlife, others by the NPS, some addressed to recreation, others aimed at ecosystem restoration.

When the Whiskeytown Dam was built, it eliminated chinook salmon habitat on upper Clear Creek, but it created new habitat for various species of sport fish in Whiskeytown Lake. Accordingly, the state stocked the lake with kokanee salmon, rainbow trout, lake trout, and brown trout, and the new fish populations generally did well. In the

²¹ National Park Service, *General Management Plan and Environmental Impact Statement, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area* (Oakland, CA: National Park Service, Pacific West Region, 1999), 69–70; Superintendents’ Annual Reports for 1975 and 1988, Harper’s Ferry Center, NPS history files,

²² Superintendents’ Annual Reports for 1972 and 1979, Harper’s Ferry Center, NPS history files.

1950s and 1960s, resource managers did not worry too much about the loss of chinook salmon habitat if overall fish production remained about the same. One fishery compensated for another. The park administration agreed at first and cooperated with the state in keeping Whiskeytown Lake stocked with sport fish. As part of maintaining a productive sport fishery, the NPS cooperated with the state in controlling the numbers of spotted bass (by electroshocking) to protect releases of trout fingerlings.

When the Sacramento River's chinook salmon population went into decline in the 1970s and 1980s, perspectives changed. The Central Valley Project Improvement Act of 1992 mandated changes to CVP management and operation and charged the Secretary of the Interior with pursuing fish and wildlife restoration and enhancement programs to save the salmon. In 1993, water temperature control curtains were installed in Whiskeytown Lake at Oak Bottom and near the intake to the Spring Creek Tunnel to provide cooler water flowing from depth out of the lake. The releases of cooler water would pass through the Keswick Reservoir into the upper Sacramento River, helping the chinook salmon to survive and reproduce. The new installations and water releases from Whiskeytown Lake were all the responsibility of the BOR. The park administration, for its part, began giving close attention to the restoration of chinook salmon habitat in Clear Creek below Whiskeytown Dam. The rehabilitation of spawning grounds in the upper Sacramento River basin was supposed to contribute about 6 percent to the overall spawning areas; the rehabilitation of the Clear Creek habitat below the dam was calculated to contribute as much as a third of that, or about 2 percent of the total. In 1998, an interagency watershed management plan was adopted that identified numerous restoration and management actions aimed at salmon restoration. Two years later, the Saeltzer Dam on lower Clear Creek was removed.²³

In the year 2000, park staff observed there had been a die-off of American bullfrog tadpoles in Whiskey Creek. The observation added to longstanding concerns that the many abandoned mines and tailings in the area were leaching toxins into the ecosystem. The NPS requested a study by the U. S. Geological Survey (USGS) to address the question: did mercury from mines in upper Clear Creek critically affect biota in the park? The combined USGS and NPS science team collected invertebrates, amphibians, and fish to measure and identify "hot spots." It found that mercury and other chemicals associated with past mining activity existed at lower concentrations in Whiskeytown National Recreation Area than at many other heavily mined areas in northern California. However, it found trace amounts of copper in Willow Creek that were concerning. In a follow-up study of black

²³ Erica M. Meyers, "Protecting a Displaced Species in an Altered River: A Case Study of the Endangered Sacramento River Winter-Run Chinook Salmon," *California Fish and Wildlife Special CESA Issue* (2021): 172–88, www.doi.gov/10.51492/cfwj.cesasi.8; National Park Service, *General Management Plan and Environmental Impact Statement*, 69. See also Harry Rectenwald, "Salmon Runs of Clear Creek," *The Covered Wagon* (2001): 72–73, and Madge Richardson Walsh, "A History of Saeltzer Dam (aka Townsend Dam)," *The Covered Wagon* (2001): 55–71; National Park Service and Bureau of Land Management, *Environmental Assessment, Lower Clear Creek Anadromous Fish Restoration and Management Project* (Redding, CA: Bureau of Land Management, 2008), 1.

bass in Whiskeytown Lake, researchers found that mercury was present in fish of legal catch size that were in excess of what the Environmental Protection Agency recommended as a maximum threshold for safe water for humans. Today, the NPS alerts anglers to the park's elevated mercury levels on the park's website.²⁴

Management of Whiskeytown Lake for Water-based Recreation

As the NPS set out to provide recreational opportunity at Whiskeytown-Shasta-Trinity National Recreation Area in partnership with the Forest Service, it started with certain assumptions about the type of recreational use that would occur. The Whiskeytown Unit was different from the other two units in some ways, and the NPS expected that the differences would make the units complementary. The Whiskeytown Unit had a smaller land area than the other two units. Whiskeytown Lake was considerably smaller than Shasta Lake and Clair Engle (Trinity) Lake, and it was the nearest of the three lakes to Redding. It was expected, therefore, that the Forest Service units would receive more overnight use while the Whiskeytown Unit would receive considerably more day use. The bigger lakes were better suited for motorboats and water skiers; the smaller Whiskeytown Lake was better suited for quieter recreational pursuits including sailing and swimming. Another important difference was that the water level of Whiskeytown Lake would not fluctuate as much as the other two reservoirs, making its swimming beaches and shoreline more attractive. The pattern of recreational use in the Whiskeytown Unit developed more or less as anticipated, with a concentration on day use and water-based recreation in the summer months.

Over the years, other visitor use patterns emerged. Total visitation stood at around 800,000 per year in the early years; then it rose in the 1970s and 1980s as the population of Redding more than tripled and the completion of Interstate 5 brought more visitors from Sacramento and the Bay Area. Total visitation fluctuated from year to year but generally hovered well above one million. Visitation rose to its highest levels in times of drought when other reservoirs in the area were drawn down. While swimming in the lake was the most popular recreational activity, it was found that some combination of swimming, sunbathing, relaxing, and picnicking formed the typical pattern of an individual's or party's recreational use. It was also noted that the area attracted people who were interested in

²⁴ Roger L. Hothem, Jason T. May, Jennifer K. Gibson, and Brianne E. Brussee, "Concentrations of Metals and Trace Elements in Aquatic Biota Associated with Abandoned Mine Lands in the Whiskeytown National Recreation Area and Nearby Clear Creek Watershed, Shasta County, Northern California, 2002–2003," USGS Open-File Report 2015-1077, <https://dx.doi.org/10.3133/ofr20151077>; Jason T. May, Roger L. Hothem, Marissa L. Bauer, and Larry R. Brown, "Concentrations of Mercury and Other Metals in Black Bass (*Micropterus spp.*) from Whiskeytown Lake, Shasta County, California, 2005," USGS Open-File Report 2011-1297, <https://doi.org/10.3133/ofr20111297>.

doing sports, especially water sports, in spring and summer and hunting in fall and winter. A high proportion of visitors were young adults. A visitor survey in 1976 found that one-third of visitors were between the ages of eighteen and twenty-nine; another in 1985 recorded that fully 60 percent of visitors were under the age of thirty.²⁵

The youthfulness of Whiskeytown Lake's visitation shaped the recreational use pattern in various ways. Young people in the 1960s and 1970s avidly took up a variety of new outdoor watersports such as surfing, scuba diving, kayaking, and later on, windsurfing. With so many people in their late teens and twenties using the area, the higher visitation in summertime tended to spread out to include the "shoulder seasons" of late spring and early fall. Whiskeytown National Recreation Area was not a destination park for family vacations like so many national parks where visitation spiked in July and August when kids were not in school and the family vacation traditionally took place. Typically, the area saw upwards of 100,000 visitors per month from May through September.²⁶

Many young people came to Whiskeytown Lake to party and enjoy youthful freedom. The NPS law enforcement rangers were kept busy with a heavy case load of incidents, citations, arrests, and the rare traffic fatality or drowning. Drunken driving and public intoxication were the most common causes for arrest. In the mid-1970s, rangers tried to clamp down on nude swimming, and in the early 1980s they noted an uptick in the number of revelers when the City of Redding closed its city parks to alcohol use. Public safety was a concern at all recreation areas, especially those where water-based recreation was the dominant use. Whiskeytown National Recreation Area had several full-time lifeguards on staff to keep watch at the swimming beaches. Swimmers did get into trouble and numerous rescues were made. There were very few drownings.²⁷

The diversification and growth of water-based recreation created challenges for recreation management at Whiskeytown National Recreation Area as it did at most federal reservoirs. There were conflicts between different modes of recreation on the lake. Speedboats and water-skiers posed a danger to swimmers. Anglers who prized tranquility and a calm lake surface were nonplussed when motorboats shattered the quiet and threw up a wake. Conflicts also arose from sheer numbers of users all engaged in the same activity. In practically any outdoor recreational activity, a sense of being crowded tarnishes the experience. Lake managers were especially hard-pressed to contend with crowded

²⁵ Rocca, *Whiskeytown National Recreation Area: A History*, 93–94; Superintendents' Annual Reports for 1976 and 1982, Harper's Ferry Center, NPS history files; National Park Service, *General Management Plan and Environmental Impact Statement*, 82–83.

²⁶ U.S. Department of the Interior, Bureau of Outdoor Recreation, *Outdoor Recreation: A Legacy for America*, 2, 13; Gayle Jennings, ed., *Water-Based Tourism, Sport, Leisure, and Recreation Experiences* (Burlington, MA: Elsevier, 2007), 97–98, 128–29, 172–73; Susan Sessions Rugh, *Are We There Yet? The Golden Age of American Family Vacations* (Lawrence, KS: University Press of Kansas, 2008), 2–4, 12–13, 17–18; National Park Service, *General Management Plan and Environmental Impact Statement*, 82.

²⁷ Superintendents' Annual Reports for 1976 and 1982, Harper's Ferry Center, NPS history files.

conditions. On land, recreational use occurs in a fairly fixed environment: trails and campsites define the space. On water, boats go almost anywhere. The problem of how to regulate people's movements was even harder on water than on land.²⁸

To mediate these conflicts, recreation managers sought to impose rules to encourage courteous behavior and foster a spirit of tolerance. In the most challenging cases they sought to determine a lake's recreational carrying capacity and to develop zones for separating different types of recreational use spatially or by time of day. At the end of the twentieth century, the managers at Whiskeytown Lake found that they had to impose restrictions. The lake was divided into four types of management zones: no boat, no wake, low-speed, and multi-use. The NPS maintained that the management zones were necessary and appropriate to keep recreation within the lake's recreational carrying capacity.²⁹

The acid test of the new direction in water-based recreation management at Whiskeytown came when the NPS banned the use of jet skis commencing in the summer of 2002. The technology first appeared in the 1960s, but the machines only became common in the 1990s as the industry took off when jet skis evolved into bigger, two- and three-passenger vehicles. Compared to a boat, the jet ski was inexpensive, easy to store and transport, and simple to operate. The small size of the watercraft and the jet propulsion system gave it fast acceleration and high maneuverability, making it fun and exciting to ride. But the machine had its critics; some thought it had an outsized impact on other water recreationists' enjoyment.³⁰

Jet skis added a louder, faster, more unruly element to the recreational boating scene. They could operate in shallow waters where the jet could scour the lake bottom and throw up a wake in a sensitive area. Their noise could drive off wildlife, and their turbulence could kill fish. Going up to 70 m.p.h., jet skis were like motorcycles running around on the lake surface. Operators of jet skis were prone to accidents. Often, they lacked boater experience. There were two major types of jet ski accidents: collisions with another vehicle or a person in the water, and injuries sustained when a person fell backwards off the rear seat into the jet stream. The latter could result in serious injury to internal organs.³¹

Three-quarters of a million jet skis would be sold in the United States between 2000 and 2015. Seeing this emerging trend in water-based recreation, the NPS sought to protect recreational values from being eroded by the presence of the raucous new plaything. Whiskeytown joined with around a dozen other National Park System units in moving to

²⁸ Reiner Jaakson, "Zoning to Regulate On-Water Regulation," *Land Economics* 47, no. 4 (November 1971): 382–91.

²⁹ National Park Service, *General Management Plan and Environmental Impact Statement*, 3, 32–33.

³⁰ David R. Lenorovitz, Edward W. Karnes, and Brian Haygood, "Personal Watercraft (PWC) Injury Hazards—Analyses, Technical Advancements, and Continuing Safety Challenges," *Theoretical Issues in Ergonomics Science* 21, no. 3 (2020): 286; Jennings, *Water-Based Tourism, Sport, Leisure, and Recreation Experiences*, 74.

³¹ Lenorovitz, et al., "Personal Watercraft (PWC) Injury Hazards," 286–87.

ban their use in the national park setting. Whiskeytown's managers heard objections to the proposed ban on jet skis on Whiskeytown Lake, but the amount of public resistance turned out to be minimal. Once the ban began in 2002, more visitors voiced support for the ban than opposed it, saying they were glad for the quiet, family-friendly atmosphere after jet skis were removed.³²

Even before the establishment of Whiskeytown National Recreation Area, youth organizations like the Boy Scouts, one Redding area church, and the California Department of Forestry established organized camps in the area. The latter two camps involved permanent buildings that were built before the national recreation area's founding. One of those camps was converted into an environmental education center; the other continued to be used as a labor camp and correctional facility within the national recreation area for several decades.

The NEED Whiskeytown Environmental School

In the 1950s, interpretation in the national parks began to emphasize ecological principles of interdependence and environmental change. There was a shift from the mere cataloging of objects to describing ecological relationships between species, as well as ecological connections between organisms and their habitat. As the American public became more interested in ecology in the 1960s, the NPS was well positioned to lead in environmental education. The agency embarked on a program of preparing comprehensive educational materials to enable teachers to bring students to designated sites in the National Park System for instruction in an outdoor setting. The outdoor classrooms were called Environmental Study Areas (ESAs). Eventually about eighty units in the National Park System came to promote at least one ESA. Whiskeytown National Recreation Area designated a five-acre site with a former church camp as an ESA in 1969.³³

The environmental education initiative began in 1968. The NPS worked with education consultants and the National Parks Foundation in developing materials for teachers who taught kindergarten through fifth grade called the National Environmental Education Development (NEED). The strategy was to teach the teachers. The NPS would hold workshops at selected units, introducing teachers to the ESA and equipping them with NEED materials, after which the teachers would return to each area with their students and hold class in the ESA without the need of a park ranger-naturalist or interpreter.³⁴

³² Superintendent's Annual Report for 2001, Harper's Ferry Center, NPS history files; ABC News, "Jet Skis Popular, but Polluting," *ABC News*, May 24, 2002, at <https://abcnews.go.com/WNT/story?id=130323&page=1>.

³³ Barry Mackintosh, *Interpretation in the National Park Service: A Historical Perspective* (Washington, DC: National Park Service, 1986), 66–67.

³⁴ William C. Everhart, *The National Park Service* (New York: Praeger Publishers, 1975), 71.

In September 1969, the NPS acquired ownership of an inholding in the southeast sector of Whiskeytown National Recreation Area at the confluence of Paige Boulder Creek and Clear Creek. The inholding belonged to the North Valley Baptist Church, which had developed a youth summer camp on the tract over the previous four to five years. The original land acquisition program for the park envisioned that the church would continue to run its camp under a land-use permit or a lease-back plan. But when the NPS instituted its nationwide NEED program, it was thought that the five-acre camp site should become an ESA and converted to a NEED camp. As one member of the park staff wrote, “The nature of improvements, the environmental surroundings, and proximity to high impact urban areas were the principal considerations leading to a decision to proceed with full acquisition.” The property with all appurtenances was acquired for about \$280,000.³⁵

The camp buildings required upgrading to make them suitable for a NEED camp. Existing facilities consisted of sixteen small open-sided cabins, a single bathhouse for the cabins, a main building, a director’s residence, a staff cabin, and a caretaker’s residence. The sixteen cabins were strung out in a line, eight to each side of the bathhouse. The main building had a large multi-purpose room with stone-lined fireplace, kitchen, infirmary, supply room, and two bathrooms. Three sliding glass doors on the north façade opened onto a patio, which overlooked the artificial pond. The grounds consisted of a cleared area with minimal landscaping, a footbridge across the pond, and one large and two smaller amphitheaters. The proposal to make the church camp into a NEED camp called for \$46,930 in upgrades to buildings, the installation of an electrical system, and sundry equipment and supplies. The open-sided cabins were enclosed with four full walls, windows, and doors, and fitted with electric lights.³⁶

The NEED camp was launched under an agreement with the Shasta County Superintendent of Schools in the early 1970s. The program targeted sixth-grade students and music students. The park hired its first environmental education and interpretive specialist, Bob Grom, in November 1972. In its first year of full operation in 1973, the camp served 1,640 sixth-grade students. Besides hosting student camps and teacher training camps, the facility was sometimes used by other federal agencies for educational functions. Later it was used as a Youth Conservation Corps camp during the summers.³⁷

In 1988, all the cabins were completely rehabilitated with new exterior plywood and vinyl siding. Labor was provided by a crew from the Crystal Creek Conservation Camp.³⁸

³⁵ L. J. Mitchell and Park Staff, “Clear Creek Nature Camp at Whiskeytown National Recreation Area: A Proposed Unit of the National Environmental Education Program,” Nov. 19, 1969, WNRA, Cultural Resources Division e-files.

³⁶ Mitchell and Staff, “Clear Creek Nature Camp at Whiskeytown National Recreation Area,” Cultural Resources Division e-files.

³⁷ Superintendent’s Annual Report for 1973, Harper’s Ferry Center, NPS history files; National Park Service, *Final Master Plan*, 23.

³⁸ Superintendent’s Annual Reports for 1988, Harper’s Ferry Center, NPS history files.

In the mid-1990s, the park administration committed to making further renovations even as it shifted more responsibility for management of the camp to the Shasta County Superintendent of Schools. The rehabilitation effort began with a \$150,000 apportionment for work on the main building. Upgrades were made to appliances, windows, bathrooms, electrical systems, and accessibility. At the end of the decade, further improvements were made to exterior building treatments and the heating, ventilation, and air conditioning system.³⁹

In the Carr Fire of 2018, seven cabins were burned beyond repair and the camp was closed due to heightened flood risk from forest removal in the adjoining drainages. A fundraising effort was organized to preserve the camp; a plan developed to replace the cabins with four-plex fire-resistant cabins and more than \$4 million was raised.⁴⁰

Crystal Creek Boys' Camp

The Crystal Creek Boys' Camp was built by the California Division of Forestry (later the California Department of Forestry and Fire Protection, or just California Department of Forestry) in 1958, and it served as a conservation camp and correctional facility of one type or another until 2009. The camp went through three incarnations. For the first fourteen years it received male inmates from the state penitentiary system, and the facility was known as the Crystal Creek Conservation Camp. In 1972, this camp was one of two such camps in the state that made a transition to taking inmates at the county level. For the next twenty-one years, the California Department of Forestry partnered with the Shasta County Sheriff's Department and with local criminal justice courts in ten northern California counties. In this second incarnation it was called the Northern California Regional Rehabilitation Center. Lastly, in 1995, the camp became a minimum-security work facility for male juvenile offenders. For another fourteen years of operation, the place was administered entirely by Shasta County and formally designated the Crystal Creek Regional Boys' Camp.

California's conservation camps were initiated soon after World War II ended. During the war, the California Division of Forestry elevated its commitment to forest fire suppression—in part as a wartime civil defense measure and in part to take the place of the Civilian Conservation Corps (CCC), which was defunded when the nation went to war. The California Department of Forestry needed to establish a large fire-fighting force at low cost, so it experimented with contracting prison labor and using the old CCC camps for training centers. First it experimented with select low-risk prisoners from San Quentin,

³⁹ Whiskeytown National Recreation Area administrative history draft report.

⁴⁰ Whiskeytown National Recreation Area administrative history draft report.

then with delinquent youth, before launching its Conservation Camp Program with the California Department of Corrections in 1945. Meanwhile, it discontinued use of the CCC camps in favor of building new camps in more isolated spots where inmates would be less apt to flee incarceration. Governor Pat Brown (1959–1966) took the conservation camp program to a higher level. In 1959, the camps were redesignated “honor camps” to reflect the minimum-security arrangements and the system of camps was expanded. There were twenty-four such camps around the state in 1960: eighteen for adult inmates and six for youths, the latter operating in partnership with the California Youth Authority. By 1972, the program had grown to encompass thirty-five camps statewide. When the California Department of Corrections shed its involvement with the Crystal Creek camp, it did the same with one other camp in San Diego County. In 2005, the program had thirty-nine camps and nearly 4,000 inmates and wards assigned to 198 fire crews. Today, it is called the Conservation (Fire) Camp Program and there are forty-four camps run jointly by CAL FIRE and the California Department of Corrections and Rehabilitation. Over 3,000 incarcerated men, women, and juveniles are in the firefighter program. They are all volunteers with “minimum custody” status and eight years or less remaining in their prison sentence.⁴¹

California’s inmate firefighter program has received mixed judgments. On the plus side, the camps offered inmates the opportunity to work in nature, learn skills, and live under conditions of relative freedom outside of the state prisons. Working as a firefighter often inculcated a sense of purpose and self-respect that helped prepare inmates for reentry into civilian life. The program belonged to a tradition of finding solace and inspiration in nature, using nature to lift the human spirit. Criticism of the program focused on state exploitation of this vulnerable population. Years before California’s conservation camp program began, the state used prison labor to build rural roads. California’s inmate firefighters filled a pressing state need as California’s burgeoning population led to heightened concerns about wildfire. The work was hazardous and grueling, and the volunteers in the program sometimes complained that they were in tougher conditions than they had bargained for. Despite the training they received, inmate firefighters were four times more likely to suffer injury and eight times more likely to suffer health effects from smoke inhalation than their professional counterparts outside the prison system.⁴²

Other problems arose. Local residents living near the minimum-security conservation camps felt unsafe. Higher rates of incarceration of people of color combined with the overwhelmingly white population in most rural areas where the camps were located

⁴¹ California Department of Forestry and Fire Protection, *100 Years of CDF* (Paducah, KY: Turner Publishing Company, 2005), 18, 78; Volker Janssen, “Convict Labor, Civic Welfare: Rehabilitation in California’s Prisons, 1941–1971,” Ph.D. dissertation (University of California San Diego, 2005), 455–509; “Conservation (Fire) Camps Program,” <https://www.cdcr.ca.gov/facility-locator/conservation-camps/>.

⁴² Janssen, “Convict Labor, Civic Welfare,” 455–509; Francine Uenuma, “The History of California’s Inmate Firefighter,” *Smithsonian Magazine*, Sept. 1, 2022, <https://smithsonianmag.com/history/the-history-of-california-s-inmate-firefighter-180980662/>.

exacerbated the rural white backlash against the program. Critics of the program pointed out that participating inmates were relocated to sites far away from their families, which tended to destroy the inmates' family bonds.⁴³

When the Crystal Creek camp was shunted over to county administration in 1972, the move came at a time of reduced sentencing and a shrinking prison population in California. Several conservation camps were converted to ecology centers where juvenile delinquents performed various types of nature-oriented work other than firefighting. However, California's rate of incarceration increased four-fold from the 1970s to the early 2000s as thousands of drug-law offenders swelled the prison population. The pressure on the state's prison system led to renewed expansion of the conservation camp program with an emphasis once more on firefighting. Justifications for the program increasingly touted the savings to the taxpayer when inmates were put to work in minimum-security settings.⁴⁴

An inventory of the Crystal Creek Conservation Camp buildings in 1994 listed a total of seventeen buildings, most of which were constructed in 1958 or were built earlier and moved to the site sometime between 1958 and 1968. The larger buildings included a dormitory (or barracks), a mess hall, an auto shop, an apparatus building, a warehouse, and two office buildings (one occupied by the Department of Forestry staff and the other by the Department of Corrections staff). More detail on the construction history of the camp could perhaps be found in records at the California State Archives in a file cited in a dissertation by Volker Janssen.⁴⁵

The site for the camp was leased from the Southern Pacific Land Company by the California Department of Natural Resources, Division of Forestry beginning on February 14, 1957. The property was subsequently purchased by the federal government on October 30, 1970. Notwithstanding the fact that the site was located within the authorized area of Whiskeytown National Recreation Area, the property was conveyed from the United States to the State of California by quitclaim deed on September 19, 1988. The land was conveyed from California back to the United States on March 6, 2017, at which time the area was included in Whiskeytown National Recreation Area.⁴⁶

⁴³ Janssen, "Convict Labor, Civic Welfare," 455–509; Uenuma, "The History of California's Inmate Firefighter," *Smithsonian Magazine*.

⁴⁴ Janssen, "Convict Labor, Civic Welfare," 455–509; Uenuma, "The History of California's Inmate Firefighter."

⁴⁵ The listing summarized here is from Mark V. Thornton, "A Survey and Historic Significance Evaluation of the CDF Building Inventory for the California Department of Forestry and Fire Protection," CDF Archaeology Reports Number 17, Dec. 1994, WNRA, Cultural Resource Division e-files. The file cited by Janssen at the California State Archives is F3717:398 Corrections, Conservation Camp Services, Camps, CDF Crystal Creek, 1955–1961.

⁴⁶ Chief, Pacific Land Resources Program Center, to Superintendent, Whiskeytown National Recreation Area, March 30, 2017, enclosing Quitclaim Deed, March 6, 2017, WNRA, Cultural Resource Division e-files.

When the camp was turned over to Shasta County beginning on July 1, 1972, administration was shared by the Shasta County Sheriff's Department, which provided custodial and supervisory personnel for inmate security, and the California Department of Forestry, whose staff operated the physical plant, took care of buildings and vehicles, and supervised inmate work crews. The camp had a capacity for eighty inmates, but the enrollment was seldom more than sixty. There was a high rate of turnover, with a total of 1,061 inmates booked at the camp during its first four and a half years of county administration. Most were young adults.⁴⁷

A one-year program review from a correctional officer with the U.S. Department of Justice gave the program high marks. This person credited the program's early success to "the beautiful site and facility, programs offered, and manner in which the staff relate to inmate ideas," all of which had the effect of eliminating hostilities and developing self-respect among the inmates. The officer stated that the project's three objectives were all being met, namely: to reduce recidivism, to offer judges alternatives in sentencing, and to relieve overcrowded conditions in county jails.⁴⁸

The work of the correctional staff on inmate rehabilitation was divided into four broad areas: comprehensive work programs, educational and vocational study with work experience, intensive counseling, and job placement. The forestry staff, for their part, worked with inmate crews on forest fire suppression and control, conservation work, ecology projects, rescue projects, and civil disaster relief work (mainly flood relief). Besides getting on-the-job training and work experience, inmates received vocational training and classes in carpentry, cabinetry, food preparation, and leather work. Through the cooperation of the Shasta County Superintendent of Schools Manpower Program, high school and college-level classes were taught in the facility in the evening, and high school diplomas were awarded to participating inmates through the educational continuation program. Other community resources were brought to bear, including marriage counseling, weekly sessions put on at the camp by the Redding Chapter of Alcoholics Anonymous, and Bible studies.⁴⁹

The camp was closed in 1993 due to budget constraints. It was reopened two years later under Shasta County auspices. While the California Department of Forestry still had ownership of the buildings, it no longer took a role in supervising work crews. Rather, the camp was run by the Shasta County Probation Department under a lease from the California Department of Forestry. In 2007, efforts were made to transfer the property

⁴⁷ "Crystal Creek Northern California Regional Rehabilitation Center," June 1977, WNRA, Cultural Resources Division e-files.

⁴⁸ Renwick N. Riley, Correctional Program Officer, to S. N. Linsey, Correctional Program Advisor, June 8, 1973, WNRA, Cultural Resources Division e-files.

⁴⁹ "Crystal Creek Northern California Regional Rehabilitation Center," June 1977, WNRA, Cultural Resources Division e-files.

from the state to the county at no cost to ease the county's financial burden of running the camp, but the transfer never happened. The annual rent of \$156,000 amounted to a little more than 10 percent of the camp's annual budget of around \$1.5 million.⁵⁰

The Crystal Creek Regional Boys' Camp had a staff of around thirty, which included a director, three deputy probation officers, about a dozen "teach-advise-counsel" officers, three probation officers, three teachers and three teachers' aides, one mental health counselor, and one part-time drug and alcohol counselor. The male juveniles sent to the camp were called "cadets." The camp had a bed capacity for sixty cadets, but the level of staffing allowed a maximum of forty-five. For several years the camp had an average of forty-two cadets. The camp needed a minimum of twenty-six cadets from other counties to keep Shasta County's investment solvent. When the number fell below the threshold for years on end it triggered the camp's closure. At the time that the Shasta County Board of Supervisors made the decision, there were just sixteen youths at the camp from Shasta County.

All cadets were between the ages of fourteen and eighteen. Their average length of stay was three to four months. Most of the cadets had had multiple commitments to Juvenile Hall and did not respond to that intervention. The goal of the Crystal Creek Regional Boys' Camp was to return every cadet to the community "as a responsible, drug free, productive individual." On that score, the camp claimed considerable success: while more than 70 percent of teens released from the California Youth Authority went back to the state's teen prison system, just 20 percent of boys who served their sentences at Crystal Creek experienced recidivism.⁵¹

While at camp, the boys attended high school classes, received three meals per day, and had mandatory periods for exercise and rest. Discipline was maintained by a progressive system of privileges awarded for good behavior. Arriving at camp, every cadet was made to wear an orange shirt. As they earned privileges, they changed to yellow shirts, then green. If they got in trouble, they had to wear orange prison jumpsuits and earn their way up the ladder all over again. In the tough environment of the boys' camp there were occasional runaways. All runaways headed down the long entrance road to Highway 299 where they had a choice of going over Buckhorn Mountain to Weaverville or going through Whiskeytown National Recreation Area to Redding. Virtually every runaway was picked up before reaching either destination.⁵²

⁵⁰ Ryan Sabalow, "Crystal Creek Boys Camp Will Close," *Record Searchlight*, June 9, 2009; "AB 687 Assembly Bill—Bill Analysis," WNRA, Cultural Resources Division e-files; "Crystal Creek Regional Boys' Camp," WNRA, Cultural Resources Division e-files.

⁵¹ Sabalow, "Crystal Creek Boys Camp Will Close."

⁵² Rob Rogers, "Crystal Creek a Place for Bad Boys to Go Straight," *Record Searchlight*, Feb. 23, 2009.

The placement of this corrections facility inside a unit of the National Park System was rare, perhaps even singular. How did the NPS and park superintendents feel about having a correctional facility in the park? Superintendents' annual reports registered nothing but positive remarks about the benefits obtained from work crews. The park's *Final Master Plan* (1976) described the Crystal Creek camp in positive terms:

The Division of Forestry Conservation Camp, situated in the hills five miles up a paved road from California 299, has permanent living accommodations for about 100 prisoners. Situated on land leased from the National Park Service until 1987, the facility has proven to be beneficial to some aspects of park operations. During 17 years of existence no known adverse effect to park visitors has occurred due to isolation from other users of the park and security measures. Crews from the camp have provided assistance in rescue searches, fire fighting, flood control, flood damage repair, stream stabilization, fuel modification, tree planting, and other related fire defense and conservation projects.⁵³

The NPS preserves and interprets a number of famous (or infamous) prisons and incarceration camps within the National Park System including Alcatraz, Andersonville, Manzanar, and others. Having an active correctional facility within the park was a different matter, of course, but the arrangement proved to be workable.

In the years after the camp closed in 2009, it was heavily vandalized. Buildings were broken into, windows were smashed, and graffiti was spray-painted on many interior and exterior walls. One can only guess at what the perpetrators had in mind. The condition of the camp today presents the naïve visitor with a rather disturbing scene of wrecked property and scrawled expressions of anger by evidently broken people. The place has an aura of raw, emotional pain that perhaps overpowers the visitor's ability to imagine the many individual successes that were achieved there.

⁵³ National Park Service, *Final Master Plan*, 23.

CHAPTER FOURTEEN

Status Report on Whiskeytown's Cultural Resources

Natural Disasters and Cultural Resource Management

The Carr Fire of 2018 was the most devastating fire in the history of the National Park System, burning 97 percent of this park's area. Lost in the fire were the remnants of the historic Whiskeytown store and post office (which had been moved in the early 1960s from the townsite to the French Gulch road junction), the Camden Toll Bridge, seven camper cabins at the NEED camp, and nine buildings at the Crystal Creek Boys' Camp, among numerous other cultural resources. While office buildings in the headquarters complex were saved, most of the employee residences were destroyed. Most bridges in the park were burned. Water treatment systems at Whiskey Creek and Brandy Creek were heavily damaged. The Oak Bottom Marina was damaged. Beyond the park boundaries, the Carr Fire destroyed more than a thousand homes, making it the sixth most destructive fire in California's history up to that time. Eight people lost their lives in the fire, including three fire-fighters and five civilians.¹

Exceptionally heavy rains during the winter of 2018–2019 added to the destruction. The burned-over hillslopes were more susceptible to soil erosion, and in the following year the park received 100 inches of rainfall, about 40 inches above normal, with substantial runoff causing road and trail washouts in many areas. Heavy soil deposition and slumps posed further threats to cultural resources. Meanwhile, the park could not safely accommodate visitors until many miles of roads and trails were repaired and thousands of hazard trees were removed. The Camden-Tower House Historic District was closed to visitors from August 2018 until June 2020 while the park staff made trail repairs, replaced bridges, removed hazard trees, and stabilized historic structures.

¹ National Parks Service, "The Carr Fire of 2018 and Ongoing Recovery," <https://www.nps.gov/whis/learn/news/carrfire.htm>.

The physical and emotional toll from the Carr Fire and the devastating rains the following winter and spring knocked the park administration back on its heels, disrupting the cultural resource program for many months as park personnel necessarily redirected their attention to putting the park—and to varying degrees their own personal lives—back in order. On the other hand, the cultural resource program did benefit from a few unique opportunities that arose in the post-fire recovery effort. For instance, a lidar survey was made of the whole burn scar, which turned up many new historic features within the park. This serendipitous development and other consequences of the Carr Fire will be discussed in this chapter.²

Unfortunately, Whiskeytown's loss of cultural resources in the Carr Fire was not an isolated event. The devastation experienced at Whiskeytown underscores a larger concern of historic preservation at the national level: in an era of accelerating climate change, cultural resources are at increasing risk of total loss or significant damage from various types of natural disasters. One study by the Union of Concerned Scientists highlighted threats from rising sea level, storm surges, and floods to many of our low-lying national landmarks. Another study by the National Parks and Conservation Association (NPCA), an overall assessment of climate-change impacts on national parks both in the present and the future, began with the statement, "Climate change is the greatest threat the national parks have ever faced." The NPCA enumerated what it sees as the ten worst climate change-related threats to parks including sea-level rise, fire, drought, and invasive species. The NPS is engaged both internally and with its state, local, and tribal government partners in forecasting and addressing climate change impacts, not only on natural ecosystems but on cultural resources more specifically.³

If the Carr Fire was the most devastating fire in the history of the National Park System, other recent fires were close behind. Back-to-back fires in Mesa Verde National Park in the year 2000 burned nearly half of the park's 52,000 acres. A fire that started in Great Smoky Mountains National Park in 2016 spread to the gateway community of Gatlinburg, Tennessee, destroyed 2,500 homes, and killed fourteen people. Whipped into an inferno by freakishly strong winds, that fire burned 11,000 acres in the park. A lightning-caused fire in Glacier National Park in 2017 destroyed the historic Sperry Chalet despite heroic efforts to save the beloved building, marking the first-ever loss of a national

² Glendee Ane Osborne, interview by Theodore Catton, May 7, 2024. Most of this chapter is drawn from this interview.

³ Debra Holtz, Adam Markham, Kate Cell, and Brenda Ekwarzel, *National Landmarks at Risk: How Rising Seas, Floods, and Wildfires Are Threatening the United States' Most Cherished Historic Sites*, May 2014, <https://www.ucsusa.org/sites/default/files/2019-09/National-Landmarks-at-Risk-Full-Report.pdf>; National Parks and Conservation Association, <https://www.npca.org/reports/climate-impacts>; Patrick Gonzalez, Fuyao Wang, Michael Notaro, Daniel J. Vimont, and John W. Williams, "Disproportionate Magnitude of Climate Change in United States National Parks," *Environmental Research Letters* 13, no. 10 (Sept. 2018): 1–12; Douglas Appler and Andrew Rumbach, "Building Community Resilience through Historic Preservation," *Journal of the American Planning Association* 82, no. 2 (Spring 2016): 92–103.

historic landmark. In the year of the Carr Fire, the Woolsey Fire in southern California burned more than 21,000 acres in the Santa Monica National Recreation Area, or about 88 percent of that park, and destroyed the historic Peter Strauss Ranch House. The next year, two fires burned 100 percent of Lava Beds National Monument. In 2021, the giant Dixie Fire burned a huge portion of Lassen Volcanic National Park on its way to scorching more acres than any single-source wildfire in California's history.

Fire is part of nature, of course, and fire managers have been trying to put natural fire back on the landscape after a long period of misguided fire suppression. But notwithstanding the complicated legacy of fire suppression for our contemporary fire ecology, we know that fires in the western United States are getting bigger and more frequent in large part because global temperatures are rising, snowpacks are melting earlier in the spring or summer, and droughts are growing more severe. In the western United States, the average number of fires that burn more than a thousand acres grew from around 140 per year in the 1980s to around 250 per year in the first decade of this century. In the Southwest, the total amount of acreage that is burned each year has risen by about 300 percent over what it was in the 1980s. Whiskeytown National Recreation Area will not be the last unit in the National Park System to lose a significant part of its cultural resources in a large and intense wildfire. In that sense, it is a canary in the coal mine.

The Camden-Tower House Historic District in the Carr Fire

The Carr Fire started within the Camden-Tower House Historic District near the Camden House. In the first twenty-four hours of the fire team's response to the blaze there was a Redding Fire Department firetruck stationed in front of the house with a hose line. Cultural Resource Program Manager Glendee Ane Osborne was on the site for several hours monitoring and providing guidance as needed. After that, a CAL FIRE engine crew remained stationed at the site day and night to protect the historic house. This crew unilaterally decided to install a dozer line in a half-moon shape around the property, in addition to using foam products on the house to keep airborne cinders from igniting the structure. The fire later burned the yard to the dozer line and also burned along the back side of the house up to a certain point before turning east. The Camden House was saved but some secondary features were lost. Sections of fence and two outbuildings burned. Other outbuildings close to the house were saved.

The nearby site of the Eldorado Mine fared much worse. Every wooden structure in the National Register-listed historic district was destroyed. Two historic buildings, a stamp mill and a storage shed, both burned down to their stone foundations. The winter and spring rains brought further destruction. The forested Mill Creek drainage above the

Eldorado Mine was intensely burned; consequently, much soil erosion happened in the following wet season, and on several occasions part of the hillside gave way and a flow of debris partially buried the stone foundations and some stone retaining walls. The NPS dug out the historic foundations and retaining walls and placed sandbags on the slopes around the historic district to prevent a recurrence. As some of the retaining walls are dry set and some are wet set, they vary in how much debris flow they can withstand.

The Eldorado Mine adit is in a cutbank that is vulnerable to slope failure. Like all mine openings, the adit is hazardous in its own right. But due to the added danger of slope failure around it, the park recently erected a chain link fence in front of the adit to discourage curious visitors from getting too close. The sandbags and chain-link fencing will probably remain until the park develops a long-term plan for site restoration. The plan will involve input from the NPS Geological Resource Division's Abandoned Mine Lands program. The plan will require a hazardous waste assessment, as the site of the stamp mill is quite possibly contaminated with hazardous chemicals that were once used in processing ore.

At the other end of the Camden-Tower House Historic District, the Crystal Creek Water Ditch was also heavily impacted by the Carr Fire. In the years prior to 2018, the park invested many hundreds of hours of labor in rehabilitating the Crystal Creek Water Ditch, returning the flow of water to it, and developing an interpretive trail alongside it. The Carr Fire burned intensely in much of the Crystal Creek drainage, destroying wooden culverts and other structural components along the ditch, including a redwood water tank that was faithfully reconstructed in 2012. Since the Carr Fire, the park has been making repairs to the rehabilitated historic ditch so that it will once again carry water.

At the lower end of the ditch an inverted siphon once carried the water from the ditch across Willow Creek. In the Carr Fire, the ten-inch steel pipe used for the siphon melted and sealed shut, and later plugged with debris, so it will have to be replaced. The fire also destroyed a cleanout shed that dated from 1913. As the park has a very clear idea of what the shed looked like, it will be reconstructed as well.

The Carr Fire burned about 60 percent of the historic orchard trees that once grew beside the Tower House. The orchard trees that survived the fire are approximately 140 years old. Some are original grafts and some are grown up from seedlings. One good thing that came from the exceptionally wet winter that followed the Carr Fire was that some of the well-watered trees, which appeared to be fire-killed actually survived to resprout. Working with Humboldt Cider Company and Redwood Acres, the park had the new sprouts grafted with rootstock. The young trees were grown in a nursery near Eureka until they were big enough to plant in the orchard. Now the grafted trees have had two or three growing seasons back in the park and are doing well so far. About fifty in number, they are known affectionately as the park's "babies."

Cultural Resource Surveys since the Carr Fire

One positive outcome of the Carr Fire was that the park was able to take part in a post-fire, high-resolution lidar survey that, among other benefits, revealed more historic resources. Lidar is an evolving remote-sensing technique that uses a laser to measure distances to the Earth and map the Earth's surface in increasingly granular detail. The lidar (an acronym for "light detecting and ranging") records data as millions of points, called a "point cloud," that renders not only topographical relief but even three-dimensional objects on the ground. In the decade prior to the Carr Fire, the NPS used lidar to map forest structure and fuels throughout the park. At that stage in the development of lidar, the imaging allowed detection down to the individual tree; however, it did not go beneath the tree canopy. After the Carr Fire, in 2019, the U.S. Geological Survey conducted a lidar survey of the fire scars left by the nearly contemporaneous Carr, Hirz, and Delta fires, all of which were located within a four-county area around Redding. Recent advances in microchips and lidar application allowed for lidar data collection down to 0.35-meter intervals. Furthermore, the survey was conducted in fall and winter of 2019 while there was no snow on the ground, stream levels were low, and vegetation cover minimal. As fire had removed much of the tree canopy, the lidar detection went all the way to the ground. Under these optimal conditions, historic features such as roads, ditches, and prospect holes became clearly visible in the lidar imagery. As a result, cultural resource managers identified many historic resources that were previously unknown, determined the full length or extent of some others, and confirmed other dimly recognized historic features.

A challenge of lidar is that it generates a vast quantity of data for storage and handling. The NPS has systems for dealing with the terabytes of lidar data, yet data storage and handling is an ongoing issue. In recent years, the NPS has integrated its systems of cultural resource inventory and monitoring to make the cultural resources data all uniform, digitized, transferrable, and maximally useful in interdisciplinary settings. The NPS's comprehensive database for cultural resources is called the Cultural Resources Inventory System (CRIS). Cultural resource managers at Whiskeytown maintain records of cultural resources located in the park such that they may be readily added to CRIS.

The park now has upwards of five hundred known cultural sites in its own inventory. Some of these site records await verification and refinement before they will be entered in CRIS. Some sites that were identified through the lidar survey still need to be visited on the ground to determine whether they are water ditches or roads. Some sites are recorded as polygons, others as linear segments, and still others as isolates (a single point on a map). As more information becomes known, two or more sites may be combined into one, or a non-polygon site may be given a polygon site boundary. Once the site record is verified and refined, then it is entered in CRIS.

The burned landscape after the Carr Fire created opportunity for more archeological survey because so much ground cover was removed that a pedestrian-type survey could be effective in identifying cultural features and spotting artifacts. In 2021, the park undertook an archeological survey of around 1,200 acres. Several additional sites were recorded at that time. Mostly they were abandoned mine sites as well as roads and ditches. A few prehistoric sites were also found.

PG&E maintains two sets of transmission lines within the park. One set of transmission lines, which serves the Western Area Power Administration, runs eastward from the Carr Powerhouse out to the Central Valley. The other, which serves PG&E, starts at the Spring Creek Power Station in Keswick and runs through the park westward to French Gulch, Lewiston, and onward to the Pacific Coast. PG&E proposes to make modifications to them. The power transmission lines are bona fide historic resources. They are part of the enormous CVP, and they are more than fifty years old. But transmission lines do not look like the sort of thing one would typically associate with historic preservation, and indeed, the park's cultural resource managers know that these transmission lines are not eligible for listing on the National Register of Historic Places. (Transmission lines connected with the Hoover Dam have been recorded and listed on the National Register, but Hoover Dam is itself a national historic landmark, whereas Whiskeytown Dam does not even approach the Hoover Dam's level of historical significance.) Nonetheless, PG&E's planned modification of the transmission lines has presented an opportunity for archeological survey, because the work calls for Section 106 compliance, and PG&E as part of its due diligence agreed to conduct a survey for all cultural resources located in the proposed rights-of-ways, and to conduct a determination of eligibility for any recorded sites (newly discovered sites as well as already known sites) that have potential for listing on the National Register. This covers steps one and two of Section 106 compliance under the National Historic Preservation Act.

PG&E's cultural resource survey has thus far added to the park's knowledge of numerous abandoned roads and brought to light the existence of many more abandoned water conveyance systems than were previously recorded. The park has well over 100 miles of abandoned ditches. Some were previously indicated by the lidar survey but needed to be visited on the ground to be sure of what they are. PG&E's cultural resource survey has also made some new prehistoric archeological finds. The survey has thus far proven to be a valuable undertaking, and there is more to go.

An Industrial Landscape

PG&E's present survey reminds us that Whiskeytown National Recreation Area preserves an industrial landscape that has seen many kinds of extractive resource use, from gold mining in the nineteenth century to logging and water and recreational development in the middle decades of the twentieth century. The landscape is laced with abandoned roads,

trails, and water ditches. It is pock-marked with abandoned mine adits, shafts, and prospect holes. It bears evidence of past farming, orcharding, and industrial logging. To the trained eye, the land contains revealing clues about prehistoric occupations going back thousands of years. The Central Valley Project (CVP) lies heavily on the landscape now, with the lake and dam being the dominant components of the CVP within the park, and the powerhouse, penstocks, and power transmission lines being prominent features of the CVP as well.

Since the Bureau of Reclamation is the owner and operator of Whiskeytown Dam and the Francis Carr Powerhouse within the park, the Bureau, not the NPS, is responsible for evaluating the historical significance of these cultural resources and determining their eligibility for listing on the National Register of Historic Places. The Bureau of Reclamation undertook the necessary background studies when the entire CVP attained or approached the fifty-year mark earlier in this century. In 2007, it completed a Multiple Property Documentation form, titled "Reclamation: Managing Water in the West, California's Central Valley Project: Historic Engineering Features to 1956," which was prepared by staff historian Jim Bailey. More than one hundred pages in length, the form included brief descriptions of the Clair A. Hill Whiskeytown Dam and Lake and Judge Francis Carr Powerhouse. (The section on the Trinity Division drew on the earlier history and physical description written by Eric Stene.) To date, the Bureau of Reclamation has not completed a determination of eligibility for its properties located within the park.⁴

The Western Area Power Administration, Sierra Nevada Region, is owner and operator of the Judge Francis Carr Powerhouse Substation. The substation is located at the west end of Whiskeytown Lake and was built and put in operation at the same time as the rest of the powerhouse complex. In 2017, contract historian Karana Hattersley-Drayton prepared a historical resources evaluation report on the Judge Francis Carr Powerhouse Substation. The substation was evaluated for its eligibility for listing on the National Register and was found to be eligible under NRHP Criterion A, being "associated with events that have made a significant contribution to the broad pattern of our history." Hattersley-Drayton commented in her report that "all components of the Central Valley Project appear to be eligible to the National Register of Historic Places under Criterion A, for the role the Project has played in the agricultural and economic development of California with a Period of Significance (currently) of 1937-1963." Hattersley-Drayton contended that the substation appears eligible "as a contributor to a proposed Central Valley Project Multiple Property nomination."⁵ Action on the more comprehensive nomination is still pending.

⁴ Bureau of Reclamation, "Reclamation: Managing Water in the West, California's Central Valley Project: Historic Engineering Features to 1956," typescript prepared by Jim Bailey, June 2007.

⁵ Karana Hattersley-Drayton, "Historical Resources Evaluation Report (HRER) for the Judge Francis Carr Powerhouse Substation, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area," report prepared for Western Area Power Administration, Aug. 15, 2017, and Trinity River Division (map and statistics), August 1980, WNRA, CRM Files, File: Central Valley Project.

The Judge Francis Carr Memorial Park is outside the powerhouse complex and owned and managed by the NPS. As noted in Chapter Seven, the three-acre park was designed by the NPS and developed in 1967, so it reached the fifty-year mark in 2017. About that time the NPS evaluated the property and determined that it is not eligible. The NPS lists the memorial park internally as a cultural resource for optional historic preservation. In 2019, a snowstorm caused a wooden seating structure next to the fountain to fail and collapse. Rather than rehabilitate it, the NPS removed the broken structure along with the fountain and replaced it with a large pavilion for public use. The park also added picnic tables, widened the sidewalks in the area, and made the whole facility wheelchair accessible. The memorial park is a popular public space, and the NPS maintains its pleasant feel by mowing the lawn and pruning the apple trees that were planted there.

At the site of Whiskeytown Dam, the JFK Commemorative Panel that was erected in 1964 is treated similarly to the Judge Francis Carr Memorial Park. The NPS has determined that the panel is not eligible for National Register listing, but it is listed internally as a cultural resource with the NPS exercising the option to preserve it. Unlike the three-acre memorial park, which has site boundaries, the panel and pedestal are listed as a historic structure, just a point on the ground. The pedestal is not in good condition as some rocks in the rubble are loose, and the panel artwork, which is made of concrete, has some cracks that need attention.

The Whiskey Creek Bridge, the three-span bridge on Highway 299 that crosses an arm of Whiskeytown Lake, was recorded as part of Caltrans's statewide historic bridge inventory in 2010. Built in 1961 as part of the effort to relocate the highway above the reservoir fill line (Chapter Seven), the bridge was listed on the National Register of Historic Places under Criterion C as a significant engineering achievement. The bridge along with the highway corridor through the park is owned by the state. There are sections of the old highway alignment, now submerged and property of the NPS, that are still visible. One is just west of the visitor center and now serves as a boat launch ramp. Another lies within an old road cut near Oak Bottom. Under the right conditions, painted stripes on pavement lying several feet under water may be glimpsed from a canoe as it is paddled through the inundated road cut.

The Whiskeytown Cemetery is another cultural resource within the park that is not owned and managed by the NPS; it is county property. The park does provide ranger-led tours of the Whiskeytown Cemetery. The few score graves that were exhumed and moved to this site when the dam and reservoir were built are marked by modest gravestones, which are inconspicuous among the more than 1,500 graves that are there now. The cemetery is managed by the Shasta County Coroner's Office, and groundskeeping is performed a couple of times each year by an inmate work crew.

The Mount Shasta Mine site is one of the largest cultural resource sites in the park and now covers almost twenty-two acres. Following the Carr Fire, the park documented around twenty additional features associated with the site, and the site boundary was expanded accordingly. The Mount Shasta Mine Loop Trail follows the historic road through the area. The primary mine shaft is fenced off for visitor safety. The fence is not very sturdy, and work is pending to replace it with something stronger and to install a grate in the shaft to eliminate risk of visitors (or animals) falling into the shaft and getting injured or trapped.

The park has made progress on abandoned mine closures since the 1980s. As more abandoned mine hazards are identified, the park seeks another round of funding and does another set of abandoned mine closures. Individual cases are prioritized according to the amount of visitor use the mine site receives. Some mine sites are visible from roads or trails and others are well off the beaten path. While a given abandoned mine hazard is awaiting treatment it is fenced off with chain link fence or orange safety fencing—depending on the degree of hazard and visibility—and signage may be posted to warn people to stay out. There was a significant push to address abandoned mine hazards in the late 1990s. A new push is now underway. Currently the park has 150 hazardous mine features; these are shafts or adits that pose a threat of injury or death to anyone who stumbles into one or unadvisedly tries to explore one. In some cases, the preferred treatment is to permanently close the feature by burying it. In other cases, the preferred treatment is to install heavy steel grates so that access is blocked to humans but not to small animals.

The Crystal Creek Boys' Camp is another cultural resource within this industrial landscape. For more than fifty years it served as a correctional facility for the rehabilitation of state and county inmates and juvenile detainees. The location of the camp was selected so that the rehabilitation program could focus on forest conservation work with an emphasis on firefighting. At its inception, the camp was in a fairly remote section of an area undergoing extensive industrial logging. After Whiskeytown National Recreation Area was established, the NPS occasionally provided conservation work projects for the camp. Since 2009, the facility has been defunct. Standing empty, it has been heavily vandalized. The current plan is to demolish the facility, remove all the buildings, cap off the water system, and re-envision the site for other uses. The long-term re-envisioning is to move the Whiskeytown Falls trailhead to this location because it has more room for parking. With that option in view, some of the historic landscaping of walkways and retaining walls will be kept when the buildings are removed. The site could eventually be redeveloped for camping. The park is also consulting with its tribal partners to consider future management of the site as part of a traditional use area.

The NEED camp dates from a little later, but it, too, has now reached the fifty-year mark. Established in 1969, the camp is one of the last remaining Environmental Study Areas designated under the NPS's environmental education initiative of that era. One year

before the camp turned fifty in 2019, the five-acre site was swept by the Carr Fire. Seven cabins were burned beyond repair and the camp was closed due to heightened flood risk from forest removal in the adjoining drainages. In the aftermath of the fire, the NPS was undecided about what to do with the camp. On one hand, the fire damage was extensive and even the surviving buildings needed many repairs. On the other hand, it was a relic of the NPS's environmental education initiative; before the Carr Fire it was one of just a handful of such camps in the national parks still operating. Also known as the Whiskeytown Environmental School, it was a beloved part of the community. The Shasta County Office of Education had run the camp through most of its existence. The local community wanted to save it, as did the tribal community. A private fundraising effort was organized to preserve the camp, and a proposed plan was developed to replace the cabins with four-plex fire-resistant cabins. In 2023, the park decided on partial demolition with a long-term plan to rebuild and make the camp operational again. All camper cabins and the naturalist cabin will be removed and the bridge over Boulder Creek will be replaced by a footbridge. The plan for new cabins is yet to be determined.

Annotated Bibliography

I. Physical Records

Cal Poly Humboldt Library, Arcata, CA. We obtained some rare books and articles at this library, augmenting our research at libraries in Redding and Davis.

Harpers Ferry Center, Harpers Ferry, WV. Copies of the superintendent's annual reports are in the NPS history collection. We obtained PDF files for all of these, which we shared with the park.

James K. Carr Papers, Patrick Carr, Anderson, CA. Through a visit and informal interview with James K. Carr's nephew Patrick Carr, we were provided access to James K. Carr's papers collected by Patrick Carr, local and family historian.

Peter J. Shields Library, University of California—Davis, Davis, CA. Of the libraries we visited, this had the richest collection on northern California history, the Wintu, lumbering, and the Central Valley Project.

Redding Public Library, Redding, CA. This library has a rich collection on Shasta County history centered on the Boggs Local History Collection. It is also a good source for California mining history, state government publications, and newspaper research.

Shasta Historical Society, Redding, CA. The society maintains useful vertical files and notebooks on many topics pertinent to Whiskeytown National Recreation Area. It has an excellent collection of local historical maps. It has indexes to the society's periodical, *The Covered Wagon*. We spent more time in this repository than any other.

Shasta Lake Heritage and Historical Society Museum and Library, Shasta Lake, CA. Although focused on Shasta Dam and the near vicinity, the society has vertical files and notebooks on Whiskeytown and other places in Shasta County that made it a worthwhile place to visit.

Trinity County Historical Society and Jake Jackson Memorial Museum, Weaverville, CA. Here we obtained sources on transportation and the Chinese in Trinity and Shasta counties that we had not found elsewhere.

Whiskeytown National Recreation Area, CA. Hereafter cited as WNRA. This was our starting place for research and the best source for everything specific to the park area. Many manuscript records, reports, and published articles held at the park have been digitized. These digital files were liberally supplied to us both over the internet and in person when we visited the headquarters. All these records are cited in the footnotes and in Section III below as WNRA, Cultural Resource Division e-Files. In addition, while visiting headquarters we made a thorough sweep of the Cultural Resource Division paper files (those not yet digitized), which are cited in the footnotes and Section III below as WNRA, CRM Files. Also, during our visit to headquarters we

obtained a few items from WNRA, Natural Resource Division e-files and from our cursory inspection of the park's extensive retired central (administrative) files. We were provided with a digital copy of the park's administrative history draft report (in progress). We also obtained one critical park document via email: Master Deed Listing, Jan. 26, 1994, WNRA, Lands Division e-Files.

II. Online Records

1860 U.S. Census for Shasta County. We accessed digitized copies of the original handwritten sheets made by the census taker through Ancestry.com. The online records were a valuable check for a typescript transcription of the same thing, which is on file at the Shasta Historical Society.

General Land Office Records. We accessed nineteenth-century General Land Office survey plats, field notes, and land patents through the Bureau of Land Management website at glorerecords.blm.gov.

Note: numerous other online sources were located via Google searches. Articles that were located through Google searches and published online are listed in the footnotes and cited in Section III below. Numerous Google searches involved historical persons who are mentioned in the text. These searches often led to information collected and posted by genealogical researchers on websites such as Findagrave.com. This type of source material must be evaluated case by case but, on the whole, it is accurate or approximately so and helpful.

III. Sources Cited in the Footnotes Listed by Subject

General and Local Histories

Andrews, Alexander Robertson. "Horsetown." *The Covered Wagon* (1964): 3–11. Reprint of a work that was probably written around 1880.

Ballou, R. S. "The Story of Ono." *The Covered Wagon* (1955): 7–12, 26.

Bancroft, Hubert Howe. *History of California Vol. 4, 1840–1845; Vol. 21 of The Works of Hubert Howe Bancroft*. San Francisco: The History Company, Publishers, 1886.

_____. *History of California Vol. 7, 1860–1890; Vol. 24 of The Works of Hubert Howe Bancroft*. San Francisco: The History Company, Publishers, 1890. Chapter 14 on the Chinese and Chapter 18 on the Indians reflect the racist thinking of the period.

Bean, Walton. *California: An Interpretive History*, 2nd ed. 1968; New York: McGraw Hill, Inc., 1973. Solid though dated.

Bevill, Russell, and Elena Nilsson, with contributions by Donald L. Hardesty, Denise Bradley, and Lisa Westwood. *Cultural Resources Overview of the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California*.

Prepared for Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, National Park Service, U.S. Department of the Interior. Chico, CA: Mountain Anthropological Research and URS Corporation, 2001.

Camden, Charles. *The Autobiography of Charles Camden: Being a Synopsis of Main Occurrences in His Life from August, Eighteen Hundred and Thirty-Four up to May Nineteen Hundred, Written by Himself and Privately Published after his Death by His Family*. San Francisco, CA: private printing, 1916.

Chan, Sucheng, and Spencer Olin, eds. *Major Problems in California History*. Boston: Houghton Mifflin Company, 1997. Good source for historiography; useful for Chapters 2 and 8 in this study.

Dasmann, Raymond F. *The Destruction of California*. New York: The MacMillan Company, 1965. An early environmental history by a renowned conservation biologist.

Giles, Rosena A. *Shasta County: A History*. Oakland, CA: Biobooks, 1949. A rich source though dated.

Historical Research Associates, Inc. and Amphion Environmental, Inc. *Cultural Landscape Report, Part I, for Tower House Historic District in the Whiskeytown Unit of the Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California*. Report prepared for the National Park Service, 2001.

Holschuh, Dana L., Laura Burghardt, and Jonathan Damp. "Archeological Overview and Assessment of the Prehistory and History of Whiskeytown National Recreation Area." Report prepared for Whiskeytown National Recreation Area. Tucson, AZ: Harris Environmental Group, Inc., 2018.

Isenberg, Andrew C. *Mining California: An Ecological History*. New York: Hill and Wang, 2005. Valuable source for this project providing a thematic overview of California history. Covers various forms of natural resource exploitation. Especially strong for mining history.

Lawson, John D. *Redding and Shasta County: Gateway to the Cascades*. Northridge, CA: Windsor Publications, 1986. Local history by a longtime Redding journalist.

Lyons, Silas, ed. *Shasta County Memories: A Photographic History, 1800s–1930s*. Redding, CA: Record Searchlight, 2009.

McKinn, Hazel, ed. *Shasta County History: An Original California County*. Shasta, CA: Shasta County Book Commission, 1985.

Memorial and Biographical History of Northern California. Chicago: The Lewis Publishing Company, 1891. Uneven but rich in narrative details on some topics.

Paul, Rodman W. *The Far West and the Great Plains in Transition, 1859–1900*. New York: Harper & Row, 1988. Excellent western history survey by the dean of western mining historians.

- Peterson, Edward. "The Story of Anderson." *The Covered Wagon* (1962): 11–21.
- Rocca, Al M. *Where the Valley Meets the Mountains*. Carlsbad, CA: Heritage Media, 2001.
- _____. *Whiskeytown National Recreation Area: A History*. Redding, CA: Renown Publishing, 2010.
- Smith, Dottie. *The Dictionary of Early Shasta County History*. Cottonwood, CA: D. Smith, 1991.
- _____. "Registered Historic Places in Shasta County." 1996. Manuscript, Shasta Lake Heritage and Historical Society. Includes several two- to three-page entries on places or cultural features pertinent to this history.
- The State Register and Year Book of Facts: For the Year 1859*. San Francisco: Henry G. Langley and Samuel A. Morison, 1859. And other years. Statistics on industry primarily. https://books.google.com/vc/books?id=WaYYtQEACAAJ&pg=PP11&source=gb_s_selected_pages&cad=1#v=onepage&q&f=false.
- Toogood, Anna Coxe. *Historical Resource Study, Whiskeytown National Recreation Area, California*. Denver: National Park Service, Denver Service Center, 1978.
- Walsh, Madge Richardson. "A Tour of Some Historic Sites in Shasta County," *The Covered Wagon* (1999): 74–80.

Prehistory

- Anderson, M. Kat. *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*. Berkeley: University of California Press, 2005. A groundbreaking work in ethnobotany.
- _____, Michael G. Barbour, and Valerie Whitworth. "A World of Balance and Plenty: Land, Plants, Animals, and Humans in Pre-European California." *California History* 76, nos. 2–3 (1997): 12–47. Lead article in a special issue, *Contested Eden: California before the Gold Rush*.
- Bauer, William J. Jr. *California through Native Eyes: Reclaiming History*. Seattle: University of Washington Press, 2016. Discusses Native perspectives on the Indigenous environment, contact, and all phases of Native history down to the early twentieth century with a focus on three case studies of Pomo, Concow and Maidu, and Owens Valley Paiute.
- Bevill, Russell, and Elena Nilsson, with contributions by Donald L. Hardesty, Denise Bradley, and Lisa Westwood. *Cultural Resources Overview of the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California*. Report prepared for the National Park Service. Chico, CA: Mountain Anthropological Research and USR Corporation, 2001.

- Deitch, Matthew J., and G. Mathias Kondolf. "The Incendiary Mix of Salmon and Water in Mediterranean-Climate California." In *Sustainable Water: Challenges and Solutions from California*. Edited by Allison Lassiter. Oakland, CA: University of California Press, 2015.
- Deur, Douglas, Rochelle Bloom, Katie Wynia, and Jamie Hebert. *The Wintu Homelands of Clear Creek: Ethnographic Accounts of Whiskeytown National Recreation Area*. Report prepared for National Park Service. Portland, OR: Portland State University, 2020.
- DuBois, Cora. "Wintu Ethnography." *American Archaeology and Ethnology* 36 (1935–1939): 1–148.
- Emberson, Geri D. "Ethnographic Overview and Traditional Use Study of American Indian Affiliations within the Whiskeytown National Recreation Area." Report prepared for the National Park Service, 2000.
- Farber, Alfred. "Alternative Approaches to the Shasta Complex and Adjacent Expressions: Assemblages, Cultural Ecology, and Taxonomies." *Journal of California and Great Basin Anthropology* 7, no. 1 (1985): 75–88.
- Hildebrandt, William R., and Michael J. Darcangelo. *Life on the River: The Archaeology of an Ancient Native American Culture*. Berkeley, CA: Heyday Books, 2008.
- Hohenthal, W. D. "Adán Eduardo Treganza, 1916–1968." *American Antiquities* 34, no. 4 (1969): 462–66.
- Hoveman, Alice R. *Journey to Justice: The Wintu People and the Salmon*. Redding, CA: Turtle Bay Exploration Park, 2002.
- King, Jerome H., William R. Hildebrandt, and Sharon A. Waechter. *Cultural Resources Overview for Northwestern California*. Report prepared for Bureau of Land Management. Davis, CA: Far Western Anthropological Research Group, Inc., 2016.
- Kroeber, Alfred L. "Handbook of the Indians of California." *Bureau of American Ethnology Bulletin* 78. Washington, D.C.: Government Printing Office, 1925.
- LaPena, Frank R. "The Wintu." *Handbook of North American Indians*. William R. Surtevant, gen. ed., Vol. 8, *California*. Robert F. Heizer, vol. ed. (Washington, D.C.: Smithsonian Institution, 1978): 324–40.
- Lighthouse, Kent G., and Otis Parrish. *California Indians and Their Environment: An Introduction*. Berkeley: University of California Press, 2009.
- McEvoy, Arthur F. *The Fisherman's Problem: Ecology and Law in the California Fisheries, 1850–1980*. New York: Cambridge University Press, 1986.
- McKibben, Grace, and Carrie Dixon. "Wintu Texts." Edited by Alice Shepherd. *University of California Publications in Linguistics* 117. Berkeley: University of California Press, 1989.

- Moratto, Michael J. *California Archaeology*. Orlando, FL: Academic Press, Inc., 1984.
- Payen, Louis A., and R. E. Taylor. "Man and the Pleistocene at Potter Creek Cave, California." *The Journal of California Anthropology* 3, no. 1 (July 1976): 51–58.
- Shepherd, Alice. "Notes on the Wintu Shamanic Jargon." In *California Indian Shamanism*. Edited by Lowell John Bean. Menlo Park, CA: Ballena Press, 1992.
- Shipek, Florence. "The Shaman: Priest, Doctor, Scientist." In *California Indian Shamanism*. Edited by Lowell John Bean. Menlo Park, CA: Ballena Press, 1992.
- Sinclair, William J. "The Exploration of the Potter Creek Cave." *University of California Publications in American Archaeology and Ethnology* 2, no. 1 (1904): 1–27.
- Steward, Julian H. *Alfred Kroeber*. New York: Columbia University Press, 1973.
- Sundahl, Elaine. *Cultural Patterns and Chronology in the Northern Sacramento River Drainage*. Redding, CA: Shasta College Archeology Lab, 1992.
- _____, and Winfield Henn. "Borax Lake Pattern Assemblages on the Shasta-Trinity National Forests, North-Central California." *Journal of California and Great Basin Anthropology* 15, no. 1 (July 1993): 73–90.
- Theodoratus, Dorothea J. and Frank LaPena. "Wintu Sacred Geography." In *California Indian Shamanism*. Edited by Lowell John Bean. Menlo Park, CA: Ballena Press, 1992.
- Towendolly, Grant. *A Bag of Bones: The Wintu Myths of a Trinity River Indian*. Edited by Marcell Masson. Healdsburg, CA: Naturegraph Press, 1966.
- Waterman, T. T., and A. L. Kroeber. "The Kepel Fish Dam." *American Archaeology and Ethnology* 35 (1934–1943): 49–80.
- Whistler, Kenneth W. "Wintu Prehistory: An Interpretation Based on Linguistic Reconstruction of Plant and Animal Nomenclature." *Berkeley Linguistic Society Proceedings* 3 (1977): 157–74.
- Yoshiyama, Ronald M. "The Salmon." In *Journey to Justice: The Wintu People and the Salmon*. By Alice R. Hoveman. Redding, CA: Turtle Bay Exploration Park, 2002.
- Wintu**
- Akins, Damon B., and William J. Bauer, Jr. *We Are the Land: A History of Native California*. Oakland: University of California Press, 2021.
- Allen, Susan. "The Nome Lackee Indian Reservation." *Wagon Wheels* 17, no. 1 (February 1967): 21–34.
- Catton, Theodore. *American Indians and National Forests*. Tucson: University of Arizona Press, 2016. Chapters on the 1970s and 1980s highlight tribal interests in Northern California regarding protection of Indian burial sites and sacred sites.

- Chase-Dunn, Christopher, and Helly M. Mann. *The Wintu and Their Neighbors: A Very Small World-System in Northern California*. Tucson: University of Arizona Press, 1998.
- Christman, Laura. "The Story of Kate Camden: Native American in a Gold Rush Family." Whiskeytown National Recreation Area. At <https://www.nps.gov/whis/kate-camden.htm>.
- Cook, Sherburne F. *The Population of the California Indians, 1769–1970*. Berkeley: University of California Press, 1976.
- Curtin, Jeremiah. "Memoirs of Jeremiah Curtin." Edited by Joseph Shafer. In *Wisconsin Historical Publications Biography Series 2*. Madison: Wisconsin Historical Society, 1940.
- Deur, Douglas, Rochelle Bloom, Katie Wynia, and Jamie Herbert. "The Wintu Homelands of Clear Creek." Report prepared for National Park Service, Whiskeytown National Recreation Area, 2000. WNRA, Cultural Resource Division e-files.
- Emberson, Geri D. "Ethnographic Overview and Traditional Use Study of American Indian Affiliations within the Whiskeytown National Recreation Area, California." Report prepared for National Park Service, Whiskeytown National Recreation Area, May 2000. WNRA, Cultural Resource Division e-files.
- Guilford-Kardell, Margaret, and James Dotta. "Some Pre-Contact Shasta County Wintu Site Locations: A Correlation of Previously Unpublished Notes of Jeremiah Curtin and J. P. Harrington with Later Published, Recorded, and Unrecorded Data on the Dawpom, Winemem, Puidalpom, and Waimuk Areas of Wintu Population." Occasional Papers of the Redding Museum, No. 1 (December 1980).
- Heizer, Robert F. *They Were Only Diggers: A Collection of Articles from California Newspapers, 1851–1866, on Indian and White Relations*. Ramona, CA: Ballena Press, 1974.
- Hislop, Donald Lindsay. *The Nome Lackee Indian Reservation 1854–1870*. Chico, CA: Association for Northern California Records and Research, 1978.
- Hoveman, Alice R. With contributions by Frank LaPena, Elaine Sundahl, and Ronald M. Yoshiyama. *Journey to Justice: The Wintu People and the Salmon*. Redding, CA: Turtle Bay Exploration Park, 2002.
- Hurtado, Albert L. *Indian Survival on the California Frontier*. New Haven, CT: Yale University Press, 1988.
- Lindsay, Brendan C. *Murder State: California's Native American Genocide, 1846–1873*. Lincoln: University of Nebraska Press, 2012.
- Madley, Benjamin. *An American Genocide: The United States and the California Indian Catastrophe, 1846–1873*. New Haven, CT: Yale University Press, 2016.

- McTavish, Anne Kathryn. "The Role of Critical Cartography in Environmental Justice: Land-Use Conflict at Shasta Dam, California." Master's thesis, San Francisco State University, 2010.
- Norgaard, Kari Marie. "The Politics of Invasive Weed Management: Gender, Race, and Risk Perception in Rural California." *Rural Sociology* 72, no. 3 (2007): 450–77.
- Peterson, Michael R. "Cultural Resources Inventory Report for Rehab Katy Camden Gravesite." Report prepared for National Park Service, Whiskeytown National Recreation Area, September 2015, WNRA, Cultural Resource Division e-files.
- Prucha, Francis Paul. *The Great Father: The United States Government and the American Indians*. Abridged edition. Lincoln: University of Nebraska Press, 1984.
- Reséndez, Andrés. *The Other Slavery: The Uncovered Story of Indian Enslavement in America*. Boston: Houghton Mifflin, 2016.
- Smith, Dottie. *The History of the Indians of Shasta County*. Redding, CA: CT Publishing Company, 1995.
- Stobridge, William. *Regulars in the Redwoods: The U.S. Army in Northern California, 1852–1861*. Norman: University of Oklahoma Press, 1994.
- Stoddard, Michael. *The Nome Lackee Indian Reservation and Vincent Geiger*. Red Bluff, CA: Andrew Osborne, 1961.
- Towendolly, Grant. *A Bag of Bones: The Wintu Myths of a Trinity River Indian*, edited by Marcell Masson. Healdsburg, CA: Naturegraph Press, 1966.
- Trennert, Robert A. *Alternative to Extinction: Federal Indian Policy and the Beginnings of the Reservation System, 1846–1851*. Philadelphia, PA: Temple University Press, 1975.
- Winnemem Wintu Salmon Restoration Plan, McCloud River. At cawaterlibrary.net/wp-content/uploads/2017/05/Shasta_winnemem.pdf.

Before the Gold Rush

- Bush, C. C. "Name of River Should Be McLeod. . ." *The Covered Wagon* (1958): 28–30.
- Dunlap, Virginia Hawes. "Fort Reading Ranch and the Hawes Family." *The Covered Wagon* (1963): 22–24.
- Giffen, Helen S. *Man of Destiny: Pierson Baron Reading, Pioneer of Shasta County, California*. Edited by Eleanor Lee Templeman. Redding, CA: Shasta Historical Society, 1985.
- Gillis, Michael J., and Michael F. Magliari, eds. *John Bidwell and California: The Life and Writings of a Pioneer, 1841–1900*. Spokane, WA: Arthur H. Clark Company, 2003.

Haas, Lisbeth. "War in California, 1846–1848," *California History* 76, nos. 2–3 (Summer–Fall 1997): 331–55. Narrative of the fighting in California with a focus on the lesser-known story of Californio as well as native resistance. Part of a special issue, *Contested Eden: California before the Gold Rush*, containing other valuable articles.

Hafen, Leroy R., and Janet LeCompte, eds. *French Fur Traders and Voyageurs in the American West*. Spokane, WA: Arthur H. Clark Company, 1965–1972; Lincoln: University of Nebraska Press, 1997.

Hawgood, John A. "The Pattern of Yankee Infiltration in Mexican Alta California, 1821–1846." *Pacific Historical Review* 27, no. 1 (February 1958): 27–37.

Hunt, Anna. "Trappers in Shasta County." *The Covered Wagon* (1967): 17–30.

Maloney, Alice Bay, and John Work. "Fur Brigade to the Bonaventura: John Work's California Expedition of 1832–33 for the Hudson's Bay Company." *California Historical Society Quarterly* 22, no. 3 (September 1943): 193–222.

_____. "Hudson's Bay Company in California." *Oregon Historical Quarterly* 37, no. 1 (March 1936): 9–23.

_____. "Peter Skene Ogden's Trapping Expedition to the Gulf of California, 1829–30." *California Historical Society Quarterly* 19, no. 4 (December 1940): 308–16.

Merk, Frederick. *Manifest Destiny and Mission in American History*. New York: Vintage Books, a Division of Random House, 1963.

Morgan, Dale L. *Jedediah Smith and the Opening of the West*. Reprint. Lincoln: University of Nebraska Press, 1967.

Quint, California B. "Jedediah Strong Smith." *The Covered Wagon* (1960): 14–18.

Mining

Alzueta, Carlos. "Clear Creek Ditch Was the Name, Gold Was the Game." *The Covered Wagon* (1998): 61–66. Good source on this important cultural resource.

Aubury, Lewis E. "The Copper Resources of California." *Bulletin No. 23* of the California State Mining Bureau. Sacramento, CA: State Printing, 1902. Authoritative contemporary source on Shasta County's copper mining boom.

Averill, Charles V. "Gold Deposits of the Redding and Weaverville Quadrangles." *California Journal of Mines and Geology* 29, nos. 1–2. Sacramento: State Division of Mines, 1933. Descriptive of the state of mine sites within the area in the early 1930s.

Ballou, R. S. "The Iron Mountain Mine." *The Covered Wagon* (1963): 5–10.

_____. "The Story of Western Shasta," *The Covered Wagon* (1964): 12–18.

- Borthwick, J. D. *The Gold Hunters: A First-Hand Picture of Life in California Mining Camps in the Early Fifties*. ed. Horace Kephart. 1857; repr., New York: MacMillan Company, 1917. Colorful narrative travel account by an Englishman drawn to the gold rush.
- Brands, H. W. *The Age of Gold: The California Gold Rush and the New American Dream*. New York: Doubleday, 2002. Emphasis on cultural history and opinion leaders.
- Bruff, J. Goldsborough. *Gold Rush: The Journals, Drawings, and Other Papers of J. Goldsborough Bruff, April 2, 1849–July 20, 1851*. Edited by Georgia Willis Read and Ruth Gaines. 1944; California Centennial Edition, New York: Columbia University Press, 1949.
- Bloom, Khaled J. *Murder of a Landscape: The California Farmer-Smelter War, 1897–1916*. Norman, OK: Arthur H. Clark Company, 2010. Argues that the corporations won, the farmers and the environment lost.
- Brown, G. Chester. *Mines and Mineral Resources of Shasta County, Siskiyou County, Trinity County*. San Francisco, CA: State Printing Office, 1915. Valuable survey and inventory with brief histories on individual mines.
- Bush, Harry E. "The New Era of Mining in Shasta County." *The Covered Wagon* (1964): 37–39.
- California Conservation Commission. *Report of the Conservation Commission of the State of California*. Pertains to copper smelter smoke. Sacramento, CA: Friend Wm. Richardson, Superintendent of State Printing, 1912.
- California State Mining Bureau. "The Copper Resources of California." *Bulletin No. 50*, September 1908. Sacramento: California State Printing Office, 1908.
- Carter, Henry. "Mines and Miners of Shasta, Trinity, and Siskiyou Counties." *The Covered Wagon* (1966): 22–33.
- Davis-King, Shelly. *Bringing Water to the Mines: A Description of the Ditch System Built by Charles Camden in the Tower House District, Whiskeytown National Recreation Area, Shasta County, California*. San Francisco, CA: Architectural Resources Group, 2003.
- Eaton, Edna Behrens. "Charles Camden and the Tower House." *The Covered Wagon* (1970): 65–69. The author was a pioneer-family resident of Redding and Oro Fino mine owner and, with her son Judge Richard B. Eaton, a local historian.
- Eaton, Richard B. "Colonel William Magee, 1806–1892." *The Covered Wagon* (1965): 10–12. Biographical sketch of Charles Camden's later mining partner.
- Evans, Taliesin. "Hydraulic Mining in California," *The Century Magazine*, 25, no. 3 (January 1883): 323–38. A neutral, contemporary, journalistic, and descriptive account.
- Fairbanks, Harold W. "Geology and Mineralogy of Shasta County." In *Report of State Mineralogist for 1892*. Sacramento: California State Mining Bureau, 1893. Helpful but inferior to the surveys by Brown (1915) and Lydon and O'Brien (1974).

- Free, E. E. "Review: Report of the Selby Smelter Commission." *The Plant World* 19, no. 1 (January 1916): 23–25. Pursuant to investigations of copper smelting pollution in Shasta County.
- "French Gulch," <https://ohp.parks.ca.gov/ListedResources/Detail/166>.
- Fulton, Charles H. "Metallurgical Smoke," *Bulletin No. 84* of the U.S. Department of the Interior, Bureau of Mines. Washington: Government Printing Office, 1916. Follow-up to reports by J. K. Haywood pursuant to copper smelter pollution in Shasta County.
- Graton, L. C. "The Occurrence of Copper in Shasta County, California." In "Contributions to Economic Geology (Short Papers and Preliminary Reports). *Bulletin No. 1290* of the U.S. Geological Survey. Washington: Government Printing Office, 1909.
- Greenland, Powell. *Hydraulic Mining in California: A Tarnished Legacy*. Spokane, WA: Arthur H. Clark Company, 2001.
- Gritz, Galen. "Whiskeytown National Recreation Area Mill Creek and Crystal Creek Ditch Systems Engineering Report." July 23, 1997. Prepared by Golden State Survey Engineering, Sonora, CA. File report at WNRA.
- Gudde, Edwin G. *California Gold Camps: A Geographical and Historical Dictionary of Camps, Towns, and Localities Where Gold Was Found and Mined; Wayside Stations and Trading Centers*. Edited by Elisabeth K. Gudde. Berkeley: University of California Press, 1975. More breadth than depth. Short entries on each camp emphasize mine development more than community development.
- Haley, Charles Scott. "Gold Placers of California." *Bulletin No. 92* of the California State Mining Bureau. San Francisco: California State Printing Office, 1923.
- Hamusek-McGann, Blossom, Sandra S. Flint, Melinda Peak, and Barry A. Price. "Evaluation of 18 Historic Mines in the Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California." Report prepared for National Park Service by Applied EarthWorks, Inc. Fresno, CA, May 1999. WNRA, Cultural Resource Division e-Files.
- Hanemann, Michael, Caitlin Dyckman, and Damian Park. "California's Flawed Surface Water Rights," 52–82. In *Sustainable Water: Challenges and Solutions from California*. Edited by Allison Lassiter. Oakland: University of California Press, 2015. Good source on historical development of California's mix of appropriative and riparian water rights law.
- Harrison, Gerard F. "John William Harrison of Grizzly Gulch." *The Covered Wagon* (2002): 8–22.
- Haywood, J. K. "Injury to Vegetation and Animal Life by Smelter Wastes." *Bulletin No. 113* of the U.S. Department of Agriculture, Bureau of Chemistry. Washington: Government Printing Office, 1910. Contains information specific to Shasta County. The second of Haywood's two reports on the subject.

- _____. "Injury to Vegetation by Smelter Fumes." *Bulletin No. 89* of the U.S. Department of Agriculture, Bureau of Chemistry. Washington: Government Printing Office, 1905. Focus on Keswick smelter. The first of Haywood's two reports on the subject.
- Hill, Mary. *Gold: The California Story*. Berkeley: University of California Press, 1999. History written by a geologist. Useful perspective.
- Hotz, Preston E. "Geology of Lode Gold Districts in the Klamath Mountains, California and Oregon." *Bulletin No. 1290* of the U.S. Geological Survey. Washington: Government Printing Office, 1971.
- Kelley, Robert L. "The Mining Debris Controversy in the Sacramento Valley." *Pacific Historical Quarterly*, 25, no. 4 (November 1956): 331–46. Provides context. Nothing specific to Shasta County.
- Kett, William F. "Fifty Years of Operation by the Mountain Copper Company, Ltd. in Shasta County, California." *California Journal of Mines and Geology* 43, no. 1 (January 1947). Informative account by a former company manager.
- Limerick, Patricia Nelson. "The Gold Rush and the Shaping of the American West." *California History* 77, no. 1 (Winter 1998): 30–41.
- Lintz, Ed. "The Gladstone Mine: A 30-Year Fascination." *The Covered Wagon* (1995): 25–31.
- Lydon, Philip A. and J. C. O'Brien, *Mines and Mineral Resources of Shasta County, California* Sacramento: California Division of Mines and Geology, 1974. A brief but authoritative historical overview with some history of specific mines.
- MacMillan, Donald. "A History of the Struggle to Abate Air Pollution from Copper Smelters of the Far West, 1885–1933," Ph.D. dissertation, University of Montana, 1973. The historical narrative focuses on two places where the U.S. government found a federal interest in protecting nearby national forests from smelter fumes: Butte, Montana, and Shasta County.
- McWilliams, John. "Recollections of John McWilliams." *The Covered Wagon* (1995): 1–12.
- Munson, Marit K., and Eric W. Ritter. "The Clear Creek Ditch." Appendix 4 in "An Archaeological Inventory and Evaluation of Select West Redding Land Exchange Parcels, Shasta County." Typescript report prepared for the Bureau of Land Management, Redding, CA, May 1993.
- Miller, C. Keith, and Luther S. Clemmer. "Mineral Resources Inventory, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, Shasta County, California." 1984. WNRA, Cultural Resource Division e-Files. The authors, mining engineers with the NPS, identified forty-seven mines within the park area, listing each one by name and location.

- Mining and Scientific Press*. Major industry journal in the nineteenth and early-twentieth centuries. Somewhat searchable online. Specific articles are cited in the footnotes.
- O'Brien, Robert. *California Called Them: A Saga of Golden Days and Roaring Camps*. New York: McGraw-Hill Book Company, Inc., 1951. Breezy narrative history in the triumphalist vein.
- National Park Service. "Cultural Landscape Inventory, El Dorado Mine, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area, California." 2016. WNRA, Cultural Resource Division e-Files.
- Nielsen, Beatrice. "Twilight Comes to the Gladstone." *The Covered Wagon* (1965): 1–9.
- Paul, Rodman W. *California Gold: The Beginning of Mining in the Far West*. Cambridge, MA: Harvard University Press, 1947. Solid but dated. Helpful perspective on California's northern mining region compared with its central and southern mining regions.
- _____. *Mining Frontiers of the Far West*, rev. ed. New York: Holt, Rinehart, and Winston, Inc., 1963; Albuquerque: University of New Mexico Press, 2001. A classic work updated with chapters by Elliott West.
- Peters, Edward Dyer. *The Principles of Copper Smelting*. New York: Hill Publishing Co., 1907. Useful context with some specific references to the Keswick smelter.
- Rohrbaugh, Malcolm J. "The California Gold Rush as a National Experience." *California History* 77, no. 1 (Winter 1998): 16–29.
- Selvertson, Mark D., Mark K. Walker, and Samantha Dollinger. "Abandoned Mine Closures: Historic Properties Identification and Evaluation Report, Whiskeytown National Recreation Area, Shasta County, California." Report prepared for the National Park Service by Anthropological Studies Center, Sonoma State University. November 2021. WNRA, Cultural Resource Division e-Files.
- Street, Franklin. *California in 1850, Compared with what it was in 1849, with a Glimpse at its Future Destiny*, in *The Gold Mines of California: Two Guidebooks* (1851; repr., New York: Arno Press, 1973). Colorful contemporary source.
- U.S. Bureau of Mines. *Minerals Yearbook 1946*. Washington: Government Printing Office, 1947. And other years. Annual summary of production and major developments in each state and county. Successor to the U.S. Geological Survey's *Mineral Resources of the United States*.
- U.S. Geological Survey. *Mineral Resources of the United States, Calendar Year 1906*. Washington: Government Printing Office, 1907. And other years. Annual summary of production and major developments in each state and county.
- Walsh, Madge Richardson. "Gold Discovered on Clear Creek," *The Covered Wagon* (1998): 70–75.

- White, Richard. "The Gold Rush: Consequences and Contingencies." *California History* 77, no. 1 (Winter 1998): 42–55.
- Wright, Lewis T. "Contribution by Lewis T. Wright." In *Pyrite Smelting*. Edited by T. A. Rickard. New York: The Engineering and Mining Journal, 1905. Technical paper by one who was involved with copper smelting at Keswick.
- Young, Otis E. Jr. *Western Mining: An Informal Account of Precious-Metals Prospecting, Placering, Lode Mining, and Milling on the American Frontier from Spanish Times to 1893*. Norman: University of Oklahoma Press, 1970.

Lumbering

- Anonymous. "The Lumber Story." No date. Typescript. From Lumber Notebooks, Shasta Lake Heritage and Historical Society.
- Coggins, Arthur Lowell. "Looking Back." *The Covered Wagon* (1978): 6–7.
- Covington, Sid. "Whiskeytown National Recreation Area Geologic Resources Management Issues Scoping Summary." April 20, 2004. WNRA, Natural Resource Division e-Files.
- Detherow, Holly. "Logging in the North State Family and Regional History." *The Covered Wagon* (2012): 110–21.
- Freeman, Richard. "The EcoFactory: The United States Forest Service and the Political Construction of Ecosystem Management," *Environmental History* 7, no. 4 (October 2002): 632–58. National-level context on forest management policy in the environmental era.
- Johnson, Beulah. *Chips and Sawdust: A History of Sawmills, the Equipment They Used and the Towns That Built around Them*. Redding, CA: Shasta Historical Society, 1978. A short history of lumbering in Shasta County by one whose family was in the industry.
- Heinzel, Fred. "Lumbering in Shasta County." No date. Typescript. From Lumbering vertical file, Shasta Historical Society. Factual but not footnoted.
- Kerns, Becky K., Walter G. Thies, and Christine G. Niwa. "Season and Severity of Prescribed Burn in Ponderosa Pine Forests: Implications for Understory Native and Exotic Plants." *Ecoscience* 13, no. 1 (March 2006): 44–55. Contributing to the scientific debate around wildfire, ecosystem restoration, and climate change.
- Keyes, C. R., J. F. Plummer, S. Alton, C. Chambers, R. Glebocki, R. Jensen, H. Kuljian, C. Madden, C. Merideth, J. N. Peach, V. Shen, and K. Wright. "Brandy Creek Forest Restoration Demonstration Project, Whiskeytown National Recreation Area (California)." April 24, 2007. WNRA, Natural Resource Division e-Files.
- Leonzo, Carlos M. and Christopher R. Keyes, "Fire-Excluded Relict Forests in the Southeastern Klamath Mountains, California, USA," *Fire Ecology* 6, no. 3 (December 2010): 62–76. Focuses on Shasta Bally.

- _____. "Second-Growth Encroachment in Relictual Forest Ecosystems at Whiskeytown National Recreation Area, California." 2007. WNRA, Natural Resource Division e-Files.
- Litman, Laura, and Gary Nakamura. "Forest History." *Forest Stewardship Series 4*. Publication 8234. University of California, Division of Agriculture and Natural Resources, 2007. Concise overview pertinent to California's forests.
- Morgan, Todd A., Charles E. Keegan III, Thale Dillon, Alfred L. Chase, Jeremy S. Fried, and Marc N. Weber. "California's Forest Products Industry: A Descriptive Analysis." General Technical Report PNW-GTR-615 of the Pacific Northwest Research Station. Corvallis: OR: USDA Forest Service, 2004. An economic history, narrative and analytical.
- National Park Service. *Carr Fire After Action Review*. 2018. At https://wilfiretoday.com/documents/CARR_Fire_AAR.pdf.
- _____. *Fire Management Plan, Environmental Impact Statement, Whiskeytown National Recreation Area, Whiskeytown, California*. Washington, D.C.: National Park Service, 2004.
- _____. "Historic Vegetation of Whiskeytown: An Analysis of General Land Office Survey Data, 1866–1882." No date. WNRA, Cultural Resource Division e-Files.
- Orsi, Richard J. *Sunset Limited: The Southern Pacific Railroad and the Development of the American West, 1850–1930*. Berkeley: University of California Press, 2005. Contains pertinent information on the railroad company's land holdings, which included lands on Shasta Bally.
- Roy, William N., and David W. Braun. "La Moine Lumber and Trading Company: Narrow Gauge Logging on the Shasta-Trinity Divide." *Columbia River and Pacific Northwest Timberbeast*, Special Issue 28–29 (2013): 1–31.
- Shuford, Beth. "Logging in Shasta County." *The Covered Wagon* (1957): 34–36.
- Smith, Dottie. "Historic Data Inventory of the Shasta County Interlakes Special Recreation Management Area." Report prepared for the Bureau of Land Management and the Forest Service, 1995. Copy at Bureau of Land Management office, Redding, CA. Contains a bit about local lumberman Arthur Coggins. For more on Coggins, see newspaper stories cited in the footnotes.
- Steel, Zachary L., Hugh D. Safford, and Joshua H. Viers. "The Fire-Frequency-Severity Relationship and the Legacy of Fire Suppression in California Forests." *Ecosphere*. January 21, 2015. At <https://doi.org/10.1890/ES14-00224.1>. Contributing to the scientific debate around wildfire, ecosystem restoration, and climate change.
- Tomascheski, J. Bud. *Sierra Pacific, a Family History: From a Forester's Perspective*. Arcata, CA: Creative Type, 1991. Pertinent to Shasta County lumbering history.

Ward, Ethel Saxon. "Pioneering in Lumber Transportation." *The Covered Wagon* (1964): 32–36.

Water Development

Billington, David P. and Donald C. Jackson. *Big Dams of the New Deal Era: A Confluence of Engineering and Politics*. Norman: University of Oklahoma Press, 2006. A National Register of Historic Properties study, jointly conceived by the Bureau of Reclamation and the U.S. Army Corps of Engineers and prepared as a historical monograph.

Bureau of Reclamation. "Central Valley Project: General." At <https://www.usbr.gov/projects/index.php?id=506>.

_____. *Central Valley Project Studies, Problem 23, Recreational Administration*. Washington: Government Printing Office, 1947.

Carle, David. *Water and the California Dream: Historic Choices for Shaping the Future*. Berkeley, CA: Counterpoint, 2016. Written by a science writer and longtime California state park ranger.

Carr, Patrick. "Saga of the Iron Canyon/Table Mountain Dam Project." *The Covered Wagon* (2017): 65–80 and (2018): 45–68.

Clarke, Jeanne Nienaber, and Daniel McCool. *Staking Out the Terrain: Power Differentials among Natural Resource Management Agencies*. Albany: State University of New York Press, 1985. A strong analysis based on comparative histories of six federal agencies including the NPS and the BOR.

Committee on Interior and Insular Affairs. *Central Valley Project Documents Part One*. House Doc. No. 416. 1956.

_____. *Central Valley Project Documents Part Two*. House Doc. No. 246. 1957.

_____. *Trinity River Division, Central Valley Project, California: Letter from Secretary of the Interior Transmitting the Report and Findings on the Trinity River Division of the Central Valley Project, California, Pursuant to Section 9 (A) of the Reclamation Project Act of 1939 (53 Stat. 1187)*. House Doc. No. 53. 1953.

Crowe, Mary. "Shasta Dam." *The Covered Wagon* (1986): 8–24.

Davis, Katherine Carr. "Francis Carr and His Descendants." *The Covered Wagon* (1974): 60–64.

Deitch, Matthew J., and G. Mathias Kondolf. "The Incendiary Mix of Salmon and Water in Mediterranean-Climate California." In *Sustainable Water: Challenges and Solutions from California*. Edited by Allison Lassiter. Oakland: University of California Press, 2015.

- de Roos, Robert. *The Thirsty Land: The Story of the Central Valley Project*. Stanford, CA: Stanford University Press, 1948. A dated but fact-packed work.
- Dodd, Douglas. "Boulder Dam Recreation Area: The Bureau of Reclamation, the National Park Service, and the Origins of the National Recreation Area Concept at Lake Mead, 1929–1936," *Southern Historical Quarterly* 88 (Winter 2006–2007): 431–73. Critical analysis of the origins of the National Park Service and Bureau of Reclamation connection.
- Foster, Jonathan. *Lake Mead National Recreation Area: A History of America's First National Playground*. Reno: University of Nevada Press, 2016. Mostly favorable history of the national recreation area prototype.
- Gahan, Andrew H., and William D. Rowley. *Reclamation: Managing Water in the West. The Bureau of Reclamation: From Developing to Managing Water, 1945–2000*. Vol. 2. Denver, CO: Bureau of Reclamation, 2012.
- Galloway, J. D. "Engineering Advisory Committee Sacramento River Basin Investigations." July 1930. Copy in File: Central Valley Project, CRM Files, WNRA.
- Hays, Samuel P. *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890–1920*. (1959; reprint, Pittsburgh, PA: University of Pittsburgh Press, 1999). An environmental history classic. It centers the conservation movement in the rise of a technically proficient bureaucratic state that commenced with water reclamation in the West.
- Hattersley-Drayton, Karana. "Historical Resources Evaluation Report (HRER) for the Judge Francis Carr Powerhouse Substation, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area." Report prepared for Western Area Power Administration, August 15, 2017, and Trinity River Division (map and statistics), August 1980. File: Central Valley Project, CRM Files, WNRA.
- Hill, Clair A. "Water of Life: The Sacramento River." *The Covered Wagon* (1997): 6–9.
- Hundley, Norris Jr., *The Great Thirst: Californians and Water, A History*. Rev. ed., 1992; Berkeley: University of California Press, 2001. A sweeping history.
- Ingram, B. Lynn, and Frances Malamud-Roam. *The West without Water: What Past Floods, Droughts, and other Climatic Clues Tell Us about Tomorrow*. Berkeley: University of California Press, 2013. A recent work with an emphasis on California.
- Kelley, Robert. "Taming the Sacramento: Hamiltonianism in Action." *Pacific Historical Review* 34, no. 1 (February 1965): 21–49.
- Kennedy, Lawrence J. "Francis Carr, 1875–1944." *The Covered Wagon* (1944): 6–9.
- Lassiter, Allison, ed. *Sustainable Water: Challenges and Solutions from California*. Oakland: University of California Press, 2015. A recent and authoritative anthology.

- Lee, Lawrence B. "California Water Politics: Depression Genesis of the Central Valley Project, 1933–1944." *Journal of the West* 24, no. 4 (1985): 63–81.
- _____. "California Water Politics: Opposition to the CVP, 1944–1980." *Agricultural History* 54, no. 3 (July 1980): 402–23.
- Mitchell, Martin D. "Land and Water Policies in the Sacramento-San Joaquin Delta." *Geographical Review* 84, no. 4 (October 1994): 411–23.
- National Park Service. "Proposed Trinity and Lewiston Reservoirs, Trinity River Division, Central Valley Project (Ultimate Plan), Trinity County, California." Report prepared for the Bureau of Reclamation. December 1951. Copy in File: Central Valley Project, CRM Files, WNRA.
- Patten, Joseph E. "History of Clair A. Hill Whiskeytown Dam and Reservoir." *The Covered Wagon* (2006): 79–89. Valuable account by a central player.
- Robinson, Michael C. *Water for the West: The Bureau of Reclamation, 1902–1977*. Chicago: Public Works Historical Society, 1979. A thorough, national-level administrative history.
- Rowley, William D. *Reclamation: Managing Water in the West. The Bureau of Reclamation: Origins and Growth to 1945*. Vol. 1. Denver, CO: Bureau of Reclamation, 2006. Replacing Robinson above, a more recent national-level administrative history. See also Vol. 2 with co-author Andrew H. Gahan.
- Standley, Donna-Rae, and Al M. Rocca. "John F. Kennedy and His Visits to Shasta County." *The Covered Wagon* (2014): 69–75.
- Stene, Eric A. "The Central Valley Project: Controversies Surrounding Reclamation's Largest Project." At <http://www.riversimulator.org/Resources/USBR/ReclamationHistory/SteneEricA.pdf>.
- _____. "Trinity Division: Central Valley Project." Project history prepared for the Bureau of Reclamation, 1996.
- Stroshane, Tim. *Drought, Water Law, and the Origins of California's Central Valley Project*. Reno: University of Nevada Press, 2016.
- Shasta County Department of Water Resources. "Summary Report." Typescript prepared by Joseph E. Patten. October 1956. Copy at Redding Public Library.
- Smith, Thomas G. "John Kennedy, Stewart Udall, and New Frontier Conservation." *Pacific Historical Review* 64, no. 3 (August 1995): 329–62. Provides good context for Kennedy's dedication of Whiskeytown Dam. Smith wrote a full biography of Udall.
- Sumrak, Frank. "Whiskeytown Lake: Its Role in the Central Valley Project." *The Whiskeytown Generator* 3, no. 1 (1988).

- Swain, Donald C. "The Bureau of Reclamation and the New Deal, 1933–1940," *Pacific Northwest Quarterly* 61, no. 3 (July 1970): 137–46.
- United States Department of the Interior, National Park Service. *Report on Recreational Resources of the Denison Dam and Reservoir Project, Texas and Oklahoma*. Washington: Government Printing Office, 1943.
- Vileisis, Ann. *Discovering the Unknown Landscape: A History of America's Wetlands*. Washington: Island Press, 1997. A well-presented environmental history with helpful description of land and water in the Central Valley and Bay Area.
- Workers of the Writers' Program of the Work Project Administration. *The Central Valley Project*. Sacramento: California State Department of Education, 1942. An interesting contemporary source.
- Worster, Donald. *Rivers of Empire: Water, Aridity, and the Growth of the American West*. New York: Oxford University Press, 1985. An environmental history classic, which argues that California and much of the West is a "hydraulic society" organized around water development.
- Young, Walker R. "Report on Iron Canyon Project—California." In Paul Bailey and Walker R. Young, *The Development of the Upper Sacramento River*. Sacramento: California State Printing Office, 1928.

Community Development

- Anonymous. "The History of French Gulch." No date. Typescript. In Small Towns vertical file, Shasta Historical Society.
- Baker, Sydnie Marshall Apperson. "An Interview with Sydnie Marshall Apperson Baker." *The Covered Wagon* (1971): 40–41. Reprint of an interview conducted in the 1930s.
- Bisbee, Cliff M. "Cradle Days of Shasta Schools." *The Covered Wagon* (1955): 17–21.
- Chase, Don M. *Pioneers: Sketches of Pioneer Days in Shasta, Tehama, Trinity and Siskiyou Counties with Emphasis on the Beginnings of Religious Organizations*. Redding, CA: Don M. Chase, 1945.
- De León, Arnoldo. *Racial Frontiers: Africans, Chinese, and Mexicans in Western America, 1848–1890*. Albuquerque: University of New Mexico Press, 2002.
- Davis-King, Shelly. *Bringing Water to the Garden: A Description of Two Ditches in the Tower House Historic District, Whiskeytown National Recreation Area, Shasta County, California*. Report submitted to National Park Service. Standard, CA: Davis-King and Associates, 1997.
- Eaton, Richard Behrens. "Charles H. Behrens: Sheriff of Shasta County, 1899–1903." *The Covered Wagon* (1979): 57–59.

- Ellis, Gene, and Frank Kester. "Uncle Sam Sobers Whiskeytown." *True West Magazine* (October 1962): 36–38.
- Frank, B. F., and H. W. Chappell. *History and Business Directory of Shasta County*. Redding, CA: Redding Independent Book and Job Printing House, 1881.
- Frisbie, Mabel Moores. "French Gulch Reminiscences." *The Covered Wagon* (1982): 85–87.
- _____. "Friends and Neighbors: We were all Foreigners in French Gulch." *The Covered Wagon* (1949): 8–10.
- _____, and Jean Moores Beauchamp. *Shasta: The Queen City*. San Francisco: California Historical Society for the Shasta Historical Society, 1973.
- Grotefend, August. "The Diary of August Grotefend, 1849–1853." *The Covered Wagon* (1993): 29–38.
- Hodgins, Elsie L., Edna L. Barr, and Della S. Kidder. "The Story of William Samuel and Mary Elizabeth Kidder," *The Covered Wagon* (1961): 5–9.
- Holmquist, Linnea. "The Shurtleff Mansion." *The Covered Wagon* (1964): 26–29.
- Mann, Ralph. *After the Gold Rush: Society in Grass Valley and Nevada City, California, 1849–1870*. Stanford, CA: Stanford University Press, 1982. Comparative analysis of two hard-rock mining towns.
- Norton, Ileene Blattner, and Susan Norton Short. "Whisky-Town 1800's Volume 1," extracts from the *Shasta Courier* newspaper, in spiral binding, Shasta Lake Heritage and Historical Society. Valuable compilation of transcribed short newspaper articles by a mother and daughter team who were former residents of Whiskeytown.
- Ritter, Eric W., James Barnes, and Barbara Woodrum. *Frank and Lena's Neighborhood: Historical Archaeology in Rural Early 20th Century Northern California*. Cultural Resources Publications—Archaeology/History. Redding, CA: Bureau of Land Management, 2014.
- Romeyn, Danica. "Whiskeytown Women's Improvement Club." *The Covered Wagon* (2015): 146–51.
- Ross, Albert F. "Whiskeytown." *The Covered Wagon* (1982): 36–56. Reprint of an article written in 1963.
- Satorius, Veronica, comp. *Between the Lines: The Catholic Church in Shasta County, California, 1853–1977*. Eureka, CA: Veronica Satorius, 1978.
- Shuford, Beth. "Legends and Stories Told Me When Cataloguing Lone Graves and Abandoned Cemeteries." *The Covered Wagon* (1963): 38–41.
- Shurtleff, Benjamin. "Shasta." *Covered Wagon* (1957): 5–12.
- Sunde, C. H. "The Thompson Family." *The Covered Wagon* (2003): 95–98.

- Sullivan, Sister Jeanne. "A French Family in French Gulch." *The Covered Wagon* (1973): 41–50.
- Thompson, Peggy. "Igo and Ono." May 15, 1972. Typescript. From Small Towns vertical file, Shasta Historical Society.
- Tuggle, Jeremy M. "A History of Ono." *The Covered Wagon* (2003): 22–27.
- Walsh, Henry L. "Hallowed Were the Gold Dust Trails." *The Covered Wagon* (1962): 7–10.
- Weissberg, Al. "Pioneer Jewish Families of Shasta County." *The Covered Wagon* (1985): 34–36.
- White, Richard. *"It's Your Misfortune and None of My Own": A New History of the American West*. Norman: University of Oklahoma Press, 1991. Includes pithy sections on the mining frontier and community development.
- Wyman, Mark. *Hard Rock Epic: Western Miners and the Industrial Revolution, 1860–1910*. Berkeley: University of California Press, 1979. Strong on labor history, technological changes and the work environment, and the general miner experience, but this book does not feature northern California.
- Young, Elliott. *Alien Nation: Chinese Migration in the Americas from the Coolie Era through World War II*. Chapel Hill, NC: University of North Carolina Press, 2014. A newer study drawing on recent scholarship and emphasizing a transnational perspective.

Chinese

- Grifantini, Michael C. "The 1880 County Census and Characteristics of Minorities." *The Covered Wagon* (2016): 113–30.
- Hart, William. "The Chinese in Shasta and Weaverville." *The Covered Wagon* (2006): 18–25.
- Houston, A. W. "Chinese Gold Diggers." *The Covered Wagon* (May–June 1946): 37–38.
- Shasta Historical Society. "The Chinese Chronicles of Shasta County." *The Covered Wagon* (1985): 76–82. A compilation of contemporary newspaper stories.
- Smith, Dottie. *The History of the Chinese in Shasta County*. Redding, CA: CT Publishing Co., 1995.
- Tsai, Shih-shan Henry. *The Chinese Experience in America*. Bloomington: Indiana University Press, 1986. Solid but dated.
- "Weaverville Joss House State Historic Park," at https://www.parks.ca.gov/?page_id=457.

Transportation

- Bethel, A. C. W. "The Golden Skein: California's Gold Rush Transportation Network." *California History* 77 no. 4 (Winter 1998–1999): 250–75.
- Cage, R. A. "The Lowden Empire: A Case Study of Wagon Roads in Northern California." *The Pacific Historian* 28, no. 2 (Summer 1984): 33–48.
- Caltrans. *A Historical Context and Methodology for Evaluating Trails, Roads, and Highways in California*. Prepared for Cultural Studies Office, Division of Environmental Analysis, California Department of Transportation. Sacramento: California Department of Transportation, 2016.
- Carey, Teresa Maxwell. "A Stage Ride to Pineland." *The Covered Wagon* (1995): 59–64.
- Colby, W. H. "A Century of Transportation in Shasta County, 1821–1920." *Occasional Publication No. 7* (1982). Association for Northern California Records and Research, Chico, CA.
- Cross, R. H. "The Early Inns of California—Shasta County." March 1, 1941. Typescript. Shasta Historical Society.
- Eaton, Edna Behrens. "Charles Camden and the Camden Toll Road." *The Covered Wagon* (1960): 8–13.
- Hertz, A. J. "A Group of Northern California Expresses," *Western Express: Research Journal of Early Western Mails* 11, no. 4 (October 1961): 20–28.
- Livingston, Robert D. "Early Expresses in Shasta, Trinity, and Siskiyou Counties." *Western Express: Research Journal of Early Western Mails* 47, no. 2 (June 1997): 6–31.
- Masterson, Grace Grattan Masterson. "Cattle Drives of the Eighties and Nineties." *The Covered Wagon* (1963): 18–21.
- McGowan, Joseph Aloysius. "Freighting to the Mines in California, 1849–1859." Ph.D. dissertation, University of California, 1949.
- Nielsen, Beatrice W. "The Saga of a Trail." *The Covered Wagon* (1969): 8–41.
- Paige, Charles L. "My Ride with Colonel William Magee." *The Covered Wagon* (1965): 13–14.
- Reed, Charles Franklin. "Autobiography of Charles Franklin Reed of Keswick, 1880–1962." *The Covered Wagon* (2000): 48–51.
- Rocca, Al M. *Shasta County in the Early 20th Century: The Coming of the Automobile and Other Events, 1900–1910*. Chico, CA: Renown Publishing Company, 2015. Based largely on local newspaper stories from the period.

Scott, Edwin, comp. *California to Oregon by Trail, Steamboat, Stagecoach, and Train 1850–1887*. Pasadena, CA: produced as a class project, by the printing students of Pasadena City College, 1976.

Signor, John R. *Rails in the Shadow of Mt. Shasta*. Burbank, CA: Howell-North Books, 1982.

Southern, May H. "George Furman." *The Covered Wagon* (1970): 34–36.

Toogood, Anna Coxe, and David G. Henderson. *Historic Structure Report: Tower House Historic District, Historical and Architectural Data Section, Whiskeytown National Recreation Area, California*. Denver: National Park Service, 1973.

Wilder, Mona. "Early Trails of Shasta County." *The Covered Wagon* (1971): 55–59.

Recreation and Park Management

Aron, Cindy S. *Working at Play: A History of Vacations in the United States*. New York: Oxford University Press, 1999. Good background on the rise of outdoor recreation with an emphasis on class identity.

Brinkley, Douglas. *The Wilderness Warrior: Theodore Roosevelt and the Crusade for America*. New York: Harpers Collins, 2009.

Butcher, Devereux. "Our National Parks in Jeopardy: Resorts or Wilderness?" *Atlantic Monthly* 207 (February 1961): 45–51.

California Department of Forestry and Fire Protection. *100 Years of CDF*. Paducah, KY: Turner Publishing Company, 2005.

Carr, James K. "A Brief History of the Whiskeytown National Recreation Area, September 22, 1979." *Covered Wagon* (2004): 60–65. An interview with Carr in 1979.

Catton, Theodore. *National Park, City Playground: Mount Rainier in the Twentieth Century*. Seattle: University of Washington Press, 2006.

Committee on Interior and Insular Affairs. *Whiskeytown-Shasta-Trinity Recreation Area: Hearing Before the Subcommittee on Parks and Recreation of the Committee on Interior and Insular Affairs United States Senate*. 89th Cong., 1st sess. 1965.

De Voto, Bernard. "Let's Close the National Parks." *Harper's Magazine* (October 1953): 49–52.

Dulles, Foster Rhea Dulles, *A History of Recreation: America Learns to Play*. 1940; 2nd ed., New York: Appleton-Century-Crofts, 1965. Good early history and a good time capsule of the field in 1940.

Everhart, William C. *The National Park Service*. New York: Praeger Publishers, 1975.

- Foresta, Ronald A. *America's National Parks and Their Keepers*. Washington: Resources for the Future, Inc., 1984.
- Hjelte, George. *The Administration of Public Recreation*. New York: The MacMillan Company, 1940. Good contemporary source reflecting developments in the 1930s.
- Hyde, Anne F. "From Stagecoach to Packard Twin Six: Yosemite and the Changing Face of Tourism, 1880–1930." *California History* 69, no. 2 (Summer 1990): 154–69. Focus on central California.
- Jaakson, Reiner. "Zoning to Regulate On-Water Regulation." *Land Economics* 47, no. 4 (November 1971): 382–91.
- Janssen, Volker. "Convict Labor, Civic Welfare: Rehabilitation in California's Prisons, 1941–1971." Ph.D. dissertation, Department of History, University of California San Diego, 2005.
- Jennings, Gayle, ed. *Water-Based Tourism, Sport, Leisure, and Recreation Experiences*. Burlington, MA: Elsevier, 2007.
- Kosmider, Holly Maupin. "Life on the Homestead: The Maupin Family of the Bald Hills." *The Covered Wagon* (1990): 21–35.
- Krahe, Diane L., and Theodore Catton. *Little Gem of the Cascades: An Administrative History of Lassen Volcanic National Park*. Report prepared for the National Park Service. Missoula: University of Montana, 2010.
- Krog, Carl E. "'Organizing the Production of Leisure': Herbert Hoover and the Conservation Movement in the 1920s." *The Wisconsin Magazine of History* 67, no. 3 (Spring 1984): 199–218.
- Landrum, Ney C. *The State Park Movement in America: A Critical Review*. Columbia: University of Missouri Press, 2004.
- Lenorovitz, David R., Edward W. Karnes, and Brian Haygood. "Personal watercraft (PWC) Injury Hazards—Analyses, Technical Advancements, and Continuing Safety Challenges." *Theoretical Issues in Ergonomics Science* 21, no. 3 (2020): 285–311.
- Mackintosh, Barry. *Interpretation in the National Park Service: A Historical Perspective*. Washington, D.C.: National Park Service, 1986.
- Milestone, Jim F. *From the White House to Whiskeytown: An Administrative History of the Creation of Whiskeytown National Recreation Area*. Whiskeytown, CA: National Park Service, 2003.
- Nash, Roderick Frazier. *Wilderness and the American Mind*. 1967, 4th ed.; New Haven, CT: Yale University Press, 2001. A classic work.
- National Park Service. *Final Master Plan, Whiskeytown Unit, Whiskeytown/Shasta/Trinity National Recreation Area*. Denver: National Park Service, Denver Service Center, 1976.

- _____. *Foundation Document, Whiskeytown National Recreation Area, California*. Whiskeytown, CA: National Park Service, July 2014.
- _____. *General Management Plan and Environmental Impact Statement, Whiskeytown Unit, Whiskeytown-Shasta-Trinity National Recreation Area*. Oakland, CA: National Park Service, Pacific West Region, 1999.
- _____. *The Shasta-Trinity Trail Plan and Environmental Assessment*. Whiskeytown, CA: National Park Service, 2005.
- Pomeroy, Earl. *In Search of the Golden West: The Tourist in Western America*. New York: Alfred A. Knopf, 1957. A classic early work on the subject.
- Rectenwald, Harry. "Salmon Runs of Clear Creek." *The Covered Wagon* (2001): 72–73.
- Rothman, Hal K. "'A Regular Ding-Dong Fight': Agency Culture and Evolution in the NPS-USFS Dispute, 1916–1937," *Western Historical Quarterly* 20, no. 2 (May 1989): 141–62. Weighs the two agencies' strengths and weaknesses in that period.
- Runte, Alfred. "Pragmatic Alliance: Western Railroads and the National Parks." *National Parks and Conservation Magazine* 48 (April 1974): 14–21. Of peripheral interest to Shasta County.
- Sax, Joseph L. *Mountains without Handrails: Reflections on the National Parks*. Ann Arbor: University of Michigan Press, 1980. Pithy and insightful history and meditation by an influential law professor.
- Shaffer, Marguerite S. *See America First: Tourism and National Identity, 1880–1940*. Washington: Smithsonian Institution, 2001. Insightful on the early years of the National Park System.
- Shankland, Robert. *Steve Mather of the National Parks*. New York: Alfred A. Knopf, 1954. Still the only full biography.
- Simpson, Sean, Great Basin Institute. "Post-Carr Fire Archaeological Inventory at Whiskeytown National Recreation Area, Shasta County, California." Draft report prepared for Whiskeytown National Recreation Area, September 7, 2022. WNRA, Cultural Resource Division e-files.
- Strandlund, Dick. "A Slice of Shasta Lake's Recreation History." *The Covered Wagon* (1988): 26–35.
- Superintendent's Annual Report for 1973. NPS history files, Harper's Ferry Center, Harper's Ferry, West Virginia. And other years. Fairly complete coverage for 1970s and 1980s and sporadic coverage through 2001.
- Sutter, Paul. *Driven Wild: How the Fight against Automobiles Launched the Modern Wilderness Movement*. Seattle: University of Washington Press, 2002.

- Uenuma, Francine. "The History of California's Inmate Firefighter." *Smithsonian Magazine*, September 1, 2022. At <https://smithsonianmag.com/history/the-history-of-california-s-inmate-firefighter-180980662/>.
- U.S. Senate. *National Conference on Outdoor Recreation*. 68th Cong., 2d sess., S. Doc. No. 229. 1925.
- Walsh, Madge Richardson. "A History of Saeltzer Dam (aka Townsend Dam). *The Covered Wagon* (2001): 55–71.
- White, G. Edward. *The Eastern Establishment and the Western Experience; The West of Frederic Remington, Theodore Roosevelt, and Owen Wister*. New Haven, CT: Yale University Press, 1968.
- Williams, Gerald W. *The USDA Forest Service: The First Century*. Washington: United States Department of Agriculture, Forest Service, 2000.
- Wilson, Kirke. "Conservation or Recreation: Our Swarming National Parks." *The Nation* 198 (April 20, 1964): 391–95.
- Young, Terence. *Heading Out: A History of American Camping*. Ithaca, NY: Cornell University Press, 2017.

IV. Contacts

In addition to the staff at Whiskeytown National Recreation Area and the many archivists and librarians who helped us at the facilities listed in Section I, we contacted the following people for information pertinent to this study:

Josh Bradford, museum curator, Redwood National and State Parks Archives.

Tami L. Corn, Northern California Area Office, Bureau of Reclamation.

Don Jackson, grandson of Jake Jackson and historical museum docent, Weaverville.

Janet Landles, granddaughter of Arthur Coggins, Whiskeytown.

Glendee Ane Osborne, Whiskeytown National Recreation Area, Whiskeytown.

Matt Padilla, forest archeologist, Shasta-Trinity National Forest.

Eric W. Ritter, archeologist, Bureau of Land Management, Redding.

Heidi K. Rogers, forester, Bureau of Land Management, Redding.

Rodney Rogers, resident, French Gulch.

Nancy Russell, Harpers Ferry Center.

Index

- A. A. Lindsay and Associates, 125
- A. Teichert and Son, Inc., 197
- abandoned mine closures, 379
- Abbot, Henry L., 307
- accelerating climate change, risks from, 372
- Achumawi speakers, 13
- Act for the Government and Protection of Indians, 269
- Act to Establish the Whiskeytown-Trinity-Shasta National Recreation Area, 153
- Adams and Company, 310
- Advisory Council of Historic Preservation, 300
- Afterthought Copper Company, 113
- Afterthought Mine, 113, 126
- The Age of Gold: The California Gold Rush and the New American Dream* (Brands), 73
- Albers, John P., 131–133
- Alcatraz Island action (1969), 297
- Alexander, Ida L., 281
- Alexander McLeod, 46–47
- Alta California, 41–43
 - private rancho, 44
 - Russian interest in, 43
 - Spain and, 43–45
 - Spanish colonization of, 44
- Alta Express Company, 310
- Alturas Sailboat Club, 204
- Alzueta, Carlos, 84
- American Indian Liaison Office (NPS), 300
- American Indian Religious Freedom Act, 299
- Anderson, California, 145–146, 326
- Anderson, M. Kat, 26–27
- Anderson Moulding Company, 146
- Andrews, Alexander Robertson, 56–59
- Anti-Chinese Society, 278–279
- anti-monopolist conservationism ideology, 171
- anti-monopolist ideology, 171
- Anti-Saloon League, 281
- Appropriations Act of 1863, 287
- Archaeological/Historical Consultants, 19
- archeological, archeological investigations, 17
- archeological resources, 9–15
 - Holocene, 11
 - Potter Creek Cave, 10
- archeological surveying, post-Carr Fire, 376
- archeology, 11–19
 - archeological surveys, 17
 - cultural chronology, 11–12. *see also individual patterns*
 - cultural sequence of area, 9–10
 - human habitation (Holocene), 11
 - human occupation, 9
 - salvage archeology in Clear Creek Drainage, 16–17
- Argüello, Luis Antonio, 44
- arrastra milling, 101, 103–104, 136
- Aubury, Lewis E., 111
 - Shasta copper output, 1900, 111
- Augustine Pattern, 15
- Auling, Moise, 101
- automobile clubs
 - Shasta County, 331
 - and state highway development, 334
- automobiles and road development, 69–71, 329–334
 - automobile accident, 1908, 332–333
 - automobile clubs in Shasta County, 331
 - California state highway development, 333
 - demand for investment in Shasta County, 332, 333
 - demand for public investment in, 331
 - effect on road improvement responsibilities, 331
 - first cars in Shasta County, 330–331
 - and growth of outdoor recreation, 340
 - lateral highway development, 333
 - Los Angeles County, 1920s, 329
 - ownership rates, 1940s, 329–330
 - Redding-Eureka lateral highway, 333–334
 - U.S. Forest Service embrace of, 339
 - workforce segregation, 334
- Averill, Charles, 128
- Babcock, R. C., 317
- A Bag of Bones: The Wintu Myths of a Trinity River Indian* (Towendolly and Masson), 22
- Bailey, Jim, 377
- Baird, Spencer F., 290
- Baker, M. D., 131
- Baker, Suzanne, 17, 19
- Baker, Sydnie Marshall Apperson, 252n34, 277, 279

- Balaklala Consolidated Copper Company, state suit for smelting damage, 119–120
- Balaklala Mine, 113
- Balaklala Smelter, 121
- Bald Hills Express, 310
- Balma, Rudy, 206
- Banghart Mine, 101, 103
- Barbour, George W., 285
- Barnum & Bailey Circus, 330
- Batavia House, 323
- Bates, Mr., 318
- Bavanda, M. J., 197
- Beale, Edward F., 287
- Bean, Walton, 44, 329
- Bear Flag Revolt, 53–54
- bears
 - black bears in park, 358
 - California grizzly bear, 98
- Benet, Stephen Vincent, 205
- Bevill, Russell, 4
- Bible, Alan, 204
- Bickford, Frank C., 132
- Bickford, Laura, 132
- bicyclists, 331
- Bidwell, John, 51–52
- Bidwell-Bartleson party, 51
- Big Bend, California, 140
- Billington, David P., 178–179
- Black, S. P., 323
- Black Tom Mine, 103
- Bloxham, Carla, 205
- boat marinas, 1
- BOR. *see* Bureau of Reclamation
- Borax Lake Pattern
 - Clear Creek hunting camps, 17
 - climate and environment, 12
 - social organization, 11–12
- Borax Lake site, 11
- Boulder Lake and Boulder Dam, 175, 194, 341. *see also* Hoover Dam; Lake Mead and Hoover Dam
- bounties on Indian people, 63–64
- Boyce, John, 311
- Boyd, Don, 206
- Brands, H. W., 73
- Brandy Creek
 - additional recreation facility development, 352
 - marinas, 353
 - recreation facilities at Whiskeytown Lake, 351
- Brewer, William H., 167
- Brown, G. Chester, 100, 112
- Brown, Jerry, 299
- Brown, Pat, 203, 365–366
- Brown, Pauline, 252, 255n40, 259
- Brown's Express, 310
- Brown's House, 315
- Buckeye Mining District, 248
- Buckhorn Bally, 152
- Bully Hill Mine, 112–113, 126
- Bureau of Ethnology, 291
- Bureau of Land Management, role in developing Whiskeytown-Shasta-Trinity National Recreation Area, 349
- Bureau of Outdoor Recreation, role in developing Whiskeytown-Shasta-Trinity National Recreation Area, 349
- Bureau of Reclamation, 176, 177
 - Clear Creek Alternates, 188
 - field office at Whiskeytown Lake, 352
 - Francis Carr Powerhouse, 377
 - partnership with Forest Service, 351
 - partnership with National Park Service, 341, 343, 351
 - role in developing Whiskeytown-Shasta-Trinity National Recreation Area, 349
 - role in salmon restoration, 359
 - and Trinity River Division, 183–186
- Burke Act of 1906, 294
- Burnett, Peter, 63
- Cachuma reservoir, 344
- California
 - effect of the railroad, 101–102
 - emigration to, 51–53
 - formation of a provisional government, 54–55
 - Indigenous people of, 9–11, 38–40. *see also* Wintu people
 - Indigenous population, pre-contact, 38–40
 - lack of legal protections for Native peoples, 62–64
 - movement for statehood, 246
 - slavery and, 54
 - “terrible seventies,” 101–102
 - territorial law regarding native people, 62–63
- California and Oregon Railroad Company, 325

- California and Oregon State Company, stagecoach, 218
- California Debris Commission, 168
- California Division of Forestry, 365
 - use of prison labor to fight fire, 365–366
- California Gold Rush, 3
 - Clear Creek population, 68
 - demand for lumber, 136–137
 - emigrant wagon trails, 68
 - population and demographics, 67–68
 - sea paths, 69
 - and the Wintu, 55–65
- California gold rush historiography, 71–75
 - cultural impact, 73
 - demographic diversity, 73
 - environmental impact, 73
 - mining frontiers, 72
- California Gold: The Beginning of Mining in the Far West* (Paul), 71–72
- California Highway Commission, 333, 334
- California Indians and Their Environment* (Lightfoot), 27
- California Indians, late 1960s to present day, 296–303
 - Alcatraz Island action (1969), 297
 - California Native American Cultural, Historical, and Sacred Sites Act, 299
 - lack of land in trust, 299
 - occupation of Shasta National Forest, 297
 - occupation of Toyon, 297–298
 - racial reckoning in California, 298–299
- California Native American Cultural, Historical, and Sacred Sites Act, 299
- California oligarchs, 45
- California Stage Company, 309–310, 316, 318, 323
- California State Parks Department, rejection of NPS
 - Whiskeytown plan, 345
- California state water plan development, 174
- California Trail, 68
- California water law development, 92
- California–Oregon Stage Road, 307, 317
- California–Oregon Trail, 306–307, 308
- “California’s Greatest Opportunity” (Marshall), 172
- Camden, Ada, 269
- Camden, Charles, 2, 69–71, 85–90, 259
 - Camden Turnpike Company, 319
 - Clear Creek, Lower Springs claim, 87
 - discovery of a dead Chinese man, 264
 - ditch building, 85
 - early days in Shasta County, 85
 - early life, 85–86
 - El Dorado Mine, 132
 - experience with slave labor, 269–270
 - family portrait, 223, 270
 - gold fever, 86–88
 - investment in Camden Toll Road, 319
 - involvement with Camden Toll Road, 317, 319–320
 - iron mining, 107
 - long tom, 88–89
 - marriage to Tower’s sister, 89
 - Mill Creek sawmill, 89, 136
 - mining around Upper Clear Creek, 88–89
 - Olney Creek claims, 87
 - partnership with Sallee and Magee, 107
 - photograph, 215, 216
 - purchase of Tower House and Ranch, 315
 - roadside robbery of, 263
 - sale of Tower House, 316–317
 - settling at Upper Clear Creek, 88
 - thrift, 243
 - “town site taking,” 86
 - travel to Shasta with Luckey, 87
 - travels with Tower, 86–87
 - upper ditch from Crystal Creek, 89–90
 - water entrepreneurship, 89–90
 - wedding to Philena Tower, 313–314
 - work ethic, 88
- Camden, Charles and Philena, 255n40
- Camden, Grace, 270
- Camden, Jason, 313–314
- Camden, Kate, 223, 224, 269
 - Camden family photograph, 223
 - in census data, 270
 - death of, 271
 - indenture with the Camdens, 269–271
 - photographs of, 270
- Camden, Philena *née* Tower, 269, 270, 313
- Camden House, 1, 2, 232, 328
 - barn, 234
 - caretaker house, 233, 234
 - Carr Fire damage, 159
 - saved during Carr Fire, 373
- Camden House orchard, Carr Fire damage, 159
- Camden Orchard, post-Carr fire, 233, 374
- Camden Sawmill, 216
- Camden Toll Road, 3, 317, 319
 - acquisition by Shasta County Board of Supervisors, 333
 - described, 320
 - horse- drawn vehicle accident, 1908, 332
 - rate per head of cattle, 328
 - rates, 319

- Camden Water Ditch Trail, 89
 - interpretive panels about water use, 6
- Camden's water ditch
 - along Mill Creek, 89–90
 - restoration of, 357
- Camden-Tower House Historic District, 1
 - archeological investigations, 17
 - and Carr Fire, 373–374
 - Carr Fire damage, 159
 - restoration of orchard, 357
 - Tower House archeological investigation, 19
 - water conveyance system, 85
- Camden-Tower House Historic District prehistoric sites, CA-SHA-192 (CA-SHA-192/479), 17, 19
- Caminetti Act (1893), 92–93, 94, 129, 168
- campgrounds, 1
- Carey Act, 170
- Carey Act of 1894 (U.S.), 169
- Carr, Francis, 182
- Carr, J. E., 318
- Carr, James K., 180, 182–183, 188
 - role in developing WNRA, 347–348
- Carr, Laurence, 202, 206
- Carr Fire (2018), xiv–xv, 5, 6, 7, 159
 - bridges across the park, 371
 - Camden House, 159
 - Camden House orchard, 159, 374
 - Camden Toll Bridge, 371
 - Camden-Tower House Historic District, 159, 373–374
 - Crystal Creek Boys' Camp, 159, 371
 - damage inside WNRA, 159
 - El Dorado Mine, 159
 - employee residences, 371
 - lidar survey of burn scar inside park, 372
 - NEED camp cabins, 371
 - Oak Bottom Marina, 371
 - scorched tree, surviving, 237
 - Tower House orchard, 374
 - water treatment systems, 371
 - water treatment systems damage, 159
 - Whiskeytown post office, 371
 - Whiskeytown store, 371
 - Whiskeytown Store and Post Office, 159
- Carter, Henry, 100n2
- Carter, Oliver, 183
- CA-SHA-192 (CA-SHA-192/479), 17, 19
- CA-SHA-195, Borax Lake Pattern occupation of, 19
- CA-SHA-479, 19
- CA-SHA-2004, 19
- CA-SHA-2005, 19
- CA-SHA-2006, 19
- census, 1850, 312–313
- census, 1860, 255–260
 - Azorean people, 257, 258
 - Chinese population, 257
 - English residents, 258
 - families, 258
 - French residents, 258
 - German speakers, 257–258, 258
 - head of household indicators, 259
 - Irish residents, 258
 - Polish residents, 258
 - Portuguese residents, 258
 - Portuguese speakers, 257
 - Spanish speakers, 258
 - Whiskeytown and French Gulch demographics, 256
 - Whiskeytown and French Gulch foreign born, 256–257
 - women, 258
- Central Pacific, 326
- Central Valley, 164–165
 - climate and soil, 165
 - flood mitigation efforts, 162–168
- Central Valley Project, 3, 175, 377. *see also* Trinity Division (Central Valley Project); water resource development
 - bond failure, 176
 - components, 162
 - conflicts regarding 1902 Reclamation Act, 178
 - as a Federal Reclamation Project, 177–178
 - and fish conservation, 190
 - geography, 164–166
 - map, 165
 - NPS reservoir recreation studies, 195–196
 - PG&E's opposition, 175–176
 - purpose, 162
 - rationale for inclusion, 4
 - Reclamation Reform Act in 1982, 178n40
 - salt tidewater, 165
 - Trinity River diversion inclusion, 183
 - Whiskeytown Dam, 183
 - Winnemem Wintu litigation against, 301
- Central Valley Project Act, 175–176
 - approved features, 176
- Central Valley Project Association, 174
- Central Valley Project (CVP), 161
- Central Valley Project Improvement Act of 1992, 190, 358–359

- Chabot, Anthony, 93
- chalcopyrite ore processing, 117
- Chalifoux, Jean-Baptiste, 48
- Chan, Sucheng, 38–39
- Charles L. Harney, Inc., 197
- Childs, Edith G., 325
- Childs, Jerome S., 325
- Chiles-Walker party, 52
- Chimariko speakers, 13
- Chin, Qui**, 321
- Chin, We, 257
- Chinese Exclusion Act of 1882, 279
- Chinese immigrants in the US
- benevolent associations, 272
 - collie labor system, 272–273
 - credit ticket agreement, 272–273
 - explosive salmon capture, 290–291
 - in Gold Rush California. *see* Chinese in Gold Rush Shasta County
 - immigration to United States, 272
 - populations, 273
 - Six Companies, 272
- Chinese in Gold Rush Shasta County, 271–279
- 1860 census data, 257
 - burial practices, 275
 - Camden's discovery of a dead Chinese man, 264
 - "Chinese Chronicles of Shasta County," 273
 - Chinese labor, 93
 - Chinese population, 7
 - contracted laborers in the "coolie" system, 271–272
 - discrimination and violence against the Chinese, 3
 - discriminatory laws regarding, 276
 - fraternization with the white community, 276
 - frugality, 274
 - as miners, 209
 - murders of, 264
 - population in Whiskeytown and French Gulch, 256n41
 - religious practices, 275–276
 - Shasta, California, 257–258
 - as sojourners, 275
 - as viewed by Californians, 273–274
 - in Whiskeytown. *see* Chinese in Whiskeytown area at Whisky Creek, 251
- Chinese in Whiskeytown area, 7, 277–279, 279
- 1860 census data, 256n41, 257–258, 277
 - after Gold Rush era, 280
 - anti-Chinese sentiment, 278–279
 - "Committee of Forty," 279
 - driven out of Redding, 1886, 279–280
 - and French Gulch, 256n41, 258
 - opium use, 278
 - response to hostility, 279
 - targets of violence, 277
- Chinese labor, 93
- murders of, 264
 - on rail lines, 327
 - at Whisky Creek, 251
- chinook. *see* salmon
- Chittenden, Hiram M., 170
- church services, Whiskeytown 1850s-1860s, 253
- Churntown, California, 137
- Ciabani, Roberto, 206
- Civil War, 260
- Civilian Conservation Corps, 341
- Civilian Conservation Corps (CCC), at Shasta Dam, 179
- Clair A. Hill Whiskeytown Dam. *see* Whiskeytown Dam
- Clair A. Hill Whiskeytown Dam and Lake, historical status, 377
- Clair Engle (Trinity) Reservoir, 348
- managed by Forest Service, 360
- Clear Creek
- hydroelectric potential, 188
 - interpretive panels, 238
- Clear Creek Ditch, 82–85
- flumes, 83
 - impact on towns in the drainage area, 84
 - lateral ditches, 83
 - lifespan, 84–85
 - plan and construction, 82–84
 - trestle over, 210
 - under Whiskeytown reservoir, 83
- Clear Creek Ditch Company, 82
- Clear Creek fishery, 192–193
- Clear Creek Lumber Company, 147
- Clear Creek mining camps, 56
- Clear Creek Tunnel, 189
- construction of, 197
 - Judge Francis Carr Powerplant, 199–200
 - water flow begins, 200
- Clear Creek Vista Trail, 90
- Cleary, S. F., 107
- Clemmer, Luther S., 106n21
- Clinton, Bill, 300
- Clovis Culture, 11
- coffer dams, 81
- Coggins, Arthur, 143–144, 147–149, 151

- authorized logging within WNRA, 147–148
- Clear Creek Lumber Company, 147
- on Coggins Park, 152
- early life and education, 143
- land owned within WNRA, 149
- land sold to government for park land, 151
- logging practices, 149
- Northern California Lumber Company, 148
- Shasta-Trinity Lumber Company, 147
- timber lands near WNRA, 147, 149
- Coggins, Arthur and May
 - California-Oregon Box and Lumber Company, 143
 - at Clear Creek, 144
 - Dunsmuir chromium mine, 143
 - entrepreneurial sense, 143–144
- Coggins, Lowell, 148
- Coggins family
 - mill development, 141–142
 - timberland acquisition, 141
- Coggins Park, 151–152
- Coggins's Mill, 225
- Coleman, Adoram and Donna, 270
- Coleman Fish Hatchery, 191, 192
- Colen, Frank, 259
- complex gold ore, 105
- Comstock, Jim, 316n27
- Comstock Lode, 102
- Conkright, Ed, 252n34
- Connor, James, 126
- Conservation (Fire) Camp Program, 366–367
- Conservation and the Gospel of Efficiency* (Hays), 171
- Conservation Camp Program, 365–366
- conservation camps in California
 - California Youth Authority, 366
 - Conservation (Fire) Camp Program, 366
 - redesignated “honor camps,” 366
 - use of prison labor to fight fire, 365–366
- “Contemporary Tribes and Tribal Organizations” (Deur et al.), 294–295
- Cook, Sherburne F., 39
 - Native California populations, 39–40
 - Wintu populations, 40
- Coolidge administration, 340
- copper mines
 - Afterthought Mine, 113
 - Balaklala Mine, 113
 - Bully Hill Mine, 112–113
 - Iron Mountain Mine, 106
 - Mammoth Mine, 112
- copper mining, 105–117
 - within current Whiskeytown National Recreation Area boundaries, 100n1
 - distinct Shasta copper belts, 112
 - flux gold, 3
 - gold as a byproduct, 105, 122
 - Mountain Copper Company, Ltd, 107–109
 - “New Era” resurgence, 107
 - pyrite smelting, 116
 - Shasta County, 3, 105–106, 111–112, 114, 115
 - smelting, 105
- copper smelting, 115–122
 - cessation, 121–122
 - general process, 115–116
 - gold, silver, and copper values in 1906, 122
 - smoke impacts, 118–120
- Coram, California, 113
- Corps of Engineers, recreational demand at reservoir projects, 343
- Corps of Topographical Engineers, 307
- Cottonwood, California, 326
- Cram, Rogers, and Company, 310
- Crawford, Frank, 147
- Cresatine, John, 278
- Crespi, Muriel, 22
- CRIS. *see* Cultural Resources Inventory System (CRIS)
- Crocker, Charles, 326
- Crotto, John, 205, 206–207
- Crystal Creek Boys' Camp
 - Carr Fire damage, 159
 - as Crystal Creek Conservation Camp, 365
 - as Crystal Creek Regional Boys' Camp, 365, 369
 - historical status, 379
 - as Northern California Regional Rehabilitation Center, 365, 367–368
 - ownership of camp site, 367
- Crystal Creek Conservation Camp, 364, 365, 367
- Crystal Creek Regional Boys' Camp, 365, 369
- Crystal Creek Water Ditch, Carr Fire damage, 374
- Crystal Creek Water Ditch Trail, 90, 235
- cultural resources, 376–379
 - dependence on water, 6
- Cultural Resources Inventory System (CRIS), 5
 - inclusion of lidar data, 375
- Cummings, Thomas, 103
- Cunningham, Abraham, 58
- Curtin, Benjamin, 64

- Curtin, Jeremiah, 40, 291–292
 Curtiss, H. A., 317
 Cusick, Andrew, 324
 Cusick, Pete, 88
 CVP. *see* Central Valley Project
 cyanidation process, 128
- dam and reservoir development, 170–171
 dam building, twentieth century
 New Deal and, 178–179. *see also individual dams and reservoirs*
 dam collapses, nineteenth century, 97
 dams and reservoirs, and fish, 190–192
 Dana, James Dwight, 49
 dangers of extended Sacramento Valley exploration, 46–47
 Dawes Act (1887), 291–295
 Deitch, Matthew J., 29–30
 Del Loma Lumber Company, 146
 Delamar, California, 112–113, 113
 Delta, California, 327
 Denison Dam and Reservoir (Lake Texoma), 195
dentalia, 15–16
 Deschutes Lumber Company, 145
 Desmond, Bridget Harrigan, 321–322
 Desmond, Dennis Jr., 321–322
 Desmond, Dennis Sr., 321–322
 Desmond, Jeremiah, 321–322
 Desmond, Johanna, 321
 Desmond, John, 321–322
 Desmond, Tim, 321–322
 Desmond Mine, 123, 125
 Detherow, Holly, 154
 Dexheimer, Wilbur A., 192
 Dickinson, Erastus and Lydia Shattuck, 265
 “Digger” slur, 62
 Division of Forestry Conservation Camp, ownership of camp site, 370
 Dixie Fire, 373
 Dixon (Captain), 64
 doctrine of prior appropriation, 92
 Dominy, Floyd, 200
 Dotta, James, 40
 Douglas, Stephen, 260
 Dreadnaught Mine, 104
- dredge mines
 B. H. K. Mining Company, 131
 Baker, M. D., 131
 Potts, A. R., 131
 dredge mining, overview, 130–131
 dredges, steam powered, 131
 DuBois, Cora, 21, 23–24
 Dunsmuir, California, 327
- Eagle Creek, 248
 eagles, 358
 East Shasta copper-zinc belt, 106
 Eaton, Edna Behrens, 129
 economic depression
 California, 1870s, 101–102
 effect on Shasta mining, 102
 United States, 1870s, 102
 ecosystem management, 153
 Ehrman, “Butch,” 332
 Eidsness, Janet, 17
 El Dorado Mine, 123, 126, 127, 132, 132–133
 Carr Fire damage, 159
 post- World War II, 132–133
 Eldorado Mine, Carr Fire damage, 373–374
 election, 1860, 260
 election, 1896, 280
 Ellis, Gene, 80
Emigrant’s Guide (Hastings), 52
 Emmons, George, 49
 Empire Hotel
 bar, 322–323
 daily rate, 323
 endangered species listings, 153
 Engle (early Clear Creek miner), 57, 245
 Engle, Clair, 182, 188
 Engle’s gold discovery, 57
 Environmental Era
 changing forest values, 152–154
 federal forestry laws, 153
 environmental history, 3, 5, 6
 environmental impacts of copper smelting
 air pollution abatement, 119, 121
 emerging science, 119–120, 121
 smoke impacts, 118–120
 environmental impacts of gold mining
 of damming, 97
 of the Gold Rush, 95–98

- hunting and wildlife, 97–98
 - of hydraulic mining, 92–93, 95
 - mercury pollution, 96
 - nineteenth-century logging practices, 96–97
 - in Shasta County, 95
 - slickens, 92, 95.96
- environmental impacts of logging, logging roads, 151–152
- environmental protection
 - collaborative model (2000s), 153–154
 - Forest Service, 153
 - state of California, 153
- ethnic minorities, 267–280
- ethnography, 20–25
 - early development of, 20–22
- Eureka Mill, 138
- Ewing Young expedition, 38
- explorations of the West, US government-sponsored, 49–50
- express mail in northern California, 310
- families, in French Gulf, 258
- The Far West and the Great Plains in Transition, 1859–1900* (Paul), 72
- farmer-led irrigation districts, 169–170
- farming, 265
- Farrington, N. C., 137, 314
- Farrington, Nate, 262
- Fauna of the National Parks of the United States* (1933), 348
- Federal Aid Road Act (1916), 338
- Federal Aid Road Act of 1916, 334
- Federal Highway Act of 1921, 334
- federal Indian policy, 287
 - 1850s–1860s, 284–291
- Federal Indian policy, allotment and assimilation, 291–297
- federal Indian policy
 - California commission, 285–287
 - California hostility to reservations, 285
 - collapse of Nome Lackee Reservation, 288
 - Compromise of 1850, 285
 - no native land rights in California, 286
 - Nome Lackee Reservation (Tehama County), 287
 - removal, not extermination, 284
 - reservation era, 284–285
 - reservation plan seen as in competition with white interests, 287
 - Tejon reservation, 287
- Federal Indian policy, termination, 295–297
- federal Indian policy, upper Sacramento Valley reservation, 286
- Federal Indian policy, urban relocation efforts, 296–297
- federal reclamation, 170–172
- federal recognition
 - lack of, for Wintu, 298, 301
 - Pit River Tribe of California, 296
 - Timbisha Shoshone, 300
 - Wintu people, 295–296
- Federal Water Project Recreation Act, 347
- Federal Water Project Recreation Act (Public Law 89-72), 194
- Feeney, Richard Henry, 323
- Feeney Hotel, 323
- Feldbusch, John A., 251
- Fillmore, Millard, 287
- Fillmore plan, 287
- fire and forest management
 - 1880s, 243
 - 2007 Brandy Creek strategies, 158–159
 - 2008 fire, 158
 - Carr Fire (2018), 158. *see also* Carr Fire (2018)
 - climate change, 155–157
 - effects of loss of Wintu practices, 135
 - “let burn” strategy, 156
 - mechanical treatment, 156, 157
 - natural disaster management, 373
 - NPS fire management plans, 156–157
 - ponderosa pine, 157–158
 - prescribed fire, 156
 - second-growth forest, 157–158
 - understory buildup, 155
 - Wintu people, 28–29
 - Wintu practices, 6, 28–29, 135
- fish and fisheries, 29
 - Clear Creek fishery, 192–193
 - cold water releases, 192
 - Coleman Fish Hatchery, 191
 - Fish and Wildlife Coordination Act of 1934, 191
 - Fish and Wildlife Service, 191
 - fish management inside park, 358–359
 - hatcheries, 191
 - Lewiston Hatchery, 191
 - McCloud River fish hatchery, 289–290
 - Nimbus Hatchery, 191
 - salmon. *see* salmon
 - salmon restoration (1990s), 359

- traps, 192
- warm water fishery, 193
- Whiskeytown Dam and Lake, 193
- Fish and Wildlife Coordination Act of 1934, 191
- Fish and Wildlife Service, Sacramento River basin fish conservation, 191
- Flood Control Act of 1944, 182, 195
- flooding
 - atmospheric river, 1861–1862, 167
 - hydraulic mining debris, 167–168
- Folsom Dam reservoir, 344
- food management patterns, 15
- Ford, Jeremiah, 324
- Forest Service, changes in the 1970s, 153
- Forina, Mary, 206
- Fort Ross, 43, 45
- Fort Vancouver, 45, 46
- Fortunate, 249
- Fortunate mining camps, 320
- Foster, Louis, 324
- Four Mile House, 249, 315
 - road to Tower House, 318–319
 - Shasta Turnpike Road Company, to Shasta, 318
- Francis, Samuel, 312–313
- Francis Carr Powerhouse, 265
- Franklin City, 249, 250
- Franklin Mine
 - early hard-rock mine in French Gulch, 100
 - in the wake of copper mining, 123, 124
- Frederickson, David, 11
- Free Bridge House, 312–313
- Freeman and Company, 310
- free-milling gold ore, 105, 123
- freight wagons
 - at Shasta, 213
 - between Shasta and Whiskeytown, 219
- Frémont, John C., 285
 - 1845 expedition, 50
 - 1849 Wintu massacre, 55–56
 - and the Bear Flag Revolt, 53
- French Gulch, 1, 48, 148, 248
 - Azorean people, 257
 - Catholic Cemetery, 240
 - Chinese population, 1860, 257
 - claims by Camden and Tower, 100–101
 - English residents, 258
 - extracting from 1860 census, 255–260
 - French residents, 258
 - German speakers, 257–258
 - hindrances to placer mining, 100
 - hydraulic mining, 130
 - Irish residents, 258
 - photograph, 214
 - Polish residents, 258
 - Portuguese speakers, 257
 - sluicing at, 100
 - women and families, 258
- French Gulch Hotel, 323
- Friant Dam, 176
- From the White House to Whiskeytown: An Administrative History of the Creation of Whiskeytown National Recreation Area* (Milestone), 347–348
- frontier thesis (Turner), 72
 - Paul, Rodman W., 72
- Frye, Arthur, 204
- fur trade, 45–50
 - and contact, 36–37
 - disease and epidemics, 48–49
 - diversity of participants, 45–46, 48
 - French traders, 48
 - and intermarriage, 37
- Furman, George, 306n3
- Galloway, J. D., 181
- Gálvez, José de, 44
- Gambrinus Mine, 101, 123
- Ganim Mine, 126
- Gasquet-Orleans Road (G-O Road or “Go Road”), 299
- Gee, Ah, 321
- General Allotment Act of 1887. *see* Dawes Act (1887)
- genocide
 - in California, 38–40, 38n74, 60–64, 244
 - massacres, 46–47, 55–56, 63–64
 - of North American Indigenous peoples, 3
 - by outright killing, 46–47, 55–56, 60, 62–64, 63–64
 - as policy, 63
 - by reducing subsistence base, 60
 - role of “militias” and “volunteer companies,” 62–64
 - Shasta massacres of 1851, 63
- Geung, Un, 278
- Ghost Dance movement, 289
- Gibbons and Reed Company, 197, 199
- Gibbs, George, 31–32
- Gilchrist, George C., 324
- Gillespie, Archibald, 53
- Gillette, E. C., 82

- Gilmore, John, 312–313
 Glacier National Park, 372
 Gladstone Mine, 103–104, 123–124
 Gladstone Mining Company, 103
 Globe Hotel in Shasta, 312
 Globe Hotel (Shasta), 315
 G-O Road, 299
 gold mines
 Desmond Mine, 123, 126
 El Dorado Mine, 123, 126, 132
 Franklin Mine, 123, 124
 free-milling gold ore, 123
 French Gulch District, 124
 Gambirinus Mine, 123
 Gladstone Mine, 123–124
 Mad Mule, 123, 124
 Mad Ox Mine, 123, 124
 Milkmaid Mine, 123, 124
 Mount Shasta Mine, 123
 Niagara Mine, 124
 Oro Fino Mine, 124, 129
 Sunshine Mine, 132
 Truscott Mine, 124
 Washington Mine, 100, 101, 104, 124
 West End Mine, 123
 Western Mine, 124
 gold mining, 5. *see also* Camden, Charles; hydraulic mining; lode mines; lode mining; placer mining
 Clear Creek, 2
 cost efficiency of labor, 91
 cultural resources, 2
 during the Depression, 128–129
 developments around Shasta County, 99–105
 discrimination and violence against the Chinese, 3
 environmental toll. *see* environmental impacts of gold mining
 Ganim Mine, 126
 hydraulic mining yield, 93
 impact on Indigenous subsistence base, 61
 increase in the wake of copper mining, 106, 122–126
 Klamath Mountains area, 67
 Native American genocide, 3
 placer gold mining, 2
 placer yield, 93
 pocket mining, 127
 population expansion and, 54–55
 supply center development, 69–71
 Whiskey Creek, 2
 within Whiskeytown National Recreation Area bounds, 106
 gold standard, removal from, 128–130
 gossan mining, 107, 128–129
 Gossett Brothers, 146
 Grand Coulee Dam, 202
 Grant, Ulysses S., 288–289
 McCloud River fish hatchery, 290
 Grattan, John, 328
 Graves, Henry S., 338
 Great Depression, 175
 resurgence in gold mining, 128
 Great Smoky Mountains National Park, 372
 Greathouse, George L., 323
 Greenville Rancheria, 295n29, 296
 Greers Ferry Dam, 205
 Gregory's Sacramento and Shasta Semi-Weekly Express, 310
 Grimmell, Mickey, 297
 Grom, Bob, 364
 Grotefend, Augustus, 243–244
 Grotefend, Strode & Co.6, 101
 Grotenfend, A., 103
 “Guidelines for Evaluating and Documenting Traditional Cultural Properties.” (Parker & King), 300
 Guilford-Cardell, Margaret, 40
 Guy F. Atkinson Company, 197

 Haley, Charles Scott, 130
 Hall, George, 332
 Hammer, J. J., 131
 hand mortars, 103
 “Handbook of the Indians of California” (Kroeber) of California” (Kroeber), 20
 hard-rock mining. *see* lode mining
 Hardscrabble mine at Piety Hill, 94
 Harrison, Benjamin, 293
 Harrison, W. R., 246
 Hart, William, 275–276
 Harvey, B. F., 63
 Hatcher, Andrew, 202–203
 Hathorn, A., 253
 Hattersley-Drayton, Karana, 377
 Hayes, John F., 11
 Hays, Samuel P., 170–171
 Haywood, J. K., 119–120
 Heicksen, Martin, 17

- Henley, Thomas J., 287
 Henn, Winfield, 11
 Henry J. Kaiser Company, 197
 Hensley, Samuel J., 52
 Herman, Dorothy, 281
 Herman, Gus, 281, 324
 Highway 299, 1
 archeological investigations, 17
 bridge over Whiskeytown Creek, 200
 bridge over Whiskeytown Creek, construction, 230
 realignment for dam project, 161, 200
 Tower House Hotel, 1
 highway robberies, 310–311
 hiking trails, 1
 Hildebrandt, William R., 11–12
 Hildebrandt and Darcangelo, 12, 15, 27–28
 Hill, Clair A., 187
 H.R. 123 (1953), 187–188
 Hindman, John, 85–86
 historic resource study, purpose of, 4
 historic structures. *see also* each for more
 Camden gravesite, 5
 Camden House, 5
 Camden Sawmill, 5
 Camden Toll Road, 5
 Chilean Mill, 5
 Clear Creek bridge, 5
 El Dorado Mine, 5
 French Gulch, 5
 John F. Kennedy memorial panel, 5
 Judge Francis Carr Memorial Park, 5
 Lower Crystal Creek Ditch, 5
 Mill Creek Ditch, 5
 Mill Road, 5
 park visitor center, 5
 Tower gravesite, 5
 Whiskey Creek Road, 5
 Willow Creek Ditch ruin, 5
History of California (Bancroft), 96–97
 Hodge, John, 258
 hogs, wild, 358
 Hokan peoples, 13
 Holladay, Benjamin, 326
 “Hooverville,” 128
 Hoover-Young Commission, 175
 Hope Consolidated placer mine, 84–85
 Hopkins, Mark, 326
 Hornaday, Richard, 206
 horse trading, 46
 Horsetown, 56–57, 245
 growth due to Clear Creek Ditch, 84
 Horsetown prospecting parties (1849–1850), 57–58
 horticulture (distinguished from agriculture), 26–27
 hotels, 321–325
 along the Trinity Trail, 315
 Batavia House, 323
 Empire Hotel, 322–323
 Feeney Hotel, 323
 Fox-Empire Hotel, 328
 in French Gulch, 322–323
 French Gulch Hotel, 323, 325
 Globe Hotel, 312, 315
 La Moine Hotel, 143
 Middle Creek Hotel, 324
 Mix’s Franklin Hotel, 252, 315
 Oak Bottom Hotel, 221, 321, 328
 Oak Bottom House, 325
 Tower House, 324–325
 Tower House Hotel, 1, 313, 315–316
 Whiskeytown Hotel, 221, 222, 324
 Whisky Town Hotel, 252
 Woodward’s Hotel, 252, 280, 324, 325
 Hotz, Preston E., 127
 House Committee on Interior and Insular Affairs, 187–188
 Hoveman, Alice R., 289
 Howell, John, 320
 Hudson’s Bay Company, 45
 in Mexican-held California, 46–47
 human population replacements
 miners replacing Wintu, 6–7
 recreationists, 7
 white people replaced by water management, 7
 Humboldt Cider Company, 374
 hunting, 358
 Borax Lake Pattern, 19
 Paleoindians, 10
 Shasta Pattern, 15
 Squaw Creek Pattern, 13
 Whiskeytown Pattern, 14
 Huntington, Collis P., 326
 hydraulic mining, 91–94
 1890s revival of, 168
 California water law development, 92
 Caminetti Act (1893), 92–93
 effect on banking, 91–92
 enormous water need, 91
 environmental impact, 92–93

- Hardscrabble mine at Piety Hill, 94
 - invention and development of, 93
 - need for capital investment, 91–92
 - outlawing of, 129
 - in Shasta county, 94
- “hydraulic society,” 164
- hydroelectric power, 174, 175–176
 - and water conveyance, 176
- Igerna, California, 141
- Igo, 248–249
- Igo mining district, 94
- indenture of Native people, 269, 270–271
- Index Mine, 126–127
- Indian Claims Commission (ICC), 296
- Indian New Deal, 296
- Indian sacred sites
 - Klamath Mountains, 299
 - National Park Service and, 299
- Indian Self-Determination and Education Assistance Act of 1975, 295
- Indian trust lands, 293–294
- Indian–white relations in California, 267
- Indigenous Californians, depopulation, 38–40
- Indigenous Californians, pre-contact
 - ecological effects of depopulation, 39
 - population, 38–40
- Indigenous people of California. *see also* Wintu people
 - genocide, 38n74
 - Paleoindians, 10–11
 - polities and “tribelets,” 9
 - unique cultural sequence, 9–11
- industrialization, 240
- Ingot, California, 113
- inmate firefighter program (California), 366–367
- Iron Canyon damsite and proposal, 180–182
 - Flood Control Act of 1944, 182
 - map, 184
- iron mining, 107
- Iron Mountain Mine, 3, 107. *see also* Mountain Copper Company, Ltd
 - cave-in, 109
 - filling fires, 109
 - miner strike, 110
 - photographs, 212
 - productivity, 109
 - workforce, 110
 - working conditions, 110, 111
- irrigation development, 169–175
 - Carey Act of 1894 (U.S.), 169
 - Central Valley, aquifer pumps, 1910s, 172–173
 - Wright Act of 1887 (California), 169
- Isenberg, Andrew C., 73
- Jackson, David, 46
- Jackson, Donald C., 178–179
- Jacob M. Ryerson, 85–86
- Jake, Ah Chung**, 278
- Janssen, Volker, 367
- Jennings, Francis, 6
- jet skis, 362–363
- John F. Kennedy Memorial, 238
 - audio component, 207
 - concerns about commissioned sculpture, 206–207
 - development and dedication, 207
 - historical status, 378
 - Kennedy Memorial Fund Committee, 206
- Johnson, Harold T., 347
- Johnson, Harold T. “Bizz,” 202
- Johnson, Keith, 17
- Johnson, Lyndon B., 347
- Joseph, Charles and Marie, 255n40
- Joseph family, 265
- Joss House of Shasta, 275–276, 279
- Joss House of Weaverville, 279
- Journey to Justice* (Hoveman), 294
- Judge Francis Carr Memorial Park, 231
 - improvements, 378
- Judge Francis Carr Powerhouse, 3, 189
 - historical status, 377
- Judge Francis Carr Powerhouse Substation, historical status, 377
- Julian (Rancho Buena Ventura caretaker), 52
- Karuk Tribe, 300–301
- Kearny, Stephen W., 53
- Keepers of the Treasures: Protecting Historical Properties and Cultural Traditions on Indian Lands* (Parker), 299
- Kelley, Robert, 165–166
- Kemble, Edward C., 65
- Kendall’s national rocker mill, 104–105
- Kennedy, John F.
 - arrival at Dam, 203
 - arrival at Whiskeytown Dam, 204
 - assassination and local sentiment, 206

- conservation tour, 1963, 201–202
- conservationism, 201
- memorial park, 3. *see also* John F. Kennedy Memorial
- national park system, 201
- support for federal water development, 201
- support of recreation development at federal dam and reservoir sites, 346
- Whiskeytown dam dedication, 3, 201–202
- at Whiskeytown Dam dedication ceremony, 204–205
- Kennett, California, 112, 113
- Kennett Dam, 176, 181. *see also* Shasta Dam
- Kesler, William, 263
- Kester, Frank, 80
- Keswick, California, 109, 110–111, 118, 148
- Keswick Dam
 - afterbay for Shasta dam, 180
 - fish trap, 192
 - labor slowdowns, 180
 - and powerplant, 161, 180
- Keswick Smelter, 3, 109, 116–117, 119, 121
- Keswick switchyard additions, 185
- Ketchum (miner, 1860s), 261–262
- Kett, William F., 109
- Keyes, Christopher R., 157
- Kidder, W. S., 255n40
- Kidder, William Samuel, 253, 254
- Kimberly Clark, 151
- King, Tom, 300
- Kirtley, Karen, 207
- Klamath Mountains as sacred sites, 299
- Klotz, Rudolph, 138
- Kondolf, G. Mathias, 29–30
- Kroeber, Alfred, 9, 20
- Kuchel, Thomas H., 347

- La Grange Mine, 130
- La Moine, California, 141
- La Moine Hotel, 143
- La Pérouse, Jean-François de Galaup, comte de, 43
- LaFontaine, Mary, 259
- Laframboise, Michel, 38, 48
- Lake Mead and Hoover Dam, 341
- “Lame Bill,” 289
- LaMoine Lumber and Trading Company, 141
- Land and Conservation Fund, role in developing Whiskeytown-Shasta-Trinity National Recreation Area, 349
- Land and Water Conservation Fund Act, 347
- landscape restoration in WNRA, toxin leakage concerns, 359
- LaPena, Frank, 41, 297–298
- Lassen, Peter, 50, 52
- Lassen National Forest, 340
- Lassen Peak eruptions, 340
- Lassen Peak Forest Reserve, 340
- Lassen Volcanic National Park, 373
- Lassen Volcanic National Park Act of 1916, 340
- latter-day hydraulic mining and dredge mining, 129–132
- Lava Beds National Monument, 373
- Lea, Luke, 285
- League of American Wheelmen, 331
- LeDuc, Maurice, 48
- Lee, Moon Lim**, 279
- Leonzo, Carlos M., 157
- levees, 168
- Levulett, Valerie, 17
- Lewiston Dam, 199
- Lewiston diversion dam and reservoir, 185
 - impoundment and generative capacity, 185
- Lewiston Hatchery, 191
- Lewiston powerplant, 185
- lidar survey of Carr burn scar, 372
- lidar survey of Whiskeytown National Recreation Area
 - data storage and handling, 375
 - prior to Carr Fire, 375
 - USGS survey of park following Carr Fire, 375
- Life on the River: The Archaeology of an Ancient Native American Culture* (Hildebrandt & Darcangelo), 12
- Lightfoot, Kent G., 10, 27
- “Little Giant” (monitor) nozzle, 93
- Loag, James, 306n3, 318
- lode mines
 - Banghart Mine, 101
 - Bell and Woodward mine, 103
 - Black Tom Mine, 103
 - Franklin Mine, 100
 - Gambrinus Mine, 101
 - Gladstone Mine, 103–104
 - Mad Mule Mine, 101
 - Mad Ox Mine, 101, 103
 - Mountain Monarch Mine, 100n1
 - Niagara Mine, 103
 - Red Rover mine, 103

- Saw Mill Flat, 261–263
- Sulphide Mine, 100n1
- Washington Mine, 100, 101
- West End mine, 103
- lode mining
 - 1850s and 1860s, 99–102
 - 1880s and 1890s, 102–105
 - 1883 resurgence, 103
 - around Whiskeytown, 99
 - as a company enterprise, 99
 - copper belt in Shasta County, 99–100
 - French Gulch, 100
 - mills, water-powered quartz, 100
- lode mining, 1941–1955, 131–133
- logging roads, 151
 - logged slopes, 226
 - and recreation, 3
 - soil erosion, 3
- logs
 - trucked out, 227
 - trucked out c. 1956, 226
- London, Jack, 143
- long tom, built by Camden, 88–89
- Lorenz Lumber Company, 146
- Louis (Whisky Creek miner), 251
- Lowden, William, 317, 318
- Lowden Toll Road, acquisition by Trinity County Board of Supervisors, 333
- lower Mill Creek ditch, 89
- Ludwig Behrens, 255n40
- lumber companies, 146, 151
 - Anderson Moulding Company, 146
 - Clear Creek Lumber Company, 147
 - Del Loma Lumber Company, 146
 - Deschutes Lumber Company, 145
 - Gossett Brothers, 146
 - Kimberly Clark, 151
 - LaMoine Lumber and Trading Company, 141
 - Lorenz Lumber Company, 146
 - Paul Bunyan Company, 146
 - Ralph L. Smith Company, 145
 - Ralph L. Smith company, 145
 - Red River Lumber Company, 141–142, 145
 - Redding Pine Mills, 146
 - Shasta Forest Company, 145
 - Shasta-Trinity Lumber Company, 147
 - Sierra Pacific, 151
 - Southern Pacific Land Company, 151
 - Trinity Logging Company, 151
 - U.S. Plywood, 145–146, 151
 - Western Xmas Tree, 151
 - who sold land to the government for park land, 151
- lumber industry
 - California, 1970s and 1980s, 153
 - Shasta County, 1970s and 1980s, 153
- lumbering, 3, 5–6, 135–159
 - automation and other changes, 146
 - benefits of railroad, 139
 - economics in Shasta, 145
 - environmental impacts, 151–152
 - environmental regulations, 152–153
 - flume development, 140
 - during Gold Rush era, 136–139
 - hydraulic mining demand, 139
 - impact on Indigenous subsistence base, 61
 - mining demand for lumber, 136
 - productivity, 145, 146
 - relictual forest within WNRA, 150
 - Shasta County, 1950s–1960s, 138
 - stimulated by railroad, 327
- Lydon, Philip A., 106
- Macco Corporation, 197
- Macklay, James, 63
- Mad Mule Mine, 101
- Mad Ox Mine, 101, 103, 124, 250
- Madera Funeral Home, 199
- Madley, Benjamin, 38n74
- Magee, William, 107
- Maher, Nicholas, 315
- mail service
 - express services, 309–311
 - federal service, 309
- Major Problems in California History* (Chan & Olin), 38–39
- Mammoth Copper Company, 112
 - state suit for smelting damage, 119–120
- Mammoth Mine, 112
- Mann, Ralph, 254
- Manuel, Donald, 17
- Marsh, John, 50–51
- Marshall, James, 65
- Marshall, Robert B., 172
- Martinez, California, 117, 121
- Marysville, attempts to extend railroad to, 325
- Mashburn, Joseph B., 199
- Masterson, Grace Grattan, 328–329
- Mather, Stephen, 339

- Matheson powerplant. *see* Spring Creek Powerplant
- Matheson powerplant and switchyard, 185–186
- Matheson tunnel, 185. *see also* Spring Creek Power Conduit
- Matteson, Edward, 93
- Maxwell, George W., 170
- McCandless, A. Z., 246
- McCleary, Washington P., 84
- McClelland*, 70
- McCloud River fish hatchery, 289–291
 drowned behind the Shasta Dam, 290–291
 failure of the salmon run, 290
 post office established, 290
 Wintu employment at, 290
 Wintu salmon site, 290
- McCloud River hatchery, 301–302
- McConstruction Company, 198
- McDermott, Paul, 204
- McGuire, George P., 252
- McGuire, William, 103
- McKee, Redick, 285
- McKinney's Ranch massacre, 63–64
- McKinstry, J., 286
- McMillin, J. P., 258
- McPhail, C. D., 332
- Memorial and Biographical History of Northern California*, 325
- memory culture methodology, 20–22
- merchants, and the mining economy, 243–244
- Merk, Frederick, 72
- Merry Mountain Diggers, 129
- Mesa Verde National Park, 372
- Mexican California, American settlers, 50–53
- Mexican land grants to Americans, 50–53
- Mexican War of Independence, and California, 45
- Micheltorena, Manuel, 52
- Middle Creek Hotel, 324
- Middleton, Bob, 146
- Middletown, growth due to Clear Creek Ditch, 84
- Middletown gold vein, 102–103
- Milkmaid Mine, 123, 124
- Mill Creek drainage, Carr Fire damage, 373–374
- Miller, C. Keith, 106n21
- mills
 stamp mills, 100
 water-powered quartz, 100
- miner-pioneers, 241
- Miners Protective Union, 278
- mining, 65–133
 and local merchants, 243
- mining booms, 72
- Mining California: An Ecological History* (Isenberg), 73
- Mining California* (Isenberg), 242
- mining camps
 as civilizing forces in the West, 244
 as disorderly, 242
 isolation of, 242–243
 as protocities, 241–242
- mining camps, Shasta County, 244–249
 Clear Creek Diggings, 245
 conditions, 245–246
 Eagle Creek, 248
 French Gulch, 76, 248
 Grizzly Gulch, 76
 Horsetown, 245
 Igo, 248–249
 Mad Mule Canyon, 76–77
 Mad Ox Ravine, 76
 Morrowville, 248
 Old Diggings, 248
 Ono, 248–249
 profitability, 77
 Reading Springs, 245–246
 Shasta City, 246
 Weaverville, 248
 Whiskey Creek, 76
 Yreka, 248
- Mining Frontiers of the Far West, 1848–1880* (Paul), 72
- mining in the 1920s
 El Dorado Mine, 127
 Ganim Mine, 127
 gold, copper, and zinc, 126–127
 Index Mine, 126–127
 Shasta View Mine, 127
 West End Mine, 127
- mining industry
 economic impact, 106
 environmental impacts. *see* environmental impacts
 of copper smelting; environmental impacts of gold mining
- Minnesota Mill, 117
- Mix, Benjamin, 250
 absence from 1860 census, 255n40
 postmaster, 280

- Mix's Franklin Hotel, 315
 - fire, 252
 - opening, 250
 - rebuilt, 252
 - renamed as Whisky Town Hotel, 252
- Model T cars, 330
- Moe, R. L., 199
- Montgomery, Buck, 311
- Moran, Margaret, 324
- Morning Glory Spillway, 204
- Morrell, John, 103, 255n40
- Morrison-Knudsen Company, Inc., 197
- Morrowville, 248
- Mosk, Stanley, 202
- motorboats, and water-based recreation, 343–344
- Mount Rainier National Park, 338
- Mount Shasta Mine, 3, 123
 - early twentieth century, 125
 - historical status, 379
 - photographs, 211
 - previous NPS studies, 125
 - workforce, 124, 125
- Mount Shasta Mine Loop Trail, 379
- Mountain Copper Co. v. United States*, 118–119
- Mountain Copper Company, 107–109, 111
 - Big Bend timberland, 140
 - electric power demand, 108
 - gossan mining, 128
 - infrastructure needs, 108–109
 - Iron Mountain Railway, 108
 - Minnesota Mill, 117
 - pyrite smelting, 116–117
 - smelter plant, 108, 212. *see also* Keswick Smelter
- Mountain Mines Co., Ltd, 107
- Mountain Monarch Mine, 100n1
- Multiple-Use Sustained-Yield Act of 1960, 153
- Murder State* (Lindsay), 60, 62
- Murdock, Alex, 251

- Nacimiento Reservoir, 344
- National Association of Engine and Boat Manufacturers, 344
- National Conference on State Parks, 339
- National Environmental Education Development (NEED). *see* NEED
- National Environmental Policy Act of 1970, 153
- National Forest Management Act of 1976, 153
- National Forest System, founding of, 338
- National Historic Preservation Act, 299. *see also* Section 106 compliance
- National Historic Preservation Act Section 106, 376–377
- National Irrigation Association, 170
- National Irrigation Congress, 170
- National Park Service
 - approach to recreation as “wonderment,” 339
 - attempts to define itself, 339
 - championing of State parks, 339
 - competition with Forest Service, 338–340
 - ESAs and NEED program, 363
 - formation of, 338
 - Geological Resource Division's Abandoned Mine Lands program, 374
 - headquarters moved to Whiskeytown Lake, 352
 - increased recreation responsibilities, 341
 - landscape restoration in WNRA, 355–357
 - Mission 66, 342–343
 - partnership with Bureau of Reclamation, 341, 343, 351
 - positive response to correctional facility in park, 370
 - prisons and incarceration camps within, 370
 - recent fires inside parks, 372–373
 - recreational facility development at Whiskeytown Unit, 351
 - resource management in park, 357
 - role at Shasta Lake, 341
 - role in developing Whiskeytown-Shasta-Trinity National Recreation Area, 349
 - role in state and county road development around WNRA, 354–355
 - staff to live on-site, 352
 - threats from climate change, 372–373
 - wildlife management inside park, 357–358
 - work with Civilian Conservation Corps, 341
 - work with USGS on mining toxin leakage, 359
- National Park System
 - Bureau of Reclamation and, 4
 - management of WNRA, 4
 - partnership with agencies around recreation, 194–195
- National Parks and Conservation Association (NPCA), 372
- National Register of Historic Places
 - Central Valley Project components eligibility, 377
 - Section 106 compliance, 17, 19
 - Whiskey Creek Bridge, 378
- National Wilderness Preservation System, 153

- Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), 300
- Native peoples
 in Camden's employment, 222
 gold miner attacks on, 61–62
 wage labor during Mexican period, 267
- natural disasters. *see also* Carr Fire (2018)
 Camden-Tower House Historic District closure 2018-2020, 371
 lidar survey of burn scar, 372
 post-fire recovery effort, 372
 winter rain 2018-2019, 371
- NEED program, 363
- NEED Whiskeytown Environmental School, 239, 363–365
 Carr Fire (2018), 364–365
 County Superintendent of Schools, 364
 development of, 364
 historical status, 379–380
 management shifted to Shasta County, 364–365
 use as a Youth Conservation Corps camp, 364
- New Deal, big dam era, 178–179
- New Helvetia, 267
- New York Flat, 328
- Niagara Mine, 124
 yield, 103. *see also* Black Tom Mine
- Nicholson, Grace, 20n28
- Nicolets, A., 263
- Nimbus Hatchery, 191
- Nobles Emigrant Trail, 68
- Noland, James, 251
- Nome Lackee Reservation (Tehama County), 287
- Nordin, John A., 325
- Norel-putis 1889 letter, 292. *see also* Wintu people:
 Norel-putis
- Nor-Rel-Muk Nation (Hayfork Band), 295n29
- North Bloomfield Mining and Gravel Company, 96
- North Fork of Cottonwood Creek, 57–59
- North Valley Baptist Church summer camp, 364
- Northern California Lumber Company, 148
- Northern California Power Company, 330–331
- Northern California Regional Rehabilitation Center, 365
 Shasta County management, 367–369
- Northern California Stage Company, 316
- Northern Maidu, 296
- Northern Pacific Railway Company, 326
- Northern Spotted Owl, 154
- Northwest Indian Cemetery Protective Association (NICPA), 298–299
- northwestern mining region, 67, 68–69
- Notley, George W. Jr., 151
- Notley, Mervin E., 151
- Novoply, 145
- NPS. *see* National Park Service
- NPS Anthropology Division (later Ethnography Program), 22
 “culturally affiliated tribes,” 22
 Whiskeytown reports, 23
- Oak Bottom, 320–321
 additional recreation facility development, 352
 marinas, 353
 recreation facilities at Whiskeytown Lake, 351
- Oak Bottom Hotel, 221, 321, 328
- Oak Bottom House, 315
 sale history, 320–321
- Oak Bottom Marina, 232, 239
- O'Brien, J. C., 106
- Oding, Fritz, 325
- O'Donnell, Kenneth, 203
- Office of Commissioner of Public Works, 168
- Office of Debris Commissioner, 168
- Office of Federal Acknowledgement, 300
- Office of Tribal Relations (FS), 300
- Ogden, Peter Skene, 47
- Okwanuchu speakers, 13
- Old Diggings, 248
- Old Dry Mill, 138
- Old Spanish Trail, 68
- Oldham, Bertram, 206
- Olin, Spencer, 38–39
- One Horse Town, 56
- Ono, 248–249
- Operation Outdoors, 343
- Oregon and California Railroad Company, 325
- Oregon Dunes National Seashore site, 202
- Oregon Road, 307
- Oro Fino Mine, 124, 129
- Osborn, Charles, 103
- Osborne, Glendee Ane, 7, 373
- Ostrander Construction Company, 197
- Otis, Jonathan, 136

- Outboard Boating Club of America, 344
- outdoor recreation, 335, 336–350
 - California management of reservoir use, 1950s, 344
 - camping at Whiskeytown National Recreation Area, 353–354
 - at dam sites, 341
 - demand during Great Depression, 341
 - and development of national parks, 337–338
 - escape from corporate culture, 337
 - and growth in automobile ownership, 340
 - hunting at Whiskeytown National Recreation Area, 358
 - jet skis, 362–363
 - motorboats and, 343–344
 - opportunities in Shasta County, 1901, 338
 - post-World War II demand spike, 342
 - recreational camping, 337
 - sport fishing at Whiskeytown Lake, 358–359
 - surge in demand for water-based recreation, 342–343
 - unmanaged demand and use at federal reservoir sites, 343
 - as an upper class luxury, 336
 - and the urban middle-class, 336–337, 340
 - water-based recreation at Whiskeytown Lake, 360–362
 - youth camps, 363–370
- outdoor recreation conferences, 340–341
- Outdoor Recreation Resources Review Commission (ORRRC)
 - influence on Whiskeytown Dam project, 345
 - recreation demand at national parks and national forests, 345
 - report of recreational use at Corp reservoirs, 343
- Overland California Mail Act (1857), 309
- overland transportation, 305
- overland way stops (ranches), 308

- Pacific Express Company, 310
- Pacific Gas and Electric (PG&E), 174, 175–176
 - interest in Whiskeytown Dam, 189–190
 - Section 106 compliance, 376
 - transmission lines within the park, 376
- Pacific Railroad Survey (1855), 307
- pack horses, 305
- pack mules, 306n3
- pack teams, 219
- Paige Boulder Creek prehistoric sites, CA-SHA-177, 17
- Paitla, 289

- Panic of 1873, 326
- “Paper Chasing,” 111
- Papoose Alternate, 188
- Park, Death Valley National, 300
- Parker, Patricia L., 299–300
- Parrish, Otis, 10
- particleboard, 145
- Paul, Rodman W., 244
 - California mining territories, 67
 - on mining booms, 71–72
 - on northwestern mines region, 73–75
 - refutation of Turner’s frontier thesis for the West, 72
- Paul Bunyan Company, 146
- Peace Policy, 288–289
- Peckham, N. A., 101
- Peterson, Billie, 76
- Phoenix Mill, 103
- picnic areas, 1
- Piggott, Michael, 293
- Pit River Tribe of California
 - federal recognition, 296
 - occupation of Shasta National Forest, 297
 - relationship to WNRA, 295n29
- placer mining
 - 1894 claim, 209
 - Chinese miner, 209
 - on Clear Creek, 210
 - Clear Creek Ditch, 82
 - during the Depression, 128
 - described, 75
 - Igo mining district, 94
 - knowledge transmission, 80–81
 - placer miners, 75–76
 - population effects of decline in, 261
 - Reading Springs, 66
 - in Shasta County, 75–81
 - steam-powered dredges, 130
 - techniques, 77–79
 - water needs and management, 81
 - water supply in French Gulch, 100
- placer mining techniques
 - amalgamation, 79
 - panning, 78
 - partnering, 79–80
 - sluicing, 79
 - tunneling, 80
 - washing, 78
- pocket mining, 127, 128
- Polchair, L., 258

- Polk, James K., 52
 Ponti, Andy, 89
 Pony Express, 309
 population control
 fertility control, 32
 sedentary living, 32
The Population of the California Indians 1769–1970
 (Cook), 39
 Post, Chester, 11
 Potter Creek Cave, 10
 presidential election of 1860, 260
 Princess Hydraulic Mining Company, 84–85, 130
 progressive conservationism, 171
 Prohibitionist Party, 280
 “Project purpose,” and recreation at federal reservoirs,
 344, 346
 Pugh and Lindsay Mine, 104
- quartz mining. *see* lode mining
 Quartz Valley Indian Community, 295n29, 296
- racial reckoning in California, 298–299
 railroad development, 305
 railroads, 102, 325–329
 arrival in Shasta County, 326
 Chinese employed with, 290
 Chinese labor and, 327
 connecting California and Oregon, 325–326
 construction halt during Panic of 1873, 326
 economic effect on California, 101–102
 effects on agriculture, 327–328
 effects on logging, 327
 federal land grants for, 326
 first California railroad, 325
 impact on fish habitats, 61
 jobs and workforce, 327
 lumber economics, 139
 and mining, 102
 pacific lines join at Ashland, Oregon, 326
 and recreation, 336
 role in copper refining, 329
 Shasta County, 102
 Slavonian labor and, 327
 Southern Pacific spur line, 139
 town formation along, 327
The Rainbow, 70
 Raker, John E., 340
 Ralph A. Smith company, 145
 Ralph L. Smith Company, 145
 Rancho Buena Ventura, 52
 Raymond Concrete Pile Company, 197
 Reading, California, 326
 Reading, Pierson Barton, 286, 326
 and Bear Flag Revolt, 53–54
 Clear Creek strike, 66–67
 interest in gold panning, 65–66
 Mexican land grant, 50
 on Native people’s condition, 60–61
 Rancho Buena Ventura, 52
 Reading’s Bar, 56–57
 relations with Wintu, 267–268
 Reading Springs, 245–246
 Reading’s Bar, 56–57, 66. *see also* Horsetown
 Reading’s Ranch, 246, 308
 Reclamation Act of 1902, 171
 and homesteading, 171
 “Reclamation: Managing Water in the West,
 California’s Central Valley Project: Historic
 Engineering Features to 1956,,” 377
 Reclamation Reform Act in 1982, 178n40
 Reclamation Service, 171–172
 recreation as a modern development, 335–338
 establishment of Yellowstone National Park, 335
 outdoor recreation. *see* outdoor recreation
Recreation Uses in the National Forests (Waugh), 338
 Red Bluff, 70
 Red River Lumber Company, 141–142, 145, 146
 Redding, B. B., 326–327
 Redding, California, 326–327
 horse culture, 1890s, 329
 Redding railstop effect on Shasta business, 327
 Redding Feed Company, 321
 Redding Pine Mills, 146
 Redding Rancheria, 295–296, 295n29
 Redding Sport Parachute Club, 204
 Redding-Eureka lateral highway
 funding challenges, 334
 road development, 333–334
 as State Route 20, 334
 as State Route 299, 334
 as U.S. Highway 299, 334
 Redwood Acres, 374
 Reed, Charles Franklin, 329
 Reed, Mr., 291–292
 Reid’s Stable (Redding), 330

- reservoir-based recreation, 194, 194–196
 - Boulder Dam National Recreation Area (Lake Mead National Recreation Area), 194
 - Bureau of Reclamation role, 194–196
 - Cachuma reservoir, 344
 - Flood Control Act of 1944, 195
 - Folsom Dam reservoir, 344
 - Lewiston Reservoir, 195–196
 - and motorboats, 343–344
 - Nacimiento Reservoir, 344
 - National Park Service management, 194
 - NPS and BOR partnership, 341, 343
 - post-World War II demand spike, 342
 - project purpose, 344, 346
 - question over responsibility for managing, 343–344
 - Santa Marguerita reservoir, 344
 - Senate Document 97, 344–346
 - Trinity Reservoir, 195–196
 - Trinity River Division dams, 195–196
 - unmanaged demand and use at federal reservoir sites, 341–345
 - water-skiing, 344
 - Whiskeytown Dam planning study, 196
- resource intensification, 33
- revolt against Micheltorerna, 52–53
- Rhodes, Jesse, 82
- Ringgold, Cadwalader, 49
- Ritter, Eric, 84–85
- river transport, 305
- Rivers and Harbors Acts, 177–178
- Rivers of Empire* (Worster), 164
- Robinson (miner, 1860s), 261–262
- Robinson, Jesse R., 246
- Rocca, A. M., 144
- Rocky Mountain Fur Company, 46
- Rolandi, F., 333–334
- Rolph, James, 175
- Roosevelt, Franklin D., 177, 340
 - conservation and land planning initiatives, 341
- Roosevelt, Theodore, 140
- Round Valley Reservation, 288
- Russian American Fur Company, 45
- Ryan, Chris, 297–298
- S. C. Snowck and Company, 82
- Sacramento River repair work, 168
- Sacramento to Oregon Trail, 307
- Sacramento Valley Railroad Company, 325
- Sacred Lily of China bulbs, 276
- Saeltzer Diversion Dam, 192
- Salinger, Pierre, 203
- Sallee, James, 107
- salmon, 5
 - in California, 29–30
 - Clear Creek salmon restoration, 302
 - dam impacts on, 190–191
 - fall-run salmon, 191, 192–193
 - McCloud and Pit River fall run, 289–290
 - McCloud River hatchery, 301–302
 - McCloud River salmon in New Zealand, 302
 - prehistoric harvest sizes, 30
 - spring-run salmon, 190
 - Winnemem Wintu litigation to protect, 301
 - winter-run salmon, 190–191
 - Wintu people and, 30–31
- Salvage Archaeology in the Whiskeytown Reservoir Area and the Wintu Pumping Plant* (Treganza & Heickson), 17
- Samuel Cooper, 255n40
- Santa Marguerita reservoir, 344
- Santa Monica National Recreation Area, 372
- Saw Mill Flat, 261–263
- sawmill development in Shasta
 - arrastra milling, 136
 - economics of, 136–137
 - placer mining, 137. *see also* placer mining
 - steam-powered sawmills, 137–138
 - water-powered sawmills, 136
- Sawyer, Lorenzo, 92–93
- Schilling, Grace, 324
- Schilling, John F., 280, 281
- Schneider (Shasta shopkeeper), 87–88
- Schneider's trading post, 312–313
- schooling, 1850s–1860s, 252–253
- Schweigert, Pete, 147–149, 152
- Scott, Winfield, 54
- Senate Document 97, 346
- servitude, forced, of Native people, 62–63
- Shafter, Meinard, 325
- Shasta
 - freight wagons, 213
 - mining camp, 68
 - road development, 71
- Shasta, California, 246–247
 - 1850s, 247
 - Chinese population, 1860, 257

- distributing center for mining region, 1850s-1860s, 247–248
- impact of railroad at Redding, 327
- population during mining boom, 248
- schools, 253
- stagecoach hub, 306
- trail to Yreka, 307
- transfer and supply center, 306
- “whoa navigation” and, 305
- Shasta Bally, 147–152, 234, 240
 - forest vegetation, 157
 - logging roads, 151–152
 - relictual forest, 157
 - Wintu sacred site, 302
- Shasta County
 - 1860 census, 254–260
 - formation during early statehood, 246–247
 - post offices, 255
 - Whiskeytown Dam county parks plan, 196
- Shasta County Board of Supervisors, negotiation of
 - NPS Whiskeytown plan, 345–346
- Shasta County Canal Company, 84
- Shasta County Farmers’ Protective Association, 119–120
- Shasta County Mining and Water Company, 82
- Shasta Dam, 178–180
 - clearing reservoir site, 179
 - construction, 179
 - under construction, 228
 - fish habitat mitigation, 192
 - forest restoration to slow siltation, 180
 - grave relocations, 179–180
 - labor slowdowns, 180
 - Vista House, 229
- Shasta Forest Company, 145
- Shasta Forest Reserve, 140
- Shasta Lake
 - Forest Service recreation management, 195, 341–342
 - managed by Forest Service, 360
 - National Park Service role, 341
 - Vista House, 341
- Shasta Pattern, 11–12
 - archeological impact, 15–16
 - Wintu peoples, 15
- Shasta Powerplant, 180
- Shasta State Historic Park, 1
- Shasta to Yreka Trail
 - 1855 survey of, 307–308
 - route, 307
- Shasta Tribal Organizations, 295n29
- Shasta Turnpike Road Company, 317, 319
- Shasta View Mine, 127
- Shasta-Trinity Lumber Company, 147, 148
- Shasta-Trinity National Forest, 140
 - national forest management of, 153
- Shea Company, 197
- Shea-Kaiser-Morrison, 197
- Shed, John, 325
- Shed, Mary, 325
- Sheldon, H. B., 253
- Sherman and Pendalton’s Ferry, 307
- Shields, Howard, 325
- Shingletown Ridge, 138–140
 - lumber production, 139
 - sawmills, 138–139
 - steam-powered hauling engines, 139
- Shock, William, 315
- Shuffletown, Mary Jane, 313
- Shurtleff, Benjamin, 245
- Sierra Flume and Lumber Company, 140
- Sierra Pacific, 151
- Six Rivers National Forest, 300–301
- Six Rivers National Forest logging plans, 299
- Skjelstad, Lucy, 17
- slickens, 92, 95.96
- Sloat, John D., 53
- smelting, 105
 - Balaklala Smelter, 121
 - and copper mining, 105
 - copper smelting, 115–122
 - environmental damage within WNRA bounds, 119
 - environmental impacts of copper smelting, 119–121
 - Keswick Smelter, 3, 109, 116–117, 119, 121
 - Mountain Copper Company, Ltd, 108
 - Mountain Copper Company smelter plant, 108
 - pyrite smelting, 116–117
 - smoke -killed trees, 213
 - suits for damage, 119–120
- Smith, Ann King, 17
- Smith, Dottie, 147, 273–274, 312
- Smith, Jedediah, 36
- Smith, Jedediah Strong, 46
- Smith, John, 82, 83
- Smythe, William E., 170
- Snake River Brigade, 47
- Soldiers Aid Society of Whiskeytown, French Gulch, and the Tower House, 316

- Southern, May, 306n3, 323
 Southern, S. F., 323
 Southern Pacific Company, 326
 Southern Pacific Land Company, 149–150, 151, 367
 Southern Pacific Railroad, role in developing
 Whiskeytown-Shasta-Trinity National Recreation
 Area, 349
 Spring Creek park, 200
 Spring Creek Power Conduit, 161, 180, 189, 200
 Spring Creek Powerplant, 180, 189
 Squaw Creek Pattern, 11–12
 social organization, 13–14
 technological advances, 13
 stage road, 309
 stagecoach travel, 309
 stagecoaches, 69, 70–71
 stamp mills, 105
 Iron Mountain Mine, 107
 within Whiskeytown National Recreation Area
 bounds, 106
 Stanford, Leland, 326
 State Water Project, 175
 steamboats, 69
 steelhead trout, 190–191
 Stene, Eric, 377
 Stephenson, T. S., 259–260
 Stevenson, B. E., Dr. and Mrs., 311
 Stockton, Robert F., 53
 Stone, Livingston, 289–290
 Strandlund, Dick, 341–342
 Strode, Augusta, 328
 Sublette, William, 46
 submerged towns
 Delamar, 113
 Kennett, 112, 113
 Suhr, Mr., 311
 sulfuric acid, 117–118
 Sulphide Mine, 100n1
 Sundahl, Elaine, 11–12
 Sunshine Gold Mining Company, 132
 Sunshine Mine, 132
 Sutter, Johan (born Johann Augustus Suter), 45
 Sutter, John, 51, 267
 Sutter's Fort, 51
 Sutter's Mill, discovery of gold, 65
 Swab, Isaac, 315
 Sweepstakes Mining Company, 330
 Syme, John, 100
 Table Mountain Dam, 182–183
 Table Mountain Reservoir, 182
 Taggart, Grant I., 316
 tailings mining, 93
 Taylor, California, 109
 Taylor's Sacramento and Shasta Semi-Monthly
 Express, 310
 Tehama, 70
 Tehama Pattern, 15
 Tejon reservation, 287
 telegraph, 309
*Tending the Wild: Native American Knowledge and the
 Management of California's Natural Resources*
 (Anderson), 26–27
 Terry Company, 140
The History of the Chinese in Shasta County (Smith),
 273–274
 The Marshall Plan, 172–174
 dam proposals, 173
 Thompson, Ben H., 348
 Thompson, N. B., 17
 Tick, We, 277
Tillie Hardwick v. United States (1983), 296
 Timbisha Shoshone, 300
 Tinker, A. M., 293
 Tom Neal Creek, 141–142
 Tomlinson (Horsetown prospector), 58
 Toogood, Anna Cox, 4, 84, 100, 106, 125, 312
 mining in park area, 1941–1955, 131–132
 Tower, Levi H.
 absence from 1860 census, 255n40
 as a businessman, 312
 death of, 316
 divorce, 314
 early days in Shasta County, 85
 early life and education, 312
 as an elected official, 316
 financial difficulties and bankruptcy, 315
 as merchant, 243
 orchard, 265
 partnership with Camden and Hindman, 312
 photograph, 217
 provisioning, 88–89
 purchase of Free Bridge House, 312–313
 separation from Camden, 312

- settling at Upper Clear Creek, 88
- travels with Camden, 86–87
- turn to hoteling, 89
- wedding to Mary Jane Shuffletown, 313–314
- Tower House, 220, 249, 306–308
 - after 1880, 324–325
 - Carr Fire damage, 374
 - expansion from Free Bridge House, 313
 - expense of improvements, 314
 - house, 218
 - opening, 1854, 313
 - overview, 311–317
 - reputation and public use, 315–316
 - rootstock recovery after Carr Fire, 374
 - settlement, 220
- Tower House diversion dam and reservoir, 185
- Tower House powerplant and switchyard, 185. *see also* Judge Francis Carr Powerhouse
- Tower House tunnel, 185. *see also* Clear Creek Tunnel capacity, 185
- Tower Ranch, 315
- Toyon Conservation Center, 200
- Toyon occupation, 297–298
- Toyon Wintu Center, 298
- Toyon-Wintu Center, 295n29
- traditional cultural property (TCP), 300
- transmission lines
 - historic lines with WNRA, 376
 - Hoover Dam, 376
- transportation, 305–340
 - 1960s California, 4
 - animals integral to, 306–309
 - California-Oregon Trail, 308
 - to gold fields, 68–71
 - horse-drawn transportation, 306
 - improvements and local hotel impacts, 323
 - mail service, 309
 - mule trains, 70
 - overland transportation, 305
 - overland way stops (ranches), 308
 - pack mules, 306n3
 - pack trail, 306
 - private road improvement, 317–318
 - private toll roads over public land, 317
 - role of Shasta, 305–306
 - Sacramento to Oregon Trail, 307
 - between Shasta and Sacramento, 305
 - Shasta to Yreka Trail, 307
 - stage roads, 309
 - stagecoach travel, 309
 - steamboats, 69, 70
 - Trinity Trail, 314–315
 - Trinity Trail toll road, 317
 - wagon roads, 308–309
 - “whoa navigation” and, 305
 - Yreka Trail, 307
- Treaty of Cahuenga, 54
- Treaty of Cottonwood Creek, 58, 268
- Treaty of Cottonwood Creek (1851), 286
- Treaty of Guadalupe Hidalgo of 1848, 54
- Treganza, Adán, 16
- Trepte Construction Company, 197
- tribal grants program, 299
- Tribal Historic Preservation Officers (THPOs), 299
- tribal sovereignty, 300–301
- Trinity Dam, construction, 197
- Trinity Dam and Reservoir, 185
- Trinity Dam and reservoir, impoundment and generative capacity, 185
- Trinity Division (Central Valley Project), 2, 6. *see also* Central Valley Project; water resource development
- Trinity Logging Company, 151
- Trinity mines, 68
- Trinity powerplant and switchyard, 185
- Trinity River diversion, 183
- Trinity River Diversion proposal, 181
- Trinity River Division, 185
 - 1952 elements of, 185
 - afterbay for Trinity Dam, 162
 - agencies involved, 183
 - Clair Engle Lake, 162
 - Clear Creek Tunnel, 162
 - components, 161–162
 - construction sequence, 197
 - Judge Francis Carr Powerhouse, 162
 - Keswick Dam and Reservoir, 162
 - Lewiston Dam, 162
 - Lewiston Lake, 162
 - map, 163
 - as part of Central Valley Project, 185
 - Spring Creek Power Conduit (or Tunnel), 162
 - Spring Creek Powerplant, 162
 - Trinity Dam, 162
 - value without Whiskeytown Dam, 185
 - water delivery capacity, 185
 - Whiskeytown Lake, 162
- Trinity River Division, Central Valley Project, A Report on the Plan of Development (February 1957), 189

- Trinity Trail, 306
 - hotels along, 315
 - improvement for wagon use, 314–315
- Truscott Mine, 124
- Tsahpekw, 298–299
- Turner, Frederick Jackson, 72, 244
- Turner, John, 46–47

- Udall, Stewart, 201–202, 203, 346, 348
- Umpqua Massacre, 46–47
- Union Leagues, 260–261
- Union of Concerned Scientists, 372
- United States Smelting, Refining, and Mining Company, 112
- United Tribe of Northern California, Inc., 295n29
- Upper Mill Creek Ditch, 90
- urbanization, 241
- U.S. Army Corps of Engineers, 176, 176–177
- U.S. Forest Service
 - accommodations for public recreation, 338–339
 - competition with National Park Service, 338–340
 - establishment of, 338
 - interest in leading provision of outdoor recreation, 338
 - partnership with Bureau of Reclamation, 351
 - role in developing Whiskeytown-Shasta-Trinity National Recreation Area, 349
 - at Shasta Lake, 341
 - wilderness preservation, 339
- U.S. Plywood Corporation, 145–146, 151
- U.S. Post Office, 310
- U.S.-Mexican War, 54

- Van Wie, A. J., 265, 320–321
- Vandeventer, Franklin, 265, 320
- Vaughan, Trudy, 84–85
- vein mining. *see* lode mining
- Vergnes, Chester, 128, 325
- Verrys Ranch, 307
- Vilas-McCumber Mill, 138
- The Vincennes*, 49
- Voshee, Joseph, 58

- wagon roads, 308–309
- Warner, J. J., 38
- Washington Mine
 - early hard-rock mine in French Gulch, 100
 - gold yield, 101
 - workforce, 124
- water development, 171
- water resource development, 6, 136–137. *see also* Central Valley Project; Trinity Division (Central Valley Project)
 - Camden Water Ditch Trail, 81, 85, 89, 89–90
 - Clear Creek Ditch, 82–85, 137
 - placer mining, 81
- Water Resources Planning Act, 347
- water rights, California, 169–170
- watershed, 2
- water-skiing, 343
- Weaverville, 248
- Weaverville massacre, 64
- Wells Fargo and Company, 310
- West, Elliott, 244
- West End Mine, 123, 127
- West Shasta copper-zinc belt, 106
- Western Area Power Administration, 377
- Western Exploitation Company, 124
- Western Mine, 124
- Western Xmas Tree, 151
- Wheeler, F. W., 103
- Whiskey Creek
 - additional recreation facility development, 352
 - bullfrog tadpole die-off, 359
 - origins, 76
 - profitability, 76–77
 - recreation facilities at Whiskeytown Lake, 351
- Whiskey Creek Bridge, 378
- Whiskey Creek camp, 249
- Whiskeytown
 - 1850s, 249–252
 - American settlers, 258
 - Azorean people, 258
 - Chinese population, 1860, 257
 - church services, 253
 - Clear Creek waystations, 249
 - extracting from 1860 census, 254–260
 - feelings about evacuation for the reservoir, 281–282
 - fire brigade, 243
 - first as Franklin City, 249
 - German speakers, 258
 - highway robberies, 310–311
 - historical forest conditions, 136
 - origin as Whiskey Creek, 76
 - origin of name, 76, 249

- population 1940s-1960s, 281
- Portuguese residents, 258
- post office, 280–281
- post office named Whiskeytown (1952), 281
- post office renamed Schilling (1917), 280
- post office renamed Stella (1885-1909), 280
- Spanish speakers, 258
- temperance movement in, 281
- violence, 263–265
- as Whiskey Creek camp, 250
- Whiskeytown Cemetery, present-day, 282
- Whiskeytown, 1860s, 260–265
 - organized search for lode strikes, 261
 - Saw Mill Flat, 261
 - Union Leagues, 260–261
- Whiskeytown Cemetery, 378
- Whiskeytown Dam, 2
 - attendees at dedication ceremony, 204
 - bilevel outlet for fish conservation, 198
 - condemnation of Woodward's Hotel, 252
 - construction of, 197–198, 197–200
 - dedication of, 3, 202, 204
 - developing and building, 161–162
 - embankment dam of rock material, 199
 - fishery impacts, 193
 - getting on Kennedy's schedule, 202–203
 - grave removals for dam project, 161, 199
 - grout curtain, 198
 - incorporation into Trinity River Division, 189
 - labor disruptions, 199
 - legislative preparation, 187–188
 - management, 4
 - outlet tunnel, 197–198
 - preparation dam site, 16–18
 - preparations for Kennedy's arrival, 203
 - preparing dam site, 161, 230
 - preparing reservoir site, 161
 - Pres. Kennedy at, 204–205
 - projected capacity and generation, 189
 - purpose, 161, 194
 - spillway tunnel, 198
- Whiskeytown Dam Alternate, benefits of, 189
- Whiskeytown Dedication Committee, 202
- Whiskeytown Hotel, 221, 222, 324
 - Whiskeytown residents, 222
- Whiskeytown Lake, 1, 2, 6, 239
 - Bureau of Land Management involvement, 346
 - diversification of water-based recreation, 361
 - first NPS recreation development plan, 345–346
 - as fishery site, 193
 - management of water-based recreations, 360
 - marinas, 353
 - recreation management zones, 362
 - reservoir clearing, 199
 - sport fishing, 358–359
 - visitor use patterns, 360–361
 - youthfulness of visitors, 361
- Whiskeytown National Recreation Area, 18
 - 1964 master plan, 351
 - Boulder Creek plan, 353
 - called Whiskeytown Unit, 349
 - camp site development, 353–354
 - Carr Fire damage, 159, 371
 - Clear Creek salmon restoration, 302
 - Crystal Creek Conservation Camp inclusion, 367
 - Crystal Creek Road camp site, 353
 - Dry Creek camp site, 353
 - establishing legislation, 2
 - establishment of, 348–350
 - hiking trail, 236–237
 - hiking trail development, 354
 - historic structures, total, 5
 - implementing *Final Master Plan* (1976), 353–360
 - land-based recreation throughout park, 353
 - landscape restoration, 355–357
 - map, 1
 - mines within current boundaries, 100n1, 106, 106n21, 130, 132
 - mining and logging damage, 355–357
 - NEED Whiskeytown Environmental School, 364
 - North Valley Baptist Church inholding, 364
 - overview, 1
 - preservation of an industrial landscape, 376–377
 - road and trail development, 354
 - Shasta Bally Road/Sheep Camp camp site, 353
 - smelting damage, 119
 - South Shore Drive, 354
 - state and county roads, 354
 - visitor center, 231, 352
- Whiskeytown Pattern, 11–12, 14
- Whiskeytown Reservoir proposal (1930), 181
- Whiskeytown residents, Whiskeytown Hotel, 222
- Whiskeytown Store and Post Office, Carr Fire damage, 159
- Whiskeytown studies, previous
 - 1978, 4
 - 1999, 4
 - 2001, 4
 - 2018, 4–5
 - 2020, 4–5
- Whiskeytown Unit. *see* Whiskeytown National Recreation Area

- Whiskeytown Women's Improvement Club, 281
- Whiskeytown's Cultural Resources, 371–380
- Whiskeytown--Shasta-Trinity National Recreation Area
 - area of initial proposal, 348–349
 - establishing act, 347–348
 - federal agencies involved, 349
 - permitted uses, 349
 - Shasta County approval of federal development, 349
 - Whiskeytown Unit, 349
- Whiskeytown-Shasta-Trinity National Recreation Area
 - establishment of, 2
 - recreational expectations, 360
 - Whiskeytown Unit, 2
- Whisky Creek, 249
 - Chinese miners, 251
 - conditions circa 1853, 250–251
 - school house, 252–253
 - violence, 251
 - women residents, 251–252
- Whisky Town Hotel, 252
- white population, 7
- Whitney, Cornelius S., 84
- "whoa navigation," 71, 247, 305
- "widowing" of the land, 6
- Wilderness Act of 1964, 153
- Wilkes, Charles, 49–50
- Wilkes expedition, 49–50
- William Kesler, 255n40
- Williams (miner, 1860s), 261–262
- Willow Creek, heavy metals, 359–360
- Willow Creek crossing ditch, Carr Fire damage, 374
- Willow Creek pipeline, 90
- Wilmot Proviso, 54
- Wingate (miner, 1860s), 261–262
- Wingate, Caleb, 314, 317
- Winnemem Wintu Tribe
 - lack of federal recognition, 301
 - relationship to WNRA, 295n29
 - salmon restoration plan, 301–302
- Winston, Green, and Drake Construction, 200
- Wintu Educational Cultural Council of Northern California, Inc., 295n29
- Wintu individuals
 - Klencladdy, 40
 - Luckie, Kate, 33
 - Norel-putis, 40, 64, 291–292
 - Reed, Mike, 293
 - Wintu Mike, 291, 293
- Wintu language, 22
- Wintu people, 2, 5
 - 1851 treaty, 286
 - acorns and, 13, 16, 26, 27
 - after relocation and genocide, 293–303
 - allotments made to, 293–294
 - and the California Gold Rush, 55–65
 - Clear Creek salmon restoration and WNRA, 302
 - defense of territory, 57
 - departure, 6
 - ethnography, 20–25
 - European/American impact on subsistence, 60–61
 - federal recognition, 295–296
 - first contact with Europeans/Americans, 34–36
 - "first treaty" with, 56–59, 245
 - Ghost Dancers, 289
 - groups and locations, 21
 - introduced diseases and depopulation, 37–38
 - Klencladdy, 292
 - landlessness, 291
 - and McCloud River fish hatchery, 289–290
 - during mining era, 7
 - mixed reception and relocation to Nome Lackee, 288
 - Norel-putis 1889 letter, 292–293
 - occupation of Toyon, 297–298
 - oral traditions, 22, 34
 - photographs, 209
 - population counts, 40–41
 - population on Sutter's lands, 267
 - pre-contact population estimates around WNRA, 283
 - protection of archeological sites inside WNRA, 302
 - on Reading's lands, 267–268
 - in relation to WNRA, 294–295
 - salmon, 29, 30–31
 - Shasta reservoir grave exhumation, 179–180
 - site in inundation zone, 16–17
 - "Southland Dance," 289
 - spirituality, 33–34
 - traditional plant use inside WNRA, 302
 - treaty with Horsetown prospectors, 58–59
 - twentieth century, 295–296
 - villages within and around WNRA, 283
 - violence against during reservation era, 288
 - Winnemem Wintu, 284
 - Winnemem Wintu of the McCloud River, 294
 - Wintu survivors of the upper Clear Creek drainage, 283–284
- Wintu people, pre-contact, 23, 26–41
 - early maps, 24

- fire and forest management, 6, 28–29
- settlements, 25–26
- shamans, 25, 31
- during Shasta Pattern, 15
- social organization, 24–25
- specialization of labor, 25
- spirituality, 25
- subgroups/tribelets, 23–24
- subsistence, 24, 26, 30–31
- upper Clear Creek population, 41
- wealth, 25
- Wintu Texts* (McKibbin, Dixon, Shepherd), 22
- Wintu Tribe of Northern California, 295n29
 - lack of federal recognition, 298
- Wirth, Conrad, 348
- Woll, Arieta, 323
- women
 - ethnicities, 1860, 260
 - French Gulch, 1860 census, 258–259
 - Mix’s Franklin Hotel, 250, 252
 - Mix’s hotel balls, 250, 252
 - Shasta Courier* correspondence, 252
 - Whiskeytown, 1860 census, 258–259
 - Whiskeytown Women’s Improvement Club, 281
 - at Whisky Creek camp, 251–252
- Woodward, Oliver P., 252, 324
- Woodward, Oliver P. Jr., 324
- Woodward, Susan, 324
- Woodward’s Hotel, 252, 324
 - 1896 election, 280
 - Whiskeytown post office, 280
- Woolsey Fire, 373
- Work, John, 36, 37
 - 1832 brigade and Wintu contact, 47–48
- Wozencraft, O. M., 285–287
- Wright, C. C., 169
- Wright, J. W., 139
- Wright, Lewis T., 116
- Wright Act of 1887 (California), 169–170
- Wright McDougal roasters, 117
- Yana people, “Norel-putis 1889 letter,” 292–293
- Yang, Ah**, 255n40
- Yellowstone Park Act of 1872, 338
- Ying, Ah**, 277–278
- Young, Elliott, 273
- Young, Otis E., Jr., 77
- Yreka, 248
- Yreka Trail, 307
- Yurok, 31
- zinc mining, 126
 - Afterthought Mine, 126
 - Bully Hill Mine, 126