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CALIFORNIAN

THE

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A Foundation Supporting the Study and Preservation of State and Regional History

The California Energy Experience



Why California Studies?

Over the next several quarters, as we develop our California Studies Learning Community here at the center, we are going to be grappling with the idea of California as a sense of place—what makes California so, well, California?

The following article by writer and filmmaker Geoffrey Dunn, reprinted from the May, 1995 newsletter published by the Center for California Studies at CSU Sacramento, captures in a very eloquent way, the answer to the question “Why California Studies?”

There is a narrow stretch of beach, located on the westside of Santa Cruz, that has always been something of a special place to me. It was here, where Monterey Bay first arches inland, that my great-grandfather, a teenage sailor from Italy, jumped ship in the summer of 1879 and decided to call California his home. Over the next two decades, he would encourage more than sixty families from his small Ligurian fishing village to join him on the central California coast.

A few months ago, when I recounted this history to a friend of mine as we walked along the beach, she informed me that even though she was only a recent arrival to California, she had a special place like that too, it being a mile or so up the coast at Santa Cruz’s picturesque Lighthouse Point.

I realized then that all Californians, whether they be descendants of its native peoples or whether they arrived here yesterday (as many of them did), draw their bearings from a single locale, a point of entry if you will, and from there flows the rest of the state. For an Ohlone friend of mine, it is a tribal midden above the Pajaro Valley; for Joan Didion, it’s sweltering yet proper Sacramento; for Gary Soto, it’s industrial Fresno; for Gerry Haslam and his friend Merle Haggard, it is the raging Kern River; for Walter Mosley, it’s Central Avenue in L.A.; for Maxine Hong Kingston, cannery-whistle Stockton; and so on. There is a here here—for all of us.

This sense of place is so powerful that it remarkably transcends race and class boundaries. Didion’s *White Album* and Soto’s *Living Up the Street*, for instance, are entirely disparate works (one a descent into white, middle-class neurosis, the other a celebration of the Mexican working class), yet they are both linked by a common sense of place and terrain, a sensibility, if you will, rooted in their authors’ Central Valley childhoods. California is at once a region of the earth and a region of the mind; the two are inexorably linked.

For all its power, however, this sense of place remains unharnessed and largely unrecognized. Generation cum generation of Californians are alienated from the land on

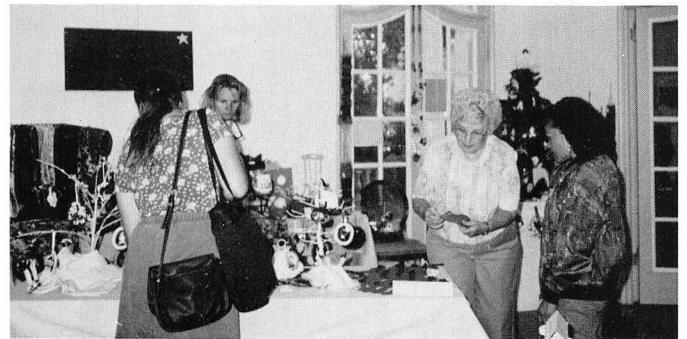
which they live and therefore, from each other. We don’t know where we are or where we’re going. The state has become socially and culturally fragmented, while our sense of political possibility is severely restricted and constrained.

The times call out for interdisciplinary California Studies programs in our university and college systems. Our lives are not segmented, nor should the study of them be. We need to draw from political science and history, geography and literature, to foster a “rooted sensibility,” as Jeff Lustig has called it, “one attentive to foundations and connections, knowledgeable about perspectives beyond its own, and capable of distinguishing the things that matter behind the welter of daily events.” We need to know and understand ourselves as Californians.

That is our challenge. Will we one day embrace the spirit of our state motto “Eureka”? Or will we continue to ask with Whitman, facing west from California’s shores, “[W]here is what I started for so long ago? And why is it yet unfound?”

As our new program evolves and develops I hope you will join us in our attempts to define and understand this state we call home.

Kathleen Peregrin
Director



Volunteer Mary Strong (second from right) helps shoppers select items at 1995 fundraising boutique “Little Shoppe of CHC.”

COVER: Two Dutch windmills were erected in San Francisco’s Golden Gate Park during the 1890s to raise water for irrigation. This one stands at the western entrance to the park. Postcard courtesy California History Center, Stockmeir Library/Archive.

CALENDAR

- 1/8 De Anza College classes begin.** CHC open to the public. History Center hours are: 8:30 a.m.–4:30 p.m., Monday through Thursday; closed from noon to 1:00 p.m.
- 1/15 Martin Luther King Jr.'s birthday observed.** De Anza College and CHC closed.
- 2/16 & 2/19 Presidents' Birthdays observed and CHC closed.**
- 2/96 Black history month: program in planning stages.**
- 3/96 Women's history month: program in planning stages.**
- 3/17 Lecture and book signing: "Energy and the making of modern California."** James C. Williams, history faculty member of De Anza college, will give a talk about his latest book and will be available to sign copies for sale, at 2:00 p.m., CHC. RSVP: 408/864-8712.
- 3/28 Winter quarter ends.**

Of Interest to Members

HERITAGE HOLIDAY EVENTS

Los Altos History House

Christmas this year at Los Altos History House will begin with gala house decorations in November and last into January of 1996.

The following dates in December (the regularly scheduled open days to the public) will also feature refreshments at no charge. Entrance is always free. On December 6, 9, 13, 16, and 20 the house museum (interpreted as a 1930s orchard farm house) will be open the usual hours: 1–5 p.m. Wednesdays and 12–4 p.m. on Saturdays. The refreshments will be served between 1:30 and 3:30 each of those days. The docents look forward to serving you. For more information, call (415) 948-9427.

Santa Clara Historic Home Tour

Santa Clara's Historic Home Tour '95 features six properties including the 1905 Colonial Revival Franck Mansion, the 1790's Womans' Club Adobe, an 1897 Victorian, a 1905 Craftsman bungalow, a modified Queen Anne, and the Italianate Harris-Lass Museum. Proceeds benefit historic preservation and cultural projects in the City of Santa Clara December 8 & 9, 1995.

Tickets at the door are \$12. For more information call, (408) 248-2787.

Holidays at the Ainsley House

Join the Campbell Museum Foundation in their exciting holiday activities at the Ainsley House to raise funds for the Campbell Historical Museum & Ainsley House. The historic Ainsley House will be decorated by local Santa Clara Valley interior designers David Douthit and Laura Taylor-Moore for the holiday season! Holiday Teas will be served for groups by RESERVATION ONLY on December 4, 5, 6, 11, 12, and 13. \$10 per person included a tour of the house and a formal sit-down English tea. Unique hand-crafted ornaments and gifts will be available at the Campbell Museum Foundation Store.

The Ainsley House is located in downtown Campbell on Grant Street between City Hall and the Campbell Library. The museum is open for tours Thursday-Sunday from noon to 4 p.m. For more information, call (408) 866-2119.

Victorian Christmas at the San Jose Historical Museum

The San Jose Historical Museum is putting on a Victorian Christmas celebration on December 9th and 10th, from 10:00 a.m. to 4:00 p.m. The Museum is located at 1600 Senter Road (Kelley Park) in San Jose, and their phone number is 287-2290. Ticket prices are: Adults \$6.00, Senior \$5.00, Youth (ages 4–17) \$4.00. Children under four will be admitted free. Participation in historical costume is welcome—but if you don't want to dress up, come anyway!

EDUCATION

Back By Popular Demand

Beginning Winter Quarter, which starts on January 8th, we will once again offer a very limited academic program of short classes. The four courses listed here will now be offered as one-unit, History 144W's rather than as fee-based classes. Since we have just added the classes, they do not appear in the Winter Schedule of Classes and you will need to call the center for the information in order to register: Master # and/or Call #.

Enrollment is going to be critical for these classes, so if you have a friend that you would like to introduce to CHC short classes, now is time. The differential fee for students with a bachelor's degree will no longer be in effect after December, so the cost per unit is \$9. Students under the age of 60 also pay an additional enrollment fee. Please call 408/864-8712 for additional details.



Financial district, San Francisco, 1910. From The Chamber of Commerce Handbook for San Francisco, 1914.

The Streets of San Francisco: *Betty Hirsch*

Have you ever wondered why there is no beach in North Beach, how to pronounce Gough, who Geary Street was named after, or who was responsible for making Market Street run diagonally? Well, look no further. This class will answer your questions on street names and places in San Francisco, tell the stories of the people for whom they were named, and follow the "only in San Francisco" chronology of street naming, when streets had only numbers and letters and the resultant confusion of it all. The class will include two City Guide walking tours.

Lecture: Thursday, 1/25; 6:30 P.M.

Room: CHC

Trip: Saturday, 2/3; 8:30 A.M.–6:00 P.M.

Army Base to National Park—

the San Francisco Presidio: *Chatham Forbes*

Unique among military bases in its extraordinary close relationships with its home metropolis, the Presidio has recently undergone demilitarization by federal action unwelcome to the people of San Francisco. For generations, overwhelming local consensus has succeeded in preserving the status of this venerable institution. But today the integrity of the property continues to be threatened by budgetary considerations and special inter-

ests. The class will tour the post, review past history, current status, and future prospects, and also receive briefings from authorities on the base.

Lecture: Wednesday, 1/31; 7:00–9:30 PM.

Room: CHC.

Trip: Saturday, 2/10; 8:00 AM–5:30 PM.

Mission, Town, and University—

A History of Santa Clara: *Chatham Forbes*

On an oak-dappled meadowland much too near to the Guadalupe River floodplain, Father Junipero Serra founded Mission Santa Clara in 1777 to minister to a sparse population of Native Americans which had lived there for thousands of years. This and the subsequent record of natural disasters, conflicts, prosperity, poverty, cultural impacts, and the foundation of town and university, will be studied by the class in the classroom and at several sites during the field study. Influential personalities will be emphasized.

Lecture: Wednesday, 2/14; 7:00–9:00 PM.

Room: CHC.

Trip: Saturday, 2/24; 8:30 AM–5:30 PM.

Treasures of the East Bay Hills: *Betty Hirsch*

Discover hidden treasures in the East Bay Hills that you may not have seen before. The Robert Sibley Volcanic Preserve is home to Round Top, an extinct ten million-year-old volcano, which at 1,761' is one of the highest peaks in the East Bay Hills. The Chabot Observatory, constructed in 1915, houses a 20" refractory telescope, one of the largest open to the public in California. Experience a planetarium show and learn about the new observa-

tory being built in Joaquin Miller Park. Within Montclair Village is an historical gingerbread firehouse, which is the pride of the area. We will partake of all of these wonders as part of this course. Come prepared with walking shoes.

Lecture: Thursday, 2/29; 6:30 P.M.

Room: CHC.

Trip: Saturday, 3/9; 8:30 A.M.–6:00 P.M.

History Center Programs Parallel Theme of Magazine

The first in a series of programs which parallel themes of *The Californian* was held on October 5 when Phil Trounstine, political editor and columnist for the *San Jose Mercury News* gave a presentation and facilitated a discussion about the relationship between the media and California politics. The September 1995 issue of *The Californian* ran a feature focusing on a progressive-era political journalist, Franklin Hichborn, and described issues facing early 20th-century Californians. In an effort to present current status on similar issues, the history center invited Trounstine to give a contemporary view of the media and California politics. Approximately forty people, about half of whom were De Anza College students, attended the talk.

One theme was his contention that huge amounts of cash fuel successful political campaigns because of the monumental impact of television and the cost of television advertising. He estimated it takes \$1 million to get one idea across to California voters. He noted that some political observers argue that over time, large political campaign contributors are doing no less than bribing candidates.

Trounstine also outlined current worrisome campaign marketing techniques. "Lying with the facts has become state-of-the-art in politics. Those of us in the news business were reared on facts, not truth. Readers want the truth." The news media finds itself on dangerous ground and challenged to report the facts **and** the truth.

The talk elicited a lively round of questions and debate about current political campaigns and those of the recent past. In fact, the question and answer period ran longer than the original presentation.



Phil Trounstine (center) talks with students after his presentation about the media and California politics.

The history center is currently developing this type of program which fosters debate and discussion about contemporary issues facing California, while offering supporting information about the history of the same issue. The result will be an inter-disciplinary, inter-generational and multi-faceted way of viewing a whole panorama of life in California.

This issue of *The Californian* features an article by De Anza College instructor and former CHC Director Jim Williams about the relationship between energy and the environment in California's history. The article is drawn from his new book *Energy and the Making of Modern California*, available in early 1996. His presentation and book signing will be held on March 17 (see Calendar on page 3).

The California Energy Experience

by James C. Williams

The following is drawn from James C. Williams' new book Energy and the Making of Modern California (Akron, Ohio: The University of Akron Press, 1996). Williams, former director of the California History Center and full time faculty member of De Anza College gives a historical perspective to energy use and its relationship to the natural environment in the Golden State.

In 1973, Americans were jolted by a vision of their vulnerability to foreign forces: Arab nations imposed an oil embargo on the United States in retaliation for American support of Israel in the Yom Kippur War. The embargo sparked an energy crisis that lasted into the 1980s. It occurred just at the time America's environmental movement was coming into its own—taking on issues such as nuclear power, offshore oil drilling, and air and water pollution. The combination of the energy crisis and environmentalism in the midst of an era already marked by unprecedented cultural radicalism opened American eyes to profound relationships between energy and the natural environment.

Across the world, environmental complexity and versatility constantly have challenged people's technological inventiveness. In harnessing energy resources, a reciprocal interplay developed between technology and the environment. People's energy choices always involve consideration of environmental endowments and available technologies, and these same energy options, in turn, influence the environment. Both technology and the environment have the capacity to empower as well as constrain, so people make energy-related choices based on a variety of continually shifting factors. In the end, the nature of human society's energy experience is shaped by technology, the natural environment, and population growth, and at the nexus of these three factors are people, their values, and their appetites.

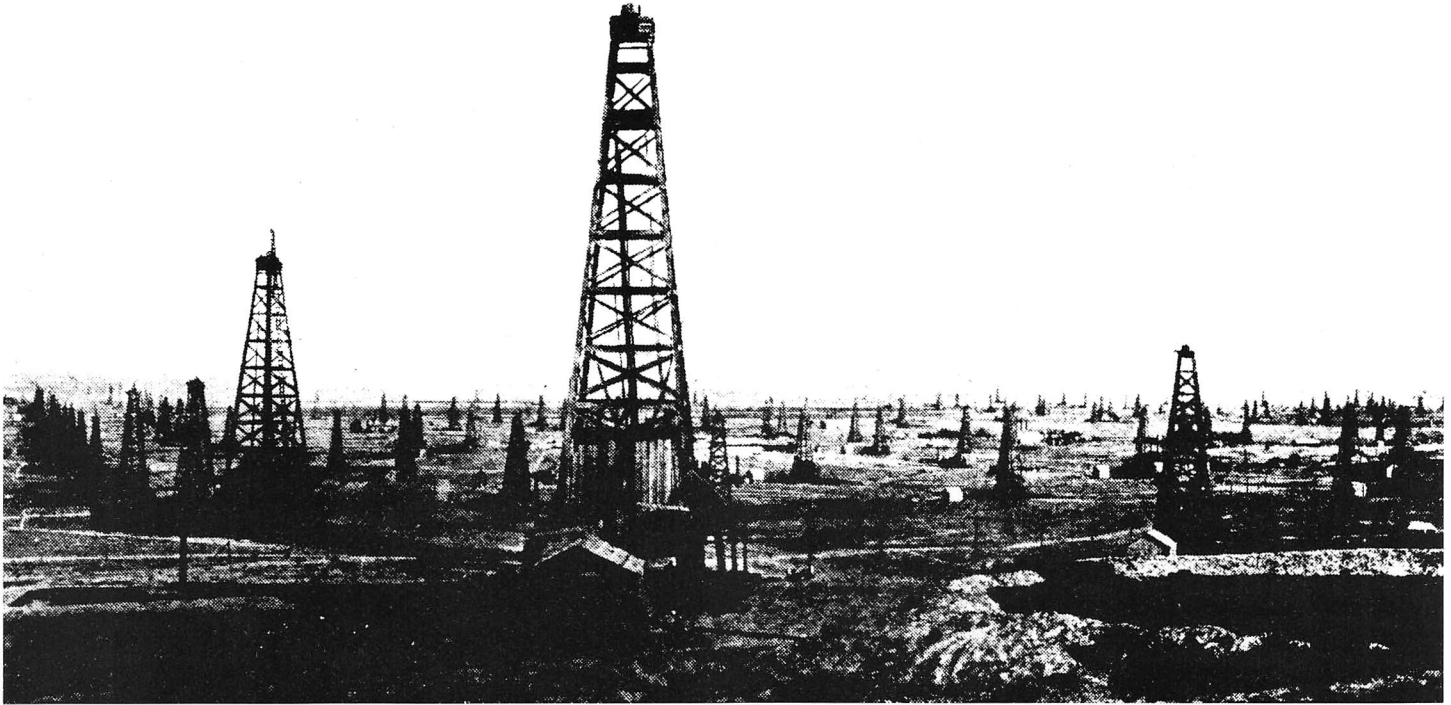


Among all places on the earth's surface, California's salubrious climate and rich diversity of natural resources has historically provided an especially attractive environment for human habitation. Here, native Americans created long lasting peaceful and prosperous hunting and gathering societies. Spanish conquest of the region brought a new world of missions and

ranches to California, and, after America acquired it from Mexico in 1846, a commercial and industrial society accompanied the steady stream of immigrants flowing into the territory. In the process of creating their world, they tapped energy resources and exploited the environment. Yet, as they prospered, their attitudes toward the environment changed. In energy development, as in other things, technological progress became essential to the good life; however, it was this same good life that made the environment important to people in different ways, through travel, outdoor recreation, and similar leisure activities. Therefore, the interplay between technology and the environment continually was refashioned as people's values changed.

The visible evolution of California energy landscape begins in the nineteenth century and on people's use of muscle power, wood and coal, hydraulic and wind power, and other natural energy resources. After 1850, coal became the primary fuel in America, outpacing wood in industrial and household use and undermining waterpowered manufacturing. But Californians discovered they had few coal reserves. Although many of them dreamt of replicating eastern manufacturing development on the Pacific Coast, inconvenient waterpower sites and expensive steam fuels stifled such efforts, and most people remained dependent on wood for fuel. As the national energy pattern shifted, only in agriculture, which relied on human and animal muscle power, did Californians adhere to the same energy model as the rest of the nation.

During the 1890s, entrepreneurs earnestly began developing California's abundant petroleum deposits, and they pioneered hydroelectric power development, drawing on the rich knowledge of hydraulic engineering which they had gleaned from four decades of gold mining. Petroleum, hydroelectricity, and, after the 1910s, natural gas formed an energy triad that virtually eliminated all other resources from the state's energy budget. Moreover, oil, gas, and hydroelectricity freed Californians from depending on imported energy resources and opened enormous opportunities for economic and industrial development. Oil replaced coal and wood as steam fuel in industry and transportation, and a hydro-based electric power network delivered energy throughout the state for domestic, agricultural, and manufacturing use. Motor vehicles and electricity transformed both landscapes and lifestyles, and, as energy companies came to be among the largest and most influential in the emerging urban-



Coal provided a name for Coalinga during the late 1800s, but oil made it prosperous after 1900. From Sunset Magazine, January 1912.

industrial world, political issues of power and control over energy resources became important.

World War II and the cold war era transformed the California economy. The war stimulated enormous military and industrial investment in the state and attracted tens of thousands of new immigrants. The explosive population and economic growth which it spawned continued unabated into the 1980s. Southern California's decentralized urban environment, in part attributable to the petroleum industry, spread across the southland and to other parts of California. An electronics industry, partly grown from regional electric power research and development, provided a foundation on which Californians built an industrial society quite unlike the eastern model of which so many of them long had dreamed. Through it all, California's energy regime confidently supplied all the fuel and electric power people wanted.

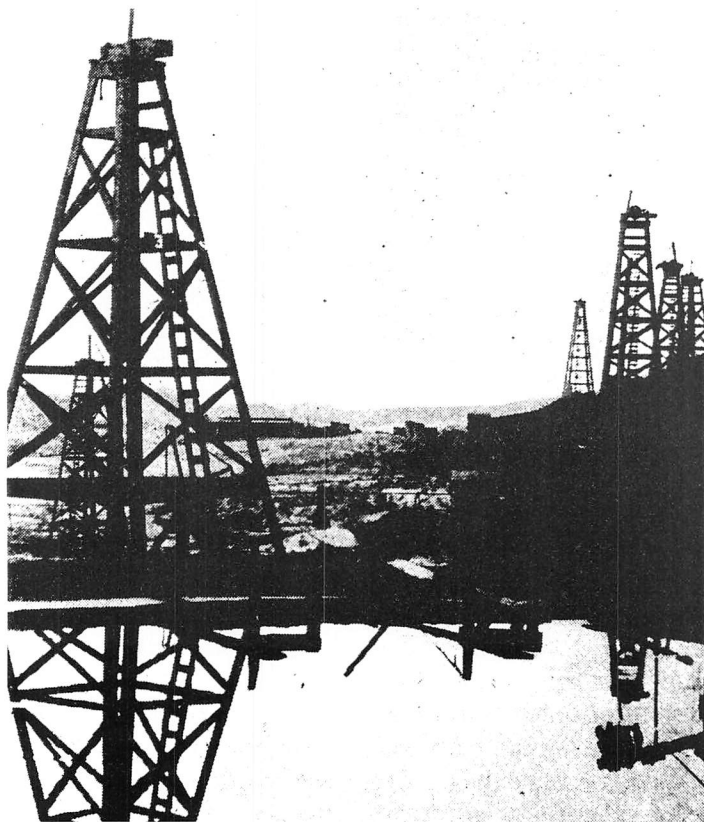
Yet the state's enormous growth brought equally immense energy problems. Oil and gas imports exceeded domestic production, and hydroelectricity became secondary to giant steam-turbine generating plants. Metropolis-dominated and energy-hungry in the second half of the twentieth century, California joined the nation in facing an uncertain energy future. Air pollution, offshore oil drilling, nuclear power, and other energy related issues increasingly fell afoul of the rising environmental movement that was itself prompted by the good life engendered in part by abundant, cheap energy. Amidst the 1973 energy crisis, the state's energy regime and environmentalists collided, and as a result of their collision Californians embarked, once again, down a different energy path. As the symbiotic

relationship between energy, technology, and the environment became clear, they rediscovered solar energy, wind power, mini-hydros, biomass energy, and cogenerated electricity.



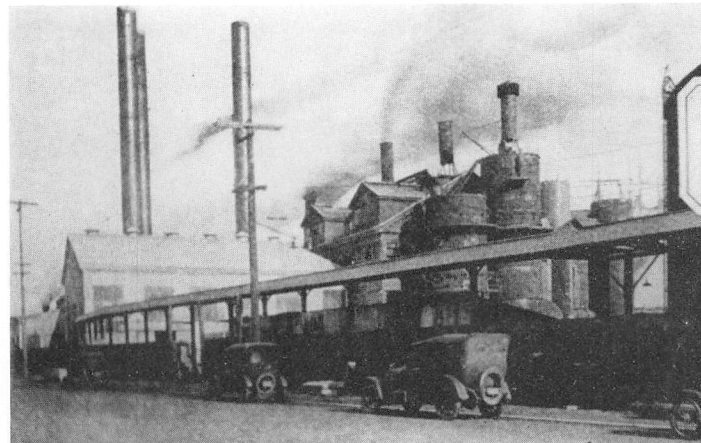
California's evolving energy landscape—the human exploitation and use of energy resources and the interplay between technology and the environment, all in the context of a steadily growing population—provides a remarkable window through which the complex relationship of technology, the environment, and human values can be seen. On one hand, its diversity and relative historical autonomy within the United States makes its energy history distinctive, but it also shares a number of general characteristics present on a national level. Like other Americans, for example, Californians came to believe in energy myths. They believed energy consumption to be a measure of life's quality—the more the better. They believed each new energy resource to be, in turn, faultless, infinitely abundant, and capable of effecting utopian change. Each energy resource had its spin as a panacea, and when people's expectations were dashed, they simply transferred their enthusiasm and the myths to a new resource.

Another characteristic of California's energy history concerns the long-standing tension in America between two types of technology: authoritarian and democratic. "The first," wrote Lewis Mumford in 1964, "is system-centered, immensely powerful, but inherently unstable, the other man-centered, relatively weak, but resourceful and durable." California's energy



The McKittrick oil field in Kern County helped transform the southern San Joaquin Valley into a major north American oil area. From Sunset Magazine, December 1908.

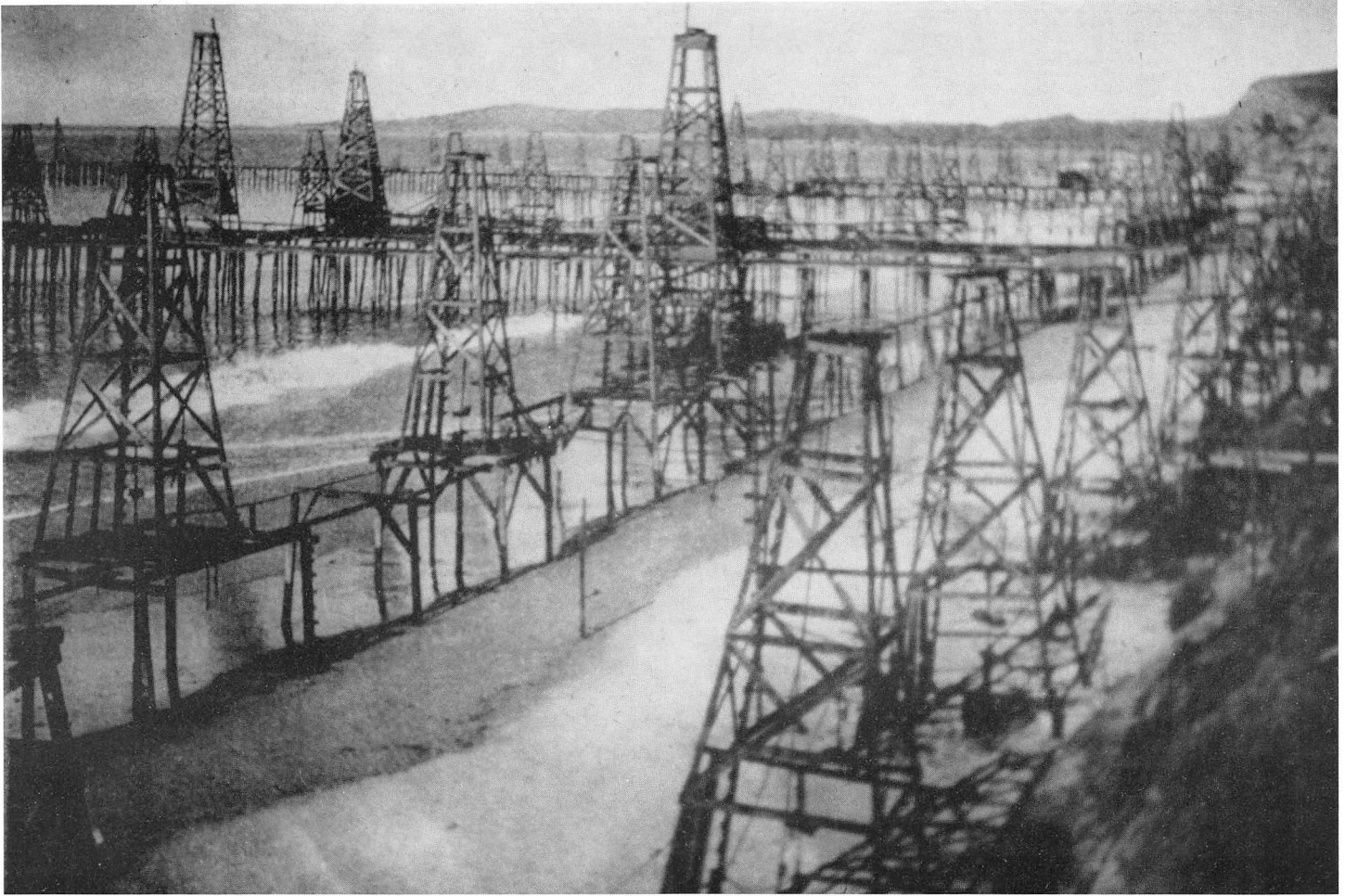
experience reflects these two modes of technological development. People started with locally controlled and easily understood energy resources: water, wind, wood, and animal power. They used technologies to harness these resources that were democratic in nature—relatively simple, localized, and appropriate for the tasks to which they were applied. Over time, however, interdependent energy systems appeared to harness resources, systems that evolved from simple to complex very much as society itself developed. Technological and organizational changes in energy production brought economies of scale, fossil fuels—coal followed by oil and natural gas—displaced other energy resources, and sophisticated electric power networks evolved.



During the 1920s, the Oakland oil gas plant was a major industrial site. From the 19th Annual Report, Pacific Gas and Electric Company, 1924.

California shared in these and other national energy characteristics, but its energy history was shaped by distinctive factors as well. Over time, in both production and consumption, California's energy resource budget deviated markedly from that of the nation. On a fundamental level, its citizens' energy choices and consequent energy developments often varied from those made in regions with different resource options, technical developments, comparative prices, output of good and services, and consumer preferences. California's natural resources, geography, and economic and technical conditions differed in distinctive ways from those in the East, Midwest, and South. Absence of coal deposits, properties of oil, location and character of rivers and streams, geographic isolation, climate, the nature of agricultural development, availability of labor, and pattern and pace of population growth each influenced the energy choices made by Californians. Among these, environmental conditions emerge as particularly important in the energy experience.

The environment shapes human societies and people alter the landscape to suit their needs. The ubiquity of wood in colonial America compared to England, for example, led European-Americans into a "Wooden Age" that uniquely defined their material life. Historian of technology Brooke Hindle observes that "Americans used wood prodigally, as a fuel and as the chief material from which they fabricated their buildings, their transportation systems, and most of their technology." At the same time, Americans exploited the environment, making marketable commodities of virtually every natural resource. In



The Summerland oil fields introduced offshore oil drilling to the world during the 1890s. Postcard from the author's collection.

doing so, they did more than reshape their society; they reshaped nature. As environmental historian William Cronon points out, people saw “natural advantages” in the environment and sought to improve it according to their vision of what it should be. Each “improvement” added to the cluster of human things superimposed on the landscape and inscribed a kind of “second nature” over the original “first nature.” Chicago’s railroad system, for example, appeared less a human artifact than “a force of nature,” because it exploited natural advantages as it spiraled out in all directions from the city. “To those whose lives it touched, it seemed at once so ordinary and so extraordinary—so second nature—that the landscape became unimaginable without it.”

Like Chicago’s railroads, California’s energy systems appeared as part of the human interaction with nature. Oil and gas pipelines, highways, waterpower delivery networks, electric power lines, and other energy systems became second nature, too. They are starkly visible examples of the relationship between technology and nature, perhaps because, as environmental historian Donald Worster, says: “Far from being a child of nature, the West was actually given birth by modern technology and bears all the scars of that fierce gestation, like a baby born of an addict.” In California and the West, technology became a tool

to “instrumentalize nature,” and its people were “especially receptive to the vision of a technologically dominated environment.” Yet, insofar as “technology is a product of human culture as conditioned by the nonhuman environment,” westerners also adapted to nature. California’s “tradition of appropriate technology . . . , from windmills and solar energy to ideas about ecologically sustainable agriculture,” represents conscious and intentional adaptation to the environment. So, while environmental conquest is part of California’s energy story, one must see it also as a saga of “reciprocity and interaction rather than of culture replacing nature.”



In California, the give-and-take between technology and the environment mingled over time and in various ways with the distinctive regional energy experience factors. Together they encouraged or retarded exploitation of energy resources. This combination of factors, in turn, coalesced with the influence of energy myths, the tension between authoritarian and democratic technology, and other concerns to create a final mixture that

comprises a crude calculus of ever-changing advantages by which Californians made and continue to make energy-related choices. It is, at any given time, the *weltanschauung* fundamental to understanding the historical evolution of energy technologies, systems, and use patterns.

As California enters the twenty-first century, there is no doubt that human use of energy will continue playing a crucial role in shaping both lifestyles and the natural world. For over 150 years, people's access to and application of energy, plus the interplay between technology and the environment, distinctively helped sculpt the economic, social, and environmental life of California. The abundance or scarcity of energy served either to stimulate or to retard economic development, its use inextricably wove itself into the social fabric, and the tapping of it indelibly etched the natural world. In sum, energy played a fundamental role in the making of modern California.



P.G.&E. operated a special car demonstrating electricity in cooperation with the Northern Electric Railway between 1912 and the early 1920s. From *The Journal of Electricity*, 45 (November 15, 1920): 460.

FOR FURTHER INQUIRY

"For Further Inquiry" suggests additional reading on the subject of the feature article and poses questions for thought and debate.

For further reading that gives a national perspective, James Williams recommends:

Melosi, Martin V. *Coping With Abundance: Energy and Environment in Industrial America*. Philadelphia: Temple University Press, 1985.

Nye, David E. *Electrifying America: Social Meanings of a New Technology, 1880-1940*. Cambridge, MA: M.I.T. Press, 1990.

Recent works dealing with contemporary energy-environment issues include:

Hollander, Jack M., ed. *The Energy-Environment Connection*. Washington, D.C.: Island Press, 1992.

Palmer, Tim, ed. *California's Threatened Environment: Restoring the Dream*. Washington, D.C.: Island Press, 1993.

What role, if any, does the environmental movement play in the development of new energy technologies?

What new sources of energy ought to be examined for the 21st century and what might be their impact on the environment?

Forthcoming:

Williams, James C. *Energy and the Making of Modern California*. Akron, OH: University of Akron Press, 1996.

For the last 150 years, California's economy and its people's lifestyles have been substantially shaped by access to and the application of energy. This new volume details the ways in which the role of energy in California's past is the key to understanding the region's overall development and present environmental circumstances. Available January 1996, approximately 400 pages, \$44.95 cloth, \$24.95 paper through The University of Akron Press (216) 972-5342, FAX (216) 972-6383 or e-mail: press@uakron.edu

PIONEER PROFILE

Albert Wishon Brought Electricity to the Central Valley



Albert Graves Wishon was the catalyst behind electric irrigation in the San Joaquin Valley at the turn of the century. The real estate and insurance agent became convinced that electricity could pump water to thirsty communities of Tulare County. He proposed harnessing power from the Kaweah River.

In 1895, Wishon established the Kaweah Power and Water Company to supply

Visalia with water and electricity. His endeavor met with some success and he formulated far more grandiose plans. He wanted to transmit electricity over long distances, a feat heretofore almost unheard of.

Wishon was able to implement his plans only with the financial support of real estate developer William Hammond and Hammond's brother residing in England. Other investors from London were also procured and with the money in hand, Hammond and Wishon incorporated the Mount Whitney Power Company which embarked on building a hydroelectric plant on the Kaweah River. The plant was completed in 1899.

Wishon's claim that electricity could reliably pump water to crops was met with skepticism by county farmers. Years later, Wishon recalled:

I proposed to growers that they should use electric motors, but they turned a deaf ear to the suggestion. With faith in my idea, I came to San Francisco, borrowed \$25,000, bought motors and shipped them to Lindsay. There I hooked one of them up to a pump on an orchard just outside the town, and sent an invitation over the countryside for the people to witness a demonstration. Several of them assembled, coming in buggies, spring wagons, buckboards, carts, even on horseback. At least half of them were confident the experiment would fail. But the demonstration was a complete and convincing success, and in ten days I had sold all the motors and ordered a new consignment.

One county historian noted the onlookers' sheer amazement and quoted a farmer at Wishon's demonstration as saying "By God, it does work, don't it!"

Wishon and Hammond enjoyed the support of the local press. One editorial claimed the hydroelectric plant would "make our orchards prolific, run our cars, drive our machinery, lighten our darkness and make thousands of people comfortable and happy."

Harnessing power from the runoff of the Sierra Nevada had far greater impact than even Wishon realized. The most immediate effect was the opening of thousands of acres of previously unfarmable land to farming. As early as 1900, just two years after the completion of the Kaweah Power Plant, otherwise arid land was blossoming with vast farms. Some property values rose as much as 500% by 1910. Besides the expansion of farm lands, electrically irrigated farms began to produce cotton, a crop that would become a mainstay in the valley. Cotton gins were also electrically powered in this era.

A secondary effect of the power plant was the electrification of related industries like packing and canning. Sorting tables, conveyor belts and a whole variety of operations were powered by electricity. Steam engines became obsolete in the canning industry in the central valley. In addition, Wishon introduced electric oil pumps for the petroleum industry and outdoor high voltage stations to regulate the transmission of electricity.

Besides farming and related industries becoming electrified, rural homes enjoyed the benefits of the new power, too. By the mid-1920s, almost 25% of California's farms were served with electricity, while the national rate was only 2.6%. In 1925 more farm houses had electric washing machines than city dwellers. The same was true of curling irons, ranges, portable fans and water heaters.

Wishon continued to push his partners for further expansion of the Mount Whitney Power Company, which caused a rift with his partner William Hammond who did not want to finance more projects. In 1903, Wishon left Mount Whitney, and joined the San Joaquin Light and Power Company in Fresno where he was in direct competition with his former partner. Eventually he served as president of the Fresno-based power company. The Mount Whitney Power Company was ultimately sold to Southern California Edison.

Wishon's impact on the development of California agriculture business cannot be underestimated. Rural electrification also spawned numerous industries which today define the region known as the central valley.

CULTURAL PRESERVATION

Environmental Volunteers Strive to Inspire Stewards of the Earth

Environmental Volunteers (EV) is a 23-year-old non-profit organization whose mission is “to promote understanding of, and responsibility for, the environment through the hands-on science education.” The group boasts over 140 volunteers who frequent Santa Clara and San Mateo County schools, bringing a hands-on approach to learning environmental responsibility and basic ecology to thousands of children.

“We believe that understanding leads to stewardship,” explained Executive Director Susanne Mulcahy. “We don’t try to cram kids’ heads full of facts. If they begin to have some sense that resources are finite, they will become stewards of the earth.”

For the most part, docents have a “personal passion for the out-of-doors and for teaching children.” Many are parents or retired persons. Director Mulcahy was happy to report that she awarded 20-year patches to four volunteers at the spring picnic this year.

Becoming a volunteer requires a commitment to complete either a three-month Extended Training course, accredited through San Jose State University, or an intensive month-long Specialized Training course focusing on one particular area. Upon completion, the docents are available to deliver a hands-on educational presentation to school children in more than 90 public and private schools. Volunteers are asked to be available 8 working hours per month for classroom visits or field trips.

Excellent training provides school children with well-prepared and creative instructors who inspire a respect of the environment. Some themes of the training and classes include Water Science and Conservation, Marine Ecology, and Earthquake Geology and Preparedness. The docents often use hand puppets, artifacts or models to communicate with the pupils. The EVs capitalize on the multi-faceted eco-systems of the Bay Area for follow-up field trips to places like Deer Hollow Farm, Palo Alto Baylands, Stanford’s Jasper Ridge Biological Preserve or Stevens Creek Park.

The program has been so popular, that the organization has had to limit its classroom visits to one per teacher per year. As an attempt to allow for more visits and train more volunteers, EV has implemented NEST (Neighborhood Education Science Team). It is a contract with a particular school that allows EV to train parents, teachers and corporate sponsors so that the sponsoring school can have multiple visits per year in every classroom. In the first six months of 1995, EV came into contact with over 1,500 students in three NEST schools. The NEST program has also given teachers an opportunity for intensive training that excites them about teaching science and provides many teaching materials.

EV introduced its interactive software program *Baylands Habitats*. The Bay Area Pollution Prevention Group (BAPPG) found the software package a great educational tool, and has financed its distribution to schools, libraries, nature centers and museums throughout nine Bay Area counties.

During the month of November, EV offered a volunteer training program called “Nature in Your Neighborhood” which prepared volunteers to teach school children how to investigate the natural environment in their own neighborhoods. One session focused on teaching techniques and basic ecology.

Beginning in January, EV will offer “Early California Indian Life: An Environmental Focus” as its volunteer training. What were the environmental challenges that California Indians faced, and how did they find solutions? Docents will learn to explain to children how the Indians used their environment in a renewable way, thereby allowing it to regenerate itself. This series will be held in the meeting room of the Peninsula Conservation Center at 3921 E. Bayshore Road in Palo Alto.

Environmental Volunteers publishes a newsletter, they sell educational materials (including their *Baylands Habitats* software program) and EV founder Karen Nilsson’s book *A Wildflower By Any Other Name*. Environmental Volunteers can be reached at:

3921 Bayshore Road, Palo Alto, California 94303.
(415) 961-0545 or FAX (415) 961-0548 or
e-mail: envirovols@aol.com



Environmental Volunteers Docent Mary Hendren points out a fresh track to school children. Photo by Susanne Mulcahy.

FOUNDATION NOTES

Wozniak Family Donates Artifacts to De Anza College

Margaret Wozniak and members of her family are donating a number of artifacts which reflect the genesis of the personal computer. De Anza College plans to mount an exhibit at the Advanced Technology Center depicting the progression of hardware in the development of Apple Computer. College President Martha Kanter contacted the history center to participate in creating the exhibit.

Some of the items to be donated are the very first motherboard, and the Apple 1 (precursor to the Macintosh). The tiny T.V. screen and wood cased keyboard demonstrate just how far the world of technology has come in a relatively short period of time. Other artifacts are the Apple II, Apple IIc, and Apple IIe.

The original logo shows a person reading under an apple tree. Plaques showing the patents for the various stages of development also accompanies this wonderful collection of memorabilia.

History Center: A Mac-compatible Office

The staff of the history center now enjoys a fully Mac-compatible office. Thanks to generous benefactors, the Power Mac 6100 and printer are fully operational. File Maker Pro database allows history center membership records and other projects to be far more manageable than before.



"Little Shoppe" fundraising boutique volunteers (left to right) Helen Driscoll Coughlin, Elizabeth Archambeault, and Mary Strong.

Volunteers

Volunteers Honored

The focus of the annual holiday open house was to honor those volunteers who have given forty hours or more of service to the center. The holiday season is a good time to appreciate those who staff the front desk at the center, sort slides in the library's collection, provide refreshments at events and inventory new clippings collections. Thank you to the following for their continued service.

The volunteers below have given a minimum of 40 hours service during the 94-95 year:

Elizabeth Archambeault	Maureen Kelley
Nancy Bratman	Deanna Liotta
Gertrude Frank	Helen Riisberg
Josephine Harper	Mary Strong
Janet Hoffman	

Little Shoppe of CHC

The volunteers, under the direction of Mary Strong and Trudy Frank, held their second annual "Little Shoppe of CHC" fundraiser boutique in early October. Many of these same volunteers created works of art, special jams and a wide assortment of crafted items.

Proceeds from the event support the Stockmeir Library. A meeting has been scheduled to evaluate this event, and make plans for next year. The volunteers who participated deserve a big thank you for all their work.

Co-ordinators

Trudy Frank & Mary Strong.

Volunteers

Elizabeth Archambeault, Helen Driscoll Coughlin, Janet Hoffman, Dee Liotta, Betty Peterson, Helen Riisberg.

Artisan/ crafts-people donors

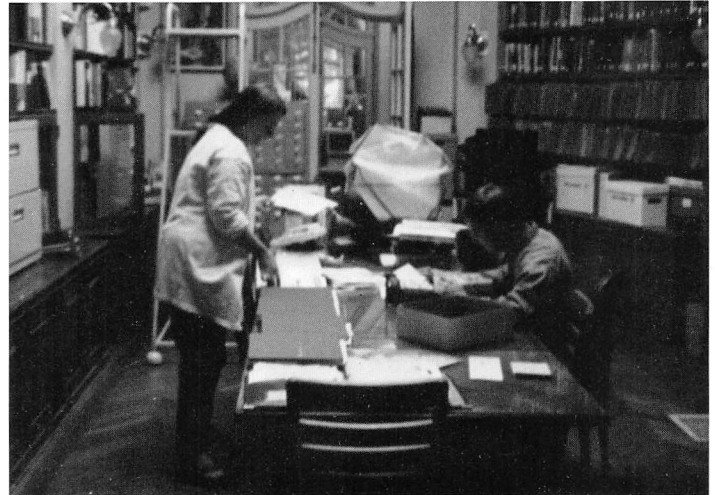
Elizabeth Archambeault, Trudy Frank, Rhoda Kristofferson, Jewell Hall, Janet Ilacqua, Anna Koster, Dee Liotta, Mary Strong, Holly Winslow.

Board of Trustees

The Board of Trustees of the California History Center Foundation regretfully accepted the resignations of two board members. Roy Roberts, longtime trustee and former President of the Board expended enormous energy and time with the history center. James Feng, De Anza College geography instructor, has been very supportive of the center during his tenure on the board. Thank you to both Roy and James for their service to the foundation.

A formidable task facing the current Board of Trustees is to raise funds necessary to keep the Stockmeir Library operating. To accomplish that task, the 1995-96 goal is to raise \$35,000. The trustees have formed task forces to generate plans of action.

Our "wish list" is a way to let our members know some of the items we need, and the ways that their donations help the history center carry on its work.



Librarian Lisa Christiansen and volunteer Nathan Rupp in Stockmeir Library.

Stockmeir Library Wish List

Here are some ways that your dollars would be used.

\$10	to purchase	new cassette tapes for oral history projects
\$20	to purchase	new video tapes to record documentaries and creat video oral histories
\$45	to purchase	a new book for the library
\$45	to purchase	hand-held vacuum
\$50	to purchase	a wall clock
\$350	to purchase	speakers and receiver to utilize tape deck***
\$500	to purchase and install	UV protective acrylic for skylight
\$500	would underwrite	prize money for a student essay contest
\$2000	would underwrite	an issue of <i>The Californian</i>

***Currently we have a high quality tape deck that we cannot fully utilize because we do not have a receiver and shelf speakers. This purchase would allow us to duplicate oral history tapes and record documentaries.

Yes, I would like to help The Stockmeir Library

and contribute \$ _____ to be used for _____ (or for whatever is needed).

___ Enclosed is my check payable to The California History Center

___ Please charge by VISA/Master Card # _____ Exp. Date _____

Signed _____

Address _____

Phone # _____



Ardenwood Book Published

George Washington Patterson and the Founding of Ardenwood by Keith E. Kennedy was published by the history center last summer. The book is a biography of the founder of Ardenwood Farm which currently is a living history museum in Fremont, California. Publication of the book was a collaboration between the descendants of George Washington Patterson and the California History Center Foundation in cooperation with Ardenwood Historic Farm. It is not one of the CHC Local History Studies, however supporter members of the California History Center Foundation received a copy of the book as their yearly premium.

A book signing and presentation by author Keith Kennedy was held on August 21 at Ardenwood. Park officials are pleased to offer the book for sale in their store. A few additional copies are available for sale at the history center for \$9.95 plus tax.



Students and CHCF members continue the discussion about the media and politics after Phil Trounstine's presentation, October 5, 1995.

New Members

Sponsors

Nan Geschke, Joan Rogers.

Individual

Glory Anne Laffey, Karla Mathiason, Lynn McNeil, Ellen Shaw, Eleanor Watanabe, Nan Yamane.

Renewing Members

Sponsors

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