CHAPTER 6: CULTURAL, HISTORICAL, RECREATIONAL AND EDUCATIONAL RESOURCES

6.0 Introduction

This chapter summarizes the existing cultural, historical, recreational, and educational resources of the San Lorenzo River watershed, with an emphasis on District-owned land. It should be noted that climate change could affect the resources discussed in this chapter. For example, impacts from unauthorized recreational use on District property could be exacerbated by the more extreme weather patterns, including longer droughts and more intense rainfall. These changes would likely increase erosion and compaction in disturbed areas.

6.1 Cultural and historical resources in the San Lorenzo River watershed

This section begins with an overview of the cultural and historical resources of the San Lorenzo River watershed, and ends with a similar overview of the District's ownership.

Big Basin State Park provides a sampling of the rich and varied cultural history of the watershed, from pre-historic Native American sites, homesteading and logging sites, to the many 1930s Civilian Conservation Corps park improvements. Ohlone hunting and gathering nomadic settlements were followed by the influx of Spanish missionaries, and again by waves of fortune-seekers of the California Gold Rush. The Spanish constructed Mission Santa Cruz, and introduced cattle-grazing and European farming techniques. The Gold Rush settlers introduced major extractive industries to the area, including logging and mining. Historical evidence from these previous land uses is still very much evident today.

6.1.1 Ohlone history and archeology

Swanson Hydrology & Geomorphology (2001) summarized pre-historical evidence in the area for the City of Santa Cruz Watershed Management Plan. Archaeological evidence suggests that Native Americans may have lived in the Santa Cruz area for 10,000 years or more. One site, with a flake scatter and two mortars, lies just to the northwest of the Newell Creek tract.

For the inhabitants of the central coast and mountains, gathering of terrestrial plant materials (e.g., seeds, acorns, tubers, and marine vegetation), collecting of shellfish, and hunting terrestrial and aquatic animals (e.g., deer, elk, rabbit, bear, seal, sea lion, fish, etc.) provided an abundance of resources for food, ornamentation, tools, and economic exchange. It is also clear that patterns of adaptation varied from place to place and changed through time.

The first residents of the San Lorenzo River watershed were the Ohlone Indians. Their numbers were small and their population density low. They hunted deer and other games, fished, and gathered various plant foods. They were nomadic; they traveled from place to place seasonally, following seasonal food sources. The Ohlone Indians were the original inhabitants of the canyon that now holds Loch Lomond Reservoir. This local group was referred to as the Zayante. They had enough acorns, fish, and small game to live a peaceful, easy life. Temascals (saunas), songs, and games were the rule, while fighting and thievery the exception (City of Santa Cruz Water Department, 2007).

They sometimes set fires in the grasslands, to encourage the growth of seed-bearing annuals and to facilitate hunting. Yet overall, their impact on the environment was extremely light, compared to the impact of today's residents.

6.1.2 Land-use history of the watershed

In many ways, the history of post-Ohlone land use in the San Lorenzo Valley watershed has created the conditions and landmarks of the current day. Three land-uses in particular have changed the landscape: Logging, agriculture, and mining.

6.1.2.a Landmarks of past of logging

The area is scattered with remains of old sawmills, steam donkeys, and old-growth stumps. Logging began in the 1830s but did not have a major impact until the 1860s. From the 1860s through the 1890s, logging was the major land use in the San Lorenzo River watershed. In 1864, 28 sawmills were operating in the Big Basin/San Lorenzo Valley area. By 1899, Boulder Creek was the fifth largest shipper of timber in the country. Early-day logging techniques were very hard on the environment. Clear-cutting was common, including hardwoods, such as madrones and tanoaks. Madrone was burned for charcoal, while bark from tanoaks was used for the tanning industry. After hardwoods were cut, the conifers were cut, and then fires were set. Initially, a fire was set to clear the bark from the logs and to clear shrubs to facilitate log removal. After logs were removed by ox teams, another fire was set, and it would burn uncontrolled into surrounding areas. This sequence of fires killed sprouts and saplings, allowed invasion of shrubs, and delayed natural reforestation. Burning, together with extreme soil erosion, could alter the land enough to prevent forest re-growth. In other areas the forest could re-grow only after a long natural successional sequence of brush to woodland to forest.

These large-scale disturbances to terrestrial plant and animal life also severely impacted fisheries. Transporting logs to mills accelerated erosion. Workers laid out pole roads in stream bottoms or drainage swales, with no attempt to control erosion. Gullies of these early-day operations are still visible throughout the watershed. Landslides and slumps were often precipitated by these logging practices, especially when skid trails following canyon bottoms undercut steep banks. Many of today's mapped landslide deposits probably date from this period.

6.1.2.b Landmarks of past mining

Throughout the watershed, old limekilns provide historical evidence of a once thriving industry. Figure 6.1 shows the Holmes limekilns in Felton.

Figure 6.1 The Holmes Limekilns in Felton

Photo courtesy of SCCRCD, 2007

The Holmes limekilns pictured above are located in Felton, and are registered as a historic resource by the county.

The mineral resources of the San Lorenzo River watershed are limited to primarily lime, limestone, sand, gravel, and crushed rock. Lime burning was one of the earliest industries in the watershed. Lime mining began in Spanish colonial times (USGS, UCSC Campus, 2007). Davis and Jordan began producing lime in 1853. By 1878, the County supplied more than one-third of the state's lime production, and most lime came from the San Lorenzo River watershed. Lime quarries were primarily located in the Felton and Santa Cruz areas. At one time, at least nine different kilns were in operation.

Prior to the development of the railroad system through the western United States, the only source of lime for cement construction in the Pacific Basin was the limestone quarries in the Santa Cruz area. Lime extracted locally was used in the construction of the Panama Canal, the Grand Coulee Dam, and in the reconstruction of San Francisco after the 1906 earthquake. Charcoal made by burning forest wood throughout the Santa Cruz Mountains fueled the limekilns that processed the lime. Lime was then hauled to ships for transport. By the early 1930s nearly all mines in the Santa Cruz area closed, as less expensive inland sources became

available by rail. "Marble and granitic aggregate are still actively being mined in the Watsonville and Davenport areas. The marble and granitic rocks are part of the Salinian Basement Complex (Cretaceous and older) exposed through Ben Lomond Mountain" (US Geological Survey, UCSC Campus Report, 2007).

Limestone quarry operations altered the landscape and streams. The quarries increased turbidity, and kilns were fueled with native redwoods and shrubs. By 1943, only two limestone companies were still in existence. Today, none are functioning. Limestone quarrying continues outside the San Lorenzo River watershed; most notably by the cement plant in the Liddell Creek drainage.

Petroleum was never successfully developed in Santa Cruz County. Historically, oil seeps were known from at least two locations along the San Lorenzo River. The discovery of oil in Moody Gulch near Alma, Santa Clara County, in the 1870s, led to exploration in the San Lorenzo River watershed. Many unsuccessful wildcat wells were dug. In the Bear Creek drainage some of the abandoned wells (probably dating from the 1930s and 1940s) were not properly capped off, and today are discharging saline water into upper layer groundwater aquifers (San Lorenzo River Watershed Planning Process, 1976, as cited by Santa Cruz Public Library, 2007).

The Santa Margarita Sandstone is a geologic formation of loosely consolidated sands that are exceptionally well-suited for glass manufacturing and construction purposes. Mining of crushed rock, sand, and gravel for the construction industry began in the 1920s and 1930s. Mining continues today with four active quarries being located within the watershed. Only one rock quarry operation currently exists, and it is located on the east slope of Ben Lomond Mountain, where it prepares granite for construction purposes (San Lorenzo River Watershed Planning Process, 1976, as cited by Santa Cruz Public Library, 2007).

6.1.3 History of the District and District-owned lands

This section outlines the history of the District's formation and land acquisition within the larger historical context of the San Lorenzo River watershed.

With regards to pre-historic Ohlone settlements, no archeological sites on District-owned land have been observed by District staff. Furthermore, no such sites were found by an archeological survey completed in 1993, as part of a proposed timber harvest plan for the Malosky Creek property, now owned by the district.

As the San Lorenzo Valley was settled in the mid-1800s, populations in Ben Lomond, Brookdale and Boulder Creek formed their own water systems. Timber magnate H. L. Middleton formed the Boulder Creek Water Company (Brown, 2006). The flume that supplied water to residents from Boulder Creek also supplied hydro-electric power to run the local lumber mill and light up the town (Capebianco, 1991; Brown, 2006). Figure 6.2 is an old photograph taken of the flume in Boulder Creek.

Figure 6.2 Flume in the San Lorenzo Valley circa 1870

Photo courtesy SCCRCD, 2007

As vacation homes increased in the early 1900s, many small subdivisions developed their own water systems. These water systems were designed to serve the needs of Bay Area residents who occupied their vacation homes only a few weeks a year. Nearby springs and creeks supplied these water systems through flumes or pipelines. Santa Cruz County population more than doubled from 1900 to 1940, increasing from 21,512 to 45,057 (U.S. Census). As more people moved into the valley, the existing water systems became inadequate (Capebianco, 1991). Many residents recalled the Fourth of July and Labor Day with no water.

Frequent droughts between 1912 and 1939 convinced valley leaders to form a water district to better control water, to serve the needs of the valley (Capebianco, 1991). After one failed attempt to form a county water district by election in 1939, the San Lorenzo Valley County Water District was formed by the voters on April 3, 1941. Negative voter returns from the towns of Felton and Scotts Valley left those areas out of the district boundaries, which included Bear Creek, Boulder Creek, Alba, and Ben Lomond school districts, and part of the Sequoia school district (Brown, 2006).

After securing unclaimed water rights in Newell Creek and Bear Creek in 1942, the District's engineer presented a water master plan to the District board. The plan included storage dams on Boulder, Newell, and Bear creeks, and the upper San Lorenzo River. In 1945, voters failed to approve the $300,000 bond proposed to pay for the Boulder Creek dam. Shortly after, however, the District bought the 1,400 acre Waterman Gap property in the upper San Lorenzo River from Mrs. Edith Smith. The purchase price was $20/per acre for a total of $28,000 (Brown, 2006).

When the District again proposed a bond measure to the voters to fund the construction of a dam at Waterman Gap, a citizen group organized to oppose it, warning about a previous disaster in Johnstown Pennsylvania, where a dam broke after a flood, resulting in hundreds of people drowning (Brown, 2006). The citizen group also opposed the proposed dam at Newell Creek.

The bond measure was defeated in December 1946 (Brown, 2006). Still optimistic about building a dam, the District purchased the 3,400 acre Newell Creek property from Wells Fargo Bank, trustee to the deceased landowner, for the price of $18/acre or $60,000 (Brown, 2006).

Following the 1946 bond measure defeat, the District sold many oil-exploration leases on the Waterman Gap property to Texaco, Humble, Richfield and Union oil companies, but none of the test holes paid off. The leases did net the District enough by 1957 to offset the costs of purchasing both the Waterman Gap and Newell Creek properties (Brown, 2006).

While the District held steadfast to its plan of damming Newell Creek, it also pursued another path: purchasing additional water supplies. In 1954, the District offered Citizens Utilities Corporation $400,000 for their San Lorenzo Valley system (Brown, 2006).

In 1957, a $950,000 bond issue proposed by the District for purchase of Citizen Utilities and a Newell Creek dam project was approved by the voters. The District continued negotiating with Citizens Utilities, and also approached the City of Santa Cruz about partnering in constructing a dam on Newell Creek. Negotiations with Citizens Utilities failed, but the City of Santa Cruz agreed to partner with the District in building the Newell Creek dam in 1958 (Brown, 2006).

In 1959, the District signed an agreement with the City of Santa Cruz, in which the District sold the city its timber and mineral rights to the Newell Creek watershed, in exchange for 1/8 of the water rights. The city proceeded to dam Newell Creek, completing Loch Lomond dam in 1959. The agreement left the District's bond revenues of $950,000 untouched.

In 1961, the District began eminent domain proceedings to acquire Citizens Utilities of Felton, and an additional bond measure of $500,000 was approved by the voters for that purpose (Brown, 2006).

Citizens Utilities fought the buyout, but after three years, a settlement was reached. In 1965, the District agreed to buy all of Citizens Utilities holdings in Ben Lomond and Boulder Creek for $1.7 million, but the settlement excluded Citizens Utilities Felton water system. To make up the difference of $200,000 the District sold the last of its Newell Creek holdings to an investor group in San Jose (Brown, 2006).

In 1964, the District purchased an additional 600 acres of land at Waterman Gap (Brown, 2006).

In 1978, the District received a grant from the EPA to purchase the 200-acre Olympia watershed property, on which the District drilled the Olympia 1 well (Capebianco, 1991).

1985, the District began planning its 5-mile pipeline on Ben Lomond Mountain (Capebianco, 1991).

In 2000, the District sold its 1,400 acre Waterman Gap holdings to Sempervirens Fund, for the sum of $10.9 million, with the understanding that the land would be transferred to Castle Rock State Park. The District had given up plans to build a dam there. Furthermore, the District had no surface water sources downstream of the property. After receiving the proceeds from the Waterman Gap property, the District purchased the 206-acre Hulse-Cook property, between Malosky and Clear Creeks, which does have value as watershed.

In 2006, the District purchased the 188-acre Malosky Creek watershed property from Sempervirens Fund for $1.75 million. Sempervirens had previously purchased this property from timber owner Roger Burch. This was a key property for two reasons. First, the District's 5-mile pipeline runs across it. Second, the property connects the District's major watershed holdings to the north and south.

In 2008, the District purchased the Felton Water System from California-American water for $10.5 million, at the behest of the Felton community. The purchase was the result of a settlement following a long eminent-domain court battle initiated by the District. Legal costs and the purchase was largely funded by an $11 million bond measure known as "Measure W," which was approved with a 74.8% majority by the voters of Felton in 2005. The settlement included 252 acres of forested watershed property in the Fall Creek watershed, adjacent to Fall Creek State Park, which supplies the Felton water system with spring and surface water.

6.2 Recreational resources

This section provides an overview of the recreational resources within the San Lorenzo River watershed, followed by an overview of the recreational resources on District-owned lands.

6.2.1 History of tourism and recreation in the San Lorenzo River watershed

Tourism became a growing industry for the watershed early in the 1900s. The first state park was Big Basin, formed in 1906. Since the early 1960s State Parks have expanded to encompass over 9,000 acres of land in the watershed. In the early 1900s summer homes and communities were built to enjoy the area. Many of these homes and communities were built quite close to streams. Not only was the riparian area impinged upon by development, but dams and beaches were also constructed for summer recreation. With the growing number of homes came an increase in

roads. The San Lorenzo River watershed was dominated by summer and second homes through the 1950s.

Historically, the tourist industry focused on the redwoods of the San Lorenzo Valley, and the beach at Santa Cruz.

The earliest redwood resort in the watershed was Big Tree Grove, near Felton, which opened in 1867. The South Pacific Coast Railroad which completed a mountain line from San Jose and points north to Santa Cruz in 1880, enabled residents from San Francisco and Oakland to make one-day picnic trips to the San Lorenzo Valley. The line's stop at Big Trees was a popular destination. The Santa Cruz beach had previously been available to the San Francisco Bay Area by a railway line from Gilroy to Watsonville to Santa Cruz completed in 1876. The South Pacific Coast Railroad line cut several hours off the round trip travel time.

The opening of Big Basin Redwoods State Park in 1904 attracted visitors to the San Lorenzo Valley, since Boulder Creek served as the gateway. In 1974-75 Big Basin attracted more than a half million visitors. Two other state parks now exist within the watershed boundary; Castle Rock State Park, near the northern drainage divide, and Henry Cowell Redwoods State Park near Felton. Henry Cowell State Park was formed in 1954 by the joining of Big Trees Groves with land donated by the Cowell family. In 1972, additional land surrounding Fall Creek was added to the Park.

6.2.2 Present day tourism and recreational opportunities in the watershed

The State Park System provides thousands of acres of the land-based recreation opportunities in the watershed. There are also many smaller county parks throughout the San Lorenzo Valley.

6.2.2.a State Parks

Major state parks include Henry Cowell and Fall Creek, Castle Rock, and Big Basin.

- ***Henry Cowell State Park,*** located in Felton, includes the Fall Creek unit. It features 15 miles of hiking and riding trails through a forest that looks nearly the same as it did 200 years ago. Zayante Indians once lived in the area, where they found shelter, water and game. The park is the home of the Redwood Grove, once known as Felton Big Trees, and features a self-guided nature path, Douglas fir, madrone, oak and a stand of Ponderosa pine. There is a picnic area next to the San Lorenzo River. The park has a nature center and bookstore. Adjoining the park is Roaring Camp Railroad, offering visitors a chance to journey back in time on an old steam locomotive. The main park area, featuring large, old-growth redwoods is approximately 1,750 acres, and the northern area (Fall Creek) is approximately 2,390 acres, with about 20 miles of hiking trails. The tallest tree in the park is approximately 285 feet tall and 16 feet wide. The oldest trees in the park are approximately 1,400 to 1,800 years old (California Department of Parks and Recreation, 2007).
- ***Castle Rock State Park,*** located in the extreme upper portion of the watershed with access off Skyline Boulevard, is a treasure of diversity and wilderness that is seldom seen next to a large metropolitan area. Ranging in elevation from a peak of 3,820 feet near Mt. Bielawski (Mt. McPhersen) to a low of 960 feet along the San Lorenzo River, Castle Rock State Park contains numerous plant communities including redwood forest, chaparral, grassland, riparian, and mixed hard wood forest. Steep canyons are sprinkled with unusual rock formations that are popular with rock climbers. The park is crisscrossed by 32 miles of hiking and horseback riding trails. These trails are part of a more extensive trail system that links the

Santa Clara and San Lorenzo valleys with Castle Rock State Park, Big Basin Redwoods State Park and the Pacific Coast (California Department of Parks and Recreation, 2007).

- ***Big Basin Redwoods State Park***, located northwest of Boulder Creek, is the oldest state park in California. The land was preserved in 1900 by Sempervirens Club, and transferred to the state in 1902. Home to the most impressive virgin redwood grove south of San Francisco, the park has miles of trails that link Big Basin to Castle Rock State Park and the eastern reaches of the Santa Cruz range. The Skyline-to-the-Sea Trail threads its way through the park along Waddell Creek to the beach and adjacent Theodore J. Hoover Natural Preserve, a freshwater marsh. The park features the beautiful Berry Creek waterfalls, and a wide variety of environments, from lush canyon bottoms to sparse chaparral-covered slopes (California Department of Parks and Recreation, 2007)

6.2.2.b County Parks

There are 743 existing acres Santa Cruz County Parks and Recreation facilities within the San Lorenzo Valley, as shown in Figure 2.2.

- Miller County Park at Kings Creek, consists of 410 acres of forested land, donated to the County by Save the Redwoods League, which purchased it from UC Santa Cruz. The park includes eighty acres of old-growth redwood forest.
- Quail Hollow Ranch County Park consists of 300 acres, noted for its unique sandhill habitat. The park is home to several rare and endangered plants and animals, including the Ben Lomond spineflower. It has numerous hiking trails, a historic ranch house, and a small pond.
- Felton Covered Bridge Community Park consists of 6.3 acres, and includes play areas, a picnic area, a sand volley ball court, turf and landscaping.
- Highlands County Park in Ben Lomond consists of 26 acres, and features playing fields, picnic areas, tennis courts, a senior center and the children's center of San Lorenzo Valley.
- The Ben Lomond Dam Park is a one acre neighborhood park where a dam is set up in the river during the summer.

6.2.2.c City parks

Other publicly-operated recreation areas located in the watershed are San Lorenzo City Park, DeLaveaga Park, Ben Lomond Park, San Lorenzo Valley Park, Harvey West Park, Boulder Creek Park, and Loch Lomond Recreation area.

6.2.3 Recreation outside of the park system

The watershed contains several golf courses, tennis/swim clubs, and privately-owned tourist attractions.

Fishing attracts visitors, especially the steelhead season which runs for approximately 3 ½ months in the fall and winter. The San Lorenzo River supports the only major coastal steelhead fishery south of the Russian River, but the Department of Fish and Game allows only catch-and-release fishing of steelhead in the river, and there are further restrictions (California Department of Fish and Game, 2007).

Recreational opportunities along the river include hiking, sunbathing, swimming, nature study, and wildlife observation. Facilities to enhance swimming conditions ranged from simple,

makeshift rock dams to more elaborate wood dams, used by youth camps and recreational districts to create impoundments for boating, swimming, or fishing. California Department of Fish and Game records disclose seven of these large recreational dams along the mainstem of the San Lorenzo River. Swimming in the San Lorenzo River, at certain places, and during certain times of the year, has been curtailed due to the presence of coliform bacteria at dangerously high levels. (San Lorenzo River Watershed Planning Process, 1976 cited by Santa Cruz Public Library, 2007).

6.2.4 Recreation on District-owned lands

The District currently does not actively manage any of its lands for recreational purposes. For years, the District has had a written agreement with the Santa Cruz County Horseman's Association (SCCHA) for limited use of the District's Olympia property, on marked trails, and with permission. This agreement calls for an annual joint inspection of the property, including the entire trail network. This inspection has not occurred regularly in recent years.

The District has not marked or mapped trails authorized for use by the SCCHA, nor has it revisited the terms of the agreement with the SCCHA requiring trail maintenance.

6.2.4.a Trespass and its impacts on rare habitat

The District has worked to minimize trespass and off-road use of District watershed lands. Still there is evidence of frequent, unauthorized off-road vehicle and equestrian use on the Olympia property. Fences have been cut, and some roads and trails have eroded badly due to this unauthorized use. The District has in the past contracted with First Alarm to patrol watershed lands for trespass. Additional fencing and blocking of access with appropriate horse crossings may be necessary to protect the Olympia property, on the ridge trail, and adjacent to the old Olympia quarry.

The District has not fully assessed the impacts to biotic resources of recreational use on District lands.

The most easily accessible of the District's lands for recreation is the Olympia property, a site of the rare and endangered sandhills communities, endemic to Santa Cruz County. All sandhills sites in the county, including the Olympia property, receive some level of use for one or more types of recreation including: hiking/walking, horse riding, mountain biking, and off highway vehicle (OHV) riding. In addition, several sandhills habitat patches, especially those featuring rock outcrops, sand parkland ridges, or other promontories, have served as congregation sites for local youths. Finally, abandoned and active sand quarries are used as arenas for parties, paint ball wars, target shooting, and OHV riding (McGraw, 2004).

According to McGraw (2004):

> One of the most important points that must be considered in managing recreation in the sandhills is that the unique geology, soil, and biology of the sandhills, combined with their rarity, renders them especially susceptible to degradation by recreational use. Land managers and policy makers experienced in recreation management in other systems are

oftentimes unaware that sandhills communities can be greatly impacted by the same recreational use that would cause less of an impact to other systems (e.g. Redwood forest, Mixed Evergreen Forest). The inordinate impacts of recreation in the sandhills, when compared to other systems, are due primarily to three main factors: sandhills soils are fragile, sandhills species inhabit open areas where recreation occurs, and sandhills species and communities are extraordinarily rare. These same factors contribute to the differences in recreation impacts within sandhills habitat due to the heterogeneity of different communities.

6.2.4.b Potential benefits of limited recreational uses

Despite the many known negative impacts of current recreational use on sandhills habitat, recreation can also provide benefits for conservation of this rare habitat. Recreation can increase awareness and appreciation of sandhills communities, which can in turn facilitate conservation support and action on behalf of the sandhills. Public support of conservation efforts is crucial to many conservation and management efforts. People are more likely to support conservation efforts if they appreciate the habitat, and this appreciation most often results from personal experience. Outdoor recreation provides a mechanism for many to experience the sandhills (McGraw, 2004), and it may serve to increase support for the overall goals of conservation (McGraw, 2004; Herbert, 2007).

Land managers may also consider allowing recreation access to sandhills habitat, despite its negative effects on sandhills species and communities: Recreation may be part of their mission statement or mandate (McGraw, 2004). They may simply want to be 'good neighbors' to those who have enjoyed access to habitat historically. Limited recreation may provide maximum benefit to the public while reducing negative impacts to sandhills communities and species. Regulations governing endangered species (California and Federal Endangered Species Acts), and environmental impacts (California Environmental Quality Act) may limit the potential for recreational activities.

6.2.4.c Liability

The District prohibits all unauthorized access to its watershed lands. All persons must be in possession of a current permit from the District Administration office to enter District lands.

The District has not mapped and analyzed potentially hazardous areas on its lands, such as sites of toxics or hazardous wastes, dangerous cliffs, erosion prone soils, mine shafts, pipelines, and overhead power lines.

6.3 Educational resources

This section provides an overview of the educational resources within the San Lorenzo River watershed, followed by an overview of the educational resources on District-owned lands.

6.3.1 Educational resources in the San Lorenzo River watershed

This section lists and summarizes some of the educational resources available to residents of the watershed.

6.3.1.a The Santa Cruz County Public Libraries

- Since 1917, the Santa Cruz County Public libraries have provided materials and services to help residents throughout the county meet their personal, educational, cultural, and professional information needs. Its various branches provide free information services to all residents of the county, including the unincorporated areas of the San Lorenzo Valley. The library system has a website that provides a searchable database on local history (Santa Cruz Public Libraries, 2007).

6.3.1.b The Boulder Creek Historical Society

The Boulder Creek Historical Society was formed in 1976 to preserve the history of the San Lorenzo Valley by collecting and exhibiting artifacts, gathering historical information, and providing education through the San Lorenzo Valley Museum and its educational outreach programs (Boulder Creek Historical Society, 2007). The museum is located in Boulder Creek, and is open to the public. Among its exhibits are local logging history, the history of the Women's Christian Temperance Union of Boulder Creek, and a World War I exhibit featuring local soldiers.

6.3.1.c Roaring Camp Railroad

Roaring Camp Railroad, located in Felton, is a privately owned railroad that provides passenger service over trestles, through redwood groves and up a winding narrow-gauge grade to the summit of Bear Mountain. Dating from 1890, the locomotives are among the oldest and most authentically preserved narrow-gauge steam engines in the country, providing regularly scheduled passenger service (Roaring Camp Railroads, 2007). In the 1880s, narrow-gauge steam locomotives were used to haul giant redwood logs out of the mountains.

6.3.1.d The Santa Cruz County Science Fair program

The County Science Fair Program is coordinated through the Santa Cruz County Office of Education, provides support for young explorers and scientists. The annual event is a collaboration of students utilizing the scientific method to investigate and gather facts, science teachers, fair coordinators, mentors, and families (Santa Cruz County Office of Education, 2007).

6.3.1.e The California Regional Environmental Education Community (CREEC)

encourages environmental literacy of students throughout the state. The organization's website provides a searchable on-line directory of environmental resources, including environment-based education, field trips, curriculum, classes, and workshops aligned with state standards (CREEC, 2007).

6.3.1.f San Lorenzo Valley High School Watershed Academy

This four-year program for students in grades 9 through 12 offers four years of science, with specialty courses in aquaculture, environmental monitoring and environmental science. The Watershed Academy is a partnership between business and education that provides real-world work experience in the field, integrated academic and technical curriculum. The District has funded several projects of the Watershed Academy, including weather stations, ruggedized laptops, and lab equipment.

6.3.1.g Monterey Bay Salmon and Trout Project

This nonprofit environmental organization is dedicated to the restoration, conservation, and enhancement of native wild coho salmon and steelhead populations and their coastal and marine

habitats from San Mateo to the south Monterey Bay area (Monterey Bay Salmon and Trout Project, 2007). Its Salmon & Trout Education Program (STEP) has been developed to provide students with a chance to learn "hands on" about salmon and steelhead and the habitats in which they live. The K-12 program uses a thematic firsthand approach, offering teachers the tools and the ideas for integrating math, science, language, arts, etc. Students learn about salmon and steelhead life cycles, their habitat requirements and the problems and solutions to preserving these "indicator" species and the watersheds in which they live (STEP, 2007). Teachers who wish to learn and participate in teaching STEP are offered a two-day workshop, which provides cooperative learning, utilizing actual lessons from the curriculum material.

6.3.1.h The California Native Plant Society (CNPS)

This statewide non-profit organization of amateurs and professionals with a common interest in California's native plants. CNPS seeks to increase understanding and appreciation of California's native plants and to preserve them in their natural habitat through scientific activities, education, and conservation (CNPS, 2007). The local Santa Cruz Chapter has focused work in the San Lorenzo River watershed. For example, in 2005, the chapter prepared a classroom slideshow for the SLV High School Watershed Academy, entitled, "An Introduction to Riparian Hydrology and Vegetation Sampling in the Rare and Unique Plant Communities of the San Lorenzo Valley Watershed: A Conservation Approach". The slideshow taught students about riparian plant communities and their value to wildlife and relationship to watershed hydrology. It also aimed to increase understanding of the value of undeveloped watershed lands and the value of riparian plant communities to fisheries, wildlife and water quality. The District funded this educational presentation through its education grant program.

6.3.1.i Santa Cruz County Resource Conservation District

This independent special district, formed to help people protect, conserve, and restore natural resources through information, education, and technical assistance programs (SCCRCD, 2007). The SCCRCD sponsors a rural roads program, and a manure management program. The SCCRCD's Watershed Cruzin' program is a teacher-training program in Santa Cruz County which provides a watershed activity guide for local classrooms and field trips. The guide facilitates fourth through twelfth grade teachers in helping students explore their local watersheds, using twenty-five classroom and field-based activities. Students discover where they live in their watershed, what else lives there, how healthy watersheds work. The District funded teacher workshops based on the Watershed Cruzin' curriculum in 2006-07.

6.3.1.j Valley Women's Club

This nonprofit is dedicated to community action, awareness and leadership in environmental, educational, social, and political concerns which affect the health and welfare of the San Lorenzo Valley and its community. The Education Committee provides scholarships for SLV High School graduates attending Cabrillo College. The Environmental Committee works to protect the watershed and to educate the public on forestry issues, erosion control, hazardous waste, recycling and other issues. It also monitors government policies and procedures.

6.3.1.k "Our Water Works in Santa Cruz County"

This activity book about the fresh water resources of Santa Cruz County is produced and funded in 2007 by the Soquel Creek Water District, the City of Watsonville Public Works and Utilities Department, and the City Santa Cruz Water Department. The District also provided financial support, and has distributed the activity book to local schools.

6.3.1.l Sandhills Alliance for Natural Diversity (SAND)

Based in Boulder Creek, this alliance was formed to preserve the rare and unique habitat of the Santa Cruz Sandhills, and inspire its stewardship through scientific research, public education, and integrated land use planning (SAND, 2007). Participants come from a variety of backgrounds and include Sandhills property owners, biologists, planners, educators, and other concerned citizens. Participants help preserve Sandhills habitat, host community educational programs, conduct scientific research, and help direct management for Sandhills habitat. SAND advises on many types of sandhills related projects, providing science-based information for successful conservation. In the spring, SAND leads guided wildflower walks to the sandhills. In 2006, the District funded SAND's project to create and install weatherproof educational signage for trails in sandhills habitat.

6.3.1.m The District's Education Grant Program

The District has sponsored local research, education and improvement projects in the watershed since 2003. The purpose of the program is to fund projects that enhance the understanding of the San Lorenzo River watershed environment or improve the watershed's environmental health. The District annually invites grant proposals from individuals, students, teachers, groups, and/or organizations. In 2007, the District's Educational Advisory Committee recommended that the District take a more proactive approach in soliciting proposals to study areas of known concern to the District. In 2009, the District offered applicants a series of projects to that would assist the District in filling some of the data gaps identified in this document.

6.3.2 Educational resources on District-owned lands

"Chapter 4: Biotic Resources," and "Appendix A: Fisheries," describe some of the valuable habitat and special status species present on District-owned lands. The District has supported research efforts on its lands with respect to fisheries and wildlife habitat. The District routinely grants permission to access its lands to researchers from the University of California, Santa Cruz.

The District has jointly funded salmonid research projects throughout the watershed, and has given NOAA Fisheries scientists access to its Zayante property. The District has also worked closely with the Sandhills Alliance for Natural Diversity to research and protect the sandhills communities on District-owned lands.

Recently, the District has authorized the Wildlands Restoration Team to access its watershed lands for the purpose of invasive species control and eradication.

ACKNOWLEDGMENTS: CHAPTER 6

The San Lorenzo Valley Water District thanks the following contributors and reviewers of Chapter 6:

Contributors:

Walter Heady, Consulting Biologist

Betsy Herbert, Ph.D., Environmental Analyst, San Lorenzo Valley Water District

Reviewers:

Larry Ford, Ph.D., Consultant in Rangelands Management and Conservation Scientist

Al Haynes, Watershed Resources Coordinator, retired, San Lorenzo Valley Water District

Nancy McCarthy, Author and Historian

Jodi McGraw, Ph.D., Population and Community Ecologist; Principal, Jodi McGraw Consulting

Fred McPherson, Board of Directors, San Lorenzo Valley Water District

Jim Mueller, District Manager, San Lorenzo Valley Water District

Jim Nelson, Board of Directors, San Lorenzo Valley Water District

Larry Prather, Board of Directors, San Lorenzo Valley Water District

Jim Rapoza, Board of Directors, San Lorenzo Valley Water District

Rick Rogers, Director of Operations, San Lorenzo Valley Water District

Rich Sampson, RPF; Unit Environmental Coordinator, CalFire

Suzanne Schettler, Principal, Greening Associates

Terry Vierra, Board of Directors, San Lorenzo Valley Water District