



Carmel River History

1603 Carmelite friars accompanying Vizcaino expedition come upon a stream and name it El Rio de Carmelo in honor of their patroness, Our Lady of Mount Carmel.

1600s Five districts of Esselen tribes were located in the Carmel Valley and Santa Lucia Mountains. Their population, at that time, is estimated at 1,285. Food sources consisted of hunting, fishing and gathering nuts and berries. The Esselen did not engage in crop farming. (*An Overview of Esselen Indians*, page 11-12, Breschini and Haversat).

Spanish Mission

The Esselen and Rumsen Indians had not engaged in crop farming prior to the arrival of the Spaniards. While fishing and hunting were important to their survival; nuts, berries and bulbs provided an additional food source. (*Life in a California Mission*, The Journals of Jean Francois La Perouse, 1986 pg. 64)

Cattle prospered when introduced by the Spaniards. When crop farming failed in the 1770s, milk and dairy products saved the mission and presidio from starvation. (*Life in a California Mission*, The Journals of Jean Francois La Perouse, 1986 pg. 77)

1770 Father Serra arrives at Monterey.

He writes to Father Juan Andres: "Or it may be necessary to leave the presidio here and move the mission with a few soldiers to the banks of the Carmel, two short leagues to the South. It is a truly delightful spot, which, thanks to its plentiful supply of both land and water, gives promise of abundant harvests." 6/12/1770 (Vandevere)

1771 Father Serra and eight men move the mission from Monterey to Carmel.

He writes to Francisco Carlos de Crois: "With the 8 men from the presidio here, together with the 8 sailors from Capt. Don Juan Perez is allowing us, this San Carlos Mission if being removed immediately to the banks of the Carmel River, as your Excellency orders." 6/18/1771 (Vandevere)

1771 Serra writes to Father Rafael Verger: "With reference to crops up to the present we have not even spoken of them. But, as soon as we are established on the banks of the river, sowing will begin. The land is such that it does not need any special attention...." 6/20/1771 (Vandevere)

1771 Serra writes to Father Francisco Palou: "What we did here, we of the mission, in the way of raising crops came to nothing. We made a little garden nearby and enclosed it; the Indians doing the digging. The whole of it became one seeding bed, as Father Fray Juan had all kinds of seeds. Everything came out fine, but nothing grew to maturity. We were all greatly puzzled. Later we found out that the ground, while showing no signs of it, at times is washed over by the salt water of the bay and so is fit for nothing but nettles and reeds." 6/21/1771 (Vandevere)

1772 Serra writes to Father Rafael Verger: "With regard to crops, nothing worthy of the name has yet been achieved. I will tell you. We may be able to accomplish something in this regard later." 8/8/1772 (Vandevere)

In his annual report he writes: "Before definitely establishing the mission here, the first concern was to have the men familiar with farming and state whether it would be easy or difficult to take water from the river for irrigating these lands. All agreed it would be (easy). Now when we tried to carry it out, they all reversed themselves and declared it impossible. This was the chief, if not the only reason why there was a delay about the sowing for which we longed. Finally, in the next year and thereafter, we determined to dry farm, which was both wise and fruitful as shall be seen from the harvest of the following year." (Vandevere)



1773 Serra writes to Antonio Maria de Bucareli y Ursua: " In the midst of all their troubles the Fathers sowed during the first year a piece of ground in wheat; it sprouted and grew very well. But, unfortunately for want of property knowledge of the territory, they had sown it in low land and then the floods came and wiped it out and it was a total loss. What succeeded to perfection was a large garden well enclosed. When I passed by there it was full of all kinds of vegetables, melons, watermelons etc. Given hands to cultivate the land, I repeat, much may be expected from the fertile soil." Later in the same letter: "Last year a large acreage of ground was sown with wheat and a flood of tremendous proportions destroyed most of it. From what little was saved they harvested about 8 fanegas of very good quality. This year, when I was there they were plowing the land with two mules with good outfits; their intention was to sow the whole of the seed they had saved from the last harvest. This is the only mission that has the misfortune of having no running water. The river that is close by, and was so much spoken of in the beginning, becomes dry after the rainy season has passed. During the year that I lived here, even in the rainy season no water flowed in it. For the use of the mission there are a few ponds of good water, and everywhere in the riverbed, with a little digging in the sane, even by hand, you can reach water. [In this way, while I watched them do it, the two boats on their last trip got their supply of water. Also there are, in the neighborhood, other permanent lakes which the animals drink from. But for irrigating the land and more particularly for a good-sized garden, it is out of the question.](#) A vegetable garden is needed here more than anywhere else, especially [to supply fresh greens to the boats and those bound for China, should they make a landing here.](#)" 5/21/1773 (Vandervere)

1775 Irrigation first mentioned. Serra writes to Antonio Maria de Bucareli y Ursua: "Without any irrigation, the mission here at Carmel, from 8 almuds of seed corn, has stored away in the granary a harvest of 150 fanegas 2.5 almuds and this, despite the great damage caused by animals and thefts. In consequence nobody doubts that if it had been well guarded, it would have come to 200 fanegas. [I say without actual irrigation because although it does not exist today, we are confident that we will have it without much trouble.](#) We have not yet begun the work because there is no need for it." 1/8/1775 (Vandervere)

1775 Serra writes to Father Francisco Pangua: "Our new Christians here are content and well fed. Besides their daily atole and pozole they are now [busy catching sardines which, for a week now, have been coming in schools to the beach.](#) [I do not know if it will be like last year at this time, when it lasted 20 days.](#) [We also had our season for fresh salmon and it was excellent.](#)" 7/24/1775 (Vandervere)

1775 First Esselen chief baptized by Franciscans, Pach-hepas, in Cachagua.

1776 Serra writes to Father Francisco Pangua: "Of those who have been added to our numbers there are more than 200. If the boat be delayed and an attack is made on the provisions of the mission, it will be pitiful, especially here, where we are facing the prospect of a bad harvest, since this year we have had less rain than at any time since we came here. Because of it the wheat, which had never before appeared so promising, is now drying up. We are having public prayers for rain; if it does not rain, we are, as far as we can see, in a terrible plight." 4/13/1776 (Vandervere)

In his annual report he writes: "[During all this time we failed to get water for irrigation, even though we took extreme steps. On this account, the harvests were diverse since they depended on the rain.](#) There were two years in which we had scarcely harvested 400 fanegas of all grains, from which we had to take the seed which was to be sown in the following year. This left very little for so many people and in one year we had recourse to Mission San Louis (Obispo) to which this (mission) paid 130 pesos in cash.

1776 - 1779 Most Esselen baptized during this three year period. Children went to work at the Mission at the age of nine. (*Overview*, Breschini and Haversat, page 27)

1777 Irrigation work begins. Serra writes to Father Francisco Pangua: "Mission San Carlos harvested but little, on account of the great drought; but we have enough to give out atole twice a day to the people, and pozole once a day. And this we go on doing." 2/26/1777 (Vandervere)



He writes to Antonio Maria de Bucareli y Ursua: "This year has been extremely dry. That is why, in San Diego the harvest will amount to nothing, in San Antonio to very little, and in San Carlos, while we have worked harder than ever to sow a large acreage, my judgment is that we will not have a third or the wheat that would ordinarily be expected. And so, in order not to be dependent, as we have been until now, on the rains and the excellence of the land, which is indeed great, we have, for more than a month and a half now, been busy with the help of more than 30 workmen leading off the water of the Carmel River, more than a league way. As a result, we will be able to irrigate as much ground as the mission will be capable of putting under seed for many years to come." 6/1/1777 (Vandervere)

1781 Serra writes to Father Fermin Francisco Lasuen: "I am really beginning to think that this year our acreage sown to wheat, corn, garden vegetables, etc., will be under irrigation that the water, should any remain over, will be stored in the pond near the granary. In this way it will never go dry and will serve as a fish pond. We still have to wait about a week or so before putting it into operation, and then, 'with the help of God', we will start on the church." 12/8/1781 (Vandervere)

In his annual report he writes: "The supplies from the preceding harvest, that were used in the beginning of this year, were sufficient and the planting of barley, wheat and some vegetables promised a harvest in accordance with the amount of water. Nevertheless, the hope (persisted) of bringing water with the possibilities of irrigation, especially for the corn which for lack of water was valueless as a crop. He realized through his surveys that at least for irrigating the land so far cultivated, he could get water from a point closer than the one he had until then considered. The enterprise was started with such confidence of success that corn was sown where it was thought it could be irrigated. When there were but few days left (of Father Crespi's work) the famous steward of San Luis Obispo (Ignacio Vallejo) came to our house offering to take the same job at the mission. He started on May 1 at a salary of 200 pesos in cash. He saw and approved the work that the two Fathers were doing toward extracting water and, after stating that within 3 days we would see the corn irrigated, he went out one morning and, without saying anything to us, he took the people from the work and set them to digging another ditch a few years further up the river, claiming that what had been done previously was valueless and, with that, the corn sown was lost and he spent seven months and used all the workmen in the new ditch. Not a grain of corn was gathered and they got a little over 400 fanegas of barley. Because of the folly of this man, a great part of the wheat was lost in the fields. Less than 400 fanegas were obtained, when to be conservative we should have expected more than 500. But, finally the water was extracted that same year in the month of December. From then on the mission has had irrigation. Thanks be to God!"

1783 In his annual report Serra writes: "To the 7 months' worth required to take water from the river for irrigation, as mentioned above, we must add the labor of bringing it to the lagoon near the mission residence. In some years, this lagoon used to be dry. Now it is always full, making it a great convenience and a delight to the mission. Some salmon (pescado) have been placed in the pool so we have it handy."

Fishing and Steelhead: Father Serra's descriptions best estimate the carrying capacity of the river is 4,200 or minus 800 or so.

1794 Presidio commanders began land grants to retired soldiers, which were not approved by the U.S. Land Commission.

1800 Rancho del Convaleciente (Los Laureles area) was granted as an outpost by the Carmel Mission for its sick parishioners.

1834 Rancho Los Tularcitos (six leagues or 26,581 acres from Buckeye Ridge to the Carmel River) granted to Rafael Gomez.

1835 Rancho Aquavit (Jack's Peak area - 1/2 league or 3,323 acres) granted to Gregorio Tapia.

1836 Rancho Corral de Padilla (2,000 varas) granted to Baldomero.



1837 Rancho El Potrero de San Carlos (4,307 acres in Carmel Valley, Portrero area) granted to Fructuoso del Real.

1839 Rancho Canada de la Segundo (bordering the Carmel River on the South - 1 league or approx. 6,600 acres) granted to Lazaro Soto. Current location of Rancho Canada Golf Club.

1839 Rancho Canada de Portezuelo (Los Padres forest) granted to Rafael Villavicencio.

1844 Rancho Los Laureles (2000 varas) granted to Jose Agricio, a resident of the Carmel Mission.

Treaty of Guadalupe Hidalgo

1848 The Treaty of Guadalupe Hidalgo, ending the Mexican War, was signed on February 2, 1848, by Nicholas P. Trist for the United States and by a special commission representing the collapsed government of Mexico. Mexico ceded to the United States Upper California and New Mexico (including Arizona) and recognized U.S. claims over Texas. (Crane)

1850 Monterey population – 1,092 (statistics from Association for Monterey Bay Governments).

1850 Esselen settlements had relocated to the Carmel Valley, from the Santa Lucia Mountains. (Overview, Breschini and Haversat, page 28)

1862 500 year flood event.

[Note: This estimate was made by Matt Kondolf in his 1982 Master's Thesis and was based on a terrace survey along the middle portion of the Carmel River. Hampson, March 2010.]

1870 (also reported 1880) Railroad partners (Crocker, Huntington, Stanford and Hopkins) from the Pacific Improvement Company purchase the Monterey Peninsula and surrounding lands.

1870 Monterey population – 1,396

1879 Robert Louis Stevenson describes Monterey's water system as windmills "whirling and creaking and filling their cisterns with the brackish waters of the sands."

1880 Monterey population – 1,662

1883 First known dam on the river created ½ mile below site of the current San Clemente Dam. Pacific Improvement Company hires 700 Chinese laborers to work building the dam and laying a 12 inch iron pipe down Carmel Valley and around the coast to their new Del Monte Hotel and nearby Monterey. Windmills and cisterns in Monterey were abandoned. (Vandevere) The water was piped 25 miles and crossed the Carmel River five times. No evidence of the pipe appears to have survived. (Hampson, March 2010).

1890 Monterey population – 1,745
Pacific Grove population – 1,411

1900 First golf course.

1900 Monterey population – 1,748

1905 To increase capacity, Pacific Imp. drills six wells near the lower end of Laureles Ranch, installs pumps capable of drawing 2M gallons per day, and begins installing a larger pipe thru the valley and around the peninsula. 500 trees are cut in Carmel to make way for the new pipe. Franklin Devendorf's Carmel



Development Co., promoted Carmel as a peaceful colony for artists and writers. The Development Co. sues Pacific Improvement Co. for "laying waste" to its property. Injunction granted, but project eventually completed. [Total cost of 1905 water project: \\$150,000. \(Vandevere\)](#)

1906 Earthquake. A honeymooning couple was killed when a chimney collapsed on them in their hotel room at "Del Monte". (Crane)

1910 Monterey population – 4,923
Pacific Grove population – 2,384

1911 Major flood event, created new land area at Schulte Rd. (Vandevere) The river course through Garland Ranch Regional Park shifted approximately one kilometer (0.62 miles) from the south side of the valley to the north side of the valley along present-day Rancho Fiesta. (from Kondolf thesis, Hampson, March 2010)

1914 Major flood event, water across entire valley. (source?) [Prof. Matt Kondolf wrote in his Master's Thesis in 1982 that the 1914 flood may have been as large as the 1911 flood. Hampson, 2010.]

1915 Flood event. High tide backed up the river waters to the edge of the Carmel Mission. (*Monterey Herald* 2/2/15)

1916 Carmel City population – 638

1919 Rancho Del Monte (11,800 acres near Rancho Los Laureles and Carmel Valley Village) granted to Del Monte Properties.

1919 S.F.B. Morse forms the Del Monte Properties Co. and purchases Pacific Improvement Co.'s Monterey holdings for \$1.3M. (Vandevere) [[Morse had drilled all over Pebble Beach in search of water to develop the property, but had come up dry. The purchase of property in Carmel Valley allowed Morse to obtain valuable water rights. Morse subsequently sold several of the properties, but retained the water rights. Personal communication from Charles Page to Larry Hampson, August 2008.](#)]

1920 Monterey population – 5,479
Pacific Grove population – 2,974

1921 Carmel River becomes site of several mining operations along the lower river, including the Carmel River lagoon. (Hampson)

1921 Morse completes a second dam after two years of construction, just upstream of the original dam. [San Clemente Dam backs up 2,000 af of water. Total cost \\$300,000. \(Vandevere\)](#)

1925 Wild boar were introduced to Monterey County around 1925 (Crane)

1927 Robles Del Rio Lodge, with a 9 hole golf course, opens in Carmel Valley. (Vandevere)

1929 Miller Canyon fire (Hampson). [During a break in the hearings in 1994 for SWRCB order 95-10, Fred Nason Sr., a Cachagua resident and an Esselen, related a story from his teen years about visiting a friend one summer at his cabin in Carmel Valley. The friend threw a cigarette out into the grass near the cabin and Fred claimed "the fire that started burned for months and then the San Clemente Reservoir filled up with mud just a few years after it was built". Fred Nason appeared to be in his 80's when he related the story. Hampson, March 2010]

1930 Monterey population - 9,141
Pacific Grove population – 5,558
Carmel City population – 2,260



- 1930** Morse sells water system to Chester Loveland. (Vandevere)
- 1930** *Pine Cone* report of artichoke farmers "...whose fields were being swamped with the dammed flood waters..." manually breaching the lagoon.
- 1931** River freezes bank to bank for first time in 20 years. (source?)
- 1931** Loveland raises water rates. Proponents of a public ownership estimate the cost at \$1.8-\$2M to purchase water rights. First debate over public, or private water, management. (Vandevere)
- 1932** Brown trout are planted in the river three times between 1932 and 1938 by Department of Fish and Game. (Alley)
- 1935** Public ownership of water supply defeated 2 to 1. (Vandevere)
- 1939** CW&T provides water to 7,430 Peninsula customers, irrigates 5 golf courses and services a growing sardine cannery industry. (Vandevere)
- 1940** Monterey population – 10,084
Pacific Grove population – 6,249
Carmel City – 2,837
- 1943** Flood event. San Clemente dam received 5.40 inches of rainfall in 48 hours. "During most of yesterday, over six feet of water was thundering over the spillway at the rate of 8,000 cf per second, enough to fill the dam seven times each day." (*Monterey Herald* 1/22/43)
- 1945** City of Monterey applies to State Water Resources board for water rights to Garzas Creek. (Vandevere)
- 1947** San Clemente Dam is 25% silted. A filter plant opens near San Clemente Dam, improving water quality. CW&T releases plans for the Los Padres dam, along with other improvements. Total cost \$1.4M. Application for 19,000 af per year storage capacity was objected by steelhead fishermen and farmers. SWRCB grants 6,000 af per year and limits season of diversion to 10/1-5/31. (Vandevere)
- 1948** Los Padres dam built with mules and one bulldozer. (Crane)
- 1948** Five golf courses dependent on Carmel River watershed. (Vandevere)
- 1949** Los Padres dam was drained for repairs. CW&T applies for 15% rate increase. PUB grants raise request. (Vandevere) [The dam was leaking water through the face, which had caused a portion of the downstream face to slump. Evidence of the repair work can be seen where large rip-rap was placed on the downstream side of the dam. Hampson, March 2010.]
- 1950** Monterey population – 10,084
Pacific Grove – 9,623
Carmel City – 4,351
Del Rey Oaks – 1,831 (1953)
- 1950** Flood event. Carmel Valley received 3.47 inches in 24 hours and San Clemente dam 3.44 inches. "Highest levels in 25 years." (*Monterey Herald* 11/20/50)
- 1952** Flood event. "Heaviest rainfall in 50 years." Los Padres reported 1.11 inches in 24 hours and Carmel Valley reported .73 inches. (*Monterey Herald* 1/16/52)



1953 Flood event. Rainfall at Los Padres dam was 2.11 inches in 24 hours and Carmel Valley received 1.48 inches. (*Monterey Herald* 4/1/53)

1955- 1956 Rainfall year was wettest on record for Mt. Toro since rainfall records started in 1946. 19.5 inches of rainfall was reported for the month of December. (*Monterey Herald*)

1956 CW&T applies to PUC for 16.6% rate increase. Cities initiate the formation of a water district to buy out CW&T. (Vandevere)

1957 PUC grants rate increase. (Vandevere)

1958 Flood event. (photo in 10/28/82 *Pine Cone*) [Mission Fields flooded by April 2, 1958 event. Several Carmel Valley residents compare the 1958 flood to the 1995 and 1998 floods. Hampson, March 2010]

1959 Monterey Peninsula Water Mgmt. District initiates efforts to buy out CW&T. (Vandevere)

[Note: the agency was actually named *Monterey Peninsula Municipal Water District (MPMWD)* and was an agency created in November 1958 to negotiate for acquisition of private water companies. A vote to buy two private water companies on the Monterey Peninsula for \$17.5 million in September 1965 failed by more than a 3:1 margin. California American Water subsequently purchased California Water and Telephone Company properties for \$42 million in 1966. The MPMWD was dissolved by a public vote in April 1967. This agency is not related to the present-day Monterey Peninsula Water Management District, which was created by the state legislature in 1977 and ratified by a public vote in 1978. Hampson, March 2010.]

1960 Monterey population – 22,618
Pacific Grove – 12,121
Carmel City – 4,580
Carmel Valley village – 1,143
Carmel Woods – 1,043

1962 "Construction of an earth levee running approximately 1,500 ft along the north bank of the Carmel River immediately east of Highway 1, was started." (*Monterey Herald* 12/12/62)

1963 Quail Resort golf course opens. (Lombardo)

1963 Carmel River flooding destroys much of Carmel Valley Road and Garland Park. (Vandevere)

1964 On October 27th, PUC determines the value of CW&T's holdings to be \$12.7M and Seaside system to be \$550,000. (Vandevere)

1965 In the September election, the measure was defeated 10,766 to 3,053. Loveland sells CW&T to American Water Works Company. (Vandevere)

1966 Flood event. San Clemente and Los Padres dams overflowed. (*Monterey Herald* 12/6/66)

1966 American Water Works Company creates California-American Water Co. to manage the operations of CW&T systems. (Vandevere)

1969 Flood event. Bridge at Don Juan ranch is destroyed. Homes at Robles del Rio are severely damaged. Carmel Valley received 2.25 inches in 48 hours, Los Padres 6.17 inches and San Clemente 5.66 inches. (*Monterey Herald* 1/27/69)

[Note: the 1969 flood washed out the south approach to Don Juan bridge, but the bridge abutments, most of the deck, and center pier were not significantly affected. However, extensive erosion along Carmel Valley



Road, the mid-Valley area, Quail Lodge and Rancho Cañada also occurred. The Robinson Canyon Road bridge and a golf cart bridge at Quail Lodge were destroyed when debris built up on the center piers. Hampson March 2010.]

1970 Monterey population – 26,302
Pacific Grove – 13,505
Carmel City – 5,525
CV Village – 3,026
Del Rey Oaks – 1,823
Sand City - 212

1970 Cal-Am announces Peninsula water shortage. Current use is at 15,000 af per year. Cal-Am proposes a dam in two stages. Stage one will be completed in five years and supply the Monterey Peninsula until 1985. The cost will be \$8.5M, with a 240' high dam yielding 25,000 af of water per year. The second phase, to be built in the '80s, would yield 42,000 af per year, adequate to supply the Peninsula until 2000. This stage would cost \$14M and raise the height to 350'. Importing water from the San Luis project in the Valley would be less expensive, but is rejected as the water would not be available for 15 years. Cachagua community opposes dam project. (Vandevere)

1970 Rancho de La Canada golf course opens. (Lombardo)

1971 Cachagua dam project abandoned. A new San Clemente dam is proposed that would create a 40,000 af reservoir and yield 21,000 af per year. Army Corp. of Engineers recommends a flood control component versus the original dam. (Vandevere)

1972 Airstrip built on Ponciano Ridge, upstream of San Clemente Reservoir. (Fuerst)

1973-1975 Airstrip erosion sends sediment into Carmel River drainage. High flows of 1978, 1983 and 1986 send sediment downstream to the San Clemente reservoir (Fuerst and Dettman).

1976 Drought event, both San Clemente and Los Padres reservoirs were down approximately 6 inches. (Dorrence, *Herald* 1/20/76)

[Note: there are no strip chart records from the recorder at Los Padres Reservoir for the period July 1976 through December 1977. At the time, the recorder only registered elevations above 1038 NGVD 1929 or from about two feet below the spillway level and up. It is likely that the reservoir did not fill and spill during the period without strip chart records. Hampson, March 8, 2010.]

1977 Monterey Peninsula Water Management District is created to augment, protect and manage water resources. (Hampson and Dettman)

1978 Marble cone fire from Robles Del Rio to the Coast burned for two weeks. It was caused by a lightning bolt at 3:39PM August 1st. It was unique "...the largest loss owing to lightning in the last 60-70 years." It was estimated to be three to five years before fisheries would recover. "Wildlife moved back into areas where water was available." Runoff from burn contributed to sediment in reservoirs. Total damage from the fire was \$72.32M. Burn area was 18 percent of the Carmel River watershed. Carmel Valley received .86 inches of rainfall in 24 hours, Los Padres received 1.45" and San Clemente received 1.82. (*Monterey Herald* 2/13/78, 8/2/78, 8/8/78)

[Note: The Marble Cone fire started in August 1977 and burned for three weeks, but did not burn down to the Robles del Rio area. The fire burned much of the 45-square mile watershed above Los Padres Reservoir and was confined by several bulldozed firebreaks created along the ridge tops. In some areas 90% of the vegetation was consumed by the fire and Vandevere reported that whole hardwood trees caught fire. During the following winter, runoff was substantially higher than normal and it was estimated that about 600 acre-feet



of sediment subsequently flowed into Los Padres Reservoir in the 1977-78 winter season, reducing its capacity to store water by 23% in a single year. Hampson, March 8, 2010.]

1978 Landmark Land Company of Oklahoma, developer of Carmel Valley Ranch Resort, finds the "Tularcitos Aquifer" which allegedly was to supply their water was non-existent. "Exhibit E" of the conditions for the subdivision which covered water was "lost" in the Monterey County Planning Department. California American Water Company was required to serve the subdivision. (Crane)

1979 Rich Hughett, one of the founding members of the Carmel River Steelhead Association, meets with then 5th District Supervisor Sam Farr and a representative of Assemblyman Henry Mello's office to discuss the declining population of steelhead in the Carmel River. From that meeting, a non-profit coalition of groups that came to be known as the Carmel River Watch (CREW) was formed. Members included representatives of the California Department of Fish and Game, Carmel Valley Property Owners Association, Sierra Club, Monterey Bay Trout and Salmon Project, Monterey County Fish and Game Commission, and the Monterey Peninsula Regional Parks District. CREW worked for the restoration and conservation of the Carmel River and its environment.

1980 Monterey population – 27,558
Pacific Grove – 15,755
Carmel City – 4,707
Carmel Village – 4,407
Del Rey Oaks – 1,126
Sand City – 182

1980 Army Corps of Engineers proposes 150,000 af flood control dam. (Fuerst and Dettman)

1980 Flood event. "Carmel River changed its course and eroded up to 100 ft of land from five lots, threatening homes. Inexpensive flood control uses concrete rip-rap, posts, fence wire and auto bodies. Carmel River is flowing at 4,000 cfs per second and nearly six af per minute. The aquifers are full." (*Monterey Herald* 1/14/80 and 3/9/80)

1983 Flood year, bank erosion. Channel width from 80 feet to 1000 feet. "Carmel River peaked at 8,800 cfs and a height of 8 ½ feet at Robles Del Rio Bridge." Large steelhead run. (*Monterey Herald* 3/5/83)

1983 First memorandum of agreement requiring the release of flow from the base of San Clemente dam. (Vandevere)

1983 CREW requests that MPWMD develop a plan to restore the Carmel River and its steelhead habitat. Riverfront property owners along the lower 15.5 miles of the Carmel River vote by a 69% to 31% margin to form an assessment zone to fund a 10-year restoration program. The Carmel River Advisory Committee is formed and becomes the successor to CREW. Seven committee members are appointed by the MPWMD Board to oversee the restoration program. (Hampson)

1984 Carmel Valley flood plain ordinance enacted. Flood insurance study completed. Carmel River Management Plan recommends restoration work along eight miles of the Carmel River between Rosie's Bridge and Valley Greens Drive Bridge. (Hampson)

1986 City of Carmel sues MPWMD over water allocation. CEQA studies were not used to determine allocation structure. (*Monterey Herald* article 11/9/86)

1986 MPWMD begins restoration of the Carmel River in a heavily damaged area upstream of Schulte Road Bridge. (Hampson)

1987 Advisory vote to proceed with the planning of the new San Clemente dam project passes 2 to 1. (Fuerst)



1990 Monterey population – 31,954
Pacific Grove – 16,117
Carmel City – 4,239
Carmel Valley village – 4,407
Del Rey Oaks – 1,150
Sand City - 192

1990 Flood event.

[Note: This entry appears erroneous. The peak river flow in 1990 at the USGS gage on Rosie's Bridge, which occurred on February 17, was 553 cubic feet per second, which corresponds to a depth of flow of about four feet. There was no flow to the ocean between 1988 and 1991. Hampson, March 2010.]

1992 Esselen Indians protest location of planned Los Padres dam because it would create a reservoir that would inundate sacred sites. (Monterey Herald 9/10/92)

1993 MPWMD begins steelhead spawning habitat restoration project (gravel infill to river bed). MPWMD lifts moratorium due to a new water source at Seaside aquifer, Peralta well. (Fuerst) Assessments of Carmel River front property owners to fund the Carmel River Management Program sunset. The program is subsumed into the MPWMD Mitigation Program created to mitigate for damage to the Carmel River from diversions.(Hampson)

1994 Pebble Beach courses begin using reclaimed water. (Fuerst)

1994 Monterey Peninsula Water Management District begins irrigation and re-vegetation of the riparian corridor of the Carmel River including "fish rescues" and habitat improvement projects. (*Pine Cone* 2/1/94)

[Note: MPWMD began irrigation and re-vegetation of the riparian corridor ten years earlier in 1984. Mark Bekker and Dave Dettman at MPWMD began fish rescues in 1987. Hampson, March 2010.]

1995 Three flood events. January 10-11 heavy rains caused the Carmel River lagoon to reach 9' and flood the surrounding areas and river banks. March 14th, 1995 the *Herald* reports "All but one of 40 homes in De Los Helechos area of Carmel Valley was damaged by flooding." Cachagua area was inaccessible with mudslides and swollen creeks overtaking roads. The flow at Los Padres dam was measured to 6,864 cf per second. San Clemente dam was flowing at 4.53 feet over spillway. Rainfall peaked at 12.36 inches in two days at Ponciano Ridge. (*Monterey Herald* 1/20/95, 3/14/95 and 3/10/95)

[Note: Flooding of some of the low-lying structures on the north side of the lagoon begins just below a water elevation of 11 feet NGVD 1929. Flooding in January 1995 was caused by a high flow event of about 10,000 cubic feet per second that overtopped the north levee downstream of Highway 1. High flow in the river also caused a backwater that prevented local inflow from getting into the river. Hampson, March 2010.]

1995 Bridge destroyed at Robles del Rio, homes flooded in January and March, erosion at the riverbanks at the mouth of the Valley. (Crane)

[Note: Most bridges across the Carmel River were damaged by the March 10, 1995 flood. The bridges that were destroyed or severely damaged included the Stonepine Bridge, Ward's Bridge (in Robles del Rio), a golf cart bridge at Rancho Cañada, and the Highway 1 bridge. Hampson, March 2010.]

1995 Vote to fund construction and operation of the new Los Padres dam project is rejected 57% to 43%. (Vandevere)



1995 California State Water Resources Control Board issues Order 95/10 on California-American Water Company after complaints filed by Carmel river Steelhead Association, Residents Water Committee, Sierra Club & California Department of Parks & Recreation. Decision 1632 granting Carmel River water rights for the New Los Padres Dam was also issued. (Sanders)

1995 First Amended Petition for writ of Mandate; Carmel River Steelhead Association, Sierra club & California Sportfishing Protection alliance VS State of California Water Resources Control Board and State of California, sought to augment groundwater pumping downstream from the "Narrows" in order to keep more water in the river below San Clemente Dam. the Board should reformulate minimum flow requirement consistent with preservation & enhancement of instream uses, especially fishery resources and mandatory rationing or reduction in consumptive use when flows meet the standards of CDFG Code { 5937 are not provided.

1996 ESA listing (threatened) on the red legged frog (*Rana aurora draytinii*). (Fuerst)

1996 Memorandum of Understanding. Minimum Pool & Flows to be released from Los Padres Dam, and agreement on flows at Clemente dam & Sleepy Hollow Weir. (Sanders)

1997 ESA listing (threatened) on steelhead trout (*Oncorhynchus mykiss*). (Fuerst)

1998 Flood event. Carmel River bridge was destroyed. Homes along the river were flooded and damaged. (Crane)

[Although some of the bridges were subject to scour and debris build-up, there were no reports of bridge failures along the Carmel River during 1998. Extensive bank erosion occurred along the lower five miles of the river. Hampson, March 2010.]

1998 Water Rights Order 98-04 amending Decision 1631 & WR 95-10 and WR95-10 is revised. (Sanders)

[Should this read Decision 1632?]

1999 Carmel River named number 8 on a list of 10 most endangered rivers from the American Rivers 1999 survey. It is the only endangered river in California. (*Monterey Herald* 4/12/99)

1999 MPWMD completes last major Carmel River restoration project along areas recommended for restoration in the 1984 Carmel River Management Plan.

2000 NMFS issued 4D Rules for the 14 Endangered species Units (ESU's) (Sanders)

Compiled by members of the Carmel River Watershed Council Charity Crane, Patricia Bernardi, Vicki Saris & Louise Bishop from an initial study by interns from Monterey Institute of International Studies, Casey Brennan, Greta Follingstad & Shannon Dionne and Jonathan Berkey, Coordinator CRWC.

Amended March 2010. Larry Hampson, Senior Water Resources Engineer, Monterey Peninsula Water Management District.

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