

Disease Theories: Miasma v. Microbes

Throughout much of the nineteenth century, Sacramento public health professionals subscribed to the “miasma” theory of disease: diseases were believed to be spread by the odors and fumes of decaying waste material. *Webster’s Medical Dictionary* defines “miasma” as “a poisonous vapor or mist believed to be made up of particles from decomposing material that could cause disease and could be identified by its foul smell.” Thus it was believed people could become ill by breathing noxious air and even die while using poorly ventilated water closets.

Therefore, early efforts concentrated on removing decaying waste from settled neighborhoods, filling in low-lying lots, draining standing bodies of water, and dumping sewage beyond the R Street levee.

Gradually, in the late nineteenth century, the microbe or germ theory of disease began to be accepted in Sacramento medical and public health circles. Increasing evidence for the germ theory of disease was being gathered by European medical researchers by at least 1835 with the work of the Italian, Agostino Bassi. The germ theory of disease was truly an international effort and included the work of the Hungarian obstetrician Ignaz Semmelwies in the late 1840s, the Englishman John Snow in his work on the 1854 London cholera epidemic and the German, Robert Koch, who published his “Postulates” in 1875. Koch was awarded the 1905 Nobel Prize in Medicine for his work on tuberculosis. Most well-known, however, was the work of Louis Pasteur in France in the 1860s.



Louis Pasteur

With its emphasis on cleanliness and good ventilation, the miasma theory did contribute to improved conditions, especially in Sacramento hospitals. But in winter months, when odors and stench declined, the miasma theory did not easily account for the continued spread of disease. Thus, the miasma theory gave way to the more inclusive microbe germ theory. Pasteurization, for example, was introduced in Sacramento dairy and brewing industries in the late 1870s.

Still, Sacramento was decried for its odorous pestilential environment. It was such a haven for rats that children were enlisted to hunt them—initially they were offered five cents for each dead rat produced, then the bounty was raised to ten cents. A city employee was paid one dollar a day to place and monitor 50 city-owned rat traps, earning a bonus of one cent for each dead rat.

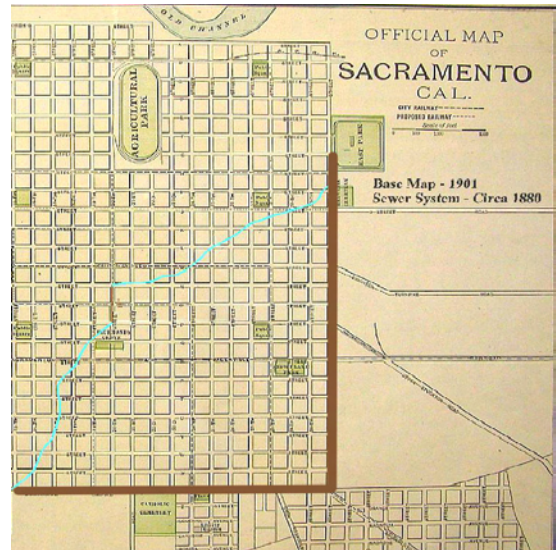
Sacramento Public Health Reforms—Water and Sewer: 1890-1910

In the 1890s the city began paving streets with asphalt and installing cement sidewalks, but these improvements did not extend to 26th and K for some years. In 1901, a citizen complained that M Street east of 15th was “churned full of manure and mud.”¹⁰ A photo of 21st and M streets, dated about 1900, shows sidewalks with no curbs, electrical power lines and an unpaved, muddy, rutted street.



Significant improvement in city water and sewer services took many years to implement. Sacramento’s water was known as “Sacramento Straight.” Coming straight out of the Sacramento River, it was so full of sediment that you could carve it with a knife and fork, and it often tasted noxiously rotten and swampy. In the words of E. A. Fairbairn, former Sacramento City Manager, “The water tasted like hell.” Numerous studies and proposals for a clean water source were put forth but defeated. In 1910 alone, the citizens twice defeated a Board of Trustees proposal for filtering Sacramento River water—first in March and again in November. Gradually, however, progress was made in Sacramento’s sewage and drainage problems.

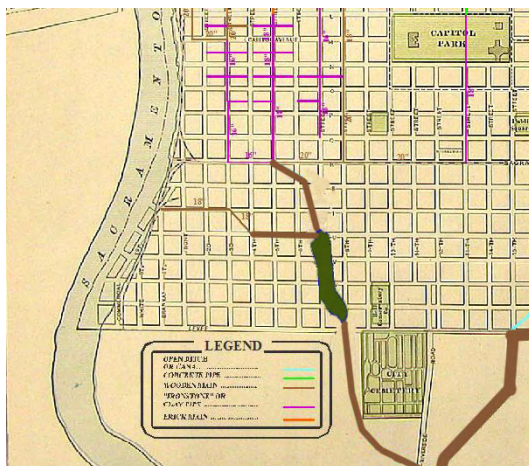
Following construction of the Central Pacific levee along Elvas Avenue, one of Burns Slough's principal sources of water was curtailed, but it continued to drain large areas west and south of the levee known as De Rutte Garden and Tivoli Gardens. In 1872, the *Sacramento Union* wrote of Burns Slough as "the historic stream, so lively and full of danger in the time of high water, yet so demure and harmless during the summer season."¹¹



31st and Y Streets Drainage Ditches

In 1881, a drainage ditch was excavated along the east side of 31st Street (Alhambra Blvd.) from East Park to the south side of the newly constructed Y Street levee. The 31st Street drainage ditch reversed the flow of Burns Slough in the St. Francis neighborhood, drawing its waters back into East (McKinley) Park. With the exception of the ponds behind Sutter's Fort and in McKinley Park, Burns Slough was, over the years, filled in and developed for city lots.

In 1906, the St. Francis of Assisi Parish complex was connected to the city sewer system via an eight-inch line running from the middle of the complex to 26th Street, then westward down the center of the alley to a 15-inch sewer main running north and south on 25th Street. The 31st Street drainage ditch, however, remained a foul, open sewer until 1915.



Duck Pond Section

By 1880, "Duck Pond had become a pool of stagnant water during the summer. When the south winds came, disease-breeding vapors blew into the city."¹² In 1881, a new levee was constructed on Y Street (Broadway), and the R Street levee was removed. That same year, a pumping station was installed on the north side of the Y Street levee at 8th Street to drain Duck Pond. The Y and 8th Street station pumped raw

sewage over the levee into the drainage ditch that ultimately ran to Snodgrass Slough.

A drainage ditch on the south side of the Y Street levee ran from the 31st Street ditch and extended westward to 15th Street where it connected to the Burns Slough ditch. This ditch and the Duck Pond ditch connected south of the City Cemetery to join the Sacramento City Drainage Canal. Constructed in 1870, the canal “was twenty-two miles long and extended to Snodgrass Slough.”¹³



Sacramento Drainage Ditch Remnant

Remnants of the Sacramento City Drainage Canal can clearly be seen on the north side of Seamas Avenue just west of Belle Cooledge Library in South Land Park. From there, the ditch continued south through what is now Reichmuth Park.

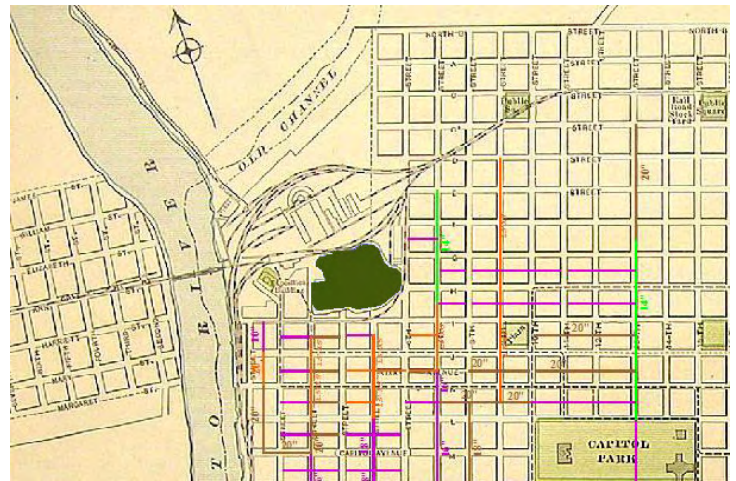
But to call it a “Drainage Ditch” would be a misnomer. On May 29, 1891, the *Sacramento Bee* headlined an article: “IT MUST STOP—Dumping Sacramento Sewage Should be Checked—The Ranchers Complaint—They Evidently Have Right on Their Side.” The *Bee* described an inspection tour of the drainage canal by the Board of Trustees—where the canal crossed Freeport Road it was a stagnant pond, four feet deep, 12 feet across. In fact the drainage canal created a vast pool of stagnant sewage-laden water, covering about 7,000 acres and stretching to the city limits of Sacramento itself.¹⁴

A pond of this stagnant sewage south of 18th Street and the Y Street levee was known as the “terror of the south winds.”¹⁵ On summer evenings, the cooling “Delta Breeze” carried the stench of raw sewage into the homes of Sacramento residents. This pond was just southeast of the original 1895 city dump at the 15th to 16th and U to W street block.

In 1891, a new sewer pipe was laid from the 8th and Y Street pump directly to the Sacramento River. In 1894, Mayor B. U. Steinman declared “We must have drainage and sewers or get out.”¹⁶ In that same year, the citizens of Sacramento passed a sewer

bond act, and in 1896, a new pumping station at S and Front streets began discharging raw sewage into the Sacramento River.

China Slough or Sutter Lake was most troubling to many civic boosters, who were concerned that its stench was the most powerful first impression arriving train passengers had of Sacramento. A bridge at 2nd Street over the west end of China Slough was known as “the bridge of sighs.” Workmen passing over the bridge were “nauseated and made very sick from the stench from the slough.”¹⁷



Western Pacific Depot (1910)

Over the years, the Central Pacific/Southern Pacific Railroad had partially filled China Slough for track levees and when it needed more land for its shops. But when the filling of China Slough began in earnest in 1905, it was predicted to be completed in a few months. Two electric pumps vacuumed sediment from the bottom of the Sacramento River into the slough, while another pump discharged its water back over the levee. This work was delayed by both low water in the river and the 1907 flood, which undid much of the previous work. China Slough was finally filled in 1908.

In 1908, the city also completed a new sewage pumping station at Front and U streets—Sump Number One—which again pumped raw sewage directly into the Sacramento River.

Progressive Reform—Sacramento

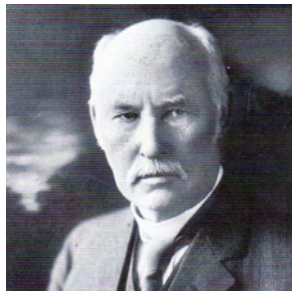
Progressive Reform, which came into prominence in the late 1890s and early twentieth century, was a movement of middle-class professionals and civic leaders who called for more responsible and responsive government at all levels—local, state and federal. They were champions of efficiency and civic order, and were involved in public health issues in Sacramento. Under the mantle of civic order, Sacramento Progressives

also targeted vice, especially in the West End. They long campaigned against prostitution, gambling, all-night bars and Chinese opium and gambling dens.

The adoption of the new city charter in 1893 was an early example of Progressive reform in Sacramento. In the early twentieth century Progressive reforms continued to win success in Sacramento. In 1903, the initiative and the referendum were added to the city charter, and Sacramento's Progressives began efforts to break the Southern Pacific's monopoly by bringing the Western Pacific Railroad into the city.



A right-of-way was secured in 1907, and in the November election, reform candidate Clinton L. White narrowly won the mayoral race by denouncing the Southern Pacific. Foreshadowing Hiram Johnson's 1910 gubernatorial campaign, White asked "Why not cast out the evil influences that have kept the city down for so long?"¹⁸ The arrival of the first Western Pacific train at the 19th and J Street station in August 1910 was greeted with a great celebration of civic leaders and citizens.



Clinton L. White

White served only two years before returning to his law practice. He was one of Sacramento's most prominent attorneys. Born in Iowa in 1850, he migrated to Northern California in late 1874, where he taught school in Placer County for a number of years. Moving to Sacramento, he was admitted to the bar in 1877. Rising rapidly, he served as deputy attorney general for the State of California in 1881 and 1882. In 1892, he was among the 15 freeholders serving on the committee that drafted what became the 1893 City Charter. White was one of the founders of the Chamber of Commerce in 1895, and he was among those businessmen and prominent citizens collecting money for our new St. Francis of Assisi Parish Church in 1908. He also served as a delegate to the

Republican National Convention in 1912 and to the Progressive National Convention in 1916. White died at the age of 75 in 1925.

Progressive Reform: Sacramento and California

Sacramento and California's most prominent Progressive was our native son, Hiram Johnson, the son of prominent Sacramento attorney, congressman, state assemblyman and Republican supporter of the Central Pacific/Southern Pacific, Grove



Hiram Johnson

Johnson. Hiram rose to statewide attention as a special prosecutor in the 1906-1908 graft and corruption trial of San Francisco political boss Abe Ruef and Mayor Eugene Schmitz. Johnson convinced Ruef to testify against Schmitz, who was convicted, but released on a technicality. Ironically, Ruef himself was soon convicted and served four and a half years of a 14-year sentence in San Quentin.

One remarkable aspect of these trials is that they were conducted during and in the immediate aftermath of the 1906 San Francisco earthquake, a disaster that fueled the fires of Progressive reform in San Francisco and California.

The statewide accolades resulting from the Ruef/Schmitz corruption trials, carried Hiram Johnson to overwhelming victory as the Progressive Republican candidate in the 1910 governor's race. He campaigned throughout the state in a red locomobile convertible with the slogan, "Kick the Southern Pacific out of politics."¹⁹ Johnson's years as governor, 1911-1917, brought California to the forefront of Progressive reform.

Progressive Reform: Theodore Roosevelt

Progressivism arrived on the national stage with Theodore Roosevelt's presidency (1901-1909). As vice president, Theodore Roosevelt ascended to the presidency when William McKinley was assassinated in September 1901. Roosevelt's administration passed a number of regulatory reforms. The Elkins Act, regulating railroads, was passed in 1903. A 1904 Supreme Court ruling broke up the Northern Securities Company—a large railroad trust formed by J. P. Morgan, J. J. Hill, John D.

Rockefeller and E. H. Harriman. In 1911, Standard Oil was broken up in another Supreme Court decision.

Theodore Roosevelt enjoyed success in international affairs as well. In 1904, the Japanese launched a war against Russia. Suffering defeats on land and sea and confronting an internal rebellion, Russia sued for peace in 1905. European leaders were so alarmed by the victory of an Asian over a European power that in 1906 Theodore Roosevelt received the Nobel Peace Prize for negotiating an end to this war.



Admiral Tōgō and the Battleship Mikasa at the Battle of Tsushima (1905)

Russian defeat in this war contributed to civil discontent that culminated in the 1917 Russian Revolution.

The Russo-Japanese War of 1904-1905 also marked the beginning of a series of events in Asia and the Pacific that would come to have significant consequences for St. Francis parishioners following December 7, 1941.

Theodore Roosevelt, Columbia and the Panama Canal

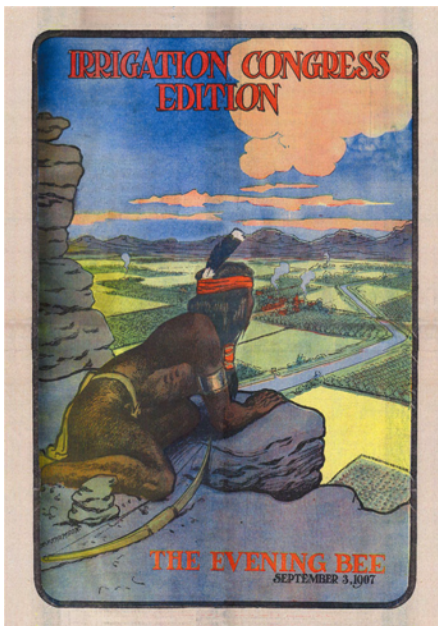
President Roosevelt was also engaged in an international venture in Columbia. Having won a number of possessions in the Caribbean and the Pacific in the Spanish American War, the United States found itself with a two-ocean empire, but only one naval fleet; thus we began negotiations with Columbia to build a canal across the Isthmus of Panama. The French had held this right since the 1880s, but construction difficulties and disease had by 1893 bankrupted their efforts. When negotiations with Columbia proved unsatisfactory, the United States in 1903 backed a Panamanian rebellion, immediately recognized Panama's independence and signed a treaty with Panama,



Theodore Roosevelt

granting the U.S. exclusive rights to build and operate a canal. United States construction on a canal began in 1904 and was completed in 1914. Of this process, President Theodore Roosevelt said, “I took Panama.”²⁰

As daunting as was the canal construction work, of equal importance was the contribution made by Dr. Walter Reed, who discovered that malaria was spread by mosquitoes. The resulting sanitation and inoculation practices were essential to American success where the French had failed.



Sacramento Valley: Irrigation, Dredging and Reclamation

While construction of the Panama Canal 1904-1914 was one of the most celebrated accomplishments of the early twentieth century, an engineering feat of similar magnitude was taking place in the Sacramento Valley—dredging the rivers and re-claiming vast acres of swamp and overflow land.

Irrigation marked the first chapter of reclamation in the Sacramento Valley. Coming into full force in the 1880s, vast areas in the upper Sacramento Valley were irrigated by diverting water from the rivers. In 1907, an Irrigation Congress was held in Sacramento to celebrate irrigation as the path to prosperity. However, the floods of 1907 and 1909 tore out

levees and irrigation works alike, demonstrating that far more work would be necessary to realize these dreams. The clam shell dredge offered an immediate solution.

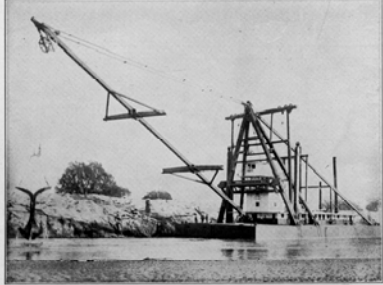
Clam shell dredges had been operating in the Sacramento and San Joaquin rivers since the late 1870s. They were used in the construction of the Panama Canal, and in the early twentieth century, they were employed to construct huge new levees to reclaim Sacramento River basins. Clam shell dredges featured booms of more than 200 feet in length and buckets up to seven yards in capacity. Befitting their epic undertaking, the dredges were named for mythological figures—Neptune, Ajax, Jupiter, Vulcan, Trojan and – the largest – Hercules. Building levees with clam shell dredgers was initially a serendipitous process, as the dredgers scooped material out of the river and deposited it on the river bank, creating massive levees.

From Red Bluff to Sacramento, the streambed of the Sacramento River is higher in elevation than the five basins to the east and the west: the Sutter Basin between the Feather and the Sacramento rivers; the Colusa Basin between the Sacramento River and the Coastal Range; the Yolo Basin running from Cache Creek to Rio Vista; the American Basin running from the Feather and Bear rivers to the American River; and the Sacramento Basin extending from the American River to the confluence of the Cosumnes and Mokelumne rivers.

Of these five basins, the American Basin, also known as Reclamation Districts #1000 and #1001, and known today as North and South Natomas, was the first to be reclaimed. The Natomas Consolidated Company of California, an international mining enterprise, bought the land in 1907. Prior to this date they were operating gold dredgers south of the American River.

In 1909, the Natomas Company began clam shell dredging operations. By 1911 the Natomas Company was advertising 60,000 acres of reclaimed land for agricultural settlement and prosperity in North and South Natomas. The Natomas Basin is subject to flooding on four sides—from the Feather and Bear rivers to the north, the drainage canal to the east, the American River to the south, and the Sacramento River to the west. At its lowest point the basin is subject to 25 feet of flood water. In 1916, four huge pumps were installed to drain the basin; they were augmented by three more in 1938.

CLAM SHELL DREDGERS
 RECLAMATION AND LEVEE CONSTRUCTION

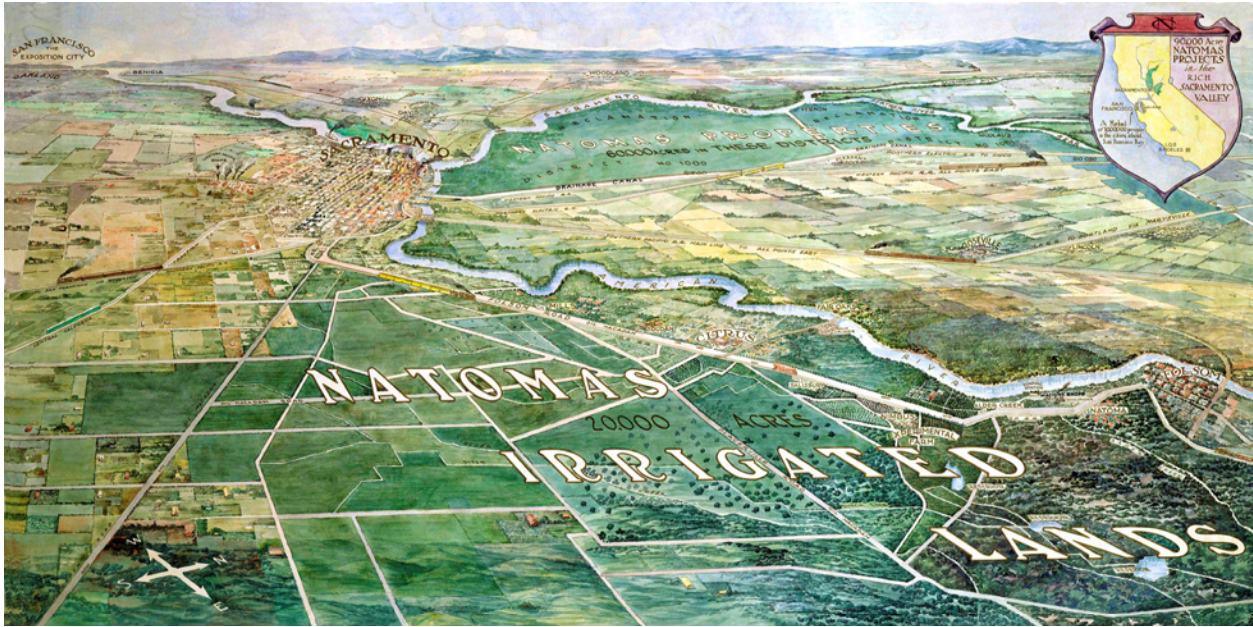


LONGEST BOOM DREDGERS IN THE WORLD

DREDGER HERCULES
 DREDGER TROJAN
 DREDGER YULCAN
 DREDGER JUPITER
 DREDGER THOR
 DREDGER AJAX
 DREDGER NEPTUNE
 DREDGER SAMSON

COMBINED CAPACITY—850,000 CUBIC YARDS PER MONTH

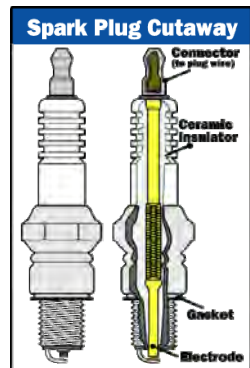
PHONES	OFFICE	SHIP YARDS
Kearney 1731	237 FIRST STREET	West Alameda
Home J 2751	SAN FRANCISCO, CALIFORNIA	



Sacramento: Electricity—Planes, Trains and Automobiles

With the completion of the 22-mile electrical power line from Folsom to Sacramento in 1895, Sacramento became an electrical industry pioneer. Electrical systems were at the heart of relatively light-weight internal combustion engines, and thus a key element in airplanes and automobiles. To understand the centrality of electricity to the internal combustion engine we can begin with the spark plug—where an electric arc (the spark) ignites the fuel, usually some form of refined petroleum.

We can trace the electrical path back from the spark plug through the spark plug wire, through the magneto and the ignition coil to the distributor and ultimately the generator. Initially cars and airplanes were started by hand cranking, but by 1920 storage batteries and starter motors took over this function.



Planes

The first airplane in the United States may have been that flown in 1902 by Lyman Gilmore of Grass Valley. Gilmore claims to have flown a steam powered airplane, and there are photos of the plane in his hanger, but to date there is no corroborated evidence



Lyman Gilmore Airplane

that he actually flew it. The steam engine was probably too heavy to lift the craft and keep it airborne.

Credit goes to the Wright brothers, Wilbur and Orville, for the first recorded heavier than air flight at Kitty Hawk, North Carolina, in December 1903. Their 1903 *Flyer* was powered by a four-cylinder internal combustion engine that weighed less than 200 pounds. In 1910, Theodore Roosevelt became the first President to fly in an airplane, and the first commercial flight took place between Dayton and Columbus, Ohio.

Trains

In Sacramento, electric trolleys quickly replaced horse cars. In 1902, the Sacramento Electric Power and Light Co. began building car barns at 28th and M streets for the new electric trolley system. In 1906, Pacific Gas and Electric Company took over the Sacramento Electric Street Railway franchise. By 1909, when the car barn complex was completed, 11 lines ran out of the facility. The J Street and 28th Street lines brought parishioners closest to St. Francis.



28th and M Street Car Barns

Electric power came to dominate not only urban transit but also interurban transit when the Sacramento Northern Railroad Company opened an electric line to Chico in 1905. By 1907, rival Northern Electric Railway Company had lines to Chico and Oakland. In 1908, Northern Electric began interurban service to Marysville and Yuba City.

Automobiles

In the 1890s, automobiles were being manufactured in Germany, France, the U.S. and other countries. But the greatest innovator in this field would be Henry Ford who founded the Ford Motor Company in 1903. Ford brought cars, trucks and tractors, not only to Americans, but to people throughout the world.

In 1900 a locomobile was exhibited at California's State Fair. In 1903 the first automobile races were held at the State Fair, and Joseph Schneer leased a building at 10th and J streets for auto sales, but went out of business a few years later.

Nonetheless, the automobile was a growing factor in Sacramento and California life. As early as 1895, the state purchased the Tahoe Wagon Toll Road, marking the beginning of U.S. Highway 50. The first Good Roads Convention was held in Sacramento in 1903. In 1907 Sacramentans passed a bond measure to upgrade and pave Folsom, Stockton, Franklin, Riverside and Auburn Boulevards, as well as part of Jackson Road to Plymouth. The California Highway Commission was created in 1909.

In 1910, there were 700 motor vehicles registered in Sacramento County, up from 27 in 1904. By 1911, Sacramentans were buying 75 automobiles a day; throughout the twentieth century, Sacramento would have one of the highest per capita rates of motor vehicle ownership in the nation.

The 1906 San Francisco Earthquake

But as Americans, Californians and Sacramentans were celebrating triumphs over distance, disease and other peoples, nature struck a blow close to home. At 5:14 a.m. on Wednesday, April 18, 1906, a magnitude 7.7 earthquake struck San Francisco. This was one of the worst natural disasters in American history. The San Andreas Fault ruptured both northward and southward for a



1907 Locomobile
(note the hand crank)



**S.F. Earthquake with
St. Boniface Ruins at right**

distance of 296 miles, sending shock waves as far north as Oregon, as far south as Los Angeles, and as far east as central Nevada. The earthquake and resulting fires killed an estimated 3,000 people.

The *Sacramento Bee* ran a number of extra editions. In their 7 p.m. *Extra* the headline read, “35,000 Homes Are Wrecked and 150,000 People Are Homeless.”²¹ The *Bee* also noted that Stanford University was reported to have been demolished. In their 11:30 p.m. *Extra* the paper noted, “Sacramento Suffers No Real Damage... “but they also noted that railroad tracks in the Suisun marshes “Drop[ped] Out of Sight” and “Millions of Damage [was] Done in Oakland.” Santa Rosa’s business district had been destroyed, and \$200,000,000 was being released from the federal treasury. There was a great need for water, food, tents and blankets. The *Bee* also reported one of the greatest fears was of an epidemic throughout the Bay Area. And the *Bee* warned that 15,000 refugees would be coming to Sacramento.

On Friday, April 20, a *Bee* headline read “Purses Opened in Sacramento.” More than \$50,000 was subscribed for relief. Thousands of people were pouring into the city, sleeping in Capitol Park, at the old and new State Fair Pavilions, and in Sutter’s Fort. Those refugees sleeping in Sutter’s Fort, as well as many others, were fed, clothed and comforted by St. Francis of Assisi parishioners.

On Saturday, April 21, the *Bee* reported that a relief party from Sacramento was the first to arrive in San Francisco. The next day, the newspaper reported that streetcars were running on several lines, and that San Francisco would soon have its “Usual Enormous Supply of Water.”

By Monday, April 23, the fear of epidemics had passed—there had been only five to six cases of smallpox reported in Oakland. In the 4:30 p.m. *Extra* on Tuesday, April 24, the *Bee* reported that seven square miles, or 80 percent, of San Francisco had been destroyed. One thousand bodies had been discovered; the city contained 40,000 refugees; and thousands were leaving.

Yet on Wednesday, April 25, one week after the earthquake, the *Bee* reported that streetcars were running, lights were functioning and there was less sickness than before the disaster. On Thursday, April 26, thousands were flowing back into San Francisco.

Indeed, San Francisco did recover faster than any one could have anticipated. Akin to the Panama Canal and the dredging of Sacramento Valley rivers, rebuilding the city was a Herculean effort that proved more than successful when San Francisco hosted the 1915 Pan Pacific Exposition. Officially launched to celebrate the 1914 completion of the Panama Canal, the Exposition demonstrated that San Francisco had more than fully recovered from the 1906 earthquake.

Successful as the Pan Pacific Exposition was, San Francisco would never again be the center of California's wealth. Oil had been discovered in the Los Angeles Basin in 1892. By 1910, population, money and influence were rapidly migrating south. Nonetheless, San Francisco could claim cultural primacy, and throughout the twentieth century people simply referred to it as "The City."

1910: Sacramento Expanding

1910 marked a year in which the city of Sacramento saw significant expansion beyond the original city limits. A 1910 effort to annex Oak Park and parts of east Sacramento failed, due to the efforts (it was said) of Oak Park saloon owners and their patrons who feared city regulation. When women were granted the right to vote in California in 1911, a renewed annexation effort succeeded.

In 1910, the Rancho del Paso land grant was sold, opening development by the Sacramento Valley Colonization Company in an area that would include Del Paso Heights, North Sacramento and the Del Paso Country Club areas. Citrus Heights also had its origins in 1910 when the Trainor and Desmond Land Company began selling ten-acre parcels in what previously had been the Sylvan district, so named for the Roman God of the Woods.

D. W. Carmichael, Democratic politician and future Sacramento mayor, founded Carmichael to the east in 1909-1910. Further to the east lay Orangevale and Fair Oaks, founded in the late nineteenth century as speculative, small-scale citrus growing communities.

1910: The Larger World

In 1910 the Vatican announced a compulsory oath against modernization, the Mexican Revolution began, and in October, the *Los Angeles Times* building was bombed, killing 21 employees. In 1910, Hiram Johnson and California Republican Progressives swept into office on their “Kick the Southern Pacific out of Politics” slogan.



1910: A New City Hall and Our New Church

The year 1910 marked a significant milepost in Sacramento’s city and church development. In April, elected officials began moving into the new City Hall, designed by

Rudolph A. Herold; begun in 1909, the building was completed in 1911. While not as dramatic as the nineteenth century Cathedral of the Blessed Sacrament and the State Capitol, the 1910 City Hall and the new St. Francis of Assisi Parish Church, bespoke a new chapter in Sacramento’s civic and religious development.

In addition to images of our church, we also have the two following photos of our 1910 elementary school class, generously donated by Joeann Diepenbrock Nelson.



Frank Dierckbrock Ramona Dunning

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Photo Credits

1. St. Francis Church Dedication, 1910. Courtesy of *Catholic Herald*.
2. *Prodigal Son* Window, St. Francis of Assisi Parish.
3. *Power of the Keys* Window, St. Francis of Assisi Parish.
4. *Abraham and Isaac* Window, St. Francis of Assisi Parish.
5. *St. Clare* Window, St. Francis of Assisi Parish.
6. Fr. Victor Aertker, St. Francis of Assisi Parish.
7. Fr. Godfrey Hoelters, St. Francis of Assisi Parish.
8. "Map of the City of Sacramento." Courtesy of Santa Barbara Mission Archives.
9. St. Francis Church Dedication, 1910. Courtesy of *Catholic Herald*.
10. Fr. Mela Funeral Card. Courtesy of St. Mary Parish, Sacramento.
11. St. Mary Church, Sacramento. Courtesy of St. Mary Parish, Sacramento.
12. St. Stephen Church and School. Courtesy of SAMCC.
13. Thomas Connelly family photo. Courtesy of *Catholic Herald*.
14. *Catholic Herald*, 1st ed. Courtesy of *Catholic Herald* (1908).
15. 1900-1910 Population Chart. California State University, Sacramento, with the assistance of Khoa Van Do, ITC, California State University, Sacramento.
16. Postcard of the Southern Pacific Depot, 1907. Courtesy of the Sacramento Room, Sacramento Public Library.
17. Postcard of the Northern Electric Railway Depot. Courtesy of the Sacramento Room, Sacramento Public Library.
18. Globe Flour Mills, 2008. Photo by author.
19. Postcard of St. Francis of Assisi Parish and Sutter's Fort. Courtesy of the Sacramento Room, Sacramento Public Library.
20. Postcard of the Buffalo[Ruhstaller] Brewery. Courtesy of the Sacramento Room, Sacramento Public Library.
21. California Winery. Courtesy of SAMCC.
22. Studebaker Brothers, advertisement. 1910 *City Directory*. Courtesy of the Sacramento Room, Sacramento Public Library.
23. Postcard of the Sacramento County Hospital. Courtesy of the Sacramento Room, Sacramento Public Library.
24. City Sewer Map. Courtesy of Richard Batha, Department of Utilities, City of Sacramento.
25. Burns Slough highlight. Adapted by author.
26. Water Closet advertisement. Courtesy of SAMCC.
27. "Years in which streets were raised" chart. Lagomarsino: 127
28. Louis Pasteur (painting by A. Edelfeldt, 1885). Wikipedia: http://en.wikipedia.org/wiki/Louis_Pasteur.
29. 21st and M Streets. Courtesy of SAMCC.
30. 31st and Y streets drainage ditches. Adapted by author.
31. Duck Pond section. Adapted by author.
32. Sacramento Drainage Ditch Remnant. Photo by author.
33. China Slough highlight. Adapted by author.
34. Postcard of the Western Pacific Depot. Courtesy of the Sacramento Room, Sacramento Public Library.

35. "White, Clinton L." (obituary). *Sacramento Bee*, September 7, 1925: 5, column 1.
36. Hiram Johnson (official portrait as U.S. Senator). Wikipedia: http://en.wikipedia.org/wiki/Hiram_Johnson
37. Admiral Tōgō. Wikipedia: http://en.wikipedia.org/wiki/Admiral_Togo.
38. Theodore Roosevelt (painting by John Singer Sergeant, 1903). Wikipedia: http://en.wikipedia.org/wiki/Theodore_Roosevelt.
39. "Irrigation Congress," *Sacramento Bee*, 1907. Courtesy of SAMCC.
40. Clam Shell Dredgers advertisement. Courtesy of SAMCC.
41. Natomas Lands, 1915. Courtesy of SAMCC.
42. Spark Plug Cutaway. www.classicsparkplug.com.
43. Lyman Gilmore Airplane. Courtesy of SAMCC.
44. 28th and M Street Car Barns. Courtesy of SAMCC.
45. 1907 Locomobile. Wikipedia: <http://en.wikipedia.org/wiki/Locomobile>.
46. San Francisco Earthquake, St. Boniface Ruins. Wikipedia: http://en.wikipedia.org/wiki/1906_San_Francisco_earthquake
47. Sacramento City Hall. Courtesy of the Sacramento Room, Sacramento Public Library.
48. Postcard of the Church of St. Francis of Assisi, Sacramento. Courtesy of Dr. Bob LaPerrière.
49. 1910 St. Francis Elementary School Classes (two photos). Courtesy of Joann Diepenbrock Nelson.

Endnotes

- ¹ Avella, *Sacramento and the Catholic Church*: 143.
- ² *Sacramento Union*, October 19, 1908: 1.
- ³ Hoelters to Grace.
- ⁴ *Catholic Herald*, October 22, 1910.
- ⁵ Ibid.
- ⁶ West: 18.
- ⁷ Brown: 94.
- ⁸ Roos.
- ⁹ Young: 2-3.
- ¹⁰ *Sacramento's Midtown*: 100.
- ¹¹ *Sacramento Union*, November 16, 1872, quoted in Mitchell: 3.
- ¹² *Elma's Booklet*: 15.
- ¹³ Ibid.: 13.
- ¹⁴ *Sacramento Bee*, May 29, 1891, quoted in *Elma's Booklet*: 15.
- ¹⁵ McGowan, "Miasma in Sacramento": 5.
- ¹⁶ Brown: 100.
- ¹⁷ Jones: 274; quoted in McGowan, "Miasma": 1.
- ¹⁸ Avella, *Sacramento: Indomitable City*: 80.
- ¹⁹ Widely quoted (e.g., www.answers.com/topic/1911).
- ²⁰ Widely quoted: "I took the [Panama] canal zone and let Congress debate, and while the debate goes on the canal does also." From a speech, Berkeley, California, March 31, 1911.
- ²¹ *Sacramento Bee*, April 18, 1906; various editions through April 26, 1906.