

Ample and Pure Water for Santa Rosa

1867 — 1926

By

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January, 2002

Prepared for the Department of Utilities,
City of Santa Rosa

This historical sketch of the early years of Santa Rosa's water supply was extracted primarily from the minutes of the City Council, city ordinances, and the early minutes of the Board of Public Utilities. While naturally focused on the city's municipal water system, the sketch overall chronicles most of the city's water supply story from a newly forming municipality in 1867 to the completion of the municipal water system in 1896 when outgoing Mayor Woodward

described the town as “a metropolis of 7,500 people.” The sketch then continues through to 1926 when the town was a prosperous farming center with a population of about 11,000.

Five months after the county supervisors approved incorporation of the town of Santa Rosa in February 1867, the Board of Trustees of the new town approved a petition to sprinkle the streets, but the source of the water was not recorded in the minutes. The board accepted a committee’s recommendation to build four cisterns for fire protection in the fall of 1869 and allocated \$236 for their construction. A special meeting of the board was held about two years later to devise ways to fill the cisterns with water, but the summary minutes provide no information on the stated purpose of the meeting — only that the fire company wanted the cisterns to be dug deeper and requested 200 feet of more hose (the request for more hose was approved about six months later).

In May 1873 the board granted a petition from the Santa Rosa Water Company for the privilege of laying water pipes in the city streets and appointed a special committee to confer with the company regarding the manner in which the pipes were to be laid. A month later the board authorized the purchase of “Ts” for fire hydrants (7 in., \$6.50; 9 in., \$8.50; and 11 in., \$10.50). In February 1874 the board approved a franchise contract with the Santa Rosa Water Works Company to lay down water pipes and furnish the city with water for 50 years. In April of the following year the board instructed the city attorney to prepare an ordinance prohibiting the throwing of water on the sidewalks. (The actual ordinance subsequently approved by the board made it a misdemeanor with a \$5 to \$50 fine or a jail term to permit any wastewater to flow onto any street, alleyway or sidewalk and was essentially an extension of an earlier ordinance prohibiting wastewater to collect on any premise.)

Soon after the election of the town’s first mayor elected directly by the voters, E. Neblett, and the election of a common council in April 1876, the new council approved watering the Plaza. When the water works company (by now, usually referred to as the McDonald water works) would not accept the council’s offered price for the irrigation water (\$0.50 per 1000 gallons), the council decided to take the water anyway.

In December 1882, in the third year of Mayor J. P. Clark’s administration, a state franchise law approved in March of the preceding year, permitted the council to request a yearly financial statement from the Santa Rosa Water Works Company to serve as a basis for the council to modify as appropriate the company’s proposed water rates for the coming year. Shortly thereafter, the company’s owner, Mark L. McDonald, was appointed by the council to fill the unexpired term of Councilman Thomas Tompson. (Immediately after his appointment, Councilman McDonald notified the council that his first action at their next meeting would be to

introduce a resolution to remove the Chinese from the east side of the Plaza.) A few weeks later, in a very chummy way, the council met in the office of the McDonald water works and unanimously approved the company's financial statement for 1882 and approved the company's proposed water rates for 1883 (with Councilman McDonald apparently voting). (The city was receiving bills from the private water company in excess of \$1000 in the early 1880s.) (1)

By the mid-1880s, there are accumulating indications in the minutes that the McDonald water works system was inadequate. For example, in August 1884, about four months after the election of Mayor Thomas Rutledge, the council appointed a committee to inquire about the expense of increasing the water pressure and in October 1887, during the second year of Mayor A. P. Overton's administration, the council appointed a committee to prepare a franchise agreement for J. B. Davis and his associates to lay water pipes in the city's streets. (There are also numerous indications in the minutes that council's relationship with former Councilman McDonald himself had become strained by the late 1880s.) (2)

For many years after the council first requested a yearly financial statement from the McDonald water works, the company apparently submitted a brief, simplified statement with their proposed water rates for the coming year. The council usually approved these annual statements and water rates without comment, but occasionally commented that the proposed rates "were just and fair" or, for example, noted that the company's return on its investment in 1888 was 7.5%. However in December 1889, a week before Mayor H. W. Byington resigned, the council requested a very detailed statement from the water works company (name and address of each ratepayer and amount paid, a breakdown of total revenue and expenses, etc.). Mark McDonald being present at the meeting, "strenuously objected" to the requirement for such a detailed statement, but his call to rescind the motion was overruled. (A week later, the one councilman who did not vote in the vote to uphold the motion of the requirement for a detailed financial statement, resigned.) Now with a new mayor, J. F. Smith, the first subsequent statement submitted by the water company was immediately declared legally inadequate by the council and the company voluntarily withdrew their initial statement. The company's resubmitted statement was still very simplified and showed a total revenue for 1889 of \$8,000 and a rough profit of only \$800. The majority of a council committee formed to examine the company's statement concluded that while the statement was still inadequate, it was ample to lower the company's proposed water rates for 1890. (A minority report from the committee showed that the company actually had total receipts of over \$21,000 and a net revenue of over \$12,000 for about an 11% return on its investment.) (Except for 1896 when Mark McDonald flatly denied the right of the council to delve into the company's affairs, for many years subsequent to 1889 the minutes record that the water rates for the coming year were set without comment or were congenially set by the councils and the water company. In January 1916 the council's request that all of the public utility franchise holders doing business in the city {electricity, telephone, water, etc.} submit an annual financial statement was unanimously denied by the utility companies on the grounds that the state Railroad Commission now had sole authority to set the

utility rates. There is no information in the council minutes or in the city ordinances after 1915 pertaining to the McDonald water works rates. The company's yearly financial statement was reproduced in the minutes for only 1889 and 1905.) (3) (4) (12)

(The cost of the McDonald water works water for sprinkling the streets in 1890 was \$0.15 per 1,000 gallons. The monthly salaries of the city clerk, \$50, and the town marshal, \$75, were established by the council in the same year.)

In March 1890 Mark McDonald complained to the council about the fast driving on McDonald Avenue. In October of the same year, T. J. Brooke now mayor, the water pressure in the hydrants was reported to be inadequate for fire protection and the council requested that the McDonald water works company increase the size of the fire mains to a minimum of 6-inch pipe. Soon after the city's horse was reported "to be sick and not of much use," in July 1891 the council adopted a resolution to issue the necessary bonds to own and control a municipal water system. A month later a council committee reported that the McDonald water works had a totally inadequate water supply for municipal purposes, was in a deplorable condition, was a menace to the health and welfare of the community, and was contaminated by the excrement of hogs and other animals draining into the reservoir (the offal and filth from three farms with water closets). Just before the election of April 1892 a special council water committee recommended that the growing City of Santa Rosa have a pumping pressurized water system as in the majority of cities in the U.S. with 100 hydrants and with adequate pressure to reach the top of a four story building. The committee also recommended contracting with a firm on the East Coast to design the system. Incoming Mayor E. Woodward stated in his inaugural address that "no greater benefit could possibly accrue to any incorporated city than the ownership of its own water works [with] the rates publically determined and the profits deposited in the public treasury." Mayor Woodward also stated that the public demanded the improvement of both the quantity and quality of the city's water supply and he ventured the opinion that the city could well afford to bond itself for as much as \$200,000 and have cheaper water by either purchasing the McDonald water works company or by constructing a new system owned by the city (cheaper water by 75% or lower property taxes by 50%). (5)

In January 1893 after his recent visit to Santa Cruz with the city attorney, Mayor Woodward reported to the council that the Santa Cruz municipal water system was the "pride of the people." (Santa Cruz at the time, was said to have the lowest water rates in the state.) Soon thereafter, the council approved Ordinance #146 calling for a special election to obtain voter approval to incur bond debt to either acquire or construct a municipal water system. Two months later, at the same meeting in which the council referred Mark McDonald's complaint that he had been arrested for dumping dirt on Monroe Street to the street commissioner, Mayor Woodward presented a letter from the Santa Rosa Water Works Company stating that all of the company's assets could be purchased by the city for \$210,000 (the letter was signed by M. L. McDonald, President and T. A. Proctor, Secretary). But the council considered the asking price

far above the company's true value, especially considering that at least about \$125,000 more would be needed to improve the company's system (new and durable distribution pipes, elevating and roofing the reservoir, and preventing the contamination of the reservoir "by man and beast," etc.). Mayor Woodward then addressed the citizens of Santa Rosa on the necessity of obtaining voter approval for the bonds to construct a municipal water system. (Interestingly, an unrecorded contract must have been let to a consultant, C. Monjeau of the National Water Supply Company, many months earlier to develop the plans, specifications, and cost estimates for the municipal system. The consultant's plans were approved by the council two weeks before the council meeting in which the asking price for the McDonald water works company was rejected, but the plans were not recorded in the minutes. The proposed new municipal water system plans are only generally described in the Mayor's address to the voters in many pages of the same the council meeting in which the asking price of the private water company was rejected.) (9)

Voters approved the issuance of \$165,000 in bonds to build a municipal water system in a special election in May 1893 (yes vote, 730 or about 74% of the 983 total vote). About seven months after the bond election, the council approved a resolution inviting J. W. Hartzell, Edward E. Britton, and Associates, who were constructing a system to supply Russian River water to the inhabitants of the county, to distribute their water throughout the city. After his re-election in April 1894, Mayor Woodward reported that while an attempt was made to sell the water bonds immediately after the special election, the bonds had not sold given that "a great financial crisis had swept over the land wrecking banks and spreading disaster throughout the country," but he noted that it may be possible to sell the bonds at an affordable price in near future. In the fall of same year, the council declared Robert Effey's bid for the water bonds at 4%, the only bid received, the highest and best bid and accepted it. Robert Effey also soon won the bid to construct the water system (\$161,000 versus W. J. Garratt and Company for \$164,900 and a partial bid for only 10 wells from John A. Bunting). About six weeks after the water bonds were sold, the council accepted Effey's request to cancel the initial bonds and issue new bonds (repealed Ordinance #118 and approved Ordinance #156), but only an expert in bonds could tell how the two issues differed. In December 1894 W. G. Skinner, a major local property owner, served the council with a formal Notice of Protest which claimed that the issuance of the water bonds was illegal and void. Skinner declared that he would resist any and all taxes to pay for the bonds and stated that he would join with others as soon as possible to judicially determine the validity of the bonds in the state Supreme Court. (7)

Shortly after the Council Chambers were described as being "enlivened by the presence of ladies interested in the protection of shade trees", in September 1895 the council responded to a state Supreme Court decision that the bonds issued to Robert Effey were illegal by issuing new bonds which met the court's edict (repealed Ordinance #156 and approved Ordinance #162 as amended by Ordinance # 163). The council then immediately authorized Mayor Woodward to enter into a contract with Effey to construct the city water system according to the plans and specifications

of the consultant and ordered that the necessary properties and right-of-way be acquired for the system. (The plans and specification were subsequently amended by the council.) (9) (10)

The surety bond for Effey's contract to build the water system was submitted by Paul B. Perkins (Principal of the San Francisco surety firm of P. B. Perkins, R. W. Swayne and S. M. Haslett), but the minutes also clearly attribute Perkins as the builder of the system. For example, the minutes of early January 1896 state that "the water works constructed by Paul B. Perkins was nearing completion." (The city was paying bills at the time to a Perkins Pump and Engine Company.) The minutes in January 1896 report that "some evil disposed persons" are threatening to injure or destroy the new water system and the council resolved to take immediate possession of the system to manage and control it, and to use the city police to protect it. In the same month Paul B. Perkins presented the council with a water meter for City Hall as a symbol of completion of the system and the council invited numerous officials from about a dozen nearby municipalities to a public test of the new municipal water system to be held on February 18, 1896. Soon after the scheduled public test date, the council employed a San Francisco attorney, Judge DeHaven, to defend the city in the Wesley Mock suit and given that the council considered that at least 3/4 of the city residents supported their new water system, the council moved to get equal space in other newspapers since the Daily Democrat had been publishing the deposition of Robert Effey "for the benefit of taxpayers opposed to the new municipal water system." In his farewell address in April 1896, Mayor Woodward stated that it "will require the utmost vigilance...[to stop] those that are trying to destroy the efficiency of the new water system." Incoming Mayor James W. Jesse supported the new water system and proposed that the water be "free" for all domestic purposes. About a month later, by a unanimous voice vote, the council instructed the city attorney to "combat every suit....to the bitter end and in the court of last resort" — just in time to receive a county Superior Court injunction in the Wesley Mock case preventing the city from taking possession of its new water system. The council then immediately resolved not to violate the court injunction, contracted with Paul B. Perkins for \$400 per month to preserve and operate the system during the pending litigation, and instructed the City Attorney O. O. Webber and Thomas Rutledge to procure a new trial in county court. (About a year later the council directed the city attorney to employ Thomas Rutledge and appeal the Mock case to the state Supreme Court.)

It is clear in the minutes that the city's new system had an inadequate water supply during its first summer of operation. The council minutes for the summer of 1896 indicate that: (1) the council held a special session to determine the "proper utilization" of the water produced by the wells; (2) a new well was sunk; (3) it was reported that more water could probably be forced from the wells; (4) the pumping equipment was removed from the brick pumping station next to Santa Rosa Creek and relocated to a new building at the well field; and (5) the plumbing ordinance was amended to prevent the wasting of water. (The city had insufficient money during much of this time to pay its bills and functioned on money borrowed from the Santa Rosa Bank.) Paul B. Perkins and his associates were released from any claims the city could have in November 1896

and, while clearly stating in the minutes that any such actions would not effect the court injunction imposed in the Mock case, the city essentially took over operation and maintenance of its water system. (11)

Except for approving privately funded water system extensions to be reimbursed when the city gained full control of its system, during the first few months of 1897 the council hired three men to staff the municipal pumping station (P. J. Doyle, head engineer, \$65 per month; R. J. White, second engineer, \$60 per month; and F. Loughery, superintendent of the municipal water system and the rock crusher, \$65 per month) and purchased tappings to make the connections to the distribution system. The tappings supplied by the city were mostly made of lead although some malleable iron tappings were also purchased by the city at this time. (There was no indication in the minutes of the lifting of the court injunction or the final outcome of the Wesley Mock suit.) In the spring of 1897 a new relatively large diameter (12.5 feet), shallow (about 50 feet) shaft well was excavated and a tunnel running from the bottom of the new well to below the pumping pit was dug to transport the water from the new well to the pumping pit. An inspector for the municipal system was hired during this period to enforce numerous water wasting prohibitions with powers to impose of \$2.50 fine per violation or shut the water off. (Example prohibitions included: limiting irrigation to between the hours of 6 to 8 a.m. and 5 to 7 p.m.; inspecting all water closets, hydrants, and faucets, etc. for leaks; and prohibiting leaving the water running while washing horses, buggies or other vehicles.) About this time, the city was again minimally functioning on money borrowed from local banks. (11)

Mayor Jesse's farewell address after the general election of April 1898 acknowledged that the costs of the long list of suits growing out of the municipal water system and the five or six sewer suits had greatly limited street work. (Only the Mock suit was apparently not settled at this time, however, the records in the minutes are too fragmentary to correctly identify all of the municipal water system related suits.) Incoming Mayor J. S. Sweet stated that while there was now unanimous sentiment favoring economy and entrenchment, the new municipal water system (now supplying 1,000 families) and the efficiency of the fire department had reduced the fire insurance rates within the city by 25%. The new mayor added that the fire wood costs for the steam pumping boilers for the water system had now become one of the greatest city expenses (\$4.50 per cord two years later, varying from about 30 cords per month consumed in the winter to over 60 cords per month consumed in the summer. As much as 1.5 million gallons per day was being pumped in the summer of 1898.) Soon after Mayor Sweet's election another shaft was dug, the tunnel floor was lowered, and the tunnel was extended more than 100 feet. (The tunnel itself was clearly recognized at this time as a water producing structure.) By June of the same year the city was divided into two irrigation districts (6 to 8 a.m. in the eastern city; 6 to 8 p.m. in the western city) and the police were instructed to wake up all parties leaving the water running at night. In the following August, Spring Creek was dammed and the water in the creek (assumed to be all from Peter's Spring) was diverted into the municipal supply. (At this time the city was again functioning on borrowed money. When the Santa Rosa Bank demanded

repayment of a \$5,000 note plus interest, the council considered, but did not pursue, suing Mark McDonald and his associates for the damages incurred by the numerous lawsuits related to the building of the municipal water system.) (11)

In the spring of 1899 when it was reported that all of the available water in the municipal system was being used (115 gallons per capita per day), the council directed that all of the water use rules be rigorously enforced. In the following late summer, the council authorized condemnation proceedings be used if the owner of Peter's Spring and the Fountain Water Company (Captain James McDonald of San Francisco) would not sell for less than \$6,000. (Apparently Captain McDonald would not sell at the offered price and condemnation proceedings were invoked.) A few weeks later, immediately after the marshal requested a safe from the council since \$47 had been stolen from his office, the council was informed that the McDonald water works company had filed a new suit against the city in the U.S. District Court in San Francisco. Mayor Sweet recommended that the council file a counter suit to revoke the company's franchise and urged the council "to fight to the bitter end with a view of ascertaining whether the majority should rule or whether a few Capitalists should manipulate the fair City of Santa Rosa." (The council unanimously approved the mayor's sentiments, but did not pursue the mayor's counter suit recommendation at this time and authorized Thomas Rutledge, assisted by Thomas Butts, to represent the city in further court proceedings of the new suit. In July 1904 the council appointed Judge Rutledge to conduct the city's case against the Water Works company in the federal courts, but the nature of the city's suit against the company was not recorded in the minutes.)

In January 1900 the council decided to proceed with the Mock case through the courts rather than complying with a request from Edward Lynch (Mock's attorney) to carry out a court injunction. (Curiously, in June of the following year the council approved Ordinance #178 which again suspended Ordinance #118, the initial bonds to build the municipal water system, which had already been declared illegal and had been suspended about five years earlier.) In the spring of 1900 the council again invoked numerous water demand restrictions such as: establishing alternative-evening irrigation districts in the eastern and western portions of the city (essentially east and west of Mendocino and South Main) with the town steam whistle marking the beginning and the end of the irrigation hours (6 to 8 p.m.); ordering that irrigation cease when the fire alarm sounded; and prohibiting the use of a hose to sprinkle the streets. (In June 1900, 58.5 cords of wood were consumed to pump 33,655,000 gallons of water.) In July 1900, the council approved the purchase of 25 water meters and while the pumps were reported to be operating at their capacity, the water supply was deemed to be ample if the water use rules were strictly enforced. (In fact, the sprinkling of streets was curtailed for much of the summer of 1900.) In the same month, despite protests from several local businessmen (including Joe Grace) that they could not possibly operate their businesses with such a small allotment of water, the council also approved Ordinance #180 which officially designated the municipal water system as the "City Water Works", provided for its maintenance and management (under the control of the mayor and the

council), restricted the use of the city water to 500 gallons per day (about 15,000 gallons per month) for each connection, and provided for non-compliance by shutting off the water or fines of \$25 for businesses and \$5 for families. (There was no effective way at the time to enforce such an edict since very few connections were metered. The council informed the businessmen that greater allotments for them would be an injustice to others and that the municipal water system was not built “to furnish free water to manufacturing plants.”)

County court approved the condemnation of Peter’s Spring and the surrounding 10 acres in January 1901 (\$190 for the land; \$4,000 for the Fountain Water Company and \$325.55 in court costs) and immediately the water from Peter’s Spring was incorporated into the municipal supply. (Captain McDonald, however, appealed the condemnation decision and a new trial was reported to be in the hands of the judge in county Superior Court in May 1902. The case was subsequently appealed to the state Supreme Court.) In the spring of 1901, at the beginning of final year of re-elected Mayor Sweet’s administration, the council approved a plumbing ordinance (#183) which required that all water closets flushed with city water be rigorously inspected for leaks. About this time the council also approved a request from ladies representing the Nomens Christian Temperance Union to erect a public drinking fountain connected to the city water system on Fourth Street, required that all meters be installed at the owners’ expense, and considered extending the water mains, hydrants, and fire alarm boxes throughout the city.

Upon his return from a League of California Municipalities convention, Councilman John Keegan reported to the council in January 1902 that Santa Rosa’s City Water Works was the only system in the state operating without water rates. A few months later in his retiring address, Mayor Sweet stated that while municipal ownership of public utilities was in the best interests of the city, the council should now focus on other city priorities such as a park. Soon thereafter, the wood burning boilers at the pump station were converted to oil (Dabney Oil Company, \$0.825 per 42- gallon barrel) and “quite an interest was shown in regards to getting a greater water supply” for the city system. (While the need for more municipal water was recognized, the council took no actions at this time.) In early 1903 the council authorized using Santa Rosa Creek water for sprinkling the streets to reduce the demand for municipal water. A few months later Mayor M. J. Bower pointed out to the council that there was a need for a large municipal bond issue to fund the necessary improvements to the sewer and water systems and to achieve other city priorities. Mayor Bower also remarked that while it was necessary to continue to stop the waste of water, “previous efforts had not been successful” and that it would be necessary to issue bonds to meter the municipal water system in order to establish a maximum amount of “free” water and to establish excess use charges. According to the mayor, the current inadequate water pumps would cost about \$15,000 to replace and that an additional \$5,000 would be needed to increase the water supply for flushing the sewers. Given the looming summer demand for water, in the same month the council also authorized petitioning the state Supreme Court to advance action on the pending Peter’s Spring condemnation suit. However, a month later the council accepted an unusual offer to sink a new well and pay only for the water delivered (\$250

for each 10,000 gallons produced) and a \$3,250 bonus if the new well produced 1 million gallons per day. (The well appears to have artesianed at 900,000 gallons per day and the builders did not receive their bonus payment.) Apparently production from the new artesian well was adequate since in December 1903, shortly after it was reported to the council that “some large boys were destroying the street signs put up by the Ladies Beautification Committee,” the council formed a committee to meet with the attorneys and withdraw and settle the Peter’s Spring condemnation suit. (The city withdrew and settled the suit about six months later.) (11)

Electric lights were installed in the Council Chambers in June 1904, about three months after the election of Mayor John P. Overton, and the minutes record that the council was “quite impressed with same.” A consultant (Edwin Reynolds) reported in August 1904 that the pumps were operating near their capacity (in excess of 80%), but that the boilers were operating at their extreme limit. The consultant also recommended numerous other necessary improvements to the City Water Works. For example, roofing the reservoir and insuring that all fire hydrants were served by at least a 6-inch main rather than the current 2-inch main serving many of the hydrants. Of the 1,200,000 gallons currently being pumped each day, the consultant determined that about 22% of the water being pumped was unaccounted for (with now 1,500 tappings restricted to 500 gallons per day and with 15% unavoidable loss, about 270,000 gallons per day was unaccounted for). The consultant confirmed former Mayor Bower’s opinion that the only way to determine the cause of the wastage and have an equitable system was to meter every tapping. (The consultant also noted that perhaps from last season’s heavy rains the water in the wells was about 8 feet above the tunnels.)

Mayor Overton’s support for the proposed large municipal bond issue was simple and clear — “Santa Rosa must be put in shape for a large residence city.” About two years after former Mayor Bower had first proposed the necessity of a large municipal bond measure and after numerous bond issue proposals were considered by the council, the voters overwhelmingly approved (yes vote, about 90% of the 1066 total votes cast) a \$200,000 bond issue in April 1905 (\$72,500 to buy land for a sewer farm and improve the sewer system; \$72,500 to improve the City Water Works system; \$5,000 for a fire engine and equipment; and \$50,000 for street improvements). The water bonds included funds for a new well and pumping engine, water meters, purchasing and laying water pipe, many new fire hydrants, and roofing the reservoir. (The priority pipe at the time was for a new 12-inch main from the reservoir to E Street via Sonoma Avenue to duplicate the main from the reservoir to the city.) (13)

In addition to the numerous other municipal improvement projects made possible by the 1905 bond funds, by the middle of April 1906 at the beginning of J. P. Overton’s second term as mayor: (1) 1,000 water meters had been purchased (\$8.10 each, Trident with split case connections) and installed (by Haven Hardware for \$0.95 each); (2) a new deep well had been sunk to over 110 feet; (3) a contract had been let to a San Francisco well drilling company to bore a deeper well to at least 250 feet; (4) the June 1905 contract for electric street lighting with the

Santa Rosa Lighting Company had been extended to include electric power for pumping the municipal water (The conversion to electricity solved both the inadequate capacity of the pumps since the company supplied its own new pumps and also allowed the overtaxed steam boiler to be retired); and (5) much water pipe had been purchased and was being installed to extend and improve the distribution system (for example, 20,000 feet of 4-in. pipe). (The Santa Rosa Lighting Company appears to have taken over the contractual obligations of the Merchants Lighting Company for street lighting in December 1901.) (11)

The minutes following the earthquake on April 18, 1906 indicate that the city's water systems were extensively damaged by the earthquake. On April 25 the council ordered the immediate repair of the many leaks wasting water and two days later, the minutes record that progress was being made in repairing the water pipes. The cost of fixtures for the municipal pumping station (\$73.50) and water pipe (\$9,364.88; at least 5,550 feet of 4-in. pipe) was paid out of the 1905 water bond funds. In May the council authorized payment of \$10 out of the Earthquake Relief Fund to each man who had fought the three days of fire following the earthquake. In June the city ordered a tapping machine, directed that all plumbing in the city streets would be performed by city crews (with a \$22.50 fee for labor and materials to connect to both of the mains of the city's sewer and water systems), and required that all water connections be metered. (In the same month the Petaluma and Santa Rosa railroad reported to the council that 1479 carloads of debris had been removed from Fourth Street — 466 carloads by the Petaluma company and 1013 carloads by the California Northwestern as fill along their right-of-way.) In August 800 more water meters were ordered (\$7.95 each), discussions began on repairing the reservoir, and the council accepted the American Federation of Labor rates for ditch digging and common labor (\$2.50 per 8 hour day). The minutes in the late fall of 1906 clearly indicate that most of the council's business was again returning to the routine administration of the city. (For example, Mrs. L. Dutard was granted permission to ride her tricycle on the sidewalk and Ordinance #235 granted Pacific Gas and Electric a franchise to transmit and distribute electricity within the city.) All but \$5,000 of the Earthquake Relief Fund was transferred to the city treasury in January 1907. (One of the late applicants for relief was from J. Walter who desired some compensation "on account of the bridge on Sonoma Avenue falling with him.")

While the initial earthquake repair plans for the reservoir called for repair of the sides, concrete supports for a roof, and a roof, the final contract in March 1907 (with C. C. Miller for \$4,700) called for only recementing the holes in the bottom of the reservoir and making the reservoir watertight. Three months after the reservoir repair contract was approved, water from a new deep well (final depth 390 feet) was reportedly being pumped to the reservoir on the hill. Apparently after completion of this new deep well, the water supply for the City Water Works was adequate to remove the 500-gallon limit for each connection. The council approved Ordinance #242 in April 1907 which assigned the street commissioner (D. Decker, who resigned about two months later) to be in charge of the City Water Works. As well as establishing the procedures for routine operation and maintenance of the municipal water system, the ordinance

established the monthly meter rates for city water (\$.25 per 1,000 gallons for up to 10,000 gallons; \$0.20 per 1,000 gallons for the next 10,000 gallons; and \$0.15 per 1,000 gallons over 20,000 gallons — the identical metered rates of the McDonald water works company. The 1907 rates appear to have remained constant through to at least 1930.) The ordinance also specified that businesses would pay for their water use at either the fixed rate or the metered rate and while metered connections to families would be at the metered rate, each domestic water user of city water would not be charged for the first 10,000 gallons of water used each month. (The ordinance also set a meter reader's pay at \$30 per month.) (11)

In early April 1908, at the beginning of Mayor James H. Gray's administration, the council decided to bill the McDonald water works company (\$311.06) for the 206 feet of 12-inch water pipe the company had secured from the city following the earthquake almost two years earlier. Another deep well was completed to 330 feet in the late summer of 1910 and an additional deep well of unrecorded depth appears to have been completed in early 1911 during the administration of Mayor James R. Edwards. By October of 1911 PG&E had apparently acquired the Santa Rosa Lighting Company and had assumed the former company's contractual obligations to supply electricity for street lighting and power for the city's pumping station. However, PG&E's bid to continue as the city's electrical contractor was unanimously rejected by the council. The council instead awarded a 50-year franchise to the Great Western Power Company to operate in the city and accepted GWP's bid for a 5-year lighting and pumping contract. (The monthly cost of GWP's bid was \$1151.75 — \$218.25 per month lower than PG&E's competing bid.) Several months after accepting GWP's bid, the council approved supporting GWP before the state Railroad Commission in response to a report that PG&E had tried to block GWP from supplying electricity in the city). (11)

The first summer of Mayor J. L. Mercier's administration, 1912, was apparently a drought year. Air-lift pumps were added to some of the wells to increase the municipal water supply and the city was again divided into two, alternative-evening irrigation districts (6 to 8 p.m., north and south of Fourth). In the same summer it was reported that algae growing in the reservoir had clogged hundreds of water meters and the reservoir was drained and a screen was added to its outlet. The 12-inch main from the reservoir to the city via Sonoma Avenue, one of the 1905 bond issue improvements, was completed in early 1913. Plans were made in the early spring of the same year to increase the capacity of the reservoir and to implement a few other, relatively minor improvements to the City Water Works. However, by June of 1913 the water supply for the city system was deemed to be inadequate and once again the city was divided into two, alternative evening irrigation districts (the same as in 1912), a special committee was appointed to investigate possible better sources of water for the City Water Works, and an urgent appeal was made to city residents to save water. (About this time 60 Keystone water meters were ordered for a trial, but about nine months later the council chose to go back to using only Neptune Trident meters. While officially opened on January 13 and 14, 1914, with a four piece orchestra playing on both nights, the new City Hall was completed in October 1913 and the

council accepted PG&E's bid to light the new hall for \$0.03 per Kwh.)

In his farewell address in April 1914, Mayor Mercier described the City Water Works as being grossly inadequate and while having spent much money on the system — “the three wells are a joke” and the reservoir was only large enough “to irrigate an alfalfa patch for a fair sized dairy” and should be many times larger. The mayor also reported that when the water is air-lifted from two nearby wells (each about 350 ft. deep) it stops the artesian flow from well #1 (undoubtedly the 1903 artesian well to about 150 ft. — i.e. the wells were drawing water from the same aquifer). Possible solutions offered by the mayor were to bore a new well to at least 1,000 feet or to develop one of the many springs and waterways in the county for a gravity water supply for the City Water Works. (About this time the city engineer, J. C. Parsons, reported to the council that in the last two years the city had accepted 164,000 square feet of macadam paving; 40,293 square feet of “asphaltic concrete” had been finished and an additional 74,818 square feet was currently being laid; bids had been invited for 146,900 square feet of sheet asphalt; about six miles of concrete curbs and gutters had been built; and more than 10,000 square feet of concrete sidewalks had been laid.)

In January 1915 the council rejected a \$0.02 monthly meter rental charge on the grounds that it would be considered by most as a direct charge contrary to the 10,000 gallon allotment of “free” water for domestic purposes. (In June 1922 the council took no action on a suggestion to reduce the “free” water allotment to 5,000 gallons per month. The city's Board of Public Utilities rejected a proposal to impose a \$1.00 monthly meter rental charge, but approved reducing the “free” water allotment to only 5,000 gallons in December 1930.) At the end of the 1915, during Mayor Charles E. Lee's administration, the council received a request from the state Board of Health to file permit applications to maintain and operate its water and its sewer systems. About three months later the council accepted the city attorney's advice and resolved to apply for the state permits. After submitting a sanitary engineer's (Ralph Hilscher) report on the city water system to the state board, the city received a temporary state permit to operate its water system in August 1916 during Mayor James C. Mailer's administration. (The state board deferred issuing a regular operating permit for the city water system until specific, but unrecorded, improvements were made in the system.) About two months later the council appears to have made no response to a proposal from the city's health officer, Dr. Jackson Temple, to improve the water of both the City Water Works and the McDonald water works with chlorination. (According to Dr. Temple, Sacramento and numerous other cities in the state had chlorinated their water and had a great subsequent reduction in the number of typhoid cases.) Numerous well improvements were completed by January 1917. For example, concreting the walls of three of the four shafts leading down to the tunnel (the fourth shaft had been built in 1897 with rock walls), concreting the walls of the pumping sump to 2 feet above the ground and covering the sump with a screen, and placing proper ladders in the shafts. In the spring of 1917 the council accepted GWP's bid to continue its lighting and pumping contract with the city for another five years on the condition that the bid rates could be lowered by the state Railroad

Commission. (GWP's bid for street lights, lighting City Hall and the Fire House, and supplying the pumps and operating the city's pumping plant was \$0.0375 for the first 60 Kwh and \$0.0185 for the next 60 Kwh. GWP's contract was subsequently modified to provide only the electricity for lighting and the city took over operation and maintenance of the pumping station. The city's appeal to the state commission was apparently successful and lowered the city's electricity bills by \$5,030 per year.) The council's Finance Committee reported that the July 1917 business water collections were \$293.65 and the residential water collections were \$282.95. (14)

A new deep well, artesianing at 981 feet, was completed in January 1918, the old steam pumping machinery was sold for scrap (for example, Burt Meeker of Camp Meeker purchased an old boiler for \$300), the old pump house was torn down and its bricks were recovered, and a bungalow was built (bid price, \$2,096) for the pump station engineer at the well site. In May of the same year, about a month after Mayor Mailer had been re-elected, the council denied a petition from Mrs. M. A. Higgins to lower her water bill after she complained that it was not possible for her to use \$0.70 worth of water in the winter. (Mrs. Higgins' water meter apparently indicated that 3,500 gallons over the limit of the first 10,000 gallons of "free" water were used in the preceding April.) In the same month the council authorized that the meter heads be changed to read in gallons as the meters were repaired. The new very deep artesian well appears to have created for the first time a water surplus for the city system and the council began to authorize the sale of the surplus water outside of the city. (For example, the water main was extended westward on Guerneville Road about 150 feet to serve Henry Noonan's slaughter house at the same metered rate as city establishments.) The council also at this time complied with a request from the U.S. Fuel Administration of California to save daylight electricity by pumping water at night and a few months later complied with another federal request to save electricity by turning off every other street light in the city center. In August of the same year Miss Rickard appeared before Mayor Mailer and the council to complain that her city water was "dirty and had wrigglers in it" (mosquito larvae?). Her complaint prompted "considerable discussion" and the council considered the possibility of roofing the reservoir. The council also agreed to request that the state Board of Health investigate the cause of the trouble. The director of the state board (C. G. Gillespie) promptly responded to the city's investigation request and stated that while it was not possible to send a state engineer to Santa Rosa at any time in the near future, one of their engineers (Clyde F. Smith) had pointed out "time and time again" to the mayor (Mailer) and the street commissioner (D. Cozad) that it was necessary not to allow the well water to leak into the tunnel. A month after Miss Rickard's complaint, two local doctors (Drs. Jewell and McLeod) requested that the council take prompt action to clean up the city water supply. The council responded to the doctors request by ordering that the tunnel be cleaned and indicated that the reservoir was going to be roofed. (The council about this time also approved a request from the U.S. Food Administration to include a food conservation slogan in the city's water bills.) (11) (14)

Nearly two years after Miss Rickard's complaint of "wrigglers" in her city water, in June 1920, a few months after Mayor W. E. Rutherford was elected, and after a lengthy discussion of the pros and cons, the council decided to take the offer of a state Board of Health engineer to come to Santa Rosa and go over the City Water Works. In his presentation to the council the state engineer (Clyde Smith) first reviewed about four years of communications between the state board and the city, and reminded the council that the city water system was currently operating with only a temporary state permit. The state engineer had determined that the tunnel was the source of the bacterial contamination in the system since tunnel water samples had many bacteria, but water from the new deep well was essentially free of bacteria. The state engineer also reported that the water was not sufficiently aerated to reduce the distasteful taste of sulphur and other well water gasses. The state engineer also recommended that the well water should not be dropped down into the tunnel (about 50 ft. down), but should be aerated and stored in a new reservoir by the well before being pumped to the main reservoir on the hill. Clyde Smith's presentation to the council was followed by a lengthy question and answer period on the problems in the city water system and their possible solutions. (One question was from a local doctor, Dr. Smith, who reported that his home tap water contained worms, snails, and mosquito larvae, and the state engineer's answer was that while disagreeable, the organisms were not a health problem.) The minutes clearly indicate that there was little interest and little money at the time to do much about the city water problems — especially the elimination of the tunnel. But the council did act on the state engineer's recommendation to hire a consulting engineer to thoroughly evaluate the system and to develop plans and cost estimates for a feasible way to operate the City Water Works.

The consulting engineer (C. C. Kennedy) submitted his plans, which were already approved by the state Board of Health, in December 1920 and was paid for his services (\$1939.38). "A lengthy and interesting discussion followed and many questions were asked of Mr. Kennedy" after his report was read to the council and filed. While it was again made clear numerous times during the discussion of the consultant's report that the city was not financially prepared to make changes in its water system at this time, the priority changes were clear — eliminate the use of the tunnel, roof the reservoir on the hill, and build an aerator and new reservoir near the wells to improve the taste of the well water before pumping it to the reservoir on the hill. While Dr. McLeod appealed to the council not to consider the city's financial problems since pure water was essential to the health of the city, the council acted on a Chamber of Commerce recommendation to proceed slowly (tour the water system, etc.) and then consider ways to raise the necessary money to improve the system. Given the city's financial constraints, money was spent to only test the capacity of the new, deep artesian well and to determine that production from the well could be increased five or six times with the installation of an air-lift pump in the well. (Unlike the previous administration of Mayor Mailer who proudly lowered taxes and ended up with a balance of about \$21,000 at the end of the fiscal year 1916-17, there is ample evidence in the minutes to indicate that city funds were indeed very limited at this time, especially during the second year of Mayor Rutherford's administration — in part because

prohibition had reduced the city's operating funds by as much as 8 to 10%. The disharmony between the council and the mayor is also very apparent at times in the minutes.) (14) (15)

The city received a letter from the state Board of Health in February 1922 informing the city that its temporary permit to operate the City Water Works "will be revoked unless some steps are promptly taken to follow the orders of the board." The council responded immediately by approving Mayor Rutherford's resolution to hold an election to obtain voter approval of a \$50,000 bond issue to make the necessary improvements to the city water system. After the election of April 1922, in which L. A. Pressley was elected mayor, the last mayor elected directly by the city's voters, the council declared voter approval of the water bonds carried. (Curiously, the vote recorded in the minutes was: yes, 2279; no, 1790 or only 56% approval and not the 2/3 majority probably required to approve a bond measure.) About a month later the council ordered that if the state tests of the city water were not reported as a news item, the test results be published "to quell rumors that the city's water was unsafe to drink." (The new state water test results most likely indicated that the city water was not contaminated with sewage bacteria and did not conflict with the predominantly sulfur and other bacteria that had previously been established as contaminants of the tunnel. The city bought its first truck about this same time — a Dodge Screen Body Business Car for \$1040 from Dodge Brothers, Santa Rosa, J. H. Williams, agent, rather than a Ford 1-ton truck for a total of \$702.83 from the Fahrner Motor Company of Santa Rosa; high gear chassis, \$533.33 plus body, cab, and windshield, etc., \$169.50.) In July 1922 the council accepted the bid of Butte Electric of San Francisco for \$46,001 to make the improvements to the city water system made possible by the bond issue. About a month later Max Rosenberg reported to the council that the National Board of Fire Underwriters had informed him that the city's water supplies and fire protection services and not kept pace with growth and that his fire insurance rates would increase by about 60%. (In the fall of 1922 the council granted a request from the Women's Auxiliary Park and Playground Committee of the Chamber of Commerce to use an unused portion of the city's hill reservoir site for a picnic area "to make Santa Rosa a city of parks as well as roses" and named the road/water pipeline right-of-way from the pump station to the road to Sonoma, "Farmer Avenue.") When completed in March 1923 by Butte Electric, the 1922 water bond improvements to the municipal water system included: (1) building a new pumping plant building at the well site equipped with the latest General Electric switchboard and meters, gate valves, air compressor for the air-lift pumps, and pumps, etc.; (2) installing an air-lift pump in the 1918 well; (3) abandoning the tunnel and piping the water from the 1918 very deep artesian well and at least two other operational wells with air-lift pumps through an aerator and then to a new reservoir by the wells before pumping it to the reservoir on the hill; and (4) finally roofing the main reservoir on the hill. (16) (17) (18)

(The completion of the 1922 water bond measure improvements may not have led to state Board of Health issuing a regular permit to the city to operate its water system. No indication was found in the council minutes or in the early minutes of the city's Board of Public Utilities through 1931 that the city applied for or received a new state operating permit for its water

system.)

City Manager Abner Hitchcock was appointed in March 1923 about the same time as the 1922 water bond improvements were completed — a few days after Elmer Peterson filed a \$12,000 damage claim against the city for operation of the city's sewage disposal system and a month before the state Board of Health notified the city that it was necessary for the city to take immediate steps to improve its sewer system. But the council was soon forced to reject all of the bids for an A Street bridge since there was not enough money in the city treasury to cover a contract. (About a year and a half later the council accepted the bid of \$16,878 from Proctor and Cleghorn of Santa Rosa for a much smaller bridge on A Street.) In June 1923 the council ordered that all new construction be metered and shortly thereafter ordered that the water be shut off in the 12-inch Sonoma Avenue main rather than incurring the costs of repairing the many leaks caused by water hammering. After much discussion and concern that a franchise could increase the company's value if at some time in the future the city bought the company, in December 1923 the council "struck off and awarded" as the highest bid (the only bid received), the bid of the Santa Rosa Water Works Company (\$75 plus a \$2,000 surety bond) to renew its franchise to sell water in the city for another 50 years.

In March 1924 the council approved Ordinance #413 which authorized City Manager Hitchcock to sell surplus city water to parties outside of the city at city resident rates. Newton B. Kinley was mayor at this time having been appointed by the council to complete the term of Mayor Pressley after his death in office in early February 1924. About a month after the general election in April 1924, in which Councilman C. O. Dunbar (who described himself as being for "law and order".... "give us a square deal") was elected mayor by the council, Mayor Dunbar appointed the first public members of city's Board of Public Utilities (F. C. Steiner, a former councilman in 1920-22, and George R. Cadan — and by ordinance and charter, the new city manager, J. E. Williams, was automatically the administrative member of the board) to administer all of the utilities owned by the city (water and sewer, although the BPU minutes through 1931 only mention a sewage related issue a few times. An approved resolution calling for a municipal electric lighting plant in January 1904 did not materialize and while often reported in the minutes, the council did not pursue the popular post-prohibition movement to own a municipal hydroelectric plant). One of the first actions of the newly formed board was to hire a secretary for the board at \$125 per month (Mrs. Maude Abrott). The secretary was also assigned to assist in the preparation of the city water bills and the collection and disbursement of money derived from the municipal water system. The BPU next initiated a program to ensure that all business using city water be metered within six months. The BPU then made plans to improve the efficiency of the water pumps to save several hundred dollars per month in pumping costs. (The water account for June 30, 1922 to July 1, 1923 showed a loss of \$18,903.70; receipts, \$18,216.49 and expenses, \$37,120.19.) Two of the most important wells with air-lift pumps were improved with Kimball deep well turbine pumps purchased from and installed by, W. J. Yandle of the Pioneer Machine Works of Santa Rosa in the 1903 artesian well for \$1423.60 in

August 1924 and in the very deep 1918 artesian well in the early spring of 1925 for \$3099.10 less \$975 for the old air-lift pump and compressor. (The electric motor of these early turbine pumps was kept above the well water and a long shaft was used to connect to the turbine pump which was deeply submerged in the well. The new pumps greatly increased the pumping efficiency relative to the air-lift pumps they replaced. Chemicals in the 1918 well rapidly corroded the first turbine pump and it was replaced on an emergency in October 1931.) (19)

In October 1924 the BPU authorized City Manager Williams to place the 12-inch Sonoma Avenue main from the reservoir on the hill to the city in serviceable condition. In the same month Mayor Dunbar appointed the two public members of the BPU to fill vacancies on the council. (Steiner and Cadan also continued with their BPU duties through 1931 when the initial BPU ceased to meet. The utilities board was apparently reformed in August 1947.) In March 1925 Mrs. Hazel Farmer Stitt, apparently a non-resident of the city, was granted the use of city water at resident rates as per the conditions of the water pipeline right-of-way on Alice Street to and from the reservoir granted to the city by Peter McGovern in October 1895. In March 1926 the council made a resolution of thanks to Mayor James Rolph Jr. and other officials of San Francisco for furnishing a fire truck with three men to operate it, after Santa Rosa's chemical fire truck had been wrecked in an accident which seriously injured Chief Duncan and driver Claude Grandi. City Manager Williams resigned immediately after the general election of April 1926 and Mayor Dunbar resigned as mayor and councilman to become the city's third city manager. The council then elected Councilman John P. Overton mayor. (J. P. Overton had previously been mayor between April 1904 and April 1908.)

NOTES

1. At the second meeting of the city's first mayor elected directly by the voters, Edward Neblett, and the common council in April 1876, the council authorized the town marshal to notify the owners of properties having nuisances caused by Chinese washhouses to abate the nuisances. In response to a petition regarding the Chinese on the east side of the Plaza and a report from the city's Board of Health that the sanitary conditions were very bad, in April 1879 (at the beginning of the second year of Mayor J. P. Clark's administration) the council approved a motion to have the provisions of the city's health ordinances enforced. About a year later the council amended the opium den ordinance prohibiting the sale or use of opium to exclude the sale of opium for legitimate purposes.

At Councilman M. L. McDonald's second council meeting on February 6, 1883, a communication was read from the city's Board of Health which declared that the buildings occupied by "Chinamen" on the east side of the Plaza, at the northeast corner of Fifth and Mendocino, and west of James McGee's house on Second Street, were in "unhealthy condition" and "detrimental to the public health of the citizens of Santa Rosa." The council approved Councilman McDonald's motion to direct the city's Board of Health to serve notice on the owners of the buildings to remove the "Chinamen" within one month and to abate all other nuisance complaints of the board. Three of the five members of the city's health board resigned in the following month and a new board was appointed. Based on the findings of the new board, the council approved another resolution introduced by Councilman McDonald declaring that the washhouse on the east side of Hinton south of the Masonic Hall, north of the lot of Jeremiah Ridgeway and bounded on the east by the lot of E. T. Farmer, a nuisance. The council then directed the marshal to serve the owner of the washhouse, J. G. Dalglish, a non-resident of the city, a copy of the resolution to abate the

nuisance of the “suds and slops” within 10 days (the resolution did not mention the ethnicity of the tenants). A few weeks later “Yik-Lee” petitioned the council to connect to the “sewer” on Fourth (an early wooden drain? — the sewer of Fourth was not installed until almost two years later). Yik-Lee’s petition was referred to the street commissioner and was not mentioned subsequently in the minutes. In January 1884, during the first year of Mayor Thomas Rutledge’s administration, the council adopted Ordinance #57 regulating washhouses and in March of the same year, the new City Hall on Hinton Avenue was completed. In the late fall of 1884 the council responded to a nuisance complaint of a washhouse at the foot of H (?) Street by directing the street commissioner and the city attorney to enforce the provisions of the washhouse ordinance. In February 1886 the council approved a motion to have the laws prohibiting the smoking of opium strictly enforced and granted permission to an anti-Chinese committee to meet in the Council Chambers. In August of the same year, now in Mayor A. P. Overton’s administration, the council approved (by a 4:2 vote) an amended resolution stating that “in the erection of the new City Hall no bricks exclusively made by Chinamen be used.” The amendment was to insert the word “exclusively” and the resolution appears to refer to the South Hall addition to City Hall completed in the early spring of 1887.

The two attempts made in 1883 to remove the Chinese washhouse on Hinton Avenue were apparently not successful since in September 1886 the city’s Board of Health again declared that the premises owned by J. G. Dalglish and occupied by Chinese was “in a very filthy condition” etc. and the council declared the situation a public nuisance. But this time the council directed the city attorney to “take the proper steps to abate the nuisance.” In June 1887 the council approved another ordinance (#83) prohibiting the use or sale of opium within the city. At the urging of Mayor J. S. Sweet, who described the matter as “very important,” the council adopted a resolution in November 1901 to send delegates to a convention called to “memorialize Congress” on the re-enactment of the Chinese exclusion act. In July 1902, about four months after the election of Mayor M. J. Bower, the council denied a petition from the Chinese Mission to remove the mission’s lot from the city’s property tax role. As late as 1929, when George Cadan had been elected mayor by the council, many residents in the Third and E Street neighborhood informed the council that they were unanimously opposed to the leasing of a house to Orientals. The minutes record that the council responded to the petitioners by stating that they were inclined to believe that they could do nothing about the situation.

2. McDonald did not run to continue his seat on the council, but was elected a library trustee in the next general election (April 1884) and served one term as a trustee. Indications of a strained relationship between the council and former Councilman McDonald include, for example, in January 1887 the council was apparently forced to file a lawsuit against McDonald and his associates to enforce the provisions of their street railroad franchise granted in June 1877 (apparently about not maintaining the tracks at street level). In October 1887 the council denied a claim from the McDonald water works for damages to the company’s water pipes caused by grading the streets. It took over two years of rejecting the McDonald water works company’s bills for flushing the new sewers before the company and the city reached an agreement on the cost of the company’s water used for flushing the sewers.

3. The Santa Rosa Water Works Company’s financial statement for 1889 was: (as recorded in the council minutes of February 11, 1890)

Investment	\$100,000
Revenue \$	8,000
Wear on plant	\$ 2,000
Expenses	\$ 7,173.47
Revenue Allowed	\$ 17,173.47

4. The council committee’s minority report on the 1889 financial statement for the Santa Rosa Water Works Company was: (as recorded in the minutes of February 21, 1890)

Capital stock	\$ 97,357	
New main (1887)	14,000	(an 11-in. main from the lower reservoir to Fourth via Sonoma Ave.)
Reinvested profits	<u>2,000</u>	
Total Investment	\$ 113,357	

Receipts water	\$ 20,915.56
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Services	<u>150.42</u>	
Total Receipts	\$	21,065.98
Expenses	\$	7,173.47
Interest	<u>1,332.53</u>	
Total Expenses	\$	8,506.00
Net Revenue	\$	12,559.98 (about 11% of investment)

5. Mayor Woodward's argument that the city could well afford to bond itself for as much as \$200,000 for an improved water system was essentially based on the reasoning that city residents were currently paying a total of about \$30,000 per year in property taxes (1893 total, \$.70 per \$100 of assessed value) and about 3/4 of this amount to the McDonald water works company for their water. The combined sum of taxes and water bills was functionally equivalent to a property tax rate of \$1.22 per \$100 of assessed value.

The mayor's calculations did not consider that those who chose to continue to be served by the private water company would be both paying the McDonald water works company for the water they used and the city in taxes for the "free" water they didn't use.

The mayor's estimate of the total McDonald water works company's gross receipts of about \$22,500 is in keeping with the council committee's minority report for the company's 1889 financial statement, suggesting that the company's own financial statement for the same year greatly under-reported its gross receipts and profit.

6. A partial listing of the monthly water rates for the Santa Rosa Water Works Company for 1894, as modified by the council, was: (as recorded in the council minutes for February 26, 1894)

families (5 or less)	\$0.75	(lowered from \$1.00)
private bath tubs	\$0.20	
public bath tubs	\$1.00	for the first tub, \$0.50 for each additional tub
hotels	\$3.50	to \$15.00
boarding schools	\$0.15	per person
day schools	\$0.005	per person (lowered from \$0.01)
county buildings	\$0.15	per person (raised from \$0.10)

7. The total property tax rate jumped 36% in one year after \$0.25 was added to pay for the \$165,000 water bond issue (1893: general fund, \$0.65; free library, \$0.05 and 1894: general fund, \$0.65; library, \$0.05; and water bonds \$0.25).

Monthly salaries for regular city employees in the late 1890s ranged from about \$50 for a clerk; \$60 for a policeman (there were four) to about \$110 for the street commissioner. Marshal Steadman was paid \$92 per month in 1895. In 1896 the farmer at the sewer farm was hired for \$40 per month and required to provide his own horse and cart.

8. The monthly water rates for the Santa Rosa Water Works Company from July 1, 1895 to June 30, 1896 were: (Ordinance #157, and as recorded in the minutes of February 26, 1895)

for family (5 or less)	\$0.65	(each additional person, \$0.10)
for private bath tub	\$0.15	
for private water closet	\$0.20	
for irrigating flower gardens and lawns	\$0.0025	per square yard
for irrigating vegetables and strawberries	\$0.03	per square yard
for private one horse and vehicle	\$0.20	(each additional horse or cow, \$0.10)
for public bath tubs (first)	\$1.00	(each additional tub, \$0.50)
for hotels where meals do not exceed \$0.25	\$3.50	
for hotels where meals exceed \$0.25	\$15.00	

for boarding schools (up to 5 persons)	\$0.75	(each additional person, \$0.10)
for day schools including public schools	\$0.005	per person
for county buildings (up to 5 persons)	\$0.75	(each additional person, \$0.10)
for saloons and liquor houses	\$2.00	
for stores	\$0.75	
for butcher shops	\$1.00	
for rooms (offices) on upper floors	\$0.50 *	* in most years, ground floor offices were \$0.25 more than upper floor offices, but in some years the rates were the same
for rooms (offices) on ground floor	\$0.50 *	
for photograph galleries	\$2.00	
for dentist offices	\$1.00	
for bakeries	\$2.00	
for confectioners	\$1.50	
for restaurants	\$2.50	
for water closets in school buildings	\$0.25	per seat
for steam laundries	\$10.00	
for laundries operated by family	\$2.00	
for other laundries	\$6.00	
for printing offices	\$1.00	
for water motors for printing offices, butcher shops, laundries, and creameries	\$5.00	
for livery and sale stables	from \$3.00 to \$7.00	
for each 1,000 bricks laid	\$0.15	
for each 100 square yards of plastering	\$0.60	
for each barrel of cement	\$0.10	
for foundries with 1/16 inch jet	\$2.00	
with 1/8 inch jet	\$4.00	
with 1/4 inch jet	\$10.00	
for public horse troughs	\$1.00	
for gas works	\$10.00	
for water carts sprinkling streets	\$0.10	per 1000 gallons
for flushing tanks for sewers	\$2.00	each
for fire hydrants on mains that conform to city ordinance	\$1.00	each

Fountains in no case are to be run for more than 6 hours per day. Fine of \$2.50 per night for neglecting to turn off water or for faucets, sprinklers, etc. left on all night. If the user paid for a meter and its installation, \$0.25 per 1000 gallons instead of the above rates.

A family of four in 1895 with a bath tub, a water closet, a small 300 square foot flower garden and lawn, a modest 600 square foot vegetable and strawberry garden, and a horse and buggy would have paid about \$3.25 per month for water. Given the wages at the time, by current standards, the monthly water costs would be considered to have been very expensive in 1895.

9. The plans for the municipal water system were designed by the consulting engineer, C. Monjeau, of the East Coast firm, The National Water Supply Company, but the consultant's plans were not recorded in the minutes. Mayor Woodward's general description of the proposed system to seek voter approval of the bond issue needed to build the system is reproduced at length in the minutes for April 4, 1893, but omits many specific details of historical interest. Essentially the proposed system called for a well or a series to wells east of the city (in an area assured by the consultant and a local well borer to be able to produce an abundant supply of water — south of Sonoma Avenue and what is now Farmers Lane), a pumping station to pump water to an enclosed and roofed reservoir at the 200 foot elevation on Rincon Heights (also known at the time as Brush's Grade or Proctor Heights), and mains and a distribution system in the city with numerous fire hydrants.

Some of the amendments in the water system approved by the council in October 1895 include: (1) specifying the size of the earthen works, cement (concrete) lined reservoir of Brush Hill as 1 million gallons; (2) changing the specifications to eliminate the roof on the reservoir; (3) moving the pumping station (a brick building housing a wood fired, 50-hp. steam boiler with two compound steam driven pumping engines, each with a capacity of 1 million gallons per day) to the north bank of Santa Rosa Creek; (4) specifying that a partial dam be constructed on the creek below the pumping station; (5) specifying that the size of the main from the reservoir to the city (6,000 ft. of 12-in. pipe down the county road between Santa Rosa and Sonoma to the intersection of Fourth and College and then down Fourth to A with 4,500 ft. of 10-in. pipe); (6) increasing the number of fire hydrants from 40 to 110 and specifying all of their locations; and (7) specifying the required pressure of the system (to be able to produce six, 1-in. streams of water 80 ft. high through 50 ft. of 2.5-in. hose simultaneously at 100 lbs. per sq. in.).

10. The lands and right-of-way acquired for the municipal water system were:

Well Field — A five-acre strip of land 174 feet wide running from the center line of Sonoma Avenue to the center line of Spring Creek (also known at the time as Mud Creek) purchased from A. L. Fisher and Rebecca Fisher for \$2,250 (Book 162 of Deeds, page 460, dated November 1, 1895). Portions of the property are still owned by the city and are currently being used for the fire station at the southwest corner of the Sonoma Avenue and Farmers Lane intersection and the Farmers Lane emergency wells, but most of this property appears to have become the section of Farmers Lane between Sonoma Avenue and Spring Creek.

Pipeline route to the pumping house — A 30-foot wide strip of land running north from the center line of Sonoma Avenue to the center of Santa Rosa Creek purchased from Rebekah W. Lowery (nee Farmer) and James W. Lowery for \$600 (Book 162 of Deeds, page 286, dated October 17, 1895). This property became a county road shortly after the pipeline was installed and a bridge was built across Santa Rosa Creek. Eventually, this property appears to have become a portion of Farmers Lane north of Sonoma Avenue.

Pumping station — A 180-foot wide lot running from the center of Santa Rosa Creek north to the southerly edge of the Santa Rosa and Sonoma Road purchased from Peter J. McGovern for \$600 (Book 158 of Deeds, page 619, dated October 19, 1895). This deed appears to include a clause granting McGovern, his heirs and assigns, the right to use the city's water at the same rate as residents of the city. The business at the southwest corner of what is now the Farmers Lane intersection with Fourth Street and Highway 12 appears to be a remnant of this property. But most of the property appears to be now the intersection of Farmers Lane with Fourth Street and Highway 12.

Right-of-way to and from the reservoir — From the intersection of the county road from Santa Rosa to Sonoma northerly up Alice Street to the reservoir. Purchased from Peter J. McGovern (Book 159 of Deeds, page 623, dated October 19, 1895). This easement deed appears to include a clause granting McGovern, his heirs and assigns, the right of free water for domestic purposes on all of his lands. "Free" probably refers to the cost of domestic water at the time planned for city residents.

Reservoir site — An approximately 3.6 acre site being lot 39 on the western side of Rincon Park on Brush Hill purchased from Jacob H. Brush and Julia A. Brush (Book 159 of Deeds, page 673, dated October 29, 1895). The lot is still owned by the city, but is now vacant and may become a future site for a large reservoir.

11. Water Supply — City Water Works

Fall 1895. The details of the initial wells and their interconnection system to the pumping station adjacent to Santa Rosa Creek were not recorded in the minutes. Effey's contract to build the water system was as per the plans and specifications of the consultant as amended by the council in October 1895. However, Mayor Woodward's general description of the consultant's plans as recorded in the minutes of April 4, 1893, describe only a well or a series of wells east of the city to produce

ample and pure water from below the second strata of gravel beds. In the summer preceding the building of the municipal water system, the council instructed a special council water committee to secure a deep well pump to fully test the wells sunk by the committee. One of the three bids submitted to build the system in September 1894 was a partial bid to sink 10 wells only (from John A. Bunting for \$2 per foot for the first 100 feet and \$0.50 for each additional 50 feet). A report in March 1896 soon after the system was completed, stated that the water from the wells was overflowing the casing of well #9. The initial March 1897 plans for water supply improvements also called for deepening and walling the existing well, suggesting that a year after the system was built only one of the initial wells was still being used. (The planned improvements to the existing well do not appear to have been implemented.)

The log for well #6 bored to nearly 1,200 feet in June 1950 at the well field shows generally alternating clay and gravel beds to about 1,000 feet, but the upper strata are too complicated to provide any indication of what the 1893 specifications of “to below the second strata of gravel beds” could have meant.

- July 1896. The equipment in the pumping station next to Santa Rosa Creek was moved to a new pumping station building at the well site. Other activities included: digging a 16-foot well (undoubtedly upper diameter, but the details of the well were not recorded in the minutes); disconnecting the pipe from Spring Creek; and unrecorded actions realizing “soon hoping to force an ample supply of water from the wells.”
- May 1897 Contracted with J. W. Swank (well, \$1,600; tunnel, \$950) to build a circular shaft well to about 50 feet deep (10-ft. inside diameter with rock walls 14-in. thick with lower 18 ft. without cement {mortar}). Five feet above the bottom of the shaft, a tunnel (4-ft. wide at the bottom, 3-ft. wide at the top, 5-ft. high, but of unstated length) was dug to apparently below the pumping pit. Two cased 12-inch diameter “wells” were bored from the bottom of the pumping pit to the top of the tunnel. The stated purpose of the tunnel when built was not to function as a water supply structure, but was to transport the new well water to the pumping pit.
- May 1898. Contracted with A. C. Hull to dig another shaft, lower the tunnel floor, and extend the tunnel more than 100 feet (at \$3 per ft.), but the length of the tunnel extension was not recorded in the minutes. The lengthened and lowered tunnel was completed in the fall of 1898 and was reported to have more than doubled the water yield from the tunnel. The tunnel was clearly recognized at this time as being a water supply structure.
- August 1898. Spring Creek was dammed adjacent to the well field and all of the creek water was diverted into the municipal water supply. It was assumed at the time that all of the water in the creek was from Peter’s Spring, but it was not until more than a year later that a purchase offer was made and subsequent condemnation proceedings were invoked against the Fountain Water Company and its owner, Captain James McDonald (Ordinance #173). Immediately after a county court approved the condemnation of Peter’s Spring and the water company in May 1901, all of the water in Spring Creek was again pumped to the reservoir on Brush’s Grade, but this time not only was the creek dammed adjacent to the well field, a ditch was also built to transport the spring water directly to Spring Creek.
- August 1903. The deal that the council accepted with H. Wright and T. J. Davis was for \$500 for the first 10,000 gallons produced, \$250 more for each additional 10,000 gallons, and a \$3,250 bonus payment if their well furnished 1 million gallons per day for 60 consecutive days. The well peaked with an apparent maximum initial artesian production of 900,000 gallons per day at about 150 feet and the builders were paid only \$2,500.

Specific details of this Wright and Davis well were not directly recorded in the minutes. This well appears to have been designated in 1914 as well number #1 and served for many years as one of the primary operational wells for the city water system. This well also appears to have been one of the wells in which an air-lift pump was installed in the summer of 1912, but the wells

receiving the air-lifts were not specifically identified in the minutes. Improvements to this well in 1916 included installing a wooden curbing (7 ft. 8 in. in diameter) to a depth of 48 feet and then concreting the walls on the inside (6 to 7 in. thick) to an unrecorded depth. Production from this well was increased in August 1924 by replacing an air-lift pump with a submerged, deep well turbine pump purchased from and installed by William Yandle of the Pioneer Machine Works in Santa Rosa for \$1,423.60.

July 1905. The council employed without the bid process, Wright and Davis to sink another deep well. The first well was stopped at 56 feet when it produced abundant water at about the same depth as the tunnel (about 50 ft.). The well builders were paid \$1,000 and were authorized (with Mayor Overton breaking the tie vote) to sink another well to at least 150 feet for \$600. The second well was reported to be at 110 feet deep in October 1905, but the well was not subsequently mentioned in the minutes. Presumably the second well did not strike enough water since about two months later, the council authorized consulting with a San Francisco water development company.

February 1906. The council contracted with J. B. Rodgers of the California Hydraulic Engineering and Supply Company of San Francisco, to sink a much deeper well than the Wright and Davis well sunk in the preceding fall. The earthquake of April 18, 1906 intervened and it was not until the spring of 1907 that this well was finished to 390 feet and the new well water was reportedly being pumped to the reservoir. The contract was for \$3.75 for each 50 feet completed and \$3.75 per foot after the well was completed to 250 feet. The additional 140 feet was only 6 inches in diameter and cost \$6 per foot.

This well was reported to have been sunk in a completed hole and bored with a steam drilling rig. The initial water production totals for this well were not recorded in the minutes.

February 1910. A contract was awarded to Pacific Drilling and Prospecting of San Francisco to drill another deep well in an existing well (\$1,175 to 150 feet and \$4 per foot for the next 50 feet). The contractor used a Keystone drilling machine similar to the one being used by the company at the time to drill a well at the Immigration Station on Angel Island. The well was reported to be at 230 feet in June of 1910 and the company was paid an additional \$979.50 to complete the well to 330 feet.

The initial water production amounts for this well were also not recorded in the minutes.

Fall 1911. The council's stated intention in early 1910 was to bore two wells to at least 150 feet. While the record of the first well bored to 330 feet by Pacific Drilling and described above is clear, the record of the second well is very incomplete. An entry in the council minutes in October 1911 reports that the second well was at 106 feet, had no water, and the "digger" (not identified) was authorized to continue. PG&E's bid for the city's pumping and lighting contract in December 1912 included installing a pump, motor and building a building for well #4. However, there appears to be no further specific mention of this well in the minutes. This well may be the so called Van Ness well drilled by Van Ness Drilling of San Jose. A note in the minutes in April 1922 reports that the air-lift pump in the Van Ness well was going to be submerged in the artesian well (undoubtedly, Pacific Drilling's very deep artesian well completed to 981 feet in 1918). In the summer of 1928 a deep well turbine pump was reported to be installed in the Van Ness well by W. J. Yandle of Santa Rosa, for \$1,623.68 for the pump and installation. However, the so called Van Ness well could not be identified with certainty.

Most of the wells appear to have started as large circular shafts leading down to the tunnel and were drilled to their final depths from below the bottom of the tunnel.

Summer 1912. Air-lift pumps were reported to be installed in some of the operational wells to increase the water supply, but the specific details were not recorded in the minutes.

March 1917. A contract was again awarded to the Pacific Drilling and Prospecting Company to bore a considerably deeper well than their earlier 1910 well (not less than 10-inch casing of 12-gage, double joint hard steel; city to pay 50% of costs as completed, remaining 50% upon completion). This well reached its final depth of 981 feet in January 1918 with an initial artesian production of 800,000 gallons per day. At 740 feet the flow of the well was reported to be 100,000 gallons per day and the well artesianed at its final depth). The total cost of the completed well was \$9,204.67 less about \$1,500 for the salvaged casing. This well was sunk in shaft #3. Other well improvements in 1917 included concreting the walls of three of the four shafts leading down to the tunnel. The fourth shaft, probably the 1897 shaft, was built with rock walls.

Tests of this well in May 1922 indicated that the artesian production had already decreased to about 1/4 of the wells initial rate, but could be increased five to six times by installation of an air-lift pump. By March 1923 production had fallen further to only about 1/5 of the wells initial rate and an air-lift pump was installed at 330 feet.

The numerous improvements to water system following the water bond issue of 1922, included abandoning the tunnel and directing the water from this well (apparently well "G" in the Butte Electric contract) and two other operational wells (wells "C" and "D" in the contract, one of which appears to have been the 1903 artesian well) through an aerator and then to a new reservoir near the wells before pumping the water to the main reservoir on Proctor Heights. The total combined production from all of the operational wells (with air-lifts) was reported to be better than 1,425,000 gallons per day in March 1923. The air-lift pump on this well was replaced by a submerged, deep well turbine pump in the spring of 1925. The turbine pump was purchased from and installed by W. J. Yandle of the Pioneer Machine Works of Santa Rosa for \$3,099 less \$975 for the old motor and air compressor.

Chemicals in the well water rapidly corroded the 1925 turbine pump and the pump was replaced on an emergency basis with a new deep well turbine pump in October 1931. For an unknown reason production from this well (named well #2 at the time) suddenly dropped off nearly 40% in early 1940 and a new well (named well #4 at the time) was drilled to compensate for the lost production. PG&E tests of wells #2 and #4 in the early 1940s established a definite interference between the two wells (i.e. the 1918 well and the new 1940 well were, at least in part, drawing water from the same aquifer.

A 1950 well record states that the 1918 well to 981 feet was drilled by Van Ness of San Jose — not Pacific Drilling of San Francisco who received the low-bid contract described in minutes of the council in March 1917. It is possible that Van Ness subcontracted with Pacific Drilling to actually drill the 1918 well, but the well records remain uncertain.

12. The Santa Rosa Water Works Company's financial statement for 1905 was: (as recorded in the council minutes of February 6, 1906)

Revenue

Water	\$9301.01	
Service & connections	<u>436.25</u>	\$9,737.26

Expenditures

Office rent & miscellaneous	\$ 330.45	
Renewals, repairs	511.65	
Legal expenses	62.75	
Salaries	3311.00	
City, state, county taxes	956.31	
Sundry expenses	<u>297.76</u>	\$5,469.92

Cumulative gross receipts to Jan. 1, 1905 \$327,432.80

Gross receipts 1905	<u>9,737.26</u>
	\$337,170.06
Construction account to Jan. 1, 1905	\$181,651.67
Expended on construction in 1905	<u>2,580.64</u>
	\$184,232.31

Gross receipts 1905	\$9,737.26
Total expenses 1905	<u>5,462.92</u>
Gross profit 1905	\$4,274.34
Construction 1905	<u>2,580.64</u>
Net profit 1905	\$1,693.70

signed by: M. L. McDonald Jr., President
A. S. Luce, Secretary
notarized by: Ross Cambell

(Note that the company's gross receipts dropped by more than 50% after the municipal water system was completed in early 1896, about nine years earlier.)

The monthly water rates for the fiscal year 1904-05 for the Santa Rosa Water Works Company included over 50 rate categories (as recorded in the council minutes for March 1, 1904), but while similar to the 1895-96 categories (see note 8) most of the rates had increased or had been modified. For example, the hotel rates were now #3.50 to \$15.00 and were no longer broken down by meal costs. The hypothetical family of four with a bath tub, a water closet, a small 300 square foot flower garden and lawn, a modest 600 square foot vegetable and strawberry garden, and a horse and buggy using the private company's water would have had a monthly water bill of about \$3.78 — an increase of about 15% in 10 years. Almost all of the increase had occurred three years after the municipal water system became operational. The McDonald water works company's rates remained essentially constant between 1899 through to at least 1915.

Families using city water for domestic purposes in 1904-05 would have likely enjoyed "free" water. With very few metered connections to city water at the time, there was no practical way to enforce the 500 gallon per day limit per connection established in June 1900. Only one user of city water, Mr. Gillian, is recorded in the minutes as being fined \$5 for using more than his 500 gallon allotment of water at this time. It was not until the fall of 1905, the next fiscal year, that the large municipal bond funds were used to begin a major effort to meter all of the connections to the city water system.

The monthly water rates for the fiscal year 1914-15 for the McDonald water works, the last year the information was recorded (Ordinance #301), were essentially identical by price and category to the 1904-05 rates, although there were a few new additions. For example, a stationary wash stand, \$0.125; and a gas engine, \$1.00 with a cooling tank and \$5.00 without a cooling tank. The hypothetical family of four, assuming they now had a stationary wash stand, but did not yet have a gasoline engine, would have paid a monthly water bill of about \$3.90 in 1914 to the McDonald water works. With the first 10,000 gallons per month "free", the same family using city water would have probably paid the city nothing in the winter and perhaps as much as \$1.00 in the summer (at \$0.20 per 1,000 gallons over 10,000 gallons).

13. After the approval of the \$200,000 municipal bond issue in March 1905, the property tax rate jumped 20% over the preceding year (1904 total \$1.25 per \$100: 1905: total \$1.50 per \$100; general fund, \$0.95; library, \$0.07; bond indebtedness, \$0.48).

The tentative \$51,403 budget for the fiscal year 1905 was: (as recorded in the council minutes for July 24, 1905)

Street department	\$ 17,770	(34%)
City Water Works	9,350	(18%)
Sewer	1,060	

Fire		5,000	(10%)
City Hall		6,500	(13%)
Health		1,000	
Marshal	1,000		
Police		4,000	
Clerk		1,273	
Assessors		600	
Attorneys		600	
Recorder	600		
Treasurer		650	
City Engineer		1,500	
Crematory (incinerator?)		500	

After approval of the tentative 1905 budget, the council raised the pay of the city engineer, L. E. Ricksecker, from \$8 to \$10 per day and raised the pay of the fire chief, L. Adams, from \$75 to \$100 per month. In 1906 there were about 16 regular city employees including: recorder, W. P. Bagley, \$60/month; clerk, C. D. Clawson, \$75/month; police chief, Frank Rushmore, \$100/month; fire chief, Frank Muther Sr., \$100/month; and street commissioner, Danville Decker, \$150/month. In August 1906 the council adopted the local chapter of the American Federation of Labor minimum rate for ditch digging and common labor of \$2.50 for an eight hour day.

14. A summary of the city's financial statement for the fiscal year 1916-17 was: (as recorded in the council minutes of August 7, 1917)

Balance in treasury	\$	6,970.06
Total receipts		<u>117,749.73</u>
Total		\$124,719.79
Payments (FY 1916-17		<u>103,788.15</u>
Balance at end of FY	\$	20,931.64

Total disbursements for the fiscal year 1918-19 were: (as recorded in the council minutes for December 30, 1919)

Pumping and lighting	\$15,802.67	(17%)
General fund	23,430.99	(25%)
Water fund	4,313.14	(4.6%)
Salary fund	21,732.01	(23%)
Sewer fund	2,024.53	(2.2%)
Street fund	23,013.35	(25%)
Park fund	402.90	(0.4%)
Building fund	<u>2,452.37</u>	(2.6%)
Total disbursements	\$93,171.96	

The above disbursements exclude the library bills. The city assessor's property tax role in 1919 was \$6,539,470 and the total property tax rate for the fiscal year 1918-19 was \$1.30 per \$100 of assessed value. These figures indicate that about 90% of the city's disbursements in 1918-19 was revenue derived from property taxes.

The financial information, the end of year balance for the 1916-17 fiscal year and the approximately 10% drop in disbursements by the 1918-19 fiscal year, documents the financial commitment of Mayor Mailer's administration to "save big money" and lower the city's property taxes.

The minutes record that the expected loss in city revenue from saloon and liquor licences, etc. resulting from prohibition, which took effect on July 1, 1919 — the beginning of the following fiscal year, was from \$7,000 to \$9,000 — as much as about 10% of the city's income.

In August 1920 the council raised the daily wages for laborers employed by the city to: (as recorded in the council minutes of August 16, 1920)

teamsters	\$9.00
road roller engineers	\$7.00
engineer/mixer paving plant	\$6.00
street work laborers	\$5.00
street sweepers, meter readers, and trouble wagon drivers	\$4.50

These wages, approved in Mayor Rutherford's administration, are 60 to 80% greater than similar city labor wages proposed by Mayor Mailer and approved by the council "after considerable discussion and opposition" three years earlier.

15. Examples of the shortage of money in the city treasury during the second year of Mayor Rutherford's administration (1921) include: (1) holding special council meetings to determine how the city government could continue to function until the property tax revenue was received at the end of the year; (2) discontinuing all but absolutely necessary work; (3) after considerable discussion, cashing \$15,000 in Liberty Bonds to purchase the northern 20-acre half of the Burbank Creation Gardens; and (4) frequently stating that the lack of money was the reason to discontinue the position of the city's first policewoman, Mrs. M. H. Reeves.

16. Undoubtedly the 1923 water treatment of aeration and sedimentation reduced the smell of the sulphides, but by modern drinking water standards and smell/taste, the city's "hard" well water would still have been quite disagreeable. (In fact, the relatively good smell/taste of the McDonald water works's "soft" water, albeit mostly surface water and readily contaminated, was likely to have been a major reason why the private company was able to continue to sell its water in the city for about 50 years after the building of the competing City Water Works.) Water from the city's present very deep, Farmers Lane standby wells (comparable in depth to the 1918 well) at the old well site, requires treatment (primarily the removal of iron, manganese, and sulphides) before the water can be injected into the city's water supply.

17. City property taxes for the fiscal year 1922-23 were: (as recorded in the council minutes of August 15, 1922)

Water bond sinking fund #1	\$0.086
Water bond sinking fund #2	0.046
1922 Water Bond Fund	0.064
Sewer bond sinking fund	0.047
Street and bridge fund	0.037
Library fund	0.10
General fund	<u>1.00</u>
Total	\$1.38 per \$100 of assessed value

Despite the council's hesitancy to proceed with the improvements to the municipal water system and incur their expense, there was a relatively minor increase in property taxes over the previous year (1921-22 Total, \$1.32) to pay off the 1922 water bonds. In the early 1920s the salary of the police chief, George Mathews, was \$135 per month. The street commissioner, Daniel Cozad, was making \$150 per month, but his position was eliminated and combined with the position of city engineer, L. L. Mills, at a combined salary of \$200 per month after the election of Mayor L. A. Pressley in April 1922. The city's first city manager, Abner Hitchcock, was hired on March 8, 1923 with a salary of \$4,000 per year. The city's second city manager, J. E. Williams, was hired on May 7, 1924, presumably at the same salary. The city's third city manager, C. O. Dunbar, was appointed to succeed Williams on May 1, 1926, but his initial salary was not recorded in the council minutes. City Manager Dunbar's salary was set at \$300 per month (\$3,600 per year) on January 4, 1927 (Ordinance # 438).

18. The original 1893 plans for the municipal water system called for the reservoir on Rincon Heights (Brush's Grade) to be roofed "to protect the water from the festering rays of the summer sun". But the council specifically

amended Effey's 1895 contract to eliminate a roof on the reservoir. Roofing the reservoir was recommended by a council committee in April 1901 and was also one of the recommended improvements to the water system in a consultant's report in 1904. A roof on the reservoir was one of the specific water system improvements called for in the municipal bond measure approved by the voters in 1905. While the initial post-earthquake repair plans for the reservoir included installing a roof and supporting piers, the final post-earthquake repair contract with C. C. Miller for \$4,700 in March 1907, called for only recementing the sides and bottom of the reservoir to make it water tight. The council approved the plans and specifications for a roof on the reservoir in September 1907 and authorized advertising for bids, but there was no further mention of this roofing project in the subsequent council minutes. Roofing the reservoir was the council's immediate response to Miss Rikard's complaint of "wrigglers" in her water in August 1918, but it was not until early 1923 that the 1922 water bond improvements included finally roofing the reservoir.

19. No evidence was identified in the council minutes or in the early minutes of the Board of Public Utilities which indicated that the BPU's program to ensure that all businesses were metered within six months was very successful. The minutes of the BPU indicate that only the Grand Hotel and the stable of the Levin Tanning Company changed from a fixed rate of \$1.00 per month to the standard metered rate, but the BPU directed that the stable's metered monthly water bills could not exceed their former fixed rate. The council's edict to meter the town at the owners expense in 1901 was apparently not very effective. It was not until the fall of 1905 that the city itself used bond funds to purchase and install a large number of meters on connections to the municipal water system. The brewery was reported to be using city water in September 1899, but while a cannery was reported to be putting in a meter in July 1910, it was also reported at this time that Grace Brothers had not yet installed a water meter.

Domestic users of city water had an incentive to be metered — to receive their "free" allotment of water. No indications were found in the minutes that business users ever had an incentive to install a meter (or a penalty for not installing a meter) despite many years of council decisions to meter every connection to the City Water Works. In June 1923 the council modified a suggestion that all businesses be metered to require only that all new construction be metered.

The categories and costs for the City Water Works water in 1917 (Ordinance #330) were essentially identical to the large number of categories and costs of the Santa Rosa Water Works Company set in 1914 (Ordinance #301). As late as 1918 there was a monthly fixed rate, an un-metered rate by category, and a metered rate for city water. The metered rate was the same for all users of city water, but domestic users got a monthly allotment of 10,000 gallons of "free" water at the time. Seemingly gross discrepancies appear to have accumulated through time in the monthly fixed rate. In December 1922 the council set the flat rate for the Rosenberg Building at \$50 per month, but cut the rate in half to \$25 after Max Rosenberg vigorously protested. As noted above, the Grand Hotel and the stable on the Levin company were both paying a fixed rate of only \$1.00 per month in 1924 when their connections were metered. In December 1930 the BPU approved the same water rates that were first established in 1907, but cut the "free" domestic water allotment in half to only 5,000 gallons per month.