

November 29, 1961

MEMORANDUM

To: Brea City Council

Subject: Communications Received

Enclosed is a copy of a petition regarding the construction of the Carbon Canyon Water Line.

Also received Resolution #61-1207 passed by the County Board of Supervisors establishing procedures for an "Orange County and Cities Civil Defense Planning Board". The Resolution proposes a mutual aid agreement for Civil Defense and Disaster Relief and establishing an Advisory Board consisting of the Chairman of the Board of Supervisors, President of the Orange County Division of League of Cities, County Director of Civil Defense and seven additional members consisting of three representing cities and four representing the County. City representatives will be appointed by the League of Cities and County representatives to be appointed by the Board of Supervisors.

This Resolution will probably be on the agenda of the December League of Cities Executive Meeting.

Respectfully submitted,



A. W. Studebaker
City Administrator

Encl.

Brea City Council
Brea City Hall
Brea, California

Re: Construction of Water System
Carbon Canyon Annexation

Gentlemen:

We of the Carbon Canyon Annex represent twenty five percent of the entire City area.

We feel two years of work and planning to improve this area gives us a right to point out certain salient facts relative to the construction of the Water System for this annexation.

Namely:

1. Will provide beautiful home-sites for the development of expensive homes.
2. Will increase the tax base for the entire City.
3. Will increase Industrial Development.
4. Will open an area where millions of dollars will be spent for roads and street improvement.
5. Commercial development in the area will increase City sales tax.
6. Plans can go ahead for the building of the Elementary School, a \$300,000 plant, at no cost to local taxpayers.

In light of the above facts, we respectfully request the Council to approve use of the 1915 Bond Act to finance construction of this water system and negotiate the best terms available. We feel this should be accomplished with the least possible delay, and the hearing date should be advertised before the first day of January, 1962.

Respectfully submitted,

Mrs. Anna M. Sorge
Mrs. Anna Sorge

Phillip Myers
Phillip Myers

Sydney Sybrandy
Sydney Sybrandy

Francis Nipp
Francis Nipp

Mrs. R. L. Dickinson Secy.
La Vida Mineral Springs

Richard G. Blake
Olinda Development Corp.

Harry D. Speer
Sumac Corporation

Clifford K. Thompson
Clifford K. Thompson

Clifford Jones
Clifford Jones

November 6, 1961

Brea City Council
Brea City Hall
Brea, California

Gentlemen:

In your deliberations on the method of financing the construction of the Carbon Canyon Water System, it may be of assistance to review some of the benefits that will accrue to the City. No recommendation on financing is included.

1. On completion of the project, the City will be sole owner of the project valued at approximately \$400,000.00.
2. The system will enable property owners to develop their lands from a very low assessed value to a very high tax value.
3. The system will provide the stimuli for additional annexation and high tax value development.
4. The elementary school can also be built at no cost to local taxpayers and may enable consolidation with the Brea Elementary District at a tax saving to the Brea District.
5. It will enable the City to make immediate use of the \$30,000.00 vault on the M.W.D. Lower Feeder.
6. It will enable the City to recover between \$15,000.00 and \$20,000.00 spent on engineering; preparation of plans and specifications, legal expense, advertising, etc.
7. If done in the near future, it will enable the City to exercise the option on the 2.3 million gallon tank and the \$1,000.00 cleaning cost.

Each of you can think of many additional benefits to the City, but to list them all would take up too much time and space. The items listed are probably the most important.

Respectfully submitted,



A. W. Studebaker
City Administrator

WATER - MORE VALUABLE THAN OIL

WATER, - What a precious commodity, and one we take for granted as long as it runs when we turn on the faucet.

The early settlers realized that they could not depend on rainfall to provide adequate water for domestic and agricultural use. As people began to migrate west and develop our area they soon realized that well water had to be supplemented with imported water. Today, Brea gets its water from two sources, the San Gabriel River basin and the Metropolitan Water District.

Prior to the 1900's a group of people considered forming the East Whittier Land & Water Company for the purpose of bringing water over the Puente Hills from the San Gabriel River at Bassett. Pipeline right-of-ways were acquired, and by 1891 water from the wells at Bassett flowed by gravity into the East Whittier reservoir. Not long after this the farmers in the La Habra Valley negotiated with East Whittier to supply water for their needs. The La Habra Water Company was organized. Later the California Domestic Water Company was formed and it is this Company that furnishes water to Brea in proportion to the amount of stock that the City owns.

The Ontario Investment Company, owned by the Chaffey Brothers, filed the original subdivision maps of Brea first as Randolph and then as Brea. The Chaffey Brothers had previously developed the water system for Ontario and Etiwanda. They were well aware of the need for water.

Virginia Carpenter, in her research on "Cañada de la Brea", reports that in 1884 the Chaffey Brothers acquired title to Rancho "Cañada de la Brea". This may explain why the Chaffeyes were interested in the development of the Brea area. George Chaffey bought stock in the La Habra Water Company and served as a director for 10 years from 1902 to 1912.

1st Article

It was the Ontario Investment Company, sometimes referred to as the Chaffey Interest, that constructed the large concrete reservoir on a hill northeast of the Brea Junior High School. A large elevated steel tank provided pressure for the mains and distributing system for Brea. The system was layed out and light steel casing was used which in later years gave trouble to maintain. A flat rate was charged for water service until wastage required meters to be installed and customers paid by usage.

Regardless of the type of pipe used in laying out the water system of Brea, it was probably better than the wood pipe and flume used originally to deliver water to East Whittier and ultimately to La Habra and Brea. The section of wood pipe that the Historical Society has was used somewhere between East Whittier and the company reservoir on Whittier Boulevard extension and Palm Street in La Habra.

* * * Dean Millen

SEPTEMBER GENERAL MEETING

Now that the summer is 'steaming' to a close, we are planning our first meeting of the Fall on -
Sept. 24, 1984 at 7:30 P.M.

Brea Old City Hall-401 S. Brea Blvd.
TOPIC: What you always wanted to know about Brea!

GUEST SPEAKER: Warren E. Griffith

Mr. Griffith is a person many of you know and a resident of Brea since 1923; otherwise known as "Griff". He has taken an active role in community life, serving many years on the Planning Commission; one of his interests is the role people have played in Brea's past. You can expect answers to such questions as:

"Why was Brea located where it is?"
"How did the lives of these pioneer men influence our City? - Henry Ford, Lyman Stewart, George Chaffey, and Charlie Kinsler, as well as others".

A big bundle of thanks goes to those volunteers who get going and do the work!

The following helped make the B.H.S. booth function at the Brea Country Fair on July 4th:

Betty and Dean Millen
Evelyn and Walt Bergman
Dyer Bennett
Leo Piantoni
Voloney Siebenthal
Frank Schweitzer

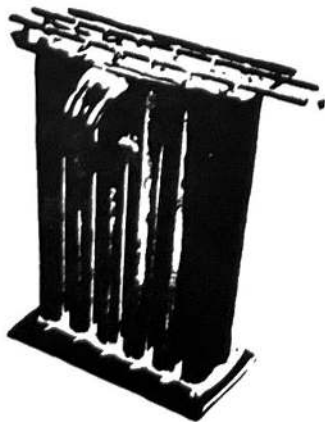
I would like to mention Frank's dedication in handling the details of organizing the booth and the materials to be sold, and the many hours he spent running around getting stuff, printing pictures people ordered, etc. etc.

Dean Millen also needs to be singled out for his continued interest in the progress of the Society. During the summer, Dean cleaned out a store room we have in the Old City Hall, acquired a door and hardware, and some paneling for the walls which were full of holes, and arranged to have all of these installed. He also was busy in the office sorting and setting up files.

I should also bring your attention to the moving crew: Betty Straw, Dyer Bennett, Walt Bergman, Dean Millen, Karl Fanning, Leo Piantoni, Vol Siebenthal and Frank Schweitzer who moved artifacts from the old council chambers into storage and moved show cases into our center. Thanks for the truck too, Dean.

President: Karl Fanning

IDENTIFY
THIS
HOUSEHOLD
ITEM



COUNTRY FAIR INCOME

Net Income From Sales \$225.10

B.H.S. has signed a 15 year lease with the Brea Foundation for the use of a space in the Old City Hall formerly known as the City Clerk's room and the vault. The former council chambers are not included. We are glad to have now a center where our activities can grow and flourish.

DONATIONS RECEIVED

SHOW CASES: We are especially fortunate to have received two excellent cases from Mrs. Kathryn Maierhoffer of The Coin Shop, and thank her for this generous gift to the Society. In addition she also contributed a mannequin dressed in a W.W.I uniform with personal equipment.

HARDWARE: Earl Hills of Cannings' Brea Hardware contributed the door hardware needed to secure the storage room previously mentioned. For this gift we thank Earl very much.

BREA POLICE: Thank you for the large framed picture of the late Jack Everett, a detective on the Brea Police force. In addition, a night stick and two Brea Police Explorer Scout shoulder patches were included.

DEDICATION CEREMONY BREA CITY PARK

Through the efforts of the City of Brea and Councilwoman Mayor Pro Tem Clarice Blamer in particular, the Old City Hall and Park and buildings have been placed on the lists of historic places by both the State of California and the United States. This is quite an honor for us and the City for the placement on the National Register of Historic Places groups this site into a select group of about 20,000 properties nationally.

In recognition of this, a dedication ceremony will take place at 11:00 A.M., Saturday, October 13, 1984 in the park at the gazebo. B.H.S. will be there, and the final edited oral histories so many of you have been waiting for will be distributed by Dr. Larry deGraaf, Oral History Department, Cal State University, Fullerton.

In 1920 the citizens of the newly formed City of Brea issued bonds (\$20,000 + \$40,000) to purchase from the Chaffey interest, the developers of the community, 136 shares of the La Habra Water, the reservoir and the equipment north and east of the present Brea Junior High School. It was necessary to erect a steel tower and tank to deliver pressure water to the community. Prior to this time pressure in the water main was very low, varying from 15 to 18 pounds pressure per square inch. This provided very limited fire protection as evident one night when a fire started on the upper floor of the Delany building on W. Ash Street. The fire was finally extinguished by a bucket brigade.*

*Purl Harding's book on Brea history.

For the next twenty six years Brea's only source of water was from local wells and the La Habra Water Company. The shares in the La Habra Water Company allowed 13.6 miners inches of continuous flow. A miners inch is equal to 9 gallons per minute. It was always very evident when certain wells would be pumped into the system as the total salts were very high, and Mr. Boxall, City Water Superintendent in charge, would get many complaints.

It was not until ^{Oct 7 1964} ~~June, 1947~~ that water from the M.W.D. system flowed into the water mains of Brea. The story leading up to this historic event is quite interesting. When Brea joined the Metropolitan Water District in 1946, it was to guarantee its future supply of good quality water from the Colorado River and to assure industry, homes and agriculture unhampered source of water. This is one of the major inducements Brea has to offer today for an adequate supply of water. Pie

The history of our present water supply dates back to the beginning of the Colorado River Association and the building of Hoover (Boulder) Dam to provide electrical power and water for Southern California. The Metropolitan Water District of Southern California was formed by

provisions of an act adopted by the State Legislature in 1927, and was established in 1928. In 1931 the voters of the 13 original cities authorized a bond issue of \$220,000,000 to finance the cost of an aqueduct to bring water to Southern California.

Work on the Hoover Dam started June, 1931 and on February 1, 1935 Colorado River water started its first storage to become Lake Mead. Dedicated by President Franklin D. Roosevelt on September 30, 1935, it was completed March 1, 1936 by the Six Companies, Inc., dam contractors. Later Parker Dam was built across the river at a point midway between Needles and Blythe and Lake Havasu was formed and from here Southern California receives its water supply.

Parker Dam also generates 100,000 kilowatts in power, giving the District the right of half the available water flow for the generation of power.

From Lake Havasu, five pumping stations lift the water along 242 miles of tunnels and concrete line aqueducts to Lake Mathews, near Corona. 109 miles of tunnels were required to aid in the capacity load of a billion gallons of water daily.

May 5, 1988

A BRIEF ON CITRUS IN BREA AREA

The earliest reference to oranges and walnuts in Brea is an ad appearing in the 1903 Orange County Director when Townsend and Robinson Investment Company of Long Beach, California advertised 2000 acres of orange and walnut land in the town of Randolph, now Brea. There were some early plantings of both oranges, lemons and walnuts. The Hualde lemon and orange planting on east Deodara, now Lambert Street, and the Sievers orange, lemon and walnut groves on west Imperial Highway planted around 1916. There were other plantings referred to in Pearl Harding's book on Brea.

In 1925 Union Oil Company, as a means to provide income from its lands in the Brea area which were being held for future oil development, entered into an agreement with Mr. Gaston Bastanchury, a citrus grower, to plant the acreage to citrus and avocados. During the next six years a total of 2107 acres were planted. These orchards added to the older orchards already owned by Union Oil Company making a total of 2350 acres. This involved over 200,000 trees of which 1000 acres were oranges, 1000 acres of lemons, 198 acres of avocados and 122 acres of grapefruit. During this period 18 water wells were drilled, some too saline to be used.

In 1933 Mr. Bastanchury conveyed his interest in the orchards to the Times Mirror Company which continued to operate the groves under the agreement with Union Oil Company. This area was referred to as "Union Citrus Orchards" until 1940,

In 1941 Union Oil Company liquidated its entire citrus department selling land no longer held for oil development, leasing other land and bulldozing the trees out on the remaining acreage.

Dean F. Millen

ORANGE QUICK DECLINE
(tristeza virus)

In the Spring of 1939 a citrus grower in the Covina area noticed several trees in a declining condition. Within a few weeks the leaves began to wilt and in a short time the tree appeared dead. After ruling out girdling by a gopher, chemical damage or other known problems to citrus trees, the University of California plant pathologists were called to inspect the grove. Because of the rather mysterious and rapid collapse of the trees the dilemma became known as Orange Quick Decline.

Soil organisms such as fungi or bacteria were soon eliminated, and a virus was suspected. By inserting a bud from an affected tree into a disease-free tree they were able to transmit the disease.

Because there is an International Plant Pathology Society, and by reviewing the literature, it was found that a similar outbreak of this nature had occurred in the citrus area of Brazil and Argentina. It was found that an aphid transmitted the virus that affected a sweet orange top on a sour orange rootstock. Further research proved that to be the case here in Southern California. Early in 1951 Dr. Dickson, entomologist with the University of California at Riverside, announced they had isolated the vector transmitting the disease to be the melon aphid.

It has been speculated that the virus probably came to the United States via the Orient with the introduction into this country of the Meyer lemon. It apparently remained dormant until 1939 when the outbreak occurred in the Covina area.

With the information so far gathered, and knowing the virus to attack trees on sour rootstock, it was estimated that as many as

12,000,000 trees would eventually succumb to the disease. At this point the research turned to what could be done.

The Citrus Experimental Station at Riverside had for years carried on a root stock plot. Sweet orange trees were grown on the various rootstocks, then planted in the affected groves, inoculating some and avoiding others. After considerable time and effort, one combination of sweet oranges budded on a Troyer citrange root appeared to have resistance to the decline virus.

Learning this the race began. There were only two producing trees at the Citrus Experimental Station. Fruit was apportioned out to the industry and in due time adequate seedlings were grown to start the transfer of the orange industry onto the new and virus tolerant rootstock.

It may be of interest to report that a person by the name of Troyer in 1908 made a hybrid, crossing navel orange and trifoliate orange, thus the Troyer citrange had its beginning.

Most of the valencia orange trees planted in the Union Citrus Orchards were on sour rootstock and would need to be replaced. However, Union's decision to liquidate avoided mass replacements. Many of the groves were affected but never replaced. For many growers in Los Angeles County, as industrialization and urbanization began in the late 40's, were able to sell out as the tree decline progressed. This proved to be a way out for most growers in Southern California faced with the replant problem.

Dean F. Millen

Believe it or not, Brea has a river running underground under Lambert Avenue, originating at Metropolitan Water District's Lake Mathews in Riverside County.

Lake Mathews, the terminal storage reservoir for the Metropolitan Water District main aqueduct, has a storage capacity of 103,680 acre feet (1958). It is from Lake Mathews that the ten foot gravity main line, known as the (Lower Feeder), extends 45 miles in a westerly direction through the cities of Corona, down the Santa Ana Canyon and through the cities of Yorba Linda, Brea, La Habra, Norwalk, Downey and Southgate to connect up with the (Middle Feeder). The easterly portion of 19 miles was completed in 1956. The westerly 17 miles were completed in 1957. The remaining 14.3 miles through Brea and across the northerly portion of Orange County were under construction during 1958. A contract totaling \$12,089,597.00 was executed October 28, 1957 with Morrison Knudsen Company and Macco Corporation to construct the 14.3 miles of 97" or 8' diameter welded steel pipe line to complete the 45 miles from Lake Mathews to Southgate in Los Angeles County. (1958 M.W.D. Annual Report)

Of interest to Brea is that this main line crossed Birch Street entering the Union Oil Company property east of Brea. The pipeline easement is identified by the green belt that diagonally crosses the subdivision until it reaches Lambert Avenue and proceeds westerly along Lambert through Brea.

IRRIGATION WATER FOR UNION CITRUS ORCHARDS

The water originated from wells and imported water from the La Habra California Domestic Water System. Several reservoirs for storage were necessary. The largest were Reservoirs Nos. 8 and 10 located on the Union Oil Tank Farm. These reservoirs were 700,000 barrel capacity, originally constructed for oil storage. They were involved in the 1926 tank farm fire. The oil burned until it reached the water when the reservoirs boiled over and did considerable damage to the surrounding property. Some of the wells were originally drilled as test oil wells, later blanked off at the water bearing stratas. Union and the Bastanchurys entered into a Planters Agreement to plant the land to citrus that was owned by Union. In 192~~8~~⁶, when most of the citrus was being planted, additional water needed to be developed for irrigation.

There were 18 wells in all, several drilled in 1931, and the last one, Well No. 18, was developed June, 1935. The average water quality was fair to good for citrus as the total dissolved solids were from 710 parts per million to over 1300 PPM. The La Habra water was of excellent quality, and the co-mingling improved the over all quality. One of the better wells was Number 15 located in the 300 block of South Laurel on the east side of the street. Well Number 16, located on the south side of Imperial Highway, between Berry and Puente Streets, was of good quality and used as domestic and irrigation.

During the early days of oil development much of the waste water was allowed to flow down the Brea Creek. As a result many wells became so saline they had to be abandoned. J. D. Sievers lost several wells as a result and two wells on the Columbia or Shell property were lost.

Hualdes' well north of Lambert and west of the Brea Creek was lost. Years later, Everett Reese, who had acquired the property, tried to pump the well but it was still too salty.

Several wells (Well No. 6, for example) needed the pump and casing pulled each year because of an iron bacteria called crenothrix. This was a gelatine-like substance that plugged the pump.

Union Oil Company of California

PHJ-83

Wilmington, California

November 13, 1941

Hubert C. Ferry, Manager of Leases

Los Angeles, California

BREA DISTRICT
IRRIGATING WATER

As requested, water samples from nine Union Oil Company irrigating water wells in the Brea district were analyzed with the following results. Unless otherwise indicated, the results are expressed as parts per million.

Well No.	5	6	7	8	14	15	16	17
Sodium (Na by calc.)	246	239	131	160	251	135	155	149
Calcium (Ca)	71	86	47	63	114	51	102	49
Magnesium (Mg)	30	45	20	32	41	17	46	32
Sulfate (SO ₄)	306	435	62	202	472	98	296	110
Chloride (Cl)	135	135	85	99	147	89	135	99
Bicarbonate (HCO ₃)	399	337	366	349	366	320	345	395
Total (by addition)	1187	1277	711	905	1391	710	1079	834
Alkali Coefficient ^a	8.8	9.8	10.4	13.8	9.1	11.6	11.1	10.5

a. The alkali coefficient which evaluates the relative toxicities of the various dissolved materials in water, may be defined as the depth in inches of water which on evaporation would yield sufficient deleterious deposits to render a 4-foot depth of soil injurious to the most sensitive crops.

In general these waters may be classified as fair irrigating supplies. With loose soils and free drainage no precautions would be required. However, with heavy soils and poor drainage special care would be required to prevent gradual soil damage.

Yours very truly,

D. E. CARR
Manager of Research

PHJ:vf

cc: Mr. J.D. Neuls
L.R. Young

By _____

18

La Habra at Fresno Water Pond

Date	Na	Ca	Mg	SO4	Cl	HCO3	CO3	Boron	Total	Alkali Co-Eff.	% Na.	P.H.	Conductance
July 1945	47	22	11	23	12	231	-0-					7.15	
July 1945	12	55	14	20	12	223	-0-		356	130			36
July 1949	18	65	15	24	12	208		-0-			15	8.0	42
					*	*	*	*					
Colorado River													
Treated				328	99			0.1	732	12.9"	76	9.1	117
Un-treated				325	90			0.1	728	16.5"	41	8.3	115
					*	*	*	*					
Santa Ana River													
				117	81			.08	539	21"	30.6	8.2	77
					*	*	*	*					
Montgomery Well - Anaheim													
	47	23	10	59	41	81	10		271	37"			
					*	*	*	*					
Lineberger Well													
	208	200	70	180	582	301			1541	2.9"			

Dean Miller

FROST WARNINGS

The voice of the Fruit Frost Service was retired on March 15, 1956 after almost a half century with the U. S. Weather Bureau. Congress in 1917 had appropriated funds to research and work on frosts and frost protection. The person sent to Southern California to implement this research was Floyd D. Young, and in 1917 he located in the Pomona area where citrus predominated at that time.

The early forecasts were disseminated by telephone, later by radio stations KHJ, KNX, and KFI. Early in the 1930's Mr. Young began his 8:00 o'clock nightly frost warnings for the citrus industry. His 8:00 P.M. broadcasts were listened to, not only by citrus growers, but by heating engineers for school and public buildings as well as the gas companies so that on a cold night they could keep the pressure up in their facilities. Mr. Young used to broadcast by districts and is credited for the origination of Jack Benny's famous cliché, "Anaheim, Azusa and Cucamonga".

Union Citrus Orchards in Brea had only a small percentage of their acreage equipped with orchard heaters. Always concerned, however, on cold, ^{rites} as to how much frozen fruit would result.

History has determined that major freezes occur at intervals of 9 to 15 years, and major freezes have occurred in 1899, 1913, 1922, 1937 and 1949. During the 1936-37 freeze Union Citrus fired heaters on 23 consecutive nights. The coldest temperatures were along Imperial Highway between Berry Street and Puente Street where a minimum of 18° was recorded. On the night of January 22, 1937 heaters were fired at 6:00 P.M. and allowed to burn out into the next morning burning an average of 8 to 9 gallons of diesel oil per heater with 50 heaters per acre. This freeze caused a great deal of tree damage to avocados,

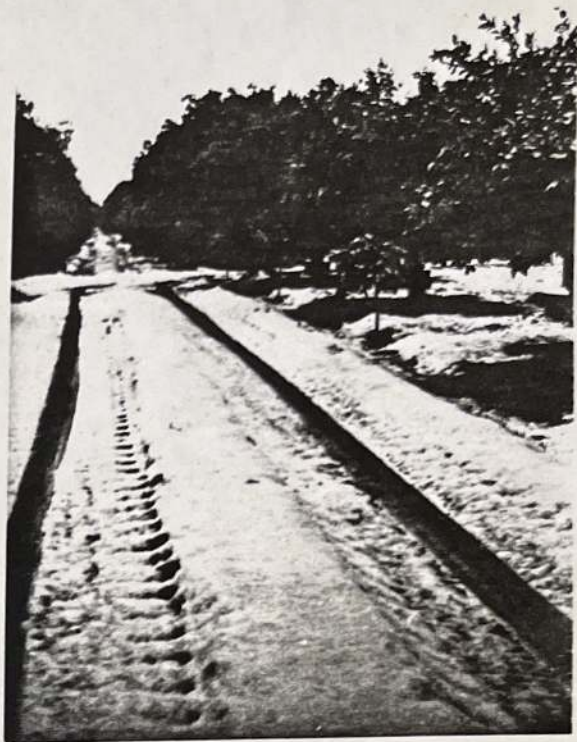
oranges and lemons. Most of the lemon fruit was a total loss as were the avocados. There was some salvage value with the oranges for juice and dried peel for cow feed.

The next cold spell occurred in 1948 and 1949. January 3rd to 8, 1949 was a record freeze period. Temperatures reached a low of 23° as early as 10:00 P.M. We had 40 acres of yearling avocado trees planted north of Lambert Road between Berry Street and the Brea Creek that were badly frozen. On the night of January 10th snow began to fall. What a relief as the temperature began to rise.

Orchard heaters always produced a great deal of smoke and did much damage to homeowners. Because citrus was a major industry in Southern California people accepted this hazard. However, after 1949 the industry attempted to improve the heaters. Underground pipeline systems were installed and wind machines were being put to use. Strict regulations were being imposed on the use of heaters.

In 1945 the Shaffer Tool Works of Brea became involved with wind machines. Because they had been involved with the manufacture of the Guiberson diesal airplane motor and had an excess of these motors, they fabricated a 40 foot tower and placed a motor with an airplane propellor on top. They were quite successful as wind machines.

Note: I have pictures of frozen avocado and lemon trees of the 1936-37 freeze. *also Shaffer wind machines*



COPY

PACKING HOUSES

By Dean Millen

The citrus fruit produced from Union Citrus Orchards was marketed through the California Fruit Growers Exchange (Sunkist) through several packing houses in the Whittier and Placentia districts. The avocados were sold through the Calavo Growers Cooperative.

During a normal year more than $\frac{1}{2}$ million 50-pound boxes of oranges, lemons and grapefruit would be shipped to eastern markets. Much of the lemons and grapefruit were shipped through Whittier Select, Jack Reed, manager, and through Whittier Citrus Association. In Placentia, the Placentia Cooperative Orange Association and Placentia Mutual Orange Growers Association. East Whittier Citrus Association shipped both oranges and lemons under Parex label as Sunkist and Buttercup and Tom Sawyer as second grade or orchard run, Clarence Dunbar, manager. El Ranchito Citrus Association in Rivera, shipped oranges first grade Sunkist under the label of Montezuma and Sarape. Second grade and orchard run, Stella, Yaqui and Toltec labels, Cecil Bell, manager.

Prior to 1941, for a number of years, Union Citrus Orchards shipped lemons from the Brea packing house, the shipping label being "76" first grade Sunkist, "1492" and

"00" second grade and orchard run, and "49" as the red ball grade. It was customary for packing houses to arrange for the picking, hauling and handling and selling of the fruit. Mr. E.H. Peterkin, owner of the Orange County Transfer Company, did most of the hauling of the fruit to the various packing houses.

UNION CITRUS ORCHARDS WATER WELLS

- Well #1 Drilled by Union Oil Co.
Depth 1125 ft. Abandoned 1929
Location: Center of Section 23
- Well #2 Drilled by Union Oil Co.
Depth unknown and never used.
Location unknown
- Well #3 Drilled by Union Oil Co.
Depth 645 ft. Abandoned. Ashly Turner
Location along south line of Sec. 14
- Well #4 Drilled SEptember, 1926
Depth 645 ft. Abandoned 1939
- Well #5 Drilled by Union Oil Co. Sept. 1927
Depth 1790 ft.
Location Union Oil Tank Section 10 - now Albertson's
Warehouse
- Well #6 Drilled by Saunders Bros., Whittier
Depth 756 ft. Oct. 1927
Location N.W. Corner of Union Oil property. North
line Sec. 4.
- Well #7 Drilled by Union Oil Co.
Depth 930 ft. Dec. 1927
Location No. 1/2 sec. 12
- Well #8 Drilled by Union Oil Company
Depth 735 ft. Feb. 1928
Location: along E.W. line 1/2 of Sec. 7 Lambert Street
- Well #9 Drilled by Union Oil Co.
Depth 760 ft. Aug. 1928
Location N.E. 1/4 Sec. 3
- Well #10 Depth 3255 ft. ABandoned 1927
Location S.W. 1/4 Sec. 8 E. of Valencia St.
- Well #11 Depth 3750 ft. Est. June 1926
Location no information available
- Well #12 No Information available.
- Well #13 Drilled by SAunders Bros., Whittier
Depth 643 ft. May 1931 Cable tool H₂S
Location along N.E. 1/4 Sec. 22 Next to²Loma Vista Cemetary

- Well #14 Drilled by Union Oil Co.
 Depth 1709 ft. May 1931
 N.W. 1/4 Sec. 10 Union Oil Tank Farm
- Well #15 Drilled by Saunders Bros., Whittier
 Depth 1310 ft. May 1931 Cable tool
 Location - south side of 300 blk. South Laurel Ave.
- Well #16 Drilled by Union Oil Co.
 Depth 1487 ft. June 1931 Rotary
 Location So. side Imperial Hwy. between Berry and PUente
 Sts.
- Well #17 Drilled
 Depth 736 ft.
 Location No. side Deodara (now Lambert) Sec. 12
- Well #18 Drilled Roscoe Moss Co. Los Angeles
 June, 1935 Depth 606 ft.
 Location S.E. of Well 8, Sec. 7

UNION CITRUS ORCHARDS

Most of the citrus planting around Brea started in 1925-26. Union Oil Company entered into an agreement with Mr. Gaston Bastanchury to plant the land being held by Union for potential oil production. So, over the next few years some 2300 acres of citrus and avocados were planted, approximately 865 acres of lemons, 820 acres of valencia oranges, 122 acres of grapefruit and 198 acres of avocados. These figures are actual planted acres and not net. There were a few acres of walnuts and navel oranges scattered throughout the plantings. When the Bastanchury interests began planting trees in the various areas they would refer to them as the Stewart, Bard, White, Hill, Orcutt, Burnham, St. Clair and Ferry, all Union Oil officials. Eventually it became easier to refer to a number rather than a name, so the names were dropped. What started in 1925 was liquidated December 31, 1940. Some of the acreage was sold, other acres were leased, and the remainder of the trees bulldozed out.

To care for and manage the plantings, the groves were divided into five divisions:

Division I: Totaling 468.6 acres; 81.5 avocados, 181.7 lemons and 205.4 valencia oranges. This acreage was north of Central Avenue and west of the Brea Creek Channel.

Division II: Totaling 446 acres; 314 valencia oranges, 83 lemons, 48 grapefruit and 2 or 3 acres of miscellaneous varieties. All located south of Central Avenue, east of Palm and west of Brea Boulevard.

Division III: Totaling 534 acres; 516 lemons, 18 valencia oranges. This acreage was all east of Brea Boulevard.

Division IV: Totaling 385 acres; 235 valencia oranges, 77 lemons, 66 grapefruit and a few acres of walnuts. This acreage was south of Elm Street, west of State College and east of Loma Vista cemetery.

Division V: Totaling 180 acres; 116 avocados, 47 oranges, 9 grapefruit and 8 acres of lemons. This acreage was on the hills north of Fullerton.

The liquidation of Union Citrus Orchards started late in October, 1940 when Mr. Rubel, vice president of Union Oil Company and Mr. Hubert Ferry, supervisor of Unions' land and lease department came to Brea. I was picked up after lunch with them saying they wanted to look over the groves. This turned out to be the real bombshell when Mr. Ferry informed me that Union intended to liquidate the entire citrus holdings. I was informed that Union intended to write off \$1,000,000 of assets as of December 31, 1940. We spent several hours reviewing the acreage they wished to eliminate, what could be sold, leased or retained by the Company. I was instructed to telephone Mr. Ferry when the bulldozers were actually pushing out the trees.

I contacted the Post Brothers Company located in the south part of the County. In 1940 there were only a few contractors with equipment capable of doing the work. The intent was to push the trees out, bunch and burn them, destroying the irrigation system, so there would be no doubt the property was returned to its original state.

We started with Division I, eliminating all the lemon trees, leaving the avocados which were leased to a group called Avocado Associates. The avocados were of the Fuerte variety and would soon mature. The terms of the lease were for 10 years, rent paid in advance. The current crop payed the 10 year rent.

The entire Division II was sold or leased, including all irrigation lines and three water wells. Brea Groves, Inc. took title to the property later forming the Arovista Mutual Water Company and dividing the property into individual ownership.

Most of Division III was leased to the Valley View Ranch with Leo West as manager, the Deodara Orchards (Neuls and Dunbar), Everett Reese, and to the R.C.B. Ranch (Robinson, Curtis and Bergan) as owners.

When Division IV was planted by the Bastanchurys', the trees were planted, some on the contour, without regard for the Brea-Fullerton City Limits. So, when the property was being liquidated in the Fall of 1940 the Union Oil Company elected to eliminate all the plantings south of the Brea-Fullerton City Limits line. Due to the nature of the planting, it was impossible to site through, so another method was devised. I placed a flag up as high as possible in an eucalyptus wind break about where Cal State Road is now located. We had determined as near as possible the city limits at that point. On one Sunday morning I rode the boom of a D8 Caterpillar bulldozer, starting at Brea Boulevard, and directed the operator in the direction of the flag in the eucalyptus tree. I would estimate it to be approximately 3/4 of a mile. This was the method used to rough in the Fullerton-Brea City Limits line. The line was later surveyed by Mr. W. W. Hoy, State License #70.

Division IV, the acreage south of Elm Street, East of Brea Boulevard and west of State College, all within the city limits of Brea, was offered for sale by Union. Liquidating a large block of land in such a short period of time accounted for some real bargains. This particular parcel sold twice while still in escrow with Curci and Turner making the final purchase. They operated a citrus packing house in Pomona. Some years later they subdivided the acreage, one of the first large subdivisions to go on the market after World War II.

Approximately 100 plus acres south of Rolling Hills Road and west of Brea Boulevard were leased to Mr. Tom Gowan and Associates. Some years later it was my duty to have the trees removed and the property cleaned up so that it could be leased for grain farming.

Division V. Most of the trees in this area were eliminated, all potential oil producing lands. Some of the acreage was sold. Mr. Tom Gowan, Judge Thompson and Mr. Hubert Ferry were some of those who

purchased the land.

Packing Houses: The citrus fruit produced from Union Citrus Orchards was marketed through the California Fruit Growers Exchange (Sunkist) through several packing houses in the Whittier and Placentia districts. The avocados were sold through the Calavo Growers Cooperative.

During a normal year more than 1/2 million 50 pound boxes of oranges, lemons and grapefruit would be shipped to eastern markets. Much of the lemons and grapefruit were shipped through Whittier Select, Jack Reed, manager, and through Whittier Citrus Association. In Placentia, the Placentia Cooperative Orange Association and Placentia Mutual Orange Growers Association. East Whittier Citrus Association shipped both oranges and lemons under Parex label as Sunkist and Buttercup and Tom Sawyer as second grade or orchard run, Clarence Dunbar, manager, El Ranchito Citrus Association in Rivera, shipped oranges first grade Sunkist under the label of Montezuma and Sarape. Second grade and orchard run, Stella, Yaqui and Tollac labels, Cecil Bell, manager.

Prior to 1941, for a number of years, Union Citrus Orchards shipped lemons from the Brea packing house, the shipping label being "76" first grade Sunkist, "1492" and "00" second grade and orchard run, and "46" as the red ball grade. It was customary for packing houses to arrange for the picking, hauling and handling and selling of the fruit. Mr. E. H. Peterkin, owner of the Orange County Transfer Company, did most of the hauling of the fruit to the various packing houses.

Dean F. Millen

Union Oil Company of California

PHJ-83

Wilmington, California

November 13, 1941

Hubert C. Ferry, Manager of Leases

Los Angeles, California

BREA DISTRICT
IRRIGATING WATER

As requested, water samples from nine Union Oil Company irrigating water wells in the Brea district were analyzed with the following results. Unless otherwise indicated, the results are expressed as parts per million.

Well No.	5	6	7	8	14	15	16	17
Sodium (Na by calc.)	246	239	131	160	251	135	155	149
Calcium (Ca)	71	86	47	63	114	51	102	49
Magnesium (Mg)	30	45	20	32	41	17	46	32
Sulfate (SO ₄)	306	435	62	202	472	98	296	110
Chloride (Cl)	135	135	85	99	147	89	135	99
Bicarbonate (HCO ₃)	399	337	366	349	366	320	345	395
Total (by addition)	1187	1277	711	905	1391	710	1079	834
Alkali Coefficient ^a	8.8	9.8	10.4	13.8	9.1	11.6	11.1	10.5

a. The alkali coefficient which evaluates the relative toxicities of the various dissolved materials in water, may be defined as the depth in inches of water which on evaporation would yield sufficient deleterious deposits to render a 4-foot depth of soil injurious to the most sensitive crops.

In general these waters may be classified as fair irrigating supplies. With loose soils and free drainage no precautions would be required. However, with heavy soils and poor drainage special care would be required to prevent gradual soil damage.

Yours very truly,

D. E. CARR
Manager of Research

PHJ:vf

cc: Mr. J.D. Neuls
L.H. Young

By _____

Union Oil Company of California

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cc: Mr. J.D. Neuls
L.H. Young

By _____

La Habra at Fresh Water Pond

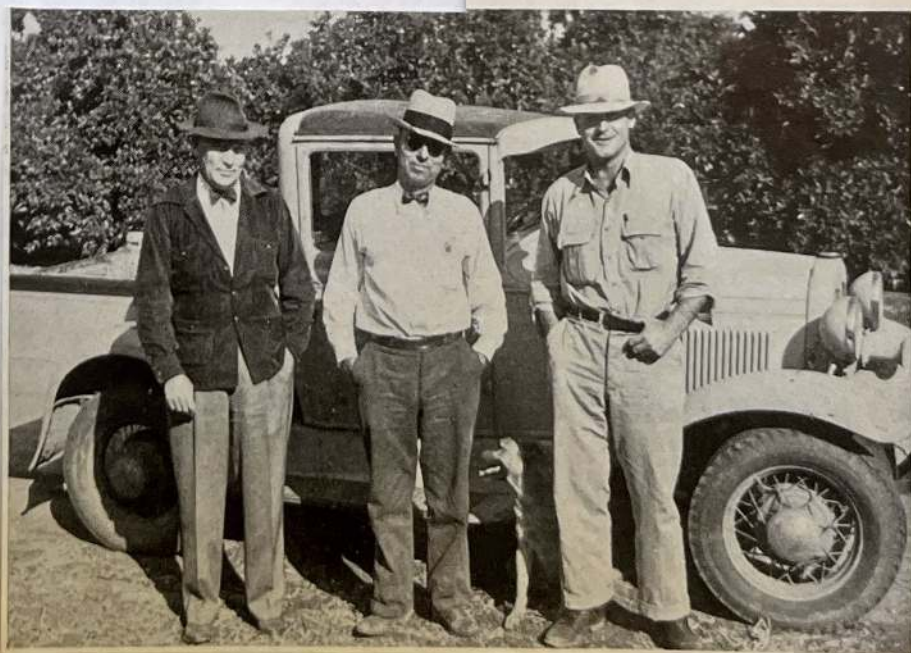
Date	Na	Ca	Mg	SO4	Cl	HCO3	CO3	Boron	Total	Alkali Co-Eff.	% Na.	P.H.	Conduct- ance
July 1943	47	22	11	23	12	231	-0-					7.15	
July 1945	12	55	14	20	12	223	-0-		356	130			36
July 1949	18	65	13	24	12	208		-0-			15	8.0	42
					*	*	*	*					
				Colorado River									
Treated				328	99			0.1	732	12.9"	76	9.1	117
Un-treated				325	90			0.1	728	16.5"	41	8.3	115
					*	*	*	*					
				Santa Ana River									
				117	81			.08	539	21"	30.6	8.2	77
					*	*	*	*					
				Montgomery Well - Anaheim									
	47	23	10	59	41	81	10		271	37"			
					*	*	*	*					
				Lineberger Well									
	208	200	70	180	582	301			1541	2.9"			



ABOVE: A typical scene in the Fullerton-Brea-La Habra area, showing some of Union's groves and the Stewart tank farm in the background. RIGHT: Loading a truck with oranges in one of the lush groves near Brea. From here the oranges go to a packing house where they are prepared for shipment.



BELOW: J. D. Neuls, supervisor of citrus operations; W. E. Chronister, Times-Mirror Company, and Dean Millen, assistant to J. D. Neuls, pose for the photog. After January 1, W. E. Chronister will be in charge of pest control for Union.



WALNUTS AND DRY FARMING

The 1903 Orange County Directory had a full page advertisement for "2000 acres of choice orange and walnut land with water, Randolph area, (later Brea), - if interested contact Townsend and Robinson Investment Company, Long Beach, California".

There is some record of older citrus planting dating back to 1916. Very likely the 80 acre J. D. Siever walnut grove was planted in the mid teens. There are those in Brea who remember picking up walnuts for the Sievers in the Fall of the year.

If you were involved in picking up and hulling the nuts, your hands became very stained. The blacker your hands got, presumably the harder you had worked. Some years the nuts would drop free from the hull, and other years it was a problem. The Sievers had a huller and dryer located on their property. Walnuts had to be dried to a certain moisture content before they could be delivered to a packing house.

One of the early lemon plantings was made by Victor Hualde, one of Brea's early settlers. The 40 acre grove was located south of where Lambert Street goes under the Orange 57 Freeway. In 1941 this grove produced 1000 boxes of lemons per acre which for Orange County at that time was good. When the Union Oil Company acquired this property is uncertain. However, it was a part of the Union Citrus operation when I arrived in Brea in 1935.

CONFIDENTIAL MEMO

August 7, 1957

Brea City Council
Brea City Hall
Brea, California

Gentlemen:

The Tidewater Associated Oil Company owns 160 shares of stock in the California Domestic Water Company and 50 shares in the La Habra Water Company which they desire to sell. They also own a 20" steel pipe line of approximately 5,680 feet in length going west from our City Reservoir to Berry Street. Under the Oil Company ownership, there is also a 6" steel line going easterly from our City Limits to a point just east of the intersection of Imperial Highway and Associated Road.

The 20" steel line is under a use agreement with the California Domestic Water Company. The 6" steel line is under use by the Associated Oil Company with a service to Severns Drilling Company Lease, approximately 1/2 mile south of Imperial Highway. The City of Brea has furnished water to the Severns Drilling Company Lease for many years through the Associated Oil Company lines. There is no agreement on file in the Clerk's Office of the terms or time limit on this service.

Councilman West, Mr. McCabe and myself have met with Mr. Joseph Jensen, Vice-President of Associated Oil Company. He stated that if the City of Brea would make an offer to the Oil Company for \$60.00 per share for the 210 shares of stock and the two water lines, he would recommend approval to the Associated Oil Company Board of Directors and propose payments over a 5 year period at 4% interest as listed below.

SUBSTANCE OF AGREEMENT

210 Shares
 \$60

5/12,600
2,520 per year

Rent stock and pay to California Domestic & La Habra Water Co.

Brea City Council

-2-

August 7, 1957

All charges & assessments levied on stock & power charges covered by contract.

Tidewater will pay taxes on line up to date of transfer to City

4% Interest on deferred payments

12,600			
<u>2,520</u>	Cash on signing contract		\$ 2,520.00
10,080			
<u>2,520</u>	10,080 = 403.20 + 2,520 =		2,923.20
7,560			
<u>2,520</u>	7,560 = 302.40 =		2,822.40
5,040			
<u>2,520</u>	5,040 201.60 =		2,721.60
2,520			
	2,520 100.80 =		2,620.80

Under the existing rules of the Domestic Water Company, each share of stock is entitled to 5,184 cubic feet of water per month. Total amount of water from 210 shares of stock would be 1,098,640 cubic feet.

Very truly yours,



A. W. Studebaker
City Administrator

Encl. prepared by
City Attorney

BREA WATER SUPPLY FROM LA HABRA WATER COMPANY

Brea receives water from La Habra Water Company by ownership of stock and an agreement with the Associated Oil Company.

The City receives the Oil Company water in the City reservoir and pumps it into the City distributing system.

The Oil Company has a six inch connection to the City System at Imperial Hwy. and Redwood Street, and a connection at Imperial and Randolph Streets. The Oil Company owns and is responsible for the 6" steel line from Redwood Street (on Imperial) east to the Associated Lease and pump station approximately 3/4 mile east of Brea. The City meters the water at this point.

The City makes no charge to the Oil Company for handling their water, but does receive the surplus water not used by the Oil Co.

The La Habra Water Co., is a mutual company and during the irrigation season (season set by La Habra Water Co. directors each year) water is paid for by stock assessments up to 5184 cubic feet per month per share. The La Habra Co. can refuse to furnish any water in excess of stock ownership, but if there is water available, will furnish more and charge for it at the rate of .03¢ per inch hour. This is slightly more than \$18.00 per acre foot.

In the non-irrigation season, (approximately four months), all water delivered is charge for at winter pumping rate of three cents per inch hour. This water is delivered to the Brea reservoir and Brea has the added cost of putting this water into the pressure system. This cost is estimated at \$6.00 per acre foot. During the non-irrigation season all of this cost is paid by the City of Brea and no charge is made to the Associated Oil Company. The non-irrigation season is during the winter months when citrus does not require irrigation.

Shares of Stock Ownership:

	La Habra Water	Calif. Domestic
Brea	136	000
Associated Oil Co.	<u>50</u>	<u>160</u>
	186	160

Total Shares: - - - - - 346.

During the irrigation season Brea is entitled to receive water as listed below, with no charge except stock assessments:

Brea - - - - -	705,034 cu. ft. per mo.
Associated Oil Co. - - - - -	<u>1,008,640 cu. ft. per mo.</u>
	1,793,674 cu. ft. per mo.

57,859 Cu. Ft. per D.

No credit is given for any water not used in any calendar month.

The month of June 1951 was the first time Brea used over their quota of water. This water is measured by a Sparling Main Line recording meter where the pipe enters the reservoir. The excess water was in the amount of 654,736 cubic feet, and equals 9093 inch hours at .03¢ per hour for a cost of \$272.79. This is equal to an additional 124 shares of Stock.

La Habra water used for June 1951: - - - - - 2,448,400 cubic feet.

Signed: _____

A. W. Studebaker
Water Superintendent

C
O
P
Y

June 16, 1958

The Honorable City Council,
City of Brea, California

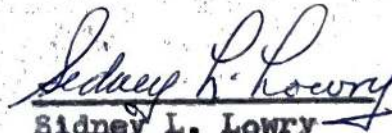
Gentlemen:

The attached water cost estimate for water furnished to the City by California Domestic Water Company is based upon the latest adopted rate schedule; applied to the estimated 1958 water purchases from this company by the City.

The estimated cost per acre foot of \$20.50 for this water compared to \$25.00 for M.W.D. water indicates that it will be to the advantage of the City to acquire additional shares of stock in the La Habra Water Company in order that we may use a greater percentage of this water and thus reduce our overall cost.

Very truly yours,

SLL:gm


Sidney L. Lowry
City Engineer

WATER COST ESTIMATE

Based upon estimated 1958 Water Use.

Jan.	2,290,000			
Feb.	2,289,000			
March	<u>1,497,200</u>			
	6,076,200	-	43,600 = 6,032,600 @ .030 =	\$1,809.78
April	1,246,600			
May	1,148,600			
June	<u>2,370,400</u>			
	4,765,600	-	43,600 = 4,722,000 @ .030 =	1,416.60
July	3,057,600			
Aug.	3,198,900			
Sept.	<u>3,110,900</u>			
	9,367,400	-	43,600 = 9,323,800 @ .030 =	2,797.14
Oct.	2,716,300			
Nov.	2,196,500			
Dec.	<u>2,067,800</u>			
	6,980,600	-	43,600 = 6,937,000 @ .030 =	2,081.10

Min. Quarterly Charge - 4 x 34.50 = 138.00

Total Annual Water Cost = \$8,242.62

Annual Stock Assessment -

La Habra Water Co. - 490.25 shares @ 8.00 =	3,922.00
Cal. Domestic Water Co. - 78 shares @ 8.00 =	<u>624.00</u>
Total Cost -	12,788.62

Total Water Delivered = 27,189,800. = 624.20 Ac. feet.

Cost per acre foot = 12,789/624.2 = \$20.50

Under present stock ownership the City is entitled to receive -
568.25 x 5184 = 2,945,808 cu. ft./mo.

At the present time the demand for the three summer months exceeds
out stock right to water.

The cost of placing this water under City pressure is estimated at
\$3.00/acre foot, which includes amortization of pumps and motors,
power costs, maintenance costs and incidentals.

Based upon the analysis presented above, it is my opinion that the
City of Brea should continue to acquire additional stock in the
La Habra Water Company until we have acquired at least 800 shares.
This, together with the 78 shares of Cal. Domestic Water Co. stock
we now own would give us a water right of slightly more than 4.5
million cu. ft. per mo.

SALES AGREEMENT

AGREEMENT between the CITY OF BREA, herein called the "City," and TIDEWATER ASSOCIATED OIL COMPANY, a corporation, herein called the "Seller."

It is agreed that subject to the provisions herein contained, the Seller hereby sells and transfers to the City the following described property:

1. 160 shares of California Domestic Water Company water stock;
2. 50 shares of La Habra Water Company stock;
3. That certain pipe line easement given pursuant to an agreement of July 26, 1921, between the Union Oil Company and the Amalgamated Oil Company, a copy of which agreement is attached hereto marked Exhibit "A" and made a part hereof;
4. That certain agreement dated March 29, 1921 and all rights contained therein between Amalgamated Oil Company and the California Domestic Water Company, a copy of which agreement is attached hereto marked Exhibit "B" and made a part hereof;
5. That certain 6" steel pipe line through which the City of Brea has furnished water to the Tidewater Associated and located approximately $1\frac{1}{2}$ miles east of the City of Brea to the Tidewater Associated Oil Company lease on the Anaheim Union Water Company property, together with the easement for the installation and maintenance of said line.

It is agreed as follows:

1. That in connection with Item No. 3 above, the Seller will secure a written consent to such assignment from the Union Oil Company to the City.
2. That in connection with Item No. 4 above, the Seller will secure written consent from the California Domestic Water Company of such assignment to the City.
3. That in connection with Item No. 5 above that the Seller shall secure a release from the Severance Drilling Company releasing the City of Brea from all obligations of furnishing water to said Drilling Company.

The City hereby agrees to pay to the Seller the sum of \$12,600.00, together with interest at 4% per annum on the deferred balance, payable as follows: approximately one-fifth thereof at the time of the execution of this contract, and the balance in four approximately equal installments, including interest as aforesaid, which payments, including interest, are as follows:

1. Cash upon the signing of this contract	\$2,520.00
2. Due in one year	2,923.20
3. Due in two years	2,822.40

4. Due in three years \$2,721.60
5. The balance due in four years 2,620.80

It is further understood that at the time of the signing and execution of this contract and the payment of the \$2,520.00 that title to 42 shares of the stock as represented in Items 1 and 2 above shall pass to the City free and clear from all liens, claims and encumbrances.

That likewise there shall pass at the time of the signing and execution of this contract Items 3, 4 and 5 above mentioned.

That upon payment of each installment by the City, title to 42 more shares of stock shall pass to the City, and upon full payment the City shall become the owner of all of the stock herein sold. That during the term of this contract and while there has been no default on the part of the City, the City shall be entitled to the use and benefits of all the property herein sold, including the stock which has not been transferred to the City, and the City shall have the exclusive right to use the water represented by said stock but shall pay all taxes and assessments against said stock which may hereafter become due and payable.

That the Seller warrants that it is the owner of the property herein sold and transferred and has succeeded to all the rights of the Amalgamated Oil Company in those two agreements above described.

That the Seller agrees to sign all necessary papers and documents in order to carry out this agreement, including the transfer and assignment of Exhibits "A" and "B", the transfer of the 6" steel pipe line as mentioned in Item No. 5, and an easement for the installation and maintenance of said pipe line and the release to the City of Brea from Severance Drilling Company for the furnishing of water.

The Seller also warrants that the documents marked Exhibits "A" and "B" are in full force and effect and that they have not been changed or modified in any manner.

CITY OF BREA
 Compilation of Bids rec'd
 10-6-52
 Ludwig R. Lowrey
 City Engineer
 Bid Items.

Bidders	Engineers Ltd Pipe Line Co	John Buen Mutual Pipeline & Const Co	D.E. Kenny 5743 E. Arroyo Rd Van Buren, Calif.	J. E. Young	A. D. C. Const. Co.	E. C. Losch Co	E. W. Connell Const.	Sam Pearce	N. P. Van Valkenburg	S. E. Pipeline Co	Doty Bros.
1	Furnish & Install 10,670 lin. ft 12" C.I. Pipe Water Main	8.74 93,255.80	6.75 72,022.50	7.59 80,985.30	7.38 78,744.60	8.20 87,494.00	6.57 70,101.90	7.50 80,025.00	7.60 81,092.00	7.11 75,863.70	7.20 76,824.00
2	Furnish & Install 1,540 lin. ft 8" C.I. Pipe Water Main	7.10 10,934.00	5.20 8,008.00	8.32 12,812.80	5.46 8,408.40	6.20 9,548.00	5.90 9,086.00	5.60 8,624.00	6.65 10,241.00	5.51 8,485.40	5.65 8,701.00
3	Furnish & Install 3,378 lin. ft 6" C.I. Pipe Water Main	4.87 16,450.86	3.30 11,147.40	4.44 14,998.32	3.44 11,620.32	4.20 14,187.60	3.72 12,566.16	3.40 11,485.20	4.90 16,552.20	3.96 13,376.88	4.10 13,849.80
4	Remove & Salvage 2400 lin. ft 6" C.I. Pipe Water Main	1.50 3,600.00	1.15 2,760.00	1.10 2,640.00	2.70 6,480.00	2.15 5,160.00	2.08 4,992.00	2.60 6,240.00	2.30 5,520.00	1.91 4,584.00	1.20 2,880.00
5	Remove & Salvage 450 lin. ft 4" C.I. Pipe Water Main	1.50 675.00	0.95 427.50	1.10 495.00	1.45 652.50	1.90 855.00	1.77 796.50	1.50 675.00	3.55 1,597.50	1.50 675.00	1.10 495.00
6	Install 2100 lin. ft. Salvaged 6" C.I.P. Water Main	1.90 3,990.00	0.75 1,575.00	2.86 ²⁸⁶ 5,985.00	2.18 4,578.00	2.20 4,620.00	2.17 4,557.00	2.25 4,725.00	1.70 3,570.00	1.18 2,478.00	1.50 3,150.00
7	Furnish & Install 26 each 12" Gate Valves	250. 6,500.00	225. 5,850.00	289. ²⁸⁹ 7,514.00	265. 6,870.00	260. 6,760.00	255.78 6,650.28	280. 7,280.00	277.50 7,215.00	230 5,980.00	260. 6,760.00
8	Furnish & Install 14 each 8" Gate Valves	150. 2,100.00	129. 1,806.00	174.70 2,445.80	150. 2,100.00	145. 2,030.00	166. 2,324.00	150 2,100.00	153. 2,142.00	123 1,722.00	135 1,890.00
9	Furnish & Install 23 each 6" Gate Valves	110. 2,530.00	92. 2,116.00	128.60 2,957.80	113. 2,599.00	100. 2,300.00	117 2,691.00	120. 2,760.00	110. 2,530.00	85. 1,955.00	100 2,300.00
10	Install 5 each Salvaged 6" Gate Valves	75. 375.00	15. 75.00	71.60 358.00	54 270.00	55. 275.00	58.95 294.75	60. 300.00	20. 100.00	33.50 167.50	10. 50.00
11	Furnish & Install 2 each 4" Gate Valves	80. 160.00	70. 140.00	98.70 197.40	88 176.00	80 160.00	96 192.00	80. 160.00	75 150.00	59.50 119.00	70 140.00
12	Furnish & Install 5 each Fire Hydrants	225. 1,125.00	205. 1,025.00	384.30 1,921.50	236. 1,180.00	270. 1,350.00	191.50 957.50	240. 1,200.00	220. 1,100.00	196.50 982.50	186.35 931.75
		141,695.66	106,952.40	139,310.92	123,698.82	134,739.60	115,209.09	125,574.20	131,809.70	116,388.98	117,971.55

Engineer's Estimate 116,254.60
 (15)

C I T Y O F B R E A
CONDENSED STATEMENT OF OPERATIONS
WATER DEPARTMENT

	<u>Y E A R E N D E D</u>				
	<u>June 30,</u> <u>1947</u>	<u>June 30,</u> <u>1948</u>	<u>June 30,</u> <u>1949</u>	<u>June 30,</u> <u>1950</u>	<u>June 30,</u> <u>1951</u>
INCOME:					
Gross Revenues - Sales	\$ 30,177.14	\$ 39,399.67	\$ 40,052.47	\$ 40,522.48	\$ 43,894.65
Service Charges and Other Receipts	1,554.79	1,675.41	3,743.79	2,676.53	4,890.00
<u>TOTAL INCOME</u>	31,731.93	41,075.08	43,796.26	43,199.01	48,784.65
EXPENSE:					
Water Purchased - M.W.D.	-0-	2,442.45	4,628.10	5,760.00	7,810.60
Water Stock Assessments	1,321.00	2,040.00	1,088.00	1,360.00	1,088.00
Power - pumping	3,694.95	2,387.48	2,411.38	2,135.24	2,185.06
Labor - Maintenance and Operation	3,358.39	4,298.16	5,003.78	5,039.29	6,075.00
Materials - Maintenance and Operation, including meters	6,928.18	4,162.51	7,078.33	6,731.97	7,570.98
Administrative, office and collection, sundry	<u>7,314.95</u>	<u>10,182.21</u>	<u>8,355.55</u>	<u>8,862.25</u>	<u>11,633.65</u>
<u>TOTAL EXPENSE</u>	22,617.47	25,512.81	28,565.14	29,888.75	36,363.29
OPERATING PROFIT * Before Depreciation	9,114.46	15,562.27	15,231.12	13,310.26	12,421.36
Appropriated for plant improvements and extensions	1,248.82	2,266.21	-0-	1,390.26	1,825.34
Transfers to Water Bond Interest and Sinking Funds	1,280.00	-0-	-0-	-0-	-0-
Transfers to Municipal General Fund	8,474.20	9,263.30	9,326.78	8,240.28	14,054.94
Unappropriated Balance in Water Fund end of year	7,207.17	11,721.53	21,845.87	25,533.59	22,989.67
Water Department Bonded Debt end of year:					
Issue 1920-1960 - 6% - 1875.00 per year	27,125.00	24,750.00	22,875.00	21,500.00	19,125.00
Issue 1921-1961 - 6% - 1000.00 per year	15,000.00	14,000.00	13,000.00	12,000.00	11,000.00
	<u>42,125.00</u>	<u>38,750.00</u>	<u>35,875.00</u>	<u>33,500.00</u>	<u>30,125.00</u>
Apportionment ad valorem taxes for water debt service	6,693.85	4,750.60	4,917.04	4,887.77	4,337.23
Balance in Water Bond Interest and Redemption Funds end of year	7,627.32	6,659.17	6,394.96	6,863.98	5,977.46
Number consumers end of year - estimated	980	1,020	1,040	1,230	1,375
Book Value of Water Supply System end of year	223,726.32	225,992.53	225,992.53	227,382.79	229,208.13
CASH BALANCE ALL CITY FUNDS END OF YEAR	\$ 38,566.15	\$ 55,998.20	\$ 82,282.19	\$ 85,271.41	\$ 83,587.47

- NOTES: (1) Books are kept on cash basis, no provision is made for depreciation, nor inventory changes.
(2) Service installations (meters) are not capitalized, the revenue from service charges is approximately equal to meter costs.

