Harlingen is crisscrossed with numerous irrigation water delivery canals. They have been in existence so long that they have melded into the scenery and are unobtrusive to most. The fact is that their existence, in great part, helped to establish the city. Lon C. Hill's sales of commercial and residential lots in the new town were predicated on the production of agriculture commodities in the surrounding land. Sugarcane, corn and vegetables came first then cotton and citrus rose to supremacy. None could have made it in this semi-arid climate without irrigation water. What made it all possible was gravity flow to the north, for the river sits at an elevation of 61' above sea level while the area to Harlingen's north is only 32'.

Here is how this very important ingredient was introduced from the river to the areas north of Harlingen by Hill's Harlingen Land and Water Company:

January 1907  Canal intake excavation work at the river about 9.75 miles south of the Arroyo Colorado is in progress. Later in the year 450 men and seventy teams of mules and horses will be hard at work on the canal under the supervision of experienced engineer John D. Hill. This Hill, no relation to Lon, had previously been employed in Brownsvlle at Lon C. Hill's hardware and implement store there.

8/17/07  Plans are made for starting the power house pumping plant to lift water from the river into the Harlingen Canal. A.R. Mann, a mechanical engineer from Chicago, is engaged to take charge of the machinery. He is already in Harlingen. It was the discovery, in 1901, of oil at Spindletop that made feasible and expedited the pumps along the river, for this energy source was economical and readily available in contrast to ever-diminishing forestry products burned to generate steam.

9/7/07  The Harlingen Canal pumps are scheduled to start. The fuel used for the steam – driven pumps is initially local wood.

9/10/07  The Harlingen Land and Water Company is chartered for the purpose of the construction, maintenance, and operation of flumes, reservoirs, lakes, wells, canals, and later other and all appurtenances for the purpose of irrigation, navigation, milling, mining, stock raising, and city water works, and the supply and transferring of water to all persons entitled to same for the purposes mentioned. With its office in Harlingen its life is set as 50 years. Five directors appointed for one year are Lon C. Hill, (his oldest daughter) Paul Hill, John D. Hill, Dr. S.H. Bell (Hill's best friend) and Peter Ebenezer Blalack (a San Antonio investor). The capital stock is $300,000, par value $100 – all of the capital stock of the corporation being subscribed by the above directors. With eighteen miles of main canal, the pumping station and other facilities in place, 6,105 acres out of the Concepcion de Carricitos Grant and valued at $40 an acre are transferred to the water company. On 9/20/07 Hill also conveys other land to the Harlingen Land and Water Co. Hill's land is exchanged for 2,987 share in the new company. His daughter Paul holds 10 shares, and Bell, Blalack, and John Hill one each.

10/29/07  The Big Flume being built by the land and water company to convey water across the Arroyo Colorado is scheduled to be finished in 30 days. Its cost is projected to be $20,000.
1/9/07 A plan is afoot for the installation of a second pump at the river station. This will double the 15,000 gpm capacity of the first one, now operating for two months. The machinery has already been reserved. At present the canal is "reported" to be 12 miles long and 50 feet wide. (In the pursuit of land buyers, the use of exaggerated numbers was routine in the period.)

3/28/08 River irrigation water reaches Harlingen in the 11.5 miles of canal south of the community. The last stretch was across the arroyo on the flume. The newspaper notes that the canal was started 5/2/07 by Walter Vann, son of Capt. J.W. Vann, who is in charge. The one 24-inch pump is to be supplemented by two 36 inch ones, so up to 35,000 acres may be irrigated. Although Harlingen now has water, it still lacks water mains and other infrastructure for direct delivery of drinkable water to its residents. Cirilo Rodriguez would pump water from the canal near his residence at 802 W. Filmore, settle it in large tin tanks, and then deliver the water by barrel to customers.

6/5/08 On this date 22 miles of canals are said to be in operation, enough to irrigate 40,000 acres. Their cost of construction is put at $280,000. (Again an example where for publicity purposes figures released and quoted would vary wildly.)

11/08 About 26 miles of canal, primary and secondary, are in operation and 75,000 acres are being or are ready for irrigation. During this period Hill is helping to frame the state law that will put into being the first semi-governmental irrigation district in the state. This is to be Cameron County Irrigation District No. 1, established on August 10, 1914, when election returns were filed.

1908 Likely in this year Harlingen has its first running water system. It is the Mooreland Lateral that comes from the main canal south of town and is then connected by a pipe to the Mooreland Hotel. The water entered a cistern tank from which it was lifted by a windmill pump to a water tower higher than the hotel itself. Two private baths run by a Mr. Prelir (?) and several public baths were then available. A bridge at Jackson Avenue straddled the water lateral there.

10/10 After five months work and with 20 days more to completion, Judge R.E. Brooks and Associates of Houston are to complete the Harlingen Land and Water Company canal to irrigate 4,000 acres adjoining Harlingen to the east. Gordon Hill is one associate and has a financial interest.

3/12/14 Harlingen farmers want to take over the canal. They would issue $300,000 in bonds. A petition carries the names of 162 of the 258 landowners in the proposed district of 31-40,000 acres.

5/6/14 Harlingen area farmers to vote on May 8 on $700,000 irrigation district bond issue. It carries when voted on this date and elected directors are A.S. Lowe, S.S. Cummings, J.P. Wilson, Gordon Hill, and G.S. Rhoades.

5/13/14 The Cameron County Commissioner's Court establishes Cameron County Irrigation District No. 1.

12/13/14 The Cameron County Irrigation District No. 1 is organized and will take over the system owned by the Harlingen Land and Water Company. On 12/29/14 The HL&W Co. conveys the pumps and canals to the district for $400,000. An additional $350,000 is voted for improvements. On 5/31/19 it changes its name to the Cameron County Water Improvement District No. 1. $190,000 is expended to change the old steam engines to De La Vergne Diesel engines. In 1929 the power for the pumping is converted to Westinghouse Electric motors. In 1945 it is renamed as Cameron County Water Control
and Improvement District No. 1 and in 1978 it becomes Harlingen Irrigation District Cameron County No.1. It will come to serve 38,025 acres of irrigated cropland and have authorized water rights for 39,574 acres. This will yield 98,232.5 acre-feet of water per annum. In 2002 it will have 3,309 accounts. By this time the major crop acreages are 10,850 for grain sorghum, 10,000 for cotton, and 7,000 for sugarcane.

9/30/18 Harlingen Irrigation District to increase pumping capacity to 266,000gpm.

11/11/21 CCWD to lower irrigation water rates:
1921 $240,000 budget $4.50/acre annual flat rate plus $2.50/acre per irrigation
1922 $150,000 budget $2.50/acre annual flat rate plus $1.25/acre per irrigation.
This was because wartime and postwar fuel prices had come down.

5/24/22 A serious fire at the CCWD pumping plant causes $5,000 worth of damage. Two of the three pumps are untouched. The area has 5,000 acres of corn and 14,000 of cotton at present.

1928 CCWD officers for the year are C.P. Bobo, director, president and manager; J.B. Elmore, vice-president; J.S. Blakney, vice-president; J.R. Grimes, vice-president; Hugh Fitzgerald, vice-president, Frank H. Brown, assessor and collector; and E.B. Worley, engineer. By the end of this year The CCWD No.1 comprises a total 43, 239.39 acres of which 38, 240.62 are irrigated, the balance of which is being used for canals, roads, drainage ditches, and land too high to irrigate. In this year 26,000 acres are under cultivation. These contain cotton, corn, cabbage, beets, carrots, other truck crops, and citrus. There is also dairy and forage. The district has about 160 miles of canals and laterals and a drainage system with 60 miles of ditches. At this time its pumping plant is housed in a substantial iron and concrete structure and consists of four 200hp Fairbanks, Morse and Co. internal combustion engines operating four 36" centrifugal pumps and one 42" one. The total pumping capacity is 132,000gpm. One of the district's canals runs along what is now 13th Street then turns west north of Jefferson Street with a branch going south to replenish City Lake.

5/36 The CCWID No.1 has as its directors F. H. Green, president; J.S. Blackney vice president; H.L. Starnes secretary and manager; with J.W. Wade and W.P. Bush directors.

1939 This year the Harlingen Canal's old wooden flume across the Arroyo Colorado is replaced by a giant, buried inverted siphon.

1942 The CCWD charge is $2 per acre per year plus 50 cents per acre per irrigation.

1949 After April the CCWD canal between Pierce Street and the Southern Pacific tracks is buried. This allows the creation of 13th Street.

6/7/49 The city awards a $65,611 contract to Lehman, Hoge and Scott of Harlingen to bury the 13th Street Canal, converting it to a 5 foot square aqueduct. It will run 3,825 feet from Pierce to the Southern Pacific railroad tracks. Work will commence within the month.

1972 In a continuing evolution of improvements to its infrastructure over the years, the Cameron County Water District #1 converts to all electric powered pumps. It had fueled its steam pumps when constructed in 1907 with wood then converted to oil. By 1956 the pumping plant operated with two dual purpose pump engines, three diesels, and one electric. In 1958 all the engines were replaced by gas-powered ones. At one point when the river changed course by about one half mile a new channel had to be dredged to the pumping plant. This channel required frequent dredging until Falcon Dam was built and silt loads were reduced.
9/1/99  The Harlingen Water District initiates a Water Conservation Policy. At this time it has three reservoirs. The Rangerville Reservoir at 61 feet elevation above sea level, and the highest point in the District, stores 500 acre feet of water. The Boggus Reservoir has a capacity of 160 acre feet and supplies 1,500 acres while the McLeod-Hood Reservoir has a capacity of 280 acre feet to service 2,500 acres. The District also maintains 140 miles of drain ditches that divert floodwaters to the Arroyo Colorado or to the drainage district to the east. The District operates at an efficiency level of 85%.

By this year the District's main canal system consists of 40 miles of earthen canals constructed in clay soils between 1905 and 1915. These range in width from 45' near the river to 20' on the extreme ends. These are supplemented by 20 miles of concrete-lined canals 10-15' wide and 4-6' deep on average, these placed 6' above ground level. The 1950s-60s saw construction of these. In addition pipelines of 12' to 36' diameter range over 155 miles. Most of these pipelines are charged by re-lift pumps.

For a system right in our midst, but so massive and complicated as described, it is strange that it keeps so low a profile. Except for the occasional gar, catfish, tilapia, or bait fishermen, the general public pays little attention to the canals. For farmers however they remain the lifeline for agricultural productivity and for ever-increasing urban residents the essential drinking and landscape water delivery infrastructure. They have served the community well for over a century.