

MUELLER Record

OCTOBER • 1955





THIS MONTH'S COVER

The growth of the Corpus Christi, Texas, water system continues to keep pace with the city's fast growing population. Above, a Mueller 36" valve is shown after workmen installed it on a reducer in a stretch of 48" main.

Recording Our Thoughts

August Bergstrom, 87, a valued friend of Mueller Co. for many years and one of the real pioneers of his city's water system, died recently. He had been identified with the City Water Department at Great Falls, Montana, from its inception until his retirement in 1951, and saw it grow into a multimillion dollar utility.

His record of municipal service was unequaled in Montana. So well known was Mr. Bergstrom that in 1941 he received a letter from our Los Angeles plant addressed only by an imprint of his picture on the envelope and "Great Falls Montana." The following letter from his son, E. L. Bergstrom, to the Los Angeles plant recalls the incident.

"Gentlemen:

"Among Father's papers, we found an envelope you sent to him dated July 8, 1941, and you used a newspaper cut of Dad instead of his name addressing said cut to Great Falls, Montana. He received it and treasured it all these years."

Mr. Bergstrom's service with the city

(Continued on page 16)



October • 1955

WALTER H. DYER, Editor

MUELLER CO.

MANUFACTURERS OF WATER AND GAS DISTRIBUTION AND SERVICE PRODUCTS

FACTORIES

DECATUR, ILL. LOS ANGELES, CALIF.
SARNIA, ONT. CHATTANOOGA, TENN.

SALES OFFICES

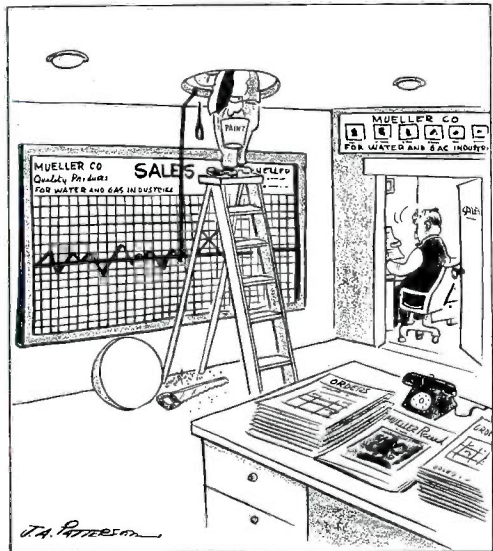
NEW YORK CITY SAN FRANCISCO

TRADE MARK

MUELLER

Reg. U. S. Pat. Off.

Member Industrial Editors Association of Chicago and International Council of Industrial Editors



"How are sales going this morning, Gus?"

"B" Machine Finds Way Into Field Of Fine Art!

But Models Need Lesson In Proper Tapping Method

WALTER BOWAN, chief engineer of Research and Development, suffered mixed emotions recently when he discovered the picture at right in a magazine. A photographer of considerable ability himself, Bowan immediately appreciated the fact that this picture has all the qualities that place it above the ordinary and into a bracket of greatness.

In a dramatic, yet simple fashion, the picture records man's constant efforts to strive for a livelihood in a world that requires us to work for survival. The picture should be great! It appeared in a special publication called *THE FAMILY OF MAN* and was created by Edward Steichen for the Museum of Modern Art of New York City. It was published by the Maco Magazine Corporation of New York City.

As a photographer, Bowan thinks the picture is outstanding. But as an engineer . . . "Why that's a Mueller B tapping machine they are using," Bowan exclaims. "They are all wrong in their work methods. It isn't necessary to move a tap with that much force!"

Bowan, who should know since he has made more than 5,000 taps in the past three years while doing experimental research for our Engineering Division, says it takes only one person to use this machine, although he believes it is convenient to have a second person feed at the same time.

Frank H. Mueller, Vice President and Director of Engineering, agrees with Bowan that the photographer probably

(Continued on page 16)





In Kankakee, Ill. The C. of C. Has A Right To Brag

*And Water Company Keeps
Pace With Busy Community*

IT'S THE DUTY of a Chamber of Commerce, of course, to brag about its hometown.

But there should be no question about the right of the Chamber of Commerce of Kankakee, Illinois, to do a king-sized job of bragging.

Consider these facts—

Since 1940, industry has spent more than \$50,000,000 in Kankakee for new production capacity.

Industries that have built plants in Kankakee during that time include A. O. Smith Corporation, Armstrong Cork Company, General Mills, Inc., Borden's Soy Processing Corporation, Gould National Battery Company, General Foods Corporation, Armour Laboratories and Simoniz Company.

To that group of blue chip industries, add these equally-well-known manufacturers who have been in Kankakee for years: American Marietta Company, Florence Stove Company, Kroehler Manufacturing Company, Bear Brand Hos-

inery Company and David Bradley Manufacturing Works.

So from whichever angle you choose to view the city of Kankakee, Illinois—population 25,900—one fact overshadows all others: Industry's attraction to Kankakee has had a tremendous impact on the area's economy. It's a prosperous, get-up-and-go community.

And that should serve as a backdrop for an introduction to the Kankakee Water Company, because industry has had an impact on the water company, too.

The Kankakee Water Company serves the City of Kankakee and its environs, the Village of Bradley and Kankakee and Manteno State Hospitals.

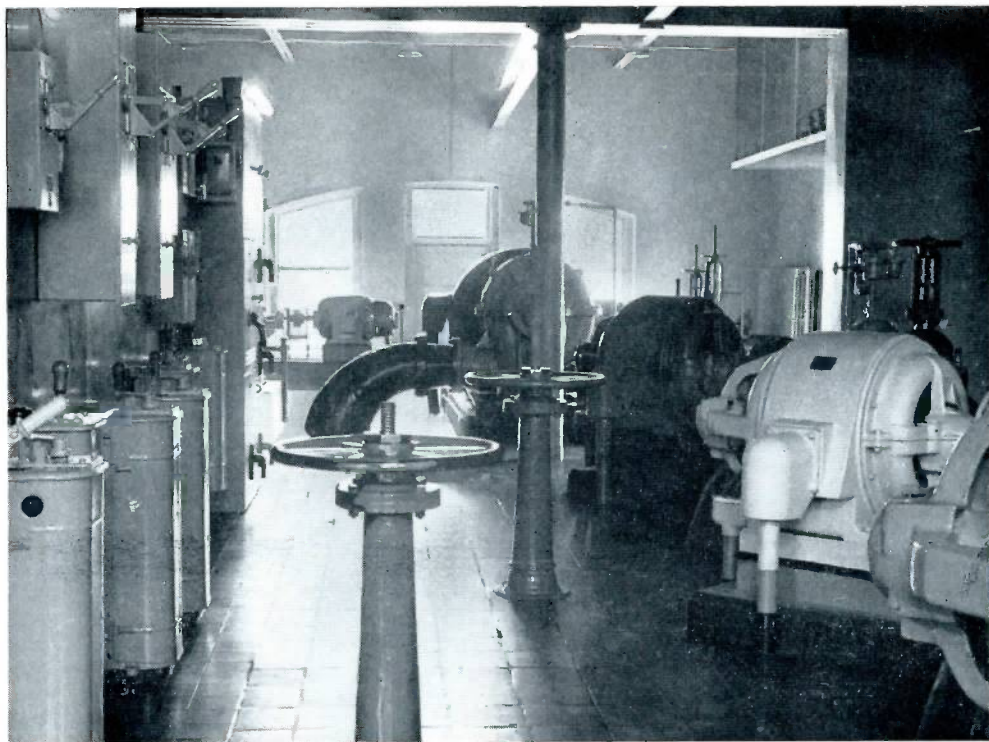
Of course, water systems all over the country have had remarkable growth records in the past decade or so. But few can match Kankakee Water Company's growth from an average daily pumpage of 3,100,000 gallons in 1940 to 8,370,800 gallons in 1954.

Indications are that 1955 will crack all existing records. Up to August 1,



Lynn O. Minor, Vice President and General Manager of the Kankakee Water Co. in Kankakee, Illinois.

A view of the high service pump room.





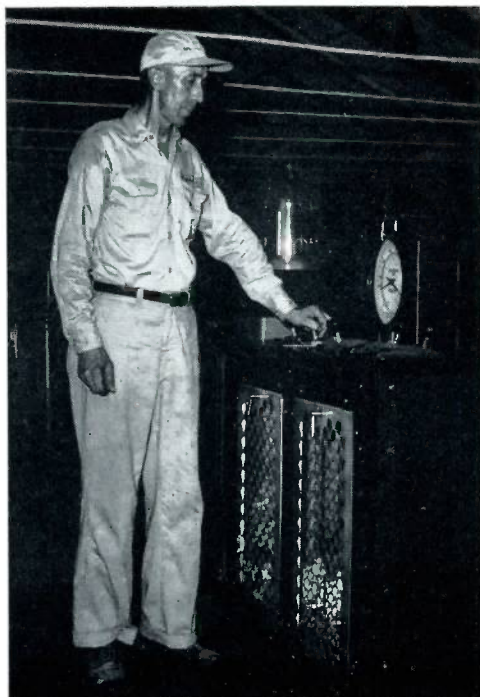
Looking at the softening plant from the west.

This attractive building is the Kankakee pumping station.





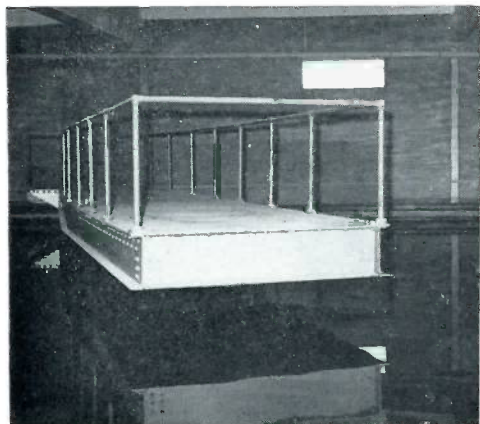
A Kankakee Water Co. employee collects a sample of the water to test its condition.



A workman operates the filters control unit.

Chief Engineer Gerold M. Holcomb demonstrates how the A.K.V.A. switch panel should be operated.

This is the 60 x 60 foot original clarifier.





The 750,000 gallon elevated tank.

the daily average was 8, 975,198 gallons—half-a-million gallons a day ahead of the same date in 1954, with maximum days of 12,000,000 gallons.

"It keeps us humpin' to supply the demand," says Lynn O. Minor, Vice-President and General Manager. "There doesn't seem to be any end to the growth in sight."

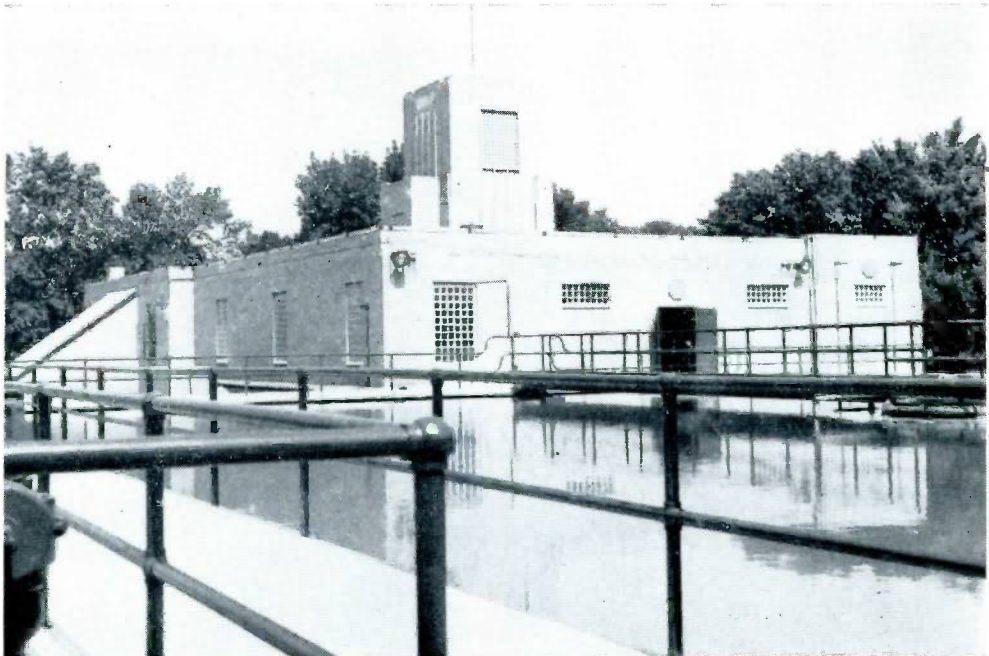
The company is owned by Consumers Water Company of Portland, Maine, which operates subsidiary water companies in six states. President of the Kankakee company is Fletcher W. Means of Portland, who serves as Vice-President and General Manager of Consumers.

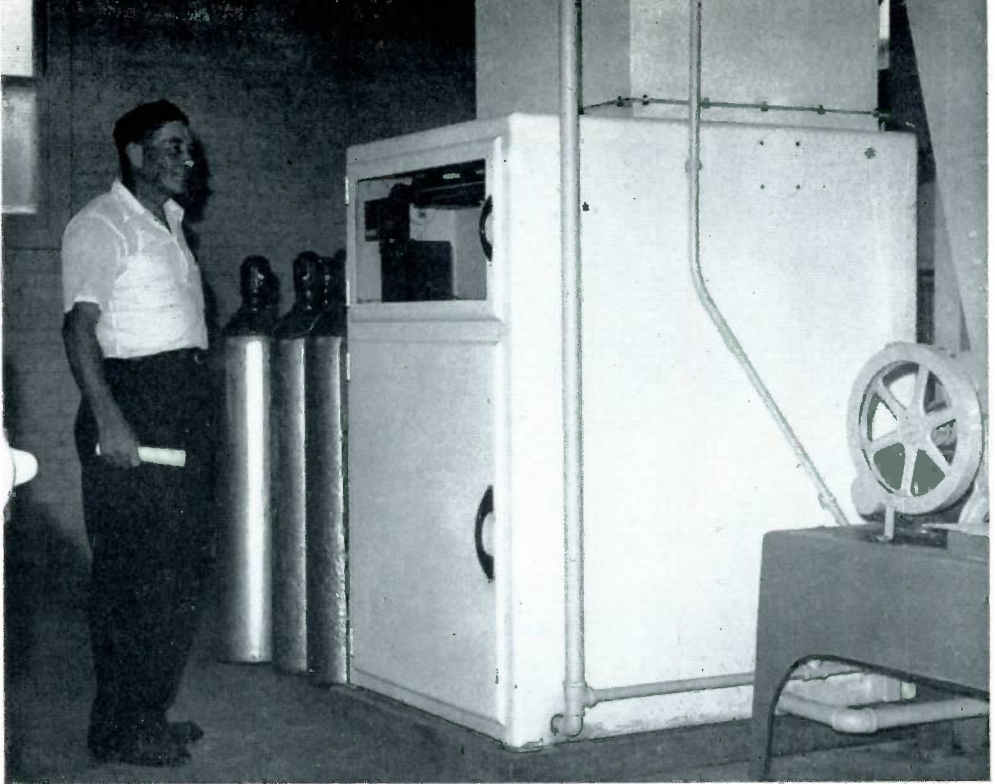
Kankakee Water Company has never had a supply problem since its founding in 1886—and probably never will—because it takes its water from the Kankakee River, which has a flow of better than a billion gallons a day, even in dry weather.

Instead, the problem has been—and still is—one of pumping, softening and purification capacity. During the past 15 years, for example, the company has increased its utility plant investment 150 per cent.

"We like to think that our willingness to invest in the future of the community has played an important part in attract-

The east view of the softening plant with clarifiers in the foreground.





Chief Chemist H. L. Clark keeps a close check on the carbon feeder.

ing so much industry to Kankakee," says Minor. "Certainly industry must have tremendous amounts of water, and we've never failed to meet the challenge of increased demand."

Complicating the problem of the Kankakee Water Company is the fact that it must soften its product.

The company began softening its product in 1928—one of the first companies

This view shows a part of the interior of the filter plant.

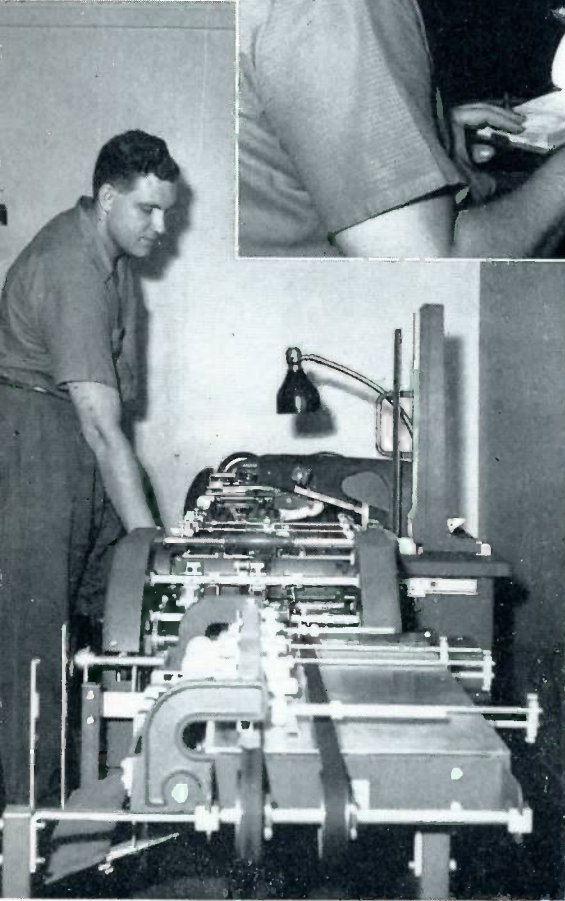


Below, the operation of the printing machine for preparing water bills.



This billing machine above prepares 500 water bills per day.

One of three chemical mixers at the Kankakee Water Company.



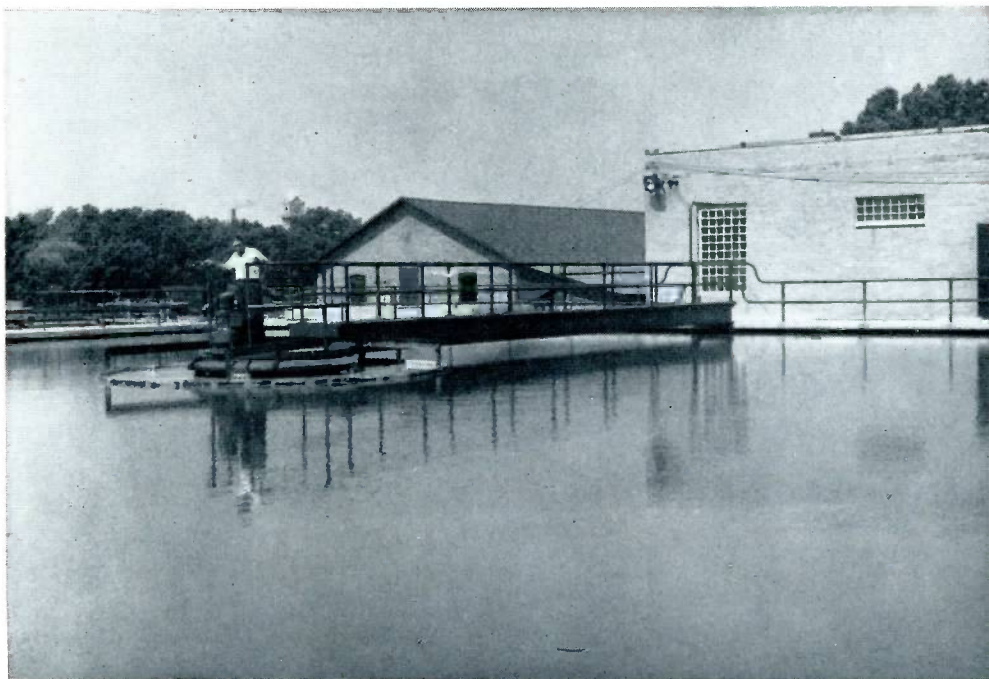
in the country to take such a step in behalf of its customers. Using the lime and soda ash softening treatment, the hardness is reduced from an average of 300 p.p.m. as the water comes from the river to an average of 85 p.p.m. as it is delivered to the company's customers.

Sludge from the softening process is pumped 3,000 feet through 4-inch pipe to an abandoned quarry, which the com-

pany purchased in 1941, across the river from the pumping and purification plant.

Tremendous increases in the demand for water have kept the Kankakee Water Company in a state of almost continuous expansion for the past 15 years.

As a for instance, Minor says: "Ever since I came to Kankakee 15 years ago, I've wanted to have an open house, to show the people of the community our



The 100 x 100 foot clarifier.

facilities. But we were always adding on, putting in new equipment, changing things here and there. It wasn't until last spring that we got a breather and finally got to hold our open house."

The "breather" didn't last long. As soon as the open house was over, work began to install a new 9,000,000-gallon-a-day high service pump, so that it could be in service to meet peak pumping requirements in the summer months.

"That's typical of the way things have been going for 15 years, and we're still planning ahead to meet even greater demand," Minor says.

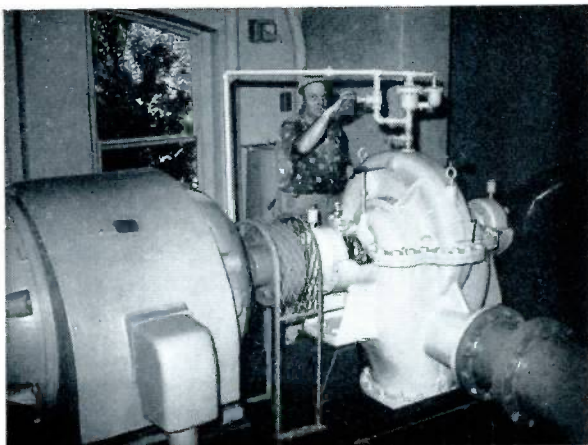
For the record—although the figures may be out-dated by the time you read this, the way things have been going in Kankakee—the company has more than 9,200 active services and has passed the 10,000 mark in total number of services. Customers are served by almost 95 miles of mains.

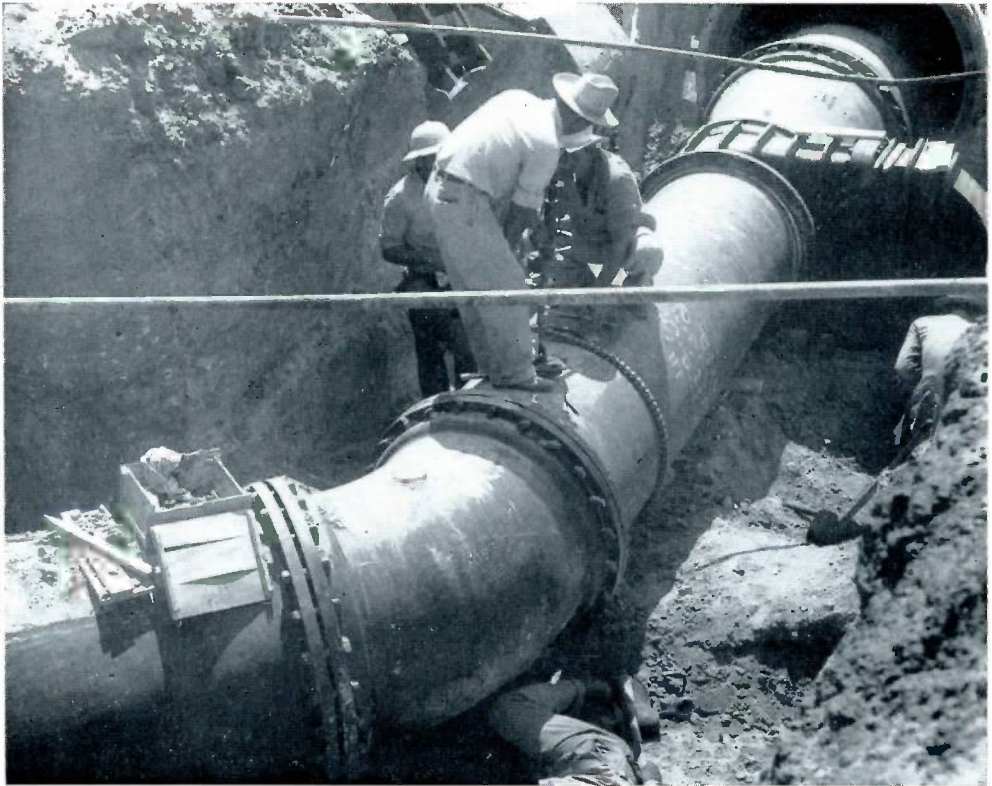
As a part of its public relations program, the Kankakee Water Company presents a booklet, "Behind the Faucet, An Introduction to the Kankakee Water Company," to its new customers.

The company offers to send copies of the booklet to other water companies who are interested in such a publication.

You may have a copy by addressing a letter to Mr. Lynn O. Minor, Vice-President, Kankakee Water Company, Box 152, Kankakee, Illinois.

A Kankakee Water Company employee operates the nine million gallon daily high service pump.





Corpus Christi workmen place a Mueller 2" corporation stop in a 36" main with a Mueller A-2 drilling and tapping machine. Many miles of 48", 42" and 36" mains have been built recently in the city's efforts to keep abreast of the growing population.

A Giant Grows In Texas

Population Doubles Every Decade Since 1920 And No Stop Is In Sight

THERE'S a young giant in the Coastal Bend Country growing so rapidly that the proud citizens of Texas may be called upon to create a fabulous new adjective to describe it accurately.

Called "The Door to Wonderland" by its 155,000 residents, the giant is Corpus Christi, and its rapid evolution into one of the major metropolitan areas of Texas has come about as a result of the favorable positions it occupies with respect to other cities, the Gulf of Mexico, and a large, oil-rich tributary trade area.

The city is the most southerly of seven large Texas cities, and it is located near the Gulf of Mexico 150 miles north of the Mexican border and 200 miles southwesterly from Houston. Its trade area consists of 24 counties all connected by a system of well-maintained state and federal highways.

Corpus Christi is located on Corpus Christi and Nueces Bays in the flat plains of the Coastal Bend country. To the east is visible the low-flying shore of Mustang Island, which separates Corpus Christi

Bay from the Gulf of Mexico. To the north is Nueces Bay, and to the west broad, level fields of cotton and grain sorghums, dotted with oil derricks, pumps and tanks. Finally, to the south is found the tremendous expanse of the King Ranch.

Historically speaking, the city is young. While the founding goes more than 100 years to the establishment of a trading post by Colonel Henry L. Kinney in 1839, the history of modern Corpus Christi dates to the opening of the deep-water port facilities in 1927 and the development of oil production in the area. The city contains few old landmarks, and there's little to remind the visitor of the past. Generally speaking, its citizens are not concerned with the past but, rather, are directing their attention and enthusiasm to the future.

Fabulous, the word so often used to describe this Cinderella city, is perhaps adequate to point up its phenomenal growth since 1920. Each decade since that year, the population has nearly doubled.

Corpus Christi had but 10,000 residents in 1920. In 1930, three years after the opening of the port, the population had jumped to 27,000. It was 57,000 in 1940, and 108,000 in 1950. Today, there are 155,000 people in the city, and although the 1950 population isn't expected to double by 1960, it is believed it will be well over 200,000 by 1970.

What has caused this obscure coastal town of 35 years ago to grow into a beautiful metropolitan area? Consider these facts. Its 28-year old port is ninth in the nation tonnage-wise; its Naval Air Station is the world's largest and represents an annual payroll of 42 million dollars; eight percent of the nation's oil reserves are within 150 miles; it has 16 percent of the nation's gas reserves; its industries showed an increase of 153 percent in manufacturing employment during the 1940-50 decade, and that is up an additional 30 percent since then; its bank deposits are at an all-time high emphasizing the city's economic strength.

The area is served by excellent deep water transportation facilities connecting with the vast intracoastal waterways system as well as the Gulf of Mexico. Corpus Christi is served by the Missouri Pacific, the Southern Pacific, and Texas

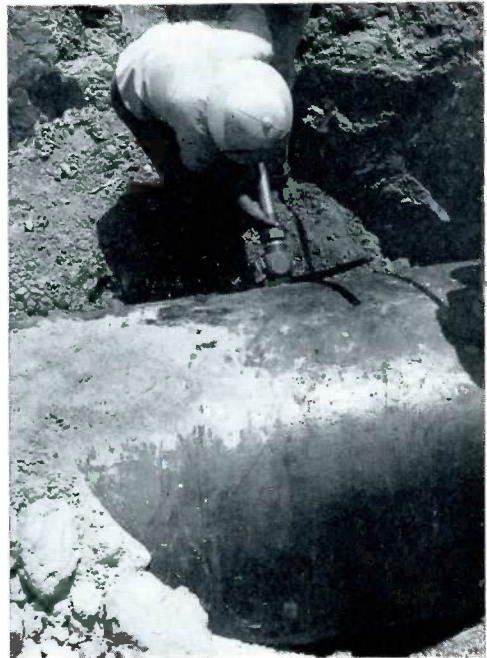
Mexican Railways, Braniff, Eastern and Trans-Texas Airlines, eleven interurban bus and truck systems and fifty pipelines which collect and distribute crude oil and gas and their products.

Inexpensive water transportation, the exploitation of oil and gas reserves, and more recently the establishment of military installations also have been dominant factors of growth. To a lesser degree, these factors have influenced the development of the trade area which remains predominantly rural in character.

Corpus Christi is a natural vacation area and enjoys a tourist trade that brings 12 to 15 million dollars a year into the city. Most employment is provided by the military installation, a diversity of industry (chemicals, aluminum, smelting, refineries, and many others), and agriculture (mostly cotton and grains).

During the past 15 years, a number of national concerns have established large plants in the area, including the American Smelting and Refining Company, Celanese Corporation, Corn Products Refining Company, Halliburton Portland

A workman holds a coupling of the copper pipe to the outlet end of a Mueller 2" corporation stop after it was inserted in the main under pressure with an A-2 drilling and tapping machine.



Cement Company, the Sinclair Refining Company, and most recently, the Reynolds Metals Company.

The tempering influence of the Gulf of Mexico, together with its southern location, gives Corpus Christi a mild climate. The average temperature for January is 56.5 degrees; while the average for August, the warmest month of the year, is 83.1 degrees. Although the humidity is higher than most inland cities of the Southwest, the temperatures in the summer are more moderate and a prevailing stiff breeze makes the summers comfortable. The average rainfall for Corpus Christi amounts to only 26.5 inches.

Like many other rapidly expanding cities of the Southwest, Corpus Christi is experiencing some growing pains. Despite the rapid construction of many new schools, facilities have been inadequate to meet the rise in school population. It has been necessary for many of the schools to operate on a two-shift basis. The large growth in population has

created problems of rapidly expanding street, sewer and water systems and other public services. Even the city hall became too small and a new four-story building has been erected. The city is making great strides in most of these problems.

However, on the other hand, Corpus Christi has been confronted with a fundamental problem which could not be as readily eliminated, but which the city has made every effort to meet in order that growth of the area may continue.

That problem is maintaining an adequate, dependable water supply. The city has been fortunate over the years to have had city officials who realized the importance of its water supply and to have had a water department staffed with men who are interested in the city's growth and who know that a city can grow only when it is properly supplied with dependable water.

Probably no other water department has been faced with the problem of keeping pace with a city whose population

Corpus Christi water works men check the installation of a Mueller 36" valve on a 48" main connected to a reducer which enabled the main to fit the 36" valve flange.



grew from 10,000 to 155,000 in just 35 years. Although it would be impossible to list all the men who have had a hand in Corpus Christi's Water Department, no list could begin without the name of John Cunningham, the Department's general superintendent. Mr. Cunningham is known as the father of the department and has spearheaded many projects to keep the water system growing with the city. His son, Atlee, is superintendent, and is being groomed to replace his father as general superintendent when the elder Mr. Cunningham retires. Atlee was promoted from superintendent of the Calallen Treatment Plant to superintendent of the entire Water Department.

William McGregor is superintendent of the storeroom and warehouses which carry a normal inventory of \$275,000 worth of stock consisting mostly of water works material. Paul Werner is chief engineer in the Water Distribution Department, and Drahn Jones is Director of Public Works, moving to Corpus Christi from Waco, Texas, where he held a similar position.

City officials now in office have taken an active interest in the department. The mayor is Farrell D. Smith. Commissioners are Minor Culli, W. J. Roberts, Manuel P. Maldonado, and B. E. Bigler. Russell McClure is city manager, Mr. Singer is city attorney and Mr. Kring is city secretary.

The City of Corpus Christi has a payroll of 1,365 people, and of that number, 177 are members of the Water Department. There are 36,067 water customers in the city, 1,700 fire hydrants (of which 90 percent are Mueller hydrants) and there are approximately 500 miles of distribution lines ranging from 2" to 48". For the past three years, the department has added from 300 to 400 new services each month. All construction work up to and including 16" mains is done by the department.

An average of 40 to 50 million gallons per day is pumped into the distribution system. In addition, the city of Corpus Christi sells water to these towns and industries: Reynolds Metals Company at Ingleside, Texas, the City of Ingleside, and Gregory, Portland, Odem, and Flour-

bluff. There is a 20" water line which serves the Celanese plant at Bishop, Texas, 34 miles from Corpus Christi.

The city obtains its water supply from Lake Corpus Christi located at Mathis, Texas, on the Nueces River some 40 miles from the city. Growth of the Water Department coincides with growth of the city. Although a history of the water supply may be traced to the early 1800s when briny wells and cisterns supplied the community, its real growth, like the city it serves, did not begin until the 1920s. At a cost of \$2,708,526.25, La Fruita Dam was constructed near Mathis. It consisted of an earth embankment 3,000 feet long with a concrete spillway 1,100 feet long, impounding 500,000 acre feet of water. Construction was begun in 1926 and finished in 1929. The city accepted the dam in January, 1930, only to have it fail ten months later.

In 1933, the majority of the Water Plant Revenue bond holders applied to the Reconstruction Finance Corporation for a \$500,000 loan to rehabilitate La Fruita Dam. The work was done by the J. L. Simons Co., and this time there was no failure.

During this period the plant was still growing. In 1927 a change was made to complete electric power and a substation was installed at the water plant. The old pumps were replaced with two four million gallons per day centrifugal pumps powered by 200 horsepower synchronous motors. A booster plant was built on a 20" line increasing the line capacity from three to five million gallons per day. Another elevated tank was added in 1929 with a 500,000 gallon capacity.

The question of a reserve supply in the city in the event of a prolonged failure was answered in 1935 with construction of a ten million gallon reservoir. The plant located with it was equipped to pump seven million gallons per day. As the demand for water grew, more filters were needed, so in 1937 two more one million gallon rapid sand filters were added and immediately in 1938, eight additional ones were built. That same year, main capacity was increased with construction of a 30-inch cement lined cast iron main to the city.

With the advent of the Naval Air Station and World War II bringing with

it new industrial activity and an almost doubling population, the struggle to keep the plant facilities up began in earnest. Four one million gallon filters were added bringing the total to 18. A large five million gallon settling basin with adjacent chemical feeding plant was built, necessitating an intermediate pumping plant. A 36-inch enamel lined cast iron main from Calallen to Corpus Christi was laid at this time, and from this main the Naval Air Station is served. The ten million gallon Savage Lane Reservoir with 18 million gallon pumping capacity was constructed making it possible to pump more water from the Calallen plant. This was finished and in service by 1944.

In 1945, another five million gallon settling basin was built at Calallen. As a result of a tropical storm causing a power line failure in August, 1945, it became apparent that for a city using approximately 25 million gallons daily, 15 million gallons in two reservoirs would not last long. Auxiliary equipment was necessary, so early in 1946 a 600 horsepower diesel-electric auxiliary unit was installed in the plant at Calallen. This furnished power for purification and pumping of approximately 10 million gallons daily.

Throughout 1950, a number of major improvements were completed. The Calallen plant was expanded to a capacity of 50 million gallons daily, and a new office and laboratory were built. A 16 million gallon reservoir was built immediately behind the existing 10 million gallon tank and additional pumps were installed. Another one million gallon tank was erected, and a bond issue, approved in 1948, supplied the necessary funds to install a large number of mains and trunk lines in the distribution system during 1949 and 1950.

The lower Nueces River Water Supply District was formed in 1949 and during 1950 it was responsible for letting a contract for the drilling of some wells and for an investigation which resulted in the selection of the site of a new dam. The \$15,500,000 structure is called the Wesley Seale Dam.

And as if construction can never stop, the Water Department is now building a new water treatment plant at a cost of \$3,403,657.

The future of Corpus Christi is pretty obvious—continued growth. And the future of the Water Department must also be growth. There is no other way, for the people who run the department know that when the Water Department ceases to expand, that will be the day that this giant of the Southwest must stop growing.

Fine Art . . .

(Continued from page 2)

took a little poetic license in order to achieve this dramatic effect.

"On the other hand," he laughed, "I wouldn't be at all surprised if the photographer didn't catch some of the fellows using the wrong method even though they are familiar with the correct way the Mueller B tapping machine should be operated.

"No matter what," Mr. Mueller says, "we have seen the B tapping machine come a long way since it was invented in 1871. But I never suspected," he says with tongue in cheek, "that it would find its way to the level of fine art!"

This picture, along with 502 others taken in 68 nations, appeared in the magazine THE FAMILY MAN, and is on display at the Museum of Modern Art in New York City.

Recording Our Thoughts . . .

(Continued from page 3)

covered a span of 60 years, 53 of which were spent as a city employee. He advanced to superintendent of the street division of the Water Department and many mayors of Great Falls termed his service invaluable.

Born in Sweden January 7, 1868, he came to the United States in 1883, locating in Amherst, Mass. He moved to Great Falls in 1891 and that same year became an employee of a privately owned water company. The city purchased the water company in 1898 and he became a city employee at that time and remained one until his retirement in 1951.

When he entered the service of the water company, Great Falls had but 72 services and the mains were few. Even as the system was enlarged to include over 100 miles of primary mains, over

(Continued on next page)

Don E. Radcliffe Is Named Assistant To W. H. Hipsher, Executive Vice President

Don E. Radcliffe, manager of the A. C. Allyn & Company office in Decatur, Illinois, has been appointed Assistant to William H. Hipsher, Executive Vice President of Mueller Co.

Mr. Radcliffe assumed his new position October 15. The post is a new one. He has been in charge of the investment brokerage firm's Decatur office since 1948, coming to Decatur from the company's headquarters in Chicago.

He joined A. C. Allyn & Company in 1947 after receiving a Master of Science degree in Economics from the University of Illinois. He was awarded his Bachelor of Science degree in Economics in 1946.

Mr. Radcliffe is chairman of the City Planning Commission in Decatur and is president of the Decatur Family Service Association. He also is vice president of the Decatur Club and is a member of the Decatur Rotary Club.

He is a former vice president of the Illinois Junior Chamber of Commerce, a past president of the Decatur Jaycees, and also a past president of the Illinois Young Republicans. In 1954 he received the Young Man of the Year Award in Decatur.

He served with the field artillery during World War II from 1942-45, attaining the rank of first lieutenant. Two years of that period were spent in the South



DON RADCLIFFE

Pacific. Prior to the war, he attended the University of Illinois from 1939-42.

Mr. and Mrs. Radcliffe are members of the First Methodist Church in Decatur. They have a son and daughter, ages four and one and one-half years, and make their home in Decatur.

Thoughts . . .

900 gate valves and over 650 fire hydrants, Mr. Bergstrom knew the location of every water main and every hydrant. At times his services were invaluable, since he knew the location of valves and mains not entered on maps when this information was essential to cope with broken lines and flood damage.

Mr. and Mrs. Bergstrom were married in their home on October 6, 1894. They continued to live there through the years and on October 6, 1954, the couple celebrated their 60th wedding anniversary.

The passing of August Bergstrom has

lessened by one the number of this nation's water works pioneers. His contribution to his city and to the water works industry will not be forgotten.

She was a mountain girl having her first dental work started. The dentist drilled and she showed no evidence of pain. Finally he turned the air stream into the cavity. Still no evidence of pain or concern.

"Feel that air?" he asked.

"That ar' whut?" she answered.

* * *

The making of friends is the best token we have of a man's success.

Introducing

Robert W. Craig, Sales Division Asst. In Decatur

Robert W. Craig, who joined our company as a Sales Division Assistant in April, 1955, brought a background of excellent management training to his administrative sales post.

His business experience prior to that date includes the position of Assistant Manager of F. W. Woolworth Company stores in Jackson, Mississippi, Kansas City, Missouri, and St. Louis, Missouri, the latter being the second largest Woolworth store in that city.

Born in St. Louis, Bob moved with his family to Springfield, Missouri, where he attended grade and junior high school. His family then moved to Jefferson City, Missouri, where he was graduated from high school.

He attended the University of Missouri, and it was there that he put his musical talent to work in order to help pay his expenses through school. Bob played in a college dance band that performed for social events at the university. While a student, he pledged Sigma Nu Fraternity.

He left school in 1947 to join the F. W. Woolworth Company management training program, and was with that firm until 1950 when he joined the Special Services Division of the United States Air



ROBERT W. CRAIG

Force at Camp Stoneman, California. Bob became an expert photographer in the service and has maintained an avid interest in photography as a hobby since then.

In 1953, he left the Air Force and became a salesman for the Kochton Plywood Co., Inc., of Decatur, Illinois. He traveled the Southern Illinois territory. In April, 1955, he was employed by Mueller Co. as a Sales Division Assistant to A. O. Yonker, Assistant Sales Manager of waterworks goods manufactured at our Decatur plants.

Waves of American tourists have begun flowing to all the corners of the earth, where they'll do their best to overlook the plumbing, the lack of air conditioning, the native drivers, the confusing currencies—and the American tourists.

—Wall Street Journal.

* * *

A horse walked into a bar and ordered a martini with catsup. The bartender mixed the drink and the horse bolted it down. Then he asked, "Don't you think it strange that I'd ask for a martini with catsup?"

"Why, no," said the bartender, "I rather like them that way myself."

Tired and hungry, the itinerant knocked at the door of an English inn called "George and the Dragon."

"Please, mum," he asked the woman who appeared, "could I have a bite to eat?"

"No," she screamed and slammed the door.

He knocked again and pleaded, "But, mum, I've been walking all . . ."

"I told you 'No,' now quit bothering me," and she slammed the door again.

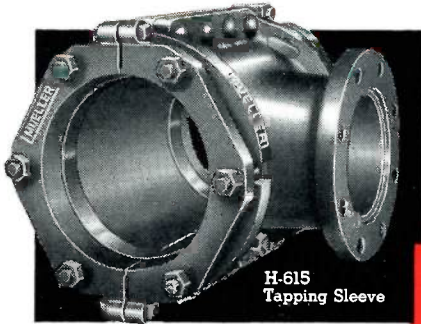
Once more he knocked and once more the door was flung open. "Now, mum, could I have a few words with George?"

MUELLER

Connect Branch Mains...

**quickly
safely
simply**

under pressure!

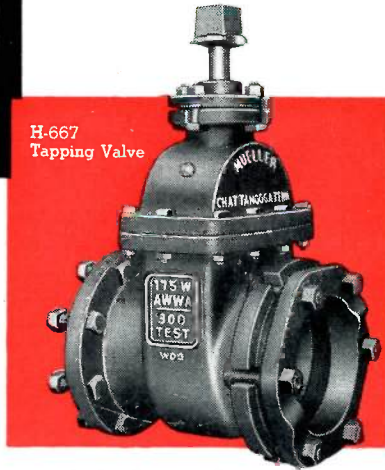


H-615
Tapping Sleeve

Mueller Tapping Sleeves and Valves are put in service under pressure with a Mueller "CC" or "C-1" Drilling Machine—no shutdown, no loss of water, no interruption of flow in main!

One mechanical joint sleeve of a nominal size will fit all classes of cast iron pipe regularly used by using only two sets of gaskets. Main sizes from 4" through 12" with various combinations of outlet sizes 2" through 12" are available.

Special mechanical joint tapping valve has oversize waterway—allows full-size cut for maximum flow. Exclusive four-point disc wedging mechanism assures tight shutoff. Available with "O" rings or conventional packing in sizes 2" through 12".



H-667
Tapping Valve

Calked type sleeves are available which will fit all classes of pipe for mains 3" through 36" with various outlets 2" through 16". Calked type valves are available with "O" ring or conventional packing or flanged type for post indicator with conventional packing only—sizes 2" through 16".

Consult your Mueller Representative, Catalog W-96 or write direct for full details.

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MAIN OFFICE & FACTORY DECATUR, ILLINOIS

MUELLER®



IMPROVED CURB BOX

Telescopic upper section prevents damage to stop, line or box from heavy loads . . . upper section held in any position by strong phosphor bronze spring . . . allows for grade changes, settlement or frost heave . . . cannot be pulled out of base . . . bronze-bushed lid assures easy removal of access plug at all times . . . curb box completely coated with tar base enamel . . . for stops in sizes from $\frac{1}{2}$ " through 2" . . . lengths from 2' through 6' . . . optional foot-piece centers stop and provides solid support for curb box.

INVERTED KEY CURB STOP

Tapered key individually ground and lapped for perfect pressure-tightness . . . key seated by base cap *and* water pressure . . . increase in water pressure automatically increases key-seating force . . . key is unseated for easy turning with downward pressure on shut-off rod . . . pressure instantly reseats key . . . combined cap and tee has accurate built-in check . . . all parts cast from finest waterworks bronze . . . various combinations of inlets and outlets for any type, or types, of service pipe . . . sizes from $\frac{1}{2}$ " through 2".



See your Mueller Representative, Catalog W-96 or write direct for detailed information on Mueller's full line of curb stops, curb boxes and related waterworks products.

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