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MUELLER RECORD

FEBRUARY • 1967

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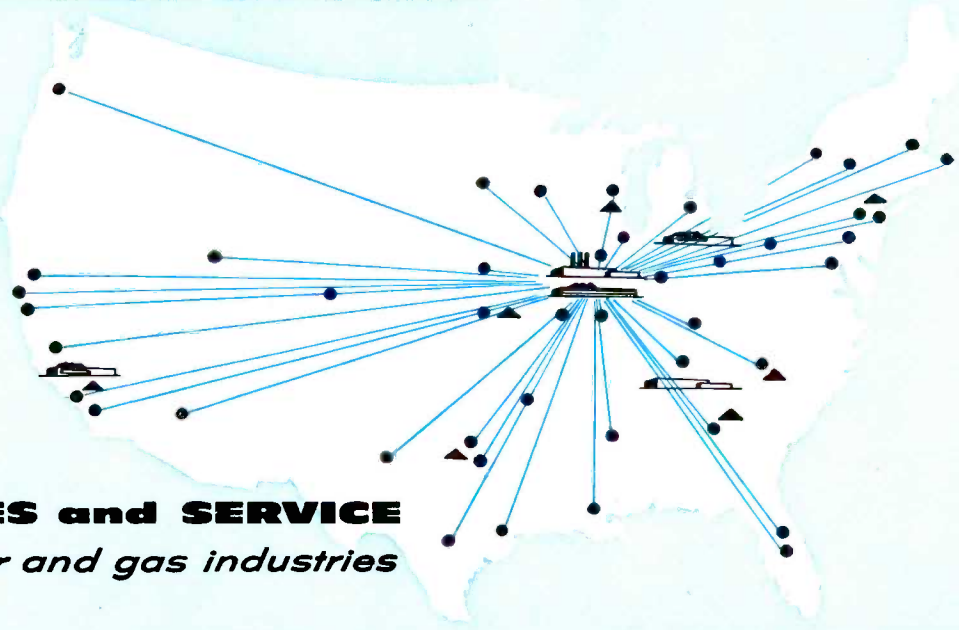


Shreveport, Louisiana

"Secondary" Body Of Water Is Of Primary Importance

The dictionary defines "bayou" as "a secondary or minor body of water." In Shreveport, La., however, a dam built on Cross Bayou and improvements made on the resulting lake have made it of *primary* importance to the community, and today Cross Lake is called: "Truly . . . one of the greatest assets of our town."

Cross Lake provides the residents of Shreveport with a spot in which to seek out largemouth black bass, an opportunity to skim across the water in a sailboat or powerboat, or a place to sit and relax along its 56 miles of shoreline. But more important to the nearly 200,000 citizens is the assurance that Cross Lake offers a dependable source of water for the second largest city in Louisiana.

It is axiomatic that any community, to grow and prosper, must make maximum use of its natural water sources, and Shreveport does this with Cross Lake. The Shreveport Department of Public Utilities not only uses the lake as its water supply but is also responsible for patrolling it and even operates a fish hatchery and stocks the lake with catfish, bass, white perch and others.

Cross Lake has never failed the community, but during the 1954-55 drought confidence waned a bit as the raw water dropped to a point where there was only enough to cover the city's needs for 200 days. This water crisis—a crisis to Shreveporters, at least—was warning enough, and the next year the voters approved an $8 million general bond issue earmarked for water and sewerage improvement.

In 1926, Cross Lake was created by constructing a concrete dam on the right-of-way of the Kansas City Southern Railway Company. About 8,000 feet of the railroad's embankment on the upstream side of Cross Bayou were made impervious with clay from the lake bed and used as an earthen dam. Large stone was also placed along this earth embankment to protect it from wind and water erosion. Upon completion, the lake had an average depth of eight feet over 9,000 acres, a width of from one to three miles by eight miles in length, and covered nearly 14 square miles of water surface. The lake's capacity of about 25 billion gallons provided a growing Shreveport with an excellent source of raw water for nearly 20 years. This was quite an improvement over the uncertainties of the Red River that had been the sole source of water in 1925.

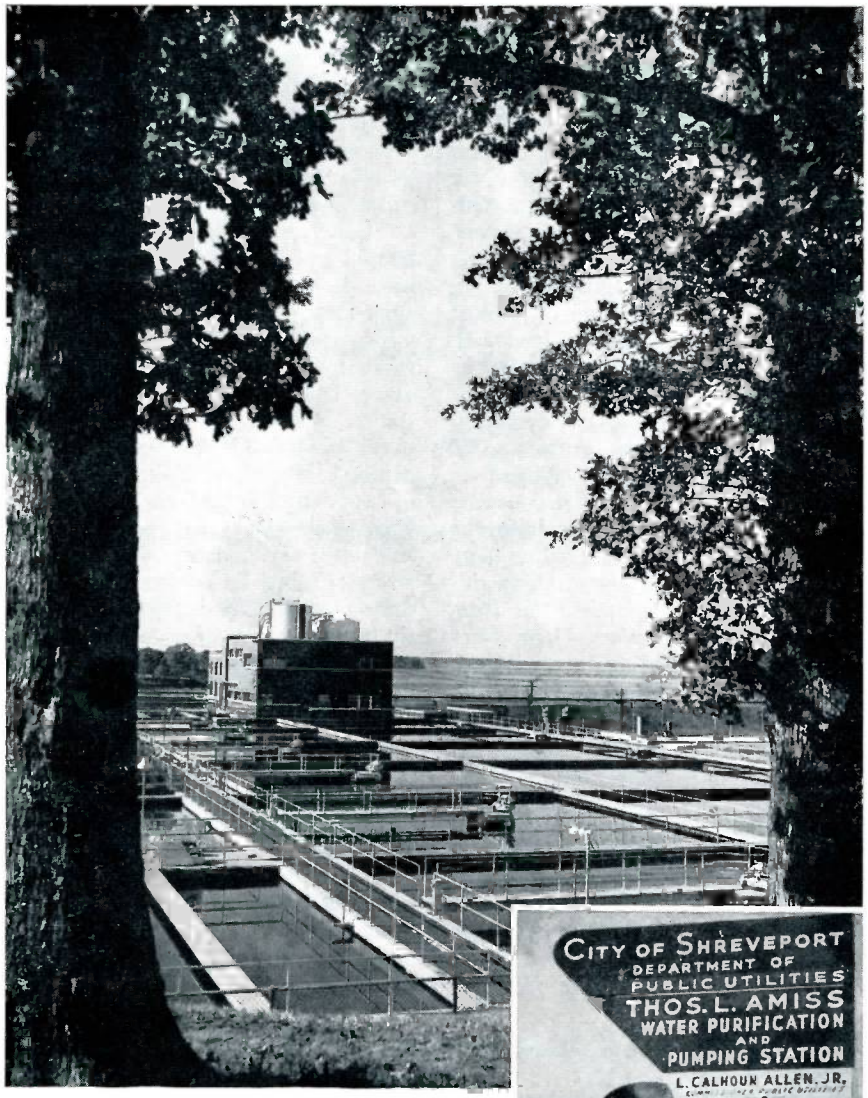
Late in 1957, following a combined study by the Water Department and private consulting engineers, the Twelve Mile Bayou was tapped as a supplemental source of supply.

The Twelve Mile Bayou Pump Station and a 60-inch transmission line were designed and constructed to take advantage of the tremendous quantity of excellent quality raw water overflowing Caddo Lake Dam and flowing down Twelve Mile Bayou. With this station and transmission line, excess water from Caddo Lake could then be pumped into Cross Lake at the rate of 100 million gallons daily when Cross Lake had the space available and when the quantity and quality of water flowing in Twelve Mile Bayou were adequate. In the spring of 1963, six billion gallons of water were added to Cross Lake from this source and furnished the city an abundant water supply in one of the driest years on record.

Of course an adequate water supply requires the necessary treatment facilities, pumping stations, distribution system and, above all, interested people to see it through to its fullest potential. Shreveport meets the requirements in every respect, primarily because of its top-quality, far-sighted managers and informed citizens who take advantage of it as a fine recreational facility.

Beautiful Cross Lake is the source of Shreveport's water supply as well as the source of much enjoyment for Shreveporters who

Mueller fire hydrants marked for shipping.



Thomas L. Amiss, Superintendent-Engineer for 44 years, stands beneath the sign which identifies the station named in his honor. This attractive modern plant has a firm capacity of 38 MGD.

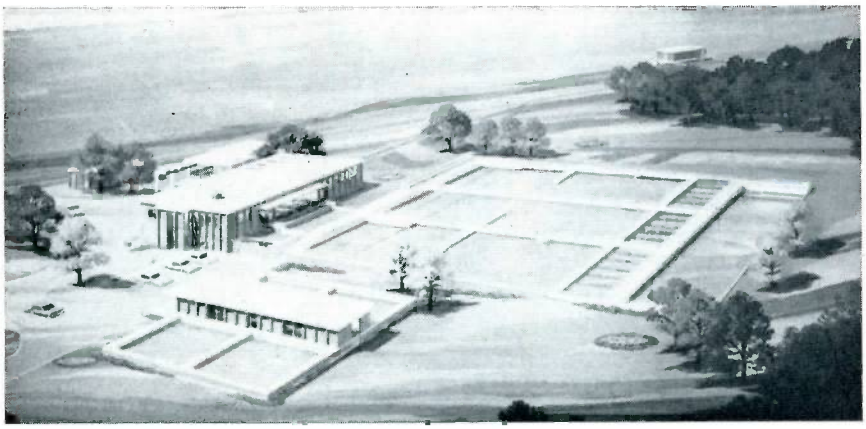
are willing to give the Department of Public Utilities the support it needs to do its job.

Support is obtained not only by doing a good job but, in addition, by making people aware of it. Instead of merely being content with supplying water, management at Shreveport takes its message to the citizens, emphasizing the importance of an adequate water supply, informing them how this is obtained, and letting the voters know how they can help. This long-term public relations program at Shreveport won the Southwest Section AWWA Achievement Award in 1964. It is the support of the Shreveport citizenry that makes funds available for expenditures for equipment, plants and manpower necessary for its modern system.

The biggest project scheduled at Shreveport at this time is a $3 million expansion of the Thomas L. Amiss Water Treatment Plant and Pumping Station. This building program, expected to be finished in early 1969, will give the facility the capacity to supply an additional 16 million gallons a day (MGD).

Shreveport is almost unique in that it has two water treatment and pumping stations, each complete in itself and entirely independent of the other. The combined overall capacity of the two stations is presently 54 MGD with a combined pumping capacity to meet higher hourly demands of 67 MGD.

Thomas L. Amiss Station, originally the Cross Lake Station, was named for Thomas Lamkin Amiss, who was employed by the old Shreveport Water Works Company in 1901. He was named superintendent-engineer in 1918 after the water system became municipally owned and he served in that capacity until November 13, 1962,



This is an artist's sketch of the scheduled $3 million expansion to the Thomas L. Amiss Station.

then served as consultant until his death in 1963. Mr. Amiss was extremely well-known in Water Works circles both in the Southwest and nationally. He was a recipient of the Fuller Award from AWWA and was a dedicated public servant.

Thomas L. Amiss Station was built in 1924 and 1925, with an original capacity of eight million gallons a day. It has twice been necessary to add complete units of treatment and production so that the plant could keep up with demands. This station now has a firm capacity of 38 MGD and the ability to meet higher hourly demands at the rate of 47 MGD.

The first plant built on the site of today's McNeil Street Station was constructed in 1887. Until Cross Lake was built, its raw water was taken from Twelve Mile Bayou and Red River. Today, its supply source comes by gravity from Cross Lake through a three mile long 30 inch line.

McNeil Street Station still has in operation most of the original steam-powered pumps with the boilers using natural gas for fuel. The steam operation has been augmented by electrically powered pumps, all of which combine to provide an overall capacity of 16 MGD.

During 1966, the average daily amount pumped was about 22 MGD, with a July average of about 33 MGD. There are about 48,750 active meters in the Shreveport system, serving about 200,000 people. Residential users account for some 65 per cent of the consumption, but such familiar names as AMF Beaird, Incorporated, Western Electric, Atlas Processing Company and Libby-Owens-Ford are listed among the major industrial users. Barksdale Air Force Base needs from 2½ MGD to 4 MGD, and a few independent water districts outside the city purchase water from Shreveport. Its water distribution system has about 650 miles of mains from 2 to 36 inches and more than 3,000 fire hydrants.

Heading the Shreveport Department of Public Utilities is Commissioner L. Calhoun Allen, Jr. This is the first elective office held by Mr. Allen, and recently he was unopposed while seeking successfully his second four-year term of office. He is a lifelong resident of Shreveport and a graduate of that city's Centenary College. He holds the rank of captain in the Naval Reserve and is active in the American Legion, Civil Defense, Masonic groups, Presbyterian Church and the Chamber of Commerce. Prior to taking public office, he was associated with his father and brother in Allen Construction.

Among the many responsibilities of the Department of Public Utilities is the operation of a municipal fish hatchery which provides a supply of fish for stocking Cross Lake.

A meter repairman uses a Mueller Oriseal valve on his setup for testing meters.

L. CALHOUN ALLEN, JR. . . .
Commissioner

A superintendent-engineer, appointed by the commissioner, is responsible for the operation of the department. Filling this important position is Charles B. Foster, Jr., a 27-year veteran with the department. He was named superintendent-engineer in 1962, after serving as assistant superintendent-engineer for 14 years. Mr. Foster is a native of the Shreveport area and holds a Civil Engineering degree from Texas A. & M. He is a full colonel in the Army Corps of Engineers Reserve, holds civil engineer's licenses in Texas, Arkansas, and Louisiana, and is active in the Episcopal Church.

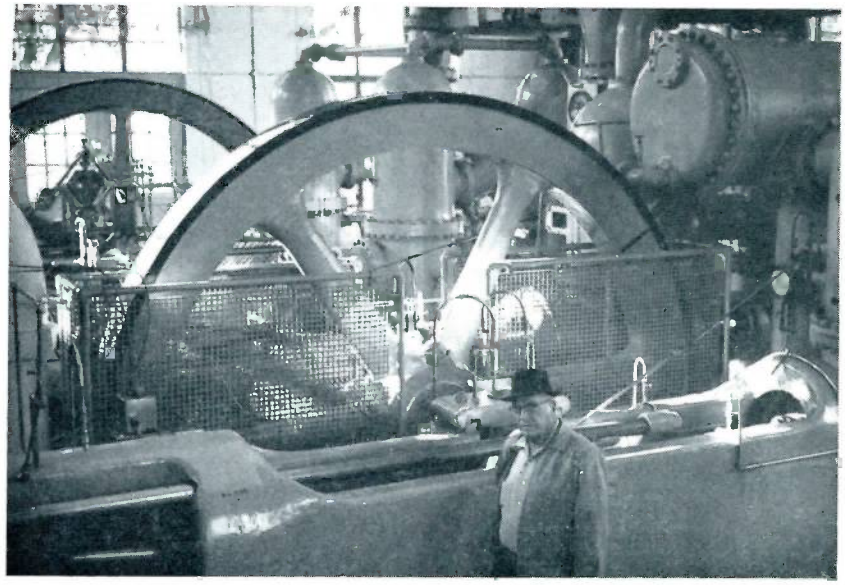
Although Shreveport's water needs are expected to be met until well into the 1970's, investigations have already been made on new sources of supply. The Red River, which flows through the city, could again be a major source of supply. It served the city for many years prior to the construction of Cross Lake. Another alternative is to go to Caddo Lake, direct, for water. A third choice is Wallace Lake, which is south of the city.

Whatever the decision, the residents of Shreveport can rely upon the Department of Public Utilities.

CHARLES B. FOSTER. JR., . . . Superintendent—Engineer

WILLIAM A. COLLINS . . .
Distribution Superintendent

A. J. PETRUS . . .
Asst. Distribution Superintendent



Roland S. Wibker, Water Pumping Superintendent, checks over some of the steam-powered pumps at the McNeil Street Station.

Who is HEW and How is HUD?

(This article by James K. Kilpatrick is reprinted through the courtesy of the Washington Star Syndicate, Inc.)

The boy was out in back, playing around the woodpile, when the strange flying machine landed in the deer glade down by Little Pigeon Creek. He started to run for the woods, but curiosity got the better of him, and he stuck around while the visitors pushed their way to the cabin.

There were two of them, a fussy little man with a round plump face, and a kind of pigeon-breasted woman with a pocketbook half the size of a saddle bag. Her slip showed. They were polite enough, but you could tell they were used to giving orders and making people jump. You know the kind.

The boy's father came out to meet them, and Nancy—that was his mother—stood in the door looking on. They weren't excited. It was like a dream, but it was colder than any dream, so cold that when the little man spoke, his breath came in tiny puffs.

"I say," said the stranger, looking at a large watch on his wrist, "could you tell me where and when we are? I am from HUD and she is from HEW, and we thought we were headed for Louisville in 1967. What a nuisance!"

The stranger glanced over at the boy, and his nose wiggled like a rabbit's nose.

"Well, sir," said the boy's father, "this is 1817 and you're in what will be Spencer County, Indiana; you're on the north bank of the Ohio, something east of Evansville and something west of Louisville. It's February, and who is HEW and how is HUD?"

"Missed by a 150 years," snapped the little man. "It's these dratted time machines. Always out of order. I punched reverse 17 and what do I get? Reverse 167. Back to the shop with it. What's your name, my good man?"

The boy's father told him.

"Well, Mr. Tom Linton," said the fussy little fellow, "HEW is the Department of Health, Education and Welfare, and HUD is the Department of Housing and Urban Development, and Miss Spencer and I are engaged in a survey of the oppressed, the depressed, and the repressed, and it certainly looks as if you qualify." He took out a yellow tablet and a ball-point pen.

"It ain't 'Linton'," said the boy's father. "You got it wrong."

"No matter," said the visitor. "The computer will give you a 10-digit number. And one for you, too, Ma'am." This last was to Nancy. "And one for that long-legged boy there. How many of you occupy this dwelling unit?"

"Well," said the boy's father, counting on his fingers, "there's me and Nancy, that's two, and Tom and Betsy Sparrow, they're Nancy's aunt and uncle, that's four, and young Dennis Hanks—he's my foster son—and the girl Sarah, and the boy there. Seven, you might say."

"Seven, I certainly will say," said the man from HUD, "definitely overcrowded."

"Substandard," said Miss Spencer. It was the first word she had spoken. "But I dare say ninety-seven-point-seven per cent of the Little Pigeon housing is equally substandard. They are somewhat below their peer group."

"No floor," said the little man, making notes on his tablet. "Inadequate ventilation. The roof leaks. No windows. No door. Bad air. Inadequate illumination." He was checking one thing after another.

"What about these children?" asked the lady from HEW. "Schooling?"

The boy's father shook his head.

"Dropouts," said the lady, making tch-tch noises. "Everyone a dropout, including that boy on the woodpile. He's old enough to qualify for Operation Headstart."

The man from HUD and the lady from HEW conferred together. After a minute or two they came back to the boy's father.

"Mr. Linton," said the little fellow. "I am pleased to inform you that you and your hapless family score nine hundred and eighty-two-point-two on the Disadvantaged Scale. You are ill-housed, ill-fed and ill-clothed. You definitely qualify for—"

"Ain't 'Linton'," said the boy's father, stubbornly. "It's—"

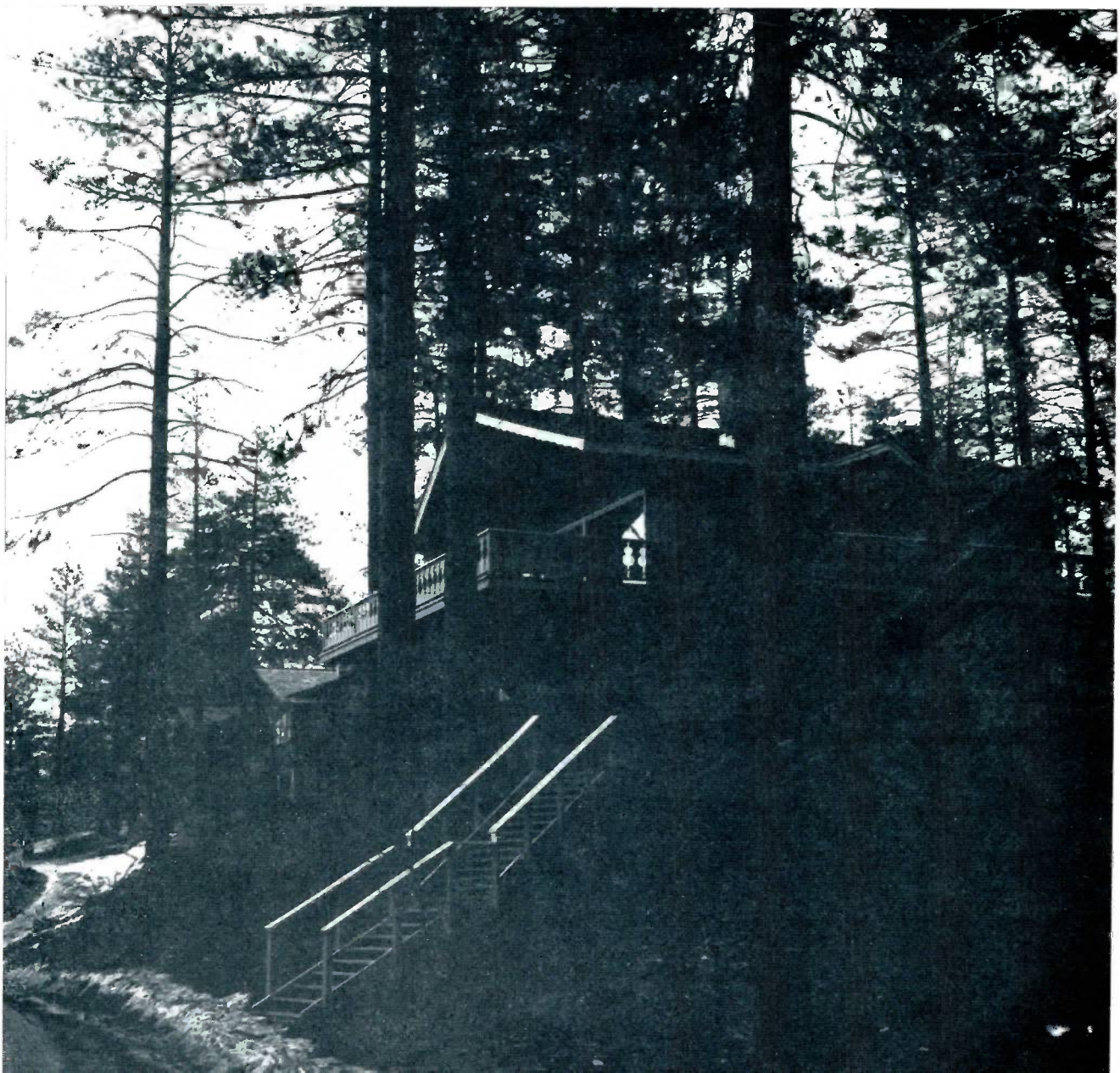
"No matter. You definitely qualify for soil bank, food stamps, supplemental rent, and the upgrading of your obsolete manual skills. You qualify for the MPTP extension service, 52 weeks of home economics, a seven-room house, two siloes, and an inscribed color portrait of the President. We will dam up Little Pigeon Creek and stock you a pond. The men will be in to string the lights tomorrow. Telephone on Thursday. Plumbing Friday. You definitely qualify for 16 different loans, giving you a debt of $11,000, 40 years not to pay. Without these indispensable upgradings in your total environment, Miss Spencer and I are agreed that you are doomed to live forever in the shadows of an otherwise affluent land, and that long-legged boy will amount to nothing at all. Sign here."

"I reckon I'd better get the boy to look at these papers," said Tom. "I can't read at all, but he reads some already. Come over here, boy, and meet these folks."

He turned to the man from HUD and the lady from HEW, just as they and their funny machine were fading into nothing-at-all.

"This is my boy, Abe," cried Tom Lincoln after them. "He's 8 years old today!"

This scenic highway drive (left) leads through the beauty of the San Bernardino Mountains, to Lake Gregory (right) and Crestline, which is a favorite spot of vacationing, fun-seeking Southern Californians. Homes like that pictured below, are owned by week-end residents of Crestline who come here to escape the busy full life that is only 15 miles away.



Crestline, California

Horizontal Wells Supply This Mountain Retreat

This rig penetrates the side of a hill in Crestline in search of water. These horizontal wells are a major source of water supply for the town.

When U. S. travelers think of the ocean, beaches, mountains, desert and attractive scenery, many of them think of California as offering all of these. It does, and attracts thousands of visitors each year as a result.

But where do Californians go when they want to "get away from it all"? Of course, some go to Florida, others go to Las Vegas, and many just go back to the family home to visit relatives. A great many, however, stay in their home state, take advantage of the spots nearby, and visit such mountain retreats as Crestline.

Called the "Gem of the San Bernardino Mountains", Crestline is about 15 miles by road and 3,500 feet above the City of San Bernardino. It offers the cool fresh air of the mountains, the fishing and boating of Lake Gregory, and in the winter—the snows that attract the skiers.

This reads like a travel folder, but in the summer Crestline has its own population explosion as thousands flock there to enjoy these varied attractions. On a holiday weekend, instead of being a city of 5,600 permanent residents it "swings" to a boom town of from 50,000 to 75,000 carefree tourists.

Many of the permanent residents run businesses and services related to the tourist and weekend visitors. Others commute to work in the San Bernardino area and are willing to drive the 30 mile round trip each day, up and down the mountains, in order to enjoy the pleasures of this vacationland.

Others are weekend residents who have built summer homes which they use as retreats from the busy life "down the hill."

Vacations in the area are not limited to the summer months. Snowfalls measured in feet rather than inches limit travel during the winter, but at the same time attract skiers and "snow bunnies" to the area.

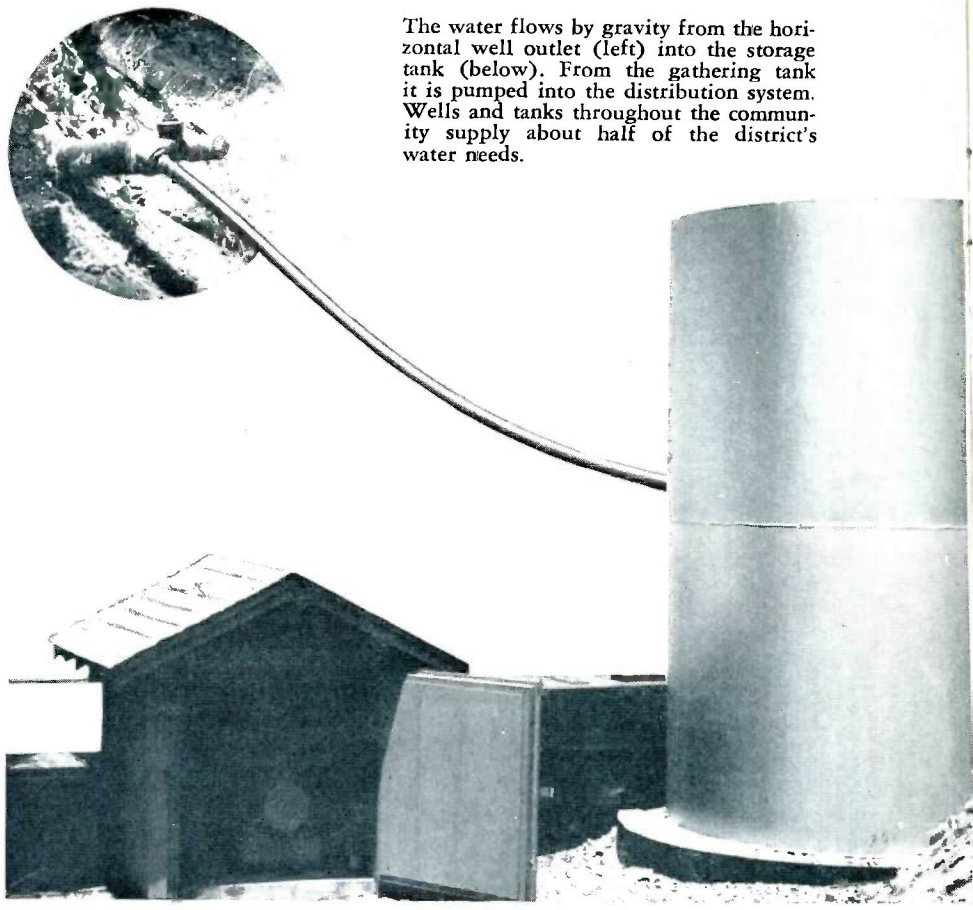
Even the water supply is of interest and receives top billing in some promotional material. One line reads: "Drink from our wells of mountain spring water."

The area, by reason of its location and elevation, is ordinarily subjected to relatively heavy annual precipitation, most of which appears on the valley floors at the base of the mountains as storm runoff. Limited amounts, however, penetrate the rock crevices and fault zones, thus creating springs which have been developed in considerable numbers for local water supply.

In addition, artificial springs are created by the drilling of horizontal wells, tapping the fault zones at varying depths below ground surface. Horizontal wells are a common source of supply in mountain areas, but to "flatlanders" this system is unique.

The horizontal wells are drilled at a slight downward angle and penetrate the hill or mountain from 200 to 700 feet, depending on the locations and their ability to produce. Casing sizes range from 4 inches to 1½ inches and produce from more than 100 gallons per minute (GPM) to 1 GPM. The

Mueller Sales Representative Kenny Potts (left) talks about service clamps with Norman Hunt, Manager-Superintendent of the Crestline Village County Water District.



The water flows by gravity from the horizontal well outlet (left) into the storage tank (below). From the gathering tank it is pumped into the distribution system. Wells and tanks throughout the community supply about half of the district's water needs.

production depends on such variables as rock formations, number of wells in the immediate area and the amount of rain and snow. The water pressure at the well head ranges from 1 to 42 pounds per square inch.

Vertical wells have been tried, but they have been costly to drill and have not been too productive. From 1921 to 1953, vertical wells and natural springs served as the only supply of water for Crestline Village. Today about 40 horizontal wells are in use and supply about half of the needs of the district's 1,700 services.

In 1937, a dam was constructed to store local runoff from the mountain watersheds and Lake Gregory was formed. This not only serves as an important water source, but it has been a boon in attracting visitors.

This 110-acre lake has sandy beaches, is stocked with fish and is available for boating if you are content to propel your boat with nothing larger than an electric trolling motor.

Due to the recreational attraction of Lake Gregory, restrictions are placed on its use for water supply. The water that is used is purchased from the Crest Forest County Water District and run through the District's filter plant, then boosted into the Crestline distribution system.

The Crestline system serves elevations ranging from 4,250 feet at the Willow Springs well to 5,447 feet at the Beacon Storage Tank. A network of 27 miles of distribution mains ties together three separate pressure zones.

During the winter, the average monthly consumption is about five million gallons. In the summer, the monthly total reflects the population change and fluctuates between 9 million and 12½ million gallons.

Heading up the Crestline Village County Water District for the past three years has been Norman Hunt. He succeeds Herman Deich who for many years served as the district's general manager, and who, until recently, was general manager of the Crestline-Lake Arrowhead Water Agency.

Mr. Hunt is now in the process of working out a master plan which will update the present Crestline system and provide facilities to accept supplemental water from the Crestline-Lake Arrowhead Water Agency. This agency contains about 50,000 acres and is part of a vast state water project utilizing Feather River water, running from Northern California to the Mexican border.

Wonder if Crestline natives ever go away on vacation?

Communities such as Crestline which are located in the heavily forested areas of the mountains are very conscious of the threat of fire. What would be considered a minor blaze in most areas elsewhere could wipe out the Village of Crestline and hundreds of acres of timber. It is illegal to smoke in moving vehicles in the area. Here, Mr. Hunt (right), Francis Newcombe, Chief of the Crest Forest Fire District, and Otho Morrow of the water district, flush a Mueller hydrant. The pole at Mr. Hunt's back marks locations of fire hydrants when they are covered by snow.

Due to the rugged terrain, a helicopter is used to bring in equipment to drill the horizontal wells.

Lofty pines line the streets which are cut through the forests.

adding metal to a gate valve ...can make it weaker

Too much metal in the wrong place can concentrate stresses beyond the limits of the material so that failure will result at these locations. Superior strength and performance are achieved by proper design and use of materials – proven by extensive performance and destructive tests. In a special explosion-proof hydrostatic test chamber, Mueller Engineers subject gate valves to these destructive tests.

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The data recorded during this test, plus information from many other critical tests, is used to prove out the design, structural strength and performance.

Through tests like this, each component and the total valve are thoroughly evaluated under more extreme conditions than would be encountered in your system.

Mueller Co. believes that continued research and product development tests such as this are the only way to insure trouble-free operation for years to come. And that's a fact.

The weight and dimensions of each part and the assembled valve are carefully checked and recorded.

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Strain gages are wired, calibrated and connected to precision electronic recording equipment.

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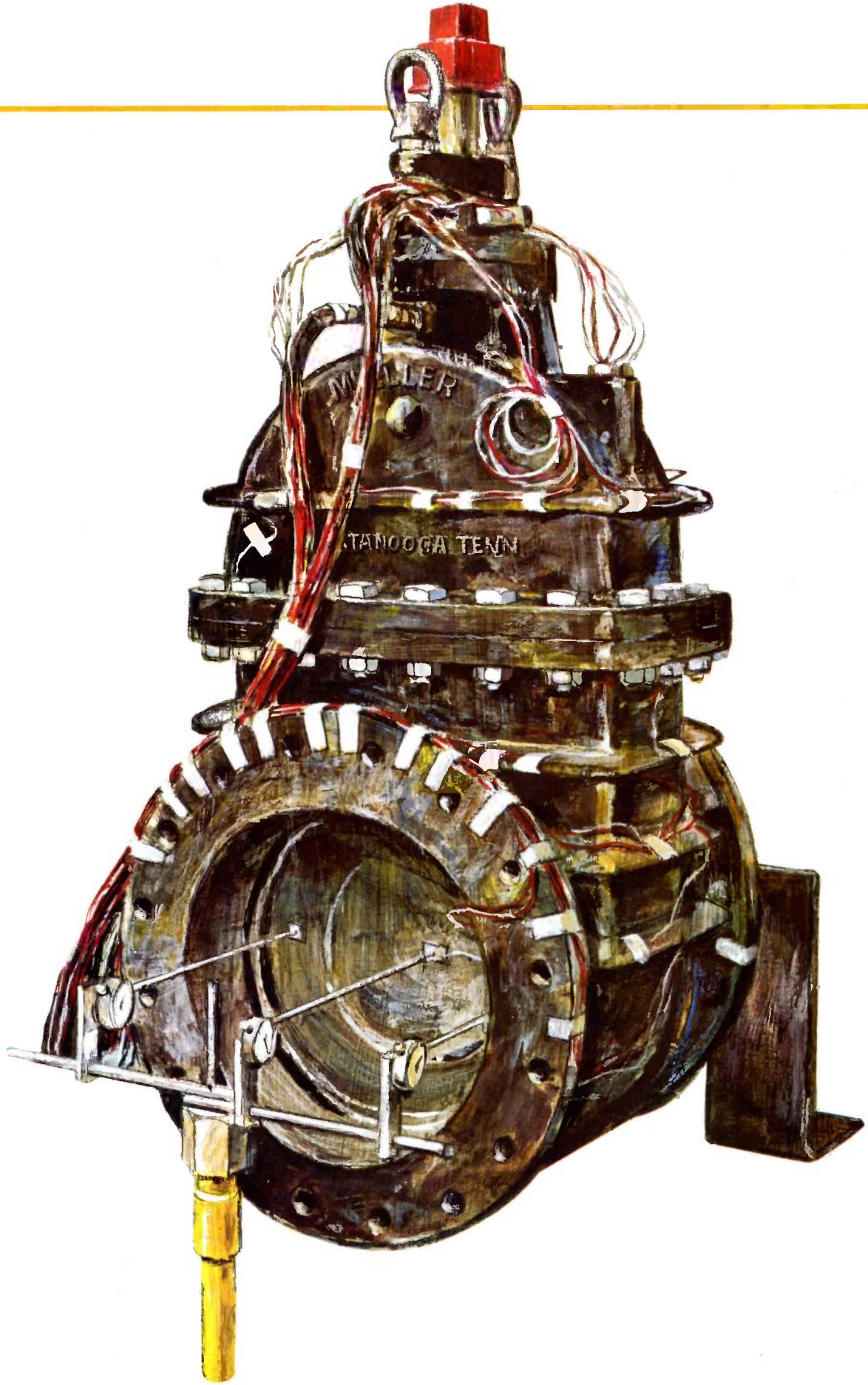
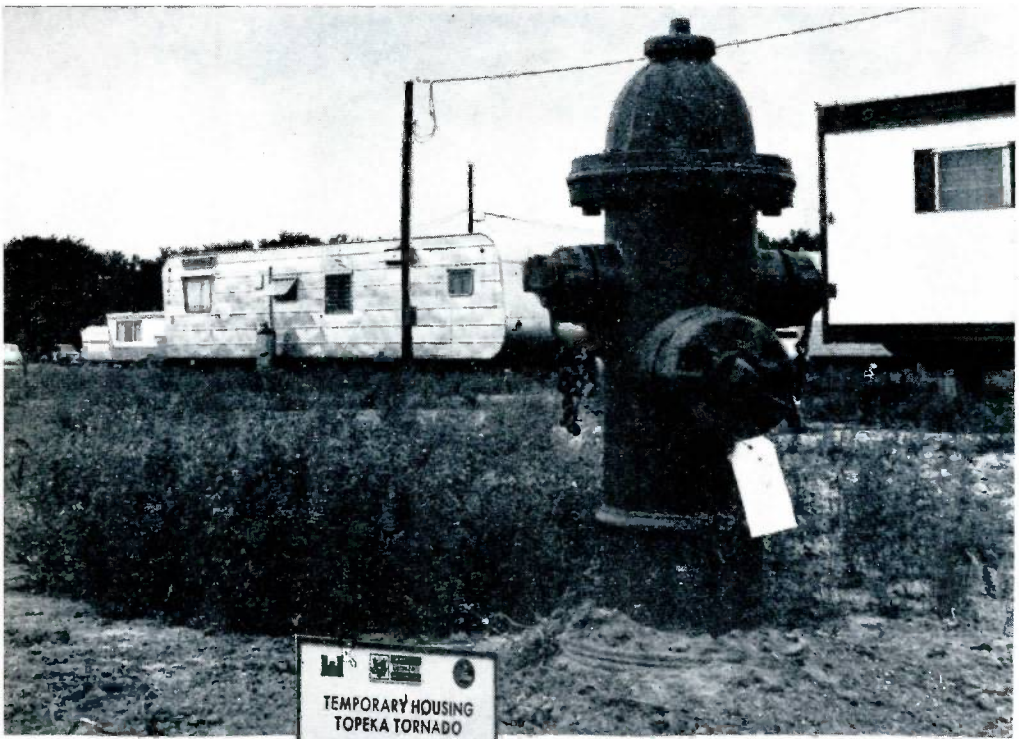

TANOOGA TENN

Nearly 2,000 homes were damaged by a tornado in Topeka, Kansas this summer, and in order to provide housing, sites were prepared, and mobile homes were moved in.

The house at the left was "lucky" compared to hundreds that were levelled. The folks in Topeka are not discouraged, however, and rebuilding (right) has been going on for many months.



"We Were Lucky"

By working around the clock, crews were able to have utilities and fire protection available by the the time the temporary housing went into use.

MUELLER RECORD

Topeka Residents Think of Luck After Tornado Does Damage of $100 Million

TODAY after eight months of rebuilding, cleaning up and relocating, there is still plenty of evidence of the devastating tornado that swooped through Topeka, Kansas early in the evening of June 8.

According to the Red Cross, 820 homes were destroyed, 1,000 dwellings suffered major damage and nearly 2,000 others incurred some kind of loss from the storm that caused damage estimated at $100 million. People and property were hurt and damaged, but Topekans have been putting the pieces back together, with help from all over the world, and, except for 17 persons, have gone on living.

"We were lucky," is the phrase that most often prefaces remarks about the storm as survivors of its half-mile-wide path describe how they huddled in basement corners seeking refuge from the wrath of the winds. Those who surveyed the damage done to the homes and businesses of friends and neighbors agree: "We were lucky."

G. Dorr Pelton, General Superintendent of the City Water Department, used the same direct reply to questions about damage to the facilities of the water system.

"Yes, we were lucky. The storm's path missed the treatment plant and no damage resulted there. We were without power for only a short time at the plant, but our emergency equipment handled the situation. Two 4-inch mains broke during the storm, but there is no question about our good fortune when you compare our damage with that of utilities having service lines overhead," Mr. Pelton said.

Southwestern Bell Telephone Co. reported 18,000 phones out of order and 110,000 feet of cable downed by the storm.

The biggest job encountered by the 130 employees of the water department was getting around to turn off about 2,000 of the system's 40,000 services. Consumption of water in Topeka went from 14 Million Gallons a Day (MGD) the day before the storm to 17 MGD, the day following. The fluctuation was due probably to the main breaks, broken services running, and to refilling of storage tanks.

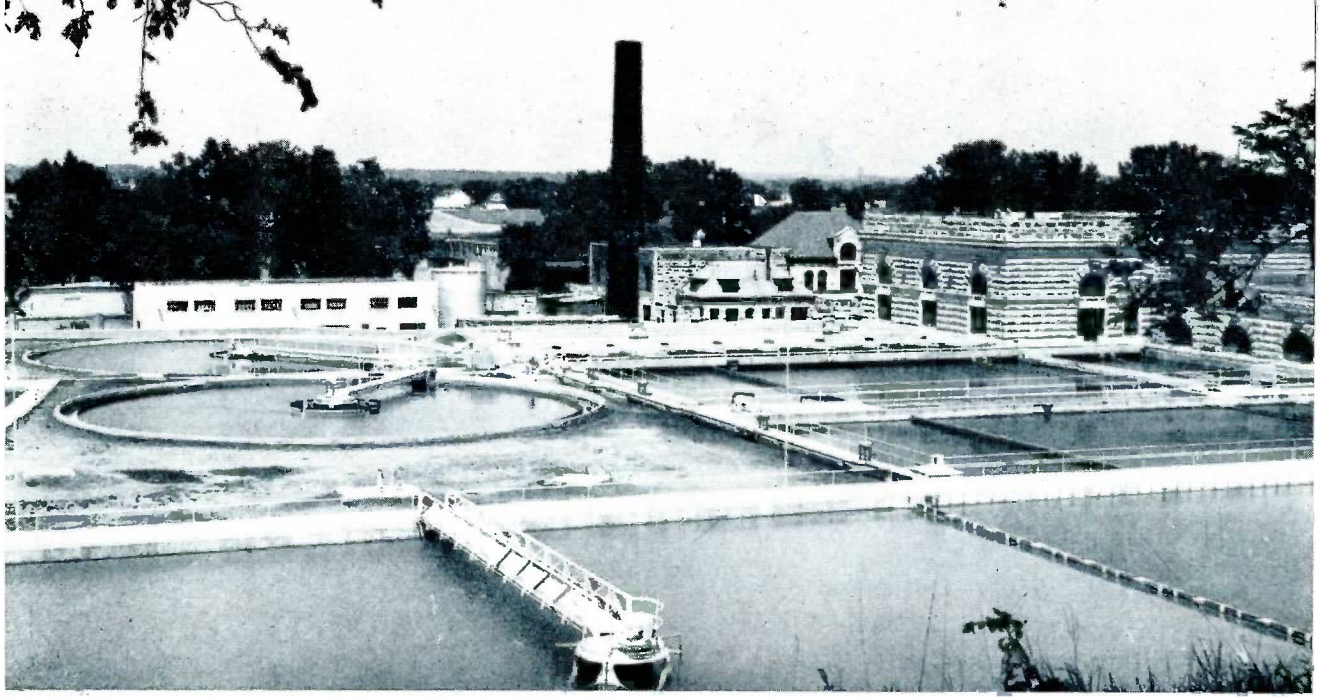
A stark reminder of the "luck" of the water department was the concrete one-million-gallon water storage tank near downtown Topeka that stood unscathed amid leveled homes and heaps that once were autos.

"Armies of volunteers" moved into Topeka right after the storm, Mr. Pelton said, and cleanup and rebuilding began immediately. The most immediate problem was to find housing for about 7,000 or 8,000 persons who lived in the 2,000 homes that were destroyed or damaged to the point where they couldn't be occupied.

Work began almost immediately on three sites that were to be developed for temporary housing. Within five days after ground was broken, by working around the clock, workmen and crews had converted an open field near the airport into a mobile home park for 175 house trailers. An eight inch water line was run about a half-mile to the site, Mueller hydrants and valves were installed and individual services run. At the same time, roads were being built, power lines installed, and the house trailers were being shipped from New Orleans where they had been used to shelter victims of Hurricane Betsy which destroyed 27,000 homes in 1965. About two weeks after the storm, the first trailer was parked and ready for occupancy. Ultimately 450 mobile homes were set up at three locations and have served as temporary housing for up to one year. Topeka was able to meet this most immediate need through the cooperation and special efforts of governmental bodies, the Corps of Engineers, utility companies, manufacturers, suppliers and workmen. Mueller Co. was one of the companies responding to emergency calls for equipment and products as our Chattanooga plant people set records preparing hydrants and valves for shipment.

According to Frank Manspeaker, Commissioner of Water Works and Street Lighting since 1963, Topeka's

Frank Manspeaker, Commissioner of Water Works and Street Lighting for Topeka, shows a point of special interest to Matt Sylvan (right) Mueller District Sales Manager, and G. Dorr Pelton (left), General Superintendent of the City Water Department.



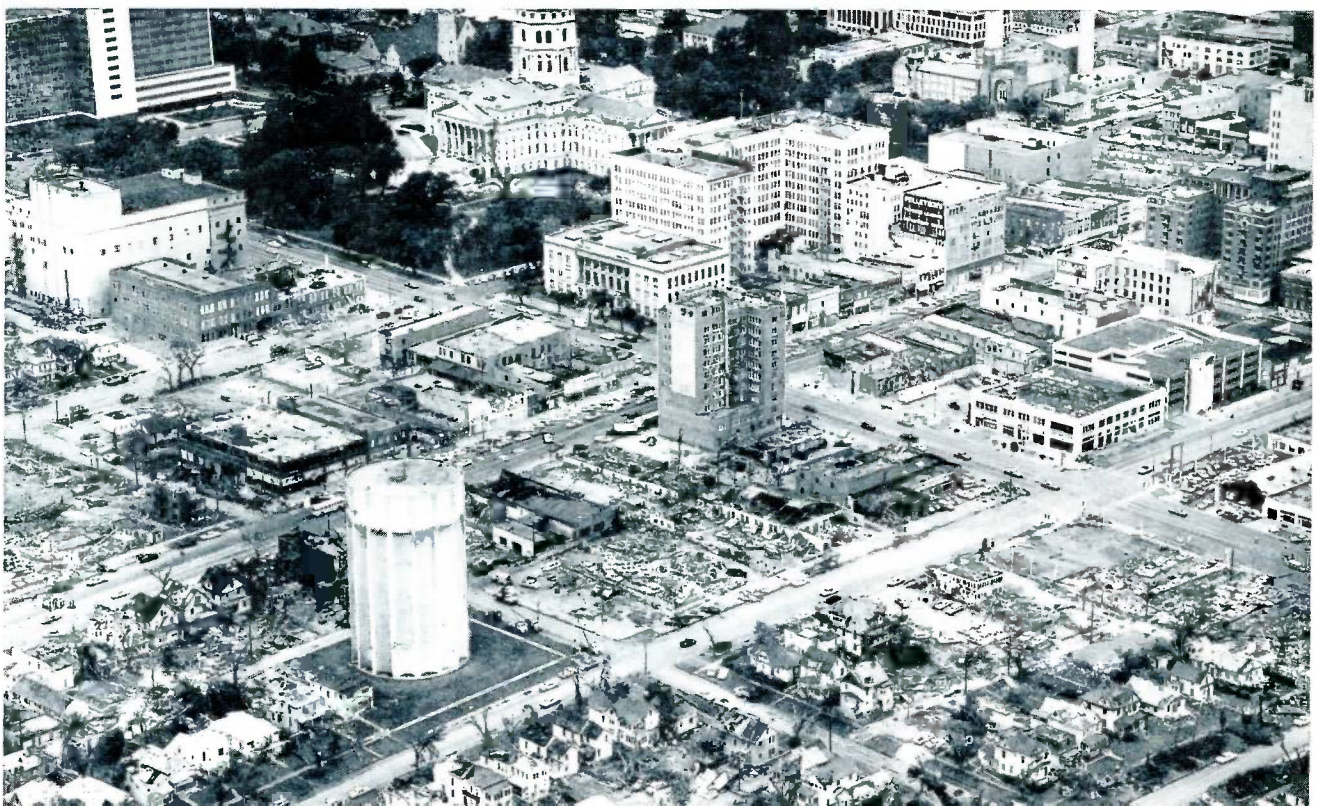
The Topeka water plant was not damaged by the $100 million storm, and kept producing water to fill the needs of the city that was devastated by the tornado.

growth will not be stopped by the June disaster, although he admits that "we have a lot of rebuilding to do before we can start growing again." The city had been successful in maintaining a steady growth pattern and in attracting industry and there is no reason why this shouldn't begin again soon. "We have been fortunate that our city-owned water utility has been able to keep well ahead of demands and I expect this to continue indefinitely," the commissioner said.

Topeka draws its raw water from the Kansas River about 60 miles above where it empties into the Missouri River. The raw water from the intake goes to the adjacent filter plant which was built in 1923. The plant, opened with a capacity of six MGD, today handles about 40 MGD. Plans have been made to increase this to 60 MGD, to meet the needs of the community which grows at the rate of about 700 services a year.

Supt. Pelton joined the City Water Department in 1926, as a draftsman. In 1932 he was promoted to Distribution Engineer, in 1943 to Department Engineer, and in 1950 to the office of General Superintendent. He has been active in many professional organizations. These include the Kansas Section of AWWA, which he served as chairman, and the AWWA National Board of Directors, which he served as representative from Kansas for three years. In 1963, he was named "Kansas Water Works Man of the Year," and the same year he received the Fuller Award at a national meeting of the AWWA in Kansas City.

An undamaged water storage tank stands amid damaged and flattened homes situated on the edge of the downtown district. The path of the storm just missed the State Capitol building at the top center of the photo. (Photo by Morris Sowards)



COMMISSIONER MANSPEAKER

General Superintendent Pelton (left) talks with Robert E. Hess, Superintendent of Production for the City Water Department.

BURNETT'S MOUND LEGEND

Burnett's Mound is by 200 feet the highest place in Topeka, Kansas, and with suburban developments moving in the peak's direction it seemed a logical spot on which to locate a water storage tank.

Pursuing this idea, the City Water Department built, in 1959, a five million gallon storage tank near the crest of the Mound. In excavating for the tank they also "dug up" an old Indian legend that stirred some of the local citizens, and the recent tornado served to fortify some of the contentions of the local "believers."

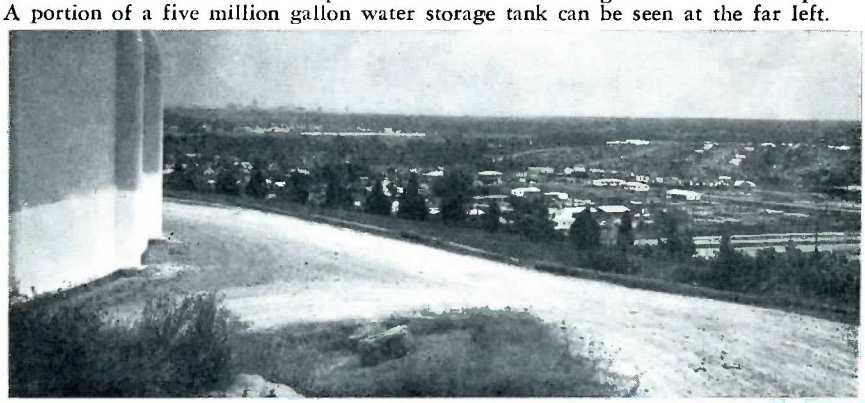
According to the story, Burnett's Mound and its foothills would split up dangerous storm clouds and protect the city from tornados. The origin of the legend is unknown, but residents say it reaches back nearly a century. The mound received its name from Chief Abram B. Burnett, a Pottawatomie Chief who lived near it for 22 years. He died June 14, 1870 and was buried in an Indian burial site in that area.

According to information in the library of the Kansas Historical Society, the mound itself was not used as an Indian burial ground, although it was within the Pottawatomie reservation.

One version claims the legend originated after a tornado in which loss of life among the Indians was considerable. The dead were buried on or near Burnett's Mound. In the burial ceremony, so the story goes, the Great Spirit was implored to watch over and protect the area from the winds so long as the resting place of the storm's victims was undisturbed. When earth-moving equipment started digging into the Mound to make a road and to level a spot for the water tank, many persons watched the project with concern, thinking about the legend. During these diggings, however, no evidence was found that led anyone to believe that the actual burial area was being disturbed.

In June, 1966, a tornado ripped through Topeka, swooping down over Burnett's Mound and cutting a half-mile path through the city. Immediately, many residents thought of the Indian legend and some put more than usual credence in its powers. For prior to June, Topeka had been notably free of tornado damage, although there had been a number of near misses.

From atop Burnett's Mound can be seen much of Topeka. The tornado dropped down over the Mound and followed a path which would cut through the center of the photo. A portion of a five million gallon water storage tank can be seen at the far left.



REFLECTIONS ON WATER

No Trouble Identifying a Mueller Hydrant

Should a motorist be fined for parking by a hydrant that does not look like one? The question was posed recently to a California judge by a Los Angeles woman driver who had received a ticket—unfairly, she felt.

"I am paying this ticket under protest," she wrote in a letter to a municipal court. "The hydrant I parked near did not look like a fire hydrant but a long pipe sticking out of the ground—not even straight." She concluded: "Even a dog would not stop by this hydrant."

The judge decided to inspect the hydrant and then agreed with the woman by letter that all she said was true—he had even seen a dog pass the hydrant without giving it a second look. Feeling that a person should be put on notice that the device was really a hydrant and not a hitching post or some fixture to be used only by water trucks, street sweepers and the like, he ordered the case dismissed and bail refunded.

However, a fire captain, expert on the appearance of hydrants, said there was no doubt in HIS mind as to the fixture's identity. He felt the woman had got off lucky but admitted that someone new to the area might find the hydrant confusing. Its barrel was a little longer than customary, he said, and the single-outlet model was of a type no longer being installed.

(One of the many assets of a Mueller hydrant is that it looks like a hydrant and there would be no doubt in any driver's mind, or a dog's for that matter!)

Skateboard, Nerve Aid In Rescue

A small man, tall in deed, Bill Sandlin, 30, of Placentia, California, has attained a stature which has nothing to do with feet and inches—unless you refer to the harrowing 620 feet he crawled through a sweltering 20-inch water line to rescue a young construction worker lying unconscious inside.

With a giant supply of concern and daring, Sandlin wormed his way, on a skateboard, the length of two football fields through the 20-inch pipe, to bring out the worker who had collapsed of exhaustion, heat and stale air. He spent more than 90 minutes on his mission before bringing to safety Lloyd Baker, 20, of Garden Grove, California, who had been at work in the pipe from 9 a.m. to noon.

Baker, a six-year employee of Longely Construction Co., Fullerton, had "crawled miles of pipe before," his employer said, and was inspecting the pipe interior for cracks and other flaws, and sealing joints. He was to have emerged 2,000 feet from where he entered. While a man is making his underground journey, in such work, a man at the end of the pipe keeps talking to make sure the "crawler" is all right.

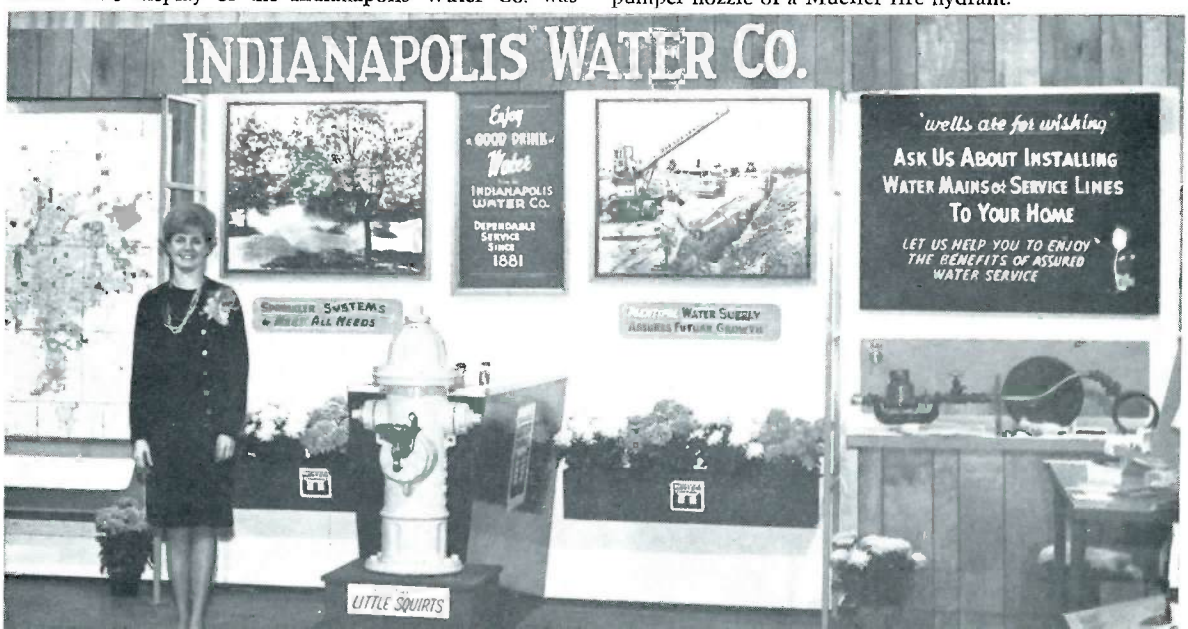
When Baker failed to respond about noon to voice calls, one of his fellow-workers called the Orange Fire Department which rushed rescue equipment to the scene. Sandlin, a broad-shouldered 5-foot 4-inch employee of Marden Utility Supply Co., Santa Ana, volunteered to take a rope to Baker, although he had never crawled in pipe that small before. Entering from an excavation, he pushed his way, on a skateboard borrowed from a passing youngster, down the pipe to Baker, whom he then placed on the skateboard which firemen pulled back by rope from outside the pipe at the excavation.

When pulled from the pipe shortly after 2 p.m., after six hours inside it, Baker was conscious and able to stand up but was pale and extremely groggy. He was taken to a nearby hospital where attendants said he was dehydrated and had a mild heat stroke. Otherwise, he had no apparent injuries and they described his condition as excellent.

After his volunteer feat, Sandlin wiped sweat from his face. "The only pipe I had crawled before was 60 inch," he said.

Marden Utility Supply Corp., his employer, is a Mueller Co. Distributor.

Water, always an important part of every house, was very much at home at the Indianapolis, Indiana, Home Show. This display of the Indianapolis Water Co. was complete with product samples which included a drinking fountain "For The Little Squirts" attached to the pumper nozzle of a Mueller fire hydrant.



Roy Evans (right) has just given away his 1,000,000th cigar to Carl J. Olsen, President of the Middlesex Water Co., Woodbridge, N. J. Looking on are, from left: Al Lash, President, George Caldwell Co., Boston, Mass; Ernest Gere, Middlesex Water Co.; Ben Lentz, Mueller Sales Representative, and Herb Huffine, Eastern District Sales Manager.

After receiving the cigar, Mr. Olsen (left) was presented with a display of 25 silver dollars by W. E. Murphy, Vice President—Marketing, Mueller Co. (right). Looking on are Herb Huffine and Roy Evans, both of Mueller.

One Million Have Gone Up In Smoke!

One of the best known men in the water industry in the Eastern United States is Leroy J. Evans. Also well known is the fact that Roy loves cigars and that he likes to share this pleasure with others. During the more than 40 years he has been with Mueller Co., calling on customers and attending conventions it was figured that he would give out his 1,000,000th cigar during the National Water Company Conference's annual meeting in Philadelphia. This milestone of smoking and friendship was appropriately marked with a ribbon so that it would be quickly identified when it was taken from Roy's cigar case by the lucky water works man. The man to receive the 1,000,000th cigar was Carl J. Olsen, President, Middlesex Water Co., Woodbridge, N. J. He also received a display containing 25 silver dollars to mark the occasion. Although Roy officially retired in 1962 after more than 42 years with Mueller, he is still on the staff of the Sales Division and has started on the distribution of the second million.

Houston, Texas

Chrome-Plated Hydrant Blends With Surroundings

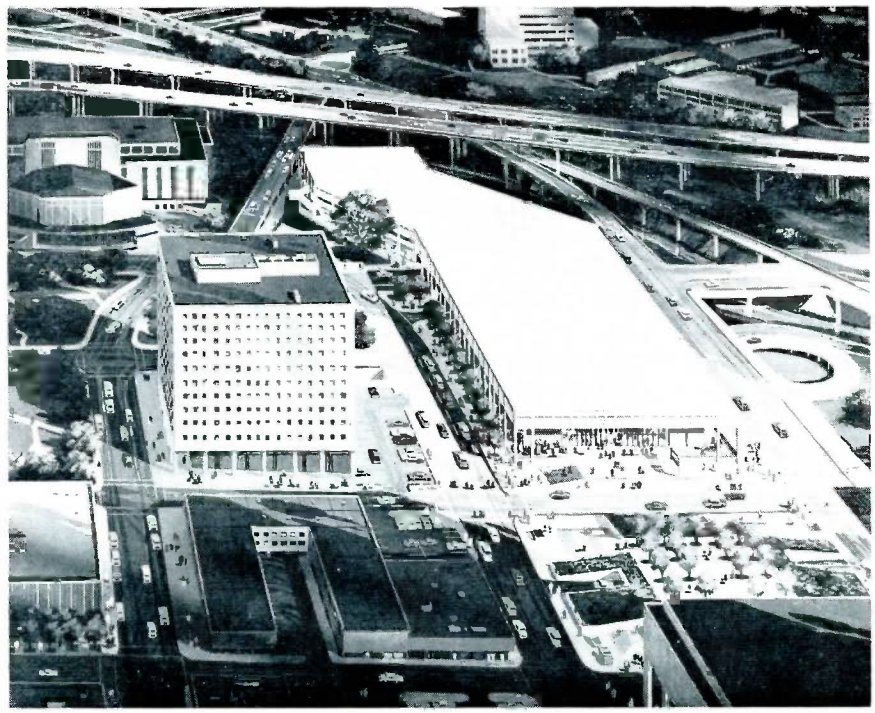
Louie Welch, Mayor of the City of Houston, admires the chrome-plated Mueller fire hydrant installed near the entrance to the Jesse Jones Hall for the Performing Arts.

Chrome plating emphasizes the sterling qualities of the Mueller hydrant situated at the entrance to the magnificent new Jesse Jones Hall For The Performing Arts in Houston, Texas. To play its important role, star performer in guarding against fire damage, it is especially adorned in keeping with the splendor of its surroundings. It was felt that the situation demanded something more than the customary hydrant with Houston's standard paint job (black barrel with orange bonnet.)

Two years of construction sounds were replaced by a majestic hush, on Sunday, October 2, as the Hall was officially opened by civic, cultural and business leaders of Houston, signaling the beginning of a month-long Arts Festival. Also in the audience were more than 700 men comprising the labor force that constructed the building on an entire block in downtown Houston.

Now the permanent home of the Houston Symphony, the Houston Grand Opera and the Houston Ballet Foundation, the Hall is a $6.7 million gift to the City from Houston Endowment Inc., a foundation established by the late Jesse H. and Mary Gibbs Jones. Jones Hall is the fulfillment of a lifetime dream of Houston businessman, philanthropist and humanitarian Jesse H. Jones. It now takes it place as one of the great performing arts halls of our time. Unique from many points of view, it is a blending of many professional talents directed by the architectural firm of Caudill, Rowlett and Scott and stands as the first major building in Houston's new $40-million Civic Center complex.

The $6.7 million Jones Hall seats from 3,000 to 1,800 people, depending upon the event being staged.



Jones Hall (the corner of which is seen in the extreme lower right corner of the sketch) is part of Houston's new $40 million Civic Center complex. Directly above it is a convention hall that is now under construction. To the left of the convention hall is a new Federal building and above that is a coliseum and music hall.

Italian marble, 133,000 square feet of it, covers the curved exterior and interior walls and the seventy-foot colonnade surrounding the building.

Publicly displayed for the first time at the dedicatory ceremonies at which Houston Endowment Inc. officially presented Jones Hall to the City is a work by noted American sculptor Richard Lippold, called his most energetic work to date. Inside the Grand Lobby, and titled "Gemini II," the sculpture consists of two separate, though related forms, each ninety feet in length and made of 2,300 polished hexagonal aluminum rods held in position by 90,000 feet of gold filled wire.

Unique in its multiform, multipurpose capacities, the Hall will house symphony concerts, opera, the dance, instrumental and voice recitals, lectures, musical comedy and drama. To function as a multi-purpose auditorium, it was designed to accommodate audiences of 3,000 down to 1,800. Ceiling panels, counter weighted, developed by noted theatrical design consultant George Izenour, can be lowered electrically to reduce the capacity of the Hall, while preserving its acoustical fidelity.

Highlighting the gala Commemorative Week festivities were the Grand Opening Concert of the Houston Symphony conducted by Sir John Barbirolli, with a special composition by Alan Hovhaness commissioned for the occasion; the unveiling of a sixty-ton rose granite sculpture by noted Spanish sculptor Eduardo Chillida, the sculpture a gift of the Museum and the City of Houston from Houston Endowment Inc.; the Houston Grand Opera production of "Aida," Walter Herbert conducting, and Metropolitan Opera stars Richard Tucker and Gabriella Tucci singing featured roles; the nationally acclaimed City Center Joffrey Ballet; "A Night of Jazz" featuring Erroll Garner, George Wein and Newport All-Star Quintet; and a presentation by the Julliard String Quartet.

Included in the Civic Center complex, and adjacent to Jones Hall, is a Convention Hall of Exhibits and an underground parking garage now under construction, with completion expected in 1967. Also in the plans for the complex are a new Federal Building and a new Coliseum and Music Hall.

The Convention Hall of Exhibits and the parking garage cover a combined total of 900,000 square feet, at a total cost, including plaza landscaping, of $11,670,439. Architects are Caudill, Rowlett and Scott; Engineers, Bernard Johnson, Inc. The Exhibit Hall has been designed as a continuous exhibition space with two major levels. The totally air-conditioned building can accommodate two simultaneous exhibits each with its own entrance lobby, show office suite, and contiguous meeting rooms. An air-conditioned pedestrian concourse links the Exhibit Building to the 3,000 seat Music Hall and the 13,000 seat Coliseum. Hotel accommodations and retail stores are both within convenient walking distances from the Hall.

. . . News from Mueller . . .

Russ Jolly Retires

Russell L. Jolly, who recently retired as Mueller Co.'s Midwest District Sales Manager, has completed a round trip from Decatur, Ill.—a trip that has taken more than 40 years.

Russ, a native of Decatur, started with Mueller Co. in that city in October of 1924 and today, even though retired, he returns as Sales Management Consultant. Under this special arrangement, his broad product knowledge will still be available to the water and gas industries as well as to Mueller Co. He will have an office in Decatur and will maintain many of his relationships with friends and customers through convention activities and special business calls.

During his extended tour from Decatur, Russ has had many intermediate stops. It is reasonably safe to say that he is the only person who has worked in the Engineering, Manufacturing and Sales Divisions of the company. (The only major division he missed was Financial, and his many years of making out expense accounts should qualify him for that division, too.) He probably has the distinction of being one of very few who have worked at all three U.S. plants, although the majority of time was spent in selling, which took him to territories from one coast to the other—and back. In popularity, he has few peers. He is well-liked, greatly respected, and held in highest regard by his Mueller associates, customers and competitors.

Russ spent his first year with the company in the Engineering Department and then "went on the road," covering western Pennsylvania and West Virginia from headquarters in Pittsburgh.

The first "road" he traveled was the rail (road), which was the only reliable transportation in 1925. Later he became a full-fledged "peddler" when he bought a Chevrolet coupe and began making calls in his auto. He recalls that auto travel was difficult at times in the early '30s and remembers having to drive five miles on a rocky creek-bed whenever he called on a particular customer. Needless to say, this call wasn't made during the rainy season.

RUSS JOLLY RETIRES . . .
Named Consultant

From Pittsburgh, Russ went to the Chicago territory. Then, when Mueller opened its West Coast plant in Los Angeles, he was called and spent many months as a worker and supervisor in the plant. In 1936, he resumed traveling and covered northern California for about four years. He then returned East and worked the Boston area for approximately a year. With the start of World War II, he was transferred to Chattanooga to run the Mueller plant that was producing shell casings and for the next four years he supervised about 500 people in that war effort. The end of the war found him returning to both Chicago and sales work. For the ensuing 10 years, or until 1955 when he was named a district manager, he sold in the Chicago area. In 1958, when the Midwest District was split, he moved to Kansas City and since then has been supervising Mueller field sales in Kansas, Iowa, Missouri, Minnesota, North and South Dakota, Colorado, Wyoming and parts of Illinois and Montana.

Forty years of work can hold many gratifying moments, but Russ most cherishes the feeling that he had a part in the progress made by the water and gas industries.

"It makes you feel good to know that you and your company were involved in the advances made in these important activities," he says, in summary.

Essentially, water treatment hasn't

ART McPHERSON . . .
To New Territory

MATT SYLVAN . . .
Midwest District Mgr.

changed much in the 40 years that he has been around, he says. It has become more of a science today, but the greatest changes are in the volume, size and demand placed upon the system and its management. "It is strictly big business today," he states.

As for the future, he says that we must take better care of our water supplies. "If pollution and demands for water both continue to increase, our only alternative is to turn to desalinization of sea water," he predicts.

As for Russ' future, he plans to live in Decatur with his sister, spend some time at the office, and, if the weather gets too bad, head for Mexico for a brief respite from the snow and cold of Illinois.

Succeeding Russ as Midwest District Sales Manager will be Matt D. Sylvan, who has been the Mueller sales representative in Kansas and western Missouri since 1957.

Arthur G. McPherson, who has been a member of the Mueller Industrial Sales Division for four years, has assumed Sylvan's former duties.

Sylvan, 43, has a Civil Engineering degree from Brooklyn Polytechnic Institute and moved to Kansas in 1942, where he joined Beech Aircraft Corp. in Wichita. Following this, he was with a consulting engineering firm in Wichita, and from 1949 until 1957 he was Assistant Manager and Chief Engineer with the Kansas City Suburban Water Co. He and his wife, Pat, will continue living in Overland Park, Kan. They have a married daughter, Martha, who is living in Dallas, and a son, David, who is in college.

McPherson is a graduate of Ohio University, Athens, Ohio and first entered sales work for a New York drug firm. In 1958, he joined Adams Pipe Repair Products, later a division of Mueller Co. In 1962, he transferred to the Mueller Industrial Sales Division and had been our representative in the Southeast prior to moving to Kansas. He and his wife, Mary, have three children and they, also, live in Overland Park, Kan.

Motorist: What will it cost to fix my car?

Mechanic: What's the matter with it?

Motorist: I don't know.

Mechanic: $39.75.

Strictly *Off the Record*

One business firm wrote to another saying: "Our electronic brain estimates that the cost of the work you wanted carried out will be . . ."

The following reply arrived the next morning: "As this is higher than we anticipated, we would suggest that your electronic brain make an appointment with ours to discuss ways of reducing the figure."

* * *

A young mother, after putting her two children to bed one night, changed into a droopy blouse and an old pair of slacks and proceeded to wash her hair. All during the shampoo she could hear the children growing wilder and noisier. Finishing as hurriedly as possible, she wrapped a large towel around her head, stormed into their room and put them back to bed with a stern warning to stay there. As she left, she heard her two-year-old say to his brother in a trembling voice: "Who was that?"

* * *

The other day a doctor cut open a patient's stomach and a bunch of butterflies flew out. "Holy cow!" exclaimed the doctor to his assistant. "He was telling the truth!"

* * *

A man asked a druggist one Sunday morning if he had change for a dime. "Sure, here you are," said the druggist, "and I hope you'll enjoy the sermon."

* * *

A Texan arrived in heaven and found things as he'd hoped. One angel took him in charge and asked if there was any particular thing he wanted. "Yep, I always liked choir music," said the Texan. "Get me 10,000 sopranos."

"An unusual request," commented the angel, "but you shall have them. Anything else?"

"Yep, 10,000 alto singers."

They were promised.

"And then 10,000 tenors," ordered the Texan, "an' that'll be all for the present."

"Well-er, how about the bassos?" inquired the angel.

"I'll sing bass."

* * *

A farmer whose elderly mother was in a nursing home brought her a fresh bottle of milk every time he visited her, always adding a little brandy to it. She never made any comment about the milk but one day when her son visited she said, "Albert, could I ask a favor?"

"Certainly, Mother," he responded.

"Please, Albert," she said, "don't ever sell that cow."

* * *

An old woman at the customs office was asked if she had anything to declare. No, nothing at all. But what was in the bottle? Oh, only holy water from Lourdes. The customs officer pulled the cork. "Whiskey, it is," said he.

"Glory be to God!" cried the offender. "A miracle."

* * *

He became very ill and was rushed to the hospital. Next day, his boss was among the first to pay a visit. "Now, Henry," he pleaded, "you just don't worry about a thing. Everyone down at the office is going to pitch in and do your work—as soon as we can figure out what you've been doing."

* * *

Two hillbillies who had never been on a train were drafted and on their way to camp. A food butcher came through the train selling bananas which neither mountaineer had ever seen. Each bought one. As one of them bit into his banana the train entered a tunnel. His voice came to his companion in the darkness. "Have you et yours yet?"

"Not yet. Why?"

"Well, don't touch it. I've et one bite and gone blind."

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Easy turning, positive pressure sealing and long service life also are advantages of the Mark II Oriseal Valve design. The Mark II combines the simplicity of a quarter turn plug valve with the turning ease and positive pressure sealing of an O-ring valve. The low-cost, premium-quality Mark II Oriseal Valve – a product of Mueller's seventeen-year experience designing and manufacturing O-ring sealing valves – puts premium quality O-ring sealing performance within the means of every water department.

Ask your Mueller Representative for the facts – or write for Brochure 9370.

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