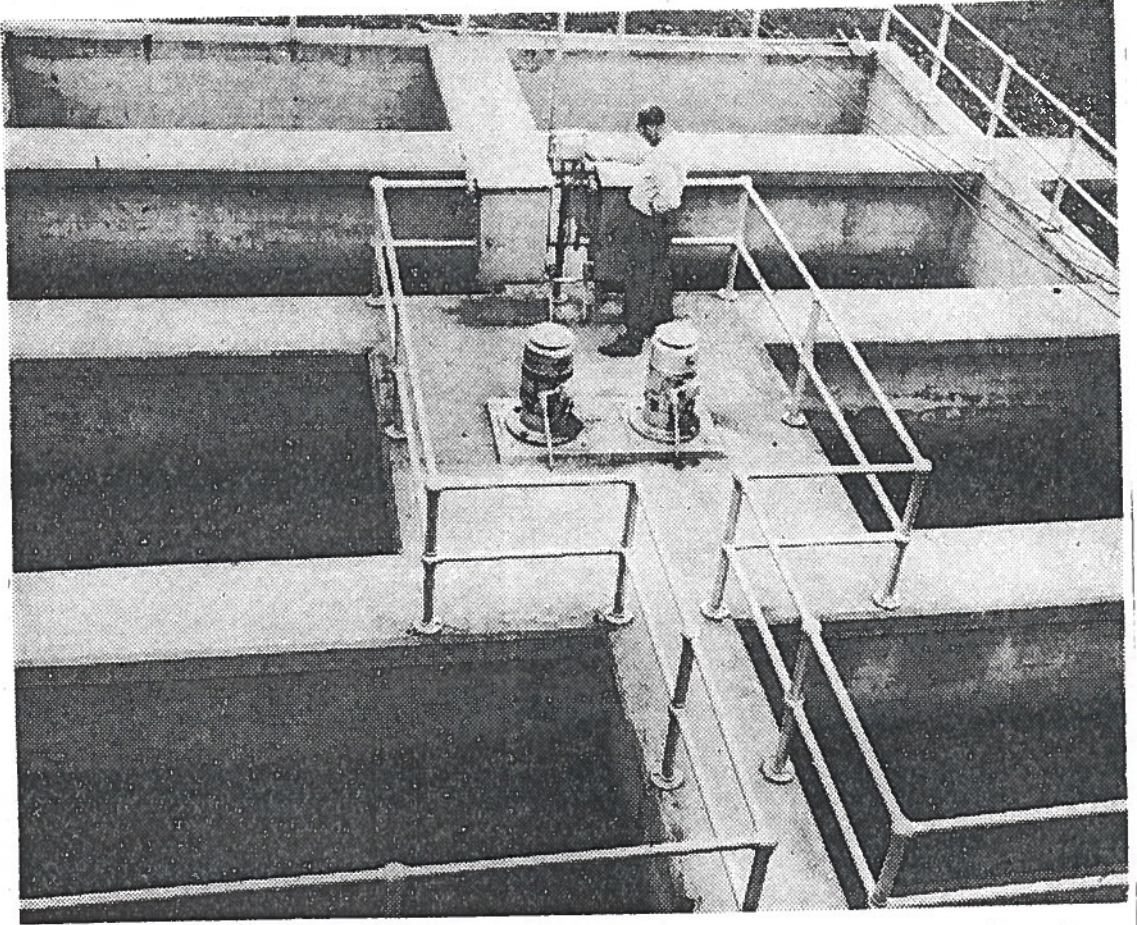


Lot Of Work Lies Behind Glass Of Water



—News-Times Photos (Thomas)

Flocculator basins, lying adjacent to each of the two water filter plants, are an important link in the purification of drinking water for Danbury residents.

In addition to being the hat center of the world, Danbury is probably one of this planet's thirstiest cities.

This observation, phrased in slightly more precise technical terminology, comes from a man who ought to know—Ellis A. Tarlton, B.S., M.S. and city chemist.

According to Mr. Tarlton, the city's two filter plants pipe an average of 8,000,000 gallons of purified water a day into Danbury homes and shops. That means over 300 gallons per person and represents one of the greatest per capita volumes among New England cities.

Supplied from West Lake and Margerie reservoirs, the plants prepare water for human consumption and for use in hat factories and other industries which require the best in H₂O.

The task of filtering and purifying this daily flood is handled by Mr. Tarlton and a crew of seven plant operators, with the aid of a fulltime, mechanic-maintenance man.

Six operators work eight-hour shifts six days a week in either plant, with the seventh man acting as alternate. The mechanic-maintenance man divides his time between the two plants as needed.

Works Alone

Working alone a good part of the time, the operator spends most of his day (or night) regulating the flow of water through a vast network of pipes, basins and storage tanks and checking progress of various filter operations.

At Margerie, for example, his scattered domain extends from basement to top floor of a three-story building and outdoors 100 feet behind and to one side of the structure.

Water is automatically pumped into the plant through a 20-inch main controlled by an automatic shut-off valve in the basement. At this point, smaller connecting pipes feed carefully-regulated dosages of alum into the water along with barely traceable amounts of ammonia and chlorine (one and three pounds, respectively, for every million gallons).

The alum combines with all dirt and natural chemicals in the water, lumping them together in grayish, fluffy, sponge-like chunks called "flock," which can then be removed easily.

Flocculators Help Out

To lighten the load on the filters themselves, the water is piped first to outdoor flocculators and



City Chemist Ellis Tarlton, who directs operations of the West Lake and Margerie filter plants, has a well-equipped laboratory to help him maintain a constant check on the water as it is processed on its way from reservoirs to city mains.



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Flocculators Help Out

To lighten the load on the filters themselves, the water is piped first to outdoor flocculators and settling basins, where three-quarters of the flock settles to the bottom, making possible the withdrawal of comparatively clear water near the surface.

Water remains in these basins from seven to 15 hours, depending on the rate of flow. When necessary, large horizontal, electrically-operated paddle-wheel devices—one in each flocculator—are switched on to stir the water and help build up large-particle flock. This additional aid is important when there are large quantities of certain kinds of algae in the water.

After a spell of wet weather or whenever extra chemicals must be added to the water, it is passed through an aerator for release of odors before going to the basins. Forced into the air as spray through small jets, it is thoroughly "aired" and collected again as it falls.

After removal of excess flock, the water is piped into spotless indoor filter basins occupying most of the first floor. Here, in what is really the heart of a filter plant, the water is allowed to seep down through layers of sand and graded gravel covering the floor of each basin.

Goes Into Clear Wells

At the bottom, the filtered water is drawn off in four-inch pipes and pumped into two underground clear wells, eight feet deep, with a total capacity of 1,250,000 gallons. These reserve tanks of pure water, Mr. Tarlton points out, form an adequate buffer against any foreseeable emergency.

"For instance," he adds, "the White street fire which required use of thousands of gallons of water per minute merely lowered the water level in the clear wells by a foot or so. To compensate for the drawdown, all we had to do was raise the rate of flow a little. Low water pressure at the fire did not mean insufficient water—it meant simply lowering of pressure from too many hoses on the same main."

In addition to guiding the flow of water through the plant, the operator has other routine duties. Every day at 5 a. m.—late on Sat-



City Chemist Ellis Tarlton, who directs operations of the West Lake and Margerie filter plants, has a well-equipped laboratory to help him maintain a constant check on the water as it is processed on its way from reservoirs to city mains.



Operator Frank S. Shanley is one of a crew of seven to whom is entrusted the 24-hour daily operation of complicated valves, controls, tanks and other equipment. One man is on duty in each plant at all times. Mr. Shanley is shown as he controls a filter "back-wash" operation.

urdays, Sundays and holidays—the filters must be washed by running 100,000 to 150,000 gallons of specially stored wash water back up through the sand to expand it and carry out the dirt.

At Margerie, costs of this operation have been cut in half by recent introduction of a supplementary "surface wash" by means of high-velocity jets in pipes which are burked in the sand as it is pushed upward by the back wash. These 75-mile-per-hour jets make it possible to clean filters with only half the water formerly needed.

Plans Innovation

Another modern innovation, use of a new filter medium over the sand, is planned for the near future and is expected to cut the number of washes to one every two days, according to Mr. Tarlton.

Every Friday afternoon the settling basins are shut off for cleaning, and approximately 750,000 gallons of harmless but distasteful black sludge are dumped into Padanaram brook. On Saturdays the flocculators are cleaned.

In addition to these major chores, the operator has a continual round of inspection and adjustment to perform. Automatic chemical feeders must be checked every hour along with the rate of flow of water through the plant, the rate of draw-down, and the performance of all the complicated machinery indoors and out.

Nerve center of the entire filter system, however, is the up-to-date chemical laboratory maintained by Mr. Tarlton. Considered one of the most modern in the state, it contains equipment for making

minute chemical analyses of water samples from the reservoir in order to determine the nature and amount of all foreign substances which might conceivably be in it.

Apparatus added to the lab in the past year or two includes such delicate, exact-measurement devices as a photo-electric colorimeter to determine concentration of foreign substances by color and a conductivity bridge which quickly measures the total quantity of solids in water.

In addition there are chemicals for making every known test on water.

Raw Water Hard To Treat

All this comes in especially handy at the Margerie plant, where the reservoir is considered one of the nation's hardest to treat for algae control.

Partly as a result of the experience gained here in that phase of filter work Mr. Tarlton is today considered one of the country's leading authorities on algae control. Only this spring he was picked as the official expert on that subject for Waterworks Engineering magazine, replacing the late Ray Goudey, chief engineer of the Los Angeles, Calif., waterworks and one of the country's leading sanitary engineers.

Mr. Tarlton's pride and joy is his laboratory, but his work carries him into every nook and cranny of the self-sufficient plant. Every year the whole inside of the plant must be repainted by himself and his small crew. And there is machinery to be moved around, valves that stick while the maintenance man is at the other plant,

thousands of exact records checked, and all the other details of running a public

An alert, clean-cut looking man with some of the college professor about him and something more of a engineer, Mr. Tarlton talks for hours on the run as he moves from floor to floor, plant to plant, planning minor troubles and going with bigger ones.

Despite the large quantity of water needed for industrial purposes, Mr. Tarlton estimates only 30 per cent goes to factories with household consumption of leaky faucets" accounting for other 70 per cent.

As the man who mini Danbury's thirst, Mr. Tarlton has only one apparent worry about the water. A persistent rumor among so many residents that "great quantities of 'poisonous' chemicals are dumped into the water."

This isn't so, he insists. Filter chemicals are harmless, the dosages used are small, and they're removed from the water by settling basins immediately after serving their purpose of killing bacteria.

Weather Forecast Sees Drought Going On

Long-Run Estimate Gives Little Hope of Immediate Relief

By JANE E. BRODY

A long-range weather forecast that was issued yesterday indicates the Northeast is still firmly in the grip of the longest drought in the region's history.

Subnormal precipitation is predicted for the next 30 days over the 13-state area that has been suffering from severe water shortages for the last five years.

Less than two and a half inches of rain is expected over the drought region between now and mid-April. Normal precipitation for this time of year is two and a half to about four inches.

According to national weather experts, the next two months will tell whether the anti-drought reserve has grown enough to assure that it will not be overdrawn this spring and summer. During fall and winter, a reserve balance must be built up to cover spring and summer water costs, which far exceed the amount of water received.

Diminished in February

Thus far this winter, the reserve has been growing steadily. In February, the drought diminished to "severe" from the "extreme" state it had been in since September, 1964.

The status of the drought is measured by the drought severity index, or Palmer Index, which balances the precipitation income—from rain and snowfall—against expected expenditures—for crops, man and evaporation.

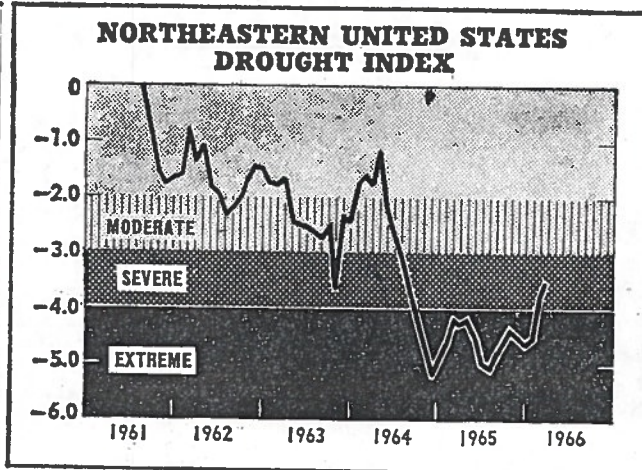
The index was devised by Wayne C. Palmer, research meteorologist for the Environmental Science Services Administration, to facilitate accurate descriptions of drought conditions in various parts of the country.

An index number of zero indicates no drought, a number above zero indicates a reserve and a number below zero indicates drought conditions where water storage has not kept up with water use.

Once reserves are severely depleted, as they have been during the course of the present drought, it takes a long time to rebuild them to the level considered "safe" for the given area.

All last year, the drought was in the "extreme" level with an index number below minus four.

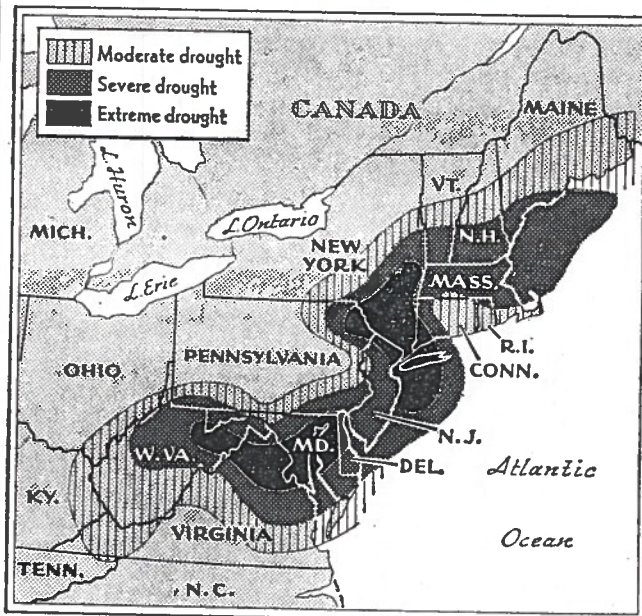
In February, it moved up to the "severe" level, with a num-



The New York Times

March 17, 1966

WATER SHORTAGE CONTINUES: Drought index in the chart above indicates continuing lack of water in Northeastern states despite recent improvement. The index is a composite figure that takes into account the water available and the water used in the Northeastern states. Map shows the current extent and severity of drought in area.



ber of minus 3.7. In the first half of March, the situation improved further to an index number of minus 3.5.

Experts with the agency, although willing to make 30-day precipitation forecasts, would not hazard a guess as to what might happen to the Palmer Index.

Dr. Helmut E. Landsberg, director of the science administration's Environmental Data Service, says he is optimistic:

"The outlook is always favorable when you have abnormal trends. They have to return to normal sooner or later."

Dr. Landsberg said that since last July, when the drought extended from Ohio into Maine, the drought region had shrunk

considerably. It now lies entirely east of the Appalachian Mountains.

He noted, however, that reservoirs were still quite depleted and would take some time to be refilled. "It took five years to deplete them, it may take another five years to fill them up again. And just because we're in better shape than a year ago, that doesn't mean we couldn't slip back."

To aid in their drought predictions, climatologists in the science administration are trying to understand how the drought got started and what has kept it going. The most popular theory is that of long-range weather forecaster, Jerome Namias, who thinks of

Northeast Shortage to Continue for at Least 30 Days

the drought in terms of abnormal winds.

Mr. Namias believes the abnormal wind patterns that have characterized the country's weather picture for the last four years caused storms and their accompanying precipitation to occur off the Atlantic Coast rather than over the states.

One of the key factors in the abnormal wind patterns may be unusually cold ocean water off Delaware, Mr. Namias says. This cold water stabilizes the warm, wet winds from the south and inhibits them from losing their moisture over the Northeastern states.

Over the last four years, the temperature of the water off Delaware has averaged about five degrees below normal. Mr. Namias held out little hope yesterday that the drought was ending because, he said, the water there is now 10 degrees below normal.

However, he explained that the drought was a cyclical phenomenon, where the atmosphere influences the ocean and the ocean, in turn, influences the atmosphere. To end the drought, "the cycle has to be broken," he said. Either the waters must warm up or the wind patterns shift.

Eventually, something must change, but right now no one knows when.

Australian Servicemen Plan Fund to Aid Asian Students

MELBOURNE, Australia — Australia's Returned Servicemen's League is to establish a commemorative fund to provide annual scholarships in Australia for Asian students. The first scholarships will be awarded to students from South Vietnam, according to the Australian News and Information Bureau.

The Victorian State President of the league, Brigadier W. H. Hall, said the funds would be financed by 10 cents voted from each annual membership fee and would be supplemented by donations. He said students brought to Australia would be sent to schools and universities and their welfare would be the responsibility of the Returned Servicemen's League, which would ensure they saw a great deal of Australian life.

Brigadier Hall said that the commemorative fund would also allow the league to assist more in activities contributing to international goodwill.

Councilmen Expected To Air City Water Rate Boosts

Board Meets
Tuesday Night;
Deficits Noted

BY PETE SEYMOUR

DANBURY — The Democratic government begins a new decade tomorrow with the Board of Councilmen's meeting in City Hall during which proposed increases in the city's water taxes are expected to be aired.

Expenses under the Water department's annual budget have kept the department in the red since 1955. Rate hikes have been the only solutions offered by the city administration and action may be taken this month. Sydney A. Rapp, Water department superintendent, appeared before the Common Council last month with a new tax schedule. His program was referred to the council's Water committee.

City Hall sources anticipate the program's reappearance tomorrow when the councilmen meet at 8 p. m. The Board of Aldermen is to meet Thursday.

Four Years in Debt

The Water department, which operates on a separate budget from the city's budget, had a surplus prior to 1955. Since then, mounting expenses have been greater than revenues.

The department concluded its 1958-1959 budget in the red for the fourth consecutive year. It had a \$28,163 deficit compared to a \$17,735 deficit in its 1957-1958 budget. The year before, taxes raised \$44,000 less than the budget.

The city's Board of Estimates and Taxation, meeting last May, recommended that the city consider boosting its water taxes. There have also been indications that the city's other departments may be taking Water department money for use in other categories.

The Finance board recommended a 20 per cent increase in the water rates. This would have raised the average city family's annual tab from \$13 to \$15.60.

Seek 33 Per Cent Hike

Mr. Rapp's program is more liberal. He has asked the Common Council to boost the annual family rate from \$13 to \$17.

Town residents who use city water pay a 50 per cent premium over the city rate. The average town family's bill would go from \$19.50 to \$29.25, according to the proposed schedule.

These increases represent approximately a 33 per cent boost.

Mayor John A. Defne, Jr., who expressed approval of the proposed rates during last month's council meetings, said he would encourage council action on the question this month.

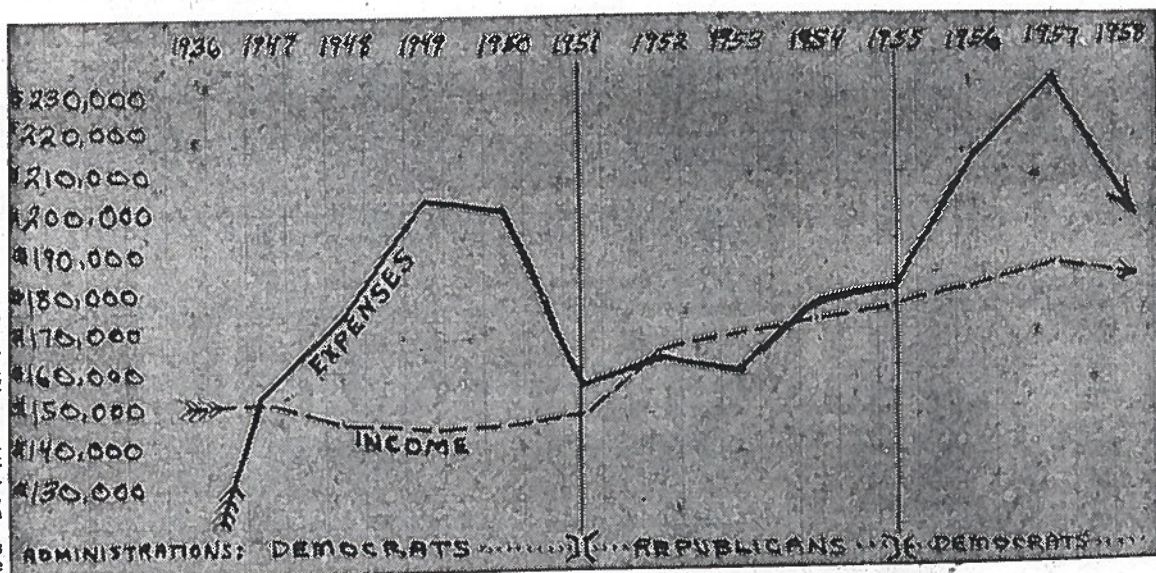
Most councilmen and aldermen appeared amiable toward an increase. A few objected to having been presented with proposed hikes without prior notification of the administration's designs, but did not express particular antipathy toward increases.

Danbury News-Times

Page 13

Danbury, Conn., Monday, January 4, 1960

Pioneer 3-5591



CITY WATER DEPARTMENT costs have spelled bad luck for Democratic administrations since World War II. A department surplus cushioned an operating deficit prior to 1955. But

the last half of the 1950s saw expenses (solid line) surpassing tax income. (dashed line).

Meters Considered

Mr. Rapp told the councilmen he also plans to press for installation of meters throughout the city in the future.

Most hat manufacturing concerns in Danbury, several other industries and but a few homes have water meters. Without the meters, a user is assessed a flat rate. Mr. Rapp called a meter system more equitable for all.

He has defended the use of meters and his proposed rate boosts by noting that Water department costs have increased three to four times since 1932.

The proposed use of meters for all users is not a new topic. Previous administrations have reviewed the idea for many years.

Bloodmobile

Opinions of the People

Water Should Be Extended

It is unfortunate that town residents on Stedley Rough and Great Plain Rds. will not be allowed to tie into the municipal water system being extended to the new public and parochial schools. It is also unfortunate that the pipe lines cannot be extended for use in other areas of the town.

It may be worth considering selling the entire water supply system to a corporation that will extend the lines to the town limits and to supply all residences, commercial establishments and industries that desire being serviced by a municipal system.

Most private wells are drilled into limestone and the water is quite hard. A large number of wells draw water through "rotten rock" that causes the water to be heavy with sediment. An astonishingly large number of wells are heavy with iron and associated with the iron, in many cases, is an unpleasant odor.

The selfish attitude regarding supplying town residents with municipal water borders on the ridiculous. People only a stone's throw from a filtering plant, standpipe or pumping station must have their own hard water wells.

I shall work for consolidation if that is the only means available to have the municipal water system supply the town. There is plenty of water to serve the town and many hills that are good sites for standpipes to supply ample pressure over the entire area.

The Bridgeport Hydraulic Co. is extending its lines. Residents in Trumbull and Westport may tie into those lines at a total cost of \$10 monthly over a 10-year period. Prospective customers of miserable iron bearing water have asked me if they should treat the water from their wells or tie into the water system being extended past their homes. It is not easy to pass up business but in all honesty I recommended that they get water from Bridgeport Hydraulic.

Health is one major reason for desiring a municipal water supply be made available throughout Danbury. More and more wells are being contaminated by detergents. Many people are drinking a dilution of their own or their neighbor's laundry water. Detergents cannot be removed from water without excessive cost. Detergents can and do pull bacteria and virus infectious diseases from septic systems and into wells before the soil bacteria can render these substances harmless.

Stand on the bridge over the Still River in Brookfield any sunny day and watch the masses of detergent foam sailing by. Imagine that in wells? It's in a great many of them right now. Sewage, too.

Danbury has been lucky so far. Wait and we'll have an awful outbreak someday of infectious hepatitis or typhoid.

A municipal water supply system is a must for the entire town and it is getting too late to delay the extension and use of water mains. A selfish attitude on the part of the city can be extremely dangerous for every one of us.

S. E. SOLMER

Constables Say They're Town Police

Regarding the editor's note to Mrs. C. S. M.'s letter under Opinions of the People, Thursday, I would like to take this opportunity to inform you that the Town of Danbury does have a police force. I refer to the Danbury Constables Association, an organization of 56 members. This is not a

paid organization, but a voluntary force. We are under the supervision of the first selectman of the town of Danbury and have as our chief, in the field, Mr. Leon Merritt, a former Connecticut state trooper.

We have been called out on a number of occasions for voluntary duty in the Town and had we been called upon for this missing person search, we would have been more than willing to have taken part in it.

This association was organized two years ago, and since January of this year, we have patroled more than 3,000 miles of town roads in our own cars and at our own expense. We have 12 cars equipped with two-way radios and a base station located in our office in the Miry Brook Firehouse. Through our fan out system, we can assemble at least 50 per cent of our membership within 30 minutes. This fan out system has proven effective on several occasions, when we were called, such as spending several hours searching for two children in the Mill Ridge area, hurricane alerts, i. e., having patrols put looking for fallen wires, trees and anyone in distress, etc., and searching for a lost child in New Fairfield.

Many of the citizens in Danbury may remember the Danbury Constables Association last winter when transportation was at a complete standstill due to the weather. At this time the Danbury Constables Association stationed themselves at the Danbury Hospital around the clock and transported nurses and visitors to and from the hospital. We have also been called upon to stand duty at such events as the Easter egg hunt at Rogers Park as well as traffic duty during the firemen's convention in Bethel last year.

I have mentioned several occasions where the organization as a whole has been called upon. However, space doesn't permit me to enumerate on what the individuals themselves have done voluntarily. By the power of arrest granted us under the statutes, we have apprehended speeders, drunken drivers, and other such violators of the law.

Granted we are a young organization, but the fact remains that Danbury does have some protection in the town as well as the city. There are certainly many individuals in the town who seem to know who to call upon when there appears to be a prowler, or a disturbance in certain areas—the special constables. To make a statement that the town of Danbury does not have a police force would be the same as saying the town of Danbury does not have any fire protection, since we are a voluntary force just as the town firemen, and I doubt that you could make such a comment about the firemen.

JOHN F. GODFREY SR.

Danbury Constables Association

Complaint On Water Meters

We received our quarterly metered water bill and found it had doubled our old town rate, while all our neighbors without meters blissfully fill their swimming pools and water their flowers and lawns at the same old town rate. We think it is a very unjust situation.

Until everyone has been ordered in the town to have a water meter installed, we think we should pay the minimum rate.

Sure, they must start somewhere but at least the old homes are paid for and if they don't know where to begin, start with all the homes in the town enjoying city water and sewerage and just paying one tax. There are plenty of them.

We aren't that lucky. Let's hear from some other meter users on this.

F. P.

Saturday Evening, September 8, 1962

The

Sell the Water System?

All three letters from readers on this page today deal with the complexities of our local government in one form or another. They are proof in themselves that Danbury needs a single, modern government, not the outmoded, costly and inefficient dual government which has existed nearly 140 years.

Two of the letters concern water service outside the city limits, one of them prompted by the fact that St. Gregory's Church is paying to install a water line along Great Plain Rd. to its new parochial school and the town is doing the same along Stedley Rough Rd. for the new Great Plain School. Both locations are well outside the city limits.

Once the lines are installed, title to them passes to the city and the city can decide whether or not anyone else can connect to them.

One correspondent raises the question of the water system being sold to a public utility.

Should that be done, the city

would probably realize enough money to pay off all its bonded indebtedness and leave a "cushion" against future taxes for property owners in the city.

Like so many other things concerned with our complex local government structure, it is a matter which should be thoroughly explored. There are good points, as well as bad points to be considered.

The city, when formed in 1889, took over the water department from the old borough of Danbury, which had been founded nearly seven decades earlier. In other communities, public utility companies were organized to provide water service.

There's a lot less politics involved in water supply in communities with privately owned rather than municipally owned systems. Most people probably would regard this as a good point, but some would see it as a bad point.

Only a thorough study of the entire question could provide the proper answer.

Reservoirs 10/18/63 Getting Low

By DON FRASER

DANBURY—A city official says one of the two public water systems is "normal for this time of the year" and the other is "well-below normal" as a result of two severe droughts this year and a total of three prolonged dry spells in less than two years.

Photo on Page 1

City Chemist Ellis Tarlton said the city has a "six-month water supply" now to last until expected early spring rains and snow runoff replenish the water reserves. But he says the water supply overall is at its lowest point since 1957.

Second Time Since '36

The municipality has had to start its "low lift" water pumps in the West Lake reservoir system for only the second time since the West Lake plant was built in 1936. The other occasion was in 1957.

The lowest point the West Lake system has reached since the reservoir reserve was built was 11.5 feet below normal on Nov. 10, 1957. The same system now is slightly over nine feet below normal. The system in October, 1957 was ten feet below normal.

One indicator of the shortage in the West Lake system is the fact that the city from now until the end of the drought will pump more water out of the Margerie system than it will out of the West Lake system. Usually, 60 per cent comes out of West Lake.

Upper Kohanza is described as in "very bad" shape. The city will soon start to pump water out of Lower Kohanza to permit future storage there once snow runoff accumulates.

Two Normal

Tarlton says Boggs Pond is at normal capacity. Padanaram reservoir also is described as full. East Lake is reported down four feet, while Margerie reservoir, itself, is down 7.3 feet. However, the backlog in this system compensates for some loss.

There is no water whatsoever in the so-called King St. reserve. However, this is a small unit in the overall system, explains Tarlton.

City Eng. Sydney A. Rapp said today that he will tour the entire reservoir system this weekend to determine whether any restrictions need to be imposed upon water users in Danbury.

Rapp said his tour will cover checks of West and East Lakes, Upper and Lower Kohanza reservoirs, Padanaram and Margerie reservoirs and Boggs Pond.

The sprawling, community water supply has been drained steadily this year of its huge resources because of the below-normal amount of precipitation since Jan. 1.

The current dry spell occurred gradually over a period of more than a year. The drought this fall is the second severe dry spell in Connecticut this year.

A severe dry spell in western Connecticut and southeastern New York more than a year ago damaged crops, caused extensive loss of surface vegetables and hay and forced several New York counties to resort to rain-making techniques.

Hope Snow Replenishes

City officials have expressed the hope that normal amounts of snow and rain this winter will replenish the Danbury water supply enough to at least

make up for part of the loss incurred by usage and drainage.

The gradual attrition of community water reserves throughout the parched Northeast and Mid-Atlantic states has caused increasing concern, especially in areas where explosive population growth already has drained supplies.

Rapp said his weekend tour is designed to pinpoint water levels and to determine whether restrictions are needed.

Weather Observer Joseph Simko earlier this week released figures which disclosed that Danbury, during the months of October, November and December, normally can expect 11.12 inches of rain on the average based upon totals accumulated over the past 18 years.

This area officially has had only .01 of an inch in 18 days. The average rainfall for October is over four inches. The area already is deficient nearly 7.5 inches this year. Simko's records reveal Danbury has had less than 30 inches overall since Jan. 1.

Water Flow

The Danbury reservoir system works as follows: Upper and Lower Kohanza reservoirs flow or are pumped into West Lake, East Lake flows by gravity into Margerie, Padanaram reservoir is pumped into Margerie, and Boggs Pond flows into West Lake.

Rapp disclosed several months ago that the Kohanzas were extremely low. Pumping at one of the two Kohanzas was stopped entirely because of low water.

The five-day forecast for the period Saturday through Wednesday offers little hope for a general rainfall. Precipitation is supposed to average less than one-half an inch, occurring as showers about Monday. These showers might reach this area by sometime Sunday.

Rising temperatures, bone-dry woods and forests and explosive fire conditions in general are sources of concern to many communities where brooks and streams normally used to fight fire outbreaks have little or no water in reserve.

The ban on all outdoor fires of any kind continues throughout northern Fairfield and southern Litchfield counties and throughout all of southeastern New York state.

Redding Tower Out

The thermometer rose to 81 degrees yesterday in Danbury. The one fact that has eased the fire danger somewhat is the fact that the short days and long, cool, damp nights counteract fire conditions.

Towers are in operation throughout Connecticut, except in Redding. The Redding fire tower is inoperative because of vandalism.

The Roxbury State Forest tower was opened yesterday. Mrs. Willard Vaill Jr. is on duty there. Warnings again were issued in the Roxbury area against starting fires. Residents were asked to report immediately any grass or woods fires to the fire wardens or to Mrs. Vaill in the tower.

The looting and vandalism in the Redding fire tower means that this area is without a tower service during this emergency.

Danbury Reservoirs Lowest In 27 Years

By DON FRASER

DANBURY—The Water Dept. today asked city water users to voluntarily conserve a dwindling supply in the community's two main and six feeder reservoirs because of the current third long drought within a two-year period.

An estimated water reserve of 40 per cent remains in the West Lake and Margerie primary reservoir systems. This is the lowest the municipality's reservoirs have fallen since 1936. The Water Dept. may impose mandatory restrictions unless rain falls soon.

Down 9.5 Feet

City Eng. Sydney A. Rapp said West Lake and Upper Kohanza reservoirs both are down 9.5 feet below the spillway level. Margerie reservoir is down 7.3 feet below spillway level and East Lake is three feet short of the spillway. The rest are down about 3.5 feet.

Although the entire municipal reservoir reserve now holds about 47 per cent of its estimated capacity of 3.3 billion gallons, Rapp said about seven per cent of this amount cannot be used because it would mean pumping mud, debris and other matter.

"We're not too bad off," said the Water Dept. superintendent. He said he draws this conclusion by basing the figures on the Danbury reservoir outlook with those compiled by other Connecticut communities.

No Alarm

Like officials of Hartford's Metropolitan District Commission (MDC), water officials here are not alarmed. There is some concern both in Hartford and in Danbury that unless some soaking rains fall before this winter, local reservoirs will be in bad shape.

The longest known dry spell on record in the Nutmeg state lasted 33 days. It is hoped there will be substantial rainfall within two weeks. If not, Rapp said he will restrict such things as commercial car washing, home car washing and probably laundromats.

Capacity at West Lake, the city's main reservoir, is rated at 1.58 billion gallons. However, Rapp said West Lake "rarely is filled to capacity." He observed that under normal conditions it would contain 1.25 billion gallons. It is down to 600 million gallons now.

This has forced the city to switch to full-scale use of Margerie reservoir. Margerie under normal conditions holds about

1.20 billion gallons. It is not as low as West Lake reservoir.

Per Capita Use

The normal rate of per capita consumption is 7.3 million gallons during a dry year such as we are experiencing now, says Rapp. At this rate, Danbury retains a good four-to-six month water supply, no matter whether rains falls in that period or not.

Statewide, other communities are now borrowing water from alien sources and paying for it at rates running from \$40 a million to \$120 a million gallons of water. There is no prospect of Danbury having to borrow water from other sources.

The city has two main reservoir systems: The West Lake system covers West Lake, Boggs Pond, Upper and Lower Kohanza reservoirs. The Margerie system covers Margerie, East Lake, Padanaram and what Rapp calls a "diversion connector" at Clapboard Ridge Rd. and King St.

By Far Worst

The "diversion connector" acts as a catchall for water runoff in small streams in the area and channels it into Margerie reservoir by gravity without having it flow into Padanaram reservoir, where it would eventually have to be pumped into Margerie.

Rapp estimates that West Lake reservoir is by far the worst off of all the city's reserves. The usable water is down to only 32 per cent of capacity now. That's one big reason why the city is now using Margerie reservoir and its tributaries.

In contrast, the MDC watersheds in the Hartford, Avon, Simsbury and West Hartland areas are down only to about 55-60 per cent of capacity, according to MDC officials. However, several of the five prime reservoirs will need more than 30 inches of rain to bring them to capacity.

Conservation

Statistics compiled by the Consolidation Commission's public works subcommittee reveal that a combination of maximum conservation of water by users and the difference between normal levels and capacity would create an addi-

tional three million gallons daily.

Mid-summer estimates placed the number of actual reservoir users at about 30,000. The subcommittee pinpointed 22,000 of this reservoir users as city residents and the rest as dwellers in the area just outside the municipal boundaries.

"Our immediate capacity plus conservation measures would provide for approximately three million gallons per day increase in service, which would then allow water service to a population of about 50,000 people," the subcommittee report said.

However, the subcommittee also found that "if a conservation program could achieve maximum effectiveness, our present capacity could possibly serve a total population of 75,000 people." Indications are the group had an eye on metering as one effective weapon.

Meters

The average daily per capita consumption is 200 gallons. It was estimated at the time the report was filed prior to June 1 that "with normal conservation practices . . . the rate of per capita use would drop from 200 to somewhere between 100 and 150 gallons per person."

Observers say water conservation never will reach maximum effectiveness without the wholesale use of meters. A check with the city water inspector produced some startling facts.

Only three out of a score or more of laundromats located in the town and city of Danbury are metered. A car wash on Federal Rd. is not metered. All homes in the city also are not metered.

Nicholas Juisto, water inspector, said local industry both inside and outside the city limits, new homes in the town near the city line, banks, downtown commerce and shopping centers are metered.

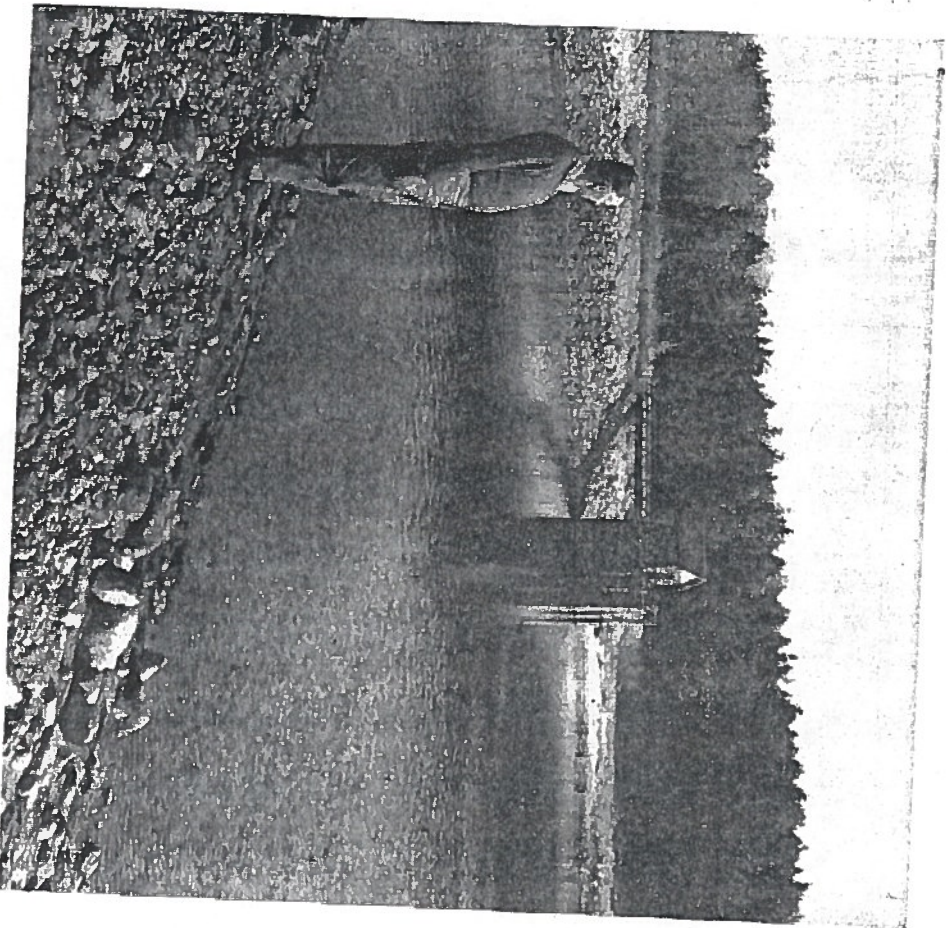
Laundromats

The three laundromats that are metered are those located on Keeler St., Chappelle St. and Rowan St., Juisto remarked. Juisto works directly under Kenneth Shack, the water tax collector at City Hall.

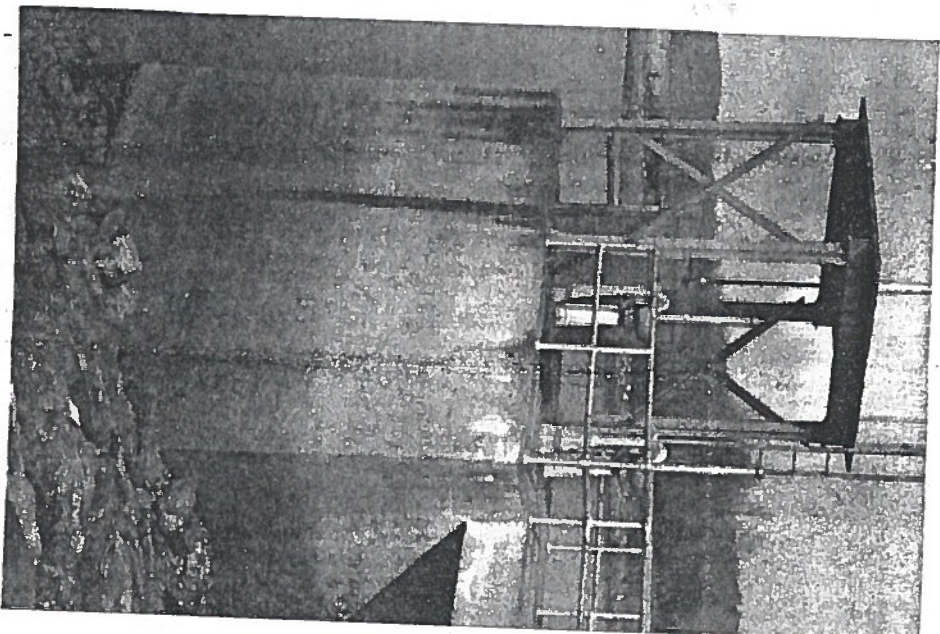
A water crisis rivets the public eye on conservation measures and less upon cost of anti-waste procedures. Water officials say what is important now is the finding of the most effective method of practicing water conservation.

While no water crisis exists now in Danbury, public officials are wondering how long the community can continue without instituting a comprehensive metering program.

OCT 24, 1963



WEST LAKE—Bruce Haley, a Water Dept. employe, looks toward gatehouse. Level is down more than nine feet.



MARGERIE, one of two principal city reservoirs, is down more than seven feet.



UPPER KOHANZA, a secondary reservoir feeder, exposes much shore normally under water.
(The News-Times—Mannion)

The News-Times

Water Dept. Has Small Balance

DANBURY — The City Water Dept. showed a small balance of \$5,233.67 during fiscal 1962-63 in the amount of revenue collected over the amount spent, according to a report made public today by Tax Collector Louis T. Charles Jr.

Charles' report reveals the Water Dept. took in a sum of \$294,676.92 for the period July 1, 1962 to June 30, 1963. The statement indicates the Water Dept. spent \$289,443.25 for the same period.

Calendar Year

A major change in reporting Water Dept. revenue and expenditures took place on Jan. 1. The Water Dept. must under a new state law operate on a calendar-year budget. This means the fiscal year for the Water Dept. runs Jan. 1-Dec. 31 annually.

The independent audit of Water Dept. books both for fiscal 1962-63 and for calendar 1962 reveals that the bureau is already operating on a January-December basis. This, it notes, is in accordance with requirements of the State Public Utilities Commission.

However, the auditor recommends that succeeding Water Dept. budgets be drawn on the calendar rather than July-June basis used now by the City

Board of Estimate and Taxation. The suggestion is that the finance board meet in November or December annually.

Consideration

This will probably be taken into consideration by the municipal finance officer or comptroller under consolidated government. The finance officer would be responsible for drawing up a Water Dept. budget and submitting it to the mayor and to the Common Council.

The sum collected in revenue is nearly \$110,000 more than the Water Dept. received in total revenue for fiscal 1957-58, according to figures retained on file by the News-Times. The department took in \$184,252 in 1957-58.

Charles said the Water Dept. realized about \$144,752.96 in revenue during the period July 1-Dec. 31, 1963. This was slightly less than one-half of the total of \$294,676 collected over the 12-month period.

Rate Increase

One reason for the sharp hike in receipts the past three years was the water rate increase adopted by the Common Council, effective March 1, 1960. Prior to the water rate hike, receipts annually had been running between \$165,000 to \$185,000.

If the next audit upholds the balance reported, this will mark one of the few occasions since 1947 that Water Dept. revenue exceeded expenditures. However, the Danbury Water Dept. generally is considered highly solvent.

The revenue reported for 1963 is about \$5,000 more than the amount reported by the tax collector for 1962. The 1962 sum came to \$289,728.04. This was for the period Jan. 1-Dec. 31, 1962, according to figures contained in the annual audit.

Six Months

The Water Dept. took in \$108,648.54 during the month of June. This accounted for almost 50 per cent of the revenue the department received for the first six months of 1963, according to Charles.

Charles and Kenneth Schack, a Water Dept. official, both listed \$20,490.82 as the amount collected in January, \$3,886.99 in February, \$11,470.46 in March, \$5,021.38 in April, \$1,478.85 in May and \$108,648.54.

A check of previous revenue-expenditure totals for the department shows that in 1958 the department took in \$184,252 and spent \$119,089.

During a 12-year period prior to the hike in water rates in the community, the Water Dept.

only twice realized more money than it spent in one year.

This occurred in 1952 when receipts totalled \$165,383 against \$165,120 in expenditures and in 1953 when receipts totalled \$169,834 against \$161,766.85 in expenditures.

Cash Activity

The auditor examined what he calls the "cash activity" of the Water Dept. account for fiscal 1962-63 and found that the department's general fund decreased from \$87,924.71 in 1961 to \$72,217 for calendar 1962.

The decrease was attributed to an increase in operating expenses, the audit said. The operating revenue for calendar 1962 was \$289,728.04. This was an increase of \$4,443 over 1961, the audit indicated.

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54 MAIN STREET

JAN 17, 1964