

NEW-YORK, SUNDAY, MAY 21, 1911.

Did It Ever Occur to You What a Water Famine in This City Might Mean?

This Question May Sound Needlessly Disturbing, but a Little Alarm Over the Present Situation May Prevent Much Suffering Later, Unless More Rain Falls This Summer Than Fell in Any of the Last Eleven.

What would happen to the city of New York if it had to go through a real water famine this summer? "A foolish question," many will say, "because a calamity never has befallen Gotham in the past and is not going to happen now." The answer to which is that it's always well to be optimistic if you don't carry it to the extent of blinding yourself to the facts and to the point of neglecting to take precaution against an unexpected run of bad luck.

Now listen to the facts about the water situation in Gotham to-day, and consider whether it is not the time to take precautions.

On May 1, 1910, the water that was stored in the reservoirs of the Croton watershed amounted to 104,000,000 gallons. For seven months the city drew off more water than the rivers and rains poured in, so that the reserve supply was constantly sinking.

In August, 1910, the constantly sinking flow of the streams was so small that they did not replace the water that was lost by evaporation from the surface of the reservoirs.

In September, 1910, the streams were still more shrunken, and the evaporation amounted to 6,000,000 gallons more than all the incoming water for every one of September's thirty days.

On December 1, 1910, the city's store of water had been reduced to 22,000,000 gallons. Seventy-two billions of gallons had been drawn off since the first of May.

On May 1, 1911, since the first of May, only 54,000,000 gallons of water were held in the reservoirs. That is about half as much as they held a year ago.

Suppose that precisely the same weather conditions prevail from now to next December as prevailed in 1910, and—where will we get the 72,000,000 gallons that we need to draw in that time? It is not hard to see where the shoe will pinch.

Evidently talk of a possible water famine is not baseless. It does not take a rainless, burning drought, such as we read of in China and Africa, and the Western prairies to give us a shortage of water.

Only another year like last year, scattered showers and some brisk rainstorms, with hot, drying days between, will suffice.

Now, let us ask ourselves again, what would a water famine mean to New York—such a shortage as is now actually threatened? Let us follow its march step by step, as it would appear to the man in the street.

Homecomers wandering through the cool, early dawn wonder what the dickens the birds are making so much noise about, plump in the middle of the city. Time was when the birds stayed in the parks of mornings, and you could shut out the light and go to sleep at 4 o'clock, with no sound in your ears but the familiar surrings of the neighboring trolley crossing.

But now the birds go cheeping and chattering all over town. Poor little devils, it is because they are thirsty, too. They wander through drouthy channels of streets and over a Sahara of roofs, hunting everywhere for a little sip of water, and the chance to make a small bird's splashing toilet.

But they are hunting in vain. The streets grow dustier and dirtier. The men cannot clean them thoroughly without the aid of the hydrants, and that aid the city has bravely denied. Scraps of paper are blown about. The dust gets

penetrated into an iron basin. Basin and pencil are cast in the sides of heavy posts, and ridiculous flat cups of galvanized iron, shaped like paddles and weighted like Indian war clubs, are fastened by chains. Hundreds of thousands drink from them every day. But these little trickles are stealing away the water from the black, drying reservoirs, and the city must save every drop it can. So the drinking fountains, too, are shut off.

It is sometimes inconvenient to the passer-by, but it is necessary.

At any rate, there has been no attempt to save water with a bucket of water unless the family is to go dry all night. In the tenement houses only too often it is the woman who must do it. But the blow has fallen on the whole city, not on the tenement houses only. In all the swarming flat-houses of Harlem and beyond men and women toil up narrow stairs with pails and pitchers. In fashionable apartment houses the servants and the janitors carry it up on the elevators.

But the more inconvenience is not all. There is no water whatever above the basements, except what has been saved by those who have read the newspaper warnings. The faucets will not run. There is no water for sanitation. And the summer heats are already here.

The first night there is a considerable saving of water. The next the saving is greatly reduced. Hardly a household but determines not to be caught again without water, and she leaves a wash boiler or a tub standing under her open tap, so that the first trickle of water will begin to fill it. Tens and hundreds of thousands of these receptacles overflow and let the water run to waste. Millions of gallons are caught and set aside in pails and tubs.

With every one in the city eager to lay up a supply the water does not rise above the first floor. When at last the lower tenants are satisfied and have remembered to shut off their streams the people of the second floor have their turn. So it goes through the day, and in hundreds and hundreds of houses the tenants of the fifth and sixth floors get no water at all. In many an expensive "elevator apartment" the roof tank, which is usually filled during the night, sets no water at all unless it is pumped up. In four days or so all are empty.

At the end of three weeks, three horrible weeks of hot summer, the hand of the famine is heavy on New York. With all the inconvenience the water officials have caused, with all the hard work they have piled upon overworked shoulders, with all the disease breeding abominations with which they have filled the city, they have reduced the vast daily consumption of water by only a petty fraction. Still the reservoirs sink, as the aqueduct sucks and sucks at them with its vast, thirsty gullet. There is little besides bottom to be seen in Croton Lake now. Rushes have sprouted up on the black mud flats, and slimy growths edge the sinking water with vivid green, like the seaweed on a dock at low tide. Scum gathers on the water. It is gathered and destroyed by men in boats. The water as it flows into the aqueduct is "treated" with chemicals, for it is heavy with disease.

Then the dog days rush upon the stricken city in all their anger. Blow after blow falls to check the drought in its terrible march. The laundries, ravenous consumers of water, are shut off by municipal ordinance, and all washing must be sent into the country, or be done at home. Some of the laundries open establishments on Long Island or in New Jersey. Still the army of refugees which is now pouring out of the city night and day.

First a newspaper warning, then that which has long been threatened comes in earnest. The water is kept at the basement level day and night. From Van Cortlandt Park to the Battery not a drop rises to the living rooms, except what is carried by hand or forced up by pumps. New York becomes a city of nightmares.

It is a harvest for the unemployed. You pay a water carrier 50 cents for five gallons of tepid, vile smelling water, delivered in the bottom of your bathtub. The stuff is too nauseating to drink, even if you believe the published declarations that it has been "treated" and is perfectly wholesome. The towing companies and the bargemen make small fortunes bringing fresh water from streams up the Hudson and selling it, bottled and retailed at 5 and 10 cents a quart. Real spring water sells for 5 cents a glass. The soda fountains have doubled and tripled their prices. The artificial ice, all made from Croton water, defies everything that it touches.

Now, at least, there is hope, and the people wait for the turning on of the water. But it is a cruel hope. The papers tell how the storm spent its strength on the lower Hudson. The merely sprinkling shower that fell on the Croton watershed was soaked up to the last drop by the thirsty ground.

Still the burning drought goes on, more terrible than before the storm. Vast swarms of flies appear, filling streets and houses and adding one more to the myriad little worries that make life a torment.

The city spends vast sums in a frantic endeavor to tide it over the famine. Light non-pipe lines are laid at great expense through the railway tubes under the Hudson and far into the hills of New Jersey, to deliver a meagre allowance of drinking water. Crows gather at the faucets with pitchers and bottles, clamoring and quarrelling. One quart a day is measured out to each person. The Croton reservoirs are down now to where the water will hardly flow into the aqueduct. An east wind increases the flow a little; a west wind drives the water across the lake and leaves the tunnel's mouth bare. Con-

tracts have been hastily let for extending the high pressure fire service northward, at a cost of millions, and the streets are torn up and flaring all night long with the gasoline torches and loud with the noise of workmen. At the new pumping stations along the river the huge engines are set up in tents, and all is ready for attaching the pumps as soon as they are out of the factories.

Then, when the work is only three-fourths done, when the time of the autumn rains is almost here, comes the disaster that only a great good fortune has delayed so long. A tree breaks out in the factory dia-

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It is Not a Bright Picture That Is Sketched Here, but It Represents a Situation, the Danger of Which Is Imminent Enough to Call for Careful Conservation of Our Depleted Store of Croton.

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PICTORIAL DIAGRAM SHOWING PROGRESS OF AN IMAGINARY CONFLAGRATION, DURING AN IMAGINARY FRESH WATER FAMINE, SWEEPING OVER MANHATTAN ISLAND FROM THE HARLEM RIVER ON THE NORTH TO THE EDGE OF THE AREA WHICH IS PROTECTED BY HIGH PRESSURE SALT WATER PIPES ON THE SOUTH.

The first word, of course, would come from the city officials who look out for our water supply. The public at large would be informed of the sinking surplus and warned of the distant danger. Housekeepers would be cautioned not to let water run uselessly, to repair dripping faucets, to turn off the water on leaving houses, to watch their meters for signs of leakage. Far and wide, high and low the water officials would spread their petition, in the best style of public spirited appeal, begging the people "not to waste the water."

All this would have precisely the effect of all polite addresses to human beings, cattle and cockroaches, when gathered in large numbers, namely, little or no effect at all. Still the water is wanted; still the reservoirs ebb as the great thirsty aqueduct saps their precious store.

Next comes a mild compulsion. The city uses its authority first at home, within its own household. Street sweepers are forbidden to open the city's water pipes in the back alleys of Manhattan and the Bronx. Long Island and Staten Island are supplied by deep driven wells that seem inexhaustible. The fountains that play in the parks and squares—pretty things enough, but not wasters of water—are shut off.

Then the results of the growing shortage are plainly visible to us without the aid of newspaper. Perhaps the first thing we notice is that the bright borders of flowers around the fountains look strangely lonely, and we wonder what is wrong. Then we see that we miss the ripple and chatter that have always kept them company, and instead, the basin are gaunt and hollow. Waterfights dare one another to throw baseballs and roller skates into their dry cups, and carry in after them and out again in fear of the neighboring policeman.

into your eyes and down your neck, and this morning's collar is not fit to wear after 12 o'clock. The show girls going to work wear their coats, even on hot days, to keep the dust from their shirtwaists. They pick up their skirts at the crossings as if it had been raining.

Still the great reservoirs ebb and ebb. The water there is rimmed with broad stretches of flat black bottom. In some of the dams the pool has shrunk to a narrow channel curving across a spreading plain of mud. The people who live on the watershed begin to notice the smell from the bare flats.

Next the hand of authority begins to bear down on some who are not the city's servants. They are the men who want to water their scraps of lawn along lordly Fifth avenue or on Riverside Drive, or in the open Bronx. The Water Department makes a rule that they are not to use a hose for such a purpose. Presently fines are exacted for breaches of the law. These men are only a few, and the men and women who will need the water in the sweltering summer are two million and more.

The shopkeepers must have hose, of course, to wash their store windows and clean the sidewalks in front. But the Water Department thinks otherwise. It considers long before it takes the step, but at last it rules that, whether hose is necessary or not, the shopkeepers will have to do without it. Then there is a complaint which amounts to something, for a complaint has to be made general, and it is proclaimed that no citizen may use a stream outside his buildings for any purpose whatsoever.

Still the reservoirs sink and sink. They are more than half empty now. There is one thing more that the city can do with its own belongings. There are places about town, in parks or dusty streets, where a little trickle of water drips from an iron

Commissary Henry S. Thompson.

There is almost exactly half as much water in storage to-day as there was at the same time last year. We used more water last summer than we have in the reservoirs to-day. In the Croton Lake there are miles and miles of mud flats where there ought to be fifteen feet of water. There was no snow to melt this year. The small snowfall last December evaporated without melting in the long, cold spell that followed. The spring rains are over, and there has been very little increase in the storage of water.

If it does not rain before June 1 the situation will be a very bad one, indeed. Summer is a dry season here, just as truly as there is a dry season down near the tropics, where the trade winds regulate the rainfall. When the ground is thoroughly dry, as it was last year, and as it will be in a few weeks more without rain, the soil will leak up an inch or two of rainfall and drain practically no run-off for the reservoirs. And the ground is still dry from last year's drought.

"We have done something to cut down the waste of water here in the city. At present we have ten automobiles out every morning with our deputies and policemen to arrest men who are using hose. We have made about five thousand arrests. There is a fine of \$5 for using a hose without a permit, and for a second offence we shut off the man's water."

"But we have only made a beginning. We can't allow the storage to get much lower without taking more serious measures. The next thing to do is to reduce the pressure in the street mains, so that the water will not rise above the basements of the buildings. That would be a terrible thing to do. It would mean hardship for a great many people. But you can figure out for yourself what the situation is, when the water that we have in storage is 18,000,000 gallons less than the stored water that we used up in the drought of last year."

"People didn't realize what a position we

were in last December, when we reached our low mark of 22,000,000 gallons in storage. The reservoirs were so low that we treated the water with chemicals to prevent contamination and disease. It will take eighteen inches of rainfall in the next three months to fill the reservoirs again."

So says the Water Commissioner. And not once in the last eleven years has the rain fall in May, June and July amounted to the required eighteen inches. The average fall for the three months has been 12.6 inches. For the last four years the average has been 10.49 inches; for the last three years, 9.79; and for the last two years, 8.96. And, with the ground dry, a scattered rainfall of three inches a month will be practically all absorbed, according to the commissioner.

So much for the Water Department and its hopes. Let us now suppose that the worst may happen, and follow the water famine step by step to the very end of its course.

"We will reduce the pressure," said the Commissioner, "so that the water will not rise above the basements." That sounds like a simple thing to say. Think, and you will see that it is, indeed, a terrible thing. At first the pressure is lowered only at night. Undoubtedly it will save some water. There are many leaks in houses that are quite unknown to their tenants.

First the poor feel it, as it is always the poor who feel a great public calamity first. Women in tenement houses, trying to draw water to wash the supper dishes, find to their surprise that the water does not run. They wait with patience—the patience they have learned too well—chattering in the dark hall beside the ill smelling common sink. An hour goes, then two. They shout for the janitor. He explains that there is no more water for them. If they wait it they will have to carry it.

Five flights of stairs is a long climb for any woman who has only her skirts to



WATER COMMISSIONER HENRY S. THOMPSON. He is appealing to New Yorkers to conserve their water supply.

Every whiff of wind drives great clouds of dried filth through the air. Sprinkling the pavements with salt water from the river leaves them apparently fouler than before. The streets are filled with unspeakable smells from the dwelling places with unflushed closets on either side. In spite of all the Health Department can do it cannot wholly persuade the people of the dangers of houses without sanitation. It is only a question of time before a typhoid epidemic breaks out.

But there is another danger, greater and more awful than all the others. Flies have broken out every day since the drought began, and the frenzied have fought them with desperate courage. Here,