

The days of the heaviest consumptions were those of the highest temperatures in summer, and the lowest in winter.

The rapidly increasing consumption during the last few days of December, 1917, as the temperature gradually lowered, was but the beginning of the period of the longest and heaviest demand ever made on the waterworks. From December 28th to February 8th inclusive, a period of 43 days, the minimum consumption (one day excepted) was 110,600,000, and the maximum, 156,500,000 gallons.

The daily average for the 43 days was 126,400,000 gallons.

It must be remembered that no water could be used during this time for street sprinkling or washing, so that the normal use of water would have been no more than during moderately cold weather in November or March, when the consumption averaged about 92,000,000 gallons. The difference between 92,000,000 and 126,400,000 would represent what may be called the super-waste of water during that period of 43 days, amounting almost to \$60,000 at the rate of \$40 per million gallons.

10,000,000 Gallons Wasted

The use of 92,000,000 gallons daily under moderate weather conditions is about 120 gallons per capita, meaning that at least 10,000,000 gallons is normally wasted during the periods of most favorable weather, and super-waste occurs at all other times.

The coal burned per million gallons of water pumped by actual weights taken in the boiler rooms averaged 2,800 lbs. This means that over 65 tons of coal were consumed each day for 43 days in pumping water that was allowed to run to waste into the drains and sewers.

This 2,800 tons of coal was consumed at a time when the United States Fuel Administrator was urging economy and restricting coal deliveries to the bare necessities of preferred classes of consumers.

Criminal waste is essentially a vice of civilization. The barbarian may ignorantly or thoughtlessly allow valuable materials to go to waste because of an abundance over and above his uses at the time, or through an inability on his part to foresee his future needs,—but he cannot be accused of knowingly and intentionally destroying things of value to himself, except as war measures to inflict injury on the enemy.

It takes the astute civilized man to deliberately injure his own tribe by consigning car loads of food products to the dump in order that the available supply may be restricted and local prices kept up.

It is the twentieth century civilization that mortgages the future and cheerfully bequeaths the debt to later generations.

House-to-House Inspection

The method of house-to-house inspection for eliminating leaks and waste depends for its efficiency on the frequency of individual inspections,—but it can never be completely effective. It is not in human nature for inspectors to continually perform duties more or less unpleasant,—and to perpetually make visits that are usually unwelcome, yet all the time maintain a high standard of efficiency. It does not generally require many months for an inspector to become somewhat weary of going over the same ground,—to relax his vigilance and to make his visits somewhat perfunctory. We could hardly expect to find, as a rule, for the positions of inspectors at salaries of \$75 per month each, men with a keen sense of humor, who would so enjoy the experience of coming in daily contact with many various and sundry specimens of humanity,

that the employment would become a pleasure. People do not like to have their houses inspected. In general, they feel that in paying for a water license, they have certainly purchased a right to an extravagant use of water,—if not an absolute privilege to waste it if they desire to do so. In summer they waste many times more water in lawn-sprinkling than is necessary for the growth of the grass and flowers. In extremely cold weather they let the water run to prevent pipes from freezing. No doubt it is more economical for the consumer to waste water than to pay plumber's bills, so long as his premises are assessed at flat rates. The claim may also be set up that the loss to the community, as a whole, would be less from the general wasting of water, than the total expense of repairing all the bursted piping that would result if the water was not allowed to run and wholesale freezing resulted. This claim might be substantiated if the matter ended with the mere comparison of the value of the water wasted and the probable plumbers' bills. Unfortunately the value of the water lost is but a small part of the damage done to the public.

The demoralizing effect of approving waste under certain conditions should be readily apparent, and its consequences could not help but be of additional assistance in forwarding the day on which the water supply would be unequal to the demand.

The owner of a building improperly piped for water, with no adequate facilities for draining the system, may feel that he is not justified financially in removing the old plumbing and installing a new and proper system; he may argue that he is confronted by a condition for which he should not be held responsible; that he is an innocent purchaser of a building erected years ago, presumably in conformity with all building regulations in force at the time; that he would be able to collect no more revenue from his building after reconstructing the plumbing than before; granting that all of his premises are true, he still cannot escape the fact that in protecting his individual interest by wasting water to avoid plumbers' bills, he is trespassing on the rights of his fellows,—and is helping to impose increased taxation on the people of the whole city.

Meters Are Effective

His case would be but little better if his premises were under meter and he was paying for the water wasted, since the indictment against him for sinning against the welfare of the community would still hold. In all probability, if he was paying for the water at meter rates, little or no water would be allowed to run to protect the plumbing.

The only effective and economical method of reducing water waste and leakage to a minimum is through the general installation of meters.

The results attained will be permanent, and the meter will automatically act as an inspector perpetually on the job.

Hon. Frank Cochrane, minister without portfolio in the Union Government, and ex-Minister of Railways and Canals, while in Toronto this week stated that in his opinion the head offices of the Canadian Northern Railway will not be moved from Toronto.

The "Toronto Daily Star" says editorially:—"That the Canadian Northern head office should remain in Toronto under government ownership is not merely a matter of local pride. Toronto is the home of friends of public ownership. Montreal is the home of its enemies. It was from Montreal that a protest was sent to the government against government ownership of the Canadian Northern Railway. The sentiments of Montreal ought to be respected, not insulted by the presence of the headquarters of the government system."