

Hamel, Pierre J. (2006). **Residential water meters : a bad idea**

*S.O.S. Water COALITION Eau Secours!*

## **Residential water meters : a bad idea**

					

Some people believe that it would be best if the direct user paid the real cost of water. A naive economic logic leads us to believe that we over-consume water because it is free, and having to pay for it would convince us to reduce our consumption.

In reality, this reasoning is true only for large industrial consumers. It is quite false, and even harmful, to apply it to residential consumers.

We often hear : « Water meters would have the benefit of making us conscious of the cost of water and therefore of its value »... and that it would pay to conserve. That is not the case. When similar households are compared, there is no difference in water consumption, whether there is a meter or not. This is what a few quasi-experimental studies have shown that focused on the specific impact of water meters, when other factors that might influence the behaviour are controlled (Collin et al., 1999 : 28-29). Environmental groups that have looked seriously at the subject have come to the same conclusion (like the S.O.S. Water Coalition, 2005 or the Conseil régional de l'environnement de Montréal : Porlier, 1999). This is also what the administration of the city of Sherbrooke have realized ; following a merger, some districts were equipped with residential water meters, and others not; it turned out the consumption is quite the same in similar districts, water meters or not. It is partly explained by the fact that water is cheap. It is generally estimated that the « real » cost of water in Montreal is approximately 50 cents per cubic meter, or .05 cent per liter. Based on a daily consumption of 250 liters per person, the average daily cost for a Montrealer would be 12 or 13 cents (or about

\$45 per person per year). If we presume that the only thing that matters to people is their personal interest, how can we hope to convince them to save water with such low costs? We would try to convince people to change their behaviour to reduce consumption by say, 20% - a meaningful reduction – and in return, we would promise them savings of 2.5 cents per day (\$9 per year).

It will be very difficult to convince people to save water with prices as low as they are, or even four times higher. In Arizona, where water is much more expensive than here, there still is consumption of considerable importance, when either watering the lawn or maintaining the countless golf greens. Demand for water does not fluctuate, that is price does not affect demand. Water meters have no doubt the same effect as hitting the water with a sword.

Water meters are not only useless but they are also costly. Between the price of the device, the installation, the billing process, and the bailiff costs to force those who refuse to pay, on average, the meter would cost annually as much as the water consumed by one person. This is not very efficient.

Even if it was agreed that everyone pays for the real cost of water supply, it would not be appropriate to pay according to consumption, because only one half of the cost is related to the consumption, while the other half pertains to the infrastructures (underground pipes and water treatment plants that have to be built, maintained and updated). Regardless of consumption, everyone benefits equally from the waterworks system that also assures protection against fires. So, logically, the cost of the network should be borne equally by all households, either through a subscription, a composition tax similar to a membership fee, or more simply (and more fairly) through the property tax. Only half of the public expenditure for water would therefore be recovered through the sale of water using meters ; in the case of a single household, one third of the invoice would go towards the water consumed while two thirds would pay for the meter.

Moreover, like all pricing mechanism, there is the classic question answered by one's political beliefs : is it fair and equitable that all pay according to their consumption, regardless of their ability to pay ? Or, would it not be desirable, as the majority of Quebec citizens think, that the rich people pay (a little) more?

Finally, the introduction of water meters will result in lamentable effects on health because water is essential for nutrition and hygiene. The British experiment has demonstrated the resurgence of diseases that were thought to be eradicated (this has been known for more than ten years : Graham et Marvin, 1994; Lister, 1995); indeed, some poor families have reduced their water consumption below the minimum requirement, resulting in much higher health costs than the small savings from a rationed use: for example, it is not very smart to limit washing your hands to save a bit of water. The granting of a minimum volume per capita for free is not a realistic solution because it would require the creation of a data bank of the population and its maintenance thereafter: so much for savings.

However, other strategies exist that are very efficient and without ill effects, be it the promotion of more water-efficient products, such as low-flow toilets or shower heads, or various forms of regulations concerning for example excessive watering.

As the French would say : why act simply when things can be complicated ? Why act simply, cheaply and fairly, paying for water through your property tax, when things can be complicated, useless, costly, unfair and harmful, by introducing water meters?

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