

What you should know about Hong Kong's new drinking water regulations

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Changes to how Hong Kong monitors and tests its drinking water were announced on Thursday, including a new approach to tap water sampling, testing for heavy metals and standards that go beyond guidelines set by the World Health Organisation.

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1) What prompted the government to work out new measures to tighten water safety checks and implement a stronger regulatory framework?

The move was prompted by the lead contamination scandal in July 2015, when water samples from 11 public housing estates accommodating 29,000 households were found to have contained excessive lead. More than 160 affected people were found to have higher blood lead levels. As of last month, at least five people were found to still have mildly elevated levels of lead in their blood.

Monitoring standards for Hong Kong's drinking water to go beyond WHO levels, officials say

Of the 126 children with elevated blood lead levels assessed for development delays, nine were still showing signs as of last month and were being rehabilitated. But the government said it was hard to prove if this was a result of lead exposure.

A commission led by a High Court judge concluded in May last year that leaded solder in the pipes had directly caused the contamination, even though, on paper, the Housing Authority, Water Supplies Department, their contractors and licensed plumbers were all supposed to use lead-free solder in fresh water pipes.

In June last year, two former directors from a plumbing subcontractor that oversaw plumbing work at three housing estates affected by the scandal were arrested for have allegedly forged documents to cover up lead solder deliveries to two of the affected estates.



Workers carry bottled water to Kai Ching Estate in Kai Tak to distribute to residents. Photo: Felix Wong

2) What has the government done after the scandal?

The government spent millions delivering bottled water to affected residents too afraid to use tap water. Standpipes were provided for affected households and blood tests for people in doubt were arranged. Pipes and taps in affected public estates are still being replaced. The government said on Thursday that 20 per cent of the affected households had had their water pipes and taps changed.

A commission was set up by then-chief executive Leung Chun-ying to launch a probe in July 2015. A report was published in May last year. A few days later, Leung apologised to the public.

The International Expert Panel on Drinking Water Safety was established by the Development Bureau in June last year. A basket of new measures based on their advice was released on Thursday.



A resident collects water at one of the temporary distribution pipes at Kai Ching Estate, Kai Tak, amid the lead water scare. Photo: David Wong

3) What did the commission's investigation find out?

The commission concluded after a probe that leaded solder in the pipes had directly caused the contamination, even though the Housing Authority, Water Supplies Department, their contractors and licensed plumbers were all supposed to use lead-free solder. A report by the commission blasted officials and stakeholders over a collective failure to prevent the use of non-compliant materials. The Water Supplies Department was accused of failing to update legislation and to ensure trade compliance.

4) What new measures did the government roll out on Thursday?

The new two-tier sampling system announced on Thursday will include a "random daytime test" of one-litre samples straight from the taps, subject to further verification tests if metals are found to exceed acceptable levels.

This requires letting taps run for five minutes and then leaving the water to stagnate in pipes for 30 minutes before further one-litre samples are drawn. The water will be subject to further verification tests to see if metals are found to exceed acceptable levels.

Using the new method, the Water Supplies Department will draw about 670 samples from taps across Hong Kong annually to test for six metals – lead, nickel, chromium, cadmium, copper and antimony. Participation is voluntary. Private and public housing flats, as well as businesses, will be covered, and results will be published weekly.

5) Can the new measures address the problems?

Lawmaker Helena Wong Pik-wan, the whistle-blower who exposed the scandal, said the government's new measures [failed to tackle the root of the tainted water issue head-on](#). She insisted that "first draw" water samples should be collected for testing to find out whether the plumbing materials were tainted or not.

A first draw sample is a tap water sample that has stood motionless in the plumbing pipes for at least six hours and is collected without flushing the tap. But the government decided to collect random water samples annually from consumers' drinking taps for testing.

Dr Chan Hon-fai, a member of an investigative task force on the lead contamination scandal and chairman of the Advisory Committee on Water Resources and Quality of Water Supplies, defended the new system, saying it had achieved WHO standards. Chan said contamination could be detected in a tap water sample that has stood motionless for 30 minutes as Hong Kong pipelines are made of copper, and a random test can already achieve the same result as using first draw water. This is in contrast to pipes in the US, which require six hours as they are made of lead.