

LCQ19: Quality of pool water at public swimming pool complexes

Following is a question by the Hon Vincent Cheng and a written reply by the Secretary for Home Affairs, Mr Lau Kong-wah, in the Legislative Council today (November 14):

Question:

A university conducted a sample test last year on the pool water at six public swimming pool complexes (complexes) and the findings revealed the presence of urine in the pool water at five of the complexes. Among them, the outdoor toddlers' pool at the Kowloon Park Swimming Pool had the highest quantity of urine, which was as high as 82.1 litres (equivalent to 411 times of urine discharges by adults). The findings of another study revealed that the chemical reaction between urine/sweat and chlorine in the pool water mix would generate carcinogenic substances such as trihalomethane. On the other hand, the Leisure and Cultural Services Department (LCSD) has refused to include urine and trihalomethane contents as parameters for monitoring the quality of pool water on the grounds that the World Health Organization has no such practice. In this connection, will the Government inform this Council:

- (1) whether LCSD will consider afresh including urine and trihalomethane contents as parameters for monitoring the quality of pool water; if so, of the details; if not, the reasons for that;
- (2) whether it will conduct a comprehensive review of the Swimming Pools Regulation (Cap 132CA), which has been in operation for many years, to ensure that the requirements pertaining to pool water quality, changing of water and emptying of swimming pools, etc., keep pace with the times; if so, of the details; if not, the reasons for that;
- (3) whether LCSD implemented in the past three years water quality improvement measures (such as enhancing the pool water filtration system) at complexes with higher attendances; if so, of the details and the effectiveness of those measures;
- (4) whether it will make reference to the experience of other jurisdictions and introduce specific measures to reduce urine and sweat contents in pool water, such as (i) advising parents and swimming coaches to encourage children to exit the water and go to the toilet every 30 to 60 minutes, and (ii) stepping up publicity to call upon swimmers to rinse their body before entering the water and not to urinate in the swimming pool; if so, of the details; if not, the reasons for that; and
- (5) as there are views that some complexes are often full, resulting in deteriorating pool water quality and swimmers not being able to swim freely, whether LCSD has reviewed if the supply of swimming pools in the districts

housing the three complexes with the highest attendances last year (i.e. Kwun Tong Swimming Pool, Kowloon Park Swimming Pool and Lai Chi Kok Park Swimming Pool) meets the standards stipulated in the Hong Kong Planning Standards and Guidelines (HKPSG); if LCSD has reviewed and the result is in the negative, of the details; whether the Government will, apart from making reference to HKPSG, take the attendance at the existing complexes as one of the considerations for supplying additional complexes?

Reply:

President,

The Government attaches great importance to the water quality of public and private swimming pools. Leisure and Cultural Services Department (LCSD) manages its public swimming pools while the Food and Environmental Hygiene Department (FEHD) licenses and regulates private swimming pools. My reply to various parts of the question is as follows:

(1) and (3) LCSD has drawn up parameters for monitoring the water quality of its public swimming pools by making reference to the Guidelines for Safe Recreational Water Environments Volume 2 issued by the World Health Organization (the Guidelines) and in accordance with the advice from the Department of Health. Such parameters include, among other things, the free residual chlorine, pH value, total bacteria count, E. coli, Vibrio cholerae and turbidity of pool water, etc. According to the Guidelines, neither urea content nor trihalomethanes content is one of the parameters to be monitored for pool water. The current parameters for monitoring the water quality of public swimming pools are providing appropriate protection for swimmers. LCSD will continue to closely monitor the quality of pool water in its swimming pools and conduct reviews whenever necessary.

Well-developed filtration and sterilisation systems are in place in the 44 public swimming pools under LCSD. Water of the swimming pools is continuously circulated, filtered and sterilised throughout the opening hours. To ensure that the hygiene of pool water is up to standard, apart from taking water samples for testing of residual chlorine levels and pH value on an hourly basis during opening hours, LCSD has also assigned accredited laboratories to conduct testing on the pool water of its swimming pools on a weekly basis to ascertain that the water quality is up to the relevant standard. Furthermore, to maintain proper functioning of the filtration and sterilisation systems of the swimming pools, the works departments concerned have been providing assistance to LCSD in facilitating proper maintenance of the swimming pools, including comprehensive inspection on the filtration system in the filtration plant during annual maintenance and timely replacement of equipment and spare parts. For example, the heavily patronised Kowloon Park Swimming Pool and Lai Chi Kok Park Swimming Pool had the chemical dosing system replaced and spare parts of the ozone generator replaced by phases in the past two years, as an effort to maintain the performance of the filtration system.

(2) FEHD licenses and regulates private swimming pools, including those

operated by clubs, institutions, associations or other organisations and those serving 20 or more residential units, under the Swimming Pools Regulation (Cap 132CA).

In accordance with the Regulation, a licensee of a swimming pool shall, at all times during which the swimming pool is in use by swimmers, cause the water therein to be completely changed by circulation through a filtration system or by renewal from source. In the case of a covered pool, not less than once in every four hours; and in the case of an open air pool, not less than once in every six hours. In short, the Regulation requires water changing by circulating through a filtration system or by renewing from source to ensure that all water re-entering the swimming pool has been filtered or renewed from source.

With regard to the quality of water, the Regulation stipulates that the licensee of a swimming pool shall maintain the water quality of the swimming pool to a standard that E. coli is absent in pool water samples of 100 millilitre each and the total bacterial count does not exceed 200 bacteria per ml of pool water samples. Moreover, the licensee shall ensure that the water in the swimming pool complies with the standard of clarity (including the turbidity and colour of water) and the standard of pH value of not less than 7.0 and not more than 7.8 specified in the Regulation. FEHD will take water samples at swimming pools for examination regularly to ensure that the pool water complies with the quality standard sets out in the Regulation.

Licensed swimming pools generally open in summer seasons. The Regulation stipulates that the licensee of a swimming pool shall cause the pool to be emptied of water not less than once in every year and at such other times as the Director of Food and Environmental Hygiene may require. In addition to ensuring that the licensee will thoroughly cleanse the swimming pool, the requirement will also facilitate the licensee to carry out maintenance works.

As mentioned above, the existing provisions under the Regulation coupled with regular examination of swimming pool water by FEHD offer appropriate protection for swimmers in terms of the quality and purity of pool water in licensed swimming pool. FEHD will continue to closely monitor the quality and purity of the pool water in licensed swimming pool, including the standard of bacteriological quality and standard of clarity, and initiate review whenever necessary.

(4) Publicity efforts have all along been stepped up by LCSD through different channels, including publication of swimmers' handbook, display of posters and banners, departmental webpage, broadcasts of messages at swimming pools and announcements in the public interest, etc., to urge swimmers to observe personal hygiene, remind them not to pollute pool water and to go through a shower and visit the toilet before swimming, etc.

(5) The three most heavily patronised swimming complexes (i.e. Kwun Tong Swimming Pool, Kowloon Park Swimming Pool and Lai Chi Kok Park Swimming Pool) last year are located at Kwun Tong District, Yau Tsim Mong District and Sham Shui Po District respectively. The numbers of swimming complexes provided in

these three districts meet or stand above the standard provision suggested in the Hong Kong Planning Standards and Guidelines (HKPSG).

When planning new sports facilities (including swimming complex) and improving the existing ones, apart from making reference to the standards set out in HKPSG, the Government will also take into consideration other relevant factors such as the current provision of sports facilities at the territory-wide and district levels, the policy objectives of sports promotion, utilisation rates/attendances of existing facilities, demographic changes, views of District Councils, site availability and technical feasibility, etc.