

Advisory Committee on Water Supplies (2018-2020)
Minutes of Fourth Meeting

Date: 7 March 2019 (Thursday)

Time: 2:00 p.m.

Venue: Room 4819, Water Supplies Department, 48/F, Immigration Tower,
7 Gloucester Road, Wan Chai, Hong Kong

Present

Ir Dr CHAN Hon Fai	Chairman
Prof. KWAN Kai Cho, Joseph	Vice-Chairman
Prof. WONG Wing Tak	Member
Prof. CHAN Yan Keung, Thomas	Member
Sr Prof. WONG Bay	Member
Ir NG Chun Keung	Member
Mr. LAU Che Feng, Edwin	Member
Dr WONG Siu Wing, Eric	Member
Mr. YEUNG Wai Sing	Member
Mr. TAM Kwok Wing, Ivan	Member
Ms. KAM Kin	Member
Ms. LEE Pik Yee, Peggy	Member
Mr. WONG Kwun Kit, William	Member
Mr. NG Vitus	Member (Development Bureau)
Mr. CHEN Che Kong	Member (Environmental Protection Department)
Dr FUNG On Yee, Connie	Member (Department of Health)
Mr. MAK Ka Chun	Member (Architectural Services Department)
Mr. WONG Chung Leung	Member (Water Supplies Department)
Mr. LAW Yuk Fat, Robin	Secretary (Water Supplies Department)

Water Supplies Department Representatives in Attendance

Mr. WONG Yan Lok, Roger	Assistant Director
Mr. YIP Ka Chun, Gary	Chief Engineer
Mr. LEUNG Chi Hung, Simon	Chief Engineer
Mr. CHO Ping Ho	Chief Engineer
Mr. KWOK Yau Ting, Kelvin	Chief Chemist
Mr. LAU Cheuk Fung Calvin	Senior Engineer
Mr. LO Tsz Lung, Warren	Senior Engineer
Mr. LEE Kwun Chung, Johnson	Senior Engineer
Mr. TSANG Chung Man, Alex	Senior Engineer
Mr. IP Chit Ki	Senior Engineer
Mr. CHUNG Wai Fung	Senior Engineer

Mr. LIU Wan Fai, Edmond	Senior Engineer
Mr. LUI Wing Kit, Ricky	Senior Engineer
Ms. LAU Bik Yan, Rebecca	Engineer
Mr. LAU Chun Yuen, Anthony	Engineer
Ms. HO Wai Chun, Blanca	Public Relation Manager
Ms. TAM Ka Yan, Yan	Engineer (Note-Taker)

Absent with Apologies

Prof. WU Xun	Member
Prof. CHU Wei	Member
Prof. CHENG Man Chung, Daniel	Member
Dr LAU Wai Neng, Michael	Member
Dr WONG TAAM Chi Woon, Vivian	Member
Dr HO Shu Kwong, Raymond	Member
Prof. CHIU Pauline	Member
Ms. WONG Chi Shun, Carol	Member
Mr. CHAN Yiu Keung, Oliver	Member (Housing Department)

Item

1. Opening Remarks

- 1.1 The Chairman welcomed all Members of Advisory Committee on Water Supplies (“ACWS”) and representatives of Water Supplies Department (“WSD”) to the meeting.
- 1.2 The Chairman informed the meeting that Prof. WU Xun, Prof. CHU Wei, Prof. CHENG Man Chung, Daniel, Dr LAU Wai Neng, Michael, Dr WONG TAAM Chi Woon, Vivian, Dr HO Shu Kwong, Raymond, Prof. CHIU Pauline, Ms. WONG Chi Shun, Carol, Mr. CHAN Yiu Keung, Oliver were unable to attend the meeting and had sent in their apologies.
- 1.3 The Chairman also informed the meeting that Mr. CHEN Che Kong had replaced Mr. WONG Wai Tak as the representative of Environmental Protection Department. The Chairman thanked Mr. WONG for his contribution to ACWS and welcomed Mr. CHEN to join the committee.

Agenda Items

2. Confirmation of Minutes of Last Meeting

- 2.1 The Chairman suggested and Members agreed that the last meeting (originally named as Meeting No. 9) would be renamed as the “Third Meeting of ACWS (2018-2020)” to avoid confusion and hence this meeting would be the “Fourth Meeting of ACWS (2018-2020)”.
- 2.2 The Chairman advised that the revised draft minutes for last meeting, which had incorporated Members’ comments, had been re-circulated to the Members on 5 March 2019 with no further comment received. There being no further amendment proposed at the meeting, the revised draft minutes were confirmed.

3. Matters Arising

Group Photo of ACWS Session 2018-2020

- 3.1 Referring to the item 12.2 of the minutes of the last meeting, the Secretary reported that the group photo had been uploaded to ACWS’s website after last meeting, which could also be downloaded by the Members.

4. Report of Working Group on Operational Matters

- 4.1 The Chairman invited Prof. WONG Wing Tak, Chairman of the Working Group (“WG”) on Operational Matters, to report the key issues discussed in the 3rd WG meeting held on 10 January 2019.

Improvement Works at Shawan River (沙灣河)

- 4.2 Prof. WONG reported the following:
- The Integrated Improvement Works for the Water Environment of Shawan River (“Works”) (沙灣河流域水環境綜合整治工程) was launched in late 2016 to reduce the risk of Shenzhen Reservoir being polluted by flood discharge from the Shawan River. The Works were expected to be completed in 2019. The impact on water quality of Shenzhen Reservoir by flood discharge from Shawan River could be reduced during severe rainstorm.
 - Some WG Members had visited the Works during the annual visit to

Dongjiang Water Supply System last year and noted that the progress of the Works was satisfactory. WG Members considered that the quality of Dongjiang water supplied to Hong Kong would be further ensured after completion of the Works.

Enhanced Water Quality Monitoring Programme (水質監測優化計劃)

4.3 Prof. WONG reported the following:

- WSD briefed WG Members on the latest progress of the implementation of the Enhanced Water Quality Monitoring Programme (“Enhanced Programme”) which was one of the components of the Action Plan for Enhancing Drinking Water Safety in Hong Kong (提升香港食水安全行動計劃).
- WG Members noted that the Enhanced Programme had already collected data for one year and the Enhanced Programme would be continued for the monitoring of the drinking water quality in Hong Kong at consumers’ taps in respect of the six metals that could be present in the internal plumbing systems as well as collecting data for review of the Hong Kong Drinking Water Standards (“HKDWS”).

4.4 Mr. WONG Chung Leung of WSD supplemented that the test results of the samples collected under the Enhance Programme in the first year were good with the 95-percentiles of the contents of antimony, cadmium, chromium, copper, lead and nickel at <1µg/L, <1µg/L, <1µg/L, 78µg/L, 1µg/L, and 5µg/L respectively and the drinking water quality in all the premises selected for sampling under the Enhanced Programme was in compliance with the corresponding standard values of the HKDWS according to the 2-tier sampling protocol for the Enhanced Programme.

4.5 The Chairman and Prof. CHAN Yan Keung, Thomas suggested that WSD should promote the good drinking water quality in Hong Kong by comparing the water sampling test results of the Enhanced Programme in Hong Kong with those in overseas countries after collecting two to three years’ data.

Voluntary Low Leaching Plumbing System Recognition Scheme

4.6 Prof. WONG reported the following:

- WSD briefed WG Members on the proposed voluntary scheme to encourage building developers to take extra efforts to enhance the drinking water quality in new buildings by using low leaching products in the plumbing systems which would also help to drive suppliers to introduce

more GA* plumbing products (i.e. plumbing products with General Acceptance (GA) of WSD for use in plumbing works and have further passed the leaching test which is voluntary) into the market.

- Some WG Members had reservation on the benefits brought by the proposed voluntary scheme as there had already been a commissioning requirement of systematic flushing for all new plumbing systems which could bring down the leaching of the new pipes and fittings before the plumbing systems were put in use. Besides, some WG Members suggested that the adoption of GA* plumbing products in a building project could be taken as one of the BEAM plus assessment criteria. WSD welcomed the comments and would review the proposed voluntary scheme.
- After the WG meeting, WSD had approached the Hong Kong Green Building Council on the use of GA* plumbing products as one of the BEAM plus assessment criteria.

5. Report of Working Group on Government Network and Inside Services

- 5.1 The Chairman invited Mr. TAM Kwok Wing, Ivan, Chairman of the WG on Government Network and Inside Service, to report the key issues discussed in the 3rd WG meeting held on 23 January 2019.

Co-opt Member(s) for the Working Group

- 5.2 Mr. Ivan TAM reported that the following three co-opt Members for the WG were endorsed during the WG meeting:-

- Prof. YEUNG King-lun (Professor of Hong Kong University of Science and Technology (“HKUST”))
- Ir Dr WONG King (Past President of Hong Kong Institute of Utility Specialists (“HKIUS”))
- Mr. WONG Kai-sang, Cliff (Vice President of Hong Kong Association of Property Management Companies (“HKAPMC”))

Smart Water Initiatives

- 5.3 Mr. Ivan TAM reported the following:

- WSD gave a presentation entitled “Smart Water Initiatives” on the smart water initiatives to be adopted in the Anderson Road Quarry Site Development (ARQD), including treated grey water for non-potable uses, enhanced Water Intelligent Network, Automatic Meter Reading, online

water quality monitoring and inline hydropower harnessing devices.

- WG Members appreciated that WSD had taken the opportunity to try out various advanced technologies in water supplies in ARQD and suggested WSD to make reference to pilot trials of similar technologies conducted by other departments.
- With the technological advancement of sensors, telemetry, network management software and data analysis in recent years, WG Members agreed that WSD was in the right direction to explore different smart solutions to continuously improve the reliability of water supplies.

5.4 The Chairman enquired whether there were recent updates on smart water initiatives and leak detection, with reference to the overseas and local experience. Mr. WONG Chung Leung of WSD advised that WSD had been actively approaching overseas and local firms for smart solutions on water supplies including leak detection. In addition, WSD had been exploring a pilot trial in ARQD for automatic notification of affected customers on water supply interruption once the valves for the relevant section of water mains were closed e.g. for emergency repair.

Development of Leak Detection Trade

5.5 Mr. Ivan TAM reported the following:

- WSD gave a presentation entitled “Development of Leak Detection Trade” to introduce their plan to develop the trade of leak detection for underground water mains in Hong Kong. The plan included (i) leak detection training courses to be organised by the Hong Kong Institute of Construction (“HKIC”) for training qualified leak detection personnel at technical level, (ii) collaboration with the Hong Kong Polytechnic University and other professional institutes (e.g. HKIUS) to establish the qualification system for personnel at professional/manager level, and (iii) collaboration with relevant institute/organization to maintain a list of qualified leak detection contractors.
- WSD also planned to publish sample contract clauses to assist property owners and property management agents in engaging leak detection services for their underground private water mains.
- WG Members appreciated that WSD had taken active steps to formulate the development plan for the leak detection trade in Hong Kong and were pleased to see the roll-out of various measures by WSD progressively.
- WG Members also suggested the training courses to be accredited under the Qualifications Framework (資歷架構) and Hong Kong Institute of

Surveyors to be consulted for the development of the qualification system.
WSD would follow up.

- 5.6 Mr. LEE Kwun Chung, Johnson of WSD advised that a training course on leak detection for technicians organised by HKIC would be open for application in coming two months. The training course comprised 3-day small-class training cum 1-day assessment and it could be further enhanced in the next phase.
- 5.7 Prof. CHAN Yan Keung, Thomas and Mr. Ivan TAM suggested WSD to provide training to property management agents to enhance their knowledge on leak detection and handling of leaks in their private water mains. Mr. WONG Chung Leung of WSD welcomed the suggestion and advised that the training could be extended to the property management agents in the next phase.
- 5.8 Sr Prof. WONG Bay suggested WSD to engage the public as ambassadors to report water mains leaks, illegal connections, etc. to WSD by using GIS, App, etc. Mr. WONG Chung Leung of WSD shared Sr Prof. WONG's view and advised that WSD was currently planning to develop a pilot trial for such reporting system using Whatsapp which would only be used by WSD colleagues initially. He added and Members supported that the pilot trial could be extended for use by the Members.

WSD

Visit to Field Testing Facility of Smart Urban Water Supply Systems

- 5.9 Mr. Ivan TAM reported the following:
- Some WG Members visited HKUST's Field Testing Facility of Smart Urban Water Supply Systems at Beacon Hill Freshwater Service Reservoir on 11 January 2019.
 - The project was investigating the technique of detection of leaks in water mains by means of transient waves on a HDPE pipe of 250 m long and diameter of 150 mm, constructed at the Beacon Hill service reservoir.

6. Report of Working Group on Water Conservation and Education

- 6.1 The Chairman invited Mr. LAU Che Feng, Edwin, Chairman of the WG on Water Conservation and Education, to report the key issues discussed in the 3rd WG meeting held on 16 January 2019.

Public Engagement and Education Programme

- 6.2
- "Cherish Water Campus" Integrated Education Programme ("IEP") (《惜水學堂》教育計劃)
 - For secondary schools, WSD would invite a service provider to design the education programme suitable for the conventional secondary schools and international schools. Consultation with both conventional and international schools' representatives would be carried out after the preliminary programme was developed. WSD had reviewed the curriculum and Science textbooks of Form one to Form three of conventional secondary schools and found that they covered water related issues including water conservation and pollution.
 - For primary schools, WSD reported that the IEP was being implemented smoothly with over 260 primary schools (over 40% of the primary schools in Hong Kong) joined the programme. The 3rd IEP Award Ceremony cum Kick-off Ceremony of Kindergarten IEP was held on 16 November 2018 at Hang Hau Community Hall. A total of 214 awards were distributed to school sponsoring bodies, schools, principals, teachers and students. WSD had engaged a service provider to revamp the teaching kit for enhancement of the IEP for launching in 2019/20 School Year.
 - For kindergartens, WSD had launched the IEP for kindergartens in 2018/19 School Year with 140 kindergartens joined the programme. Two sessions of Teacher Training Workshop were held on 19 and 25 January 2019 respectively in which speakers shared their experience on using the teaching kit of the IEP.

Water Resources Education Centre (水資源教育中心)

- 6.3
- The works for Water Resources Education Centre ("WREC") in Tin Shui Wai covering fitting out, exhibits and a dome theatre were in progress. The current target was to commission the WREC in late 2019.
 - The next Hong Kong Water Race (organized by Wofoo Social Enterprises, with WSD as co-organizer) would be held in the Tin Shui Wai on 14 April 2019. It was an orienteering event under which the participants will tour around prominent landmarks in the district, including the WREC.
 - WG Members suggested to develop a 3-D virtual tour platform in the website for the WREC.

Youth Participation in Water Conservation

6.4 Mr. Edwin LAU reported the following:

- WSD had engaged the Hong Kong Federation of Youth Groups Jockey Club Media 21 to launch the "Cherish Water Ambassador" Scheme cum Video Contest. Over 250 students from 43 secondary schools and tertiary institutions had joined the programme as ambassadors.
- There was an array of events for the ambassadors from December 2018 to July 2019, including the Appointment Ceremony (held on 1 December 2018), short film production workshop (held on 1 December 2018), Water Treatment Works Guided Tour, sharing session with experts and directors, training camp, "Water Speaks - Video Competition" and "In-School Promotional Activities".

Collaboration and Partnership with Green Groups and Other Relevant Stakeholders

6.5 Mr. Edwin LAU reported the following.

- WSD co-organized, supported or participated in around 15 events / activities organized by green groups and Non-governmental Organizations ("NGOs") annually.
- WSD would continue to seek for opportunities to co-organize large-scale water conservation related events with green groups and NGOs. Currently, WSD was the co-organizer for Hong Kong Water Race (香港水足印) (co-organized with Wofoo Social Enterprises) and Walk for Living Water (活水行) (co-organized with Amity Foundation (HK)).
- WSD had made contribution to Environmental Protection Department ("EPD") on the assessment criteria in respect of water usage in catering and hotel sectors under the Hong Kong Awards for Environmental Excellence ("HKAEE") (香港環境卓越大獎). WSD also participated in the final adjudication panel of HKAEE for the above two sectors in November 2018.

Flow Controllers to Households

6.6 Mr. Edwin LAU reported the following:

- WSD had been distributing flow controllers to households joining the "Let's Save 10L Water Campaign" (齊來慳水 10 公升) or successfully applying for the e-Bill Service, and had been installing flow controllers for households of public rental housing estates. As at end December 2018, WSD had provided/installed flow controllers to a total of some 340,000 households.

- WSD was collecting relevant water consumption data before and after installation of flow controllers in public rental housing estates to assess the effectiveness of the programme, and would present the findings to the WG when available.

Use of Water Efficiency Labelling Scheme (WELS) Products

6.7 Mr. Edwin LAU reported the following:

- WSD updated WG Members on the registers of the six voluntary WELS products, being (i) showers for bathing, (ii) water taps, (iii) washing machines, (iv) urinal equipment, (v) flow controllers and (vi) water closets.
- Regarding the proposed mandatory WELS via legislative amendments to the Waterworks Ordinance, WSD was formulating the regulatory framework and had engaged a consultant to conduct a Business Impact Assessment (“BIA”) study to assess the corresponding compliance difficulties and compliance cost. The BIA consultant was also conducting stakeholder consultation.

7. Let’s save 10L Water Campaign 2.0

7.1 Upon invitation of the Chairman, Ms. HO Wai Chun, Blanca of WSD gave a presentation entitled “Let’s save 10L Water Campaign 2.0” which had incorporated comments received during the 3rd meeting of WG on Water Conservation and Education held on 16 January 2019.

7.2 Mr. LAU Che Feng, Edwin suggested that WSD could consider giving coupons as gift to the winners of the water conservation competition with a view to encouraging participants to conserve more water. Ms. HO Wai Chun, Blanca of WSD mentioned that the use of coupons in the competition would be considered.

7.3 Mr. TAM Kwok Wing, Ivan suggested that WSD could explore ways to enable the public to know how to conserve 10L water each day in their daily life. Mr. WONG Yan Lok, Roger of WSD mentioned that there were some interesting water-saving products, such as flow-controlled shower head with “polar bear on melting ice” as timer, which could help the public to be aware of their water consumption.

- 7.4 Mr. CHEN Che Kong suggested that WSD could make use of existing mascots of other relevant governments, such as EPD, etc. for enhancing the water conservation promotion through “crossover” promotion. Ms. HO Wai Chun, Blanca of WSD replied that WSD had been collaborating with other relevant governments in launching "crossover" promotion with their mascots such as Big Waster (大咗鬼), Keep Clean Ambassador Ah Tak (清潔龍阿德), etc.

8. Research and Development in WSD

- 8.1 Upon invitation of the Chairman, Mr. LIU Wan Fai, Edmond of WSD gave a presentation entitled “Research and Development in WSD”.
- 8.2 Regarding the tea gathering with the academics as mentioned in the presentation, Mr. KWAN Kai Cho, Joseph advised that he had participated in the tea gathering before which provided a good platform for WSD to cooperate with academia and explore research and development (“R&D”) opportunities on water supplies. In response to Mr. KWAN’s enquiry on the funding arrangements for the R&D projects in WSD, Mr. LIU Wan Fai, Edmond of WSD replied that there were generally two funding sources viz. (a) funding provided by WSD or (b) funding provided by others, such as Innovation Technology Fund, etc.
- 8.3 Sr Prof. WONG Bay suggested WSD could have inter-departmental or inter-disciplinary collaboration with R&D teams of other government departments, NGOs, institutions, etc. to jointly carry out R&D projects. The Chairman suggested that WSD could organize technical forums, similar to Drainage Services Department's technical forums, to report the findings of WSD's R&D projects. Mr. WONG Yan Lok, Roger replied that WSD had regular collaboration meetings with other government departments and R&D collaboration would be explored in these meetings.

9. Energy Management in WSD

- 9.1 Upon invitation of the Chairman, Mr. CHO Ping Ho of WSD gave a presentation entitled “Energy Management in WSD”.
- 9.2 Sr Prof. WONG Bay suggested WSD should extend the implementation of

floating photovoltaic (“FPV”) systems on impounding reservoirs and explore with electricity companies on utilizing the energy generated from the FPV systems. Mr. WONG Chung Leung of WSD replied that WSD was currently reviewing and exploring for the extended implementation of FPV systems on impounding reservoirs. He added that the electricity generated from the pilot FPV systems installed at Shek Pik Reservoir and Plover Cove Reservoir was used to power the nearby waterworks installations and WSD would continue to liaise with electricity companies on utilization of the energy generated from the FPV systems.

9.3 Mr. LAU Che Feng, Edwin suggested that WSD could explore the use of nano technology in the internal coating of pumps in order to reduce surface friction for enhancing pump efficiency. Mr. WONG Chung Leung of WSD advised that WSD currently had a R&D project being undertaken by HKUST on the internal coating of pumps for enhancing pump efficiency.

9.4 Sr Prof. WONG Bay, Prof. KWAN Kai Cho, Joseph and Mr. CHEN Che Kong suggested that energy conservation could be achieved by proper planning of water supply systems. Mr. WONG Chung Leung of WSD shared the Members’ view and advised that WSD would take a proper balance between water supply reliability and energy conservation when planning water supply systems, especially the elevation of proposed service reservoirs for new development areas.

10. Report on Visit to Dongjiang Water Supply System 2018

10.1 Upon invitation of the Vice Chairman, Mr. LAU Chun Yuen, Anthony of WSD reported on the visit to Dongjiang Water Supply System from 27 to 29 November 2018.

11. Any Other Business

11.1 The Chairman congratulated WSD for being admitted as a member of the Leading Utilities of the World in 2018, which was a network of the world’s top water and wastewater utilities. As a token of appreciation, the Chairman proposed and Members agreed that the Chairman on behalf of ACWS would issue a letter of congratulation to WSD in this respect.

11.2 There being no further items raised, the Chairman thanked Members for attending the meeting and adjourned the meeting at 5:10 p.m.