

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

Date: 31 October 2018 (Wednesday)

Time: 2:00 p.m.

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

Present

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| Ir Dr CHAN Hon Fai | Chairman |
| Prof. KWAN Kai Cho, Joseph | Vice-Chairman |
| Prof. CHAN Yan Keung, Thomas | Member |
| Prof. CHU Wei | Member |
| Sr Prof. WONG Bay | Member |
| Ms. WONG Chi Shun, Carol | Member |
| Ir NG Chun Keung | Member |
| Mr. LAU Che Feng, Edwin | Member |
| Mr. TAM Kwok Wing, Ivan | Member |
| Ms. KAM Kin | Member |
| Ms. LEE Pik Yee, Peggy | Member |
| Dr HO Shu Kwong, Raymond | Member |
| Mr. WONG Kwun Kit, William | Member |
| Mr. CHOW Hau Keung, Vincent | Member (Development Bureau) |
| Mr. WONG Tak Wai, David | Member (Environmental Protection Department) |
| Dr FUNG On Yee, Connie | Member (Department of Health) |
| Mr. CHAN Yiu Keung, Oliver | Member (Housing Department) |
| 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

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| Mr. WONG Yan Lok, Roger | Assistant Director |
| Mr. LAM Ching Man | Assistant Director |
| Mr. LEUNG Chi Hung, Simon | Chief Engineer |
| Mr. KWOK Yau Ting, Kelvin | Chief Chemist |
| Mr. LAU Cheuk Fung Calvin | Senior Engineer |
| Mr. LAW Tak Chi, George | Senior Engineer |
| Mr. LEE Kwun Chung, Johnson | Senior Engineer |
| Mr. TSANG Chung Man, Alex | Senior Engineer |
| Mr. WONG Man Ching | Asset Management Team Leader |
| Ms. TAM Ka Yan, Yan | Engineer (Note-Taker) |

Absent with Apologies

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| Prof. CHIU Pauline | Member |
| Prof. WONG Wing Tak | Member |
| Prof. WU Xun | Member |
| Prof. CHENG Man Chung, Daniel | Member |
| Dr LAU Wai Neng, Michael | Member |
| Dr WONG TAAM Chi Woon, Vivian | Member |
| Dr WONG Siu Wing, Eric | Member |
| Mr. YEUNG Wai Sing | Member |

Item

1. Opening Remarks

- 1.1 The Chairman welcomed all the Members and representatives of Water Supplies Department (“WSD”) to the meeting.
- 1.2 The Chairman informed the meeting that Prof. CHIU Pauline, Prof. WONG Wing Tak, Prof. WU Xun, Prof. CHENG Man Chung, Daniel, Dr LAU Wai Neng, Michael, Dr WONG TAAM Chi Woon, Vivian, Dr WONG Siu Wing, Eric, Mr. YEUNG Wai Sing were unable to attend the meeting and had sent in their apologies.

Agenda Items

2. Confirmation of Minutes of Last Meeting

- 2.1 The Chairman advised that the revised draft minutes of the Meeting No. 8 (which had incorporated Members’ comments) had been circulated to the Members on 25 October 2018 with no further comment received. There being no further amendment proposed at the meeting, the revised draft minutes of the Meeting No. 8 were confirmed.

3. Matters Arising

Water Loss Management Strategy of WSD

- 3.1 Referring to item 7.2 of last meeting minutes, the Secretary of Working Group (“WG”) on Government Network and Inside Service reported that WSD had

employed former Chief Technical Officers of the Leak Detection Unit of the department via Post-retirement Service Contract Scheme to provide leak detection training to WSD staff.

Proposed Visit to Dongjiang Water Supply System

- 3.2 Referring to item 10.2 of last meeting minutes, the Secretary reported that the email inviting Members to the proposed visit to Dongjiang (“DJ”) Water Supply System was sent out on 17 August 2018 and 10 applications had been received so far. The detailed arrangement of the visit would be provided to the participants by email shortly.

4. Working Group on Operational Matters

- 4.1 The Chairman invited Sr Prof. WONG Bay, Vice Chairman of the WG on Operational Matters, to report the key issues discussed in the 2nd WG meeting held on 12 September 2018.

On-site Generation of Chlorine Gas in Water Treatment Works

- 4.2 Sr Prof. WONG reported the following:
- WSD briefed the WG Members on the on-site generation of chlorine gas (“OSCG”) for water treatment works to reduce the risk in transportation and storage of liquid chlorine currently used for water treatment in Hong Kong. Chlorine gas and sodium hypo-chlorite solution would be generated by the OSCG plants by means of electrochemical process on brine solution using ion-exchanging membrane.
 - A pilot OSCG plant was commissioned in March 2017 inside one of the three chlorine stores at Ngau Tam Mei Water Treatment Works for acquiring the experience of installation, testing and operation of OSCG plants.
 - The result of the pilot OSCG plant revealed that the technology was safer and could ensure more reliable supply of chlorine for water treatment than importing liquid chlorine. WSD would install the OSCG plants in all large water treatment works.
 - The WG Members fully supported the use of OSCG.

Water Quality Impact Assessment

4.3 Sr Prof. WONG reported the following:

- WSD briefed the WG Members on the Water Quality Impact Assessment (“WQIA”) which was a measure to prevent occurrence of water quality incident caused by the new works or maintenance works of WSD.
- The WG Members considered that the WQIA was an effective measure to prevent water quality incident.

Commissioning for New Plumbing Installations – Monitoring of Systematic Flushing and 6-hour Stagnation Water Sampling Test

4.4 Sr Prof. WONG reported the following:

- WSD briefed the WG Members on the enhancement measures implemented starting from 1 September 2018 to monitor the systematic flushing and 6-hour stagnation water sampling test for commissioning of new plumbing installations.
 - Revised record form was to be used by Licensed Plumbers to record more details of systematic flushing of new plumbing installations.
 - Details of sampling protocol for 6-hour stagnation water sampling test was provided on WSD website for accredited laboratories to follow in collecting water samples for the test.
 - Accredited laboratories were required to implement measures at sampling location to ensure no interference during the 6-hour stagnation period (e.g. by covering drinking water tap selected for sampling by a plastic bag with seal) and provide more information and record of the collection of the water samples in the test reports for the 6-hour stagnation water sampling test.
- The WG Members considered that the enhancement measures should be effective in ensuring that the systematic flushing and 6-hour stagnation water sampling test were properly carried out.

4.5 The Chairman recommended that the samplers could take photos of mobile phone screen (with time indicated) together with the tap selected for sampling before and after the 6-hour stagnation period for the 6-hour stagnation water sampling and the accredited laboratories should make declaration regarding the stagnation period in the testing reports.

4.6 Prof. KWAN Kai Cho, Joseph opined that the public and relevant stakeholders should be educated on the importance of flushing to ensure drinking water safety. Mr. TSANG Chung Man, Alex of WSD replied that advice on the importance of flushing of new plumbing installations had been promulgated through various channels to occupier/tenant/owner who newly moved in a premises.

5. 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 2nd WG meeting held on 28 September 2018.

Co-opt Member(s) for the Working Group

5.2 Mr. Ivan TAM reported that the WG Members were invited to propose co-opt member(s) for the WG and some proposals had been received. The proposed co-opt members would be discussed and agreed in the next WG meeting.

Underground Asset Management

5.3 Mr. Ivan TAM reported the following:

- WSD gave a presentation and introduced WSD's underground asset management strategy which included a host of asset management measures to be put into practice in the coming few years with the aim to establish an underground asset management system consistent with the international standard ISO 55001.
- The WG Members appreciated that WSD had drawn on the latest international asset management best practices in establishing its underground asset management strategy to further improve the reliability of the water supply system in Hong Kong with effective use of resources on maintenance and renewal underground assets.
- The WG Members considered that the presentation was useful and WSD should give the presentation again in this ACWS Meeting for information of all ACWS Members.

Standard Contract Templates for Procurement of Leak Detection Service and/or Water Main Repair Works

5.4 Mr. Ivan TAM reported the following:

- As announced in the Policy Agenda 2017 and 2018, the Government would take specific measures to deal with the leakage problem at private water mains. WSD had embarked on the preparation of standard contract templates for procurement of leak detection services and/or water main repair works for use by owners' corporations, property management offices etc for rectification of leakage in their private water mains.
- In response to the suggestions from the stakeholders, the templates would include the procurement services of leak detection and water mains repair works.
- The WG Members appreciated WSD's effort in preparing the standard contract templates.
- The WG Members expressed concern over the potential conflict of interest arising from deploying the same contractor for leak detection service and subsequent water mains repair works.
- WSD would review the templates taking into account comments of the WG Members.

5.5 In response to Chairman's enquiry, Mr. WONG Chung Leung of WSD advised that in addition to the preparation of the standard contract templates, WSD had been liaising with relevant professional institutes to provide training courses for the development of leak detection expertise and to establish qualification systems for leak detection contractors, professionals, technicians etc under which disciplinary action could be taken against them for misconducts.

5.6 Sr Prof. WONG Bay suggested that Continuing Professional Development courses on professional ethics and integrity could be provided to leak detection professionals and technicians to enhance their ethical awareness and knowledge.

6. Report of Working Group on Water Conservation and Education

6.1 The Chairman invited Mr. LAU Che Fung, Edwin, Chairman of the WG on Water Conservation and Education, to report the key issues discussed in the 2nd

WG meeting held on 17 September 2018.

Co-opt Member(s) for the Working Group

6.2 Mr. Edwin LAU reported the following three co-opt Members for the WG were endorsed during the WG meeting: –

- Dr MAN Chi-sum (Vice-Chairman of Green Power)
- Dr HUNG Oi-shing, Jeffrey (Friends of the Earth)
- Mr. LAM Yat-fung, James (Principal of Lions College)

"Cherish Water Campus" Integrated Education Programme ("IEP") (《惜水學堂》教育計劃)

6.3 Mr. Edwin LAU reported the following:

- To promote water conservation through education and publicity, WSD was implementing various education programmes in secondary schools, primary schools and kindergartens.
- WSD presented a draft framework of the education programme for secondary schools which was developed after consultation with some secondary schools. The WG Members had in-principle endorsed the framework, and suggested WSD to develop teaching kits for lower secondary (Form 1 to Form 3) and upper secondary (Form 4 to Form 6) respectively.
- For primary schools, WSD reported that the IEP was being implemented smoothly with over 40% of the primary schools in Hong Kong joining the programme. The 3rd IEP Award Ceremony cum Kick-off Ceremony of Kindergarten IEP was scheduled for 16 November 2018 at Hang Hau Community Hall. WSD planned to introduce a new teaching kit for the IEP for primary school in 2019/20 School Year.
- WSD had revamped the teaching kit for the IEP for kindergartens which was fully launched in this School Year.

Water Resources Education Centre ("WREC")

6.4 Mr. Edwin LAU reported that the temporary WREC at WSD Mong Kok Office was closed in mid-June 2018. WSD targeted to commission the permanent WREC at its new Tin Shui Wai Office in the first half of 2019. The works for the permanent WREC had commenced in July 2018.

Eco-Expo Asia 2018

6.5 Mr. Edwin LAU reported that the WG Members suggested WSD to invite students to join WSD's guided tour and attend WSD's education talk on the Public Day of the Eco Expo Asia on 28 October 2018.

- 6.6 Mr. WONG Chung Leung of WSD advised that WSD had all along been supporting the event of Eco Expo Asia since 2013. This year, WSD had taken on board the Members' suggestion to increase participation in the event and made good use of the Public Day to engage the public.

Youth Participation in Water Conservation

- 6.7 Mr. Edwin LAU reported the following:
- With ACWS's support to take forward the Cherish Water Ambassador Scheme (惜水大使計劃), WSD had engaged Media 21 of the Hong Kong Federation of Youth Groups to further develop the scheme.
 - Under the scheme, about 200 ambassadors from secondary schools and tertiary institutions would be recruited and they would participate in a video contest and conduct activities to promote water conservation in school and community.
 - An award ceremony was to be conducted in 3rd quarter of 2019 to recognize the ambassadors with outstanding performance.
 - The WG Members suggested WSD to consider inviting the ambassadors with outstanding performance to join the visit of DJ Water Supply System.

Collaboration and Partnership with Green Groups and Other Relevant Stakeholders

- 6.8 Mr. Edwin LAU reported the following.
- WSD had co-organized, supported or participated in a total of 13 events / activities organized by green groups and NGOs on water conservation so far this year and would continue to seek for opportunities to do so.
 - With WSD's effort, the assessment criteria on water usage under the Hong Kong Awards for Environmental Excellence (catering and hotel sectors) had been enhanced, and WSD would participate in the final adjudication panel for the awards in the above two sectors (to be held in end November 2018 tentatively).
 - WSD's had obtained Urban Renewal Authority's support to incorporate the use of Water Efficiency Labelling Scheme ("WELS") Grade 1 or 2 water-consuming devices (including taps, showers, washing machines, etc.) in the tender of their re-development projects from mid-2018 onwards.
 - WSD was working with BEAM Society to explore the use of WELS Grade 1 products as a pre-requisite requirement of obtaining BEAM certificate.

Water Conservation Initiatives

6.9 Mr. Edwin LAU reported the following:

- WSD had distributed flow controllers to 330,000 households which had members joining the ‘Let’s Save 10L Water’ (齊來慳水 10 公升) Campaign or successfully applied for the e-Bill Service as in end August 2018. The WG Members suggested WSD to assess the effectiveness of flow controllers in reducing water consumption at public rental housing estates.
- WSD conducted roving exhibitions “Water Conservation – Past • Present • Future” at all 18 District Council districts between August 2017 and June 2018, with around 27,000 visitors in total.
- WSD launched the promotional videos on water conservation for foreign domestic helpers starting from August 2018.
- The WG Members supported the initiatives of WSD on implementing Automatic Meter Reading in Hong Kong and exploring the installation of smart shower devices which could reflect users’ real-time consumption level by numerical figures or colour intensity in some selected households as trial to promote water saving.
- The WG Members recommended WSD to enhance publicity on water conservation and collaborate with District Councils to promote water conservation at community events.

Water Efficiency Labelling Scheme

6.10 Mr. Edwin LAU updated that WSD was in the process of formulating the regulatory framework of the mandatory WELS via legislative amendments, and had engaged consultants to conduct a Business Impact Assessment study to assess the corresponding compliance difficulties and compliance cost.

7. Publication of Water Quality Data

7.1 The Chairman invited Mr. KWOK Yau Ting, Kelvin of WSD to report the progress on publication of water quality data for the DJ water received for the period from October 2017 to September 2018. Mr. KWOK Yau Ting, Kelvin of WSD advised that the concerned water quality data had been prepared and would be circulated to the Members of WG on Operational Matters for comment.

[Post-meeting notes: The water quality data for the DJ water received for the

period from October 2017 to September 2018 was circulated to WG members on 1 November 2018 and published on the WSD's website on 30 November 2018.]

7.2 Mr. KWOK Yau Ting, Kelvin of WSD advised that there were occasional deviations of DJ water quality from the standard of Type II waters (applicable to the abstraction for human consumption in first class protection area) in Environmental Quality Standards for Surface Water (GB3838-2002) in the supply agreement due to the discharge of floodwater from Shawan River into the Shenzhen Reservoir as a result of heavy rainstorms. Nevertheless, in accordance with the international practice that compliance would be based on annual average, the average DJ water quality for this reporting period complied with the standard. Moreover, WSD had raised its concerns about the floodwater discharge of Shawan River into the Shenzhen Reservoir with the Guangdong Authorities and noted that the Integrated Improvement Works for the Water Environment of Shawan River (沙灣河流域水環境綜合整治工程) were anticipated to be completed in mid-2019. By then, the water quality of Shawan River would be much improved and the impact of floodwater discharge from Shawan River into Shenzhen Reservoir on the water quality of the latter would be substantially reduced.

8. WSD's Preparations, Emergency Response and Recovery Efforts for Super Typhoon MANGKHUT

8.1 Upon invitation of the Chairman, the Secretary gave a presentation on "WSD's Preparation, Emergency Responses and Recovery Efforts for Super Typhoon MANGKHUT".

8.2 The Chairman appreciated the great efforts of WSD in minimizing the impact of Mangkhut on the water supply and striving for maintaining a stable and continuous water supply during the super typhoon. Sr Prof. WONG Bay opined that the public might not be aware of the efforts made by WSD and suggested WSD could do more promotion work in this respect. Mr. HO Shu Kwong, Raymond advised that he would report the efforts of WSD in the super typhoon Mangkhut to his District Council.

8.3 As a token of appreciation, the Chairman proposed and the Members agreed that the Chairman on behalf of ACWS would issue a letter of appreciation to

WSD.

[Post-meeting notes: The letter of appreciation was issued to WSD on 21 November 2018.]

9. Underground Asset Management

- 9.1 Upon invitation of the Chairman, Mr. WONG Man Ching of WSD made a presentation on the “Underground Asset Management”.
- 9.2 Prof. KWAN Kai Cho, Joseph, Vice Chairman of the ACWS, appreciated that WSD had adopted a proactive approach to manage underground asset to improve the reliability of the water supply system.
- 9.3 Sr Prof. WONG Bay opined that WSD was moving in the right direction to adopt the new approach of underground asset management but a cultural change would be required in WSD in order to ensure that the new approach could be operated effectively and successfully. Mr. WONG Chung Leung of WSD agreed that the new approach would focus on proactive risk management which was quite different from the old practice of passive maintenance and hence a cultural change would be required for adopting the more proactive approach.
- 9.4 Mr. CHOW Hau Keung, Vincent of DEVB opined that there might be possible increase in the number of water mains failures arising from those low consequence water mains failures after implementation of the risk-based underground asset management of water mains but the overall consequence might be less serious when compared with the old approach. He suggested that WSD could analyze the overall consequence after adoption of risk-based management against previous years to demonstrate its effectiveness and educate the public the merits of the risk-based underground asset management approach. He also suggested WSD to develop some FAQs to response to public queries. Mr. WONG Chung Leung of WSD agreed the need to enhance public education regarding the new approach of underground asset management.
- 9.5 Prof. CHAN Yan Keung, Thomas enquired whether the underground asset management strategy had contained the element of research and development

("R&D") and suggested WSD could have more collaboration with universities and other research institutes in R&D aspect. The Chairman opined that WSD could organize a R&D forum similar to the technical forums organized by DSD and EMSD. Mr. WONG Man Ching of WSD replied that R&D was one of the important elements in the underground asset management strategy. He added that WSD had setup the Steering Committee on Research and Development last year for identifying the R&D needs of the department and would continue to explore and promote R&D collaboration with academia.

10. Report on WSD's Participation in 2018 Eco Expo Asia

10.1 Upon invitation of the Vice Chairman, Mr. TSANG Chung Man, Alex of WSD gave a presentation on "WSD's Participation in 2018 Eco Expo Asia held from 25 to 28 October 2018".

10.2 The Chairman appreciated WSD's participation in the 2018 Eco Expo Asia and considered that it was a good platform to showcase the water supplies in Hong Kong and to engage the public on WSD's works as well as to promote water conservation.

11. Report on Visit to Hysan Place, Ma On Shan Water Treatment Works and Mount Pavilla

11.1 Upon invitation of the Vice Chairman, Ms. TAM Ka Yan of WSD reported on the visit to Hysan Place, Ma On Shan Water Treatment Works and Mount Pavilla on 4 October 2018, which enriched Members' knowledge on different water conservation measures adopted in buildings and water treatment process.

12. Any Other Business

12.1 Sr Prof. WONG Bay suggested that WSD could carry out R&D projects on finding ways to consume less electricity. Mr. WONG Chung Leung of WSD replied that with the implementation of a host of energy management initiatives, the electricity cost per unit water supplied had been gradually declining in recent years. He added that WSD was exploring projects for generation of renewable energy such as floating PV system in impounding

reservoirs. Besides, WSD had engaged academia to carry out a study on applying internal coating to pumps for enhancing their energy efficiency.

12.2 The Secretary distributed the group photo of ACWS taken on 5 July 2018 to Members for retention. He advised that the group photo would be uploaded WSD to ACWS's website after the meeting.

12.3 There being no further items raised, the Chairman thanked Members for attending the meeting and adjourned the meeting at 5:00 p.m.