

Advisory Committee on Water Supplies
Minutes of Meeting No. 3

Date: 22 February 2017 (Wednesday)

Time: 2:00 p.m.

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

Present

Dr CHAN Hon Fai	Chairman
Mr LAM Tin Sing, Enoch	Vice-Chairman (Water Supplies Department)
Prof WONG Wing Tak	Working Group Chairman
Prof CHENG Man Chung, Daniel	Working Group Chairman
Dr MAN Chi Sum	Working Group Chairman
Prof KWAN Kai Cho, Joseph	Task Group Chairman
Sr WONG Bay	Working Group Vice-Chairman
Mr TAM Kwok Wing, Ivan	Task Group Vice-Chairman
Prof CHAN Yan Keung, Thomas	Member
Dr LAU Wai Neng, Michael	Member
Dr WONG TAAM Chi Woon, Vivian	Member
Mr CHAN Kwok Wai	Member
Ms KWAN Sau Ling	Member
Mr LAU Yuet Fan, Ivan	Member
Ms TONG Po Chun	Member
Mr YEUNG Wai Sing	Member
Mr NG Vitus	Member (Development Bureau)
Mr WONG Tak Wai, David	Member (Environmental Protection Department)
Mr FORK Ping Lam	Member (Food and Environmental Hygiene Department)
Dr CHING Cheuk Tuen, Regina	Member (Department of Health)
Mr LUK Hing Chuen, Steve	Member (Housing Department)
Mr WONG Man Wai, Billy	Member's representative (Housing Department)
Mr IP Chit Ki	Secretary (Water Supplies Department)

Water Supplies Department Representatives in Attendance

Mr CHAU Sai Wai	Assistant Director, Water Supplies Department
Mr KWOK Yau Ting, Kelvin	Chief Chemist, Water Supplies Department
Mr CATLIN Kit Wai, Stephen	Senior Engineer, Water Supplies Department

Water Supplies Department Representatives in Attendance (con't)

Mr PANG Kwok Fan, Gabriel	Senior Engineer, Water Supplies Department
Mr TSANG Chung Man, Alex	Senior Engineer, Water Supplies Department
Mr YU Man Tat	Senior Chemist, Water Supplies Department
Ms LAW Ming Chu, Cecilia	Engineer, Water Supplies Department (Notes Taker)

Absent with Apologies

Prof CHIU Pauline	Member
Prof LI Xiao Yan	Member
Dr Lee Ka Yan, David	Member
Dr WONG Siu Wing, Eric	Member
Ms LAM Yuk Chun	Member
Ms WONG Pik Kiu	Member

Item

Opening Remarks

- 1.1 The Chairman welcomed all the Members to the Advisory Committee on Water Supplies (ACWS) Meeting No. 3.
- 1.2 The Chairman informed the meeting that Prof CHIU Pauline, Prof LI Xiao Yan, Dr Lee Ka Tan, David, Dr WONG Siu Wing, Eric, Ms LAM Yuk Chun and Ms WONG Pik Kiu had sent in their apology for not being able to attend the meeting.

Agenda Items

Confirmation of Minutes of Last Meeting (ACWS Meeting No. 2)

- 2.1 The Chairman remarked that the revised draft minutes of the meeting no. 2 (which had consolidated comments from Members) had been circulated to the Members on 10 January 2017 and no further comment was received before the meeting. There being no further amendment proposed at the meeting, the Chairman announced that the revised draft minutes of the meeting no. 2 sent to the Members on 10 January 2017 was confirmed.

Matters Arising

3. Water Safety Plan

- 3.1 The Chairman invited Prof WONG Wing Tak, Chairman of Working Group on Water Quality to update Members on development of the Water Safety Plan (WSP).
- 3.2 Prof WONG reported that WSD's work on WSP is divided into WSP for WSD and WSP for buildings. WSD was currently reviewing WSP for WSD and they would report findings when the review was completed. A Task Group on Water Safety in Buildings (The Task Group) under ACWS was formed in October 2016 to develop WSP for buildings in Hong Kong. Prof Joseph KWAN, Chairman of the Task Group, would report progress on the development of the WSP for Buildings.

4. Publication of Water Quality Data

- 4.1 The Chairman invited Prof WONG Wing Tak, Chairman of WG on Water Quality to update Members on the publication of water quality data.
- 4.2 Prof WONG reported that the revised report format for publication of the water quality data had been endorsed by the WG members in its last meeting.

5. Mandatory WELS

- 5.1 The Chairman invited Dr MAN Chi Sum, Chairman of WG on Water Conservation, to update Members on Stage 1 of mandatory WELS – mandatory use of WELS products.
- 5.2 Dr MAN reported that WSD had reviewed the findings and taken all the recommended mitigation measures from the Business Impact Assessment study in finalizing the proposal and working out the implementation details. The WSD Circular Letter No. 2/2017 concerning the proposal was issued on 20 January 2017 for the soft launch on 1 February 2017 with a one-year grace period. Two seminars would be held on 23 February 2017 and 6 March 2017 to explain the details and answer questions concerning the Circular Letter and the proposal.

5.3 Mr Ivan LAU mentioned that there were many models of non-WELS products in the market and it was difficult for these products to be registered under WELS in a timely manner. Mr. IP Chit Ki of WSD responded that WSD was currently formulating a mechanism to recognise the products that had been registered under water efficiency schemes in other countries such as New Zealand or Australia for registration under WELS in Hong Kong without the need of testing such products. WSD

6. Integrated Education Programme (IEP) 「惜水學堂」教育計劃 on Water Conservation

6.1 The Chairman invited Dr MAN Chi Sum, Chairman of WG on Water Conservation, to update the Members on the Integrated Education Programme (IEP) 「惜水學堂」教育計劃 on Water Conservation.

6.2 Dr MAN reported the following:

- 210 primary schools had joined the IEP, an increase of 36 from last 2015/16 school year's 174.
- The second issue of IEP Newsletter had been published in January 2017 and could be accessed via WSD website.
- Two supplementary educational “water safety” game sets, entitled “安全煮沸飲用水的步驟” and “如何保持大廈食水優質” respectively for inclusion in the IEP had been developed. The Water Science Division had been consulted on the contents of the game sets. Production was underway and copies of the game sets would be available for distribution to all primary schools in March 2017. WSD
- The pilot education kit for kindergartens was under development. The five sponsoring bodies with highest participation rate in the IEP were approached to invite their kindergartens/nursery schools to use the pilot education kit. As at end January 2017, 66 kindergartens/nursery schools from 4 sponsoring bodies agreed to participate in the pilot scheme. Representatives from these sponsoring bodies were also invited to join a Working Group on the development of the education kit.

6.3 The Chairman stated that the continuous increase in numbers of primary schools joining was very encouraging and appreciated WSD's effort.

7. Initiative of Installing Flow Controllers at Private Housing Estates

- 7.1 The Chairman invited Dr MAN Chi Sum, Chairman of WG on Water Conservation, to update the Members on the initiative of installing flow controllers at private housing estates
- 7.2 Dr MAN reported that the flow controller installation works in all Kerry's (嘉里), Urban's (富城), City Base's (港基) and Nan Fung's (南豐) residential estate clubhouses (with WSD supplying flow controllers and the management offices installing them) had been completed as far as possible. Altogether, 198 showers and 755 taps (a total of 953) in 63 clubhouses managed by the four property management companies had been fitted with flow controllers.
- 7.3 The pilot scheme for installing flow controllers at 16 selected public rental housing estates was completed. A total of 24,190 (45%) households were installed with flow controllers at their water taps and/or showerheads. Since then, WSD was continuing to install flow controller in public rental housing estates. As at December 2016, flow controllers was installed in a further 61,110 households in another 36 estates.
- 7.4 Dr MAN stated that comparison of full year consumption before and after installation of flow controllers for over 20 000 pilot scheme households indicated an average saving of more than 15 litres per household per day, which was equivalent to a reduction of daily per capita domestic water consumption by about 5 litres based on an average household size of 2.9.
- 7.5 The Chairman enquired whether the private club houses had complained about the use of flow controllers. Mr Stephen CATLIN of WSD responded that no complaints had been received so far as not all shower heads in the club house were installed with flow controllers.
- 7.6 Prof CHENG Man Chung, Daniel suggested WSD to organize "green club house" competitions to encourage property management companies to use WELS projects. Mr TAM Kwok Wing, Ivan stated that there were already many similar competitions; it would be more effective for WSD to collaborate with green groups to organise "save water" competition. Sr WONG Bay stated that the two well-known awards titled "Green Building Award" and "Quality Building Award" had incorporated water efficiency as one of the

judging criteria and suggested to label the water efficient products to promote to the users. Mr Enoch LAM responded that WSD would explore the feasibility of working with potential trades such as hotels and catering to organise “save water” competitions. Mr Enoch LAM also stated that WSD had implemented the soft-and-hard approach; soft was to work with education, green groups and food and hotel industry for promoting the importance of water conservation while hard was to mandate the use of WELS products.

8. Green Group Collaboration

8.1 The Chairman invited Dr MAN Chi Sum, Chairman of WG on Water Conservation, to update the Members on the green group collaboration.

8.2 Dr MAN reported that the 2nd tea gathering with NGO/green groups had been held on 25 January 2017. Representatives from the following twelve NGO/green groups attended the gathering.

1	World Wide Fund For Nature Hong Kong	世界自然（香港）基金
2	Business Environment Council Limited	商界環保協會
3	The Green Earth	綠惜地球
4	Drop Of life	點滴是生命
5	The Conservancy Association	長春社
6	Green Power	綠色力量
7	Green Council	環保促進會
8	Friends of the Earth (HK) Charity Limited	香港地球之友慈善有限公司
9	The Amity Foundation (Hong Kong)	愛德基金會（香港）
10	World Green Organisation	世界綠色組織
11	Hong Kong Bird Watching Society	香港觀鳥會
12	Kadoorie Farm and Botanic Garden	嘉道理農場暨植物園

8.3 Dr MAN shared the discussions with the NGO/green group representatives on the following issues-

- (i) Pilot project of floating Photovoltaics (PV) panel system at reservoirs;
- (ii) Biodiversity of catchwaters; and
- (iii) Reliability of water supply to meet increase in demand.

8.4 For the PV panel system, the green group representatives were generally supportive to the pilot project of floating PV panel systems being recognized

not only as a source of renewable energy but also a means of covering the reservoir to reduce evaporation and prevent algal bloom although aesthetics could be a cause for public concern.

8.5 Regarding biodiversity of catchwaters, a pilot project was proposed to be arranged for ecological improvement works at one selected catchwater in an area of high biodiversity.

8.6 In regard to reliability of water supply, views were exchanged on measures to ensure the water supply to meet the expected increase in demand up to the year of 2040, including increase in the Dongjiang (DJ) supply, and expansion of water gathering grounds.

8.7 Dr MAN mentioned that the third tea gathering would be held in about 6 months' time, tentatively in the third quarter of 2017.

WSD

8.8 The Chairman enquired why no hiking related groups, one of the major stakeholders, are invited to the Green Group Collaboration meeting to give feedbacks regarding the floating PV panels at reservoirs. Mr Enoch LAM agreed to engage these specific groups on the selected topic at the right time.

WSD

9. Permanent Water Resources Education Centre (WREC)

9.1 The Chairman invited Dr MAN Chi Sum, Chairman of WG on Water Conservation, to update Members on the permanent Water Resources Education Centre (WREC).

9.2 Dr MAN reported that selection of the exhibit design consultant had been completed. The consultancy was awarded on 21 February 2017 with the design process scheduled for completion in 8 months. The consultant would brief the ACWS Members on the preliminary exhibit design in due course.

WSD

9.3 The Chairman enquired whether Dr WONG TAAM Chi Woon, Vivian's suggestions on inclusion of climate change concept had been included in the permanent WREC. Mr Stephen CATLIN of WSD confirmed that this element had been included.

10. Working Group on Water Quality

- 10.1 The Chairman invited Prof WONG Wing Tak, Chairman of WG on Water Quality to report key issues from the third WG meeting which had been held on 6 February 2017.

Publication of Water Quality Data

- 10.2 Prof WONG reported that the DJ and drinking water quality data for the period from October 2015 to September 2016 had been published on the WSD website on 10 November 2016. Both the DJ and drinking water quality continued to be satisfactory.

Quality Water Supply Scheme for Buildings – Fresh Water (Plus)

- 10.3 Prof WONG reported that as on 1 February 2017, 766 applications for the “Quality Water Supply Scheme for Buildings–Fresh Water (Plus)” (the “Q-Plus”) were received, of which 634 were approved with certificates awarded. 26 applications were being processed whilst 106 applications required additional information and clarifications. A total of 261,700 private households were covered by the successful applications, representing about 20% of total private households in Hong Kong.

Leak Detection of Underground Inside Service

- 10.4 Prof WONG reported that the WG members had discussed the various consequences of pipe leakages including water wastage, damages to the property and even contamination of drinking water. The WG members agreed that measures should be explored to raise the public awareness of importance of proper maintenance of inside services and prevention of pipe leakage. It was agreed that the leak detection issue should be discussed under the WG on Water Conservation as one of the initiatives to conserve water and the WG on Water Quality would be invited to comment on the proposal of voluntary leak detection of inside service, if necessary.

Visits to DJ Water Supply System

- 10.5 Prof WONG reported that ACWS members visited the DJ Water Supply System during 1-3 November 2016. The programme, which included visits to 新豐江水庫, 惠州綠道, 東江流域水量水質監控中心, 沙灣河水環境綜合整治工程, 沙灣河污水截排工程, 深圳水庫生物硝化站 and 粵港供水公司

水環境監測中心，was satisfactory. The members welcomed that the Guangdong Authorities had commenced the improvement works to address the problems of stormwater overflowing into the Shenzhen Reservoir during heavy rainfalls. The members opined that Department of Environmental Protection of Guangdong Province (GDEPD) (廣東省環保廳) might be invited to join the discussions in future visits for a better understanding on the protection of DJ water quality from environmental protection point of view.

- 10.6 Ms TONG Po Chun enquired about the “Rubbish Water” in Huang Tang Town. Mr CHAU Sai Wai of WSD reported that immediate actions were taken by WSD including liaison with Water Resources Department of Guangdong province (廣東省水利廳) and GDEPD (廣東省環保廳) for their urgent follow-up action; and the site inspection to the landfill site at Huang Tang Town performed by WSD staff on 21 February 2017 revealed that the site had been reinstated with newly planted trees. Mr CHAU emphasized that no irregularities were observed from regular monitoring on the quality of DJ water received by WSD.
- 10.7 The Chairman suggested WSD to report the same to the media to ease Hong Kong people’s concern on DJ water quality. Sr WONG suggested establishing a communication mechanism for ACWS Chairman and Members to provide their input before responding to media. Prof Daniel CHENG suggested WSD to response quickly in the WSD’s website after the incident. Mr Enoch LAM responded that WSD would prepare some standard reply for WSD responding promptly to the media, actively liaise with GDEPD to obtain the latest development and ask ACWS responsible Chairman to approach the media/ public as and when necessary.
- 10.8 Mr YEUNG Wai Sing suggested WSD to set up a media response group including ACWS Chairman, ACWS WG Chairman and WSD staff. Mr Enoch LAM suggested creating a WhatsApp group in the meantime. (Post meeting notes: The WhatsApp group was created on 28 February 2017.)

11. Working Group on Water Resources

- 11.1 The Chairman invited Prof Daniel CHENG, Chairman of WG on Water Resources to report key issues from the third WG meeting which had been held on 17 February 2017.

Rain Water Harvesting System at Shui Chuen O Estate

- 11.2 Prof CHENG reported that Housing Department (HD) and its consultant, AECOM, had presented the Rain Water Harvesting System at Shui Chuen O Estate. Members supported HD's initiative but considered that the treated water standard adopted for irrigation was high and disinfection by chlorination was undesirable. They suggested HD and WSD, in collaboration with academia, to explore (i) more effective disinfection methods (e.g. nano-silver); and (ii) the feasibility of setting a multi-tiered water quality standard for various non-potable uses.

Biodiversity in Water Gathering Facilities

- 11.3 Prof CHENG reported that WSD had presented their planned initiatives to enhance the biodiversity in water gathering facilities. Members appreciated WSD's effort and supported the proposals.

Latest Development of Reclaimed Water Supply to North-eastern New Territories

- 11.4 Prof CHENG reported that riding on DSD's proposal to upgrade the Shek Wu Hui sewage treatment works to tertiary treatment for meeting the requirement of "no net increase in pollution loads to the Deep Bay", WSD planned to supply reclaimed water (RW) supply in lieu of fresh water to the NENT, including Sheung Shui and Fanling, for toilet flushing. WSD gave a brief report on the latest development of the RW supply to Northeast New Territories (NENT). Having reviewed overseas experience, WSD's consultants were studying the need for a charging scheme and legal framework for affecting the RW supply in Hong Kong. Members supported the project and suggested WSD considering according a higher priority to the use of RW and devising a long-term road map for replacing salt water with RW for toilet flushing.
- 11.5 The Chairman enquired Dr CHING Cheuk Tuen, Regina about DH's view on the quality requirement of reclaimed water. Dr Regina CHING replied that DH would have a concern for the content of bacteria present in reclaimed water if it should come into contact with human beings. Reclaimed water for toilet flushing generally called for a lesser concern as it would not come into contact with human. Dr Regina CHING considered it advisable for WSD to adequately inform users of the reclaimed nature of the water as well as potential risk behind.

- 11.6 The Chairman enquired whether WSD was devising a long-term road map for replacing salt water with RW for toilet flushing. Mr Enoch LAM responded that WSD was targeting to use higher proportion of RW for flushing instead of replacing the salt water supply in total.

12. Working Group on Water Conservation

- 12.1 The Chairman invited Dr MAN Chi Sum, Chairman of WG on Water Conservation to summarize the discussions at the third WG meeting which had been held on 8 February 2017.

Water Conservation Week (WCW)

- 12.2 Dr MAN reported that WCW was successfully held from 17 to 21 November 2016 at the Polytechnic University of Hong Kong under the theme “Save Water We Can”. The 5-day event was well received by the public. Programme highlights of WCW included the following:
- (i) Exhibition – “Water Conservation – Past • Present • Future”;
 - (ii) Opening ceremony;
 - (iii) “Cherish Water Campus” Award Ceremony;
 - (iv) Green seminar;
 - (v) Launching Ceremony of the “Best Practice Guidelines for Water Usage” for the catering and hotel industries and forum;
 - (vi) Eco-tours of Mai Po and Tai Tam, guided tours; and
 - (vii) Drama, variety performances and workshops.
- 12.3 Dr MAN reported that WCW was supported by over 150 organisations, including green groups, government departments, trades, schools and school sponsoring bodies with visitor of over 20 000.

13. Task Group on Water Safety in Buildings

- 13.1 The Chairman invited Prof Joseph KWAN, Chairman of TG on Water Safety in Buildings to summarize the discussions at the first and second meetings of the TG which had been held on 16 November 2016 and 17 February 2017 respectively.

Scope and objectives of WSP for buildings in Hong Kong

- 13.2 Prof KWAN reported that WSPs for buildings in Hong Kong should be developed to enhance water safety in buildings based on risk assessment and implementation of preventive measures. WSPs for buildings should be implemented by building owners or management agents on a voluntary basis. WSPs for buildings should cover general buildings such as residential buildings or offices and specific developments such as hospitals, schools and elderly homes. The objectives of WSP for buildings were to prevent the chemical and microbiological contaminations during transfer and storage of drinking water in the inside services of buildings.

WSP templates and checklists

- 13.3 Prof KWAN reported that the guidelines for WSP for buildings would be developed to provide guidance to building owners/management agents to develop their own WSPs. A guideline document would be developed which contained a general template for general buildings and specific templates for special buildings. A generic water safety checklist should also be developed to facilitate its adoption by building owners/management agents who choose not to develop a full version of their own WSPs.

Workshop on WSP for buildings on 7 Dec 2016

- 13.4 Prof KWAN reported that a workshop had been conducted by a WSP expert on 7 Dec 2016 to gather members' views and advice on the development of WSP for buildings in Hong Kong. It was agreed in the workshop that the WSP for buildings should i) promote good management of inside services; ii) be comprehensive but concise; iii) be user-friendly and written in plain language and iv) have a generic template as well as specific templates for special developments as annexes/attachments. It was also agreed that pilot trials, together with training and promotion, should be conducted for WSP for buildings.

Pilot trials of WSP for buildings

- 13.5 Prof KWAN reported that based on the outcomes of the workshop and suggestions of stakeholders, WSD had developed a draft guideline document with templates and generic checklist. Pilot trials of the following buildings were being prepared:
- 1 primary school and 1 secondary school
 - 1 special school to be opened later in 2017

- 1 private residential building
- 1 elderly home

14. Framework Strategy on Water Loss Management

- 14.1 The Chairman invited Mr LEUNG Chin Hung, of WSD to present on the framework strategy on water loss management.
- 14.2 The Chairman enquired for any overseas examples for Water Intelligent Networks (WIN). Mr LEUNG of WSD replied that England and Taiwan had deployed similar technology.
- 14.3 The Chairman enquired any other means to predict which section of the pipe was going to burst/ leak before the installation of sensors/meters under WIN. Mr Enoch LAM clarified that WIN aimed to prevent burst which was developed from minor leakage over time. However, WIN could not predict or prevent sudden failure. Mr Enoch LAM also mentioned that WSD had engaged a consultant in Australia to look into a model for Hong Kong to predict the burst/ leakage and WSD had passed the information of Hong Kong to them for assessing the applicability of their technology in Hong Kong.

15. Proposal on a Scheme for Leak Detection of Underground Inside Service

- 15.1 The Chairman invited Mr LEE Hong Nin, Kevin of WSD to present on the proposal on a scheme for leak detection of underground inside service.
- 15.2 Mr Daniel CHENG suggested using easier way to calculate the DR (Discrepancy Ratio) as the current proposal is difficult to understand i.e. DR=1.1 mean 9.1% loss. Mr Enoch LAM responded that WSD would simplify the presentation of water loss accordingly.
- 15.3 The Chairman enquired where to place the master meter, inside or outside the lot boundary. Mr Enoch LAM replied that since January 2006, developers had to provide meter rooms within the lot boundary of the new developments for the installation of master meters therein. However this is difficult to have such arrangement for the existing buildings built before 2006 and a bulk meter outside the lot boundary would be placed if possible.

16. Framework Strategy on Water Conservation and a proposal on “HK2SaveS” Festival in 2018

- 16.1 The Chairman invited Ms KWAN Kai Yin, Janice of WSD to present on the Framework Strategy on Water Conservation and Ms HO Wai Chun, Blanca of WSD to present on the proposal on “HK2SaveS” Festival in 2018.
- 16.2 Prof Joseph KWAN suggested public pledging for water saving and the inclusion of historic water consumption in the water bill. Mr Enoch LAM replied that the consumption history had already been added in the water bill.
- 16.3 Prof Daniel CHENG suggested WSD to promote water conservation in the annual Eco Expo Asia. Mr Enoch LAM responded that he was invited by the Trade Development Council to attend the Eco Expo last year and shared WSD’s current works and initiatives in water resources and management at a forum.

17. Report on Visit to DJ Water Supply System during 1-3 November 2016 and T-PARK on 5 January 2017

- 17.1 The Chairman invited Ms LAW Ming Chu, Cecilia of WSD to report on the visit to DJ Water Supply System during 1-3 November 2016 and T-PARK on 5 January 2017.

18. Proposed Visit to Muk Wu Pumping Station, Tai Po Water Treatment Works and Sha Tin Water Treatment Works

- 18.1 The Chairman invited Ms LAW Ming Chu, Cecilia of WSD to present on the proposed visit to Muk Wu Pumping Station, Tai Po Water Treatment Works and Sha Tin Water Treatment Works.
- 18.2 The Chairman welcomed the visit and encouraged all ACWS members to join.

19. Any Other Business

- 19.1 There being no further items raised, the Chairman thanked Members for attending the meeting and adjourned the meeting at 5:45 p.m.