

# Report No. 12

## Visit to Dongjiang Water Supply System (23 -24 November 2010)



## Advisory Committee on the Quality of Water Supplies

**Advisory Committee on the Quality of Water Supplies**  
**Report No. 12 – Visit to Dongjiang**  
**(23 - 24 November 2010)**

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# **Advisory Committee on the Quality of Water Supplies**

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### **SECTION A - INTRODUCTION**

During 23 - 24 November 2010, a delegation of the Advisory Committee on the Quality of Water Supplies (ACQWS), comprising nine non-official members, four official members and five other HKSAR Government officials (see details at **Annex 1**) and led by the Chairman, Prof. HO Kin Chung (何建宗教授) and the Director of Water Supplies, Mr. MA Lee Tak (馬利德先生), paid a 2-day visit to the Dongjiang (東江) catchment area. The delegation was accompanied by the officials of the Department of Water Resources of Guangdong Province (廣東省水利廳) and the executives of the Guangdong Yue Gang Water Supply Limited (廣東粵港供水有限公司) during the visit. The itinerary is appended at **Annex 2**.

2. There are two purposes of the visit to Dongjiang in 2010. One purpose was to provide members with an update of the latest progress and development on protecting the quality of Dongjiang water made by the Guangdong Authorities. Another purpose was to provide new members, who first joined the current term of ACQWS (i.e. from April 2010 to March 2012), with the opportunity to get themselves familiarised with the Dongshen Water Supply Scheme (東深供水系統). The Supply Scheme had been subject to different stages of improvements or expansions, the latest being the Dongshen Water Supply Improvement Works (東深供水改造工程) commenced in 2000 and completed in 2003.

## SECTION B – THE VISIT

3. On the first day, the delegation visited the Sanzheng Sewage Treatment Plant (三正污水處理廠) at Dongguan (東莞), one of the first batch of sewage treatment plant projects in Dongguan adopting the build-and-operate (BOT) format. With an ultimate treatment capacity of 160,000 tonnes a day after completion



of all its three phases, Phase 1 of the Plant started operation in January 2009 and is capable of treating both domestic and industrial waste waters. The Plant plays an important role in improving the water environment of Dongguan and in protecting the water quality of Dongjiang.

4. The delegation then visited the first pumping station of the Dongshen Water Supply Scheme, the Taiyuan Pumping Station (太園泵站) at Dongguan, and the nearby Shima River Sewage Diversion Works (石馬河調污工程). At the Taiyuan Pumping Station, the delegation was given a briefing of the Dongshen Water Supply Scheme with the aid of a model and gained a full understanding of the Supply Scheme.



5. The delegation was also briefed about the operation of Taiyuan Pumping

Station and Shima River Sewage Diversion Works. The pumping station is situated on



the southern bank of Dongjiang, 350 m upstream of the location where Shima River meets Dongjiang. This arrangement ensures that polluted water from Shima River will not enter the Dongshen Water Supply Scheme. The design capacity of the pumping station is 100 m<sup>3</sup>/s at a pump head

of 11 m. Members observed that since the completion of the Shima River Diversion Works, relatively polluted discharges from Shima River had ceased to flow into Dongjiang. Such discharges had been diverted to Zhangcun Water Purification Plant (樟村水質淨化廠) before being discharged to the Pearl River and the concern of backflow of contaminated water from Shima River to Taiyuan Pumping Station had been addressed. Hence, the quality of Dongjiang water had been further safeguarded before supplying to Hong Kong.



6. In the afternoon, the delegation further visited the Qiling Pumping Station (旗嶺泵站), the third pumping station of the Dongshen Water Supply Scheme. Qiling Pumping Station pumps raw water supplied from Lianhu Pumping Station (蓮湖泵站) to Jinghu Pumping Station (金湖泵站). There are eight pump sets



in the pumping station. The design capacity of the pumping station is 90 m<sup>3</sup>/s at a pump head of 25 m.

7. The delegation then proceeded towards Tangsha (塘厦) of Dongguan and visited the Shishan Open Channel (石山明槽) and the Jinghu Pumping Station (金湖泵站). Shishan Open Channel is a concrete open channel of 6.4 m x 6.5 m cross section with a total length of 848 m. Jinghu Pumping Station is the fourth and the last pumping



station of the Dongshen Water Supply Scheme. There are eight pump sets in the pumping station. The design capacity of the pumping station is 90 m<sup>3</sup>/s at a pump head of 25 m. After visiting various key installations, Members appreciated the scale of the project that was required to bring quality water to Hong Kong and witnessed the maintenance quality of these facilities.

8. Before ending the first day visit, the delegation visited the Dongshen Water Supply Improvement Works Exhibition Centre (東深供水改造工程展覽館), where Members could also have an overview of the history of the Improvement Works and was impressed by the tremendous efforts made by the



Guangdong Authorities in helping Hong Kong resolve its water shortage problem.

9. On the second day, the delegation proceeded to Shenzhen (深圳) and visited the Shawan River Sewage Interception Works (沙灣河污水截排工程), which was located at



the lower section of the Shawan River (沙灣河) adjacent to the Shenzhen Reservoir (深圳水庫). The Interception Works was built to divert discharges of Shawan River to the Luofang Water Treatment Plant (羅芳污水處理廠) for secondary treatment

before the treated water was discharged into the Shenzhen River. This interceptor had successfully prevented sewage from being discharged into the Shenzhen Reservoir and safeguarded the quality of raw water supply.

10. The delegation then visited the Bio-nitrification Plant (生物硝化廠) located at the Shenzhen Reservoir, which receives and treats Dongjiang water from the Dedicated Aqueduct before it enters the Shenzhen Reservoir. The Bio-nitrification Plant was constructed before the Dedicated Aqueduct project for the purpose of removing the ammonia present in the incoming Dongjiang water. In the



Bio-nitrification Plant, Members noted that the quality of Dongjiang water received in Shenzhen Reservoir had improved significantly since the commissioning of the



Dedicated Aqueduct. Due to the improvement in the water quality, the Bio-nitrification Plant was operated at a lower aeration rate on a need basis to maintain the activity of the nitrifying bacteria in the plant and to increase the dissolved oxygen content of the raw

water supplied to Hong Kong.

11. The delegation then visited the Main Dam of the Shenzhen Reservoir, where they took a closer look at the quality of the Reservoir water. Before ending the trip, the delegation visited the Dongjiang Water Supply Scheme Safety Monitoring and Control Centre (東江供水工程安全監控中心). For effective protection of Dongjiang



water, the Guangdong Authorities had installed monitoring and control facilities along the Dedicated Aqueduct and Shenzhen Reservoir. The delegation was briefed about the latest enhancement of the security measures adopted for the purpose of protecting the Dedicated Aqueduct and the Dongjiang water.

## **SECTION C – PRESS CONFERENCE**

12. Upon returning to Hong Kong, a press conference was held in the Headquarters of the Water Supplies Department (WSD) at the end of the visit. A short

video highlighting the visit was played and was followed by an account of the visit given by the Chairman, Professor HO Kin Chung (何建宗教授). Six members, namely, Mr CHAN Sheung Yan, Kenneth (陳尚仁先生), Dr CHEUNG Yun Hing, Richard (張潤興博士), Ms FONG Kwok Shan, Christine (方國珊女士), Ms SO Yee Ching, Phyllis (蘇綺青女士), Mr WONG Siu Wai, Kenny (王小偉先生) and Ms WONG Wai Lan, Luciana (王惠蘭女士), shared their observations on water quality of Dongjiang during the 2-day visit. They advised the press that the water quality of Dongjiang was satisfactory and appealed to the Hong Kong public to conserve water.



## SECTION D – CONCLUSION

13. Members considered the visit very informative and successful. All the delegates were impressed by the continuous efforts made by the Guangdong Authorities in abating pollution, protecting the watershed and ensuring the water quality of Dongjiang at upper reaches.

14. Members also realised that demand for the supply of Dongjiang water had substantially increased in other Guangdong municipalities and towns due to robust economic growth over the past years. They appreciated the commitment and efforts of the Guangdong water authority to accord priority in maintaining a continuing supply of Dongjiang water to meet Hong Kong's demand. They also considered that Hong Kong citizens should always be mindful of the scarce and valuable water resources.

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**ANNEXURE**

**Annex 1      List of Participants**

**Annex 2      Itinerary**

# Advisory Committee on the Quality of Water Supplies (ACQWS)

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### List of Participants

姓名 Name		職銜 Title
<b>水質事務諮詢委員會 ACQWS</b>		
1	何建宗教授 Prof HO Kin Chung	主席 Chairman
2	馬利德先生 Mr MA Lee Tak	副主席 Vice-Chairman
3	陳尚仁先生 Mr CHAN Sheung Yan, Kenneth	委員 Member
4	王惠蘭女士 Ms WONG Wai Lan, Luciana	委員 Member
5	潘樂祺先生 Mr POON Lock Kee, Rocky	委員 Member
6	王小偉先生 Mr WONG Siu Wai, Kenny	委員 Member
7	張潤興博士 Dr CHEUNG Yun Hing, Richard	委員 Member
8	鄒桂昌教授 Prof CHAU Kwai Cheong	委員 Member
9	蘇綺青女士 Ms SO Yee Ching, Phyllis	委員 Member
10	方國珊女士 Ms FONG Kwok-shan, Christine	委員 Member
11	徐永華先生 Mr CHUI Wing Wah	委員 Member
12	鄧建輝先生 Mr. TANG Kin Fai	委員 Member
13	李根基先生 Mr LI Kan Kay	秘書 Secretary
<b>其他 Others</b>		
14	吳孟冬先生 Mr NG Mang Tung, Bobby	水務署助理署長 Assistant Director, Water Supplies Department
15	黃仲良先生 Mr WONG Chung Leung	水務署總工程師 Chief Engineer, Water Supplies Department
16	郭有定先生 Mr KWOK Yau Ting	水務署高級水務化驗師 Senior Chemist, Water Supplies Department
17	唐緻靈女士 Ms TONG Chi Ling, Annisa	水務署公共關係經理 Public Relation Manager, Water Supplies Department
18	程柏基先生 Mr CHING Pak Ki, Parker	政府新聞處攝影師 Photographer, Information Services Department

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**Itinerary**

**Day 1 (Tuesday, 23.11.2010)**

- 08:18 Depart at Hung Hom Terminal by Through Train
- 10:15 Visit Sanzheng Sewage Treatment Plant (三正污水處理廠), Taiyuan Pumping Station (太園泵站), Shima River Sewage Diversion Works (石馬河調污工程)
- 12:20 Lunch
- 13:30 Visit Visit Qiling Pumping Station (旗嶺泵站), Shishan Open Channel (石山明槽), Jinhu Pumping Station (金湖泵站), Dongshen Water Supply Improvement Works Exhibition Centre (東深供水改造工程展覽館)
- 17:30 Depart for hotel at Tangxia(塘廈)

**Day 2 (Wednesday, 24.11.2010)**

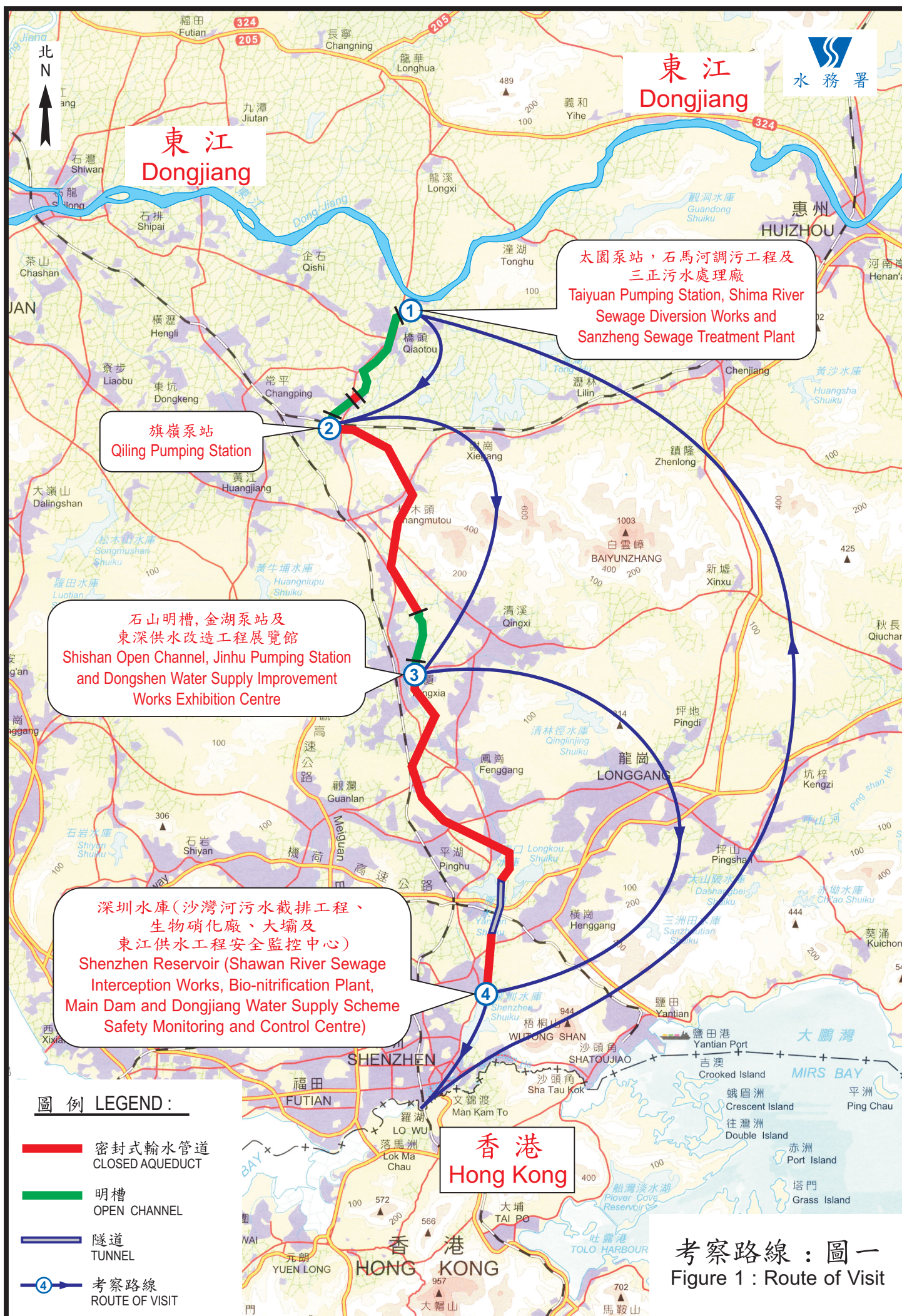
- 09:00 Depart for Shenzhen (深圳市)
- 10:00 Visit Shenzhen Reservoir – Shawan River Sewage Interception Works, Bio-nitrification Plant, Main Dam and Dongjiang Water Supply Scheme Safety Monitoring and Control Centre (深圳水庫 - 沙灣河污水截排工程, 生物硝化廠, 大壩及東江供水工程安全監控中心)
- 13:00 Lunch
- 14:15 Depart for Hong Kong
- 16:15 Convene a press conference at Immigration Tower

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**FIGURE**



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**PHOTOS**



Photo 1 – A bird's-eye view of Sanzheng Sewage Treatment Plant



Photo 2 – The delegation at Sanzheng Sewage Treatment Plant



Photo 3 – The delegation at Sanzheng Sewage Treatment Plant



Photo 4 – The delegation at Sanzheng Sewage Treatment Plant



Photo 5 – The intake channel of Taiyuan Pumping Station



Photo 6 – The delegation at the exhibition room of Taiyuan Pumping Station



Photo 7 – The rubber dam of Shima River Sewage Diversion Works



Photo 8 – The delegation at Qiling Pumping Station



Photo 9 – Shishan Open Channel



Photo 10 – The delegation at Shishan Open Channel



Photo 11 – The delegation at Jinhu Pumping Station



Photo 12 – The delegation at Jinhu Pumping Station



Photo 13 – The delegation in front of  
Dongshen Water Supply Improvement Works Exhibition Centre



Photo 14 – The delegation at the square outside  
Dongshen Water Supply Improvement Works Exhibition Centre



Photo 15 – The delegation at  
Dongshen Water Supply Improvement Works Exhibition Centre



Photo 16 – The delegation at  
Dongshen Water Supply Improvement Works Exhibition Centre



Photo 17 – Video session at  
Dongshen Water Supply Improvement Works Exhibition Centre



Photo 18 – Reception Dinner held by  
The Department of Water Resources of Guangdong Province



Photo 19 – The delegation at Shawan River Sewage Interception Works



Photo 20 – Director of Water Supplies giving an inscription  
at Shawan River Sewage Interception Works



Photo 21 – The delegation at the control room of Bio-nitrification Plant



Photo 22 – Director of Water Supplies and the Chairman of ACQWS  
(from left to right) at Bio-nitrification Plant



Photo 23 – The delegation at Bio-nitrification Plant



Photo 24 – The delegation at Bio-nitrification Plant



Photo 25 – The delegation at Shenzhen Reservoir



Photo 26 – The delegation at Main Dam of Shenzhen Reservoir



Photo 27 – The delegation at Dongjiang Water Supply Scheme  
Safety Monitoring and Control Centre



Photo 28 – Briefing session at Dongjiang Water Supply Scheme  
Safety Monitoring and Control Centre



Photo 29 – The press conference



Photo 30 – The press conference

