Drainage Services Department in Brief 2012-13

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1. Our Vision, Mission and Values

Vision

To provide world-class wastewater and stormwater drainage services enabling the sustainable development of Hong Kong

Mission

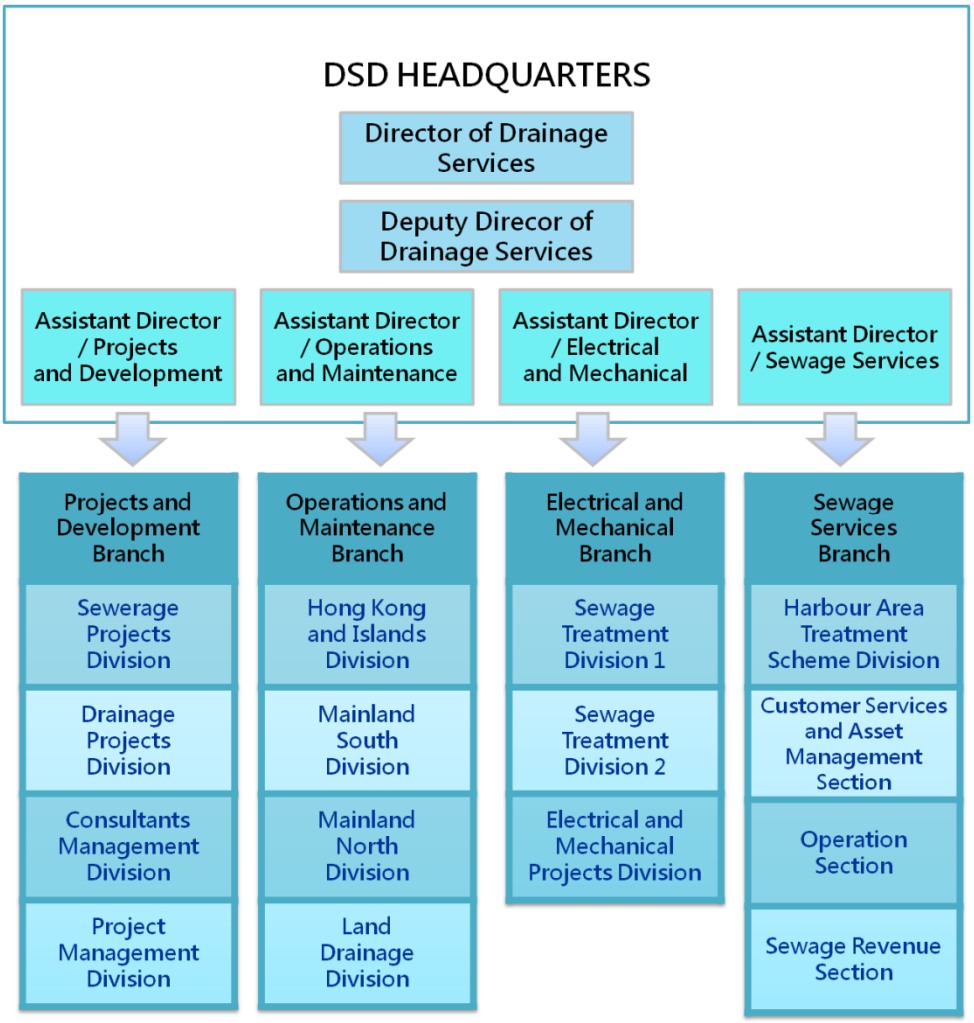
- Improving drainage services in a cost-effective and environmentally responsible manner
- Enhancing a caring, harmonious, safe and healthy work environment that fosters staff development and a mindset for change
- Strengthening relationships with community, industry and worldwide counterparts

Values

- Customer Satisfaction
- Quality
- Commitment
- Teamwork

2. Organization

2.1 Organization Chart



2.2 Staff Establishment

Directorate		18
Professional		291
Engineer		226
Electrical & Mechanical Engineer		43
Electronics Engineer		2
Shift Charge Engineer		2
Quantity Surveyor		1
Land Surveyor		2
Landscape Architect		1
Environmental Protection Officer		2
Chemist		12
Technical & Site Supervisory		820
General & Common Grades		525
Model Scale I		201
	Total	**1,855**
Staff seconded to other departments		1

3. Financial Data

3.1 Income

Sewage Services Operating Account

	(in millions of HK$)		
	2010/11	2011/12	2012/13 (Subject to finalization*)
Sewage charge	639	703	772
Trade effluent surcharge	201	204	206
Others	35	40	42
Total Revenue	875	947	1,020
Total Expenditure (1)	(2,125)	(2,234)	(2,292)
(Deficit)	(1,250)	(1,287)	(1,272)

(1) Including depreciation of fixed assets, indirect expenditure from other departments, etc.

* The figures are only provisional and are subject to endorsement by the Sewage Services Accounts Committee.

3.2 Sewage Charge

3.2.1 Number of Accounts

	(in thousands)		
	2010/11	2011/12	2012/13
Sewage Charge	2,570	2,590	2,610
Trade Effluent Surcharge (TES)	20	21	22

Shatin Sewage Treatment Works

3.2.2 Categories of TES trade

- Yarn sizing
- Bleaching and dyeing of knitted fabric
- Knit outerwear
- Spinning cotton
- Medicines
- Basic industrial chemicals
- Pulp, paper and paperboard
- Breweries and manufacture of malt liquor
- Cocoa, chocolate and sugar confectionery
- Bakery products
- Vegetable oil, peanut oil, peppermint oil and aniseed oil
- Canning and preserving fruit and vegetables
- Slaughtering, preparing and preserving meat
- Restaurants
- Washing new garments, excluding laundries
- Bleaching and dyeing of woven fabric
- Wearing apparel other than knit outerwear
- Soap and cleaning preparations, perfumes, cosmetics
- Paints, varnishes and lacquers
- Tanneries and leather finishing
- Soft drinks and carbonated waters industries
- Distilling, rectifying and blending spirits
- Vermicelli, noodles, and similar farinaceous products
- Grain mill products
- Canning, preserving and processing of fish and crustaceans
- Dairy products
- Soy and other sauces

3.2.3 Sewage Charge Rate

Effective Period	Sewage Charge Rate ($/m^3)
1.4.2008 – 31.3.2009	1.31
1.4.2009 – 31.3.2010	1.43
1.4.2010 – 31.3.2011	1.57
1.4.2011 – 31.3.2012	1.71
1.4.2012 – 31.3.2013	1.87
1.4.2013 – 31.3.2014	2.05
1.4.2014 – 31.3.2015	2.24
1.4.2015 – 31.3.2016	2.44
1.4.2016 – 31.3.2017	2.67
From 1.4.2017 onwards	2.92

Sewage Services Charges Customer Service Centre at Western Magistracy

3.3 Operating Expenditure (2010-11, 2011-12 and 2012-13)

	(in millions of HK$)		
	2010/11	**2011/12**	**2012/13**
Recurrent Expenditure			
Personal Emoluments	685.9	727.4	769.3
	(39%)	(40%)	(40%)
Departmental Expenses	1,083.8	1,111.2	1,141.4
	(61%)	(60%)	(60%)
Other Charges	0.0	0.0	0.0
	(0%)	(0%)	(0%)
Non-recurrent Expenditure	7.1	0.0	0.0
	(0%)	(0%)	(0%)
Total:	**1,776.8**	**1,838.6**	**1,910.7**

3.4 Capital Works Projects

	In-house		Consultant-managed		Total	
	No.	**Cost**	**No.**	**Cost**	**No.**	**Cost**
Projects in hand*	15	$6,325M	80	$54,445M	95	$60,770M
Contracts in hand**	17	$1,854M	40	$22,789M	57	$24,643M

	Sewage Services	Flood Prevention	Total
Projects in hand*	$49,872M	$10,898M	$60,770M
Contracts in hand**	$22,160M	$2,483M	$24,643M

Notes:

* **"Projects in hand"** include:

(1) All on-going Cat. A projects with works/consultancies in progress (MOD price); and

(2) All Cat. B projects. (September 2012 price)

** "**Contracts in hand"** include all on-going works contracts.

3.4 Capital Works Projects (Cont')

	Sewage Services	Flood Prevention	Others***	Total
Cat. D items in hand	$804M	$307M	$16M	$1,127M

Notes:

*** **Others:** Minor works including drains affecting slope safety, greening, structural survey, combined sewage services and flood prevention works.

Shek Wu Hui Sewage Treatment Works

4. Key Areas of Work

4.1 Sewage Collection, Treatment and Disposal

Services provided in the sewage collection, treatment and disposal include, effective operation of sewage treatment facilities, upgrading the existing sewerage infrastructure and building new facilities, including:

Sewerage infrastructure provided on a catchment-by-catchment basis

- The regional sewerage infrastructures are mainly proposed under the 16 Sewerage Master Plans (SMPs) and the subsequent 8 SMP Reviews.
- Total cost of sewerage projects under design and construction stages, excluding HATS is $32.7 billion.

Stanley Sewage Treatment Works

4.1.1 Harbour Area Treatment Scheme (HATS), Stage 1

(formerly known as Strategic Sewage Disposal Scheme, SSDS)

HATS is the most important infrastructure programme undertaken by the Government to improve the water quality of Victoria Harbour, helping Hong Kong to continue its development as one of the world's most populous and advanced cities.

Stage 1 was completed and has been put in full operation since December 2001, treating currently some 1.4 million cubic metres (about 75% of sewage generated by the population in the HATS catchment) of sewage each day from areas around the harbour and bringing significant improvement in water quality to the harbour.

Project scope:

Construction of about 23 km long deep tunnel system for collecting sewage from Kowloon, Tsing Yi, Kwai Chung, Chai Wan, Shau Kei Wan and Tseung Kwan O to a centralised sewage treatment works at Stonecutters Island for chemically enhanced primary treatment.

Construction cost: $8.1 billion

Annual operation cost: $320 million

4.1.2 Key Information of HATS Stage 1

7 Preliminary Treatment Works connected under HATS Stage 1

- Kwai Chung
- Kwun Tong
- Shau Kei Wan
- Tsing Yi
- Tseung Kwan O
- Chai Wan
- To Kwa Wan

Tunnel Drive

Tunnel Drive (7 sections)	**Length (km)**	**Diameter (m)**	**Depth(mPD)**
Chai Wan to Shau Kei Wan	2.3	1.20	-126 to -121
Shau Kei Wan to Kwun Tung	2.5	1.35	-121 to -76
Tseung Kwan O to Kwun Tong	5.3	1.35 twin	-87 to -67
Kwun Tong to To Kwa Wan	3.3	2.82	-143 to -136
To Kwan Wan to Stonecutters Island	5.5	3.54	-136 to -125
Kwai Chung to Tsing Yi	0.8	2.21	-143 to -132
Tsing Yi to Stonecutters Island	3.6	2.36	-132 to -125

4.1.2 Key Information of HATS Stage 1 (Cont')

Stonecutters Island Sewage Treatment Works (SCISTW)

HATS 1 Commissioning Date	December 2001
Occupied Area	10 hectares
Catchments	Urban areas of Kowloon & Northeast Hong Kong Island
Serving Population	3.5 million
Designed Treatment Capacity	1,700,000 m^3/day
Current Daily Flow	1,400,000 m^3/day
Quantity of Sludge generated	600 tonnes/day

Layout of HATS Stage 1 system

4.1.3 Harbour Area Treatment Scheme Stage 2A

Project scope:

- Construction of about 21 km long deep tunnel system to transfer the sewage from the northern and south-western parts of Hong Kong Island to Stonecutters Island;
- Upgrading of eight existing preliminary treatment works (PTW) on Hong Kong Island; and
- Expansion of the existing chemical treatment capacity and addition of disinfection facility at SCISTW.

Estimated cost: $17.1 billion (MOD prices)

Estimated Annual operation cost: $490 million

Route of HATS Stage 2A sewage tunnel

4.1.4 Key Information of HATS Stage 2A

Progress to date:

Upgrading works for Stonecutters Island Sewage Treatment Works (SCISTW)

- The advance disinfection facility at SCISTW has been put into operation since March 2010. 4 Tsuen Wan swimming beaches were re-opened in June 2011, the remaining 3 beaches are expected to be opened in phases from August 2013 to early 2014, after the completion of the improvement works for necessary facilities;
- Out of the 6 contracts for the expansion of SCISTW, the 2 advance works contracts for the interconnection tunnel connecting the new and existing pumping stations and covering of sedimentation tanks have been completed. The other 3 works contracts, including the construction of sludge dewatering facilities, main pumping station, new sedimentation tanks, effluent tunnel, and disinfection facilities have progressively commenced since September 2009. The remaining 'Design, Build & Operate' contract on sludge handling and disposal facilities at SCISTW is in tender stage. Construction is scheduled to commence in mid 2013.

Upgrading works for 8 Preliminary Treatment Works

The two contracts for upgrading the PTWs at North Point, Wanchai East, Central, Sandy Bay, Cyberport, Wah Fu, Aberdeen and Ap Lei Chau have commenced in January and August of 2011 respectively.

4.1.4 Key Information of HATS Stage 2A (Cont')

Construction of Sewage Conveyance System

Works have commenced on site for construction of the deep tunnel system since July 2009.

Our target is to commission the sewerage system of Stage 2A in 2014/15 to collect and convey the remaining 25% of the sewage generated on both shores of Victoria Harbour to SCISTW for chemically enhanced primary treatment before discharging into the Harbour.

Internal view of sewage conveyance tunnel of HATS Stage 2A

4.1.4 Key Information of HATS Stage 2A (Cont')

8 Preliminary Treatment Works to be connected under HATS Stage 2A

- North Point
- Wan Chai East
- Central
- Sandy Bay
- Cyberport
- Wah Fu
- Aberdeen
- Ap Lei Chau

Sewage Conveyance Tunnel

Conveyance System	Length	Size	Depth(mPD)
North Point to Stonecutters Island	12 km	- 7.5 km long twin oval tunnels (cross-sectional area from 1.7 to 5.6 m^2 each) - 4.5 km long single circular tunnel (cross-sectional area = 7.1 m^2)	-163 to -148
Aberdeen to Sai Ying Pun	7.5 km	- Twin oval tunnels (cross-sectional area from 1.5 to2.1 m^2 each)	-80 to -123
Ap Lei Chau to Aberdeen	1.3 km	- Twin circular tunnels (cross-sectional area = 0.28 m^2)	0 to - 100

4.1.4 Key Information of HATS Stage 2A (Cont')

Stonecutters Island Sewage Treatment Works

HATS 2A Commissioning Date	2014/15
Occupied Area	10 hectares
Catchments	Urban areas of Kowloon, Northern and Southwestern Hong Kong Island
Serving Population at ultimate	5.7 million
Designed Treatment Capacity	2,450,000 m^3/day
Daily Flow upon commissioning	2,000,000 m^3/day
Total Quantity of Sludge upon commissioning	800 tonnes per day

Expansion of the Stonecutter Island Sewage Treatment Works

4.1.5 Harbour Area Treatment Scheme Stage 2B

Project scope:

HATS Stage 2B involves construction of a biological treatment plant on Stonecutters Island for all HATS flow.

Progress to date:

Government is continuing its monitoring of the population growth, sewage flow build-up and changes in water quality, and a Review Study is now being carried out by Environmental Protection Department to study the implementation programme for Stage 2B.

Subject to a decision to go ahead, the next step is to commence the Engineering Investigation Study to confirm the technical and environmental feasibilities of HATS Stage 2B.

4.2 Flood Mitigation and Control

Stormwater drainage services include implementation of flood prevention works, and operation and maintenance of stormwater drains and facilities in an efficient manner. Our flood prevention works are summarized as follows:

North Western New Territories:

	Completed works	**Under planning / design / On-going works**
River training	About 43 km	About 4 km
Drainage improvement	About 9 km	About 8 km
Village Flood Protection Schemes	19 Nos.	Nil
Storage Tank	Nil	2 Nos.
Cost of works	$5.6 billion	$3.2 billion

Northern New Territories:

	Completed works	**Under planning / design / On-going works**
Shenzhen River Training	About 14 km	About 5 km
Other River Training	About 37 km	About 8 km
Drainage improvement	About 5 km	About 4 km
Village Flood Protection Schemes	2 Nos.	2 Nos.
Cost of works	$5.1 billion	$3 billion

4.2 Flood Mitigation and Control (Cont')

Western Kowloon:

	Completed works	Under planning / design /On-going works
Stage 1 Drainage Improvement	10 km of drains	Nil
Stage 2 Drainage Improvement	23 km of drains	Nil
	Kai Tak Transfer Scheme	
	Tai Hang Tung Storage Scheme	
Stage 3 Drainage Improvement	11 km of drains	Nil
Others	Lai Chi Kok Drainage Tunnel (3.7 km long)	2.5 km of drainage tunnel
Cost of works	$5.8 billion	$400 million

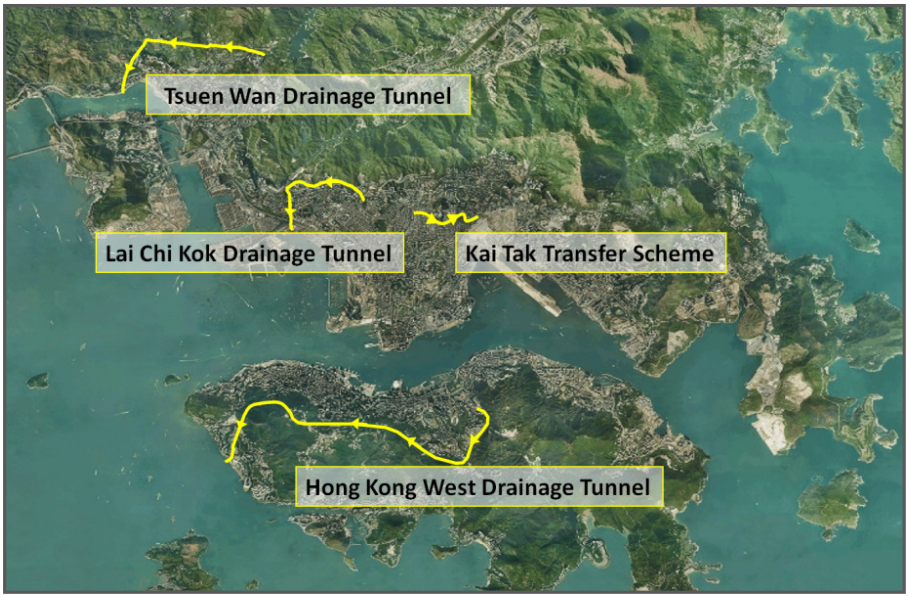
Other Areas:

Total Construction Cost $12.2 billion

(For areas in Northern and Southern Hong Kong Island, East Kowloon, Tsuen Wan, Kwai Chung, Sha Tin, Tai Po, Tuen Mun, Sham Tseng, Sai Kung and South Lantau)

4.2.1 Construction of 4 Drainage Tunnels

	Tsuen Wan Drainage Tunnel	Lai Chi Kok Drainage Tunnel	Hong Kong West Drainage Tunnel	Kai Tak Transfer Scheme
Approved Project Estimate	$1,486 million	$1,669 million	$3,380 million	$380 million
Commencement Date	December 2007	November 2008	November 2007	January 2001
Commissioning Date	March 2013	October 2012	August 2012	December 2004



Layout of 4 Drainage Tunnels

4.2.1 Construction of 4 Drainage Tunnels (Cont')

	Tsuen Wan Drainage Tunnel	**Lai Chi Kok Drainage Tunnel**	**Hong Kong West Drainage Tunnel**	**Kai Tak Transfer Scheme**
Scope of Project:				
Length of tunnel	5.1 km	Main = 1.2 km Branch = 2.5 km	11 km	1.8km
Diameter	6.5 m	4.9 m	6.25 m to 7.25 m	4.4m
Other features	• 3 intake structures; • an outfall at Yau Kom Tau	• 6 intake structures; a stilling basin; • an outfall at Stonecutters	• 34 intake structures; • an outfall at Cyberport	• stormwater discharged to Kai Tak Nullah

Internal view of Hong Kong West Drainage Tunnel

4.2.2 Implementation of 3 Stormwater Storage Schemes

- Tai Hang Tung Stormwater Storage Scheme (THTSSS);
- Sheung Wan Stormwater Storage Scheme (SWSSS); and
- Happy Valley Underground Stormwater Storage Scheme (HVUSSS)

i) Comparison of Pumping Stations of different Stormwater Storage Schemes

	THTSSS	**SWSSS**	**HVUSSS**
Total pumping capacity	1.9 m^3/s	6.0 m^3/s	1.5 m^3/s
Deodorization unit*	No	Yes	No

* Deodorization unit is provided at SWSSS to cope with the odour problem arising from contaminated water collected by the upstream stormwater drainage system.

External view of Tai Hang Tung Stormwater Pumping Station

4.2.2 Implementation of 3 Stormwater Storage Schemes (Cont')

ii) Comparison of Underground Storage Tanks

	THTSSS	SWSSS	HVUSSS
Commissioning Year	2004	2009	1st phase commission: 2015 Overall commission: 2018
Capacity	100,000 m^3	9,380 m^3	60,000 m^3
Plan Area	16,900 m^2	1,580 m^2	24,000 m^2
Average Internal Depth	7.5 m	5.9 m	3 m
Weir Type	3 numbers of 33m overflow weir	N/A	15 numbers of 3m movable overflow weir

Internal view of Tai Hang Tung Stormwater Storage Tank

4.2.3 Reconstruction and Rehabilitation of Kai Tak River

The project covers the improvement of the upstream section of Kai Tak River from Po Kong Village Road to Tung Kwong Road, and the midstream section from Tung Kwong Road to Prince Edward Road East.

Upstream Section

Project Scope:

- Reconstruction and rehabilitation of a section of Kai Tak River from Po Kong Village Road to Tung Kwong Road of about 600 m long;
- Construction of a box culvert of about 400 m long alongside the Kai Tak River from Wong Tai Sin Police Station to Tung Tai Lane;
- Relocation of affected existing watermains and sewers; and
- Carrying out the associated works, including landscaping works and in-situ reprovisioning of an existing footbridge near Tung Tai Lane.

Works commencement date: October 2011

Completion date:

- Targeted to complete flood relief works in phases from 2015 onwards; and
- Targeted to complete the whole project including the greening works in mid 2017.

Approved project estimate: $1.60 billion

4.2.3 Reconstruction and Rehabilitation of Kai Tak River (Cont')

Midstream Section

Project Scope:

- Reconstruction and rehabilitation of a section of Kai Tak River from Tung Kwong Road to Prince Edward Road East of about 500 m long;
- Utility diversion including the reprovisioning of an affected existing dry weather flow interceptor; and
- Ancillary works including landscaping works.

Works commencement date: End 2013

Completion date: End 2017

Estimated project cost: $1.24 billion

Kai Tak River before improvement works

4.2.4 Village Flood Protection Schemes

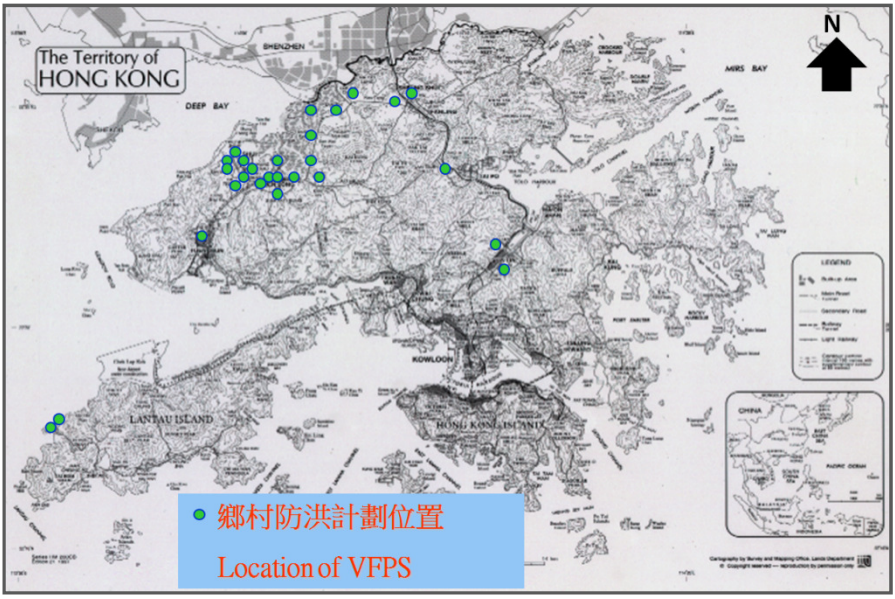
List of Village Flood Protection Schemes in operation: (Total: 27)

District		Schemes in Operation
NWNT	Yuen Long	Kau Hui (or Nam Pin Wai)
		Ma Tin Tsuen
		Shui Pin Wai
		Wang Chau Village
		Shui Pin Tsuen
		Tai Kiu
	Kam Tin	Sha Po Tsuen
	Ngau Tam Mei	Po Wai
		Chuk Yuen Tsuen/Ha San Wai
	San Tin	Chau Tau
		Mai Po Lo Wai/Mai Po San Tsuen
		San Tin
	Tin Shui Wai	Lo Uk Tsuen
		Sik Kong Tsuen
		Sik Kong Wai
		Kiu Tau Wai
		Ha Mei San Tsuen
		Sheung Cheung Wai
		Fung Shui Lane

4.2.4 Village Flood Protection Schemes (Cont')

List of village flood protection schemes in operation: (Cont')

District		Schemes in Operation
NNT	Sheung Shui	Sheung Shui Tsuen
		Tai Tau Leng/Tsung Pak Long
other areas	Sha Tin	Tsang Tai Uk
		Fo Tan
	Tai Po	Shui Wai
	Tuen Mun	Tsing Chung Koon
	Lantau Island	Tai O No.1
		Tai O No.2



Location Map of Village Flood Protection Schemes (VFPS)

4.2.5 Elimination of Flooding Blackspots

From 1995 to early 2013, we have removed 118 flooding blackspots. 51 of them are in the northern and northwestern parts of the New Territories (including North District, San Tin, and Yuen Long). In 2012, there were 15 flooding blackspots in Hong Kong. We have reviewed the list of flooding blackspots in early 2013 and eliminated 2 more flooding blackspots.

Flooding Blackspots deleted from the 2012 List

	Location	Scale**
1	Ha Wo Che Village, Ha Wo Che, Shatin	2
2	Ling Tsui Tau Tsuen, Mui Wo	1

Situation of Flooding Blackspots

Situation of Improvement Works	Number of flooding blackspots
Improvement works commissioned and the improvement achieved is being monitored	6
Improvement works are under construction	5
Improvement works are under planning and design	2

(Total: 13)

4.2.5 Elimination of Flooding Blackspots (Cont')

Details of Flooding Blackspots (2013)

Total number of flooding blackspots : 13

Division	District	Location	Situation*	Scale**
Mainland North	North	Shek Tsai Leng, Kwu Tung	A	1
		Ping Kong	A	2
		Nam Wah Po	A	2
		Ko Po, Kan Tau Tsuen, Kwan Tei	A	1
	Yuen Long	Shek Wu Wai, San Tin	B	3
	Tuen Mun	Tuen Mun San Tsuen	A	1
	Tai Po	Lam Tsuen Valley Basin	A	2
		Ting Kok Road-Shuen Wan Chim Uk to Wong Yue Tan	B	3
		Tung Tsz Road	B	2
Mainland South	Tsim Sha Tsui	Chatham Road South between Granville Road and Austin Avenue	C	1

4.2.5 Elimination of Flooding Blackspots (Cont')

Details of Flooding Blackspots (2013) (Cont')

Division	District	Location	Situation*	Scale**
Hong Kong & Islands	Aberdeen	Pok Fu Lam Village	C	1
	Pok Fu Lam	Wong Chuk Hang Road, J/O Nam Long Shan Road	B	1
	Wan Chai	Morrison Hill Road, J/O Lap Tak Lane	B	2

Remarks

*Situation of Flooding Blackspots

Situation*	
A	Improvement works commissioned and the improvement achieved is being monitored
B	Improvement works are under construction
C	Improvement works are under planning and design

4.2.5 Elimination of Flooding Blackspots (Cont')

Remarks

** Scale of Flooding

1	**Minor**
	Affecting area of less than about 50 metres x 50 metres (area less than 0.25 hectare) or resulting in minor public nuisance and inconvenience.
2	**Small**
	Affecting area of more than 0.25 hectares or resulting in some agricultural damage, isolated property damage, or traffic disruption.
3	**Medium**
	Affecting area of more than 10 hectares or resulting in significant property damage or serious traffic disruption.
4	**Major**
	Affecting area of more than 100 hectares or resulting in serious social or economic disruption.

4.2.6 Drainage Master Plan Studies

- Since 1994, Drainage Services Department (DSD) has completed 8 stormwater drainage master plan (DMP) studies and 3 drainage studies. In 2008, DSD commenced the next phase of DMP review studies. Review studies for DMP in Yuen Long, North District and Happy Valley were completed in 2011. Review studies for DMP in West Kowloon and East Kowloon commenced in January 2012 while Review studies for DMP in Tai Po, Shatin and Sai Kung commenced in February 2013. For the other drainage catchments, the relevant DMP review studies will be progressively commenced in the coming years.

4.2.7 Other Flood Mitigation Measures:

- Drainage catchment management (via a drainage impact assessment process), drainage legislation, enhanced river maintenance, flood warning and minor drainage improvements.

Sheung Yue River

4.3 Nullah Beautification

Completed Nullah Beautification Works:

1. Mong Kok Road Nullah, Mong Kok
2. San Kwai Street Nullah Ramp, Kwai Chung
3. Fung Fai Terrace Nullah, Happy Valley
4. Lung Chu Street Nullah, Sham Shui Po
5. Joyful Building Nullah, beside Tsuen Tak Garden, Tsuen Wan
6. Summit Terrace Nullah, south of Tsuen King Circuit, Tsuen Wan
7. Yip Shing Street Nullah, Kwai Chung
8. Kwai Wing Road Nullah Ramp, Kwai Chung
9. Jordan Valley Nullah, Kwun Tong
10. Rambler Crest Nullah, Tsing Yi
11. Flower Market Road Nullah, Mong Kok
12. Tonkin Street Nullah, Shamshuipo
13. Queen's College Nullah, Causeway Road, Causeway Bay (Renamed as Fire Dragon Path)
14. Fuk Man Road Nullah, Sai Kung (Renamed as Fuk Man Garden)

4.3 Nullah Beautification (Cont')

To be completed:

	Progress
Kai Tak River, Choi Hung Road, Wong Tai Sin	We have adopted the majority views collected from the public engagement exercise that the River should be kept open as far as possible as a unique and special feature. Works expected to be completed in phases from 2015 to 2017.
Staunton Creek Nullah, Heung Yip Road, Wong Chuk Hang	During planning stage, it was identified that the location of this project partially overlaps with Highways Department's South Island Line (East) project . Hence, Highways Department has commissioned MTR to carry out the improvement works of Staunton Creek Nullah during the construction of South Island Line (East) development project. Works expected to be completed in 2015.

5. Key Statistics / Key Data

Sewerage network serving 93 per cent of Hong Kong population

Assets: Separate Foul and Stormwater Drainage Systems

● Length of sewers (foul)	1,683 km
○ HK & Islands	472 km
○ Mainland North	437 km
○ Mainland South	774 km
● Length of sewage tunnels	42 km
● Length of underground stormwater drains	2,378 km
○ HK & Islands	520 km
○ Mainland North	707 km
○ Mainland South	1,151 km
● Length of engineered channels	341 km
○ HK & Islands	35 km
○ Mainland North	273 km
○ Mainland South	33 km
● Length of drainage tunnels	22 km
	4,466 km

5. Key Statistics / Key Data (Cont')

Assets: Plants

Preliminary Treatment / Screening Works	21
Primary Treatment Works	2
Chemically Enhanced Primary Treatment (CEPT) Works	4
Major Secondary Treatment Works	6
Minor Secondary Treatment Works	34
Tertiary Treatment Works	1
Total nos. of sewage treatment works	68
Sewage Pumping Stations	224
Stormwater Pumping Stations	33
Total	325

Sheung Wan Stormwater Pumping Station

5. Key Statistics / Key Data (Cont')

Major Sewage Treatment Facilities	Capacity (m^3/day)
Preliminary Treatment / Screening Works	
● North West Kowloon Preliminary Treatment Works	406,000
● Kwun Tong Preliminary Treatment Works	333,000
Primary Treatment Works	
● Cheung Chau Sewage Treatment Works	4,000
● Tai O Imhoff Tank	1,200
Chemically Enhanced Primary Treatment (CEPT) Works	
● Stonecutters Island Sewage Treatment Works	1,725,000
● Siu Ho Wan Sewage Treatment Works	180,000
Secondary Treatment Works	
● Shatin Sewage Treatment Works	340,000
● Shek Wu Hui Sewage Treatment Works	93,000
● Tai Po Sewage Treatment Works	100,000
● Sai Kung Treatment Works	8,000
● Yuen Long Sewage Treatment Plant	70,000
● Stanley Sewage Treatment Works	11,600
Tertiary Treatment Work	
● Ngong Ping Sewage Treatment Works	2,000
Sewage Pumping Stations	
● Stonecutters Island Main Pumping Station	2,700,000
● Cheung Sha Wan Sewage Pumping Station	1,272,000
Flood Water Pumping Stations	
● San Tin Stormwater Pumping Station	8,000 l/s
● Chuk Yuen Stormwater Pumping Station	8,000 l/s

5. Key Statistics / Key Data (Cont')

Volume of sewage treated

(million m^3)	2010/11	2011/12	2012/13
By Preliminary Treatment	293	286	306
By Primary Treatment	4	4	5
By CEPT	517	525	525
By Secondary Treatment	165	166	165
TOTAL	979	981	1,001

Note:

1. The volume of sewage treated by tertiary treatment for the above years is insignificant when compared to other treatment processes as shown in the above table. The volume of sewage treated by tertiary treatment annually is about 0.16 million m^3.
2. Current daily quantity of sewage sludge disposed of at landfills: 825 tonnes with over 30% dryness.

6. Public Education

The following Sewage Treatment Works (STW) and Information Center are open to visits by students or organizations through prior application:

Name of STW & Information Centre	Address	Available Visiting Time
Shek Wu Hui Sewage Treatment Works	San Wan Road, Shek Wui Hui, Sheung Shui, N.T	• From 10:00 am to 11:30 am or 2:30 pm to 4:00 pm; • From Mondays to Fridays, except Public Holidays
Shatin Sewage Treatment Works	1 Shui Chong Street, Ma Liu Shui, Shatin, N.T	
Sai Kung Sewage Treatment Works	Wah Fuk Street, Tui Min Hoi, Sai Kung, N.T.	
Yuen Long Sewage Treatment Works	Wang Lok Street, Yuen Long Industrial Estate, Yuen Long, N.T.	
Stanley Sewage Treatment Works	Wong Ma Kok Road, Stanley, H.K.	
Ngong Ping Sewage Treatment Works	Ngong Ping Road, Ngong Ping, Lantau Island, N.T.	• From 10:30 am to 11:30 am or 2:30 pm to 3:30 pm • From Tuesdays to Fridays, except Public Holidays

6. Public Education (Cont')

Name of STW & Information Centre	Address	Available Visiting Time
San Tin Flood Prevention Information Centre	San Tin Village Flood Pumping Station, San Tin Tsuen Road, San Tin, N.T.	• From 10:00 am to 11:30 am or 2:30 pm to 4:00 pm; • From Mondays to Fridays, except Public Holidays;

The following Information Center is open to public for visit:

Name Information Centre	Address	Available Visiting Time
Ngong Ping Sewage Treatment Information Centre	Ngong Ping Road, Ngong Ping, Lantau Island, N.T.	• From 10:00 am to 12:30 pm, or 1:30 pm to 4:30 pm • Closed on Mondays and on the following public holidays: New Year Day, The First, Second and Third Day of the Chinese New Year, Good Friday, Christmas Day and Boxing Day

**** Application forms for the visits could be downloaded from our website.***

7. Contact Us

Drainage Hotline
2300 1110

Sewage Charges Customer Services Enquiries
2834 9432

General Enquiries
2877 0660

Website
http://www.dsd.gov.hk

E-mail
enquiry@dsd.gov.hk

渠務署
Drainage Services Department

Drainage Services Department in Brief 2012-2013

31/3/2013