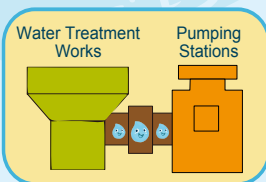


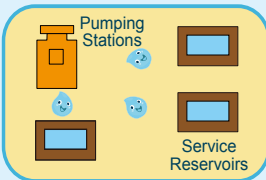
## Little Drop's Distribution Process



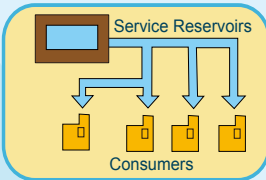
**1** After leaving the water treatment works and with the help of the pumpsets at the pumping stations,



**2** Little Drops will be pushed to the service reservoirs which are big water tanks.



**3** The Little Drops stay in the service reservoirs for a few hours before they are delivered to consumers through underground pipelines.



## Water Quality Control

To comply with the World Health Organization (WHO) Guidelines for Drinking-water Quality, Little Drops have to go through stringent quality control before they arrive at the consumers' taps. We have qualified chemists to conduct many kinds of tests. Over 170,000 samples in a year will be taken from different intakes, storage reservoirs, water treatment works, service reservoirs, trunk-mains and consumers' taps for testing. Water is therefore safe to drink.



## Water Distribution in the World

Fresh water accounts for only 2.5% of all the water on Earth; the rest is salt water. 70% of this fresh water is in the form of glaciers and snow caps in the poles and mountainous regions.

### Water Sources in Hong Kong

- 1 Rainwater collected in catchment areas
- 2 Dongjiang water imported from Guangdong



### Did You Know...?

- There are no sizable lakes or rivers in Hong Kong. There is also no suitable site for constructing a new large impounding reservoir. We have to rely on the Dongjiang for about 70% to 80% of Hong Kong water supply.
- The total capacity (586 mcm) of the 17 impounding reservoirs in Hong Kong is just more than half of the annual total fresh water consumption.
- The average amount of fresh water used by each resident in Hong Kong (with a population of about 7 million) per day = 130 one-litre bottles of drinks
- The average amount of flushing water used by each resident in Hong Kong per day = 90 one-litre bottles of drinks



## Worldwide Water Resource Problems



- Number of people without access to improved water sources: 880 million\*
- Number of people without access to basic sanitation facilities: 2.5 billion\*
- More than 10% of people in the world consume crops irrigated by wastewater that may contain health-hazardous chemicals and pathogenic organisms.\*\*



- Water scarcity affects both developed and developing countries. For example, water is scarce in the southern and middle western part of the United States.
- Water scarcity also affects China. The Central Government has spent billions to tackle the problem.

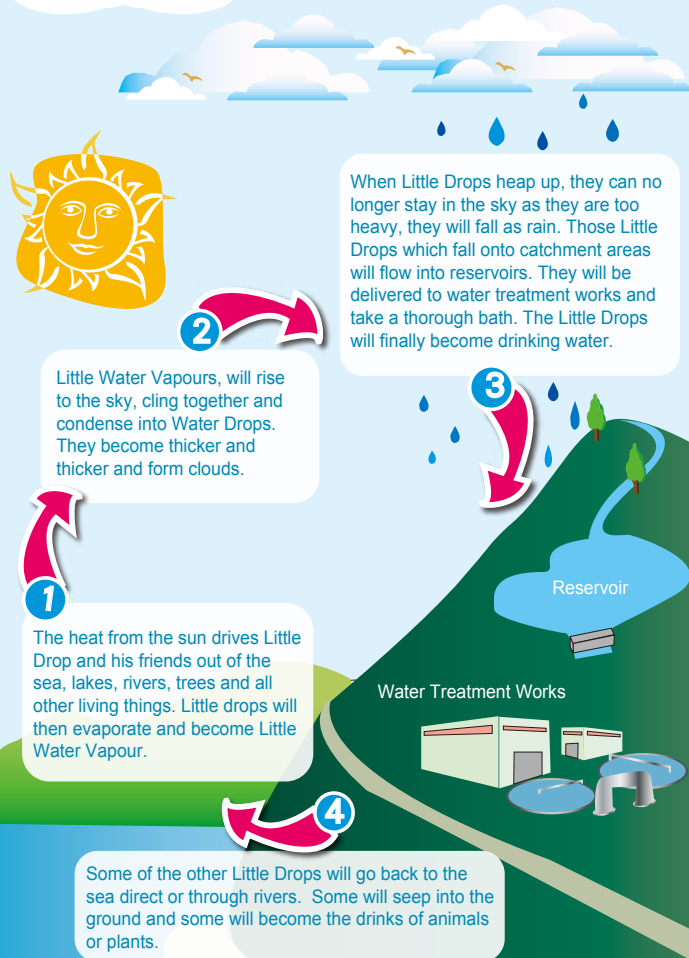


Water is essential for life. While governments all over the world strive to provide adequate supplies of quality water to their people, we, being the consumers, should learn how to save water in our daily life.



## Little Drop's Marvellous Journey

### Water Cycle



\* Source: UNICEF Website  
\*\* Source: WHO Website

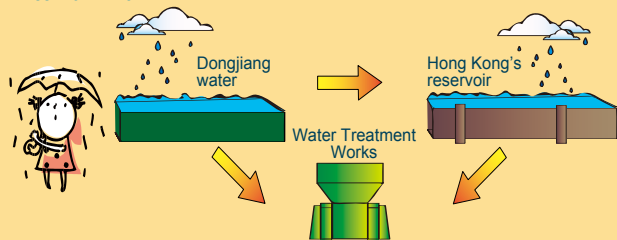
# Water

# Treatment

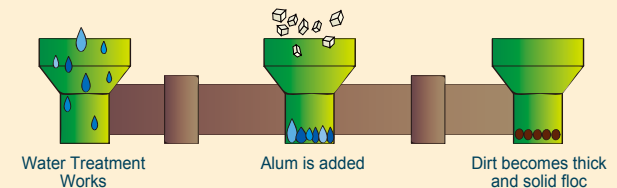
# Process

## Step 1 Raw Water → Clarifier

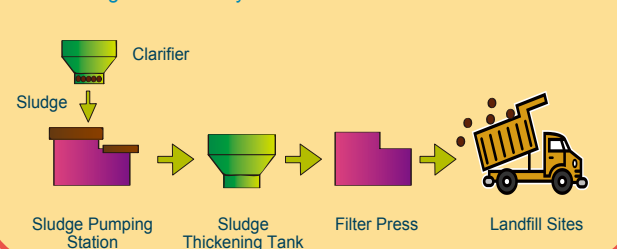
**a** Little Drops fall into Dongjiang with other rain drops and then are transferred from the Guangdong province direct to the water treatment works or impounding reservoirs in Hong Kong. In the reservoir, they will join and mix with the rainwater. The water is known as raw water because it requires treatment before people can drink it.



**b** When Little Drops enter into the clarifier at water treatment works, a chemical called alum is added. The small dirt inside Little Drops' bodies will then cling to each other to become thick and solid floc. The dirt from Little Drops will then rest on the floor of the clarifier in the form of thick and greasy mud called sludge.

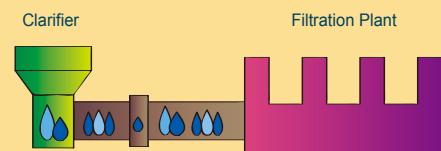


**c** The sludge is then collected, thickened and finally compressed into sludge cakes. They will be taken to landfill sites.

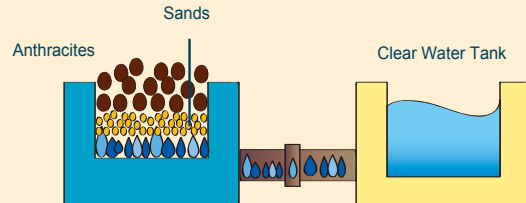


## Step 2 Clarifier → Filtration Plant → Clear Water Tank

**a** After taking a big bath in the clarifier, Little Drops march to another tank - filtration plant.



**b** In filtration plant, finer dust, dirt and mud inside Little Drops' bodies are taken away by some very high grade of fine coal, the so-called anthracites. Then, they pass through layers of sands.

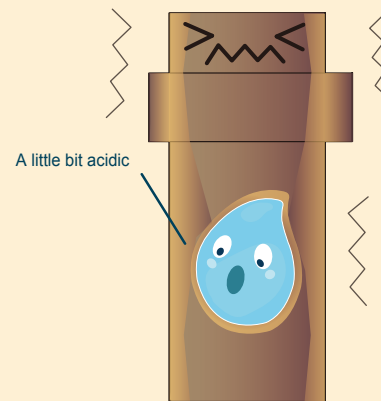


**c** Here are the crystal clear Little Drops after they come out of the filtration plant and go into the clear water tank.

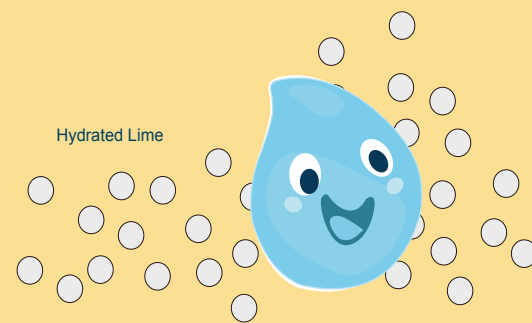


## Step 3 Clear Water Tank

**a** However, the Little Drops are a little bit acidic because they have taken alum when they pass through the clarifier. They can eat into the water pipes and fittings to produce rust as they walk along.

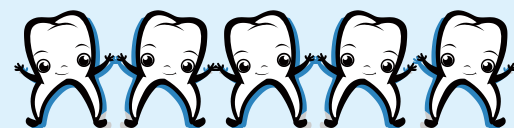


**b** Therefore, another chemical called hydrated lime has to be given to the Little Drops for neutralisation.



## Step 4 Clear Water Tank

- a** To make Little Drops cleaner, they will then be dosed with a little bit of chlorine for disinfection.
- b** Finally, Little Drops will be added with fluoride which protects people's teeth.



As of January 2010, there are 17 impounding reservoirs in Hong Kong.

- High Island Reservoir
- Plover Cove Reservoir
- Tai Lam Chung Reservoir
- Shing Mun Reservoir
- Lower Shing Mun Reservoir
- Shek Lei Pui Reservoir
- Kowloon Reservoir
- Kowloon Byewash Reservoir
- Kowloon Reception Reservoir
- Pok Fu Lam Reservoir
- Aberdeen Upper Reservoir
- Aberdeen Lower Reservoir
- Tai Tam Upper Reservoir
- Tai Tam Intermediate Reservoir
- Tai Tam Byewash Reservoir
- Tai Tam Tuk Reservoir
- Shek Pik Reservoir

There are 21 water treatment works, too!

