

## EPD - Beach Water Quality

### Beach Water Quality in Hong Kong 2013

#### Our Mission:

**To safeguard the health and welfare of the community and meet conservation goals by working to achieve and maintain the Water Quality Objective for bathing beaches**

[Photo: Beaches in Hong Kong are popular spots for a wide range of outdoor activities]

#### Introduction

Hong Kong has many beautiful and attractive beaches with white sands along its long and twisting coastline. Each year, millions of beach-goers enjoy bathing in these beaches with clean water.

The objective of the Environmental Protection Department (EPD)'s Beach Water Quality Monitoring Programme is to monitor beach water quality and protect the health of bathers. The background and details of EPD's monitoring activities can be found at its [Hong Kong Water Quality Resource Centre \(HKWQRC\) website](http://wqrc.epd.gov.hk) (<http://wqrc.epd.gov.hk>) or its beach water quality [thematic website](http://www.beachwq.gov.hk) (<http://www.beachwq.gov.hk>).

[Photo: Kids playing together at Butterfly Beach]

This report summarises the beach monitoring data collected in 2013, the gradings of the beaches and their annual compliance with the Water Quality Objective (WQO) for bathing beaches. In 2013, the EPD monitored 41 gazetted beaches and three non-gazetted beaches in different parts of the territory. The gazetted beaches were monitored weekly during the bathing season from March to October. EPD staff made field observations and collected samples for laboratory analyses of *Escherichia coli* (*E. coli*) as the bacteriological water quality indicator. EPD staff also took measurements of dissolved oxygen, pH, salinity, temperature and turbidity of beach water.

[Photo: EPD staff monitoring beach water quality]

[Photo: Bacterial testing of beach water at EPD's laboratory]

Hong Kong's beaches are assessed using a dual system: annual ranking and weekly grading which are both based on the *E. coli* level in beach water to indicate potential health risks associated with swimming. The annual ranking reflects the overall water quality of the beach over the entire bathing season, while the weekly grading denotes the recent water quality of the beach. Under the dual rating system, beaches are categorised into "Good", "Fair", "Poor" and "Very Poor". Those ranked "Good" and "Fair" meet the WQO for bathing waters.

[Photo: Beach water quality grading board]

## Annual Beach Ranking in 2013

All 41 gazetted beaches in Hong Kong complied with the WQO in 2013. Although the total rainfall recorded during the bathing season in 2013 (2671 mm) was 54% higher than that in 2012 (1733 mm), there were only occasional increases in the *E. coli* levels in beach water, which were recorded mostly for beaches in the western side of Hong Kong. Compared with the ranking in 2012, the number of beaches ranked as "Good" has increased from 23 (or 56 %) to 24 (or 59 %) and the number of beaches ranked as "Fair" has changed from 18 (or 44%) to 17 (or 41%). No beach was ranked as "Poor" or "Very Poor" in 2013.

[Photo: Scenic Clear Water Second Bay Beach]

The beaches with a "Good" water quality ranking were largely located in the Southern District (Hong Kong Island South), Outlying Islands and Sai Kung. All 12 beaches in the Southern District were ranked as "Good" in 2013. Of the nine beaches on the Outlying Islands, seven were "Good" while Silver Mine Bay Beach and Pui O Beach were rated as "Fair". The ranking of Pui O Beach has changed to "Fair" but the change was not statistically significant. In the Sai Kung area, five beaches were "Good" in 2013 with Silverstrand Beach rated as "Fair". On the western side, all six beaches along the Tuen Mun coast and all eight beaches in the Tsuen Wan District received a "Fair" ranking in 2013.

The water quality of the Tsuen Wan beaches has been stable in 2013 following improvement in previous years, which is mainly due to the smooth operation of the Advance Disinfection Facilities (ADF) of the Stonecutters Island Sewage Treatment Works since March 2010, and the completion of the sewerage works in the hinderland of the beaches.

Since all the Tsuen Wan beaches have achieved the WQO for bathing, four previously closed beaches, namely Approach Beach, Casam Beach, Hoi Mei Wan Beach and Lido Beach, have been reopened to the public for swimming since June 2011. After the upgrading of beach facilities, Anglers' Beach has also been reopened for swimming since September 2013. For the remaining Ting Kau Beach and Gemini Beaches, the Leisure and Cultural Services Department plans to reopen them for public use after the completion of the improvement works in the swimming season of 2014.

[Photo: Stanley Main Beach - bathers enjoying the clean sand]

EPD also monitored three non-gazetted beaches in Hong Kong: Discovery Bay (a popular beach on Lantau Island), a sandy beach adjacent to Kiu Tsui Beach in Sai Kung, and a planned artificial beach in Lung Mei, Tai Po. Discovery Bay and the beach adjacent to Kiu Tsui Beach continued to be ranked as "Good" in 2013. Similar to 2012, Lung Mei was ranked as "Poor" in 2013. The public sewerage network is being extended to villages in the Lung Mei area, and other pollution abatement measures will be implemented to improve the water quality.

## Weekly Beach Grading in 2013

The EPD issues weekly gradings of gazetted beaches which are open for swimming. The information is disseminated to the public through weekly press releases, the EPD's website, the beach hotline, GeoInfo Map of the GovHK website and beach noticeboards.

In 2013, the water quality of beaches in the Southern District was largely satisfactory. Ten gazetted beaches received mostly "Good" or "Fair" grading in the bathing season, while St. Stephen's Beach and Stanley Main Beach were rated as "Poor" on a few occasions after heavy rain. South Bay Beach had the best water quality, achieving "Good" gradings on all rating occasions.

[Photo: Hong Kong beaches offer respite from hustle and bustle of city life]

The water quality of the Sai Kung beaches was also generally good with weekly grading mostly "Good" or "Fair". Kiu Tsui Beach was rated as "Very Poor" on two occasions after heavy rain.

The beaches on the Outlying Islands were generally very suitable for swimming, with Hung Shing Yeh and Upper Cheung Sha Beaches achieving 100% "Good" gradings. Cheung Chau Tung Wan, Kwun Yam, Lo So Shing and Tong Fuk Beaches achieved "Good" gradings over 80% of the rating occasions. Cheung Chau Tung Wan, Kwun Yam, Lo So Shing and Pui O Beaches were rated once as "Very Poor" after heavy rain.

The water quality of the beaches in the Tuen Mun area was generally fine and nearly all graded as "Good" or "Fair".

The water quality of beaches in Tsuen Wan was generally satisfactory with gradings maintained mostly at either "Good" or "Fair". Except Approach Beach, other open beaches were rated as "Very Poor" on one or a few occasions after heavy rain.

[Photo: Scenic Lo So Shing Beach (Lamma Island)]

## Water Quality Trend

The beach water quality in Hong Kong is able to fully comply with the WQO for the last four years. The percentage of beaches complying with the WQO had changed from 74% in 1986 (29 of 39 beaches) to 63% (26 of 41 beaches) in 1997, and then improved to 100% since 2010 for all 41 gazetted beaches.

### Comparison of annual beach ranking of gazetted beaches in 1986, 1997 and 2013

Year	WQO Compliant		WQO Non-compliant	
	Good	Fair	Poor	Very Poor
1986	23.1%(9)	51.3%(20)	17.9%(7)	7.7%(3)
1997	24.4% (10)	39.0% (16)	29.3% (12)	7.3% (3)
2013	58.5%(24)	41.5%(17)	-	-

( ) No. of beaches

Note: Two Beaches degazetted in 1995 were excluded from the calculation.

Back in the 1980s, many beaches were either closed, such as Cafeteria Old Beach, Castle Peak Beach and Silver Mine Bay Beach, or on the verge of being closed (e.g. Middle Bay Beach and Repulse Bay Beach) because of poor water quality.

There was a further drop in compliance rate in the mid-1990s due to population growth particularly in the new town areas. Since then, there has been progressive improvement in the last decade as a result of enforcement of environmental legislation, extension of the sewerage network and provision of new sewage treatment facilities across the territory including the beach hinterland. Major improvement measures implemented in the past are summarized in the following table.

**Major improvement measures for the beaches since the implementation of beach water quality monitoring programme in 1986**

<b>1986 – 1990</b>	
Implementation of the Livestock Waste Control Scheme under the Waste Disposal (Livestock Waste) Regulation.	Most beaches, particularly Silver Mine Bay Beach
Declaration of the Southern Water Control Zone (WCZ) under the Water Pollution Control Ordinance (WPCO) and legislative enforcement.	Southern beaches
Interception and diversion of polluted storm drains at beaches in Southern District.	Southern beaches
<b>1991- 1995</b>	
Implementation of chemical waste control.	All beaches
Declaration of the North Western WCZ under WPCO and legislative enforcement.	Tuen Mun beaches
Diversion of polluted storm water drains away from Castle Peak Beach.	
Provision of public sewers for So Kwun Wat and Sam Shing Estate.	
Commissioning of Stanley Sewage Treatment Works (STW).	Stanley Main Beach
<b>1996 - 2000</b>	
Full implementation of WPCO in all WCZs.	All beaches
Commissioning of the Shek O Sewage Screening Plant and diversion of polluted storm water drains at Shek O Village.	Shek O Beach
Completion of all major works under Southern Southern Sewerage Master Plan.	Southern beaches
Commissioning of the new 2 km long Pillar Point sewage submarine outfall.	Tuen Mun beaches
<b>2001 - 2005</b>	
Completion of HATS Stage 1.	Big Wave Bay, Shek O, Rocky Bay Beaches
Provision of public sewers in the Silverstrand area.	Silverstrand Beach
Full operation of the Sham Tseng STW.	Beaches along the Tsuen Wan coast
<b>2006 - 2010</b>	
Commissioning of the Advance Disinfection Facilities at Stonecutters Island STW.	All Tsuen Wan beaches
Extension of the public sewerage network to the beach hinterland along Castle Peak Road.	Beaches along the Tsuen Wan coast

Through continuous efforts of the government to implement pollution abatement measures over the years, there was significant improvement at the beaches in various districts in the last few years. Improvement at Silver Mine Bay Beach, Castle Peak Beach and Repulse Bay Beach was most remarkable as the beaches have consistently complied with the WQO in recent years. All beaches in Tsuen Wan have met the WQO since 2010. To sum up, all of Hong Kong's bathing beaches have now achieved the required standard for swimming.

### **Compliance with WQO at gazetted beaches, 1997 - 2013**

[Figure: Compliance with WQO at gazetted beaches, 1997 - 2013]

Water quality trend lines of gazetted beaches over the last 28 years are included in this report to show the changes over the years. More in-depth background and details of the beach monitoring programme are available at the [Hong Kong Water Quality Resource Centre \(HKWQRC\) website \(http://wqrc.epd.gov.hk\)](http://wqrc.epd.gov.hk) or its beach water quality [thematic website \(http://www.beachwq.gov.hk\)](http://www.beachwq.gov.hk), which provides user-friendly access to the annual beach reports as well as data published since 2000.

[Photos: Fun for all ages at Castle Peak Beach]

## The Monitoring Programme

### Beaches monitored by the EPD

Southern District	Sai Kung District	Tsuen Wan District	Tuen Mun District	Islands District	Tai Po District
Deep Water Bay	Kiu Tsui	Ma Wan Tung Wan	Butterfly	Silver Mine Bay	Lung Mei**
Repulse Bay	Hap Mun Bay	Anglers'	Castle Peak	Pui O	
Middle Bay	Trio	Gemini	Kadoorie	Lower Cheung Sha	
South Bay	Silverstrand	Hoi Mei Wan	Cafeteria Old	Upper Cheung Sha	
Chung Hom Kok	Clear Water Bay First	Casam	Cafeteria New	Tong Fuk	
St. Stephen's	Clear Water Bay Second	Lido	Golden	Cheung Chau Tung Wan	
Stanley Main	Kiu Tsui (New)**	Ting Kau		Kwun Yam	
Turtle Cove		Approach		Hung Shing Yeh	
Shek O				Lo So Shing	
Big Wave Bay				Discovery Bay**	
Hairpin					
Rocky Bay					

\*\* Non-gazetted beaches

### Beach monitoring frequencies

Beach	Monitoring frequency per month	
	Bathing season *	Non-bathing season
<b>Gazetted beaches open all year round**</b>	at least 3 times	at least 3 times
<b>Other gazetted beaches</b>	at least 3 times	once
<b>Non-gazetted beaches</b>	at least 3 times	once

\* March to October

\*\* Clear Water Bay Second, Deep Water Bay, Golden and Silverstrand Beaches

## Overview of Various Stages of the Beach Monitoring Programme

[Image of overview of various stages of the Beach Monitoring Programme]

### Hong Kong's annual beach ranking system

Rank	<i>E. coli</i> counts per 100 mL*	Minor illness rate** (Cases per 1,000 swimmers)	WQO Compliance
Good	≤24	Undetectable	Compliant
Fair	25-180	≤10	
Poor	181-610	11-15	Non-compliant
Very Poor	>610	>15	

\* Geometric mean *E. coli* count calculated based on all data collected between March and October.

\*\* Skin and gastrointestinal illnesses

### Hong Kong's weekly beach grading system

Grade	Beach water quality	<i>E. coli</i> counts per 100 mL*	Minor illness rate ** (Cases per 1,000 swimmers)
1	Good	≤24	Undetectable
2	Fair	25-180	≤10
3	Poor	181-610	11-15
4	Very Poor	>610 or last reading >1,600	>15

\* Unless otherwise indicated, the *E. coli* count represents the geometric mean of the 5 most recent sampling occasions.

\*\* Skin and gastrointestinal illnesses



## **The 2013 Findings**

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[Image of Annual Ranking of gazetted beaches at a glance]

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## Hong Kong's gazetted beaches 2013 annual ranking

Annual Rank			
Good	Fair	Poor	Very Poor
Hung Shing Yeh	Cafeteria Old	--	--
South Bay	Silver Mine Bay		
Upper Cheung Sha	Silverstrand		
Lo So Shing	Ma Wan Tung Wan		
Turtle Cove	Golden		
Hap Mun Bay	Cafeteria New		
Tong Fuk	Pui O		
Chung Hom Kok	Kadoorie		
Trio	Lido		
Kwun Yam	Butterfly		
Cheung Chau Tung Wan	Casam		
Repulse Bay	Castle Peak		
St. Stephen's	Hoi Mei Wan		
Deep Water Bay	Approach		
Kiu Tsui	Ting Kau *		
Hairpin *	Anglers'		
Middle Bay	Gemini *		
Clear Water Bay Second			
Shek O			
Lower Cheung Sha			
Stanley Main			
Big Wave Bay			
Rocky Bay *			
Clear Water Bay First			

\* Closed beach

## Weekly beach grading summary of gazetted beaches by district in 2013

District	Percentage of Weekly Gradings				Total no. of Grading Occasions
	Grade 1	Grade 2	Grade 3	Grade 4	
<b>Southern</b>	78%	21%	0%	1%	347
<b>Sai Kung</b>	61%	38%	0%	1%	207
<b>Tsuen Wan</b>	1%	88%	7%	3%	219
<b>Tuen Mun</b>	14%	81%	5%	0%	210
<b>Outlying Islands</b>	71%	27%	0%	1%	307

Figures may not add up to 100% due to roundings

## Annual ranking and weekly grading summary - Southern District beaches

Beach	Annual Ranking	Percentage of Weekly Gradings			
		Grade 1	Grade 2	Grade 3	Grade 4
<b>Big Wave Bay</b>	Good	49%	51%	0%	0%
<b>Chung Hom Kok</b>	Good	97%	3%	0%	0%
<b>Deep Water Bay</b>	Good	83%	17%	0%	0%
<b>Hairpin *</b>	Good	No grading for closed beach.			
<b>Middle Bay</b>	Good	74%	26%	0%	0%
<b>Repulse Bay</b>	Good	91%	9%	0%	0%
<b>Rocky Bay *</b>	Good	No grading for closed beach.			
<b>Shek O</b>	Good	65%	35%	0%	0%
<b>South Bay</b>	Good	100%	0%	0%	0%
<b>St. Stephen's</b>	Good	83%	11%	0%	6%
<b>Stanley Main</b>	Good	53%	44%	0%	3%
<b>Turtle Cove</b>	Good	91%	9%	0%	0%

\* Beaches closed for reasons other than water quality.

## Annual ranking and weekly grading summary - Sai Kung beaches

Beach	Annual Ranking	Percentage of Weekly Gradings			
		Grade 1	Grade 2	Grade 3	Grade 4
Clear Water Bay First	Good	46%	54%	0%	0%
Clear Water Bay Second	Good	59%	41%	3%	0%
Hap Mun Bay	Good	91%	9%	0%	0%
Kiu Tsui	Good	61%	33%	0%	6%
Silverstrand	Fair	24%	76%	0%	0%
Trio	Good	85%	15%	0%	0%

## Annual ranking and weekly grading summary - Tsuen Wan beaches

District	Beach	Annual Ranking	Percentage of Weekly Gradings			
			Grade 1	Grade 2	Grade 3	Grade 4
Tsuen Wan	Anglers'	Fair	0%	69%	22%	8%
	Approach	Fair	0%	86%	14%	0%
	Casam	Fair	3%	95%	0%	3%
	Gemini *	Fair	No grading for closed beach.			
	Hoi Mei Wan	Fair	0%	89%	8%	3%
	Lido	Fair	3%	95%	0%	3%
	Ting Kau *	Fair	No grading for closed beach.			
	Ma Wan Tung Wan	Fair	3%	94%	0%	3%

\* Closed beaches

### Annual ranking and weekly grading summary - Tuen Mun beaches

District	Beach	Annual Ranking	Percentage of Weekly Gradings			
			Grade 1	Grade 2	Grade 3	Grade 4
Tuen Mun	Butterfly	Fair	20%	66%	14%	0%
	Cafeteria New	Fair	11%	83%	6%	0%
	Cafeteria Old	Fair	9%	91%	0%	0%
	Castle Peak	Fair	9%	83%	9%	0%
	Golden	Fair	20%	80%	0%	0%
	Kadoorie	Fair	17%	83%	0%	0%

### Annual ranking and weekly grading summary - Beaches on the Outlying Islands

Beach	Annual Ranking	Percentage of Weekly Gradings			
		Grade 1	Grade 2	Grade 3	Grade 4
<b>Cheung Chau Tung Wan</b>	Good	80%	17%	0%	3%
<b>Hung Shing Yeh</b>	Good	100%	0%	0%	0%
<b>Kwun Yam</b>	Good	80%	17%	0%	3%
<b>Lo So Shing</b>	Good	97%	0%	0%	3%
<b>Lower Cheung Sha</b>	Good	63%	37%	0%	0%
<b>Pui O</b>	Fair	17%	78%	3%	3%
<b>Silver Mine Bay</b>	Fair	23%	77%	0%	0%
<b>Tong Fuk</b>	Good	91%	9%	0%	0%
<b>Upper Cheung Sha</b>	Good	100%	0%	0%	0%



### Annual beach rankings of gazetted beaches from 1997 to 2013

Year	Number of Beaches in Each Rank				Total
	Good	Fair	Poor	Very Poor	
1997	10	16	12	3	41
1998	16	16	8	1	41
1999	22	13	6	0	41
2000	21	14	6	0	41
2001	21	13	5	2	41
2002	23	10	2	6	41
2003	23	11	1	6	41
2004	25	9	5	2	41
2005	23	11	1	6	41
2006	22	12	5	2	41
2007	25	9	7	0	41
2008	24	10	7	0	41
2009	23	15	3	0	41
2010	23	18	0	0	41
2011	31	10	0	0	41
2012	23	18	0	0	41
2013	24	17	0	0	41

### Comparison of annual beach ranking of gazetted beaches in 1997 and 2013

Year	WQO Compliant		WQO Non-compliant	
	Good	Fair	Poor	Very Poor
1997	24.4% (10)	39.0% (16)	29.3% (12)	7.3% (3)
2013	58.5% (24)	41.5% (17)	0% (0)	0% (0)

( ) No. of beaches

**Compliance with the Water Quality  
Objective at gazetted beaches, 1997 - 2013**

<b>Year</b>	<b>Percentage of Compliance</b>
<b>1997</b>	63%
<b>1998</b>	78%
<b>1999</b>	85%
<b>2000</b>	85%
<b>2001</b>	83%
<b>2002</b>	80%
<b>2003</b>	83%
<b>2004</b>	83%
<b>2005</b>	83%
<b>2006</b>	83%
<b>2007</b>	83%
<b>2008</b>	83%
<b>2009</b>	93%
<b>2010</b>	100%
<b>2011</b>	100%
<b>2012</b>	100%
<b>2013</b>	100%

### Annual geometric mean *E. coli* levels of gazetted beaches by district, 1997 - 2013

Year	Southern	Sai Kung	Tsuen Wan	Tuen Mun	Outlying Islands
1997	55	26	562	326	24
1998	34	17	321	125	12
1999	16	9	231	59	7
2000	16	11	219	57	8
2001	18	13	321	101	12
2002	10	12	666	70	7
2003	11	14	566	85	8
2004	9	10	405	64	5
2005	14	14	576	77	8
2006	13	11	447	122	11
2007	9	8	294	77	9
2008	11	13	247	56	12
2009	11	13	163	43	10
2010	14	10	90	39	8
2011	7	5	25	34	7
2012	11	10	50	47	8
2013	12	15	85	54	11

Note: Annual geometric mean *E.coli* levels calculated based on all the data collected between March and October

Annual geometric mean *E. coli* levels (1997 - 2013)

Beach	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Southern District</b>																	
Big Wave Bay	179	114	77	98	106	23	33	26	101	50	17	31	46	149	17	31	21
Chung Hom Kok	22	40	14	8	15	13	14	9	13	10	9	13	14	9	5	5	8
Deep Water Bay	55	46	14	16	18	9	9	7	8	7	7	9	12	9	6	9	11
Hairpin	44	72	17	18	10	6	7	7	13#	11#	19#	10#	12#	33#	6#	9#	14#
Middle Bay	40	16	11	11	8	9	14	12	20	18	9	11	12	12	6	15	14
Repulse Bay	23	11	8	9	13	9	12	4	8	12	7	14	11	7	6	7	10
Rocky Bay	399#	223#	72#	80#	118#	43#	28#	19#	30#	33#	17#	15#	13#	50#	23#	30#	22#
Shek O	102	70	32	29	31	13	11	16	19	24	18	22	11	19	11	16	15
South Bay	17	6	4	7	5	5	11	9	7	7	5	5	4	4	4	5	4
St. Stephen's	40	26	11	6	7	5	9	4	12	11	6	9	6	4	4	4	10
Stanley Main	72	24	13	12	9	8	6	5	7	10	9	10	13	20	6	34	19
Turtle Cove	40	14	12	11	15	8	4	5	8	7	5	5	5	8	4	6	6
<b>Sai Kung District</b>																	
Clear Water Bay First	62	41	11	16	28	28	17	9	16	20	14	11	15	10	7	8	24
Clear Water Bay Second	66	44	12	26	22	14	21	10	19	13	9	19	27	13	5	18	15
Hap Mun Bay	3	2	2	2	1	2	4	3	4	4	3	5	3	3	2	2	7
Kiu Tsui	5	4	4	5	5	4	5	17	14	11	6	13	16	13	9	10	13
Silverstrand	148	99	32	61	100	133	97	74	67	30	33	35	51	28	18	30	39
Trio	30	21	17	10	12	6	10	2	6	5	2	12	5	6	2	9	8
<b>Tsuen Wan District</b>																	
Anglers'	691#	502#	442#	326#	621#	1169#	693#	619#	895#	772#	496#	510#	276#	134#	27#	69#	133
Approach	1009#	435#	387#	316#	411#	696#	762#	470#	663#	599#	352#	251#	208#	124#	59	83	106
Casam	609	239	231	209	233	741	702#	594#	716#	426#	305#	289#	144#	102#	21	50	71
Gemini	458	399	350	258	323	1155	875#	1102#	1042#	853#	566#	481#	410#	137#	19#	40#	135#
Hoi Mei Wan	471	280	109	177	199	547	442#	287#	641#	308#	286#	271#	130#	87#	23	51	86
Lido	600	262	231	181	269	683	734#	523#	782#	459#	280#	296#	178#	87#	21	32	53
Ma Wan Tung Wan	110	92	51	39	133	201	159	101	132	171	78	53	60	17	10	24	41
Ting Kau	1583#	1045#	515#	593#	739#	742#	831#	412#	512#	469#	405#	258#	145#	141#	58#	88#	107#
<b>Tuen Mun District</b>																	
Butterfly	259	121	44	61	74	60	74	55	55	94	84	56	49	30	41	42	71
Cafeteria New	309	100	60	51	104	62	80	54	70	120	68	48	38	31	27	47	50
Cafeteria Old	435	138	58	57	125	74	76	61	81	150	67	45	46	34	29	48	39
Castle Peak	332#	199#	57#	58#	105#	58#	64#	80#	90	139	64	47	35	63	49	48	78
Golden Beach	352	98	44	50	87	66	84	46	62	117	87	63	42	37	26	62	45
Kadoorie	290	130	109	68	120	114	160	98	117	118	101	87	48	45	37	40	52
<b>Outlying Islands</b>																	
Cheung Chau Tung Wan	24	19	11	12	16	17	11	12	14	37	21	15	17	12	6	13	10
Hung Shing Yeh	5	3	3	5	6	2	5	4	4	4	6	4	6	4	3	4	4
Kwun Yam	32	21	6	10	11	9	7	5	10	13	9	10	9	8	5	5	9
Lo So Shing	3	2	4	2	5	2	3	2	3	4	3	5	7	3	3	4	5
Lower Cheung Sha	85	23	10	12	22	10	14	7	12	11	12	20	13	11	9	10	17
Pui O	36	16	10	10	17	10	15	9	10	16	30	24	12	14	13	22	51
Silver Mine Bay	481	123	39	50	67	42	50	14	34	52	22	43	45	31	28	38	39
Tong Fuk	14	10	4	5	6	4	3	4	5	5	4	10	5	5	4	4	7
Upper Cheung Sha	8	3	2	3	5	3	3	3	3	4	4	7	5	4	3	4	4

Note:

# Figure in red indicates that the beach was closed in that year

## 2013 Beach visitor number

Beach	Daily Average		Peak Day	Peak Month	Total
	Weekdays	Weekends & Public Holidays			
<b>Southern District</b>					
Big Wave Bay	418	870	3,500	27,790	138,610
Chung Hom Kok	267	707	2,300	17,200	100,580
Deep Water Bay	920	4,668	15,000	122,850	525,150
Hairpin	167	267	600	8,150	48,980
Middle Bay	239	317	780	14,500	64,730
Repulse Bay	10,838	14,806	21,000	421,480	2,972,680
Rocky Bay	-	-	-	-	-
Shek O	2,761	6,382	24,000	296,700	966,150
South Bay	248	623	2,900	27,540	90,870
St. Stephen's	167	455	1,000	11,000	64,000
Stanley Main	850	2,690	16,000	78,810	355,380
Turtle Cove	65	385	1,340	7,230	41,450
<b>Sai Kung District</b>					
Clear Water Bay First	154	496	1,380	12,600	65,120
Clear Water Bay Second	1,991	6,416	24,000	235,700	841,720
Hap Mun Bay	398	803	2,770	41,390	129,890
Kiu Tsui	106	781	2,250	12,280	80,010
Silverstrand	431	1,251	6,400	47,750	171,160
Trio	263	1,035	3,700	30,800	126,170
<b>Tsuen Wan District</b>					
Anglers'	71	243	970	13,120	31,200
Approach	129	513	960	9,440	62,290
Casam	43	127	470	2,890	17,260
Gemini	9	21	60	620	3,250
Hoi Mei Wan	76	164	370	4,590	25,720
Lido	310	914	2,980	20,200	124,310
Ma Wan Tung Wan	587	2,303	5,920	48,740	281,170
Ting Kau	35	127	310	2,620	15,930
<b>Tuen Mun District</b>					
Butterfly	833	1,537	2,100	38,000	260,450
Cafeteria New	860	1,773	4,750	61,950	283,700
Cafeteria Old	822	1,099	2,400	38,500	223,550
Castle Peak	405	1,311	1,800	23,260	171,710
Golden	2,045	4,734	9,500	116,000	716,200
Kadoorie	606	1,009	1,850	34,900	180,660
<b>Outlying Islands</b>					
Cheung Chau Tung Wan	206	562	2,700	15,620	78,940
Hung Shing Yeh	179	617	1,450	14,260	78,940
Kwun Yam	79	227	800	6,290	31,150
Lo So Shing	53	180	340	3,720	23,040
Lower Cheung Sha	156	568	1,410	15,740	71,130
Pui O	283	714	1,900	19,590	103,710
Silver Mine Bay	249	802	8,610	28,320	105,280
Tong Fuk	138	288	760	10,030	45,780
Upper Cheung Sha	113	413	1,700	11,060	51,710

Note: Information provided by the Leisure and Cultural Services Department

**Physicochemical water quality data for gazetted beaches, 2013**

Beach Name	pH	Salinity(psu)	Turbidity(NTU)	Temperature(°C)	Dissolved Oxygen (mg/L)	(% Saturation)
<b>Southern District</b>						
Big Wave Bay Beach	8.33 ( 8.14 - 8.53 )	29.6 ( 21.3 - 32.9 )	2.32 ( 0.72 - 6.13 )	26.0 ( 18.6 - 31.5 )	6.8 ( 6.1 - 7.8 )	96 ( 85 - 107 )
Chung Hom Kok Beach	8.34 ( 8.13 - 8.59 )	29.6 ( 21.6 - 33.4 )	4.15 ( 0.87 - 31.40 )	25.9 ( 17.9 - 31.0 )	6.6 ( 5.4 - 8.4 )	94 ( 80 - 117 )
Deep Water Bay Beach	8.31 ( 8.04 - 8.62 )	28.7 ( 21.3 - 33.3 )	6.08 ( 1.15 - 21.80 )	26.2 ( 18.6 - 31.0 )	6.6 ( 4.2 - 8.1 )	94 ( 65 - 119 )
Hairpin Beach [Closed]	8.40 ( 8.21 - 8.72 )	29.3 ( 21.9 - 33.0 )	2.20 ( 0.55 - 6.34 )	26.4 ( 17.4 - 32.2 )	6.7 ( 5.3 - 8.2 )	96 ( 73 - 110 )
Middle Bay Beach	8.33 ( 8.10 - 8.62 )	29.5 ( 22.6 - 33.2 )	4.59 ( 1.02 - 29.40 )	25.8 ( 17.7 - 30.0 )	6.6 ( 4.6 - 8.6 )	93 ( 68 - 116 )
Repulse Bay Beach	8.34 ( 8.13 - 8.67 )	29.7 ( 22.5 - 33.4 )	3.95 ( 0.99 - 11.70 )	25.6 ( 17.8 - 30.0 )	6.7 ( 4.7 - 8.2 )	94 ( 72 - 118 )
Rocky Bay Beach [Closed]	8.27 ( 8.08 - 8.53 )	30.1 ( 22.7 - 32.8 )	2.15 ( 0.84 - 5.62 )	25.7 ( 18.4 - 31.4 )	6.7 ( 5.5 - 8.9 )	94 ( 81 - 108 )
Shek O Beach	8.34 ( 8.19 - 8.64 )	30.7 ( 26.5 - 33.1 )	2.32 ( 0.75 - 5.31 )	25.9 ( 18.6 - 31.8 )	6.6 ( 5.7 - 8.1 )	95 ( 76 - 105 )
South Bay Beach	8.33 ( 8.12 - 8.65 )	29.6 ( 22.1 - 33.3 )	3.36 ( 0.97 - 9.56 )	25.9 ( 18.2 - 30.0 )	6.7 ( 4.7 - 8.3 )	94 ( 72 - 116 )
St. Stephen's Beach	8.30 ( 8.04 - 8.64 )	29.6 ( 21.3 - 33.4 )	3.02 ( 0.93 - 19.60 )	25.9 ( 17.9 - 30.0 )	6.6 ( 5.1 - 8.2 )	93 ( 78 - 117 )
Stanley Main Beach	8.38 ( 8.20 - 8.78 )	29.0 ( 21.9 - 32.5 )	2.37 ( 0.85 - 5.72 )	26.5 ( 17.7 - 32.5 )	6.6 ( 4.2 - 8.0 )	95 ( 63 - 111 )
Turtle Cove Beach	8.37 ( 8.19 - 8.78 )	29.5 ( 21.4 - 33.3 )	4.30 ( 0.93 - 15.10 )	26.3 ( 17.5 - 31.8 )	6.6 ( 5.4 - 8.3 )	95 ( 70 - 112 )

**Sai Kung District**

Clear Water Bay First Beach	8.36 ( 7.98 - 8.65 )	29.0 ( 22.4 - 32.3 )	4.90 ( 1.39 - 21.70 )	26.8 ( 18.7 - 31.5 )	6.8 ( 5.2 - 8.4 )	97 ( 74 - 114 )
Clear Water Bay Second Beach	8.35 ( 7.93 - 8.65 )	29.9 ( 24.2 - 32.5 )	5.72 ( 1.90 - 20.60 )	27.0 ( 18.8 - 31.4 )	6.6 ( 5.1 - 7.6 )	96 ( 73 - 111 )
Hap Mun Bay Beach	8.37 ( 8.04 - 8.65 )	30.3 ( 26.7 - 32.5 )	2.35 ( 0.46 - 5.88 )	27.2 ( 19.1 - 31.7 )	6.7 ( 5.6 - 9.0 )	98 ( 86 - 113 )
Kiu Tsui Beach	8.37 ( 7.99 - 8.74 )	29.4 ( 24.1 - 32.3 )	2.19 ( 0.76 - 5.74 )	27.3 ( 19.1 - 32.7 )	7.0 ( 5.5 - 9.9 )	100 ( 88 - 117 )
Silverstrand Beach	8.37 ( 7.94 - 8.71 )	28.6 ( 24.1 - 31.6 )	3.49 ( 1.47 - 8.32 )	26.6 ( 18.5 - 31.2 )	6.7 ( 5.4 - 8.4 )	95 ( 67 - 113 )
Trio Beach	8.35 ( 8.09 - 8.65 )	28.1 ( 19.4 - 32.1 )	2.30 ( 0.96 - 5.77 )	27.4 ( 19.2 - 32.2 )	6.8 ( 5.9 - 8.7 )	99 ( 90 - 116 )

**Tsuen Wan District**

Anglers' Beach	8.18 ( 8.00 - 8.42 )	26.8 ( 13.3 - 31.5 )	4.65 ( 1.67 - 10.50 )	25.8 ( 19.4 - 30.8 )	6.3 ( 4.9 - 7.6 )	90 ( 72 - 115 )
Approach Beach	8.17 ( 7.91 - 8.39 )	25.5 ( 16.2 - 31.3 )	3.97 ( 1.67 - 8.18 )	25.8 ( 19.3 - 30.0 )	6.5 ( 5.0 - 7.9 )	90 ( 64 - 105 )
Casam Beach	8.18 ( 7.97 - 8.38 )	26.1 ( 18.0 - 31.5 )	3.88 ( 1.32 - 14.20 )	26.1 ( 19.5 - 30.7 )	6.4 ( 5.1 - 7.5 )	92 ( 68 - 105 )
Gemini Beaches [Closed]	8.18 ( 7.91 - 8.42 )	27.0 ( 15.8 - 31.7 )	4.00 ( 1.31 - 8.91 )	25.9 ( 19.4 - 30.8 )	6.3 ( 4.7 - 7.4 )	90 ( 68 - 108 )
Hoi Mei Wan Beach	8.17 ( 7.96 - 8.40 )	25.8 ( 18.3 - 31.5 )	3.84 ( 1.29 - 10.20 )	26.1 ( 19.3 - 30.8 )	6.3 ( 4.5 - 7.5 )	90 ( 66 - 103 )
Lido Beach	8.17 ( 8.01 - 8.40 )	26.1 ( 18.0 - 31.5 )	4.10 ( 1.66 - 10.50 )	26.0 ( 19.5 - 30.6 )	6.4 ( 5.4 - 7.4 )	91 ( 71 - 105 )
Ma Wan Tung Wan Beach	8.16 ( 7.96 - 8.37 )	27.4 ( 19.1 - 31.6 )	5.82 ( 2.09 - 15.30 )	25.8 ( 19.2 - 29.5 )	6.1 ( 4.4 - 7.7 )	86 ( 63 - 104 )
Ting Kau Beach [Closed]	8.20 ( 7.99 - 8.43 )	25.4 ( 16.8 - 31.4 )	3.93 ( 1.12 - 10.90 )	26.0 ( 19.3 - 30.4 )	6.4 ( 5.2 - 7.5 )	91 ( 68 - 112 )

**Tuen Mun District**

Butterfly Beach	8.18 ( 7.90 - 8.44 )	22.6 ( 9.3 - 30.8 )	6.95 ( 3.05 - 25.40 )	26.8 ( 19.9 - 30.7 )	6.4 ( 4.6 - 8.1 )	90 ( 66 - 114 )
Cafeteria New Beach	8.18 ( 7.90 - 8.48 )	22.6 ( 8.2 - 30.8 )	11.10 ( 3.30 - 23.80 )	26.5 ( 19.7 - 30.6 )	6.4 ( 5.1 - 8.1 )	89 ( 71 - 101 )
Cafeteria Old Beach	8.18 ( 7.93 - 8.41 )	22.4 ( 7.8 - 30.7 )	8.89 ( 3.28 - 16.70 )	26.5 ( 19.8 - 30.3 )	6.4 ( 5.2 - 8.3 )	88 ( 73 - 104 )
Castle Peak Beach	8.20 ( 7.92 - 8.52 )	21.9 ( 8.1 - 30.7 )	5.93 ( 2.79 - 16.20 )	26.8 ( 20.1 - 30.5 )	6.7 ( 4.9 - 8.2 )	93 ( 69 - 113 )
Golden Beach	8.18 ( 7.90 - 8.44 )	22.8 ( 8.2 - 30.8 )	14.02 ( 5.56 - 37.10 )	26.4 ( 19.6 - 30.3 )	6.4 ( 5.2 - 7.5 )	90 ( 73 - 102 )
Kadoorie Beach	8.19 ( 8.00 - 8.45 )	22.4 ( 8.1 - 30.7 )	6.61 ( 2.71 - 20.70 )	26.7 ( 20.2 - 30.5 )	6.3 ( 5.0 - 8.1 )	89 ( 62 - 104 )

**Islands District**

Cheung Chau Tung Wan Beach	8.29 ( 7.97 - 8.73 )	28.0 ( 21.2 - 32.0 )	3.81 ( 1.31 - 12.10 )	26.0 ( 19.0 - 30.4 )	6.8 ( 5.6 - 8.4 )	96 ( 77 - 119 )
Hung Shing Yeh Beach	8.25 ( 8.02 - 8.64 )	28.1 ( 14.0 - 33.1 )	5.65 ( 1.94 - 15.20 )	25.5 ( 19.3 - 30.4 )	6.8 ( 5.5 - 8.0 )	95 ( 83 - 121 )
Kwun Yam Beach	8.30 ( 7.97 - 8.70 )	27.5 ( 20.7 - 32.1 )	3.91 ( 1.01 - 11.20 )	25.9 ( 19.0 - 30.3 )	6.8 ( 5.5 - 8.3 )	95 ( 81 - 117 )
Lo So Shing Beach	8.26 ( 8.03 - 8.63 )	28.5 ( 15.2 - 33.0 )	3.64 ( 0.91 - 10.60 )	26.0 ( 19.8 - 30.7 )	6.7 ( 4.9 - 8.2 )	95 ( 72 - 119 )
Lower Cheung Sha Beach	8.32 ( 8.10 - 8.73 )	27.1 ( 17.9 - 32.0 )	10.58 ( 1.87 - 34.10 )	26.9 ( 18.3 - 31.6 )	6.7 ( 5.7 - 7.8 )	95 ( 84 - 104 )
Pui O Beach	8.32 ( 8.12 - 8.69 )	27.0 ( 17.2 - 32.0 )	15.18 ( 3.32 - 41.20 )	27.4 ( 18.3 - 32.5 )	6.6 ( 5.6 - 7.9 )	95 ( 83 - 103 )
Silver Mine Bay Beach	8.27 ( 8.01 - 8.62 )	23.4 ( 10.3 - 31.1 )	7.17 ( 1.50 - 25.30 )	27.4 ( 19.0 - 33.1 )	6.9 ( 5.0 - 8.3 )	97 ( 73 - 112 )
Tong Fuk Beach	8.31 ( 8.12 - 8.68 )	27.4 ( 18.7 - 31.9 )	6.72 ( 0.85 - 22.40 )	26.7 ( 18.0 - 31.6 )	6.8 ( 5.6 - 8.0 )	96 ( 85 - 105 )
Upper Cheung Sha Beach	8.32 ( 8.11 - 8.67 )	26.8 ( 18.7 - 31.8 )	8.41 ( 1.26 - 22.10 )	27.4 ( 18.3 - 31.5 )	6.7 ( 5.8 - 7.4 )	95 ( 84 - 105 )