

## CALCULATION OF SEWER GENERATED AT CAPE POINT

Visitors to Cape Point											New info 29/07/10	
MONTH	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
April	74,882	67,009	58,245	55,754	55,664	60,668	73,784	55,894	70,042	71,568	65,890	63,771
May	40,052	36,318	34,864	36,158	39,253	45,862	42,138	41,063	41,707	44,191	49,211	44,369
June	27,360	32,963	28,230	32,444	31,877	29,340	28,964	30,819	33,684	33,000	33,449	35,756
July	33,777	28,469	29,418	28,625	30,681	34,220	41,454	44,205	43,033	50,369	45,989	49,450
August	49,103	44,248	37,012	39,542	41,266	55,944	52,129	53,298	54,575	60,981	56,965	62,081
September	47,956	37,244	51,941	48,448	59,776	50,762	54,660	56,434	63,433	63,092	54,233	52,147
October	66,657	52,794	53,522	54,007	65,831	87,228	77,553	77,146	78,933	78,759	75,429	75,550
November	82,589	84,133	60,842	58,406	74,544	80,974	86,690	82,298	90,954	74,433	78,768	76,321
December	80,534	103,864	83,602	84,886	100,698	79,676	104,910	97,135	108,391	111,293	95,399	101,627
January	107,026	70,068	80,472	91,279	100,705	121,253	93,235	92,356	93,130	89,835	87,200	85,654
February	71,158	68,274	59,892	68,489	63,823	71,445	78,100	74,841	84,693	85,025	68,957	74,797
March	84,600	77,909	67,593	84,804	75,566	80,325	87,029	73,899	78,914	93,193	69,186	72,591
Visitors / year	765,694	703,293	645,633	682,842	739,684	797,697	820,646	779,388	841,489	855,739	780,676	794,114

In- or decrease / from prev. year	-	-8.1%	-8.2%	5.8%	8.3%	7.8%	2.9%	-5.0%	8.0%	1.7%	-8.8%	1.7%
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PERSONS / DAY FOR EACH MONTH											New info 29/07/10	
April	2,496	2,234	1,942	1,858	1,855	2,022	2,459	1,863	2,335	2,386	2,196	2,126
May	1,292	1,172	1,125	1,166	1,266	1,479	1,359	1,325	1,345	1,426	1,587	1,431
June	912	1,099	941	1,081	1,063	978	965	1,027	1,123	1,100	1,115	1,192
July	1,090	918	949	923	990	1,104	1,337	1,426	1,388	1,625	1,484	1,595
August	1,584	1,427	1,194	1,276	1,331	1,805	1,682	1,719	1,760	1,967	1,838	2,003
September	1,599	1,241	1,731	1,615	1,993	1,692	1,822	1,881	2,114	2,103	1,808	1,738
October	2,150	1,703	1,727	1,742	2,124	2,814	2,502	2,489	2,546	2,541	2,433	2,437
November	2,753	2,804	2,028	1,947	2,485	2,699	2,890	2,743	3,032	2,481	2,626	2,544
December	2,598	3,350	2,697	2,738	3,248	2,570	3,384	3,133	3,496	3,590	3,077	3,278
January	3,452	2,260	2,596	2,944	3,249	3,911	3,008	2,979	3,004	2,898	2,813	2,763
February	2,541	2,438	2,139	2,446	2,279	2,552	2,789	2,673	3,025	3,037	2,463	2,671
March	2,729	2,513	2,180	2,736	2,438	2,591	2,807	2,384	2,546	3,006	2,232	2,342
Max visitors /day	3,452	3,350	2,697	2,944	3,249	3,911	3,384	3,133	3,496	3,590	3,077	3,278
Min visitors / day	912	918	941	923	990	978	965	1,027	1,123	1,100	1,115	1,192

ASSUMPTION	
% of visitors entering the Cape Point Entrance Gate to visit the POINT :	<b>90%</b>

WASTE WATER GENERATED / PERSON			
Description	No.	Litre	Total
Flushing of toilet	2	9	18
Washing of hands	2	0.25	0.5
Food and other	1	1.5	1.5
Total (litre) :			<b>20</b>

WASTE WATER GENERATED (m <sup>3</sup> )											New info 29/07/10	
PERIOD	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
<b>1 TOTAL / YEAR</b>												
Visitors to visit the Point (90%)	689,125	632,964	581,070	614,558	665,716	717,927	738,581	701,449	757,340	770,165	702,608	714,703
m <sup>3</sup> / year	13,782.5	12,659.3	11,621.4	12,291.2	13,314.3	14,358.5	14,771.6	14,029.0	15,146.8	15,403.3	14,052.2	14,294.1
<b>2 DAILY TOTAL - Based on MONTHLY daily visitors (averages)</b>												
Average visitors / day	2,098	1,927	1,769	1,871	2,027	2,185	2,248	2,135	2,305	2,344	2,139	2,176
m <sup>3</sup> / day	42.0	38.5	35.4	37.4	40.5	43.7	45.0	42.7	46.1	46.9	42.8	43.5
<b>3 DAILY TOTAL - Based on MAXIMUM DAILY visitors / month (averages)</b>												
m <sup>3</sup> / day	69.0	67.0	53.9	58.9	65.0	78.2	67.7	62.7	69.9	71.8	61.5	65.6

Note : These figures to indicate daily effluent already produced in Jan 2004.

PROJECTED FIGURES FOR THE NEXT 10 YEARS											
PROJECTED INCREASE OF VISITORS : 2.5%					CALC INCREASE FOR MAX DAILY VISITORS : 57.0%						
PERIOD :	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	
Visitors / year :	815,507	835,895	856,793	878,212	900,168	922,672	945,739	969,382	993,617	1,018,457	
<b>4 TOTAL / YEAR - Based on projected growth</b>											
Persons to visit the Point (90%)	733,957	752,306	771,113	790,391	810,151	830,405	851,165	872,444	894,255	916,611	
m <sup>3</sup> / year	14,679	15,046	15,422	15,808	16,203	16,608	17,023	17,449	17,885	18,332	
<b>5 DAILY TOTAL (average) - Based on projected growth</b>											
Persons / day	2,234	2,290	2,347	2,406	2,466	2,528	2,591	2,656	2,722	2,790	
m <sup>3</sup> / day	44.7	45.8	46.9	48.1	49.3	50.6	51.8	53.1	54.4	55.8	
<b>6 DAILY TOTAL (average) - Based on projected yearly growth and % increase for MAX DAILY visitors</b>											
Persons / day	3,508	3,596	3,686	3,778	3,872	3,969	4,068	4,170	4,274	4,381	
m <sup>3</sup> / day	70.2	71.9	73.7	75.6	77.4	79.4	81.4	83.4	85.5	87.6	

Note : Figures to be used for future treatment plant size.

Figures above is based on averages and does not reflect ACTUAL maximum daily visitors visiting the "Point".