

# **RECREATIONAL WATER QUALITY REPORT JULY 2014 – JUNE 2015**

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## **1.0 STATUTORY CONTEXT**

Municipal areas offer natural recreational waters including beaches and rivers which are used for activities including swimming and fishing. Other recreational waters include public pool facilities available to the community.

In accordance with section 130 (1) of the *Public Health Act 1997*, a Council is to monitor the quality of water within its municipal area in accordance with any relevant guidelines, with this referring to '*Recreational Water Quality Guidelines 2007*' issued by the Director of Public Health. The primary aim of the Guidelines is to protect human health and prevent the transfer of disease-causing organisms during contact with recreational waters with the Guidelines providing for the sampling and monitoring of popular recreational waterways and swimming pools.

Under the Guidelines it is a mandatory requirement from the Director that samples for primary recreational waters, other than swimming pools, must be taken at the beginning of the swimming season, which includes the months of December, January, February and March. The samples must be taken weekly during the duration of the season from each site, unless other arrangements are approved by the Director. The samples are to comply with the microbial levels as stipulated under section 8 of the Guidelines. The Guidelines also state that controlling authorities are required to erect signs and conduct monitoring of popular recreational water areas where there are identified sources of pollution that may affect human health.

The public pools within Huon Valley municipal area are monitored and sampled during the duration of their opening times of the year. Under the Guidelines, it is a mandatory requirement that all public swimming pools must be tested for microbiological quality and chemical parameters on a monthly basis or, if directed in writing by an Authorised Officer, more frequently. The microbiological water quality of all public swimming pools and public spa pools must be maintained in accordance with the Microbiological Water Quality criteria set out in the Guidelines.

It is a mandatory requirement that at the end of each swimming season, the controlling authority shall prepare a report for presentation to the Director by 30 September each year.

## **2.0 MONITORING OF RECREATIONAL WATERS**

In order for Council to provide a more proactive means of communicating public health advisories to the public and community regarding the quality of the water at identified swimming beaches within the municipal area, warning signs advising persons not to swim in these waters during and up to three days after rainfall events are placed at Dover Beach, Randalls Bay and Verona Sands.

However, Council will continue to monitor its beaches and respond to any complaints, issues or concerns the public may have regarding the water quality. Council's Environmental Health Unit would conduct water sampling if deemed appropriate or necessary. These arrangements have been approved by the Director of Public Health.

## **3.0 MONITORING OF SWIMMING POOLS**

### **3.1 MICROBIAL LEVELS FOR INVESTIGATION**

Swimming pool water is tested for the organisms listed in Table 3.1 below.

<b>Type of Organism</b>	<b>Maximum Count Allowable</b>
Heterotrophic Plate Count (HPC)	100 Colony Forming Units (cfu) per ml
Thermotolerant coliforms/ <i>E.coli</i>	<1 per 100ml
<i>Pseudomonas aeruginosa</i>	<1 per 100ml

Table 3.1 Testing parameters for microbiological testing of swimming pool water.

The 'total heterotrophic plate count' (HPC) or 'standard plate count bacteria' (SPC) is considered to represent the general cleanliness of the water. As the HPC is not considered indicative of a potential health risk, these bacteria are not generally considered as a compliance measure, rather their numbers are monitored to understand changes in water over time and to alert operators to increases in general bacterial numbers. A HPC greater than 100cfu/ml is a warning sign that the conditions in the pool or spa are perfect for the multiplication of coliforms, *Pseudomonas aeruginosa* and other bacteria that pose a potential health risk. A HPC greater than 100cfu/ml may indicate there is a problem with the pool disinfection system. If a result reveals a HPC greater than 100cfu/ml a resample must be taken within 48 hours of becoming aware of this result.

Either Thermotolerant coliforms as a group or *E. coli* can be used to indicate the presence of faecal contamination based on the premise that Thermotolerant coliforms or *E. coli* are present in high numbers in the faeces of humans and other warm-blooded animals. Their presence indicates that faecal pollution may have occurred and pathogens might be present as a result.

*Pseudomonas aeruginosa* is the most common disease causing agent associated with waterborne disease outbreaks. It is an opportunistic pathogen and has been identified as the causative agent of eye, ear and skin infections. Its normal habitats are water, soil and vegetation but may also be of human origin. Although relatively resistant to a range of disinfectants, chlorination of normal swimming pools should be sufficient to kill bacteria. However, in environments which are peculiar to spas such as water turbulence, elevated temperature and heavy bather-loads, considerably greater care is needed to ensure their safe operation and the eradication of this organism.

If a result reveals the presence of Thermotolerant coliforms / *E.coli* or *Pseudomonas aeruginosa*, a resample must be taken within 48 hours of becoming aware of this result.

### 3.2 SAMPLING AND RESULTS

There are three swimming pools with the Huon Valley municipal area that are offered for public use. These include the Huonville Pool, Port Huon Pool (owned by Council) and the Hastings Caves Pool (owned by Department of Primary Industry Parks, Water and Environment).

#### 3.2.2 Hastings Caves Swimming Pool

Samples were taken monthly and results are presented in Table 3.2.2 below.

HASTINGS CAVES		Pool operates all year round		
Sample No	Date	HPC/100mL	Thermotolerant Coliforms/100mL	<i>P. aeruginosa</i> /100mL
1	01/07/2014	7	<1	<1
2	30/07/2014	2	<1	<1
3	10/09/2014	1	<1	<1
4	08/10/2014	3	<1	<1
5	05/11/2014	1	<1	<1
6	08/12/2014	<1	<1	<1
7	06/01/2015	46	<1	<1
8	05/02/2015	2	<1	<1
9	04/03/2015	4	<1	<1
10	30/03/2015	<1	<1	<1
11	06/05/2015	4	<1	<1
12	02/06/2015	<1	<1	<1

Table 3.2.2 Swimming pool sample results for Hastings Caves Swimming Pool 2014-2015

#### Interpretation of results and any appropriate action taken

Results for Hastings pool were within the Guidelines acceptable range.

#### 3.2.3 Port Huon Swimming Pool

Samples were taken monthly and results are presented in Table 3.2.3 below.

PORT HUON		Pool operates all year round		
Sample No	Date	HPC/100mL	Thermotolerant Coliforms/100mL	<i>P. aeruginosa</i> /100mL
1	02/07/2014	<1	<1	<1
2	06/08/2014	<1	<1	<1
3	03/09/2014	<1	<1	<1
4	08/10/2014	<1	<1	<1
5	05/11/2014	<1	<1	<1
6	08/12/2014	<1	<1	<1
7	07/01/2015	<1	<1	<1
8	05/02/2015	<1	<1	<1
9	02/03/2015	<1	<1	<1
10	13/04/2015	<1	<1	<1
11	04/05/2015	<1	<1	<1
12	01/06/2015	<1	<1	<1

Table 3.2.3 Swimming pool sample results for Port Huon Swimming Pool 2014-2015

### Interpretation of results and any appropriate action taken

Results for Port Huon Pool were within the Guidelines acceptable range.

#### 3.2.4 Huonville Swimming Pool

Samples were taken monthly and results are presented in Table 3.2.3 below.

HUONVILLE		Pool operates during Summer months (Dec – Mar)		
Sample No	Date	HPC/100mL	Thermotolerant Coliforms/100mL	<i>P. aeruginosa</i> /100mL
1	05/11/2014	1	<1	<1
2	08/12/2014	<1	<1	<1
3	07/01/2015	<1	<1	<1
4	05/02/2015	<1	<1	<1

Table 3.2.4 Swimming pool sample results for Huonville Swimming Pool 2014-2015

### Interpretation of results and any appropriate action taken

Results for Huonville Pool were within the Guidelines acceptable range.

### 3.3 SUMMARY OF THE POOL WATER SAMPLING

Results collected revealed that the water quality of all three swimming pools falls within the safety limits of the Guidelines.

### 4.0 RECREATIONAL WATER SAMPLING CONCLUSIONS

Swimming advisory signs at identified swimming beaches provides a proactive means of advising the public and community of potential contamination of these waters due to outfalls from nearby lagoons following rainfall events.

Whilst Council will continue to monitor these beaches, the statutory requirement to conduct water sampling is no longer required having sought approval from the Director of Public Health.

No public health issues identified with the swimming pools.

The recreational water sampling program will be reviewed during the 2015 October - November period to determine what sampling may occur for the 2015-2016 swimming season.

2014 – 2015 Recreational Water Report completed September 2015 by Council's Senior Environmental Health Officer.