



## STAFF REPORT

**TO:** Environment & Planning Committee

**FROM:** David Lewis, Co-Ordinator - Regulatory Services

**REFERENCE:** ST538

**SUBJECT:** **TASMAN VILLAGE SANITARY SURVEY - WATER SUPPLIES - REPORT EP07/05/08** – Report prepared for 9 May 2007 Meeting

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### 1. BACKGROUND

After Council's decision to not service Rural 3 developments concern was expressed about the quality of the water supplies and sewage disposal systems servicing the township of Tasman. A number of informal and limited surveys had been carried out over the years which indicated that problems with these individual household services were being experienced but no intensive sanitary survey had been completed. As a consequence, I was asked to undertake such a survey.

The survey consisted of going on to each property, interviewing the occupiers, plumbing wells and mapping the positioning of the on-site services. Water samples were then taken from the individual supplies and tracer dyes placed in the septic tank systems where appropriate. (No dyes were used in systems which pumped the treated effluent into surface irrigation systems on the properties).

This work was carried out in late October / November 2006, hoping that rain would raise the groundwater levels for the evaluation of the effluent disposal systems under adverse conditions. Insufficient rain was encountered to achieve this and so an evaluation of the disposal systems has yet to be completed. In view of the time lapse it has been decided to present this report dealing with the water supplies of Tasman.

### 2. COMMENT

Testing of water supplies for human consumption is prescribed in two ways under the New Zealand Drinking Water Standards. If only "total coliform bacteria" are tested for and these are found to be present then the water supply is classified as "non-potable". However, if "faecal coliform bacteria" and "Escherichia coliform bacteria" (E. coli) are tested for as well as the "total coliform bacteria" and no faecal coliform bacteria are found but total coliform bacteria are present (from organic sources) then the water supply is assessed as being "potable". If faecal bacteria are present then obviously the supply is non-potable.

The presence of total coliform bacteria without faecal bacteria does indicate that pollutants are getting into the water source. Whilst these could be solely from organic sources (decaying vegetation) it does show that other pollutants could get entry and so the water source must be rated as insecure.

In view of this, instead of the two classifications of the water supply being either “potable” or “non-potable”, a third classification of “unwholesome” has been added. This term (or its reverse “wholesome”) is used a lot legislatively to describe water supplies and the fact that pollutants (total coliform bacteria) are present in the water means that it is suspect as a source for human consumption.

### 3. RESULTS

A map of Tasman has been developed and attached to this report that is colour coded to show the classification of the water supplies on each property dependant upon the results of the water sampling as well as the source of the water. The following colours depict the classifications:

Blue – potable  
Orange – unwholesome  
Red – non-potable  
Grey – unoccupied

The results are statistically reported as follows:

<b>Water Quality Classification</b>	<b>Number of Properties</b>	<b>Percentage of Properties</b>
Potable	22	32%
Non-potable	34	50%
Unwholesome	12	18%
<b>Totals</b>	<b>68</b>	<b>100%</b>

All property owners and occupiers have been advised of the results of their water sample testing with precautions for consumption advised where the quality was not up to a potable standard. A spreadsheet is available showing the particulars for each property.

### 4. DISCUSSION

68% of the properties tested have water of an unsatisfactory standard for human consumption whilst a number of the supplies that have been rated as potable are only so due to treatment of the water (generally be filtration and ultraviolet light sanitisation). On top of this there is also a problem on a number of the properties where the quantity of water is borderline with recorded instances of wells drying up and rainwater tanks needing supplementing during droughts.

The quality and quantity of groundwater varies greatly throughout the township with, apart from those with the problems outlined above, one particular bore of excellent quality servicing six properties was noted and an artesian well of good quality water was discovered in Dickers Road. It would appear that it is a matter of luck as to whether or not a property has a decent underground water resource.

The results of this survey emphatically show that the quality of the water supplies servicing the township of Tasman are not of a satisfactory standard for human consumption with two-thirds (2/3) being of an unacceptable quality. The resolution to this problem is either to require the individual treatment of water supplies on properties that do not comply or to provide a reticulated water supply for the township.

Any such decision should be made with the knowledge of the likely consequences of the State Highway bypass which, when in place, would make Tasman a very desirable township to reside in and could therefore create demand for further development including new areas being subdivided and infill subdivision of the existing large residentially used sections.

## **5. RECOMMENDATION**

**It is recommended that the Committee receive this report.**

D R Lewis  
**Co-ordinator – Regulatory Services**

