

Your Ref: CEO2412009

16 October 2009

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Dear Mr Mellon and Mr Marshall

Thank you for your letter of 24 September 2009 regarding the recent controlled release of heavily diluted treated wastewater from the Water Corporation's Tree Farm No. 1 (TF1).

The following information is provided to better understand why the Water Corporation made this difficult but unavoidable decision to discharge the water into Seven Mile Creek

The TF1 has been successfully using treated wastewater to irrigate tree lots since 1992. Planning started in 2006 to deal with increasing flows. In early 2007, the Corporation bought Swarbrick Farm, about 15 kilometres north of Albany, to develop a second tree farm (TF2) to discharge treated wastewater. Work commenced on a pumping station and pipe-work to have TF2 in operation by this summer. However, the need to deal with increased wastewater flows has had to be balanced with the need to find additional safe and reliable water supply sources.

A drying climate and population growth have combined to put pressure on the Corporation's ability to provide a sustainable water supply, and the Corporation is working towards finding new water sources for the Lower Great Southern. As part of this effort, irrigation plans for TF2 were put on hold because the site is a potential future water source. Tests conducted in March 2009 showed that the TF2 site offered the greatest short-term opportunity to augment the Lower Great Southern Town Water Supply Scheme.

While the Corporation was assessing TF2 as a water source, a one in ten year storm in November 2008, and extraordinary summer rainfall in Albany this year (270 mm from November to January compared to an average of 98 mm), compromised the Corporation's ability to store and contain wastewater flows. In March 2009, a works program was created to provide improvements at TF1 to allow deferring the provision of alternative wastewater disposal while the future of TF2 was under investigation. It is expected that these works, and the following actions, would give the Corporation sufficient time to respond to these issues by 2011/12:

1. Increasing the tree harvest by an additional 50 hectares to provide greater irrigation capacity at TF1.
2. Employing a dedicated Tree Farm Manager with a special brief to closely supervise operational improvements at TF1.
3. Investigating the use of additional land already developed with trees for short-term irrigation. This is now being pursued as a medium term-objective (refer below).
4. Creating a taskforce to accelerate improved management practices.

A second review of the TF1 dam storage levels in March 2009 confirmed that there was a risk that above-average winter rainfall could lead to an overflow at TF1. In April 2009, the Corporation wrote to the Department of Environment and Conservation (DEC) advising on the situation and requesting permission, if required, to conduct a controlled release to the environment of the storage in No. 2 Dam. The request was denied.

Until Ministerial Conditions on the Operating Licence for TF1 were rescinded recently, the Corporation was allowed to release water in response to a one in ten year rainfall event. Since the relevant conditions were removed, the Corporation has been in negotiations with the DEC to change the conditions of the licence.

The situation worsened from June to August 2009 when the Albany rainfall was 22% above average for the same period. A review in August indicated that there was now a significant risk of an overflow to the environment and the Corporation engaged in talks with the DEC and the Department of Water to determine an optimum solution.

On 4 September 2009, the Corporation applied in writing to the Director General of DEC to obtain a permit to discharge wastewater under Section 75 of the *Environmental Protection Act*. Under this Section, the Director General has the power to grant verbal approval for the Corporation to undertake a controlled discharge.

Staff from the Corporation's Great Southern Region and a DEC representative visited TF1 and all agreed that a controlled discharge would have to start when the overflow from the No. 2 Dam into the No.1 Dam was imminent to ensure that the structural integrity of either dam was not compromised. It was also agreed that a controlled discharge of heavily diluted treated wastewater from the No. 2 dam would result in a lower level of nutrient release than an uncontrolled overflow from the No. 1 Dam.

After more heavy rain, the Corporation began a controlled discharge of about 8 ML a day from Dam No. 2 at 4.40 p.m on Saturday, 5 September 2009. The discharge continued until September 17. During this time, about 83 ML of treated wastewater was released – about the same amount as the inflow from the one in ten year storm rainfall. Monitoring was carried out daily and is continuing on a daily basis.

Samples taken upstream and downstream from TF1 have shown only a minor increase in total nitrates and phosphates. There was also only a minor increase in E.Coli. These slightly higher than normal levels are expected to drop as rainfall diminishes.

At no time during the discharge was there any threat to water quality or public safety.

To assist in resolving the current situation, the Corporation is now committed to these additional actions:

#### **Short-term**

- Moving to what is known as “whole-tree” harvesting (no tree residue is left after harvesting) to improve irrigation maintenance and higher evaporation between rows of trees.
- Increasing the use of probes to optimise soil moisture and irrigation efficiency.
- Enhancing the irrigation distribution system to create lower storage levels by the end of summer.
- Improving drainage to divert rainfall run-off away from the storage dams.

**Medium-term**

- Finalising the evaluation of TF2 as a water source and, if the site is not suitable, resuming work to create an irrigation site.
- Investigating lease arrangements with nearby privately-owned tree farms.

**Long-term**

- Investigating the suitability of nearby land for acquisition and development as irrigated tree farms.
- Investigating commercial and/or industrial uses for treated wastewater.

The Corporation's Environment Branch is working towards providing the documentation you have requested.

This is a complex and demanding situation that requires cooperation. The Corporation's Great Southern Region will ensure that you are kept up-to-date with progress in dealing with this issue.

If you would like to discuss this matter further, please contact the Regional Business Manager Great Southern, Mr David Hughes-Owen, on telephone 9842 4273, who would be pleased to assist.

Yours sincerely



Peter D Moore  
CHIEF OPERATING OFFICER