

**BEFORE INDEPENDANT HEARING COMMISSIONERS
APPOINTED BY THE CANTERBURY REGIONAL COUNCIL**

UNDER: the Resource Management Act 1991

IN THE MATTER OF: Proposed Plan Change 7 to the
Canterbury Land and Water Regional
Plan – Section 14: Orari-Temuka-
Opihi-Pareora

**UPDATE OF EVIDENCE OF JULIA MARGARET CROSSMAN ON BEHALF OF
THE ADAPTIVE MANAGEMENT WORKING GROUP (SUBMITTER NO. PC7-385)**

Dated: 27 October 2020

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1 INTRODUCTION

- 1.1 My full name is Julia Margaret Crossman. My experience and qualifications are set out in my primary evidence statement dated 17 July 2020.
- 1.2 The purpose of this statement is primarily to provide an update to my primary evidence in light of the matters addressed in the 'Joint Witness Statement – Hydrology' (JWS) in relation to compliance monitoring, which were discussed during caucusing.

2 COMPLIANCE MONITORING

Partial restriction compliance period

- 2.1 Paragraph 28 of the JWS notes agreement by the hydrology experts to the complexity of the various Alternative Management Regimes.
- 2.2 My primary statement addressed aspects of the Section 42A Report concerning potential compliance/enforceability issues with the changes to PC7 in response to the Adaptive Management Working Group's (AMWG) proposal that partial restrictions for Opuha Water Limited (OWL) shareholders, measured at Saleyards Bridge (SYB), be based on a fortnightly volumetric restriction.
- 2.3 While I accept that a fortnightly volumetric restriction is not the standard practice in Canterbury, I am confident that compliance monitoring is achievable for the following reasons:
 - (a) OWL receives water orders daily from its shareholders through its Customer Relationship Management (CRM) database portal and monitors, via telemetry, the consented takes within the Opuha scheme to ensure abstraction aligns with water orders.
 - (b) Through the water orders, OWL has an understanding of the anticipated (all things remaining equal) water ordered for the following 7 days, and this information is sent through to Environment Canterbury (ECan) on a daily basis.
 - (c) OWL's Microsoft experts/advisers have confirmed that OWL's CRM and water order database can be upgraded to include the functionality

required to monitor and track compliance with a fortnightly volumetric restriction.

- 2.4 My primary evidence details the system/process OWL proposes to implement to track compliance against the fortnightly volumetric restriction. This monitoring and reporting system will ensure that ECan can undertake effective monitoring of affiliated water permit compliance with the AMWG's proposed partial restriction regime.
- 2.5 It is my understanding that consent holders' water meter data is not currently scrutinised by ECan until 4-6 months following the end of the irrigation season. It is therefore my opinion that OWL's monitoring of the abstraction by its shareholders on a daily basis and reporting to ECan on a daily basis, with a full fortnightly report, will provide for far more proactive consent monitoring that is currently occurring within ECan.

Partial restrictions for tributary irrigators

- 2.6 The JWS (at paragraph 29) noted that tributary abstractors have restrictions on both the main stem and the tributary that they are abstracting from. The experts agreed that using a different averaging period on the mainstem (fortnight) compared to the tributaries (24-hr/daily) creates additional monitoring complexity.
- 2.7 I wish to clarify that the tributary irrigators' restrictions are presently monitored on an instantaneous basis (as opposed to an averaged basis) unless they are part of a water users' group which can then manage restrictions by other means (as agreed with ECan).
- 2.8 While I agree that the AMWG's proposal adds some additional monitoring complexity, I am again confident that compliance monitoring is achievable for the following reasons:
- (a) The consent holders are obligated to abide by both mainstem and tributary restriction regimes, and on a daily basis they will always be limited to the more restrictive of the two.
 - (b) Day to day, consent holders will respond to the pro-rata minimum flow restrictions on a daily basis, while ensuring over a two-week period, the volumetric restriction is not breached.

(c) Dual restrictions will not be onerous for the consent holder to manage, especially as any restricted fortnight volume will be closely monitored and managed by OWL.

(d) Dual restrictions have been imposed through water short periods, particularly in the 2014-16 period when monthly volumetric restrictions were imposed. Successful compliance monitoring of these consents during that period demonstrates that ECan has the ability to monitor dual periods.

2.9 In addition, it is important to consider the reason why restrictions are imposed. The intent of tributary restrictions is to protect the aquatic ecosystems of the tributary, whereas the intent of restrictions on the mainstem is to protect lake storage (albeit with the ultimate intent of protecting the mainstem aquatic ecosystem, by reducing the likelihood of the river going dry). The flows in the tributaries can change relatively quickly and can be difficult to predict with certainty, therefore it is appropriate that the minimum flow compliance is measured on a daily basis. The change in lake storage, however, is far smoother and is more able to be predicted based on inflows, climate forecasts, environmental flow demand and irrigation demand. As such, it is my opinion that it is appropriate to manage restrictions based on the mainstem flows on a fortnightly basis.

Julia Margaret Crossman

27 October 2020