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

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UPDATE OF THE EVIDENCE OF MARK WHITBY WEBB ON BEHALF OF THE OPIHI FLOW AND ALLOCATION WORKING PARTY (SUBMITTER NO. PC7-382)

Dated: 27 October 2020

GRESSON DORMAN & CO
Solicitors
PO Box 244, Timaru 7940
Telephone 03 687 8004
Facsimile 03 684 4584
Solicitor acting: G C Hamilton / N A Hornsey
georgina@gressons.co.nz / nicola@gressons.co.nz

1. INTRODUCTION

1.1 My full name is Mark Whitby Webb. 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 clarify, for the benefit of the Hearing Panel, the experts reference to “incremental gain” in the Joint Witness Statement – Freshwater Water Quality/Ecology (JWS), for the tributary rivers with respect to the recreational sports fishery.

2. INCREMENTAL GAINS

North and South Opuha rivers

1.3 Trout angling on the North and South Opuha rivers is restricted due to naturally low flows in summer. The proposed summer minimum flow regime of 815 L/sec for the North Opuha in PC7 Table 14(m) and 520 L/sec to 1,000 L/sec for the South Opuha in Table 14(n) and Table 14(o) are unlikely to increase availability of angling flows. Anglers target more assured natural flows particularly in spring of around 2,000 L/sec.

1.4 The experts agreed that the summertime flow increases proposed in PC7 Table 14(o) provide **incremental increases** in habitat retention. The proposed increase to December to March minimum flows for the South Opuha of 100 L/sec from current, increase salmonid habitat availability by approximately 4% averaged across the 4 salmonid measures and by 2.3% averaged across the 7 indigenous fish values modelled. These are relatively small gains in habitat for significant increases (+20%) in minimum flows. For both indigenous fish and salmonids the gains in habitat from increase in minimum flows above 500 L/sec become progressively less. This explains the experts description of incremental gains in habitat.

1.5 Improved flows during brown and rainbow trout spawning and rearing may improve recruitment to the Lake Opuha fishery with benefit to lake anglers.

Upper Opihi River

1.6 The Upper Opihi River has low adult trout drift feeding and food producing habitat until flows exceed 2 m^3/s. These are the flows that anglers will target when they occur naturally. Angling flows far exceed the levels of minimum flows proposed in PC7 Table 14(p) and Table 14(q).

1.7 The experts considered that PC7 Table 14(p) and Table 14(q) provided **incremental gains** in habitat above that provided by the current regime. This means there are relatively small gains in habitat at higher flows and the gains become less significant as flows increase. For five of eight indigenous fish values and two of five salmonid habitat values modelled, habitat availability decreases in flows above 800 L/sec.

Te Ana Wai River

1.8 The Te Ana Wai River is a spring and autumn trout fishery relying on natural flows of at least 1 m^3/s to encourage angling and well above proposed PC7 summer minimum flows. Proposed summer minimum flows provide minor improvement in adult trout habitat but overall it remains scarce and very unlikely to increase summer angling activity.

1.9 The experts agreed that PC7 Table 14(r) and Table 14(s), that have the same minimum flow regimes, provide **incremental gains** in habitat. The 50 L/sec increases in December to February minimum flows increase average fish habitat by less than 2% and increases in habitat become more minor as flows increase.

Mark Whitby Webb
27 October 2020