

**BEFORE INDEPENDENT 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

**JOINT MEMORANDUM OF COUNSEL REGARDING AGENDA FOR
HYDROLOGY EXPERT WITNESS CONFERENCING
17 August 2020**

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MAY IT PLEASE THE HEARING COMMISSIONERS

- 1 This Joint Memorandum of Counsel is filed on behalf of the Canterbury Regional Council, the Adaptive Management Working Group, the Opihi Flow and Allocation Working Party and Opuha Water Limited (collectively **the Parties**) and follows the Joint Memorandum of Counsel filed on 31 July 2020.
- 2 In that Memorandum, Counsel noted that they were working with the expert witnesses for the Parties to confirm an agenda for each expert witness conferencing session.
- 3 Accordingly, enclosed as Appendix 1 to this Joint Memorandum is the agenda in respect of the ecology expert witness conferencing session, scheduled for Tuesday 18 August 2020.

Dated this 17th day of August 2020



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P A C Maw / I F Edwards
Counsel for Canterbury Regional Council



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G C Hamilton
Counsel for the Adaptive Management Working Group,
the Opihi Flow and Allocation Working Party and Opuha Water Limited

Appendix 1 – Agenda for ecology expert witness conferencing

AGENDA FOR EXPERT WITNESS CONFERENCING

Topic: Ecology – Orari-Temuka-Opihi-Pareora Sub-Region

Date: 18th August 2020

Location: MS Teams

Attendances:

- Shirley Hayward (Canterbury Regional Council)
- Dr Greg Ryder (Opihi Flow and Allocation Working Party, Adaptive Management Working Group, and Opuha Water Limited)
- Mark Webb (Opihi Flow and Allocation Working Party, Adaptive Management Working Group, and Central South Island Fish & Game Council)
- Richard Measures (Adaptive Management Working Group and Opuha Water Limited)
- Dr Phil Jellyman (NIWA – Canterbury Regional Council: from 1pm onwards)
- Dr Tom Drinan (Department of Conservation)

Facilitator:

- Bill Rainey

Introductions

- Acknowledging Environment Court Practice Note – 7.1 Code of Conduct for Expert Witnesses and Appendix 3 Protocol for Expert Witness Conferences.

Freshwater Outcomes/Limits for Lake Opuha – (Shirley, Greg and Richard)

- Tables 14(b), 14(e) and 14(f)
- What is the current state of Lake Opuha water quality (e.g., Temperature, DO, chlorophyll-a, TLI, TP, TN)?

Artificial Freshes – (Shirley, Greg, Mark, Tom and Richard)

- Policy 14.4.35(e)
- In light of the hydrology caucusing statement, what role could an artificial fresh regime have in the Opihi catchment in terms of managing periphyton and enabling fish passage?
- What are the implications (from water quality and ecological perspectives) of the changes to Policy 14.4.35(e) recommended in the Section 42A report and as sought in the AMWG's evidence?

Environmental Flow Limits Regimes – (Shirley, Greg, Mark, Phil, Tom) – 1pm onwards

- What are the key principals about flow needs to support healthy ecosystems (for example, minimum flows, allocation amount, flow variability, seasonal flows, partial restrictions and flushing flows)?

Individual river ecological flow provisions

- Table 14(m) (North Opuha)
 - What is the current state of ecosystem health?
 - What ecological values (including for different key species) are relevant for each river?

- What flow ranges support those values (including minimum flows, seasonal flows and allocation)?
- What are the implications (ecologically) of the flow regimes proposed in PC7 and by submitters?
- Tables 14(n) and (o) (South Opuha)
 - What is the current state of ecosystem health?
 - What ecological values (including for different key species) are relevant for each river?
 - What flow ranges support those values (including minimum flows, seasonal flows and allocation)?
 - What are the implications (ecologically & water quality) of the flow regimes proposed in PC7 and by submitters?
- Tables 14(p) and (q) (Upper Opihi)
 - What is the current state of ecosystem health?
 - What ecological values (including for different key species) are relevant for each river?
 - What flow ranges support those values (including minimum flows, seasonal flows and allocation)?
 - What are the implications (ecologically & water quality) of the flow regimes proposed in PC7 and by submitters?
- Tables 14(r) and (s) (Te Ana Wai)
 - What is the current state of ecosystem health?
 - What ecological values (including for different key species) are relevant for each river?
 - What flow ranges support those values (including minimum flows, seasonal flows and allocation)?
 - What are the implications (ecologically & water quality) of the flow regimes proposed in PC7 and by submitters?
- Tables 14(v) and (w) (Opuha/Opihi Mainstem)
 - What is the current state of ecosystem health?
 - What ecological values (including for different key species) are relevant for each river?
 - What flow ranges support those values (including minimum flows, seasonal flows and allocation)?
 - What are the implications (ecologically & water quality) of the flow regimes proposed in PC7 and by submitters?