

**IN THE ENVIRONMENT COURT OF NEW ZEALAND
CHRISTCHURCH REGISTRY**

**I TE KŌTI TAIAO O AOTEAROA
ŌTAUTAHI ROHE**

ENV-2020-CHC-127

UNDER the Resource Management Act 1991 (RMA)

IN THE MATTER of the Water Permits Plan Change - Plan Change 7, being part of a proposal of national significance directed by the Minister for the Environment to be referred to the Environment Court under section 142(2)(b) of the RMA

AND

IN THE MATTER of an application under section 149T of the RMA

OTAGO REGIONAL COUNCIL

Applicant

**STATEMENT OF EVIDENCE OF DR JULIE MARIE EVERETT-HINCKS
ON BEHALF OF THE OTAGO REGIONAL COUNCIL
7 December 2020**

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Introduction

- 1 My full name is Dr Julie Marie Everett-Hincks.
- 2 I hold the position of Science Manager at the Council.
- 3 I hold a Bachelor of Agricultural Science (Honours), Masters of Applied Science (First Class Honours) and a PhD in Animal Science, all from Massey University. I also hold a Bachelor of Laws from the University of Otago.
- 4 I have been a Science Manager for at the Council for nearly two years. Prior to my work at the Council, I worked as a Senior Scientist for Innovative Farm Systems and Animal Genomics at AgResearch Invermay.
- 5 I have not been involved in the development of Plan Change 7 to the Water Plan (**PC7**).
- 6 I have been asked by the Council to prepare evidence for these proceedings.

Scope

- 7 I have been asked to provide evidence in relation to PC7, particularly regarding the Council's science work programme between the release of the results of the investigation of Professor Peter Skelton (into the Council's use of its freshwater management functions) and the upcoming notification of the new Land and Water Regional Plan (**LWRP**). My evidence addresses:
 - (a) Science's work programme in place; and
 - (b) The Council's internal science capacity to complete the required work prior to notification of the new LWRP.
- 8 In preparing this evidence, I have read and considered the following documents:
 - (a) Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019; and

- (b) The Minister for the Environment's recommendations to the Council, dated 18 November 2019.

Summary of Evidence

- 9 My name is Dr Julie Everett-Hincks and I am the Science Manager at the Otago Regional Council (**Council**). I am providing evidence in relation to the Council's science work programme between the release of the results of the investigation of Professor Peter Skelton and the upcoming notification of the new Land and Water Regional Plan (**LWRP**).
- 10 My evidence addresses the science work programme in place, and Council's internal science capacity to complete the required work prior to notification of the new Land and Water Regional Plan.
- 11 Professor Skelton, in his review of the Council's freshwater management functions, identified a number of aspects in which improvements were to be made.
- 12 Following this review, the science team has planned its approach to the upcoming development of the LWRP, in order to ensure that science is delivered within the required timeframe.
- 13 This has included a regional modelling approach to assist/inform limit-setting across the freshwater management units (**FMUs**). This involves modified catchments, and those with competing land uses, relying on catchment-specific modelling to assist with limit setting in the new LWRP, while catchments with limited modification or limited hydrological complexity will rely on region-wide modelling.
- 14 In addition, work that is required to implement the latest NPS FM 2020 has been scoped and will be progressed, including wetlands mapping.
- 15 Another matter identified in the review was a potential lack of capacity in the science team to provide the required advice to inform the science needs to implement national direction. This has been addressed, with the science team being reorganised and an additional eight new positions created. The new positions span a wide variety of expertise, from freshwater ecology to mapping land use activity.

Background

- 16 In May 2019, the Minister for the Environment engaged Professor Peter Skelton to undertake an investigation into whether the Council is adequately carrying out its functions under section 30(1) of the RMA in relation to freshwater management and allocation of resources, including implementation of the National Policy Statement for Freshwater Management 2014 (as amended 2017).
- 17 One of the aspects of the review undertaken by Professor Skelton was in relation to the capability and capacity of the Council to complete the work required in order to significantly upgrade the planning framework, and give effect to the relevant national instruments.
- 18 Professor Skelton's review recognised the lack of scientific knowledge that currently exists in the Otago region with respect to freshwater resources.¹ Professor Skelton's review identified the Ministry for the Environment's concern that the Council may not be able to achieve compliance with the National Policy Statement for Freshwater Management 2014 (as amended 2017) by 2025 given the amount of work the Council is yet to do.²
- 19 One of the Minister's recommendations stemming from the review conducted by Professor Skelton was for a new Land and Water Regional Plan (**LWRP**) to be notified by December 2023. The Council has committed to this in its response to the Minister.³
- 20 The Council has considered the work required in order to meet this timeframe, particularly in relation to the science team. Professor Skelton identified that a robust scientific evidence base is "critical to the success of [the Council's] water management planning and implementation."⁴

¹ Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019, at page 26.

² Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019, at page 12.

³ Letter from Chairperson of Council to Minister for the Environment, dated 16 December 2019.

⁴ Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019, at page 26.

- 21 The Science team has created a number of workstreams and focussed on building capacity in order to achieve a new LWRP by the Minister's deadline.

Work programmes in place for science team

Identifying environmental limits for Freshwater Management Units

- 22 The science team has been carefully planning its approach to the new LWRP, compliant with the National Policy Statement for Freshwater Management 2020 (**NPS-FM**).
- 23 In order to develop an approach capable of delivering scientific information across all of Otago within a three-year timeframe, the policy and science team have grouped the previously-identified Freshwater Management Units (**FMUs**) into four categories based on degree of modification from natural state (e.g. use and hydrological complexity) and values.
- 24 This approach recognises that the FMUs differ in terms of information requirements, and assists to identify where further scientific information is needed. This approach enables science resources to be prioritised where they are most required.
- 25 The four categories are:
- (a) Catchments with generally low hydrological modification, high water quality and high values (Catlins FMU and Upper Lakes Rohe (Mata-Au FMU));
 - (b) Mostly smaller coastal catchments with impact on water quality from cultural uses (Dunedin Coastal FMU);
 - (c) Catchments with either high hydrological modification or degraded water quality (Dunstan Rohe (Mata-Au FMU), Roxburgh Rohe (Mata-Au FMU), and Lower Clutha Rohe (Mata-Au FMU)); and
 - (d) Catchments with very complex hydrology and diverse pressures on competing values (Taieri FMU, North Otago FMU, and Manuherekia (Mata-Au FMU)).
- 26 In order to attempt to meet the background information requirements to inform the policy behind a new LWRP for all of Otago within a three-year timeframe, the Council is proposing to use a differential approach between the categories.

- 27 For Category 1 and 2 FMUs (as listed above) and low use areas in Category 3 FMUs, the Council proposes to use regional level models to fill information gaps quickly, enabling precautionary planning in these areas.
- 28 Some areas of Category 3 FMUs and Category 4 FMUs are where a large proportion of science input is likely to be required, as they typically have high levels of competing demands (i.e. between land use and a finite water resource). The environmental limits for these catchments are intended to be informed by catchment-specific modelling.
- 29 This work programme is intended to be phased, depending on the level of information required for each catchment. The phasing has been developed as follows:
- (a) Regional models to provide an information backstop across Otago and scoping of catchment specific models (year 1);
 - (b) Catchment-specific modelling to provide detailed modelling for catchments in Category 4 and high use areas of Category 3 (year 2 and 3); and
 - (c) State of environment network review to ensure ORC's environmental monitoring network is representative of the requirements for the new LWRP (year 3) and continues to build the knowledge required to review current plan changes and inform future plan changes.
- 30 The network review will also include monitoring programmes for the objectives set out in the new LWRP, to provide a monitoring network under the new NPS-FM (2020 or later) and LWRP moving forward.
- 31 The Strategy and Planning Committee of the Council has been informed of and has noted this proposed approach. This has allowed the science team to begin work on the technical actions required.

Additional work required as a result of the NPS-FM

- 32 The Council has also identified additional work that is required as a result of the introduction of the NPS-FM and the Essential Freshwater reforms, over and above that provided for in the Long-Term Plan budgets.
- 33 For the science team, these additional workstreams include:

- (a) Wetlands mapping to create a more detailed inventory of baseline wetlands information, as well as a land or aerial based monitoring programme;
 - (b) A representative estuary monitoring network and programme; and
 - (c) A programme that includes fish surveys, fish passage and connectivity projects (including an inventory of all instream structures, monitoring, impact and risk assessment and remedial programmes).
- 34 These science programmes are required to assist ORC implement the Essential Freshwater reforms. In turn, this work will ensure that planners and policy staff have the baseline knowledge to inform the provisions of the new LWRP, to ensure that it is consistent with the relevant higher order documents.
- 35 The Council has committed to getting started on this work as soon as possible, even though it will likely create over-expenditure at the end of this financial year. These workstreams will involve collaboration with external consultants in order to expedite the work.

Capacity of the science team to complete required work

- 36 The capacity and capability of the science team was one of the key focuses of Professor Skelton's review. Professor Skelton's review found that while Council managers and the Chief Executive were aware of the shortfall in capacity, more investment was required to address the shortfalls.⁵
- 37 At the time of Professor Skelton's review, the science team had 9.4 full time equivalent (FTE) scientist positions. As detailed in the review, a previous independent report commissioned by the Council had identified key capacity and capability gaps for the science team.
- 38 This report provided recommendations for the introduction of further staff, noting that particularly in relation to water there was a shortage of

⁵ Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019, at page 26.

approximately 4 – 6 FTEs to carry out work on practical hydrology and hydroecology (i.e. minimum flows).⁶

- 39 At the time the Skelton review was undertaken, the Council was already recruiting for an additional three new water science FTEs.⁷
- 40 In May 2020, the Council finalised a reorganisation of the science team, to create teams similar to those recommended in the review. This reorganisation ultimately resulted in the creation of eight new positions. This includes additional scientists in freshwater ecology, biodiversity, groundwater and land use.
- 41 These new positions address the key capacity gaps identified in the review of the science department. All but four of these positions have been filled (with interviews ongoing for the remaining four positions, so the Council currently has a total of 16.4 FTEs across the science department (increasing to 21 when the remaining positions are filled). This is over and above the amount recommended in the previous independent report. A copy of the science team structure is attached as **Appendix 1**.
- 42 The division of the wider science department into teams allows more effective and better management of workflows and ensures that the right people are providing advice on each area.
- 43 The inclusion of new positions within the team allows internal knowledge and experience bases to be built, to reduce potential reliance on external consultants. While external consultants will often have a role, the new structure will enable the Council to ensure that it retains much of the knowledge in-house, creating and building on credibility for the Council.
- 44 The new team structure addresses any potential previous lack of specialisation, and ensures the Council has much of the expertise required to review current and inform future plan changes.
- 45 This increase in capacity has been reflected in the Annual Plan. One of the key priorities signalled in the Long-Term Plan (finalised in 2018) was

⁶ Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019, at page 26.

⁷ Investigation of Freshwater Management and Allocation Functions at Otago Regional Council: Report to the Minister for the Environment by Professor Peter Skelton, 1 October 2019, at page 27.

the need for quality and management of the natural environment, particularly the region's freshwater.

- 46 This work was accelerated by the Professor Skelton review and Minister's recommendations, with an increase in work and funding to improve the freshwater science and monitoring in 2019/2020.⁸
- 47 The Annual Plan also signalled the Council's recent "gearing up" of science capacity, and the associated increase in funding required to support that.⁹ Particularly in terms of freshwater monitoring, the most recent Annual Plan "introduces capacity to deliver more, at a faster pace, to look after Otago's freshwater."

Conclusion

- 48 Since the release of Professor Skelton's review and the Minister's recommendations, the science team has been progressing work to ensure that it is able to provide high-quality advice (particularly regarding environmental limits for freshwater) within tight timeframes.
- 49 This has included planning the approach to modelling for FMUs in the upcoming LWRP to ensure that the science is sound but that deadlines will also be met, undertaking additional work required as a result of the newly introduced NPS-FM (for example regarding wetlands mapping).
- 50 In addition, the Council has increased the capability and capacity of the science team by recruiting more staff, and ensuring that existing roles are more focussed in their scope and administrative tasks removed.

DATED this 7th day of December 2020



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Dr Julie Everett-Hincks

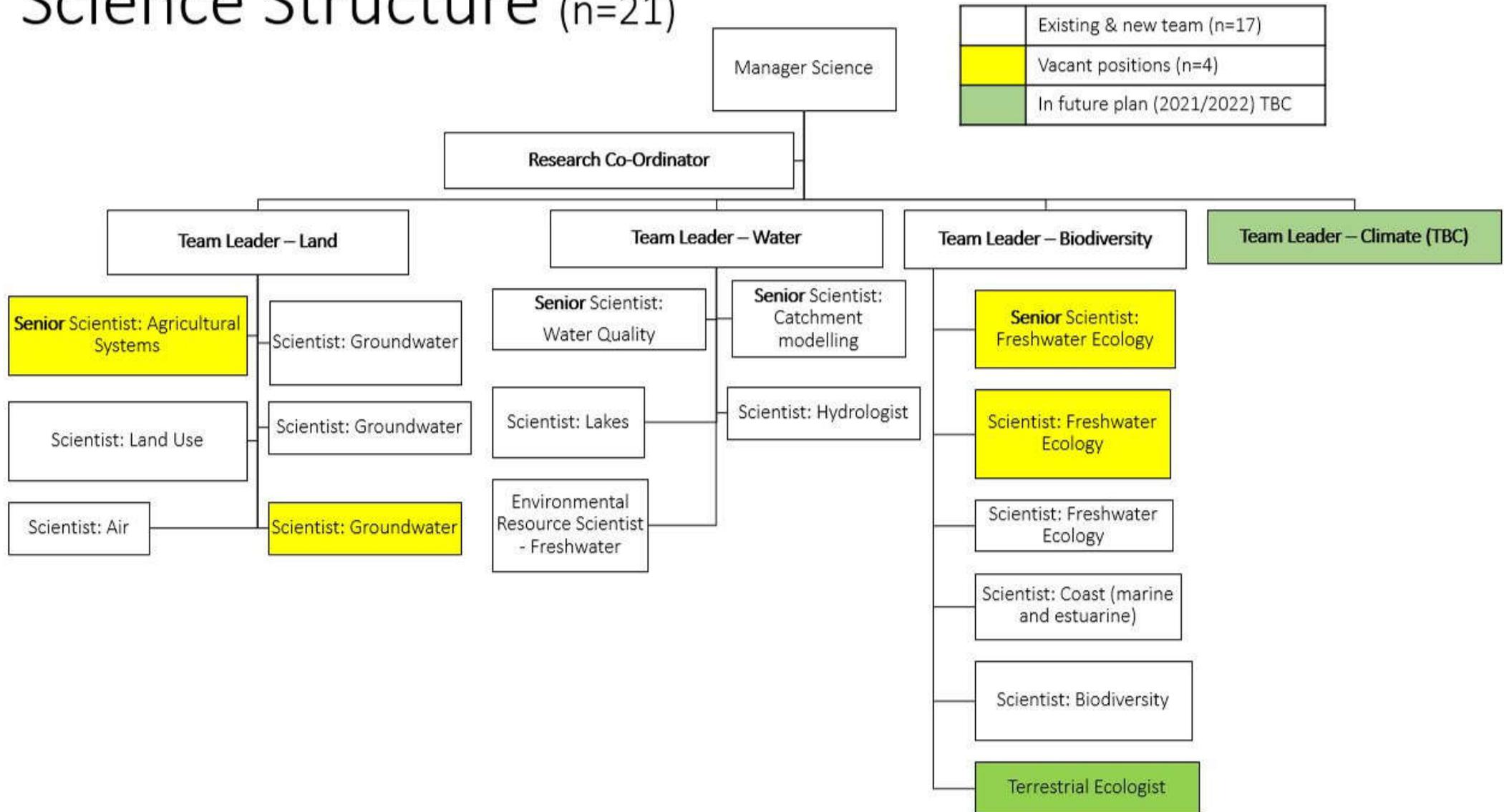
⁸ Otago Regional Council Annual Plan 2020/21, page 5.

⁹ Otago Regional Council Annual Plan 2020/21, page 15.

Appendix 1: Otago Regional Council Science Team Structure

Appendix 1

Science Structure (n=21)



	Existing & new team (n=17)
	Vacant positions (n=4)
	In future plan (2021/2022) TBC