

**Section 32 Report:
Consideration of alternatives,
benefits and costs**

**Proposed Plan Change 3A
(Minimum Flow for Taieri River at Tiroiti)**

**Regional
Plan: Water
for Otago**

*This Section 32 Report should be read in conjunction with
Proposed Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) to the Regional Plan: Water for Otago.*



Otago
Regional
Council

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Abbreviations used in this report

ORC	Otago Regional Council
Proposed plan change	Proposed Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) to the Regional Plan: Water for Otago
Proposed Plan Change 3A	Proposed Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) to the Regional Plan: Water for Otago
RMA	Resource Management Act 1991
Water Plan	Regional Plan: Water for Otago

1 Introduction

This report assesses Proposed Plan Change 3A to the Water Plan as required by Section 32 of the RMA, and should be read in conjunction with the proposed plan change.

The proposal adds a new minimum flow to the Water Plan's Schedule 2A: Specific Minimum Flows, and identifies the existing flow recorder at Tiroiti as a new Monitoring Site.

2 Background

The Water Plan was made operative on 1 January 2004. A number of catchments with minimum flows are listed in Schedule 2A. The ORC intends to add more catchments to this schedule where a minimum flow regime and specified primary allocation limit is seen as the best way to address environmental and/or allocation pressures.

Minimum flows are already fixed in Schedule 2A for the Taieri River at a number of Monitoring Sites, including Waipiata (1000 l/s) and Sutton (1250 l/s). These are upstream and downstream (respectively) of Tiroiti.

A 29 November 2004 meeting between irrigators and the ORC Resource Science Unit generated correspondence requesting the Plan Change. The subsequent technical report "*Management Flow for the Taieri River at Tiroiti*" was published in August 2006. That report looked at the option of setting a further minimum flow in the Taieri River at Tiroiti.

3 Identification of issues and analysis of options

Section 32 of the RMA requires evaluation of a plan change.

(3) *An evaluation must examine -*

- (a) *the extent to which each objective is the most appropriate way to achieve the purpose of this Act; and*
- (b) *whether, having regard to their efficiency and effectiveness, the policies, rules, or other methods are the most appropriate for achieving the objectives.*

(4) *... An evaluation must take into account -*

- (a) *the benefits and costs of policies, rules, or other methods; and*
- (b) *the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the policies, rules, or other methods.*

This evaluation is set out below. Minimum flow options are identified with a summary of benefits and costs for alternative options, and an assessment of how the recommended option is appropriate.

OPTION 1: MAINTAIN THE STATUS QUO

No new minimum flow and formal flow monitoring site are added to Schedule 2A. River flows downstream of Waipiata continue to be managed to the existing minimum flow at Sutton, as specified in the Water Plan.

Benefits:

- No plan change required.
- No additional administrative or implementation costs.

Costs:

- Current situation of a minimum flow regime at a less relevant and distant site at Sutton will continue.

- No mandate as community request not met.
- Greater opportunity for high flow harvesting not achieved.

OPTION 2: MINIMUM FLOW AT TIROIITI BETWEEN 1000 AND 1150 L/S

A minimum flow is added to the Water Plan, but it is lower than 1150 l/s at Tiroiti. It could not be lower than 1000 l/s which is the minimum flow upstream at Waipiata.

Benefits:

- More water available to tributary flow taking upstream of Tiroiti.

Costs:

- This would guarantee less water to those downstream of Tiroiti, at low flows, because taking of water would not cease so frequently upstream of Tiroiti than it would with a higher minimum flow.
- Adverse effect on natural character.
- Implementation costs (plan change, administration of extra site).

OPTION 3: MINIMUM FLOW AT TIROIITI BETWEEN 1250 AND 1150 L/S

A minimum flow is added to the Water Plan, but it is higher than 1150 l/s at Tiroiti. It could not be higher than 1250 l/s which is the minimum flow downstream at Sutton.

Benefits:

- This would guarantee more water to those downstream of Tiroiti, because taking of water would cease more frequently upstream of Tiroiti when the higher minimum flow was reached.

Costs:

- This would constrain taking of tributary flow above Tiroiti.
- Adverse effect on natural character.
- Implementation costs (plan change, administration of extra site).

Recommended option

OPTION 4: PROPOSED PLAN CHANGE: MINIMUM FLOW OF 1150 L/S AT TIROIITI

The proposed plan change identifies the additional minimum flow and monitoring site for the Taieri River at Tiroiti, and adds these to Schedule 2A, with a reference to the newly divided section in Rule 12.1.4.4. The addition complements the existing minimum flows and monitoring sites already in place in the Taieri catchment. Hydrological observations and correlation calculations indicate 1150 l/s (1.15 m³/s) is close to the expected flow at Tiroiti when the Waipiata Monitoring Site is at its minimum flow of 1000 l/s.¹

Benefits:

- Responsive to community request for improved relevance, certainty and independence of a less distant site.
- Enables easier management of catchment specific minimum flows.
- Provides for better management of high flow harvesting, while sustaining social, cultural, recreational, economic and environmental values.

¹ The most relevant observations were found to be made when flows are below 3000 l/s and during widely distributed rainfall patterns, rather than during irregular or atypical localised events. The figure obtained from correlation has been rounded to 1150 l/s for simplicity in management.

- Utilises an existing flow recorder which can be simply transformed into a monitoring site for minimum flows.
- Recognises appropriately the known contribution from the various tributaries in the section from Waipiata to Sutton.
- Provides for the natural character of a river, which normally grows steadily larger as it proceeds down its catchment, as tributaries contribute to flows.
- Meets the current water plan objectives relating to river management sustainability and community values.

Costs:

- Implementation costs (plan change, administration of extra site).

The proposed plan change to add a new minimum flow of 1150 l/s at Tiroiti, is the preferred option, as it is the most appropriate. This option assists in sustaining existing take patterns, and enables those taking water to observe a more relevant minimum flow than the current one at a more distant monitoring site.

It will be effective as the community will have acceptance.

This is an efficient option as the benefits outweigh the costs, which are minor. It improves effectiveness in the management of water in the catchment.

This is a low to nil risk option as the effects of implementing this particular minimum flow at Tiroiti are understood. The potential for dormant deemed permits to be newly exercised is a risk to established or new patterns of taking, but apply in much of Otago, irrespective of a plan change like this.

4.0 Consultation

Approximately 30 people attended a public meeting on 23 March 2010 at Kyeburn to discuss the proposal. On 19 March 2010 a meeting was held with Kai Tahu ki Otago Ltd to alert iwi to the process and the substance of the proposal.

The Consultation Draft was distributed on 30 April 2010 to 27 recipients, mainly RMA Clause 3 Schedule 1 agencies. Notes taken at the 23 March 2010 meeting were circulated to the attendees and all consent holders in the area. No comments were received on the Consultation Draft of the proposed plan change from Clause 3 Schedule 1 agencies.

5.0 Conclusion

This proposed plan change is recommended as the preferred option. It enables the establishment of a new minimum flow monitoring site at the existing recorder site at Tiroiti, the definition of the catchment area to which the minimum flow applies, and the addition of the new minimum flow in Schedule 2A. This report identifies that the most appropriate minimum flow at Tiroiti is 1150 l/s.

This option meets the requirements of Section 32 of the Resource Management Act 1991, being an efficient means to achieve the improved, more focused management of takes in this particular catchment area with the greatest benefit and least cost, and insignificant risk.

6.0 Reference Material

- **ORC Reports to committee or Council:**

- 2002/577 – Priority Rivers for Minimum Flow Investigations.
- 2005/455 – Managing Minimum Flows.
- 2006/598 – Management Flows for Aquatic Ecosystems: Manuherikia River, Taieri River at Tiroiti and Waianakarua River.
- 2006/668 – Water Plan, Plan Change 1B (Minimum Flows): From Science to Plan.
- 2007/248 – Water Plan – Proposed Plan Change 1B (Minimum Flows).
- 2010/1293 – Consultation on Proposed Plan Change 3A (Minimum Flow for Taieri River at Tiroiti) to the Regional Plan: Water for Otago.

- **ORC Technical Report:**

“Management Flow for the Taieri River at Tiroiti” ORC, August 2006