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Committee Regulatory
Author Laura Keenan – Senior Environmental Scientist

Review of minimum flows for Wairarapa rivers

1. Purpose

To provide an update on progress with investigations into minimum flows for Wairarapa rivers, specifically the Waiohine and Ruamahanga rivers.

2. Background

The Regional Freshwater Plan includes ‘minimum flow’ policies for the Ruamahanga River and most of its major tributaries. The minimum flow is set to protect instream values such as ecological and recreational values. Greater Wellington seeks to maintain river flows above the minimum flow by restricting or prohibiting consented abstraction during times of low river flow.

A review in 2007 found that the minimum flows for some of the rivers in the Regional Freshwater Plan were derived based on very limited information, and have not been tested to ensure they are set at an appropriate level for protecting instream values. In addition, allocation of water from some of the major rivers, such as the Ruamahanga, Waiohine and Waingawa rivers, is at or nearly at the limits specified in the Regional Freshwater Plan. If core allocation limits are fully utilised then low flows will be exacerbated; therefore, it is very important that the minimum flows have been tested in accordance with current science. If the proposed National Environment Standard on Ecological Flows and Water Levels is adopted this will require minimum flows for rivers with a high level of allocation to be tested using defensible scientific methods.

Greater Wellington has been carrying out investigations to determine flow requirements for protecting instream values. Recent investigations were carried out on the Waiohine River and the lower reaches of the Ruamahanga River, and have primarily focused on determining flow requirements for sustaining ecological values. The results will be taken into consideration when reviewing the current policies of the Regional Freshwater Plan over the next 12 to 18 months.

3. Findings of recent investigations

3.1 Lower Ruamahanga River

An Instream Flow Incremental Methodology (IFIM) survey was carried out on two reaches of the lower Ruamahanga River, at Morison's Bush and Pahautea. The survey results were used by the Cawthron Institute to model how fish habitat is affected by low flows. They found that adult brown trout have the highest flow requirements of the fish species modelled. In order to maintain 90% of brown trout habitat at mean annual low flow, a river flow of 8,700 L/s at the Waihenga Bridge is required. The modelling indicates that this flow will also protect habitat requirements of eels and other migratory native fish.

The current minimum flow for the lower Ruamahanga River in the Regional Freshwater Plan is 8,500 L/s at Waihenga Bridge. Therefore, based on the findings of the study and taking into account errors in flow measurement, the current minimum flow appears to be set at a suitable level for protecting instream habitat. The study also found that fish passage and boat passage should not be adversely affected at the minimum flow.

3.2 Waiohine River

An IFIM survey was carried out on two reaches of the Waiohine River, the middle reach upstream of SH2, and the lower reach just upstream of the Ruamahanga River confluence. The survey results were used by the Cawthron Institute to model how fish habitat is affected by low flows. Similar to the results for the Ruamahanga River, they found that adult brown trout have the highest flow requirements of the fish species modelled. In order to maintain 90% of brown trout habitat at mean annual low flow in the middle and lower reaches of the river, a flow of 2,770 L/s is required at the Waiohine Gorge. This takes into account losses to groundwater that occur along the river. The modelling indicates that this flow will also protect habitat requirements of eels and other migratory native fish.

The current minimum flow for the lower Ruamahanga River in the Regional Freshwater Plan is 2,300 L/s at Waiohine Gorge. The findings of this study suggest that in order to protect ecological values of the river, using trout habitat as an indicator, the minimum flow should be set at a slightly higher level.

The Waiohine River has a high amount of 'essential abstraction' – for public water supply and the Moroa Water Race – and this will be taken into account when recommending any changes to the Regional Freshwater Plan.

4. Next steps

The minimum flows for some other rivers – both in the Wairarapa and western part of the region – remain to be 'checked' prior to the review of the Regional Freshwater Plan. However, the IFIM process of surveying the river and carrying out habitat modelling is time-consuming and expensive. Therefore, we are looking at engaging the Cawthron Institute to analyse all the Wellington region's existing IFIM data to derive a regional approach for quickly and easily

assessing ecological flow requirements. If this work is successful, we will be able to use it to check the current minimum flows for other rivers, such as the Tauherenikau, Waingawa and Otaki rivers.

A technical report detailing any proposed changes to the Regional Freshwater Plan's minimum flow policies will be prepared in 2010/11. The report will also discuss security of supply and core allocation limits.

5. Communication

The report on the lower Ruamahanga River has been sent to Fish & Game and the Department of Conservation. The Waiohine River report, once finalised, will be sent to these parties and to Rangitaane o Wairarapa and Ngati Kahungunu ki Wairarapa. Copies are available to the Committee on request.

6. Recommendations

That the Committee:

1. ***Receives the report.***
2. ***Notes the content of the report.***

Report prepared by:

Report approved by:

Report approved by:

Laura Keenan
Senior Environmental
Scientist

Ted Taylor
Manager, Environmental
Monitoring and Investigations

Nigel Corry
Divisional Manager,
Environment Management