

EXECUTIVE SUMMARY

1. Introduction

Fresh water is vital to the life of the Southland Region. It sustains our communities by providing drinking water; it allows our farmers to farm by providing stock water, dairy shed water and, increasingly, water for irrigation; it provides the environment for people to enjoy recreational activities such as fishing, swimming and kayaking; and it supports the creatures and plants that live in our rivers, streams, wetlands and lakes.

Traditionally, Southland has been seen as a region with an abundance of natural water, clean enough for a wide variety of uses and able to sustain healthy instream populations of animals, plants and fish. But are these assumptions still true? Is there enough water in Southland's rivers, streams, lakes and aquifers to provide for all the myriad uses to which it is now put? And whether or not there is sufficient water for these purposes, does the management of water in the region need to be changed to address new issues and increasing pressures?

Environment Southland is responsible for managing fresh water in Southland, primarily under the Resource Management Act 1991 (the RMA). The region's territorial local authorities, Southland District Council, Invercargill City Council and Gore District Council, also have their parts to play. Under the RMA Environment Southland has developed the Regional Policy Statement for Southland (the RPS) and the Proposed Regional Water Plan for Southland (the Water Plan), both of which set out how Environment Southland will manage the region's fresh water. The Southland District Council is also reviewing its District Plan, which has provisions that could impact on water quantity.

Environment Southland's responsibilities for water quantity relate to how it is allocated to uses like farming, community supplies and industry, and how much water is left in rivers, streams, lakes and wetlands to maintain natural flows and habitat. Currently there is sufficient water available from surface waterbodies and groundwater aquifers to provide for all the different needs and uses of Southland's communities, while leaving enough water behind to look after our aquatic ecosystems and maintain the natural character of rivers, streams and lakes. But demand is increasing and, in combination with the effects of climate change, will present a challenge to water management over the next 10 years.

2. Existing Regional Policy Statement and District Plan issues – a brief synopsis

Both the Regional Policy Statement and the Southland District Plan contain issues relating to water quantity and allocation. These issues and their relevance to the Southland of today are discussed below.

The existing RPS contains eight issues relating to water quantity. In summary they are that:

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- low flows in rivers and streams and/or overallocation of water can cause adverse effects because they can increase the concentrations of contaminants discharged into waterbodies;
- changes in flows and levels of water in rivers, streams and lakes can significantly affect aquatic ecosystems and the way in which surface water and groundwater interact;
- conflicts in water allocation can arise because of competing needs, including those of aquatic ecosystems and values. At times there is insufficient water to provide for all needs;
- there are positive and negative, direct and indirect effects from taking, diverting and damming water;
- there are positive and negative consequences of using water, and the manner in which water is changed by that use;
- a wide range of events and activities can impact positively or negatively on water quantity;
- current uses of water may be inefficient and wasteful;
- there is a need for further information on the extent and state of groundwater resources in the region.

We've reviewed each of these issues to assess whether they remain relevant in Southland today. What we've found is that most of the issues are still relevant:

- there are several rivers and streams in the region where water quality has been affected by summer low flows;
- the interaction between surface water and groundwater is being investigated by Environment Southland as demand for groundwater increases and as effects on spring-fed streams become apparent;
- efficient use of water will become ever more relevant as demand for water in the region grows and competition between uses (both instream and abstractive) increases;
- Environment Southland has implemented a comprehensive groundwater monitoring programme, but there is an ongoing need to collect groundwater information to assist decision making.

The broader issues, relating to the positive and negative effects that taking water can have and the events and activities that can affect water quantity, are no longer as relevant. The issues are currently described in such broad terms that it is hard to know what specific activities might be causing issues in Southland and what sorts of effects are being experienced. As well, nobody has highlighted the effects of the use of water as an issue in Southland.

We have also undertaken a detailed analysis of each objective, policy and method that relates to each issue to check that they are all still relevant. This analysis has shown that the basic framework will remain relevant provided some amendments are made. The current Outcomes anticipated by this framework are:

- Outcome 4.1 Maintenance and enhancement of instream and ground water flow regimes, and reduction of adverse effects on aquatic ecosystems.
- Outcome 4.2 Satisfying the reasonable needs of current and future water users.

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- Outcome 4.3 Non-wasteful use and better availability of water.
- Outcome 4.4 Use of water resources consistent with environmental standards.
- Outcome 4.5 Understanding and provision for traditional Maori values in water quantity.
- Outcome 4.6 Induced changes of flow regimes of water bodies are minimised.
- Outcome 4.7 Integration of land management with management of water quantity.

The issues relevant to Water contained within the current District Plan are:

- The need to avoid and mitigate the degradation of water quality as a result of human activities, removal of vegetation and contamination from sewage and animal effluent.
- The need to maintain and enhance the District's significant aquatic plant and animal life, particularly indigenous species, and the district's fresh water fishing resources.
- Land use activities may have an adverse effect on water quality in some parts of the District.
- The viability of water schemes can be threatened by the change of land uses in their catchment areas.

We feel the second generation Southland District Plan should clearly state the importance of the quantity of water in our rivers, streams, lakes and wetlands. Variations in surface water flows and groundwater levels, increasing pressure on water sources, the implications for water users from low water levels, and the wider environmental effects, should also be identified.

3. What has changed and what are the issues now and for the future?

By talking to key stakeholders, and reviewing the considerable amount of information that is now available on our water resources, we have identified changes over the last 10 years and issues that we believe may arise in the future.

We have found that allocation of water has increased significantly in the last ten years, with groundwater use increasing 17-fold and a 6-fold increase in the number of surface water permits issued. Increasing irrigation is one of the major causes of this expansion and while the amount of irrigation in Southland is still relatively small compared to regions like Canterbury and Otago, Southland's groundwater resources in particular are also much smaller than those in other parts of the country. Increasing demand for this water in the future will be a challenge that Environment Southland and Southland District Council must face.

Irrigation is just one identifiable area of higher demand. Urban communities and local industries are also likely to want more water in the future. Human needs will have to be balanced against those of the biological communities living in our streams, rivers, lakes and wetlands and the aspirations of local communities to use waterbodies for recreation. We'll need to better understand how groundwater and surface water interact, so that we can ensure that taking groundwater doesn't seriously affect surface water and vice versa. We'll also be challenged to ensure that the water taken from our waterways is used as

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efficiently as possible. All these challenges will have to be managed in the context of a changing climate and its effect on how much water is available to allocate.

Nationally, the incoming Government has signalled that the management of water is one of its top priorities. In the context of what have been signalled as major reviews of the RMA, national directions in relation to water quantity will also affect how Southland's water resources are managed.

Already changes to the RMA have introduced new responsibilities for Environment Southland. Maintenance and enhancement of ecosystems, maintenance of indigenous biological diversity and integrating the development of infrastructure with land use are all new functions for regional councils that were introduced in the 2005 amendment to the Act. Regional and district plans are also now required to '*give effect to*' rather than just '*not be inconsistent with*' the RPS, which puts more emphasis on the overall importance of the RPS to the region.

Furthermore, the Government has developed a series of national planning instruments. These include the *Proposed National Policy Statement on Freshwater Management*, the *Proposed National Environmental Standard for Water Measuring Devices* and the *Proposed National Environmental Standard on Ecological Flows and Water Levels*.

The change in Government may lead to some re-prioritisation in relation to these documents. Prior to the election the National Party's resource management policy included putting the National Policy Statement on hold and initiating a '*collaborative governance process*' to engage key stakeholders to develop an effective framework for addressing issues of water quality and allocation. No matter what the final fate of the documents is, there have been clear signals from both past and present Governments that there will be more national direction in terms of how our water resources are managed.

At a regional and local level, several different issues have arisen in recent years that will need to be addressed over the life of the next RPS and District Plan:

- Intensification of land use within Southland is leading to greater demand for water. Aquifers are coming under increasing pressure, principally from irrigators and particularly in Northern Southland. Dairy conversion is the principal driver of the higher demand for water but population growth in some towns is also increasing pressure on water sources. Conversion to forestry also needs to be considered as a potential issue for water quantity as it may influence the amount of water reaching rivers and streams and therefore decrease the volume available for abstraction. We have been told that there needs to be better integration between Environment Southland and the region's other councils in relation to land development and its effects on water quantity. The Southland District Council has recognised this in its analysis of the provisions of the District Plan relating to land use change, and concern has been expressed about possible additional impacts of intensification of land use on the viability and integrity of reticulated community water schemes.

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- Water is a finite resource in Southland. Some stakeholders are concerned at the likely cumulative effects on the environment from the combination of permitted and consented water takes from waterbodies. While the Water Plan contains policies about flow cut-offs and volumes of water that can be allocated on a case-by-case basis, there are no overall catchment minimum flows or defined allocation volumes for our rivers and streams.
- As demand for surface water and groundwater grows and water resources become more allocated we will need to think more about how efficiently water is used. We have already made some moves in this regard, with daily and seasonal limits being applied to irrigation takes and use of water being tied to soil moisture levels.
- Even though the amount of information we have on our water resources has increased over recent years with our state of the environment monitoring programme, more information is needed to assist in managing the quantity and allocation of water. The difficulty of assessing the effects that taking groundwater can have on spring fed streams, the need for more information on our confined aquifers, and a better understanding of the effects of land use in the headwaters of our waterbodies have all been identified as areas where more information would help us to manage the water resource.
- Many of the issues that we face in relation to the quantity of water in our rivers, streams, lakes and aquifers and how to allocate it are cross-jurisdictional. It has been suggested that the RPS needs to recognise this and clarify the relative roles and responsibilities of the various agencies and organisations involved in water management.
- There is currently a focus on water quality in the District Plan, but water quantity is not specifically recognised as an issue. Variations in flows and levels, pressure on water resources, and the implication of these effects on water users and the wider environment all need to be identified and addressed.
- Recent figures in relation to groundwater allocation indicate a significant increase in demand for water. The Southland District Council recognises that appropriate objectives and policies must be formulated to address this increased demand and the consequential water allocation issues as part of the District Plan.
- The Southland District Council is very supportive of the adoption of policies and rules that recognise the importance of community water supplies. Some Southland communities are already experiencing supply problems during times of drought and/or flood and through increasing difficulty in obtaining consents. Construction of new reticulated water supplies required to address potential public health risks could also add to the pressure on water quantity within the Southland District.

4. Options for addressing issues

The first RPS identified a series of fairly generic issues for managing water quantity, as we got used to managing resources under the new framework of the RMA. The development of the Water Plan and its subsequent variations from 2000 onwards allowed us to address more specific issues. This approach needs to carry on through our review of the RPS and as we develop new ways to address emerging issues.

Emerging water quantity and allocation issues can be addressed either by revisiting our existing rule framework or by finding non-regulatory ways to manage them. Under the current framework, Environment Southland manages the taking and use of water from rivers, streams, lakes and aquifers while the region's other councils currently have no rules controlling how land use can be changed.

As discussed earlier, changing land use (for example conversion of sheep and beef properties to intensive dairy farming) can have an effect on the amount of water in waterways. It may therefore be time to reconsider whether the three district and city councils should develop rules to require a land use consent to be obtained under the District Plan for specified land use changes. Conditions could be attached to consents relating to for example maintenance of riparian margins, which could have positive effects on water quantity. Appropriate objectives and policies in response to the increased demand for water and the resulting water allocation issues could also be formulated for the second-generation District Plan.

From a regional council perspective, because of concerns about the combined effects of permitted and consented takes, it may be appropriate for Environment Southland to look at the rule framework again, for example by:

- reassessing the volume of water that can be taken as a permitted activity;
- establishing minimum flow cut-offs for consents to take water;
- setting priorities in terms of which water uses will be provided for first;
- developing criteria for determining reliability of supply;
- undertaking investigations and research into region-wide or catchment specific issues that may arise and developing policy responses to them.

We could look at ways of effecting change that don't require rules. Environment Southland already does a lot of work with water users through its Catchment, Environmental Information and Environmental Education sections. However, this work does tend to be focussed more on issues of water quality than on water quantity/allocation. We could investigate areas where guidance and advice would be helpful for managing water use, such as best practice guidelines for agricultural water use, partnerships with major water-using industries on efficient use of water, and working with the region's other councils in relation to reticulated community water supplies.

At a district level measures such as economic incentives or education programmes could be appropriate alternatives to district rules. Monitoring resources could be increased in order to monitor and assess the effectiveness of non-regulatory approaches, and also

to ensure that existing consent holders who could affect water flows and levels with their activities are complying with their consent conditions.

Revisiting the overall way that we manage water allocation may also be an option. At present management is based on addressing issues on a region-wide basis. It's possible that we should go back to managing water on a catchment basis in order to address specific issues.

5. Questions for your comment

How we address the issues that have arisen since the RPS and the District Plan became operative in the late 1990s is something that we need your thoughts on. The questions outlined below will help to provide a starting point for our discussion with you about managing water quantity/allocation in Southland.

Question 1 – the existing Regional Policy Statement and District Plan

What are your thoughts on the relevance of the issues identified in the existing RPS and District Plan? Are some issues more relevant now than others? Should the existing policy framework be revisited or is what we have still appropriate to manage today's issues?

Question 2 – emerging issues

Do we have a complete list of the major pressures on water quantity/allocation in Southland and have we identified all the potentially significant emerging issues? Are there other issues that are also relevant and need to be considered for Southland? How should the RPS deal with these issues – should it deliberately set out a management framework, or leave that to the Water Plan? Should the District Plan also have rules for activities that might affect water quantity? How should Southland address the matters raised in national planning instruments such as the Proposed National Policy Statement for Freshwater Management and National Environmental Standards?

Question 3 – priorities

What are the priority areas for action? Should there be an increased focus on efficient water use? Should reticulated community water supplies be given priority over other types of water use? How might we do this? Are there other areas where more guidance and information would be helpful to the Southland community?

Question 4 – Environment Southland and territorial authorities

How might Southland councils work together to address the interconnected issues of land use and water quantity? Should the region's district and city councils develop land use controls to manage the effects of land use change on water quantity? Or should Environment Southland develop rules to manage the use of land to control effects on water quantity? Does the issue need a rule framework, or can it be effectively managed by other means (such as economic incentives or guidance and information)?

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Question 5 – catchment management planning

How do you think the concept of catchment management planning might work? Would it be more effective than Environment Southland's current region-wide approach to water management?