

## EXECUTIVE SUMMARY

### 1. Introduction

Fresh water is vital to the life of the Southland Region. It sustains our communities by providing drinking water and a medium for the transport and disposal of treated wastewaters; it allows our farmers to farm; it provides an 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 ample natural water, clean enough for a wide variety of uses and able to sustain healthy instream populations of animals, plants and fish. In tandem with this, however, it has also been recognised that the quality of the water in the lower catchment areas of our rivers and streams in particular can be lower than desirable. The existence of 'hotspots' of groundwater contamination as a result of various land uses has also been known for some years. But are we dealing with these issues appropriately? Are we making progress or is Southland's water quality getting worse? Does the management of water in the region need to be changed to address issues that are emerging as our lifestyles change?

Environment Southland is responsible for managing fresh water in Southland, primarily under the Resource Management Act 1991 (the RMA). The region's other councils, Southland District Council, Invercargill City Council and Gore District Council, also have their parts to play. Under the RMA Environment Southland has prepared 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 contains provisions that have a bearing on water quality.

Environment Southland is responsible for maintaining and enhancing the quality of water in our rivers, streams, lakes and aquifers. Our monitoring programmes allow us to keep an eye on water quality and some consistent themes are appearing. In the headwaters and upper catchment areas of our rivers and streams water quality is generally good, nutrients are low, aquatic communities (such as the small creatures that live in the beds of rivers and streams) are healthy and the water is suitable for swimming in. Further down catchments however monitoring is showing steadily decreasing water quality and aquatic community health, particularly in areas where land use is more intensive. While groundwater quality is generally good throughout the region monitoring is showing increased levels of contaminants in more intensively farmed areas, which can have flow-on effects on our rivers and streams. Some natural events can decrease water quality but many of our water quality problems are caused by the actions and activities of people around our rivers, streams and lakes.

Arresting our declining water quality will present a challenge to our water management over the next 10 years.

## 2. Relevance of existing RPS and District Plan issues – a brief synopsis

Both the Regional Policy Statement and the Southland District Plan contain issues relating to water quality. These issues and their relevance to contemporary Southland are discussed below.

The existing RPS contains four issues relating to water quality. In summary they are that:

- the community requires water of an appropriate quality to sustain a wide range of activities and values, as well as the life-supporting capacity and habitats that water provides, and the quality of life humans gain from using water;
- a wide range events and activities can have positive or negative effects on water quality;
- insufficient regard is given to alternatives for both treatment and discharge of waste;
- there is insufficient information available on the quality of groundwater in order to allow good decisions to be made about its use.

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

- as the community's expectations in terms of water quality are rising appropriate quality water is required to meet those expectations;
- different activities and values throughout Southland either could be or are being affected by existing water quality in the region;
- Environment Southland has implemented a comprehensive groundwater monitoring programme, which has improved the level of information on groundwater quality, but there are still some locations ('hotspots') where further information is needed.

Nobody consulted as part of our review has so far identified concerns with the consideration of alternative methods of treatment or discharge of waste. The broader issue of the positive and negative effects of events and activities on water quality is also no longer as relevant. The issue is currently written so broadly that it is hard to know what specific activities might be causing issues in Southland and what sorts of effects are being experienced.

In addition to looking at the issues, we have undertaken a detailed analysis of each objective, policy and method that relates to each issue to check that they are still relevant. This analysis has shown that while the basic framework is okay there are some amendments necessary in order to ensure that it is truly relevant. The current Outcomes anticipated by this framework are:

- Outcome 5.1 Maintenance and enhancement of instream and ground water quality and reduction of adverse effects on aquatic ecosystems.
- Outcome 5.2 Providing water of sufficient quantity and quality to satisfy the reasonable needs of current and future water users.
- Outcome 5.3 Having discharges to water that meet, after reasonable mixing, water classifications.
- Outcome 5.4 Understanding and provision for traditional Maori values in water quality management.

- Outcome 5.5 Integration of land management with the management of water quality.

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.

When the current District Plan was written it was intended that the effects of land use change on water quality would be managed by economic measures, for example rates relief or purchase of properties. This may no longer be an effective approach, primarily due to changing patterns of land use and the relative affordability of the extensive areas of high value farmland that would be necessary to protect water quality. The second generation Southland District Plan therefore needs to look to alternative options for maintaining and enhancing water quality.

### **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 been able to identify changes over the last 10 years and potential issues that may arise in the future.

Through our monitoring we have found that the levels of nutrients in our rivers and streams are steadily increasing. Specific examples of this in the Southland District are the Mataura and Oreti Rivers, which are two of the most nitrogen enriched rivers in New Zealand, with levels continuing to increase. Most catchments still have acceptable water clarity and dissolved oxygen levels, but several of our monitoring sites at particular times of the year have bacteria levels that exceed the guidelines for public health at particular times of the year. Throughout the region the aquatic communities living in our rivers and streams are in better shape in the headwaters and upper areas of our catchments, with health steadily declining the further downstream monitoring sites are located. In general, these decreases in water quality are mirrored by different land uses in different areas of our catchments. Lower down in catchments, where land use is more intensive and many of our towns are located, water quality is worse than in upper catchment areas.

Monitoring of groundwater quality has shown that quality is generally good throughout the region, although levels of contaminants are increasing, particularly in more intensively farmed areas.

Nationally, the new 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,

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national directions in relation to water quality 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 RMA. Regional and district plans are now also 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.

The Government has also developed a series of national planning instruments in the last few years. These include the *Proposed National Policy Statement on Freshwater Management*, the *Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007* and the *Proposed National Environmental Standard for On-site Wastewater Systems*.

The recent change in Government may lead to some re-prioritisation in relation to these documents. Prior to the 2008 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 has been a clear signal from both the 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:

- Point source discharges continue to affect water quality in the region. In consultation with stakeholders we have identified that the main discharges of concern are sewage, stormwater and industrial wastewater, although activities in the beds of our lakes and rivers can also affect water quality. All of these activities will have to be managed in the context of the needs of our communities and the aquatic ecosystems that depend on water quality for their survival.
- Potential development of the region's nationally significant deposits of coal, lignite and gas in the near future could also cause significant water quality problems. Within the time span of the reviewed RPS and the second-generation District Plan it is possible that lignite mining or oil production could occur in Southland, and it is highly likely that new commercial and industrial activities that could affect water quality will start operating. The effects of these activities will have to be managed through both the RPS and the District Plan.
- Intensification of land use within Southland is seen as having the most significant effect on water quality within the region. More intensive land use such as dairying

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and arable farming has a greater potential to decrease surface water and groundwater quality, through indirect discharges from animal effluent, fertiliser and general land uses, stock access to rivers and lakes, and winter grazing close to our waterways. We have acknowledged the significance of the issue of non-point source discharges and their potential effects on water quality and have adopted a goal of beating non-point source pollution by 2015. To that end we have incorporated a wide range of initiatives in the Long Term Council Community Plan and the Annual Plan to identify 'hot spots' where the greatest efforts to improve water quality need to be focused.

- Intensification of land use within the Southland District also raises potential issues for reticulated community water supplies. The quality of the source water for these supplies dictates the treatment costs, and decreases in water quality may mean that new supply sources need to be found.
- There is a general feeling that the RPS does not adequately address cumulative effects, and in particular the influence of land use activities on water quality. We need to work out how to make the RPS more specific and directive, while recognising the challenge of dealing comprehensively with cumulative effects.
- One type of cumulative effect of concern arises from increasing rural/residential 'lifestyle' block developments in some areas of Southland District that are not connected to reticulated wastewater systems. In combination with a large number of older existing systems throughout the district, these types of discharges have the potential to cause cumulative adverse effects. The likely size of this effect has not yet been quantified.
- Even though the amount of information we have about water quality has generally been better than that available for water quantity, there is still a lack of information on water quality in lakes (particularly the mixing of discharges in lake environments). Obtaining this type of information would help us better manage the water quality in our regionally, nationally and internationally significant lakes and wetlands.
- Many of the issues that we face in relation to the water quality of our rivers, streams, lakes and aquifers are cross-jurisdictional. It has been suggested that the RPS needs to recognise this and make clear what the relative roles and responsibilities of the various agencies and organisations involved in water management are.
- There is a growing public awareness of and concern about water quality at both a district and a regional level. Several land use activities that might potentially affect the water quality of our rivers, streams, lakes and aquifers, and also have the potential to affect the viability of community water schemes, can currently be undertaken in the District without resource consent.

#### 4. Options for addressing issues

The first RPS identified fairly generic issues for management of water quality, 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.

Water quality issues can be addressed either by revisiting our existing rule framework or by finding non-regulatory ways to improve water quality. Under the existing rule framework Environment Southland manages discharges of contaminants to land and water by permitting some types of discharges and requiring consents to be obtained for others. By contrast, the region's district councils zone land based on controlling effects rather than specific activities. This can potentially lead to land use intensification in areas where it may not be suitable, and to the development of a variety of other land use practices that may be having unanticipated adverse effects on water quality. It may therefore be time to revisit whether the region's district and city councils need to develop rules to require a land use consent to be obtained under the District Plan for specified land use changes, or for new objectives, policies and rules relating to safeguarding water quality to be developed at the district level, or for Environment Southland to consider developing rules to control land uses that may have effects on water quality.

District Plan rules could be developed to control activities such as:

- vegetation clearance
- the working of soil on steep slopes
- grazing of riparian margins
- planting and maintenance of riparian margins
- harvesting of tree crops

The Southland District Council could also consider effects of activities on water quality when processing consents for land uses such as application of fertiliser in riparian margins, draining of wetlands and effluent management. These are only examples of activities, and there may be others that could also be considered.

It may also be appropriate for Environment Southland to fine tune the existing rule framework and consent conditions for discharges, for example by:

- requiring consents for discharges from mole and tile drain systems
- imposing consent conditions that require best management practices to be adopted
- developing a system for transferable discharge permits under s137 of the RMA.

Any new regulatory approach would need to have appropriate scientific backing, to ensure that it was not just introducing 'rules for rules sake'. We could also look at ways of effecting change that don't require rules. Environment Southland already does a lot of work on water quality through its Catchment, Environmental Information and Environmental Education sections. Several industry initiatives are also underway throughout the region. We could investigate further areas where guidance and advice

would help to improve water quality, such as advice on suitable land uses for various soil types or best practice for land management in tile drained areas. We could also work more closely providing guidance to the region's industries and city and district councils on wastewater and stormwater discharges, and opportunities to improve the quality of both.

The Southland District Council sees value in non-regulatory means of improving water quality as well. A renewed emphasis and focus on economic measures such as rates relief and funding of fencing could be a way to prevent degradation of the District's water quality, in combination with a focus on educating and informing people about the potential environmental effects of some land uses.

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

### **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 quality 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 there some issues that are more relevant now than others? Should the existing policy framework be revisited or is what we have appropriate to manage the issues that we have?

#### *Question 2 – emerging issues*

Have we got a complete list of the major pressures on water quality 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 District Plans also provide more guidance and direction on maintaining water quality in Southland? 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? Are point source discharges or non-point source discharges of greater concern? What types of point source discharges do you think are still causing water quality issues in the region? Are land uses causing water quality problems, and if so, which land uses are the most significant? Are industry driven initiatives a good way to address adverse effects on water quality? Are there other

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specific 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 quality? Should the region's district and city councils develop land use controls to manage the effects of land use change on water quality? Or should Environment Southland develop rules under its function to manage the use of land to control effects on water quality? Does the issue need a rule framework, or can it be effectively managed by other means (such as economic instruments or guidance and information)?

### *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?