

REGULATORY IMPACT STATEMENT: National environmental standard for sources of human drinking-water

STATEMENT OF THE NATURE AND MAGNITUDE OF THE PROBLEM AND THE NEED FOR GOVERNMENT ACTION

Contamination of drinking water sources (rivers, lakes and groundwater used to supply drinking water) has led to serious outbreaks of disease in developed countries including the United States and Canada. While New Zealand has not had outbreaks of the scale experienced overseas there have been a number of outbreaks of disease caused by contaminated drinking water in New Zealand in the last 20 years. The largest of these was in Queenstown in 1984, when 3500 people are estimated to have become ill. More recently, in July 2006 contamination of a drinking water source at Cardrona skifield resulted in more than 120 cases of illness. Waterborne disease is estimated to cost \$25 million per year in New Zealand and we have one of the highest rates of gastroenteritis in the developed world.

New Zealand has problems with nutrient and microbiological contamination of water from a range of sources including industrial, agricultural, sewage and forestry. Both point and non-point discharges impact on drinking water sources but are not specifically addressed by most regional councils. This means that drinking water sources are regulated inconsistently around the country leading to varying levels of drinking water source protection, public health risks and different conditions for drinking water suppliers. In addition, unanticipated events such as spills pose additional risks to drinking water supplies. Risks from such an event are exacerbated as there are no requirements for consent holders to notify water suppliers of such incidents.

STATEMENT OF THE PUBLIC POLICY OBJECTIVE(S)

The public policy objective is to reduce the risk of contamination of drinking water sources. The approach must be consistent across New Zealand whilst being an efficient and effective way of managing human drinking water.

STATEMENT OF FEASIBLE OPTIONS (REGULATORY AND/OR NON-REGULATORY) THAT MAY CONSTITUTE VIABLE MEANS FOR ACHIEVING THE DESIRED OBJECTIVE(S)

Status Quo

Regional councils regulate discharges to water, and to land that may enter water under the Resource Management Act. Resource consents are required for activities that may adversely affect water quality. Regional plans define circumstances in which consents are required for activities that may adversely affect water supplies. At present only three of the sixteen regional councils have a comprehensive approach to managing effects on drinking water sources in their regional plans. The Ministry for the Environment, Ministry of Agriculture and Forestry, Regional Councils and the Fonterra co-operative have signed the Clean Streams Accord. The goal is to have stock excluded from 90% of waterways by 2012. This is a voluntary measure to reduce stock from entering waterways, but does not explicitly consider drinking water sources. In addition there are no protocols which facilitate communication between consent holders and water treatment plant operators in the event of an accidental discharge to drinking water sources. Because the status quo does not meet the public policy objectives it is no longer appropriate.

Non-Regulatory Option

Voluntary options. In this approach the Ministry would, through the use of additional voluntary measures, encourage and support regional councils, treatment plant operators, drinking water assessors and district health boards to improve the management of drinking water sources. There would be a range of measures to support local government, but there would be no compulsion for regions to improve practice or implement guidance. One such measure could be for local authorities to buy land in drinking water catchments and manage it as a water supply protection zone. Because of the voluntary nature of this option and councils' different priorities, implementation would be inconsistent across New Zealand. Therefore, this option does not meet the public policy objectives and is rejected.

Regulatory Options

National policy statement. Under this option the Minister would issue a national policy statement. The Minister has the power to issue statements on matters of national significance that are relevant to achieving the purpose of the Resource Management Act. National policy statements establish objectives and policies, but methods cannot be specified. Therefore a national policy statement allows central government to specify environmental outcomes but allows each region autonomy in their decision making towards the outcomes. The national policy statement would not provide a consistent approach to implementation and is rejected on these grounds.

Amend relevant legislation. Under this option, amendments could be made to the Resource Management Act which would achieve the policy objectives. The inclusion of drinking water as a 'matter of national importance' (section 6) or a 'matter to have particular regard' to (section 7) would mean that the effects of activities on drinking water would have to be considered in every policy, plan and consent decision. Amendments to a combination of Section 70 (regional plan rules) and 107 (discharge permits) would have the effect of including drinking water as a matter that had to be addressed in developing rules in regional plans and in granting discharge permits. However, alterations to legislation are demanding in terms of resources and would take a long time to promulgate. Currently the House may have other legislative priorities which would make an amendment difficult. Therefore, this is not the most efficient option for meeting the public policy objectives and is rejected.

Preferred Option: national environmental standard. National environmental standards set a mandatory requirement via regulations developed through sections 43 and 44 of the Resource Management Act. Under this option the Minister for the Environment would develop a national environmental standard prescribing:

- Part 1. regional councils to decline discharge permits, or permits to take, use, dam or divert water, that are likely to result in community drinking water becoming non-potable or unwholesome following existing treatment.
- Part 2. that before regional councils include permitted activity rules in a regional plan, regional councils must carry out an assessment that

considers the nature of the drinking water sources and the nature of permitted activities in their catchments, and be satisfied that permitted activities will not result in community drinking-water supplies being non-potable or unwholesome after existing treatment.

Part 3. that consent holders notify water treatment plant operators and the consent authority of significant unintended events that have the potential to adversely affect sources of human drinking water.

Part 1 and 2 of the standard will apply only to populations over 500 and Part 3 will apply to populations over 25. The proposed national environmental standard is a narrative standard. It describes processes and outcomes that should occur, rather than specifying numeric values in source water. The standard will not be retrospective, so will only apply to new applicants. Councils will have the ability to set more stringent standards if they so choose.

To aid implementation, the Ministry will develop good practice guides, run workshops, promulgate a database identifying drinking water abstraction points and provide additional support. There will be a six-month transition period enabling councils to familiarise themselves with the standard before it takes effect.

STATEMENT OF THE NET BENEFIT OF THE PROPOSAL, INCLUDING THE TOTAL REGULATORY COSTS (ADMINISTRATIVE, COMPLIANCE AND ECONOMIC COSTS) AND BENEFITS (INCLUDING NON-QUANTIFIABLE BENEFITS) OF THE PROPOSAL, AND OTHER FEASIBLE OPTIONS

Section 32 of the Resource Management Act requires that an economic appraisal is carried out on the proposed national environmental standard. The following section is largely based on the findings of the economic appraisal which will be published before the regulation is made public.

Central Government. The Ministry for the Environment will incur costs through administration, capacity building, education, development of implementation guides and monitoring of the implementation of the national environmental standard. These costs have been estimated at \$300,000 over three years, which will be covered through existing baseline funding. There are unquantified cost savings to the Ministry of Health due to a decrease in the incidents of waterborne disease outbreaks.

Local Government. Regional councils and unitary authorities will be the primary mode through which the national environmental standard is implemented. The costs will comprise administering changes to consent processes, assessing permitted activity impacts and reviewing permitted activity rules as part of scheduled plan reviews. It is estimated that this will cost all the 16 regional councils and unitary authorities \$1.9 million or \$120,000 per council (all monetary values are present value discounted over 20 years at 10% unless otherwise stated).

Drinking water suppliers. Drinking water suppliers will experience an increased cost in both the implementation and administration phases of the national environmental standard. During implementation, cost increases are

likely to be minor and associated with increased consultation with regional councils. Future deterioration of water quality at the treatment plant intake will be slower compared to the status quo, which means that upgrades to plant and equipment will be avoided or delayed. Overall, a \$0.6 million net benefit to drinking water suppliers has been quantified. The Ministry of Health considers this to be a substantial underestimate of the final net benefit that would result from preventing ongoing deterioration of drinking water sources (preventing need for future upgrades to treatment plants). Additional unquantified benefits will arise from improved communication between all parties on the likely impact of activities on drinking water sources particularly in the event of an accidental spill.

Resource consent applicants. Applicants need to demonstrate that their activity will not make drinking water nonpotable or unwholesome. Therefore some resource consent applicants may face increases in costs. Existing consent holders will not be affected unless the intensity or nature of their discharge changes. It will affect new applicants applying for discharge consents and consents to take, use, dam or divert water whose activities may adversely affect the quality of a drinking water source. Some activities which are currently permitted, including some landuses, may require a consent in future as a result of permitted activity reviews conducted in accordance with part two of the national environmental standard. It is estimated that the net cost to the applicants, comprising mitigation and consent application, will be \$22.8 million.

Land users and persons acting under permitted activity rules. If councils change permitted activity rules as a result of part two of the national environmental standard, some activities (e.g. effluent irrigation, land use practices) may need to change. Due to the high level of uncertainty involved in predicting possible changes in activities over the next 20 years, the economic analysis was not able to quantify the costs associated with changes to permitted activity rules for land uses and other activities.

Society. The above quantified benefits should be viewed as a minimum as the national environmental standard will deliver on a range of multiple outcomes and will improve health, the environment and the overall quality of life for New Zealanders. The quantification of benefits directly attributable to the national environmental standard is difficult. However, analysis shows that, at a 10% discount rate, the national environmental standard would need to deliver a 15% improvement in drinking water source in order for the benefits to outweigh the costs. If the improvements were higher than this (say 30%) then the cost-benefit equation is very favourable (with a net present value of \$27m). At lower discount rates (appropriate for long-term health benefits), the 'tipping point' is approximately a 10% improvement in the quality of drinking water source. In practice the national environmental standard will deliver much broader benefits such as improved aesthetics and greater recreational opportunities, which makes the national environmental standard highly efficient. By reducing the risk of drinking water outbreaks, protecting drinking water sources contributes to maintaining New Zealand's image as a safe tourist destination and a source of healthy, environmentally sound produce.

As part 1 and 2 of the standard apply only to populations over 500 it means a small percentage of New Zealanders will not realise the full benefits of the standard. To lower the threshold to 25 people and above, as originally proposed, the estimated cost is \$200 million over 20 years, this is a 10 fold increase in cost to cover an extra 5% of the population.

STATEMENT OF CONSULTATION UNDERTAKEN

Stakeholder Consultation The Ministry developed a draft proposal for the national environmental standard in 2004. A draft economic appraisal was completed but the proposal was not notified. The proposal was for a grading and classification (quantitative) standard that required the monitoring and reporting of the suitability of human-drinking water sources. As a result of feedback from drinking water suppliers and local government, the proposed standard had to be completely revised. The proposal was unacceptable on the grounds that it would impose too many costs on treatment plant operators and regional councils.

In 2005 the process started anew with a revised narrative (qualitative) standard with a focus on resource consent and plan processes rather than directing a specified level of source water quality. In total, 82 submissions were made in response to the discussion document released in September. The key points raised by submitters were:

- whether there is a need for the national environmental standard
- technical aspects of definitions
- roles and responsibilities for implementing the national environmental standard
- potential costs of implementation.

Technical workshops and the Talk Environment meetings delivered the proposed national environmental standard to over 3100 people during the formal submission period. Over 30 meetings were held in 16 regions with the proposed national environmental standard as one of the key topics discussed. Four dedicated workshops on the proposed drinking-water source standard were held and a number of separate meetings were held with local government, drinking-water assessors and other stakeholder groups. As a result of consultation the proposed standard was amended to:

- restrict implementation of the standard to regional councils
- change the population threshold for the standard from 25 to 500
- take out provisions that duplicated existing functions of other agencies.

Government Departments/Agencies Consultation. The draft discussion document was circulated to all major government departments for comment prior to public notification. In total 44 submissions were received from central and local government in response to the public discussion document. Of these three submissions were from central government (Ministry of Transport, Ministry of Health and Transit New Zealand). As there are close links between the Ministry of Health's drinking water standards and the proposed national environmental standard there has been ongoing involvement of the Ministry of Health at all stages of the development of the national environmental standard.

The cabinet paper and the RIS/BCCS were sent to departments and agencies for consultation. Comments on the RIS/BCCS were received from the Ministry of Agriculture and Forestry, Ministry of Economic Development, the Treasury and the Ministry of Health and were incorporated.

BUSINESS COMPLIANCE COST STATEMENT

New discharge consents and consents to take, use, dam or divert water cannot be granted if they will adversely affect the quality of drinking water sources. Consent applicants may have to carry out a more detailed study into the effects of their activities compared to the status quo. This is beyond the information which currently needs to be provided by the applicant and will introduce an incremental compliance cost to the consent applicants.

This will affect new activities requiring discharge consents and consents to take, use, dam or divert water in catchments that are used as the source for drinking water supplies. Some activities which are currently permitted may require a consent in future as a result of permitted activity reviews conducted in accordance with the second part of the national environmental standard. Existing consent holders will not be affected unless the intensity or nature of their activity changes.

Consent applicants often use resource management consultants to apply for their consents. As a result of the national environmental standard, fees paid to the consultants may increase due to the extra modelling that needs to be performed as part of the consent application. The extra cost to the applicant will vary from case to case depending on the nature of the activity, the drinking water source and the treatment plant. The additional costs for consent applicants may be limited, because many activities which have an impact on water quality are already required to consider the impact on environmental values in accordance with existing Resource Management Act regulations.

The Ministry for the Environment has allowed six months of transition for the introduction of parts one and three of the standard. This will allow industry and regional councils time to become familiar with the requirements of the standard and prepare for the new regulatory regime. The second part of the standard takes effect when regional councils next review their plans. The Ministry will disseminate information on the new standard by holding workshops, meetings and preparing guidance material. This information will primarily be aimed at councils but will also be useful for businesses.