

Cabinet Policy Committee

Proposed National Environmental Standard for Sources of Human Drinking Water

Proposal

1. This paper seeks approval for the Ministry for the Environment to commence the regulation development process for a national environmental standard for sources of human drinking water under the Resource Management Act 1991. The paper outlines the proposed policy and also presents a Regulatory Impact Statement and Business Compliance Cost Statement.

Executive summary

2. In August 2005, Cabinet agreed to the Ministry for the Environment undertaking consultation on a national environmental standard for sources of human drinking water [CBC Min (05) 11/26 refers]. The standard is intended to reduce risks to water bodies from which drinking water supplies are taken. It aligns with the Sustainable Water Programme of Action, which includes objectives for improved management of water quality.
3. The proposed standard has been developed in close consultation with stakeholders, particularly local government and the Ministry of Health. Regional councils will have the main responsibility for implementing the standard. The proposed standard will ensure that regional councils consider effects on drinking water sources when granting resource consents and developing regional plans. This could apply to any activity regulated by a regional council, such as discharges, water takes and land uses that could affect water quality.
4. If this paper is approved, I will instruct the Parliamentary Counsel Office to draft a national environmental standard to give effect to these policy decisions.

Background

5. Section 43 of the Resource Management Act (1991) provides for the making of national environment standards, which are regulations made by the Governor-General, by Order in Council.
6. In August 2003, Cabinet agreed to the Ministry for the Environment undertaking extensive public consultation on a range of proposed national environmental standards, including a standard for human drinking water [CAB Min (03) 27/3B refers]. Cabinet was updated on progress with the proposed standard in July 2005 and gave approval for release of a discussion document on the proposed standard in August

2005 [CBC Min (05) 11/26 refers]. Following public notification, submissions were received from a range of stakeholders. Key aspects of policy were revised in response to consultation (see paragraphs 43-49 in this paper).

7. This work aligns with other Government initiatives to improve management of water through the Sustainable Water Programme of Action.

Need for a national environmental standard

8. The Ministry for the Environment and the Ministry of Health are working together to improve the management of drinking water in New Zealand. While drinking water quality in New Zealand is generally very good, disease-causing microorganisms are present in many of New Zealand's water sources. These enter water from a range of sources, including animal and human waste. This places drinking water supplies at risk. New Zealand has one of the highest rates of gastroenteritis in the developed world. While the reasons for this are not fully understood, drinking water is one of the routes by which people are exposed to the microorganisms that cause disease.
9. Effective management of drinking water requires reducing the risk of contamination at all steps of the process, from source water through to the treatment plant and distribution system. The concept is that if the risk of contamination is minimised at every step, a failure in one step of the process will not lead to catastrophic consequences. This is known as the 'multiple barrier' approach and is recommended by the World Health Organisation.
10. Internationally, lack of recognition of the importance of the multiple barrier approach has resulted in severe outbreaks of waterborne disease in developed countries, leading to serious illness and deaths. Analysis of numerous disease outbreaks linked to water supply worldwide has shown that contamination of water sources is often the cause of these events.
11. The most notable examples are outbreaks in Walkerton and Milwaukee in North America. In the small rural town of Walkerton, Canada, an outbreak of the toxin-producing bacteria *Escherichia coli* O157 in 2000 led to 2000 cases of illness and seven deaths. Costs were estimated at CAN\$155 million. The contamination that caused this event entered the water supply from effluent run-off. In another well known case in Milwaukee, United States, 400,000 people are estimated to have become ill and over 100 people died as a result of contaminated drinking water (1993). This event resulted from contamination of the water source by cattle feed lots.
12. Although New Zealand has been fortunate to avoid outbreaks of this scale, 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. Most recently, contamination of a drinking water source at Cardrona skifield resulted in over 120 cases of

illness in July 2006. Studies by economists, which estimate the proportion of disease caused by contaminated drinking water, indicate that waterborne disease costs \$25 million per year in New Zealand.¹

13. The OECD's draft report on New Zealand's environmental performance, dated August 2006, recommends that 'finalisation and approval of the proposed Health Amendment Bill and the national environmental standard for source waters should be fast-tracked, as they would lend the statutory backing needed to assure the protection of public health from contamination of drinking water supplies'.

Legislative framework

14. Currently, there is no explicit legislative requirement to consider the effects of activities on sources of human drinking water during council decision-making processes. This is a gap which leaves community water sources potentially vulnerable to contamination.
15. The powers to control the effects of activities in catchments on drinking water sources rest with local government (particularly regional councils) under the Resource Management Act 1991. Health, local government, building and civil defence legislation applies only after water is taken from its source for treatment and/or delivery to the consumer. While there are currently proposals before Parliament to amend health legislation to improve management of drinking water (the Health (Drinking Water) Amendment Bill), these will not introduce any mandatory controls on activities in the catchments of drinking water sources. To achieve integrated management of water from its source to the tap, and thus achieve the objective of implementing the multiple barrier approach, controls are needed under both the Resource Management Act and health legislation.
16. Currently, the degree of protection for drinking water sources in New Zealand varies greatly across the country. Only three of the country's 16 regional authorities comprehensively address protection of drinking water source in their plans. There is no clear mandate to regional councils that they need to consider effects on drinking water sources when making decisions on resource consents and regional plans.
17. The proposed national environmental standard does not depend on passage of the Health (Drinking Water) Amendment Bill for successful implementation. It will improve management of drinking water sources regardless of the Bill's passage.

Policy objectives

18. The proposed national environmental standard applies to management of rivers, lakes and groundwater used to supply drinking water (referred to as 'drinking water sources').

¹Harris Consulting et al., August 2006. *Economic appraisal and section 32 preparation for sources of human drinking water*. Unpublished report prepared for the Ministry for the Environment.

19. The policy objective is to reduce the risk of contamination of drinking water sources by:
 - Contributing to a multi-barrier approach to managing human drinking water.
 - Ensuring there is a catchment component to managing human drinking water, making certain there are controls within drinking-water supply catchments.

The proposed national environmental standard

20. There are three parts to the proposed standard, relating to:
 - Part 1: Decisions on resource consents.
 - Part 2: Permitted activity rules in regional plans.
 - Part 3: Notification of occurrences that may affect drinking water sources.

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.

Part 1: Decisions on resource consents:

21. The standard applies to the quality of source water (e.g. in rivers and groundwater) before it is taken for use in a drinking water supply. The proposed standard would require 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 nonpotable or unwholesome following existing treatment.² However, councils will have flexibility in decision making. For example, applicants and communities may consider planned upgrades to drinking water treatment plants, or offsets within catchments, during the resource consent application process.
22. Where existing drinking water treatment facilities are not currently providing potable or wholesome water, different criteria are proposed. In these situations, consents cannot be granted if they will (or are likely to) make the water quality worse at the point where water is taken for a drinking water supply. This is intended to achieve a balance between preventing ongoing increases in contamination of source waters, while allowing some development in catchments with inadequate drinking water treatment plants.
23. This part of the standard will commence 6 months after the regulation is made. It will apply to all resource consent applications lodged after that date. It will not apply to resource consent applications lodged on or before that date.

² Definitions of potability and wholesomeness, which define whether water is safe and aesthetically acceptable to drink, will be based on the Drinking Water Standards for New Zealand 2005.

24. The Health (Drinking Water) Amendment Bill will require water suppliers to take all practicable steps to comply with the Drinking Water Standards for New Zealand by a specified year, depending on population. If this becomes law, the proposed national environmental standard regulation could be amended to refer to progressively lower population thresholds to synchronise with the requirements of that Bill.

Part 2: Permitted activity rules in regional plans

25. The proposed standard states that before including permitted activity rules in a regional plan, regional councils must:
 - Undertake 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 becoming nonpotable or unwholesome after existing treatment. In situations where permitted activities are marginally deteriorating source water, communities may consider alternatives such as planned treatment plant upgrade or offsets within the catchment.
26. In practice, this means that councils will not be able to include permitted activity rules in their plans if those activities will result in water becoming nonpotable or unwholesome to drink. In order to allow flexibility for councils and communities, the national environmental standard deliberately does not prescribe how councils should meet this requirement. Introducing or changing permitted activity rules is one possibility. Non-regulatory methods, such as riparian protection programmes, are another.
27. The purpose of this part of the standard is to ensure that the effects of permitted activities on sources of human drinking water are considered when councils prepare regional plans. This could apply to any activity regulated by a regional council, such as discharges, water takes and land uses that could affect water quality.
28. Councils are already required to review their regional plans every ten years. Under the Resource Management Act, permitted activity rules cannot be included in plans if the activity will result in adverse environmental effects, including effects on aquatic ecosystems and on stock drinking water. The proposed standard will ensure that councils consider effects on drinking water sources along with the other matters they are already required to consider.
29. This part of the regulation will apply when any regional plan or part of a regional plan is prepared or reviewed.
30. This part of the standard will not require councils to undertake a separate plan review. It is intended to be done as part of plan preparation or scheduled plan review, to minimise additional work for regional councils.

31. The standard does not specify the level of detail required for the assessment. This is to be decided by individual councils at their discretion, consistent with the local solutions approach of the RMA.

Population threshold

32. Parts 1 and 2 of the standard would apply only to communities of 500 people or more. A lower population threshold was originally proposed, but was revised in response to concerns from local government about the potential costs of applying the standard to all small communities. The estimated cost of applying the national environmental standard to communities of 500 people and above is \$24.2 million over 20 years. For a threshold of 25 people and above, as originally proposed, the estimated cost is \$200.4 million over 20 years.
33. Five percent of the New Zealand population live in communities of under 500 (but over 25) people. It is recognised that setting the population threshold for the proposed standard at 500 potentially leaves these smaller communities at risk from deteriorating source water quality.
34. Analysis shows that the greater the number of plants that are upgraded to deliver safe water, the cheaper the costs of complying with the national environmental standard (since treatment plants can deal with more contaminants in the water.) The Health (Drinking Water) Amendment Bill will require water suppliers to take all practicable steps to comply with the Drinking Water Standards for New Zealand by a specified year, depending on population. This would lead to upgrades in drinking water treatment in communities that do not currently receive safe drinking water.
35. If the Health (Drinking Water) Amendment Bill becomes law, the proposed national environmental standard regulation could be amended to refer to progressively lower population thresholds to synchronise with the requirements of that Bill. This would result in extending the benefits of the national environmental standard to small communities, including rural settlements and marae.

Part 3: Notification of spills and other events

36. The third part of the proposed standard requires all relevant consent holders to notify downstream water treatment plant operators and the consent authority of significant unintended events that have the potential to adversely affect sources of human drinking water.
37. Consent authorities (both territorial and regional authorities) will be required to place this condition on new consents if the activity has the potential to adversely affect water quality, at the point where water is taken for a drinking water supply, if something went wrong (e.g. breach of an effluent pond wall). The content of such a condition would be decided by the consent authority on a case by case basis depending on factors such as the nature of the activity and the proximity to a drinking water source.

38. This part of the standard applies to activities with the potential to affect community drinking water supplies for populations of 25 people or more.
39. This part of the standard will take effect 6 months after the regulation is made.
40. During drafting, consideration would have to be given to the circumstances in which this provision may apply, as the standard is not intended to require consent holders to report instances in which they have breached the law.

Definitions

41. The definitions of nonpotable, unwholesome and any other relevant terms will be generally consistent with those in the Drinking Water Standards for New Zealand 2005. Technical details of these definitions will be discussed with Ministry of Health officials during the drafting process. The need for an amendment to the regulation will be considered following any subsequent revisions to the Drinking Water Standards for New Zealand

Ability to set more stringent standards

42. Councils will be able to set more stringent standards for protection of drinking water sources in their region if they wish.

Consultation requirements

43. Section 44 of the Resource Management Act requires notification and an opportunity for the public and iwi authorities to comment on proposed national environmental standards. The proposed national environmental standard for sources of human drinking water was notified in September 2005. Submissions were invited over an 8-week period from 24 September to 28 November 2005. 82 submissions were received. These came from local and central government, industry, non-governmental organisations and members of the public.
44. During the submission period, technical workshops on the proposed national environmental standard were held in major centres throughout the country. Separate meetings were held with local government, drinking water assessors and other stakeholder groups. In addition, the Ministry for the Environment's Talk Environment meetings in 2005 coincided with the consultation period for the proposed standard. The meetings included discussion of the proposed standard as one of the key topics during 30 meetings in 16 regions. In total, the combination of focused workshops and the Talk Environment meetings delivered the proposed standard to over 3100 people during the consultation period.
45. Submitters' positions on the national environmental standard were split. 38% supported or conditionally supported the proposal. 41% opposed it. The remainder did not state their position. Most submitters supported

the intent of protecting drinking water sources, even if they did not agree with the content of the proposed national environmental standard.

46. 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.
47. A summary of submissions was produced and sent to all submitters. It was also published on the Ministry for the Environment's internet site.
48. Following the close of submissions, Ministry for the Environment officials held discussions with numerous stakeholders from local government, as well as some industry representatives and Ministry of Health officials. Some aspects of the proposal were modified in response to submissions and as a result of subsequent discussions with stakeholders.
49. In particular, changes were made to make it easier for local government to implement the standard. Key changes were:
 - Restricting implementation of the standard primarily to regional councils (reflecting existing responsibilities under the Resource Management Act and also where water quality expertise resides).
 - Changing the population threshold for the standard from 25 to 500 to make implementation less onerous.
 - Removing a part of the standard which all parties agreed was unnecessary, as it duplicated existing emergency responsibilities.

Cost-benefit analysis

50. An economic analysis of the potential impacts of the national environmental standard has been undertaken. Results are summarised in the attached regulatory impact statement and business compliance cost statement.
51. Total costs associated with the national environmental standard were estimated at \$24.4 million over 20 years, with the majority of costs being borne by consent applicants.
52. The quantification of benefits directly attributable to the national environmental standard is difficult. However, calculations show that if the national environmental standard resulted in a 15% improvement in water quality over time, this would result in an estimated health benefit of \$27 million over 20 years. In practice, the regulation will deliver much broader benefits which make the national environmental standard highly efficient. These include avoiding the need for future treatment plant upgrades and maintaining New Zealand's image as a safe tourist destination and a source of healthy, environmentally sound produce.

Tools to assist local government

53. The Ministry for the Environment intends to produce guidance material to assist councils to implement the standard. This will include:
- A users' guide to outline the requirements of the regulation in plain English for local government and industry.
 - A database showing locations of community drinking water supply take points.

Consultation undertaken

54. The following departments have been consulted in the preparation of this paper and their views have been taken into consideration: Ministry of Health, Ministry of Economic Development, Ministry of Foreign Affairs and Trade, Parliamentary Counsel Office, Ministry of Education, Ministry of Agriculture and Forestry, Land Information New Zealand, Te Puni Kokiri, Ministry of Research, Science and Technology, Treasury, Housing New Zealand, Department of Conservation, Department of Building and Housing, Ministry of Justice, Department of Internal Affairs, Ministry of Transport, New Zealand Defence Force, Ministry of Women's Affairs. The Department of the Prime Minister and Cabinet was also consulted in the preparation of this paper.

Financial implications

55. This paper does not contain specific recommendations on expenditure or revenue.

Human rights

56. There are no inconsistencies between the proposal and the Human Rights Act 1993 or the New Zealand Bill of Rights Act 1990.

Legislative implications

57. The proposed standard will be developed as a regulation made by the Governor-General, by Order in Council.

Regulatory impact and compliance cost statement

58. The regulatory impact statement and business compliance cost statement attached to this paper comply with the requirements for these statements. These documents include an analysis of alternatives to the national environmental standard, and the basis for deciding that a national environmental standard is the most appropriate option.
59. Based on the information provided in the attached regulatory impact statement and business compliance cost statement, the Regulatory Impact Analysis Unit considers that the disclosure of information is adequate, and the level of analysis is appropriate given the likely impacts of the proposal.

Publicity

60. The regulations will not come into force until at least 28 days after they have been notified in the New Zealand Gazette. I will release press statements prior to the regulations being completed, and the Ministry for the Environment will develop an implementation package for regional councils.
61. If the proposed standard is approved, I propose that this submission, including Cabinet decisions, and any Annexes, including the Regulatory Impact and Business Compliance Cost Statement, will be publicly released, including by publication on the Ministry for the Environment website,

Recommendations

It is recommended that the Cabinet Policy Committee:

1. **Note** that the proposed national environmental standard for sources of human drinking water aligns with the Sustainable Water Programme of Action;
2. **Note** that consultation has been undertaken on the proposed standard in accordance with the requirements of the Resource Management Act;
3. **Note** that analysis (presented in the regulatory impact statement and business compliance cost statement) has demonstrated that a national environmental standard is the most effective and efficient national planning instrument to achieve the objective of reducing the risk of contamination of drinking water sources;
4. **Agree** that regulations be developed for sources of human drinking water based on the subject matter outlined within this Cabinet paper;
5. **Invite** the Minister for the Environment to instruct Parliamentary Counsel to draft a national environmental standard to give effect to these policy decisions;
6. **Agree** that the Minister for the Environment may publicly release this paper, including Cabinet decisions, and any Annexes, including the Regulatory Impact and Business Compliance Cost Statement, once Cabinet has made a decision.

Hon David Benson-Pope
MINISTER FOR THE ENVIRONMENT