



STAFF REPORT

TO: Environment & Planning Committee

FROM: Mary-Anne Baker, Policy Planner

REFERENCE: W310, E880

SUBJECT: **SUBMISSION TO MINISTRY FOR THE ENVIRONMENT ON PROPOSED NATIONAL STANDARD FOR WATER MEASURING DEVICES - REPORT EP07/02/19** - Report Prepared for 28 February Meeting

1. PURPOSE OF REPORT

This report recommends confirmation of a submission lodged Friday 16th February with the Ministry for the Environment on its discussion paper on working towards a national environment standard for water measuring devices.

2. BACKGROUND

In April 2006, the Minister for the Environment and the Minister of Agriculture and Forestry released the Sustainable Water Programme of Action implementation package. The package aimed to improve the sustainable management of freshwater, protect freshwater resource into the future and acknowledge the fundamental importance of water to all New Zealanders.

One of the key outcomes sought was to provide for the increasing demands on water resources and encourage efficient water management. To achieve this, the government is proposing an NES on water measuring devices. This NES would set minimum requirements for the installation and operation of water measuring devices, including transfer of data. It would apply to all water takes that need resource consent except in specific circumstances. (It does not apply to domestic water takes at a household level)

3. RECOMMENDATION

It is recommended that the Committee **confirm** the submission to Ministry for the Environment on the discussion paper on the proposed National Environment Standard for Water Measuring Devices as attached to this report.

Mary-Anne Baker
Policy Planner

TASMAN DISTRICT COUNCIL'S SUBMISSION ON "PROPOSED NATIONAL STANDARD FOR WATER MEASURING DEVICES"

The Tasman District Council thanks the Ministry for the opportunity to be part of the development of a National Environment Standard (NES) for water measuring devices and to comment on the Ministry's Discussion Document; Proposed National Environmental Standard for Water Measuring Devices (2006).

As an introductory comment, we consider the introduction of national environmental standards (NESs), which have the force of regulation, should adhere to certain principles. An NES should be clear and unambiguous in its meaning and effect, relevant to resource management issues which justify national intervention, cost effective in administration, and not impose unintended adverse consequences for local authorities or their communities. We remain to be convinced that the current proposal will meet any of these principles and, as with previous NES proposals, we are sceptical about how the concepts will be translated into law.

GENERAL COMMENTS

1. The Tasman District Council has had a long history of water management and has recognised and provided for the sustainable management and efficient use of water in this district through a series of water management plans and their ongoing implementation. Water management provisions have been developed and improved since the first Water Management Plan was prepared for the Waimea Plains in 1981.
2. In particular, the Council has developed policies and rules that recognise and regulate the need for and use of water meters as a key water management tool. Water meters have been an integral part of our management regime in specified parts of the district since the early 1980s and have been required under regional plans since 1992.
3. The Council recognises that part of the NES proposed in the discussion document could provide valuable assistance to the Council in its role as water manager. This part is the technical specifications for water measuring devices (more detail provided later).
4. The Council considers that the discussion document has not clearly articulated or justified the national cause for the proposed standards. The objectives provided in section 1.4 outline a combination of national, regional and on-farm objectives that merely indicate the wide scope of the issue surrounding use of water meters.
5. The discussion document notes existing use of water metering by councils. There is general support at many levels for the value of requiring water meters and the need for some national consistency. Various approaches have already been adopted by regional/unitary councils. Given overall acceptance of water metering as a good water management tool, the report should also have examined in more detail current practices, their history, the rationale for them, and why there hasn't been greater or

more widespread use of water metering as a water management tool at a catchment level. This analysis would have improved the Ministry's understanding of the issue, identified current barriers, and reasons why meters may not be universal, and would have provided better direction for improvements.

6. The Tasman District Council does not require water metering at all sites. For some catchments, it is sufficient for Council to control and sustainably manage water use by allocating specified amounts of water through water permits. It maintains a database that allows this information to be accurately recorded and monitored. Furthermore, Council has established thresholds for cumulative totals of allocated water, and when these thresholds are reached, Council may initiate further investigation into the need for more detailed water management provisions (including use of water meters).
7. The Council generally establishes allocation limits in terms of litres per second, and records cumulative totals of water allocated by water permits in litres per second. It acknowledges that there are other formats that could be adopted including annual volume reporting, which may also require existing permits to be reviewed.
8. Annual volumes of water allocated are, on their own, an indicator of economic activity but provide very little indication of environmental performance nationally. The reasons for collecting this data need to be more precisely articulated so that an appropriate reporting format can be developed.

The Council considers that the annual reporting by Councils of the amounts of water allocated through resource consents could be nationally significant data for both environmental and economic reasons.

It supports development of nationally consistent standards for water permit allocation data reporting and suggests that amount allocated in litres per second (possibly as a percentage of the Mean Annual Low flow) as a suitable alternative to the proposed standard.

The justification for national recording and reporting of actual water use data as opposed to allocated water has not been clearly established.

9. The RMA already provides ample discretion for Councils to adopt policies and methods to require water use measuring and recording. The Council does not believe that an NES should be used to improve water management performance by some councils at the risk of undermining or conflicting with sound water management practices already adopted by other councils.
10. Part of the assumption supporting a universal, national requirement for water meters appears to be linked with the proposition that the data yielded would indicate situations where the resource is over-allocated. The phrase "over-allocation" is used in the discussion document without being defined. There is very little understanding shown in the discussion paper about the extent to which a resource can or should be allocated and the resultant extent to which a users' supply is subject to reductions in a given drought (from the total amount of water available for allocation). The Council would support more debate about what the terms means in relation to allocation of

water in catchments where there is insufficient water to meet all demand all the time. (Incidentally, there has also been very little debate about how Councils manage water takes during drought and what is best practice.)

SCOPE OF NES

11. If the need for national reporting of actual water use can be shown, the Tasman District Council considers it cannot be justified for all water takes in all situations. In this case, the Council considers that national policy direction must be developed through an NES regulating the use of water measuring devices.
12. As noted above, even at a catchment level, this Council does not always require water measuring devices. We can only agree that the benefits of water meters are many, but in some catchments (e.g. where there is plenty of water still available for allocation) there are few if any **regional** benefits to collecting and maintaining such data. The Council challenges the assumption that benefits of actual water use data at a national level are therefore sufficiently significant to support imposing any universal requirement. The question as to whether water meters are always the best approach for individual users can be assessed on a case by case basis.
13. The Council notes that some councils have adopted the 80/20 principle, whereby the water users taking 80% of the water are monitored while the smaller takes are not so intensively managed. In this district, however, the Council has resolved that, where water meters are required, all users are expected to install water meters. This is in order to achieve equity between users and enable monitoring of permit compliance.
14. The Council would expect that national policy direction would identify the circumstances under which metering actual use requires reporting at a national level. In this case, it would support an NES that established the criteria for measuring water use and allowed for regional implementation through council plans and rules.
15. Suggested criteria for imposing national water metering requirements are:
 - in catchments or water management zones where more than X% of the specified allocation limit has been reached
 - a scale in terms of MALF or 5 year Low Flow and quantity of abstracted water with respect to the MALF or groundwater indicator
 - in any water management zone or catchment where an environmental trigger has been established (e.g. low flow/groundwater level/seawater intrusion threshold)
 - where they are considered necessary, meters may be required to be installed by a specified date.

Any NES should provide relevant criteria as to when and why water meters would be required (see 15 above).

Alternatively, but less preferable, an NES could require councils to prepare water measuring/metering policy including an implementation programme (by set date?) that states circumstances and timing for water measuring, taking into account the criteria listed above.

16. The Council agrees that domestic takes allowed by RMA Section 14 not be subject to a water meter requirement. The sheer number of such takes means the administrative burden of dealing with data from so many water meters is not warranted by any possible benefits. The Council acknowledges that such takes will continue and will be inevitable for human health reasons. It notes that information about conserving water and on-site water storage etc are ways to manage adverse effects of those takes.
17. The Council also feels that other takes permitted by Council rules should not be subject to water metering. Councils would have determined that, on their own and cumulatively with other permitted takes, these takes have an insignificant effect on the water resource (and quantities of the permitted take can vary from catchment to catchment). Allocation limits take into account the cumulative effect of permitted takes.

TECHNICAL SPECIFICATIONS

18. Although the Tasman District Council fails to identify any national significance or importance for national reporting of actual water use for all consented takes, it clearly recognises the need and value of water use measuring and reporting at a local level. To this end, it supports an NES that establishes standards of performance and a testing regime for water measuring devices.

The Council supports an NES that defines the minimum requirements or standards of performance for water measuring devices.

19. The Council supports an NES that defines the minimum requirements for water measuring devices. However, it considers the consent holder would still have no certainty that any particular device actually meets the proposed standards, including operation under various water quality parameters (e.g. high sediment, high iron etc) or that it is in fact fit for the purpose. Groundwater and surface water takes cannot be treated in the same way. Issues such as water quality, debris damage to meters, fish entrainment, and intake velocity are relevant considerations for surface takes. Meters for groundwater takes may also be affected by water quality.

A testing standard is required for water measuring devices.

Council would support the development of a testing regime that confirms that a water meter is fit for the purpose. (See for example, the NES establishing the performance standard for woodburners of 1.5 grams of particulate /kg of fuel burnt. This NES is supported by the Australian/New Zealand Standard 4013; 1999).

This is potentially significant but unless there is agreement as to what devices are suitable and fit for purpose, the NES will serve little purpose and will simply transfer the burden of defending its intent on to councils when they say the imported model manufactured in any particular country is not acceptable.

20. Recording Interval

Objectives for recording data at any one time are likely to be different depending on site specific conditions, weather conditions, catchment conditions, time of year (for example, taking water for frost fighting has entirely different effects from taking water for irrigation). Instantaneous flows for surface takes may be critical information for some water bodies, but hardly ever for groundwater takes.

21. Real time information during a drought is likely to be essential at a catchment level – but not at a national level. Annual data is more relevant at national level. This has implications for how any NES is written and indicates the need for regional flexibility. In particular, the recording interval is something that needs to be determined on a case by case basis. . It will be influenced by the type of take (ground or surface water) the sensitivity of the water body, degree of pressure by other water users and level of management required to maintain environmental values. This Council currently only requires one water user to supply instantaneous take information (telemetered data). Council will require water users to supply water meter data more frequently during a drought.
22. The majority of water meters in this district record the cumulative total, and the frequency of reporting of this data may vary depending on river flows. These water meters do not provide a pulse output for each cubic metre of water. The Council would oppose any regulation that requires an upgrade of existing water meters to record daily volume.

The recording interval should be an issue resolved at a catchment level

However, Council would support a specification that, where required, meters must be able to provide continuous measurement.

23. Data Storage

It is unclear whether the intention of the proposed NES is to require data loggers or whether cumulative totals are considered 'data storage', but the proposed minimum requirements in section 4.6 imply use of a data logger. While this council clearly recognises the benefits of data loggers and the ability to require direct transmission of this data, most water permit holders in this region currently have standard water meters that require manual reading and recording of data.

24. Council will address performance standards for existing and future meters through a review of its water metering strategy. It may over time seek data loggers for all water users, but it is likely to ever require all this information by telemetry. Upgrading this Council's current water metering systems has a number of issues (including costs for users and significant resourcing issues for Council). While a telemetered water use monitoring system definitely has attractions for water managers, the capacity of any telemetry system to cope is currently limited. GPRS (cell phone) technology could also be considered for data reporting, but again, because of local issues such as cell phone coverage also mean such decisions must be made at a local level.

25. A retrospective NES requiring a much higher standard has significant cost and effort requirements for both the Council and water permit holders. This Council opposes this requirement, but supports the intention to establish performance standards for these measures if they are required.

**An NES should enable Councils to require permit holders to upgrade water measuring performance, including installation of approved water meters and installing measures such as data loggers and direct transmission of data (see also section below). ;
Alternatively (and less preferred) an NES requiring higher levels of performance (such as requirements for data loggers) should only be required for any (applicable) new consents to take water.**

26. The proposed standard for measuring flows in channels of +/- 10mm water level accuracy can result in high errors in flow depending on whether the flow is low or high. The measurement of channel flows should not be based on the accuracy of the water level, but on the accuracy of the flow reading.

The Council suggests the measure of accuracy of flows in channels be based on flow, not water level

RECORDING AND REPORTING

27. The discussion document notes in section 4.5 concerns about poor reporting rates by water users. The Council supports a requirement for consent holders to record and transfer water metering data. It would especially support the development of specific penalties for non-return of data where requested by Council. A legal opinion obtained by the Council on the scope for enforcement action for non-return of water meter data concluded that the Council lacks any ability to impose an infringement fine, but must rely on the much more weighty and time consuming measures provided by an abatement notice or enforcement order.

The NES should specify penalties to be imposed for non-return of water meter data (i.e it should introduce explicit power to impose infringement fines).

IMPLEMENTATION ISSUES

28. The asserted benefit of an NES being “quick and cost effective” is contested. It ignores the implementation consequences (cost and administrative effort) for both councils and water users. Council would however, support both the enhanced power and the flexibility to require water meters to meet local conditions and issues. This is particularly significant in relation to existing water permits and the need to review consents. Consent reviews are very expensive for councils. (Note that water meter requirements can be imposed when consents are renewed anyway).

Council acknowledges the benefits of requiring water meters in appropriate circumstances and supports a 'fast track' low cost process for reviewing consents where the term of the consent is very long or where rates of water use are increasing in a particular catchment. (The councils' RMG has made the suggestion that a "deemed condition" could be written to allow councils to implement a measurement requirement when circumstances warrant).

29. **Data Management**

Maintenance of water meter databases is costly and time-consuming especially where data is used to ensure compliance with conditions as well as managing effects of water takes on a catchment or water management zone basis. This data set is in addition to information held about water permits and total allocations in specific catchments. Compliance and data accuracy are big issues. There are significant regional variations in how councils manage this data

Council supports development of data management best practice guidelines

30. The impact of a five year timeframe will vary considerably depending on the final scope of the NES