

Analysis of Current Problems with Freshwater Management in New Zealand
(Based on NZ Business Council for Sustainable Development's "Best Use Solution for NZ's Water Problems")

Problems	Consequences (Effects)	Main Causes	Remedial Action
<u>Water Quantity</u> (1) Over-allocation of water to consumptive uses	<ul style="list-style-type: none"> • Adverse effects on in-stream (non-consumptive) values (eg ecology, recreation, cultural, hydro-power) • A lack of balance in the allocation of water between consumptive and non-consumptive uses. • Investment uncertainty due to short-duration consents. 	Lack of a robust national water allocation system based on a wide view of the relationship between land use, water use and water quality, and embracing strategic perspectives (eg future needs)	Formalisation of a <i>mixed</i> Integrated Catchment Management Planning (ICMP) system and market framework to promote integrated management of land use, water (surface and groundwater) use, and water quality. Via amendments to RMA and (revised) NPS.
		Lack of national guidance as to how competing demands for water should be balanced in the national interest	Promotion of a values-based allocation system with guidance from central government as to how values should be balanced (eg industry, hydro, irrigation, recreation, cultural, ecological values and needs). NPS could provide this guidance.
			Possible requirement to allocate all water to 4 primary pools (Viz: aquatic ecosystems, permitted activities, in-stream public uses, and consented use pools) to reflect a more balanced approach in the NZBCSD report (p19).
		Only a few regional plans have set allocation limits for water bodies, probably reflecting a lack of guidance as to how this should be approached.	Impose requirement as advocated to set allocation limits (via community involvement in preparation of ICMPs) and provide central government guidance as to how this should be approached via the NPS.
		Current approach to water allocation does not adequately reflect the natural variability of water flows, leading to conflict and ecological damage during droughts. It does not distribute risk across stakeholders nor make it clear who carries the risk if consented volume of water is not available.	Require consumptive users to take entitlements (below) to proportional shares (not absolute amounts) in the water made available for taking / consented use in an ICMP. (The majority of the risk associated with climate-induced variability in water availability would then be with the user).
		Information deficits; lack of monitoring and metering of water resource and use, and frequent poor understanding of relationship between surface and groundwater resources.	Require resource monitoring (surface and groundwater) and metering for all significant takes, via NPS. Also provide surface / groundwater relationship studies.
		Lack of national guidance as to how to set "environmental flows" to sustain recreational, ecological and cultural values.	Provisions of guidance on setting of environmental flows by central government, via NPS or an NES.
		Consent durations tend to be kept to a minimum by regional councils as a way of managing uncertainty surrounding future resource availability (relates to investment uncertainty issue, left column).	Separate entitlement right from take / use rights (below) and create a 35 year term for access entitlements .

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(2) Allocated but unused water (can be up to 80% of allocated water)	<ul style="list-style-type: none"> Surplus allocated water is not available for productive uses. Constraints on growth / jobs unrealised socio-economic benefits Frustrated demand, conflict, litigation 	<p>Under the first-in first-served allocation system, people apply for more water than they need or the maximum they are likely to use.</p> <p>Under RMA, rights to take and use water are granted to landowners and the Act only has limited provision for the voluntary <u>transfer</u> of surplus allocated water and transfer involves a costly and time-consuming process akin to the gaining of a <u>new</u> take consent.</p>	Creation of an entitlement in law, via amendment to RMA, to access water separate from the rights to take and use (this would be a secure property right available for a 35 year term with rights to renew for 35 years) as advocated by the NZBCSD. These water access rights would be transferable. The ICMP would define the terms and conditions by which voluntary transfer of access entitlements would occur. The "best use" approach advocated by the NZBCSD allows for the <i>immediate</i> and <i>temporary</i> transfer of an entitlement for a defined period.
		Coupled with the above, a lack of a formally recognised pricing instrument to facilitate the transfer of entitlements	Formal recognition (by way of the NPS) of a pricing instrument to enable transfer of entitlements whereby prices apply only in the consented use pool (see above)
(3) Inefficient use of water	<ul style="list-style-type: none"> Wastage of water. Opportunity costs 	Lack of incentive(s) to improve efficiency of use (eg current irrigation practices) because users do not pay for consumptive uses of water and often have unconstrained access. "Use it or lose it" rules encourage inefficient use.	Mandatory payment for consumptive use of water. Pricing of tradable entitlements (above) which will provide incentives for more efficient use.
<u>Water Quality</u>			
(4) Deteriorating water quality in some water bodies	<p>Adverse effects on in-stream values (aquatic ecosystems, recreation, cultural values)</p> <p>Adverse effects on consumptive uses (high cost of clean-up) eg drinking water supplies, industrial uses.</p>	Point-source discharges of contaminants	Improved treatment of some discharges (tighter consent conditions)
		Intensification of land use, increasing contaminant load in diffuse run-off and in surface water entering groundwater	Landowner education. Land use controls as a last resort eg stocking rate controls as in catchment of Lake Taupo, to control nutrient inputs
		Generally less water to dilute contaminants in summer (water abstractions and climate change)	Improved water allocation (above) and the harvesting / storage of water when plentiful
		Failure of many regional councils to set minimum water quality standards via the water classification procedures in the RMA	Mandatory setting of water quality minimum standards / limits via ICMPs (above)
		Inadequate approaches to managing the cumulative effects of contaminant inputs to water bodies	More emphasis (research / mgt) on defining the assimilative capacity of water bodies. The possible introduction of a cap- and-trade mechanism whereby a limit or cap is put on permissible contaminant loads and rights to discharge can be traded, as advocated by the NZBCSD.