

Submission on Economic regulation and consumer protection for three waters services in New Zealand.

From:
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Introduction

Thank you for the opportunity to submit. There is a wealth of experience and knowledge within the local government sector on three waters. Funding has always been the most difficult and an area that has restricted the sectors response,

The following items have been identified to compliment other submissions made by Local Government, particularly the Wellington and Wairarapa submissions.

However, there are a few areas that we wish to provide additional brief feedback. These being on:

- 1 Climate Change
- 2 Water Bylaws
- 3 Combined rural / urban supplies and easement arrangements
- 4 The Exclusion of Self Supply
- 5 Internet of Things – Water Meters
- 6 Setting Revenue and Financing – A Methodology

Thank you for receiving the submission

Regards

Peter Wimsett
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Discussion Items

1 Climate Change

We recommend that impacts of climate change form a central part to review capital investment decisions.

For example -these include investment in:

- Multiple alternate water sources for supply (bore water can be catastrophically affected by earthquake events).
- Treatment Systems to manage contamination of water such as turbidity, cyanobacteria, nitrates etc
- Adequate water storage (treated and/or untreated).
- Demand management systems and pricing mechanisms
- Retreat and storm surge issues
- Unexpected impacts e.g. specifications levels exceeded for return-events such as flooding leading to failure and difficulty in repair or access to supply chain

Climate Change can be expected to have a large impact on immigration and the availability of water.

In particular, New Zealanders returning home, peoples of Pacific nations and Australians may all seek automatic right of entry while increasing trouble spots will create interest from climate refugees and those seeking options for their survival.

In 2020, Tararua District experienced a one in fifty-year drought event for the towns of Woodville and Dannevirke. Woodville was particularly affected and was unable to source water under its consent for over 2 months. This drought management was only achieved through major investment in infrastructure over a period of ten years with covered reservoirs and, also by imposing major restrictions in place under its Water Supply Bylaw to reduce consumption.

However, there is a cost to this investment. Debt for 3-Waters is already a burden for local rates. For reference, in Tararua approximately \$240,000 equates to 1% of rates. External interest cost in 2019/20 was approximately \$400,000 and debt repayments were \$1.9 million, meaning about 10% of all rates, (rural and urban) was used for debt servicing. Of these, two thirds, or 6.6% of rates was for 3-Waters. Furthermore, these costs excluded the operational costs, depreciation for future replacement, and the need for further investment.

Breakdown of Tararua District Council Debt at 30 June 2020

Activity Debt	2020	Split
Stormwater	1,473	4%
Wastewater	7,673	20%
Water	<u>16,050</u>	<u>42%</u>
3-Waters	25,196	66%
Other Debt	<u>12,887</u>	34%
Total Debt	<u>38,083</u>	<u>100%</u>

It is now a concern that there will be increasing demand for water from immigration (potential 'climate refugees', others and returnee New Zealanders). More stress on water supplies will come from climatic events such as rain, snow and drought, water contamination and biological events. These are all potential 'cascading' climate risks of the future that may affect water supply. Water security is likely to become increasingly difficult in the future for food production, industry, business, residential and Government services.

The investments in water supplies of the future will be more than just upgrade and renewal of existing services. New water storage, treatment systems and secondary water sources will need to be considered. These are likely to be major matters for consultation shortly to be released in Tararua District Council's draft Long Term Plan due for release in April/May 2021.

To conclude, there remains a place for local authorities who best know their communities that enables them to set visions and goals relevant for those communities and to then build the infrastructure to support these.

2 Water Bylaws – Transitional Matters

Council have multiple water supply bylaws that support the regulatory framework.

These can provide specialised processes for localised conditions. Having a unified bylaw will provide challenges such as past or current requirement for potable, greywater or stormwater tanks.

Grandfathering these bylaws until such time a generalised review can take place is suggested as a transitional arrangement.

Taumata Arowai intended purposes will be to ensure compliance and enforcement for 3-Waters (Water, Wastewater and Stormwater) with standards and actions to address non-compliance.

Water Supply Bylaws are established under the local Government Act 2002 to compliment and expand on the primary legislation and regulations – on how to do this, including the design of

physical connections, emergency powers and enforcement actions for use of public water supplies.

The new legislation sets out new definitions and other matters. These may create difficulties with interpretation. Bylaws cannot contradict its legislative source. As a result, some water bylaws may require review as a result of the Bill. Given the prescribed process for review, it is suggested that the Committee assess this matter to ensure a transition period may occur to enable full compliance.

In many instances there will be minor issues to consider. An example is that the Tararua District's current Water Supply includes connection to small lifestyle blocks and a few farm connections. The latter being historical agreements to supply a very small number of farms usually in exchange for easements across land for water infrastructure. This has necessitated the inclusion of conditions in the Bylaw for private tanks to be installed at some locations.

3 Combined rural / urban supplies and easement arrangements.

The Tararua District's landscape is changing rapidly and afforestation is one of the major changes we see and an impact on water provision to the affected areas.

With co-funding from Te Uru Rākau / Ministry of Primary Industries, Council has commissioned a study to look at the current and future impacts of afforestation in our district.

A major piece of the research focuses on social impacts associated with the rapid land use change; what Right Tree, Right Place means to locals; what opportunities afforestation could bring to local people and the relationship between afforestation and tourism.

However, the change has a major impact on the use and access to a shared rural / urban water Supply.

The context of issues that the Tararua District faces can be very rural in nature. A perfect example is the Pongaroa Rural Water Supply.

As background, the Pongaroa Water Scheme was commissioned in 1983 from a government funded programme. This investment had a dollar-for-dollar government grant and community in-kind donated labour. Then further private investment was made in farm reticulation systems. The Scheme now supplies water to both households and livestock with 96 km of Council controlled pipelines. These deliver water to the settlement of Pongaroa (Less than 200 people) and farms spread over a wide geography. There were seven boil-water notices issued in the two years prior to the treatment plant installed for the Town in January 2019, but none since then. The Supply and future security of water for the area of Pongaroa is now being affected by the conversion of land from agriculture to carbon farming/permanent forest. The economic

impact of this change in land use is far ranging, with over a century of agriculture work reverting to monoculture forestry.

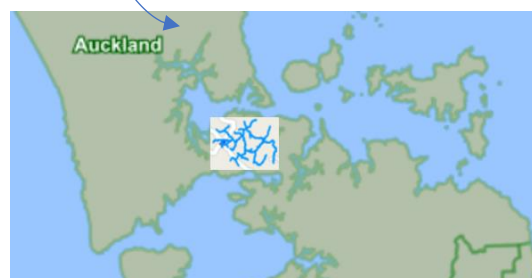
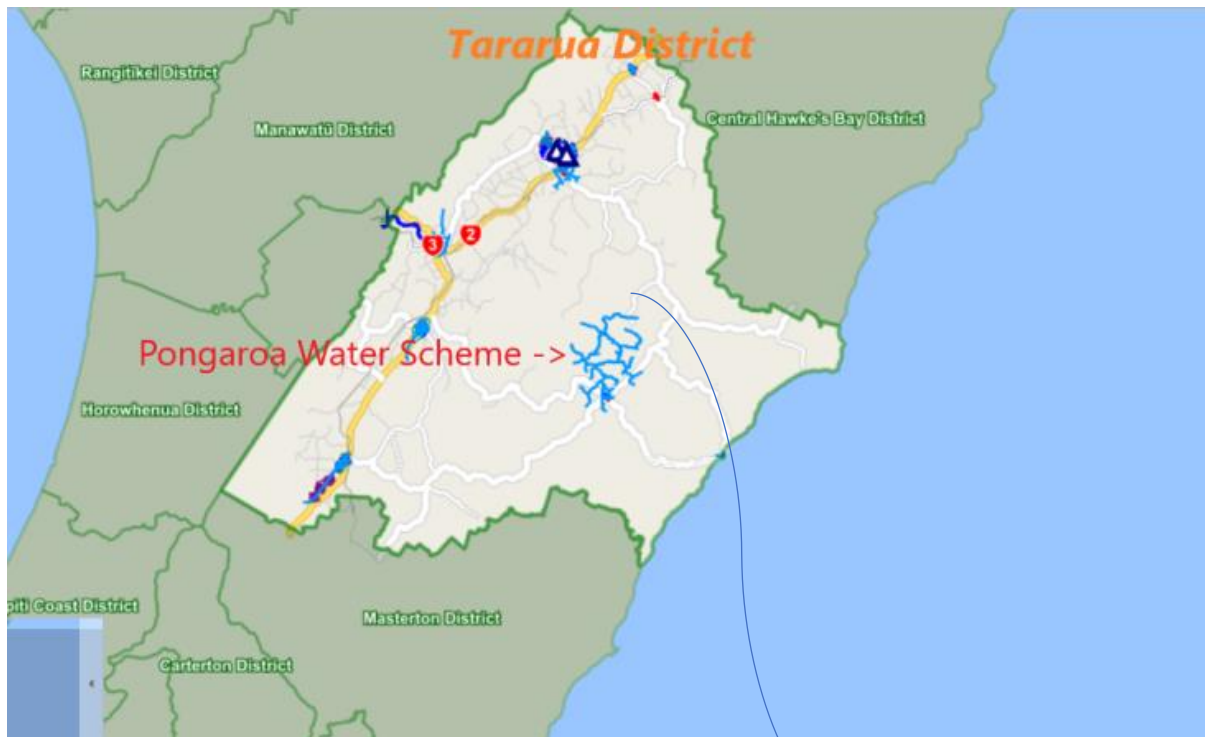
For the Scheme, this change in land use has four clear impacts:

- 1 Reduced demand from there being less people and livestock
- 2 Road access for maintenance of infrastructure may no longer exist due to tree growth and lack of road maintenance
- 3 On-farm private piping systems and Council pipelines may become compromised by tree roots (from tree growth and increasing fire risk)
- 4 Untreated water sources may become needed for fire suppression (particularly during dry periods). The area is particularly windy and expected to dry further from climate change.

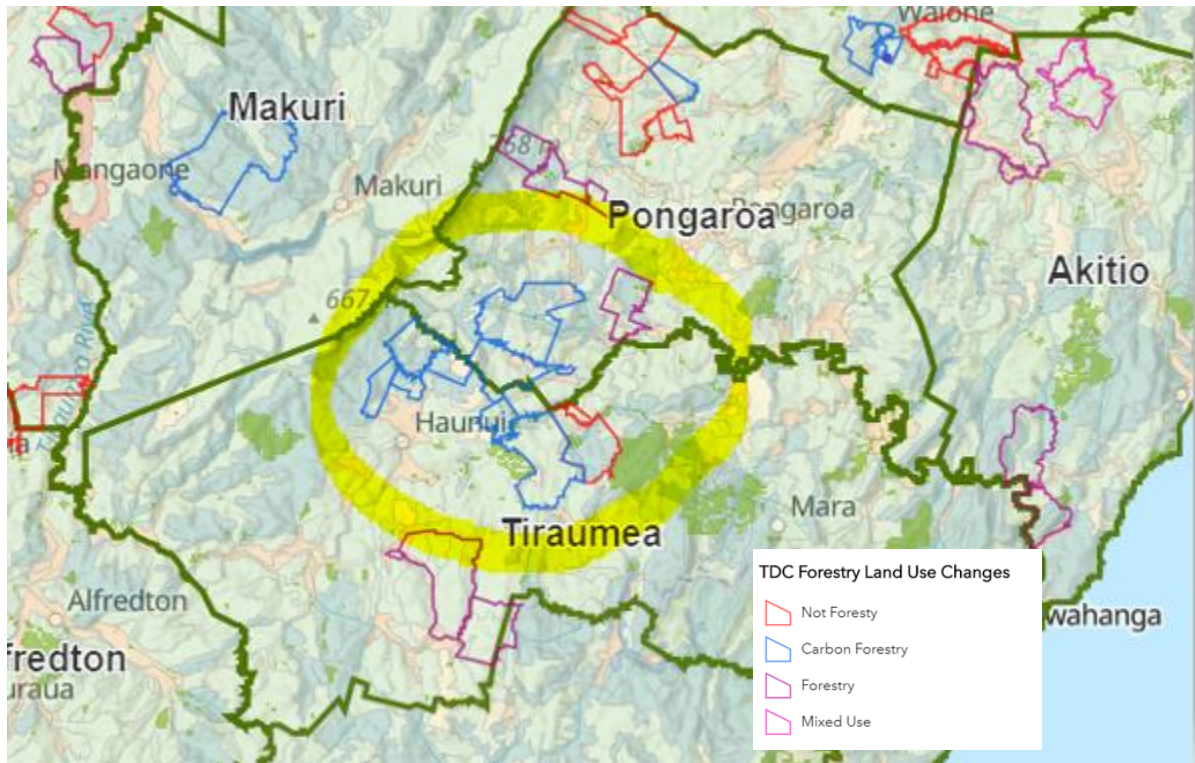
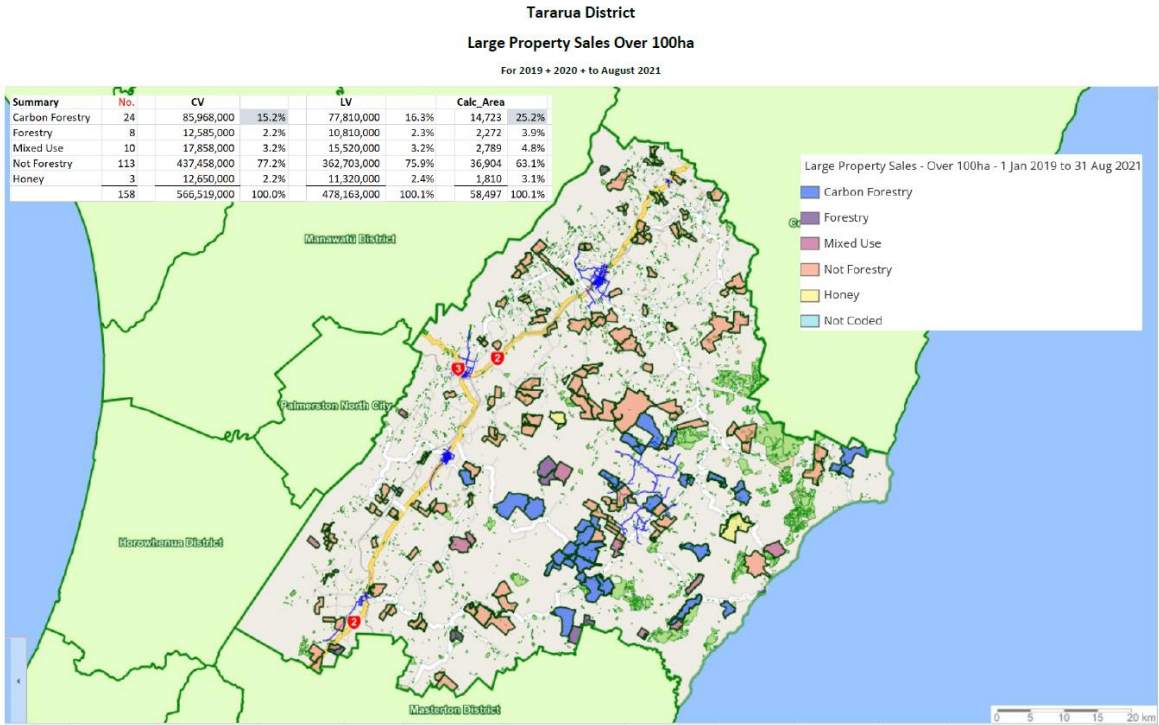
These issues are more problematic for the geographical extent of the Pongaroa Rural Water Scheme and its sparse population when compared to that of large cities, like Auckland (refer map on next page). In particular, the Scheme provides water to only about 115 ratepayer properties whilst land use is swiftly changing:

Geographical Spread of Pongaroa Rural Water Supply Scheme

– then superimposed to scale on central Auckland



Change in Land Use (Blue is Carbon Forestry Conversions)



4 The Exclusion of Self Supply

Across New Zealand, there is a large number of people that have self-supply through surface water, groundwater bores, roof collection and other sources. Their health remains a priority along with those that suppliers provide that the Bill does cover. There appears to be role for a regulator to ensure all New Zealanders health are considered, even if there is no single bulk supplier of service.

COVID-19 has highlighted our risk to biological contamination from many sources. Biological risks are likely to increase as pressures come on the natural world from human activity, including, pollution, incursion, change in habitats and climate change.

Recommendation

That consideration be given for establishing recommended standards for any household treatment systems. That an accreditation system may be established for compliance with a minimum standard of best practice treatment for self-supply drinking water systems. A charging mechanism may need to be developed for this purpose

5 Internet of Things - Water Meters

The Tararua District has a project to prototype the installation of internet of thing water meters. These have been trialled since September 2019 with the largest drought in 50-70 years informing us of large users water consumption on an hour by hour basis. The technology is the future of charging but there are a number of requirements for improvement before they are robust. These include:

- Scale of deployment of gateway/relays for unlicensed band communication – consistency of comms will be required – aerals for below ground installation of devices
- Battery life of IoT device is important (Recommend a ten-year life – 2 x 12 hour open channel for transmission)
- Security of device
- IP rating for flooded or wet conditions
- Reporting tools for alerts to management system and for customer alert/portals similar to those now made available to electricity consumers in online portals by retailers
- NZ Standard approved devices

The information and analysis provided from these devices will compliment any plant and reticulation telemetry to allow service levels to be assessed, areas requiring maintenance and a fairer efficient charging system to be developed.

6 Setting Revenue and Financing – A Methodology

3 Stage Decision Process

Councils at one time followed a 3-step decision-making process in setting funding for activities.

This was last reviewed at each Long Term Plan and then consulted upon. This is still a useful mechanism to understand charging systems and how they are developed for natural monopolies.

In brief, these three steps were:

Step One

Allocating theoretical costs of activities based on the economic principles of:

- public good
- beneficiary (or user) pays
- exacerbator (or polluter) pays and
- Consider intergenerational equity.

Step Two

The theoretical costs allocated in Step One are then modified by considering

- Ratepayer and resident interests
- Fairness and equity
- Council policies
- Transitional impacts

Step Three

Finally the actual funding mechanisms are determined in a way that achieves the allocations decided at Step Two, after taking account of

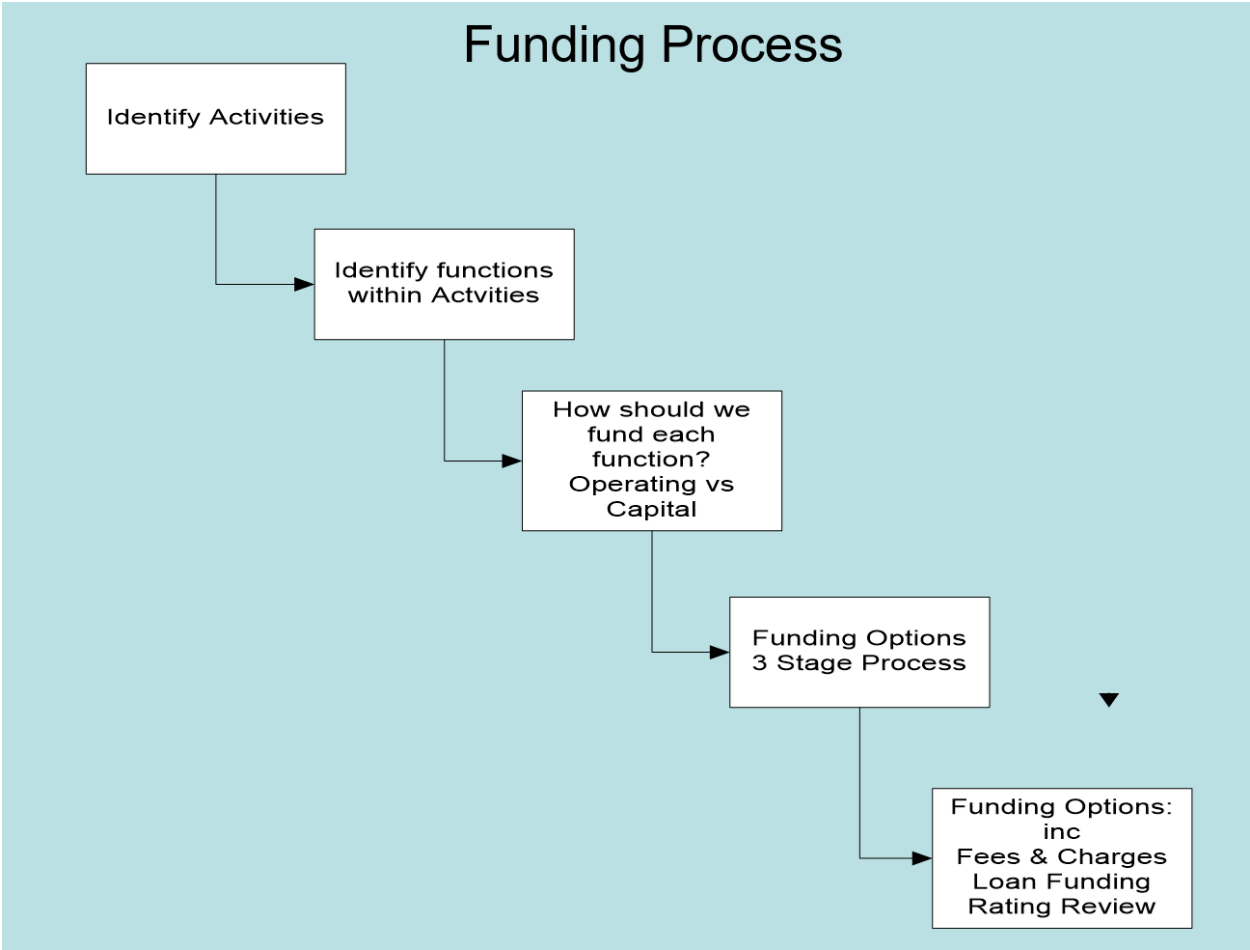
- Practicality
- Costs vs. efficiency
- Separate vs. single mechanisms
- Transparency

A standardised template is used in the process, ensuring a consistent approach is taken.

General principles used in the 3-step process are:

- User pays is a legitimate funding method if the benefit to individuals is greater than the benefit to the community.
- User pays is also recognised as a tool to achieve Council's goals e.g. charging for refuse collection to encourage waste minimisation. Water meters for water conservation
- In some cases e.g. water, targeted rates are used as a surrogate for user charges as Council considers this to be a more efficient and effective method of funding than individual user charges.
- Rates are primarily a tax. While effort is made to link payment of rates to benefits received or costs generated it is not possible to do this on an individual ratepayer basis.
- Subsidy from central government recognises that some services, e.g. roading, form part of a national infrastructure and only central government can levy user charges.
- Where the benefit accrues to the whole district general rates will be used.
- Where benefits accrue to certain groups within the district, differentials or targeted rates will be used.
- In some cases e.g. water, targeted rates are used as a surrogate for user charges as Council considers this to be a more efficient and effective method of funding than individual user charges.
- Uniform Annual General Charge (UAGC) recognises that most services are available to all properties regardless of value and that all properties should contribute a reasonable amount to the running of the district.

Appendix 1 Process for Funding Activities



Appendix 2 Water Supplies – Example of Outcome of Staged Process

Stage One

The benefits are potable water, fire protection and street cleaning and accrue to urban residents and properties with reticulation to the schemes, and also to some properties on the urban perimeters. Farmers tapping into schemes contribute greatly to costs and a number remain unmetered. Large industrial users are metered. Those who do not pay can be cut off. The public benefit is mainly through the possibility of fire fighting, street cleaning and use in public swimming pools.

Stage Two

There were several issues of fairness and equity when considering the Stage One allocations. Some people would be paying two or three times under that proposed system. Rural people have to provide their own water supply systems and should not have to contribute to the urban water supply as well. It would be almost impossible to define the exact area for an urban and semi-urban separate rate. There is also a community expectation that the water supply will be funded by users. About 25% of the costs are currently met by metering large users.

Stage Three

The funding policy proposed for Urban Water Supplies is 100% - Uniform Targeted Rate (with the proviso that large users, including farmers, whose properties are reticulated, pay on a metered user pays basis).

It was proposed for inclusion in the Long Term Council Community Plan that a capital contribution be charged through rates to fund upgrading costs to improve water standards. It was considered that the matter was too important to apply intergenerational equity (defer charging beneficiaries when the benefits are received) and that Council needs to prepare for the large future cost of such a large expected increase in levels of service. Essentially Council will begin saving for the projects to secure better access, storage, and/or improve water quality through better treatment and in accordance with water quality standards.

“That in addition to the amount of rates required for water supplies expenditure, a surcharge be applied to fund future upgrading costs to improve water standards”.

The change in stage 3 of private benefit from current funding of 20% to 35% will require a phase in of higher fees over a period of 5 years to assist with the impact on users.

There is a possibility that Government will provide subsidies for some capital developments. Subsidies are not allowed for in the ratios below.

Tararua Water Supplies Summary

Water

	Stage 1	Stage 2	Stage 3 by 2011/12
Private Benefit - User Pays			
Metered/Extraordinary	19.0%	21.0%	35.0%
Targeted Rates	79.0%	79.0%	65.0%
Exacerbator Pays	2.0%	0.0%	0.0%
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

No changes were made to the current policy.

Water Pongaroa

	Stage 1	Stage 2	Stage 3
Private Benefit - User Pays	0.0%	0.0%	0.0%
Targeted Rates	100.0%	100.0%	100.0%
Exacerbator Pays	0.0%	0.0%	0.0%
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

In Recent Years a probability approach has been taken to rate these considerations against the Community outcomes for providing the services (Low, Medium, High)

	Group of Activities, Community Outcomes and Activity	user/beneficiary pays principle	intergenerational equity principle	exacerbator pays	costs and benefits	Proposed		Rationale	Funding Sources	
						Private	Public		Operational	Capital
Sewerage	A Safe Community								Targeted rates, general rates, fees & charges & reserves	Targeted rates, general rates, fees & charges & reserves
	A High Standard of Infrastructure	M	H	L-M	L					
	A Sustainable Natural Environment									
Stormwater Drainage	A High Standard of Infrastructure	M	H	L	L				Targeted rates	Loans, General Rates, Reserves
	A Safe Community									
Water Supplies	Access to Local Services									Loans, reserves, Targeted rates, fee & charges
	A High Standard of Infrastructure	H	H	L	L-M				Targeted rates, fee & charges	
	A Sustainable Natural Environment									
	Strong Prosperous Economy									

Appendix 3 Types of Expenditure and Funding

Types of Expenses

Different types of expenses may be funded differently where their purpose and value may extend over more than one year e.g. asset capital purchases or investments made. These expenses are identified as:

Expense Type	
Operating General	Annual- Short Term
Operating Interest	Annual- Short Term
Operating Depreciation (To Reserves)	Annual- Short Term
Loan Repayments	Annual- Short Term
Capital Renewals	Long Term Value
Capital Developments	Long Term Value
Investments Made	Long Term Value
Transfers To Reserves	Long Term Value
Savings	Long Term Value

The three stage process applies to the net cost of the activity after other funding sources have been utilised.

Types of Funding

Before we even get to identifying funding we review why we are providing the type of services.

We have several alternatives:

Alternative: Defer Expenses
Alternative: Reduce or Exit from Service e.g. Privatisation
Alternative: Transfer Responsibility - CCO, Joint Ventures, Crown, Other

Once we are satisfied for the need of the service function we can consider the funding options:

Funding Options
Cash Surpluses Used
Interest Revenue, Dividends or Subventions

Funding Options
Loans Raised
Realise Assets
Realise Investments
Sponsorship or Donations Revenue
Subsidies or Grants Revenue
Transfers from Depreciation Reserves
Transfers from Special Funds, Savings
User Pays: Fees, Charges inc Rent & Lease Revenue
Rates

Rates are then able to be charged through a number of ways but generally in the following ways:

Type of Rates
Rates District Wide General Uniform
Rates District Wide General Variable
Rates District Wide Targeted Uniform
Rates District Wide Targeted Variable
Rates Local General Uniform
Rates Local General Variable
Rates Local Targeted Uniform
Rates Local Targeted Variable