

# water

• for the

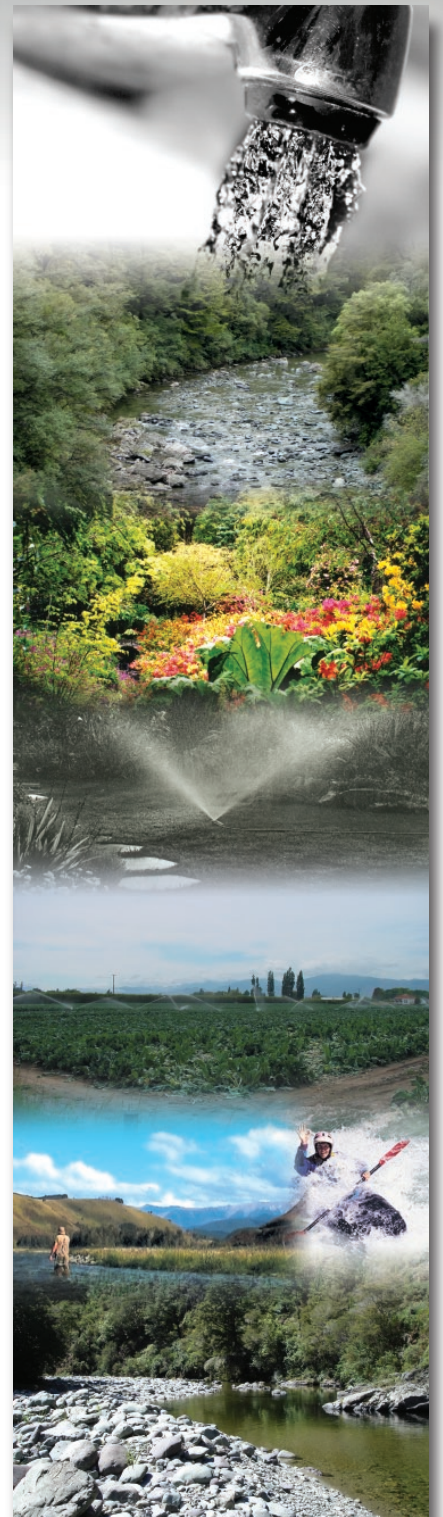
# waimea

# basin

**Have your say survey**

**Report**

**January 2007**





## Executive Summary

The Waimea Water Augmentation Committee (WWAC) received a total of 434 responses to its ‘Water for the Waimea Basin – Have Your Say’ survey. This represented a response rate of 6.2%. Council works on obtaining a minimum three percent response rate for its surveys and public consultations.

From the responses, it appears people in the Waimea Basin and Richmond are acutely aware of the water shortage problems and are keen to seek a workable solution.

The important outcomes from the survey included:

- 97% awareness about water shortages
- 75.5% support for a storage option (dam)
- There was a high level of knowledge about water shortage issues among respondents
- There was a high level of knowledge about the water storage option among respondents
- Several alternative water management options were consistently put forward
- Issues concerning shortages were raised
- Important concerns about dams were raised

These priority survey outcomes were based on the percentage of people who raised the issue. It is important to note that, although percentages have been given, these figures relate to the number of respondents who raised a particular issue. Therefore, if 50 percent of respondents thought a dam was the only solution, it does not mean the other 50 percent said they did not think the dam was the only solution, it means 50 percent of respondents individually put forward this idea.

This report has captured the priority outcomes under each of the questions asked in the survey.

The final section of this report provides recommendations on the way forward to address concerns raised.

# Background

The Waimea Water Augmentation Committee (WWAC) undertook a survey of residents in Richmond and the Waimea Basin to gauge community awareness of water shortages in the area and knowledge about possible solutions, particularly storage options (dams).

The survey was part of the Phase I feasibility study into water augmentation for the Waimea Basin that began in mid 2004.

## Objectives

- To conduct a questionnaire survey of all households in the Waimea catchment area, including Richmond.
- Determine and record the level of understanding about water shortages and the information gaps from the returned survey forms.
- Provide a report on the findings and analysis to the Waimea Water Augmentation Committee.

## Methodology

The Waimea Water Augmentation Committee prepared a questionnaire survey titled 'Water for Waimea Basin – Have your Say' which was sent out as a supplement to Newsline, the Mag to 4000 households in Richmond and posted separately to a further 3000 households in the rural Waimea catchment area.

The survey questionnaire sought both qualitative and quantitative responses. There were a total of 8 questions as follows:

1. Are you aware of water shortage issues in the Waimea Basin?

Yes	No	Don't Know

- 1a. If you answered yes please briefly outline what you know about the water shortage issues and how these water shortages affect you or others.

2. Do you think a water storage option (dam) would be an effective way to address current and future water shortages?

Yes	No	Don't Know

- 2a. If you answered yes or no please briefly outline why you think a dam is/is not an effective way to address current and future water shortages.

3. What other water management options could the Waimea Water Augmentation Committee (WWAC) or Tasman District Council consider for the future?

4. What are the most important issues for you relating to water shortages on the Waimea Plains?
5. What are the most important issues for you relating to water storage solutions (dams)?
6. What questions do you have about water augmentation?

Would you please tell us a little about yourself:

Male	Female			
Age bracket:	0-30 years	31-50 Years	50-70years	71+years
Which area do you live in?	Urban		Rural	

The survey was designed to get quantitative answers to the level of knowledge about water shortages in the area and the level of support for a water storage option (dam). It then sought qualitative responses to broad-based questions that aimed to get people to share their ideas, solutions, priorities and concerns relating to water shortages and water augmentation.

It is important to note that although percentages have been given, these figures relate to the number of respondents who raised a particular issue. Therefore, if 50 percent said they thought rainwater tanks were a good idea, it does not mean the other 50 percent said they did not or did not know, it means 50 percent of the respondents individually put forward this idea without prompting.

A total of 434 submissions were received made up of 234 from urban dwellers and 200 from rural dwellers. This represented a 6.2% response rate, which was double the expected response rate of three percent.

The questionnaires were analysed individually in two groups – urban and rural - and the different responses to each question were recorded.

As ideas were repeated or added to, these were ticked and expanded to get a picture of the number of times a particular issue was raised. In the outcomes, percentages have been shown to give an indication of what the community priorities are and how often an issue cropped up. Any idea, opinion, suggestion or criticism raised by at least 3% of respondents was included in the outcome statements.

## Timeframe

The surveys were posted to households in Richmond and the Waimea Basin October 2006. Respondents were asked to reply by 3 November 2006, although responses were accepted up to the first week of December.

## Introduction

Residents in the Waimea Basin area have experienced water restrictions in recent summers because there is not enough water in the rivers and underground water system (aquifers) to cope with the demand for irrigation, drinking water supplies, and industrial supply needs.

The Wairoa, Lee, and Waimea rivers are the water sources that refill (recharge) the aquifers that in turn supply irrigation water to the Waimea Plains and domestic and industrial water to the Richmond urban area.

The water shortages experienced in recent years have significantly reduced production of irrigated crops, prompted water rationing in the urban area, and have also affected the Wairoa, Lee, and Waimea Rivers as well as the coastal springs that are highly valued by the community and local Iwi.

Another threat posed by water shortages is the possibility of saltwater getting into the aquifers that are used for drinking water supply, irrigation, and industrial use. Saltwater infiltration would have serious consequences for drinking water, as well as for industry and crop production.

The membership of the Waimea Water Augmentation Committee (WWAC) includes irrigators, urban suppliers, councillors, and staff from Nelson City and Tasman District councils, Department of Conservation representatives, Fish & Game representatives, and Iwi representatives.

The Committee has been tasked with planning for water storage and looking at the available options, such as the feasibility of a dam in the Lee or Wairoa catchment areas. Site selection will be based on technical, environmental, social, and cultural information. Currently around 3,700 hectares of land has water permits for irrigation, but a further 1,800 hectares could be irrigated if more water was available.

Making more water available in the freshwater system – water augmentation – is one proposed solution to the water shortage problem, along with improvements in water management and the development of better water conservation measures.

The committee sought feedback on the proposed solution to water shortages. The following outcomes give a picture of the priorities and concerns raised by people in the Waimea Basin and urban Richmond. As far as possible the words used to explain the outcomes come directly from the survey respondents.

Since this survey was conducted, WWAC has decided to investigate the Upper Lee site as its preferred option. Detailed analysis of the site and the costs are being undertaken in Phase 2 of the study.

# Outcomes from Water for Waimea Basin Have Your Say Survey

## 1. Are you aware of water shortage issues in the Waimea Basin?

Of the 434 responses received 97.5% said yes.

The split between urban and rural responses was identical – both had 97.5% awareness.

### 1a. If you answered yes, please briefly outline what you know about the water shortage issues and how these water shortages affect you or others?

**Restrictions:** There is high awareness about water shortage issues among respondents. The most prevalent responses (64.5%) were related to the loss of availability of water at crucial times for gardens and rural irrigation because of low rainfall, which means low rivers and dry aquifers. People were aware of these problems from media reports, from experiences with household bores/springs running dry, noticing lower river levels, experiencing restrictions during summer.

**Demand:** Another 11 percent said the demand for water was outstripping supply. Irrigators, the effect of pine plantations, dairy farming were perceived to be driving the problem.

**Growth:** Urban development, population growth, and commercial/industrial growth were cited as major contributors to water shortages by a further 5% of respondents.

**Water rights:** Another 4.3% said the over-allocation of water rights on the Waimea Plains was critical to the water shortage situation.

**Climate change:** 2.3% cited climate change as a contributing factor.

## 2. Do you think a water storage option (dam) would be an effective way to address current and future water shortages? (Where the responses don't add up to 100%, not all respondents answered the question)

### *Overall*

75.5% of respondents said yes

9.5% said no

13% did not know or were unsure

### *Of the urban respondents*

74% said yes

10% said no

12% did not know or were unsure

### *Of the rural respondents*

77% said yes

9% said no

14% did not know or were unsure



**2a. If you answered yes or no please briefly outline why you think a dam is/is not an effective way to address current and future water shortages.**

**Best option:** There is high awareness of how a dam would augment supply with 56% of respondents saying a dam was a viable option. Responses in this category ranged from a dam being the 'only option' to a dam being 'one solution'. Winter storage for summer use was perceived to be an effective use of rainwater.

**Short-term fix:** The most significant responses against a dam was that it is a 'short-term fix', it may not be big enough and it may not recharge the aquifers. This came from 3% of respondents. Other opinions against a dam included environmental concerns, safety concerns, and cost.

**3. What other water management options could the Waimea Water Augmentation Committee (WWAC) or Tasman District Council consider for the future?**

**Rainwater tanks:** The most prevalent suggestion for water management was private storage of rainwater. Around 27% of respondents thought the use of rainwater tanks and private dams should be encouraged or even made compulsory on new buildings. Council could consider a subsidy scheme to encourage installation of rainwater collection tanks and farm dams.

**Pipe water:** Many of those opposed to the dam thought piping water from Lake Rotoiti, Lake Rotoroa, the Buller or Gowan Rivers would be a better option. Some suggested the Motueka gorge, the Pelorous and Quail Valley. A total of 18% of people suggested the piping option for water management.

**Recycling:** Recycling urban stormwater, treated wastewater and household grey water was put forward by 11 percent of respondents.

**Education:** Education on efficient water use should be encouraged according to 7.6% of respondents. This included household conservation, efficient use of irrigation and use of water saving devices (low water use shower heads, toilets etc).

**Water rights:** Renegotiation of existing water rights/reallocation of water rights was brought up by 3% of respondents. Some wanted tradable water rights, others were opposed to this.

**Pines:** Pine plantations were singled out by 3% of respondents has a hindrance in the water catchment areas to soakage and release of water.

**Farming:** It is also worth noting that 2% of respondents perceive either vineyards or dairying as major water consumers and inappropriate land use for this area.

**4. What are the most important issues for you relating to water shortages on the Waimea Plains?**

**Supply:** Lack of water during times of drought was the most important issue cited by 27% of respondents. Water should be available for domestic supply, gardens and primary production as well as fire fighting. A good clean supply is needed.

**Sustaining horticulture:** Having sufficient water to sustain intensive cropping and the effect of shortages on the district economy were put forward by 7.8% of respondents. The Waimea Plains are considered to be good growing land and an integral part of the regional economy.



**Saltwater intrusion:** The contamination of aquifers with salt water was brought up by 7% of respondents. Maintaining water quality is an important issue.

**Food supply:** Being able to maintain our food supply and the loss of productive land were raised by 6.4% of respondents. Water shortages make it difficult for commercial operations to have a guaranteed supply.

**Wastage:** Concern about wastage, particular by irrigators working in the heat of the day was raised by 5.2% of people who called for more efficient use of water.

## 5. What are the most important issues for you relating to water storage solutions (dams)?

**Safety:** Safety issues including earthquake risk, potential dam failure/flooding, engineering and construction were raised as important issues by 14% of respondents.

**Cost:** Who will pay? Funding, cost, is it cost effective were issues raised by 13.6% of respondents.

**Environmental issues:** Minimising environmental effects, keeping rivers in good health, and the effect of a dam on fish and fishing were raised by 11.5% of respondents.

**Act now:** Make a decision and act now was a sentiment expressed by 9% of respondents who wanted to see Council get on and plan for the future.

**Site and size:** The dam needs to be in an appropriate location and be big enough to cater for long term requirements was an issue raised by 8.3% of respondents.

**Recreational opportunities:** Survival of fish, improvement of river health, public access, white water amenity were all issues raised around the dam providing recreational opportunities by 6.7% of respondents.

## 6. What questions?

Who will decide dam location and when? Where are the likely sites?

Why don't you think more of urban growth within Richmond/Appleby/Brightwater areas?

Why should urban houses in rural areas pay for agricultural water use?

Why don't major users pay for water usage?

Why bother with surveys – Council pays lip service to consultation?

Why not look at piping water from the Nelson Lakes?

Is something actually going to be done this time? Why has it been left so long to do something about it?

What is it going to cost water users in the end?

Cost and feasibility? Who pays?

What is it? What does 'augmentation' mean?

How often have saltwater incursions occurred and what is the likelihood of it becoming more significant in the future?

Given that the dam in the Wairoa Gorge was planned and preliminary engineered in the 1970s, what's the delay now?

Is consideration being given to using the stored water for both irrigation and for potable drinking water long term? If yes, will rock be the preferred walls for the storage areas?

Is consideration being given to long-term government finance and possible suspensory loans to meet construction and design costs?

Have you done a survey of total aquifer flows corresponding to population growth?

Would a dam replenish both aquifers?

When is something going to be done about cleaning up our waterways?

If water is stored in a dam is it treated before domestic users receive it? How is it kept pure?

Is anything being done about recycling stormwater?

Why are there plans for more subdivisions when we have a water shortage?

What are the different options?

What has TDC done to encourage major users to be more efficient with water use?

Why does Council think 'growth' is good for the region?

Do you plan to take bolder action to ensure adequate water storage for the region?

Will you put human needs before environmental considerations?

Should planting of pine forests be restricted? Has impact of forest development been assessed?

Will the proposed dams further reduce water levels in the aquifers?

If one dairy farm on the Richmond boundary uses as much water as the Richmond urban area uses, would Council consider purchasing the farm and growing crops that do not require irrigation?

Do we have enough water for all these private swimming pools?

What are the benefits to people other than a few dairy farmers and apple growers?

How many dams are affordable?

Will new homes be required to install rainwater storage tanks?

What is being done to improve public water supplies?

Is it a long-term solution? Will it satisfy future demand?

How big does it need to be to address the problem

What other options is Council considering?

Has the nitrate level in the Waimea Plains increased over the years?

Is water augmentation mainly for high production users? If so will they bear the cost?

When will a dam be built?

Can irrigation requirements be lessened by better application and more appropriate crops?

Can we build these dams without rates increases for current landowners?

Why has there been no consultation with NZ Recreational Canoeing Association?

I would like to know more about the dam options – size of reservoirs and their likely benefits in terms of irrigation.

Why are Richmond domestic supply wells so close to the estuary?

Can small scale power generation be included?

What are the other options?

## The way forward

The survey shows there is high awareness about water shortages in the Waimea Basin and the majority of people support a dam as a suitable solution.

The responses also show the Waimea Water Augmentation Committee (WWAC) has some educational work to do to address some of the issues raised including:

- o Environmental impacts
- o Cost benefits of a dam versus piping water from outside the area
- o Inability to pipe water from Nelson Lakes National Park
- o The possibility of hydro electric generation
- o Address safety concerns
- o Recreation opportunities

Water users also need to conduct some public relations exercises to improve public perception about their use of water including:

- o Efficient use of water by irrigators (not watering in the heat of the day, watering the road etc)
- o Contribution of dairy farming in relation to water use
- o Contribution of vineyards in relation to water use
- o Contribution of pine plantations in relation to water use

The questions posed by respondents also need to be answered clearly. There are various options for getting the message out including using Council publications (Newsline, Mudcakes and Roses), local media, rural/farming media, and radio.

It is recommended that WWAC develops a public relations strategy that clearly sets out a plan for addressing public concerns and bolstering public support for this project.