

**Social Mapping of Wairarapa Water Issues:
An information resource and ‘think piece’
for
The Wairarapa Regional Irrigation Trust**



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Executive Summary

Water in the Wairarapa region is highly valued for its productive and consumptive uses, for recreation, and for cultural and spiritual reasons. This think-piece provides the Wairarapa Regional Irrigation Trust with a summary of perspectives and ideas about water uses and values in the Wairarapa region, identified through interviews with seventeen Wairarapa residents in March 2009. The think-piece provides a snapshot in time that gives some indication of the range of issues that were relevant to interviewees and that may be important to others within the region. Interviewees came from a range of backgrounds, including farmers, District Council staff and mayors, non-government organisations, industry representatives, iwi, recreational advocates, and resource management consultants.

Historical Wairarapa narratives

A number of interviewees had long family connections to the Wairarapa region, and described important childhood memories, and spiritual, recreational and cultural connections to the region and its waterways. These connections provide a sense of generational continuity and a setting in which experiences and knowledge can be passed from generation to generation. Past experiences provide a 'benchmark' for people to assess changes and to think about possible actions and or policies to address negative changes.

Demographic, land-use and industry changes in Wairarapa

New people coming into the area, land-use changes, industrial and retail changes and climate changes were all described by interviewees as issues that have impacted on the region in general and on water more specifically. Land use change was seen as inevitable and this included life style development, bigger farms, dairy conversion, more intensification, and a likely increase in viticulture and horticulture and seed crops. Positive impacts of changes have been the growth of Martinborough and new facilities driven by population growth, and steady growth for industry and retail businesses. Several people commented on their perceptions of climate change over time, as well as how future climate change might impact on land use.

Values and uses for water

Interviewees discussed a wide range of values and uses for water, including recreational use (fishing, jet boating, canoeing, kayaking, swimming), spiritual and cultural values, and consumptive and productive uses (drinking-water, horticulture, farming, forestry, industry, tourism, fire fighting and waste-water treatment). Several interviewees explained that they find it difficult to describe spiritual or cultural connections with rivers and lakes, but that these connections do exist and are extremely important.

Water Quality

The issue of water quality was one which many interviewees felt strongly about, and which seemed to raise some feelings of anger and great concern. Only two interviewees believed water quality in the region is good; most felt that there has generally been a decline in the state of the region's rivers. Reasons for concern include the effect of poor water quality on human health (drinking-water, swimming-water and fish consumption) as well as on domestic pets' health and on the health of ecosystems and fisheries.

The most frequently described cause of poor water quality was agricultural land-use and intensification of farms. Waste-water disposal was also blamed, along with population increase and residential development. Interviewees had different ideas about how to improve water quality, including planting more indigenous cover, stricter monitoring of efforts to keep stock out of waterways, improvement in or alternates to wastewater discharge into waterways,

stricter controls on diversions to waterways by farmers, and improved care of small streams and stock water races.

Water Quantity

According to the interviewees, most people in the Wairarapa are acutely aware that water is a valuable resource. Key issues raised were the frequency and impact of droughts and floods, including urban water restrictions, and impacts of low-flows on recreational fisheries. A reliable water supply is a key requirement for a range of water users, for reasons that include reduction of risk for farm contracts, production of feed for winter months, to improve opportunities for changing land-use, and to realise investments. Some interviewees described inefficient water use, including lack of water conservation in households, inefficient irrigation infrastructure or irrigation practices, and inconsistent water conservation measures.

The need to ensure adequate water storage for urban centres was raised several times, but the need for water storage to meet multiple needs was very rarely mentioned spontaneously. Numerous concerns about water storage were raised, including the importance of being aware of negative impacts of water storage, the importance of maintaining flow variation if storage was considered, and the need for careful consideration of equity issues related to the private use of water, or who might pay for water storage. The possibility of on-farm storage was another issue raised by several people. Equity and fairness issues were raised in relation to water allocation in general, with interviewees calling for consideration of these issues in the development of policies or mechanisms for allocating and distributing water.

Political Context

The political context within which decisions about water are made was described in detail by many interviewees. Almost everyone talked about desirable changes to the organisation of local government, including the possibly of merging the three district councils to make one district council, or establishing a unitary council, or maintaining the status quo with Greater Wellington Regional Council retaining its current role. The combined Wairarapa District Plan was widely praised and interviewees hope that it will provide a more unified approach to land and water management for the Wairarapa. Interviewees also described good relationships between those who are involved with water management, and most mentioned the need for 'good' processes for decision-making, including access to information and good consultation processes.

Linkages to other New Zealand contexts and research findings

Throughout this think-piece we have identified issues from related project work from around New Zealand. Issues around water uses and values are very similar across the country, for example the importance of historical connections to regional waterways and how these connections are linked to present day activities, the importance of rivers and waterways for recreation and for spiritual and cultural reasons, concerns about water quality and methods of allocating water in a fair and sustainable way, and approaches underway to improve the interface between water allocation, efficient water use, and farming practices in order to protect or enhance the environment. At the same time, the contexts within which these issues sit can be very different around the country and any research or decision-making processes must take these differences into consideration.

Questions to consider

The think-piece also includes a series of questions that relate to the interview data in each section in the document. The questions are aimed primarily at WRIT, highlighting issues that the Trust might need to consider as they continue to explore the means for and feasibility of improving water availability and reliability for water users.

Section 3: Historical Wairarapa narratives

- How might people's significant relationships and interactions with waterways be maintained and/or enhanced when considering changes to water availability infrastructure?
- How will iwi interests and stake be incorporated into future water availability infrastructure changes, given their status as Treaty partners and tangata whenua?

Section 4: Demographic, land-use and industry changes in the Wairarapa

- To what extent can changes to water availability infrastructure take account of impacts of potential climate change?
- If improved water availability increases land values without the concurrent ability to 'intensify' land use, is this likely to lead to an increase in rural residential development? How important is this scenario given the value placed on maintaining productive land use and the values associated with rural amenity?

Section 5: Values and uses of water in the Wairarapa

- How can future changes to water availability infrastructure ensure that multiple consumptive and productive uses of water can be maintained?
- How can WRIT and the community provide a benchmark against which future impacts of changes on water availability and quality can be measured?
- What activities, values and uses of water should inform this benchmarking exercise?

Section 6: Water quality issues

- What is WRIT's role in:
 - (a) Contributing to 'raise the bar' to achieve an improvement in water quality relating to agricultural run-off?
 - (b) Ensuring water quality is not negatively impacted on if there is an increase in land that can be irrigated?
 - (c) Demonstrating to the public that WRIT is taking the need to contribute to an improvement in water quality seriously?
- What partnerships can WRIT establish with the primary sector to both decrease water quality issues and help the Primary Sector Accord reach its targets of an improvement in water quality?
- What partnerships can WRIT establish with regional and district councils that can contribute to an improvement and maintenance of water quality in the Wairarapa?

Section 7: Water quantity issues

- The impacts of low flows are different for different groups at different times of year. How can WRIT take these different impacts into consideration in exploring the feasibility of improving water availability and reliability?
- How can WRIT work with councils and the community to address equity or fairness issues that could arise in the consideration of water restrictions or changing flows?
- Interviewees highlight a range of reasons for needing a reliable water supply. How will WRIT consider the needs of these different groups in exploring how to improve regional water availability and reliability?
- It has been suggested that having access to more water might increase 'water wastage' or inefficient use – how could a regional scheme be managed to avoid such 'wastage'?
- Concerns were raised about the potential negative impacts of improved regional water availability (eg through water storage). How will WRIT engage with those who raise such concerns to work through some of these issues?

- Given that potential changes to water allocation mechanisms and management (through improved water availability/changes to the RMA) are likely to raise issues of fairness and equity, what is WRIT's role in helping Greater Wellington Regional Council work through potential changes to water allocation management?

Section 8: Political context of water and land management

- What relationships or partnerships has WRIT already developed?
- What relationships or partnerships does WRIT plan to develop and how?
- How can existing relationships or partnerships provide networking opportunities?
- How can WRIT develop flexible or adaptive relationships or partnerships with district councils and Greater Wellington to cope with possible future changes (eg unitary council, one district council, combined district council planning etc)?

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1. Introduction

This report has two key purposes. The first is to present a descriptive overview of issues relating to freshwater availability and quality in the Wairarapa region to the members of the Wairarapa Regional Irrigation Trust (WRIT). These issues were identified through carrying out interviews with seventeen Wairarapa residents who related a range of experiences, values and uses of water in the region, as well as their own Wairarapa histories. The interviews were carried out by two ESR researchers between 9 -13 March 2009. The second key purpose is to provide a range of questions arising from the interview data that WRIT might need to consider as the Trust continues to explore the means for and feasibility of improving water availability and reliability for water users. Thus, this report is in the form of a ‘think piece’ rather than an analytical report with recommendations. Included in the report is reference to relevant Greater Wellington Regional Council documents, and related research findings that includes a number of ESR projects. This is to demonstrate that many of the water-related issues faced in the Wairarapa – and the experiences and views expressed by those interviewed – are similar to those in other areas of New Zealand. Relevant ESR projects include:

- Identifying drivers and barriers to water transfer/trading in the Opuha Dam Scheme, South Canterbury
- Carrying out cross-sector interviews identifying what water management tools are currently used in Canterbury and what the needs are for new or integrated tools (in combination with NIWA, Aqualinc, Canterbury Development Corporation).
- Exploring equity and fairness issues that are likely to emerge in the area of water resource management, focusing on water allocation.
- Identifying and documenting community uses and values of (and management options for) freshwater in the Waimea in Tasman. This work informed a Feasibility Study into water augmentation for the region for the Waimea Water Augmentation Committee (WWAC).

The Wairarapa interviews provided rich data that covered a diversity of experiences, perspectives, views and ideas about:

- Changes in the Wairarapa over time, including family and whakapapa ties to the region, and what the future might look like;
- Multiple issues relating to freshwater in the region such as water quality and water availability and use for agriculture and recreational activities;
- Lifestyle and land use change and associated issues of water quantity and quality; and
- The regional and local political contexts

It is important to note that the small number of interviews carried out means that this ‘think piece’ report does not provide definitive or representative information. Rather, it is a snapshot in time that can give some indication of the range of issues that were relevant to interviewees and that *may* be important to others within the region.

2. Methodology

Members of the Wairarapa Regional Irrigation Trust (WRIT) provided the ESR researchers with the names of people to be interviewed and arranged each appointment. Retrospectively, it would have been more appropriate for the ESR researchers to arrange the interview dates and times in order to provide verbal and written information about the project and answer questions prior to the interview itself. This would have ensured interviewees were provided with consistent information and clarity around the relationship between WRIT and ESR. It was explained to interviewees that ESR is a Crown Research Institute which has been asked by WRIT to interview a range of people within the region about their values and uses for water. The information they provide will be provided to WRIT in report format. It is also important to note that the researchers were not familiar with the detail of what WRIT was actually doing. This was not seen as a problem because it enabled the researchers to focus on the broad issues of water availability, quality and the particular Wairarapa context of water-related issues, rather than be an intermediate party between WRIT and the community.

Interviewees came from a range of backgrounds, including farmers, District Council staff and mayors, non-government organisations, industry representatives, iwi, recreational advocates, and resource management consultants. The interviews were semi-structured with a basis of pre-determined questions but flexibility around the order and wording of questions (see Appendix One). Most of the interviews were taped and later transcribed. Those that were not taped were recorded in field notes. Having two researchers to carry out the interviews enabled at least one person to focus on the direction and context of the interview and one to take notes.

The interview data was analysed initially through NVivo software that enables identification and categorising of broad themes which are then further broken down into 'nodes' or smaller categories of information. For example, in relation to documenting the stories of ties to the region and changes over time, the broad themes included: Ties with the Wairarapa; industry and agriculture changes; climate change; political issues; 'lifestylers'; changes in water; recreation; Māori perspectives; the future. This thematic categorisation of data also enables it to be linked to data from other projects in which similar data analysis processes were used.

In writing this 'think piece' quotes from those interviewed are used extensively for two reasons: the first is to provide a space for the 'voices' of those interviewed, and the second is to provide a form of validation of research interpretation and analysis. (In other words, there needs to be a transparent fit between what interviewees said in the interview and the ways in which what they said is presented in the 'report').

3. Historical Wairarapa narratives (family ties and recreational activities)

A number of those interviewed had long-held family connections to the Wairarapa region, with experiences ranging from seeing the sixth generation of family in the region to second-generation residents who may have left for a time and then returned.

“I have lived in the Wairarapa all my life – taken over the family farm ...”

“I was born in the Wairarapa ... and after leaving the area I’ve been back for fifteen years.”

“Grew up in ... and that was a family farm and then went off to varsity and overseas – twenty years away and came back about seven years ago. Bought some of the farm and built the house.”

Others had lived in Wellington but had childhood ties with the region.

“I’ve lived here for 27 years; prior to that I lived in Wellington.”

One interviewee, when asked if going away and coming back might be quite common for younger people, stated;

“I think there’s typically a lot of people when they get to their early twenties want to get out of here, but then they realise it’s not a bad place after all. Different ages I suppose. It can’t be too bad if people want to come back to it.”

A Māori interviewee (Rangitāne o Wairarapa) talked in detail of his whānau, hapū and iwi associations with the area, and of strong connections to waterways through mahinga kai (food gathering) and the fulfilment of kaitiakitanga (guardianship) obligations:

“We have spiritual and cultural connections to the Ruamahanga based on whakapapa. We are entrusted with the respect and care of land and waterways. These values are handed down to each generation. A lot of social acts in our whānau were about ensuring there was food – river for eels, bush for rongoā, coast for seafood. Whānau travelled to the lake – most whānau in Wairarapa have some connections through genealogy, so things were shared. Our area was a vegetable-growing area, so we would swap kumara for eels.”

Connections to place included a number of interviewees' stories about their childhood recreational activities and, for some, how these have changed.

"...still do – go swimming as when a kid! I live right next to the river and my grandson goes down to the river along with a lot of the neighbourhood ... in fact they (the rivers) are probably cleaner now than when the dairy factories and what have you used to be beside the rivers."

"I used to go rafting as a kid, swimming, trout fishing, camping."

"Christmas day 2003 we all went swimming in the Ruamahanga, we were basically down there for the whole day"

"The schools all used to go to "the Cliffs" for a picnic – out Gladstone way. But they don't any more – not safe to swim there because of the Masterton sewage outlet. So they don't go there for their picnics or barbecues any more."

"Fishing is an important part of our heritage."

"When I was growing up my parents had a farm and the river ran at the back of it – you could swim in it, catch crawlies. Now I wouldn't swim in it, fish in it. It has changed so much, there's so much pollution and the river has just changed. It's not like it used to be twenty or thirty years ago."

"I was brought up next to the Ruamahanga I have seen the river go through many changes. I can recall as a child going down there swimming and being able to swim most of the length of the river, with many deep pools. It's hard to do that now, it's very shallow, in some places just a trickle. My father used to say 'when you go to the river always be careful.' When I was young, our Māori values were getting pushed aside so we could learn in an English society, but old people would warn us of different areas of the river. 'Taniwhā' translates as monster, but the old people used it more to describe danger. The 'taniwhā' could be death, or a snag or currents. Same for tapu – tapu areas meant dangerous, not safe. Also tapu were places where a baby is cleansed after birth, bodies cleansed after death, or where someone has died or drowned."

In the Wairarapa News (18/03/09), an article outlined the involvement of school students in freshwater quality monitoring, focusing on a catchment approach to understanding water resources in their locality and identifying the human impacts on water resources. The organisation *Sustainable Wairarapa* also involves schools and community groups in stream restoration and maintenance.

"By coincidence a lot of schools have tributaries running through their schools so they can relate to it (stream care). There's a reasonably strong enviro-schools programme running in Wairarapa."

Even though we're (Sustainable Wairarapa) technically the main sponsor, the initiative is trying to be a community project."

Past, present and future river-related experiences and the connections between these are important in a number of ways. They provide a sense of generational continuity and a setting in which experiences and knowledge can be passed from generation to generation; children's interest in the natural world and/or how humans impact on waterways can be enhanced through direct access to freshwater ecologies; past experiences provide a 'benchmark' for people to assess changes and to think about possible actions and/or policies to address negative changes. For Māori the acknowledgement of customary and historical occupation of land and utilisation of waterways establishes mana whenua; authority, status and interest in relation to the effective management of land and water, for the benefit of future generations.

3.1. Linkages to other New Zealand contexts and research findings

The importance of historical connections to regional waterways and how these are linked to present day activities has been articulated by other research participants in both Tasman and Canterbury. For example, our case study work in Tasman (FRST-Funded *Sustainable Development – the Human Dimension C03X0304*) indicated strong community, mana whenua and family connections to rivers that were expressed in multiple ways. These included:

- Engaging in recreational activities such as swimming, rafting, picnicking, walking, kayaking, and fishing, tramping that provided opportunities for social interaction between family members (including extended families), between friends, with river settings often providing a place for teenagers to socialise in a number of different fashions.
- Scenic or aesthetic enjoyment such as rivers being pleasing or enjoyable landscape feature, places for contemplation, relaxation, painting, often over a lifetime.
- Engaging in the practice of guardianship or kaitiakitanga of rivers from 'mountains to sea' and protecting mahinga kai areas such as natural estuarine springs and wetlands.
- Rivers and river edge ecologies providing places where children can learn about nature.
- Rivers as markers of local and regional identity and 'belonging' all of which were sometimes expressed as markers of home.



Photograph 1: Children 'rafting' in the Lee River, Tasman

In Capability Funded project work (*Identifying Drivers and Barriers to Water Trading in the Opuha Dam Scheme*) interviews carried out with Fairlie residents (South Canterbury), and several farmers in the Opuha dam and irrigation scheme, mentioned the loss of the Opihi River gorge in the building of the Opuha dam (1997). One farmer who was highly supportive of the scheme, said, “*and there were no environmental concerns I don't think, even though that gorge where the dam was put in, I have to say, was a very nice little gorge, so that was a trade-off that was made. I have to say that was a very picturesque little gorge ... and I thought oh it's a shame we're going to have to do this to this gorge*”. Community members also talked about the loss of this gorge for family outings and recreational activities.

Historical continuity – sustainability – then, appears to be important to people when they talk about their relationships with freshwater resources and waterways. Just as farmers often talk about the need to pass on their land in as good if not a better state than when they first took on responsibility for it, so, too, do many people in New Zealand - Māori and Pākehā – want their children and their children's children to enjoy, use and care for freshwater environments.

QUESTIONS TO CONSIDER

- **How might people's significant relationships and interactions with waterways be maintained and/or enhanced when considering changes to water availability infrastructure?**
- **How will iwi interests and stake be incorporated into future water availability infrastructure changes, given their status as Treaty partners and tangata whenua?**

4. Demographic, land-use and industry changes in Wairarapa

4.1. Increase in ‘new people’ in the region.

Discussion about new people coming into the area was related to increasing numbers of life-style blocks, the development of ‘boutique’ wineries (predominantly around Martinborough), as well as industry and retail growth.

“We have seen huge changes – in the 1970s there were no lifestyle blocks, there were big farms, and in the first week of January everything was brown.

“There’s been a much greater influx of people coming from Wellington, that’s been quite a major change. There’s probably more lifestyle blocks now than farming.”

“Wairarapa is the capital country escape. Wellingtonians think of the Wairarapa as part of Wellington”.

“There were no vineyards when I first came here, now there’s a lot more cropping now, lots of ‘new blood’ from Wellington, Auckland, and English and Dutch, more lifestylers and IT people, and lots of commuters, the train-station car park is already full to capacity.”

“Yes, that’s (life-style blocks) certainly been one of the evolutions, particularly some of the younger families have taken advantages of the subdivision rules, probably over the last 20 years. The peripheral areas of all the towns have benefited by that situation.”

“30% of ratepayers have Wellington addresses - either lifestyle or rental properties, and over 1,000 people per day commute – more in South Wairarapa.”

People had mixed views about these changes. Most recognised that the influx of ‘lifestylers’ had kept the region buoyant in terms of employment opportunities, the diversity of people, and increased choices of cafés and restaurants, but there was mixed reaction to changes in land use and the rural landscape. Most were positive about the ‘new’ people coming into the area, recognising that they had contributed to more facilities for the longer-term residents.

“I think there’s probably some who would like a gate at the top of the hill, but we’ve been lucky that we’ve had a gradual increase and we had a influx of people who feel quite comfortable here. But you have to be practical about these sorts of things – without an increase in population you can’t have the facilities that one would really need.”

“Vineyards have brought in a lot of young people – sports activities including squash, tennis, more children in the schools.”

However one person thought that with a lot of new people coming in and old families leaving the district, there was now an increased pace of life with more individuation¹ and less trust. And another stated how expensive Greytown had become for the locals.

“We call Greytown the small Wellington because a lot of people have moved over here from Wellington. They’ve come for the life style but they’ve made it very, very expensive in Greytown.”

One person commented on the new airline, stating that; “high-flying people were moving into this area. CEOs left right and centre in Martinborough. Amazing amount of brain power here. That will put pressures on us – people will want to live on a nice bit of land with nice views...”

The landscape changes associated with life style development were also viewed both positively and negatively. One interviewee commented on how there used to be fewer trees when the rural area was mostly big farms.

“Now, with more life-stylers, there is planting, and more shelter-belts. There are also grapes which grow well on dry and stony land that was previously considered poor quality”.

Others regretted the loss of productive land and the associated rural ambience, and were concerned that the new district plan would not control continued subdivision of rural land.

“Life-style blocks – they’re a nice idea but not commercially viable.”

“About the development of lifestyle blocks – don’t realise how important the rural ambience is until you’ve lost it. Farming is simpler - sheep etc, because it enables expansive views of mountains and hills.”

“Lifestyle blocks have prevented the Wairarapa from dying – there’s no doubt about that ... there’s been an influx of people from Wellington looking for the good life, but the downside of that is productive rural land that should be producing food for the country is becoming non-productive, because the lifestyle blocks are getting smaller and smaller and smaller.”

“Lifestyle blocks from an agricultural view are not always that effective. So you can graze 30-40 sheep to the acre on a commercial sheep farm, a life-styler might have 3 alpacas, half a dozen sheep and a handful of chooks. I do know that I heard a statement made a couple of years ago about the best use of land, and lifestyle blocks were certainly not the best use of land. The commercial dairy herd made much better use of the land than the life-styler did. However, aren’t

¹ Individuation relates to the increasing focus on individual rights with an accompanying decrease in the sense of being part of a collective or a community.

lifestyle blocks predominantly urban people who have decided that they want to be part of the good life? And why shouldn't they be if they've got the wherewithal to do that?"

4.2. Land use change

While the growth of viticulture around Martinborough was commented on by most of those interviewed, not everyone thought there had been changes.

"There's not much change in rural Wairarapa."

However, most interviewees had noticed changes. These included:

- Less orcharding
- Less berry fruit grown around Greytown, with the decline linked to fewer frosts (for setting the fruit).
- Larger farms
- An increase in dairy conversion and intensification.

"There have been dairy conversions ad nauseum where groundwater or river water is available. It is still done on a case-by-case basis."

"I suppose if you look at the agricultural side there's been changes in horticulture, particularly if you're looking at the greater Wairarapa. You've got the grape industry, and some more specific industries, olives and so forth, but it's still predominantly a rural agricultural area, and the economy still, I believe, is quite reflective of how well agriculture is doing. It takes a wee while to filter through. But we went through a period some years ago where agriculture didn't do so well and the Wairarapa suffered I think. And we've just been through a period where agriculture, particularly dairying, has done extremely well."

"There's more intensive farming, quite an increase in dairying, much bigger units and we've certainly seen an amalgamation of farms both sheep and beef and in dairy to have more viable units. Indeed, in early times a big sheep farm was probably 300-400 acres. The very minimum that you're looking at now in terms of being viable is probably 1000-1200 acres. Dairy farms often had 60-70 cows; an average one would have 400 odd cows these days. Often a lot bigger so there has been a great deal of intensification of farming, on bigger units, with smaller labour units involved."

4.3. Industry and retail change

Most of those interviewed thought that industry and retail growth in the region, along with the labour force and employment opportunities, was steady. Some people commented on growth in the retail sector with firms like Noel Leemings and The Warehouse and Briscoes coming to town (Masterton)

“It’s not that long ago that none of those people were here, you had to go over the hill. We’ve got a very good infrastructure here now as far as retail goes. As far as changes go, it’s developed steadily, but its not huge growth, you don’t see the huge growth that you see perhaps in Auckland or Manukau. Having said that, when the times get a bit tighter, you don’t see the sudden dip either.”

“We’ve had 4% growth since the last census and that was high for the Wairarapa. It is growing. We’ve got the biggest lot of undeveloped industrial land in the lower North Island just coming on stream. That’s going to be a big thing for Carterton. We’ve got a rail-head there. I believe, for an inland port – we’re losing so much space to shops on the Wellington waterfront, they shouldn’t be storing logs in Wellington, they should be storing them here and running them straight from here on rail straight into the boats. It’s going to be such a manufacturing and storage space created up there.”

“Masterton has developed industrially. There’s certainly more industry there now. And there is more subdivision around the fringes so it’s expanding.”

4.4. Climate change

A number of interviewees thought there had been changes in the Wairarapa climate. One person commented on their perception that the reduction in berry fruit growing was related to less frosts, while others though the climate was getting more severe.

“Weather-wise, we’re now getting Hawkes Bay’s weather – the equator is getting wider and four seasons are being melded into one. 20 years ago winter was winter and summer was summer and ne’er the twain shall meet. At the moment it’s hard to tell the difference between winter and summer. When I first shifted over here, we’d have an inch of ice on our cattle troughs for 3-4 days at a time. Well you don’t even see that anymore. By Christmas, the hills out the back here were burnt like the desert.”

“It’s interesting because I grew up in the Wairarapa many many years ago, in Greytown ... and I’m not sure if it’s an age thing or whether all people my age think back and remember long hot summers, I don’t know. We had longer summers and we had relatively cool winters. What we’re seeing now is spurts – we got an extremely hot period here for about 3 weeks, and then it just drifted away. We’re in March now and it’s quite cool. Whereas I seem to remember March/April you finish swimming in the river. So climate-wise I think it is changing a little. When we get rain now we get quite severe rain for about a day, and then you don’t see any more for maybe a month.”

Some interviewees, when expressing a certain amount of pride and attachment to the region, described their ‘vision’ for a ‘sustainable Wairarapa’;

“I hope that Wairarapa retains its rural character. I’m biased because I live here, but it’s a fantastic landscape and rural activity plays a huge role in that. So I think there are threats to that from, particularly rural residential lifestyle subdivision, and I don’t think the district plan has got it quite right, it’ll be all right for the next few years because the economy won’t be pushing to create subdivision but in another 5-10 years... I think we’ll see a fairly major change if these plan provisions are still in place. And I think things like wind energy generation, that’s going to become a big issue in the Wairarapa before long... the other challenge to the Wairarapa will be what happens with grapes, it’s a reasonably important industry for the region, particularly Martinborough”.

“I think [my vision] is related to carrying capacity on the bottom line for some level. What can the natural and physical resources actually accommodate in relation to their use? That’s on one level the population basis but also agricultural intensity type thing. I guess personally I tend to have more of a concept for a sustainable model of, the strong definition of sustainability, where you have the environment, and then a community inside that and then financial stuff as opposed to the three interlocking things. That’s probably more the way I tend to think of it. So in terms of what is sustainable Wairarapa, the first thing to me is looking at the environmental bottom line, and then the people, then the economic stuff. In relation to the irrigation proposal, to me if you can get more economic productivity or something out of it, without compromising the bottom lines, that’s brilliant. And I think it’s possible. But it has to be managed very carefully so that it’s not a tradeoff between the two. You’re not increasing one at the expense of the other”.

4.5. Summary of changes in the Wairarapa

There were a number of changes in the Wairarapa region identified by interviewees. These included demographic changes such as an influx of what was referred to as ‘life-stylers’, most of whom were perceived to come from Wellington or as immigrants from other European countries. The lack of urban land available for large residential sections in Wellington was seen as one driver of why Wellingtonians were moving to the Wairarapa.

People had mixed views about rural subdivision, with some decrying the loss of productive farming land. The planting of smaller blocks had, according to one interviewee, enhanced the amenity value of the region, while others thought that this change had negatively impacted on the rural landscape with its expansive views of hills and mountains.

Most of those interviewed thought that there had been positive impacts of these changes, such as the growth of Martinborough, and new facilities driven by population growth, especially an increase in residents with school age families. While Greytown was seen as a drawcard for newcomers to the district, one interviewee commented that in catering for Wellingtonians, Greytown had become too expensive for locals.

People interviewed who had connections to industry (eg forestry) and/or other commercial interests thought that there had been slow steady growth over time, with less peaks and lows as in other regions of New Zealand.

Land use change was seen as inevitable and this included life style development, bigger farms, dairy conversion, more intensification, and a likely increase in viticulture and horticulture crops (eg olives). Several people commented on their perceptions of climate change over time, as well as how future climate change might impact on land use. Discussion around water-related issues was most often tied to land use and interviewees raised a number of issues they thought were important for the Wairarapa. The following section of the report identifies and discusses the issues raised during the interviews.

QUESTIONS TO CONSIDER

- **To what extent can changes to water availability infrastructure take account of impacts of potential climate change?**
- **If improved water availability increases land values without the concurrent ability to ‘intensify’ land use, is this likely to lead to an increase in rural residential development?**
- **How important is this scenario given the value placed on maintaining productive land use and the values associated with rural amenity?**

5. Values and uses of water in the Wairarapa

A wide range of values and uses of water were described by interviewees, and most people, whilst talking about specific uses of water, emphasised that water is crucial, and is an emotive topic.

“Water is crucial to the Wairarapa... [it’s] likely to become an even more emotive issue over the next five to ten years” and “people get emotional over such issues”.

5.1. Recreational uses of water

Rivers and lakes throughout the Wairarapa region were described as extremely important for recreation, both for locals and for tourists. Activities mentioned include fishing, jet boating, canoeing, kayaking, swimming, camping and rafting.

“The Ruamahanga is full of families and dogs all splashing around, same with parts of the Tauherenikau that have very high recreational use, Waiohine, you’ll see a lot of kids down there. They’re all good rivers; I mean they’re relatively safe because the deep spots end up in shallow spots. They’ve got shallow banks”.

“My own family were down there [Ruamahanga River] just enjoying it. Fishing is an important part of our heritage”.

“Anywhere there is a bridge when it’s a real hot summer’s day, you’ll see people over the edge swimming. You can stand on my bridge 100 metres from my house and see the perch and trout going by”.

“People do game bird shooting in the lakes. People like the rivers and the beaches”.

“[Lake Henley] is a big area, people go running there, or take their dogs for walks, and do activities on the lake, yachts, walking. There’s a good walking track and there’s wetlands further down that come out of the river, separate from the lake. People go swimming and kayaking in the river just up from Henley Lake, there’s a club there and rapids. There’s a lot of use in the south, boats on the lake, people go camping, swimming on the fringe of Lake Wairarapa”.

The Wairarapa region is important for ‘sports fishing’, including brown and rainbow trout, and perch. *“The Ruamahanga and its tributaries are a key fishery for the Wairarapa and people coming from Wellington. That’s where a certain amount of the urban base obviously is”.* Several people mentioned the presence of kōura and eels in the water races throughout the region.

There are some important wetlands in the region, most of which are around Lake Wairarapa, and some smaller wetlands on the sides of many of the tributaries.

Wetlands are home to many native species including fish, and also to native birds and the water fowl, an important bird for game shooters. The Department of Conservation's Lake Wairarapa Wetlands Action Plan (2000-2010) lists a variety of ecological values in the wetlands, including a community of small native plants which is greater in area than in any other North Island lake, 96 bird species (recorded in the last 15 years) including water and wader birds, waterfowl and shag, twelve native fish species, and the nationally threatened mud fish. Whitebait, flounder, eels, perch and brown trout all provide a significant recreational fishery (Department of Conservation, 2000).

Some interviewees mentioned specific groups who have an interest in recreational uses of rivers and wetlands, including the Department of Conservation, Fish and Game, Forest and Bird, Wellington Botanical Society, The Ornithological Society of New Zealand, Dr Mike Joy (Massey University, with a strong interest in preserving native fish), and the Sustainable Wairarapa group.

5.2. Spiritual and cultural connections to water

Māori with affiliations to Rangitāne ki Wairararapa and/or Kahungunu ki Wairarapa have spiritual and cultural connections to the Ruamahanga and other local water bodies based on whakapapa. This kinship-based connection establishes a reciprocal relationship, requiring mana whenua to care for and sustain the natural environment as she has them.

“We are trusted with the respect and care of land and waterways. These values are handed down to each generation...Pā sites are situated along most of the rivers in the region; “at these sites water was often used for cultural aspects of life, spiritual aspects of life, and for social aspects, swimming and bathing. Now the most common use of water is for swimming. Some rituals are still performed, but not in the same context as in the past. We perform the tohi (naming) ceremony, where a newborn child is given their name. Water is used for blessings; lifting tapu, tangi, bless a new life, naming a child”.

The use of water in spiritual and cultural ceremonies mentioned in this quote highlights the high regard with which Māori view water, given its life-sustaining properties.

Other interviewees also discussed connections with rivers and lakes that could be described as spiritual or cultural, as discussed in section 3. Several people explained that they find it difficult to describe some of these connections.

“Kiwis are not good at articulating this. Kiwis know they like it but don't know how to say it”.

“A lot of it is about language that people use and attitudes. The underlying values are exactly the same, but its couched in different terms and if you've got a group of engineers they have a terminology, a group of social scientists have a terminology... farmers have a

certain terminology. But they're actually talking about the same thing".

"When Māori introduce themselves, they do their pepeha, and talk back to their mountain or river, acknowledge it. I think to a certain degree that applies to any kiwi. I know for myself, having travelled overseas and lived in different parts of New Zealand, even on a subconscious level, association of landforms and shapes of the land, is somewhere underneath there at a quite deep level... and I assume water is part of that landscape".

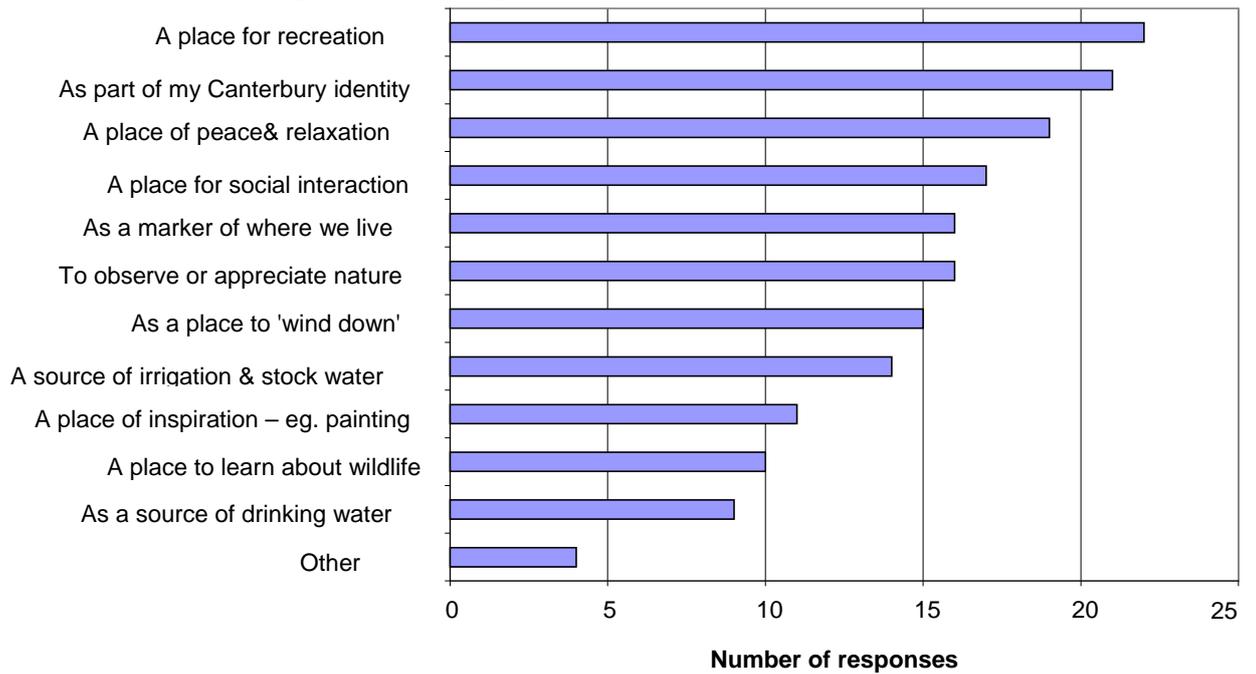
"What struck me today [at the Masterton wastewater hearings] is people's relationship to the river. To me it's just as valid as and probably more so than some of the scientific terms and stuff".

One way people's values for rivers and waterways are recognised is through participation in stream-care groups. Several groups were mentioned by interviewees including the Papawai Stream Care Group, the Makoura Stream Restoration Project and the Enaki Stream Care Group. These projects involve a wide range of community members, councils, NGOs and businesses. These groups have open days, do riparian planting and flood control (see section 7.4).

5.3. Linkages to other New Zealand contexts and research findings

In 2007, we carried out a pilot survey of Canterbury residents' water-related values and activities. This was a random survey of 28 attendees at the Canterbury 'Hot Science' series in 2007. While the majority of respondents lived in Christchurch, the survey found that people were willing to travel further afield to visit rivers such as the Rakaia, Ashley, Hurunui and Ashburton indicating that both local and regional activities and identities are important.

Figure 4: The importance of rivers to



households



Photograph 2: The Rakaia River, Canterbury

The Wairarapa interview data, and the table above, demonstrates that people’s social and cultural connections to rivers and waterways are important, and that the past provides a personally experienced ‘benchmark’ from which to assess real or potential change.

5.4. Consumptive and Productive Uses of Water

Access to both surface and ground water is an extremely important aspect of business management for many different groups. People talked about the following uses of both surface and ground water:

- Drinking-water (urban and rural)

All humans require access to drinking-water. Although we did not talk to anyone responsible for urban water supplies, interviewees talked about the different sources of water for urban settlements in the Wairarapa, including bores into river aquifers (Martinborough and Greytown), or sourced directly from the river (Masterton – from Waingawa River, with 3 bores as back-up, Carterton – the Kaipatangata Stream, and two underground bores). Rural households are either on bores or use rainwater tanks.

- Horticulture

Vineyards use water for irrigation, and some use water for frost protection, although most currently use helicopters. A few vineyards are on town water supplies.

Crop farmers require water for irrigation (examples in the Wairarapa include maize, wheat, peas, squash, and onion seed).

- Beef, sheep and dairy farming

Water is required on farms for stock drinking-water, for irrigating pasture, for cleaning equipment and shed wash down. Farms typically source their water either from water races or from bores. *“Of course for sheep and beef and for dairy, water is totally essential”*. *“[Water races are] vital to some farmers, they can’t water their stock any other way unless they have a bore”*.

- Lifestylers

Several interviewees speculated that life-stylers use more water than ‘traditional’ farmers. For productive (not necessarily profitable) life-style blocks, water is needed for animals and/or for irrigation. According to interviewees, olives do not need much water for processing. This season a small olive grower irrigated 3-4 hours every other day, only for 10-12 days this year.

- Forestry

Forestry (radiata pine) is primarily on the East Coast, in the Masterton District. The Ngaumu State Forest has a large processing plant. *“One of the features of radiata of course, or all plantations like that, is that water isn’t totally necessary, they can exist on rainfall that may not necessarily arrive on tap”*.

- Industry

Industrial water use is primarily for manufacturing and processing. Several factories were mentioned by interviewees, including Breadcraft, Hansells (NZ Ltd), a printing firm, and Premier Bacon in Carterton. These were not classed as ‘wet’ industries.

- Tourism

Some interviewees stated that a number of tourist attractions in the Wairarapa rely on a regular supply of water. Two examples include tourist gardens and Mt Bruce. *“They [Mt Bruce] need water because they’ve got the eels there that they feed. Without the water going through the nature reserve, you wouldn’t have the birds, they’d go somewhere else. It’s a significant draw card for the Wairarapa. 40000 people a year go to Mount Bruce”.*

- Firefighting

Water is also required for fire-fighting and reliable supplies are required for this.

- Waste-water treatment

Water is required both for the treatment and discharge of waste, whether this is an urban waste treatment plant and process, or a farm effluent disposal system.

QUESTIONS TO CONSIDER

- **How can future changes to water availability infrastructure ensure that multiple consumptive and productive uses of water can be maintained?**
- **How can WRIT and the community provide a benchmark against which future impacts of changes on water availability and quality can be measured?**
- **What activities, values and uses of water should inform this benchmarking exercise?**

6. Water Quality Issues

6.1. Perceptions of water quality in Wairarapa Rivers

The issue of water quality was one which many interviewees felt strongly about, and which seemed to raise some feelings of anger and great concern. At the time these interviews were undertaken (9-13 March 2009) the Masterton District Council waste-water hearings were being held, and this may have helped to raise awareness of the water quality issue throughout the Wairarapa. Several interviewees believed that water quality is a key issue throughout New Zealand, and one that will become more important with time.

“I think water quality is going to become a bigger and bigger issue as time goes by. I think it’s probably more of an awareness than anything else, as it gets talked about more and more. And as population increases it puts more pressure on it”.

“[Water quality] is becoming increasingly important. I think its one part of a national awareness type thing that’s slowly changing and the

standards are increasing, and I can only see that getting more and more important in terms of the general public's expectations and reactions to water quality. There's a bit of a difference between the ideas or perceptions and the reality of how you manage these issues. And sometimes there is an idealised conception I think of what water quality should be like or how it should be managed, without a real detailed understanding of the complex issues you have to go through to achieve that".

Only two interviewees believe that water quality in the region is good, saying that "Water quality is generally good", and in relation to the wastewater scheme "it is interesting to note that the Masterton sewage actually helps the river – the quality of the water upstream of the plant is actually worse than downstream". Most others compared water quality over time, and feel that there has generally been a decline in the state of the region's rivers:

"Water quality is not as good as it used to be".

"Water quality has changed and we can't do what we used to do. The river is more polluted the further downstream you go".

"The river is in a terrible state. We want to look at how we can clean it up".

6.2. Reasons for concern

The primary concern raised by interviewees was the effect of poor water quality on human health, from eating fish that have been affected, to swimming in and drinking the water.

"Nice fat fish ... I'm always a bit nervous about what's coming down the river, but I make sure the fish are cooked well".

"I know that people are concerned about the cleanliness of the Ruamahanga in terms of the water quality, in the summertime, if you want to go swimming with your kids. People do swim in the Ruamahanga, but they do so now thinking are we going to get anything? At times it can be rather green looking and you think ugh! And one of the newspapers, or maybe both of them, will publish the results of the water quality testing. I don't know if it was earlier this summer or the summer before, it was certainly 'Ruamahanga fails all the tests'. It's the region's dirtiest river. That sort of idea".

"Now, I wouldn't swim in it, fish in it. It has changed so much, there's so much pollution and the river has just changed".

People were also concerned about the effect of poor water quality on their pets, and on the fish themselves.

“In the summertime, there isn’t any water, or what water there is I wouldn’t let the dog drink. Very slimy”.

“I think the general public are just as concerned about fish stocks because these are all indications of the quality of the river”.

When asked about the most important water issue requiring attention, several respondents replied *“I’d say water quality, put water quality first. Specifically the rivers”*.

6.3. Perceived causes of poor water quality

Interviewees discussed several different causes of poor water quality in the Wairarapa. By far the most frequently described cause of poor water quality was agricultural land-use and in particular, the increasing intensification of farms.

“Water quality has reared its head, with the runoff in dairy farms in particular and from fertiliser use that has altered the cleanliness of the rivers I guess. Nutrient loading - nitrates and phosphorous.”

I assume [the water race is] very nice and clean when [the water] comes in and it’s probably horrible when it goes out because as far as I know none of the landowners who have it for stock water have it fenced. Cows stand in it, do all the things they do in it. No-one is enforcing it”

“The water races have not been maintained. You’ve got a lot more small holdings and they don’t manage the water well, especially the water races that run through their properties so you get clogging up with weeds, and the water flows off into the paddocks and then you’ve got the flip side of that with the dairy farms and they’re big. They’re intensive agricultural businesses. They’re not the little farmer with 150 cows anymore, it’s 1000 or 1500 with an intensive need for water and their discharge or waste water, and that is very poorly managed”. [The Clean Stream Accord] doesn’t exist in the Wairarapa as far as I’m aware... if it was introduced here it would certainly go a long way to cleaning the creek out”.

“We’ve still got too many people with too many cattle crossing the stream”

“The Mangatarere River has got very poor water quality due to land use. Agricultural runoff, so you’ve got nitrogen phosphorous, also suspended sediment, reducing the water quality in the Mangatarere”.

“With increasing land-use there’s increasing adverse impact on the environment from sediment discharges, nutrient enrichment, and things like that”.



Photograph 3: Ruamahanga River and farmland near Greytown

Several interviewees also blamed the disposal of waste-water into the Ruamahanga River, saying the

“Ruamahanga has problems, because Masterton DC discharge their wastewater into that and that’s a fairly old wastewater plant”, and “We have always been of the mind that we do not want sewage going into the river. There’s other ways”.

A third reason for poor water quality provided by one interviewee was the impact of population increase and residential development. A residential development in the United States that had negative impacts on water quality was described as an example.

Concerns appear to be justifiable based on the 2007 Lower Ruamahanga River Instream Flow Assessment Report (Greater Wellington Regional Council, 2007). The report states that;

Weekly monitoring of three sites on the Lower Ruamahanga River over the summer bathing seasons show that the river tends to fail recreational water quality guidelines (for faecal indicator bacteria) on occasions, particularly following rainfall. The high *E. coli* counts following rainfall are considered to be due to runoff from agricultural areas. [This is runoff directly into the Ruamahanga River and indirect runoff via tributaries.] All three monitored sites on the Lower Ruamahanga River have been assigned ‘very poor’ suitability for recreation grades (p36).

The report does note that in this case the grading system of MfE/MoH (2003) better reflects the condition of the bathing sites during wet weather, rather than in dry weather when recreational activity is greatest.

The Wellington Regional Council *Freshwater quality monitoring technical report 2005, updated 2006* also explored changes or trends in water quality and the possible reasons for these. In relation to the monitoring of Wairarapa rivers and streams the report did identify a decline in water quality.

The decline in water quality and macroinvertebrate health with distance downstream is attributed to changes in land cover and land use practices, and the influence of point source municipal wastewater discharges. Downstream of Mount Bruce, indigenous forest and scrub cover gives way to increasing pastoral cover that supports various agricultural land uses (Figure 4.18). Overland runoff from farms and direct stock access to tributaries are likely to contribute significantly to increased instream contaminant loads. (62)

6.4. Improvements to water quality

Interviewees had several ideas about what could be done to improve water quality, including:

- Planting more indigenous cover – rather than willows – on river banks in order to provide shaded areas that would keep the water temperature down (and inhibit algae growth). There is “*very little indigenous planting along waterways so the rivers are not cool or shaded and species live within a narrow temperature range*”.



Photograph 4: Willows alongside the Ruamahanga River

- Stricter monitoring of efforts to keep stock out of water ways; “*In a [irrigation] scheme, not sure you can impose on people conditions about the way water is used. Regional Council should have a management plan backed by regulation. Need a holistic [irrigation] scheme ‘if it can be done’.* Fonterra requires farm plans [reference to Insight documentary]. *Voluntary measures are not necessarily working*”.

- Improvement in – or alternates to – wastewater discharge into waterways, especially the MDC treatment plant;
- Stricter controls on diversions to water ways by farmers and life-stylers;
- Improved care of small streams and stock water races.

Those who talked about land use intensification as contributing to deteriorating water quality saw that industry (eg Fonterra) and GWRC had dual responsibility to (i) ensure water abstraction did not decrease the contaminant carrying capacity of water ways and (ii) ensure that land use practices and behaviours that did not adversely impact on water quality. Other interviewees talked about the Sustainable Wairarapa group and their efforts at improving water quality.

We're [Sustainable Wairarapa] working with Masterton DC and Greater Wellington, and we've held community hui, developing visions for what they want to see the stream like and now we're starting to look at management plans and doing some background research to find out what the current state of it is before we decide on what we'll do.

A report on the Otukura Stream (Greater Wellington Regional Council, 2008c) located between Greytown and Martinborough recommends that policies for reducing stock access and restoring riparian vegetation are considered when the Regional Freshwater Plan is reviewed. In addition, Greater Wellington should consider promoting or requiring riparian restoration through the resource consent process.

Schools are also working on raising awareness of the importance of maintaining the quality of water for multiple purposes with initiatives under the umbrella of the Enviroschools programme and GWRC (see Appendix 2).

Visions for improved sustainability included:

“Protection of the resource, maintaining water quality, Wairarapa actually needs enhancement, so enhancing water quality and maintaining water quality throughout the region to maintain instream values, all affected, interested key holders, as well as establishing or maintaining some of those farming values as well”

“It's about balance of environmental and ecological values within the environment of intensive land use”.

6.5. Linkages to other New Zealand contexts and research findings

In an ESR Capability Fund project pilot survey, respondents were asked about water quantity and quality of the rivers they identified for certain activities. Quality appeared to be more important to the respondents than quantity.

Table 1: Importance of Water quantity and quality

	Very important	quite important	A little important	Not really important	Blank
How important are the rivers to you	20	5	1	0	2
How important is water quality	22	4	1	0	1
How important is water quantity	14	10	1	1	2

These findings are consistent with those in Hughey and Cullen’s New Zealand-wide survey *Public perceptions of New Zealand’s Environment* (Hughey & Cullen, 2008) which found that; water quality and/or pollution (14.2 of respondents) was identified as the most important environmental issue facing New Zealand (p.25), and that between 2002 and 2008, there was a significant increase in the number of people who thought this was the most important issue. Additionally, “farming was perceived as the single greatest cause of damage to freshwater systems in New Zealand; the percentage of respondents holding this view has almost doubled since the 2000 survey” (p.21).

Public consultation for stage four of the Canterbury Strategic Water Management Study also indicated that water quality was a major issue. However, water quality and quantity are largely regarded, by Canterbury residents, as interdependent, and there was equal emphasis on the importance of managing land use to avoid negative environmental impacts and the need to establish and maintain environmental flows. Examples of what was required included: minimising discharges to water ways; monitoring land-use practices and employing best practice approaches; excluding stock from all irrigated catchment waterways and lowland streams; protecting dynamic processes of Canterbury’s braided rivers; maintaining ecosystem (indigenous) biodiversity; ensuring high quality water for contact recreation; and protecting the region’s high quality aquifer-sourced drinking water.

In the Human Dimension project, participants in the Tasman case study workshop were asked to identify ‘core values’ relating to water. As can be seen in the table below, many of the core values identified relate to water quality. As in Canterbury, many workshop participants linked water quality and quantity.

Table 2: core values identified in Tasman workshops

<i>Workshop One Core values identified by 33 participants (Crop and dairy farmers)</i>	<i>Numbers subscribing to core values</i>	<i>Workshop Two Core values identified by 28 participants (individuals and or collective interests)</i>	<i>Numbers subscribing to core values</i>
Reliability (water quality and quantity)	30	Habitat/Environment	27
Aquifer protection	30	Potable Water	26
Sustainability	30	Protect aquifers	24
Best knowledge used to make decisions	29	Efficient Use	23
Retain water rights	28	<i>Mauri</i>	20
Maintain economic livelihood	25	Contribution to coast	18
Employment in the wider community	24	Recreation	18
Reasonable cost of water provision	24	Public access	17
Efficient use of water	21	Volume (river flows & aquifer levels)	14
Retain intrinsic (environmental) nature of rivers	21	<i>Wairua</i>	12

A key issue that has arisen in both Canterbury and Tasman is the cumulative impact of land use change (ie conversion to dairying) and/or intensification on water quality in relation to new water augmentation and storage schemes for irrigation.

Additionally, the primary sector is working on a plan of action (Primary Sector Water Partnership, 2008) in which their goals are to:

- Maintain and/or enhance water quality from primary production land, with demonstrable and accelerated progress on the resolution of water quality issues from agricultural land within five years.
- Demonstrate improvements in water use efficiency by the primary sector within five years.

Their approach “aims to achieve sustainability goals and to maintain dynamisms and flexibility in the primacy sector” through a number of different strategic initiatives and partnerships.

QUESTIONS TO CONSIDER

- **What is WRIT’s role in:**
 - (a) **Contributing to ‘raise the bar’ to achieve an improvement in water quality relating to agricultural run-off?**
 - (b) **Ensuring water quality is not negatively impacted on if there is an increase in land that can be irrigated?**
 - (c) **Demonstrating to the public that WRIT is taking the need to contribute to an improvement in water quality seriously?**
- **What partnerships can WRIT establish with the primary sector to both decrease water quality issues and help the Primary Sector Accord reach its targets of an improvement in water quality?**
- **What partnerships can WRIT establish with regional and district councils that can contribute to an improvement and maintenance of water quality in the Wairarapa?**

7. Water Quantity Issues

7.1. Water availability

Most people in the Wairarapa, according to interviewees, are acutely aware that water is a valuable resource, and that at certain times there is either not enough to go around, or there is too much, resulting in floods. Interviewees had different ways of explaining how much water is available in the Wairarapa, and the following comments reveal differences in understanding about the current situation.

“The whole Wairarapa as you’re probably aware is just a huge deep valley filled up with rocks and with water in between. So there are some limitations in terms of water that is readily available”.

“It’s not that the Wairarapa actually lacks water, because there’s a tremendous amount that flows through it. It’s really that they don’t get a lot of rainfall in the summer, except for the places up under the ranges that still get water quite well. But certainly through the central valley. A lot of moisture comes off the hills and as you get further east, you get less and less. But as you get to the east side of the valley you get a very dry area and I think that’s probably because stuff that’s coming from the West is stripped before it gets there, and stuff that comes from the east has deposited most of its rain. With the drought for the last two years that was an area that was really bad hit”.

“The surface water from the rivers is obviously there but you can’t predict when that’s available so the groundwater is seen as an

essential resource. And I suppose its replenishment is dependent on rain as well”.

“At the moment the aquifers are just about empty...if you get a dry summer....”

“There are several aquifers, some fed by rivers which are rechargeable ones, and in the middle of the district, I’m not quite sure exactly where, there are some deeper aquifers that I think now have moratoriums on them, they’re not putting any more bores down”.

“We’ve got issues with low flows out in the Wairarapa. The Wairarapa is pretty much fully allocated if not over allocated. I think there are approximately 15 rivers that are fully allocated, and they include the main rivers like the Ruamahanga, Waingawa, Waiohine and Waipoua and the Mangatarere is 50% overallocated.”

“I think there’s enough water. No one really knows”.

It appears that Wellington Regional Council have identified the need to improve their knowledge on the river and aquifer systems in the Wairarapa. Given incomplete knowledge it is not surprising that people have different understandings of what are often quite complex water systems. Watts and Perrie, in the Lower Ruamahanga instream flow assessment report (Greater Wellington Regional Council, 2007) state that; “the Lower Ruamahanga River is fully-allocated under the current Regional Freshwater Plan water allocation policies, and therefore Greater Wellington needs to have sound information on instream values and flow requirements to aid in decision-making on future resource consent applications to take water” (p.2). It is interesting to note that a considerable number of consents are due for review in 2010, but according “to the core allocation specified in the Regional Freshwater Plan, this allocation is considered to be fully utilised, and it is likely that no further abstraction will be granted under the current policies (except as allowed for under supplementary flow conditions)” (p.8).

The Regional Freshwater Plan (Wellington Regional Council, 1999), states that a third of Wairarapa groundwater zones are at allocation levels greater than 60% of their allocation limits (Greater Wellington Regional Council, 2006).

Drought

Greater Wellington Regional Council reports over the years clearly show periods when the Wairarapa has experienced less than usual rainfall;

Due to the dry conditions that persisted for much of March 2008, river flows for the month were below average throughout the region. The average monthly flow was less than half of the long-term average in the ‘eastern’ rivers (e.g., Wainuiomata, Mangaroa, Ruamahanga and the eastern Wairarapa rivers). The low flows experienced in March have an estimated return period of 8-10 years in the Waikanae, Hutt, Wainuiomata, and Ruamahanga rivers (Greater Wellington Regional Council, 2008a).

Groundwater levels are low in both rainfall and river recharged aquifers in the Wairarapa. This is a combined effect of low recharge rates and high abstraction demand through the dry summer (particularly for irrigation). Groundwater levels in the deep confined Parkvale aquifer monitoring well continue to track below long-term minimum recorded levels. Anecdotal evidence has been received of some shallow boreholes in the Wairarapa drying up over the summer (Greater Wellington Regional Council, 2008a)

When asked about water availability in the Wairarapa, most interviewees talked about droughts and their impact on the region. There appears to be high awareness about the impacts of drought on different groups, and the fact that there have been recent periods of less rain means that the impacts of not having enough water are currently in people's minds.

"You're probably aware that we've come out of two or three years of quite sustained drought. This year has been quite benevolent really, but the last couple have been very dry and tough".

"Farmers are more affected [by drought] because they lose their livelihood; the urban people are affected because it's inconvenient; they can't wash their car. But the farmers incomes are affected, they have to dry the cows off early. Just a vicious cycle".

Floods

Wairarapa residents are also acutely aware of the flood risk and some of the causes of floods.

Towns such as Masterton, Carterton, Greytown, Featherston, Martinborough and Tinui all face a risk of surface and river flooding, or the effects of flooding (e.g. being cut off by road closures) because they are located in low-lying areas. Flooding in the upper Wairarapa Valley (the area around Masterton, Carterton and Greytown) is usually caused by the rivers that begin in the Tararua Ranges. These rivers are quite short and have steep gradients, especially in their upper reaches. After heavy north-westerly rains in the Tararua Ranges, there is little time to warn people in the upper Wairarapa Valley of the coming floods (Greater Wellington Regional Council, 2008b).

"I guess we're getting more floods in the rivers these days. Big floods. I guess that as land is cleared, water comes down more quickly whereas when it was covered in bush the water was held back by the foliage and stuff that was there. All of the rivers in the Wairarapa have underlying shingle beds which come down from the Tararuas. Whereas out towards the east coast the rivers all run over a clay base and there is very little rock out that way".

7.2. Impacts of low-flows

Water restrictions

Urban water restrictions are imposed on some part of the district every summer;

“That’s something we do every year come the first of November - we move to an alternate day hosing situation in the town [Masterton]. We’re only talking about town water here of course. All the new properties are equipped with water metering but we’re able to keep well within our quota just by going to alternate hosing...there are times of extremely low flow where we make a point of saying ‘guys we’ve got to save water’ and we get a very good community response”.

Carterton district has water metering for domestic users, and residents are charged once they have used their initial free allocation of 350,000litres per year. Metering increases the visibility and awareness of water use, and additional benefits have included identifying and fixing leaks in the system. Carterton also has increased their water storage capacity.

“With the water storage and metering, hopefully we’ll be all right for a few years. We were laughed at by other authorities being such a small place and putting water meters in but it has paid off already”.

Some interviewees talked about the differences in attitudes between those on an urban supply and those dependent on rainwater tanks for domestic water.

“I believe we have a significant issue with our ability to store water in our urban areas. Masterton, Carterton, Greytown specifically and sometimes Martinborough and Featherston have hosing restrictions. Because in the rural areas - they’re on bores or tanks, a few might be on town supply. And if you’re on tanks you learn to manage water. We’ve got tanks, so you manage the water; if it hasn’t rained for a month or two months you start looking at ways you can save water. We put low flow devices in the showers – we’re not stupid.”

Water restrictions also impact on irrigators who are unable to take the full amount of water for which they hold consents an issue highlighted in the newspaper article below.

Water restrictions on Wairarapa water takes

3 February 2009

Greater Wellington has imposed water restrictions on consented water takes from some Wairarapa rivers as a hot and dry January and increased demand for irrigation takes a toll on river flows and groundwater levels. Restrictions have been placed on consented water takes from the Upper and Lower Ruamahanga, Tauherenikau, Taueru, Waingawa, Whangaehu and Waipoua rivers and the Mangatarere, Otakura and Parkvale streams.

Rainfall during January was well below average throughout the region with the Wairarapa plains and eastern hills receiving only about one-third of their average January rainfall, with about 19 mm of rainfall in Masterton and 15 mm at Tauherenikau. The Tararua Ranges, Wellington and the Hutt Valley also had only about half or less than half their usual January rainfall.

Water restrictions are placed on most resource consents issued for taking water from rivers and streams during low flow periods to preserve river and stream life. Although river flows for January were below average they are not yet at the extreme low levels experienced last summer. However, many small streams in the Wairarapa are now experiencing significantly lower flows than usual because of low groundwater levels and a lack of rainfall in the eastern Wairarapa hills and in the Tararua Ranges.

www.gw.govt.nz/story30502.cfm , accessed 9/4/09

Several interviewees commented on the situation where water restrictions were placed on urban residents while a number of grape growers were still irrigating from town supplies. *“Because they’re paying rates people see water as their right to use as much as they wish and see restrictions as infringing on human rights!”*. While it was understandable that some would see this as unfair, some interviewees did comment on the difference between ‘suffering’ inconvenience (eg urban residents not being able to wash their car), compared to impacts on livelihoods.

It was pointed out that urban residents often did not realise that irrigators also had water restrictions; *“Town people face summer restrictions, as do the grape growers”*.

Impacts on trout fisheries and anglers

Several interviewees brought up the impact of low flows on trout fisheries;

“During low flows, as the mean annual low point is passed, trout habitat decreases; essentially, you get a decrease in physical habitat. You also get a decrease in drifting macro-invertebrates, the high quality ones that are essential for maintaining trout populations. With the decrease in flow you get increased temperatures, increased periphyton growth, which causes increases in variations in dissolved oxygen, which obviously impacts on the trout population. They require cold temperatures - for spawning we want 10 degrees or under, for maintaining a healthy population, under 19 degrees. From the angler - and to a lesser extent the hunter’s - point of view, certainly the actual river when its in low flow can have increased algal growth, so its not an attractive place to fish. The other thing which can happen is that peak flows can be altered which can be important for moving gravel downstream. That’s another aspect of how pools and streams and ripples are maintained. That hydrological variation is really important for maintaining in-stream ecosystems and values”.

QUESTIONS TO CONSIDER

- **The impacts of low flows are different for different groups at different times of year. How can WRIT take these different impacts into consideration in exploring the feasibility of improving water availability and reliability?**
- **How can WRIT work with councils and the community to address equity or fairness issues that could arise in the consideration of water restrictions or changing flows?**

7.3. The need for a reliable water supply.

A reliable water supply is a key requirement for a range of water users. Reliability of urban supplies was seen as essential to meet human health and hygiene needs as well as for other domestic uses;

“There is an absolute necessity to provide clean drinking water to the various communities and industries”.

Regional development was seen by some as putting a strain on reliability for urban supplies;

“Urban supplies are not keeping pace with the development of the region so they need more reliability”.

Reliability of supply for rural irrigation purposes was also seen as essential by a number of interviewees, and “*there are a number of farms that are looking at on-farm dams to provide that certainty*”.

The need for a reliable water supply included the following reasons:

- Reducing risks when contract cropping. “*Irrigation helps – you’re not so much at risk when undertaking contract cropping*”.
- The need for dairy farms to maintain their quotas for meeting town supply. “*Dairy farmers in particular have quotas they need to keep in terms of town supply, so the necessity to produce milk on a known basis is important*”.
- The need to produce feed for winter months. “*I’ve got farmland of my own and you’ve got to certainly try and develop a situation where you’ve got certainty of feed over the period. The production of bailage in summer periods is quite traditional, whereas it used to be hay which was a gut filler, the bailage is something which you can continue to produce with, so the ability to do that during summer periods has enhanced the ability to provide feed on an ongoing basis*”.
- To improve opportunities for changing land use. “*Irrigation provides so many options. It gives you that much larger spectrum of things you can do with your land, and that makes it very easy to change relatively quickly as well. Whereas if you’re running a rain-fed farming system, you’ve got limitations in what you can change to*”.
- To realise investments. “*Water security is a major issue. We have made a major investment in the farm and still want to be doing this in twenty years*”. While this interviewee was focusing on the ability to renew consents for water takes, it was recognised that the ability for Regional Councils to renew consents depends on water availability **and** reliability of supply;

“I guess the real issues we look at are enabling groundwater to be taken on a sustained basis and with certainty”.

Other interviewees commented on farming under ‘normal’ rainfall conditions, which were described as too much water in winter and too little in summer.

“From a farming perspective, when is the water is the issue – in summer – if you’d asked me two weeks ago we were possibly going into the third drought in a row and that has quite serious implications. The flipside is in winter – how wet it is, it’s the opposite, you’ve got too much of it around I suppose”. [To get around this] “You’ve probably got two approaches: you either go down the irrigation strategy or you design agricultural practices around natural conditions. They’re quite different approaches. Both have merits in different situations I suppose”.

Several people said irrigation is definitely needed in the Wairarapa;

“I think there is, there’s a lot of irrigation that takes place at the moment, just on an individual basis, but there’s certainly a lot of land that I think could be irrigated. The challenge is obviously balancing the benefits of irrigation with potential impacts that flow on from it.”

One interviewee stated that sustainability means “to have water in a tap – the whole valley needs it. [We need] good management – taking care of the water without wasting it – clean green image”.

7.4. Perceptions of inefficient water use

There were a range of views about what was seen as inefficient water use. Interviewees connected inefficient water use to a decline in water quantity, and many of their comments included ideas about what people *should* be doing. Ideas about inefficient water use included:

- A lack of conservation attitudes to water for household use.

“Growing up with tank water you’re very aware of how much water you need to have a shower”. “I’ve seen changes in our attitudes to electricity... if you can get that mind change with water – it’s probably going to take a little while and it’s probably going to take some pretty good droughts. We’re used to droughts”.

- Inefficient irrigation infrastructure and/or irrigation practices;

“There is inefficient water use by dairy farmers”.

“I think too, though, some of the farmers with their older irrigation styles when it’s blowing a gale and they’re throwing this water up into the air and it’s landing a km down the.... They need to look at how they irrigate and the times they irrigate. If they did something about their timing, I’m sure that there’s ways they could work to be more public friendly with the way they irrigate”.

- Inconsistent water conservation measures which set up a perception ‘wastage’.

“The biggest problem we have as far as complaints are concerned are urban people in the summer complaining about farmers irrigating their paddocks. And wasting it. They’re wasting water. They don’t see that it’s actually part of their business”.

Interestingly, all those we spoke to told us that they were very aware of the need to conserve water, but it was ‘others’ in the community who were wasting water or using it less efficiently.

One interviewee's vision of sustainability was that there is; *“not too much dairying (takes too much water out of freshwater systems), a mix of dairying with cattle and sheep, and the dairying sector needs to get better at using its water. Increased numbers of cows result in more pressure on the rivers”*.

7.5. Water storage

The need to ensure adequate water storage for urban centres was a topic raised by a number of interviewees;

“Urban supplies are not keeping pace with the development of the region so they need – more reliability. Masterton's done something about that because they had a problem with water quality, that's one element of it. In respect to siphon some off in the peak flows – that's a no-brainer. If you continue to do what we've always done – we struggle for water in the summer and that's only going to get worse. We know we've got a lot of water in the winter and not enough in summer so any saving – put some away”.

However, the need for water storage facilities to meet multiple needs was very rarely mentioned spontaneously, despite some interviewees noting that there was land on the plains that would benefit from access to water.

“If you go down to the Ruamahanga Bridge you can see the depth and width of the river which is just going out to the sea, it would be nice just to have a hundredth of that”.

“[Storage] may well have benefits for urban use as well. I think there's certainly some opportunity there”.

“Increased storage would be good, because the aquifers are empty. DoC and Fish and Game might be anti-storage”.

The importance of being aware of negative impacts of water storage, and of being able to mitigate the negative impacts of too much water taken for irrigation was extremely important for a number of interviewees;

“There are issues associated with water storage, it isn't the be all and end all, a lot of considerations need to be taken into when developing water storage but I definitely think it may be a way to go”.

“ ... Irrigation could take out too much water in summer; better to store water in winter (when flows are above average) and release in summer. Holding dams are probably an expensive option. Taking peak flows might be okay although you'd lose some of the flushing activity. A storage lake probably wouldn't be used for recreation. If you're flooding productive land for storage, that wouldn't be useful”.

The importance of maintaining flow variation if storage was considered was also mentioned by another interviewee;

“Hydrological variation is extremely important for rivers, and if you’re going to take the water generally you’ll take it at high flow. ...so if you’re taking, you need to be maintaining natural hydrological variation as well to maintain in-stream values. So the dams need to not be in the main stems, and they need to take account of spawning tributaries and the values that tributaries have for fisheries, and the maintenance of the health of the main stems as well.”

The issue of who would pay for water storage was one that concerned quite a few interviewees. One interviewee mentioned decreasing land values which would impact on farmers’ (and banks) ability to invest in storage and irrigation. According to the interviewee, the opinion of an ANZ chief economist was that;

“... a lot of dairy farms are borrowed on the back of high anticipated payouts plus the expectation that there will be a capital gain in the land and he doesn’t see that happening. So that may have a fairly significant influence on how much people and farmers are prepared to commit to irrigation, or how much their banks are prepared to commit to irrigation.”

Others thought that it would only be the large land holders who could afford to invest in water storage and irrigation; that investment would not be viable for smaller farms because they would not realise a return on the investment, especially given stable or reducing land prices.

“Irrigation for 20-50ha blocks is not worth the investment. For horticultural crops you’d have to intensify and that’s big capital cost so have to change land-use. It’s not economic and you’d end up with environmental problems.”

Some thought that it was unlikely the general population, especially those in urban centres, would be willing or able to afford regional water storage, even though it would probably be fairer if everyone paid for it - *“Seems fairer if everyone has to chip in.”*

“Water storage is not an option – people wouldn’t pay for it. It’s not within our easily accessible budgets. Not within what people would be willing to pay.”

Another interviewee thought that everyone would pay for security of supply. When asked if urban people would be willing to pay;

“For security of supply? Why wouldn’t you? You’d pay in some way, You can pay in money or you can pay in life style, restrictions whatever. I think it’s a gradual change – it’s when people are faced with sudden change they don’t like. I think you need an attitudinal change before you can accomplish the other ones though”.

By attitude change, the interviewee thought that people need to think about water conservation; otherwise improved reliability of supply could just result in ongoing or more water being wasted;

“Everybody’s got some responsibility at some stage. Have to do that the same way as electricity, it has to be government led; that New Zealand is not going to have water in perpetuity, and while we waste it it’s going to cost us. I’ve seen changes in our attitudes to electricity – my teenager comes home and tells me how many energy vampires we have glowing in the dark! So they have a different perspective on electricity as we had! If you can get that mind change with water – it’s probably going to take a little while and it’s probably going to take some pretty good droughts. We’re used to droughts”.

One interviewee compared the forestry industry’s reliance on water to on-farm storage;

“In forestry if it’s really dry, and there’s no water you can’t harvest, it’s too risky [because of fire danger] and water is stored. Lots of water. Forestry is lucky in that respect – because the industry encourages thinking about water storage. And the industry has dispensation in regards to resource consent so it’s easy to create a dam in a forest. It’s not so easy to create a dam on a farm. It’s damn difficult”.

Another concern raised by an interviewee related to the private use of water and who might benefit;

“the private use of a public water and how that’s all managed. People would be getting private gain from that. And probably as long as it’s not at the expense of a public asset...It’s that transfer of economic benefits or value, from one sector of the community or all the community to a portion of the community possibly”.

The interviewee acknowledged that;

“there’s the multiplying factor that’s normally quoted, and I have no doubt that occurs. [But] like any economic stuff it’s not applied across the board – some people will benefit and some people won’t benefit. That’s typical economic analysis – it averages it across everyone, whereas in reality it’s a shift within the community. I don’t know how you get around that... it would be nice if it was a win-win situation or not a win-lose. I think it’s possible... it depends on what the final system would be and whether its taken away public common good type values which often aren’t in the market and don’t get paid for, but are valued anyway to the community”.

In discussing the need for water storage for irrigation, one interviewee brought up the possibility of on-farm storage;

“It sounds like in Canterbury there is a lot of on-farm storage, setting up 10-15 hectare storage ponds, not effluent, straight water. If that is economically feasible down there, why not here? I know there are a number of farmers in the Wairarapa who have done it, hill farmers, and you’re talking about quite a different proposition there because 1) different topography and 2) the value of that land productive-wise is different”.

Another interviewee said that

“I don’t think that’s [on-farm storage] an option, you’ve obviously got to do it on flattish land, you’ve got to have the storage available, there might be some occasions where two farms might join together but its not where you can do community schemes to provide that. Most farmers, I think, that are contemplating that are doing it on their own properties. Most of the hill country farms are relatively large and you have to have suitable valleys for that to occur. So that takes care of the hill country area. But it’s the flatlands where the challenge really lies”.

QUESTIONS TO CONSIDER

- Interviewees highlight a range of reasons for needing a reliable water supply. How will WRIT consider the needs of these different groups in exploring how to improve regional water availability and reliability?
- It has been suggested that having access to more water might increase ‘water wastage’ or inefficient use – how could a regional scheme be managed to avoid such ‘wastage’?
- Concerns were raised about the potential negative impacts of improved regional water availability (eg through water storage). How will WRIT engage with those who raise such concerns to work through some of these issues?

7.6. Water allocation, availability and land use

A number of interviewees described water allocation (and trading), security of water supply and land use practices as interlinked. Key issues revolved around fairness/equity of water allocation, and the sustainability of both water resources and agricultural land use and farming practices;

“I guess the real issues we look at are enabling groundwater to be taken on a sustained basis and with certainty. And a system which enables some fairness amongst the allocation of that is quite

important. Historically I guess people have - it's been a first-in first-served basis, and there is a need to perhaps look at a fair system to enable newcomers to have access to water, without compromising the existing farmers".

"I think it's [sustainability] related to carrying capacity ... What can the natural and physical resources actually accommodate in relation to their use. That's on one level - the population basis but also agricultural intensity type-thing. But I think if you increase the people or increase the intensity of farming, you then need to realise there's a trade-off, or something else needs to give. Otherwise you affect the environmental bottom line. In relation to an irrigation proposal ...if you can get more economic productivity or something out of it, without compromising the bottom lines, that's brilliant. And I think it's possible. But it has to be managed very carefully so that it's not a trade-off between the two. You're not increasing one at the expense of the other".

"I think there is, there's a lot of irrigation that takes place at the moment, just on an individual basis, but there's certainly a lot of land that I think could be irrigated. The challenge is obviously balancing the benefits of irrigation with potential impacts that flow on from it. That's something that all areas that are dealing with agriculture in general but irrigated agriculture in particular are dealing with".

One interviewee, talking about the nutrient trading project for Lakes Taupo and Rotorua, likened this initiative to water trading;

"Water trading is essentially the same approach and I think that concept is workable. The biggest challenge with water allocation is the 1st in 1st served approach which has traditionally taken place. If you get in and grab a whole lot, the next person down the line is restricted. I think with technology and being able to work out who can take what when. It makes water trading an awful lot easier. Technology plays a huge role both in what you can do with the land, if you throw some water on it – land use intensification over the last 100 years has been incredible really, if you see all the things coming out of AgResearch about pasture growth, soils etc, the technology that enables that to be done on a laptop on a kitchen table is now available. Production can be maximised, but those discharges and adverse effects can be minimised in the same way, because theoretically if you're managing your pasture and soil nutrients to optimum levels then you can have minimal loss and therefore minimal impacts on waterways".

Another interviewee talked about differences in farming practice and how improving the environment as well as increased productivity was possible;

“There are certainly a lot of farmers who are behind the game, some that are just leading the way. I think putting those good practice farmers up on a pedestal and promoting those farmers and saying this is improving their bottom line, they’re improving the environment plus becoming more productive, I think that certainly helps but there’s a hard road convincing some of the traditional farmers... Dairy farmers have benefitted because of the push from Fonterra, and their collective approach ...”.

7.7. Linkages to other New Zealand contexts and research findings

There are a number of different kinds of group and sector initiatives that are trying to improve the interface between water allocation, efficient water use, and farming practices in order to protect or enhance the environment. For example, the manager of a North Canterbury irrigation company stated that;

“We do have a problem with water from border dyke irrigation going back into the main river – high nutrient and E-Coli levels in the Pahau River. There is the Pahau Enhancement group to which the irrigation scheme belongs, and their aim is to take border dyke water out of the equation – 18 irrigators with the potential to better manage their farms are producing farm plans with a three year implementation time frame. In monitoring the focus is on phosphates.”

QUESTION TO CONSIDER

- **Given potential changes to water allocation mechanisms and management (through improved water availability/changes to the RMA) are likely to raise issues of fairness and equity, what is WRIT’s role in helping GWRC work through potential changes to water allocation management?**

8. Political Context of water and land management

8.1. Local Government responsibilities and organisation

Wairarapa interviewees talked a lot about the roles of the different councils, and about the possibility of district and regional councils merging; a topic that seemed to be high on peoples’ agenda in March 2009. We describe these views here in order to provide some context for the conversations with interviewees – managing land and water resources forms a key part of relationships between councils and will be an important part of considerations about an amalgamation. Interviewees had a range of opinions about the way things *could* be set up. Options discussed were:

- The merging of the three district councils to make one district council.
- The set-up of a unitary council – made up of the three district councils with the functions of a regional council
- Maintaining the status quo – with Greater Wellington Regional Council maintaining its current role.

“I think it’s ludicrous for our rate-money and there should be only one council. Should have one council, one telephone exchange and be able to use all the libraries. The regional council is doing as good a job as it can given competing councils”.

“Should be a unitary council – what relationship do we have to Wellington?”.

“If you look at Tasman and Gisborne and what have you, the unitary authority model is one that works very well there, we’re a unique catchment in terms of water, and there is no interrelationship with any other areas and its my view that we should be able to stand alone”.

“I would think that sometime in the future we would in all probability have a unitary authority here, combining all three councils and the regional council. We’re looking at the viability of that situation”.

“I think Wellington Regional Council has done a good job til now. I think with the area and the sources of water, if you look at the Ruamahanga, it goes right through. Probably the region would be better served with a central body. But I don’t think Masterton District Council, Carterton District Council, or South Wairarapa District Council could manage the water in their areas, but they’re so interrelated to the surroundings areas, which of course go a bit bigger and then you’ve got Wellington over the hill. I think Wellington Regional Council or an over-riding body of some sort is more practical. And that must be the same given, when you look at the rivers, look at the Waikato, it covers a huge area, with several iwi involved in that one. Taieri river, again, it’s huge. The Taieri goes through mainly rural areas, whereas the Waikato goes through some commercial areas”.

“Those who call for a unitary council have a narrow view. I’m not pro-Wellington but I am pro-bigger picture. Some insular people have lived here all their lives, and don’t see the relation to Wellington. They see Wellington as the enemy. But where would we get the staff? We need those staff. How would a unitary council be better? If we were unitary, we’d focus on the Wairarapa but with limited dollars too. There is the perception that Greater Wellington Regional council waste money”.

Several interviewees mentioned the Combined Wairarapa District Plan, agreed upon in 2002 and released as a proposed document in 2006. The Plan serves to provide a common approach to subdivision, management of coastal areas, infrastructure

development, financial contributions and regional priorities for industrial development (ten Hove, 2007). General feeling about the combined plan was positive, especially in relation to land-use planning and subdivision rules;

“The combined plan is for all three districts. It has taken a long time and been a lot of hard work”.

“The councils could do more to improve the environment. The combined district plan is good”.

8.2. Relationships between those involved with water in the Wairarapa

A number of good relationships exist amongst those who are involved with water management in the Wairarapa. Interviewees overwhelmingly described these relationships in a positive light, and were keen to show that such relationships are a very important part of negotiations for all aspects of water management.

- **Relationships between councils**

“I have been at a meeting in wellington this morning with all three councils and the regional council as part of a wellington situation, so there are very good relationships between them. Particularly in the Wairarapa we cooperate very much between the councils, we share services... The combined district plan that we’ve got here is one that unites the entire area beyond the boundaries of the TLAs, so that’s useful and it’s a move toward working cooperatively”.

- **Relationships between councils and other groups**

“I’ve got high interest of course in anything to do with water or wetlands. I deal directly with scientists from the regional council, we’ve got a very strong working relationship with them. If I have an issue that’s been raised with me by an individual then I pass that on to compliance and I check compliance’s investigation of that issue”.

“A rural advisory committee also meet when the council needs them eg in the LTCCP process”.

- **Relationships between iwi and other groups**

“They (iwi) have spoken to us about issues that they have and we’re trying to work with them on those issues”.

“The Wellington Regional Council, in my observations, is very keen to involve all people who are interested but particularly iwi. We are being given the opportunity to get out there and you’ve got Māori representation and iwi representation on the councils, on Wellington Regional Council, and that representation is, I was going to say improving, but that’s no disrespect to previous representation. But I think its becoming more front of mind and more important people are recognising the importance. So while I say it’s improving, it’s not to say it was ever bad. I think there’s just a greater awareness. It’s a

little bit like we were talking about before – if there’s a river running past the back fence and it’s clean and there are no bugs in it, we take no notice. It’s only when it starts to dry up and you suddenly realise you’ve got to take the cattle further away, that you start to worry about it”.

“The council have a Māori standing committee – made up of two members from our three marae, plus two iwi representatives. And two councillors. It’s an interesting committee, I won’t say it sets the world alight doing much, but we’re round the table talking. The group has existed for at least 10 years, and meet 6-weekly”.

“We are building relationships with iwi, we work strongly with them to do with the Masterton District sewage, and I’m hoping to continue that relationship. They will give us a heads up on issues which we might not be immediately aware of. Iwi like our anglers have a very long history in that region, back generations”.

“Iwi are expressing more openly and I’ve got to say, in my opinion, this is a personal opinion, are being given the opportunity to voice their opinions a bit more... I think iwi are going to take a much more proactive role in this discussion [about water]”.

“Today [at wastewater hearings] both iwi were presenting their submissions, and both acknowledged the relationships of other community groups working in this area which are of interest to them, and I was saying to one of the guys today that there have actually been some quite good relationships built, focused on an issue. Quite often you come from different backgrounds but as soon as someone gets your back up, people stand together”.

“Some Pākehā appreciate cultural values that local iwi have regarding the land. We have been researching our history, and have been visiting old pa sites over the last 15-20 years. We have a draft book, a historical record of most sites in Wairarapa. We had to go on farmers land – 99% of farmers were very welcoming. Many Pākehā are willing to have a relationship, to want to learn. There will always be times when they say things that are a bit... but that’s purely through not knowing”

- **Relationships between community and other groups**

“We also have quite a lot of interaction with local anglers. Going to their regular monthly meetings, and also hunter groups down in the Wairarapa. Some of the first people to recognise a change in the problems which exist there are the local anglers because they probably can’t fish there or they can’t hunt... They have a history with the region so they can see how things change over time”.

- **Relationships between farmers**

“I am a member of a farming discussion group – 20-25 farmers who meet once a month – we take turns going to each others’ homes. It’s good to get encouragement, especially in drought conditions. The group give each other ideas, feedback and encouragement”.

There were several less positive comments made about existing relationships, including the comment that

“Shorter consents are a challenge for farmers. Council transparency helps but there is a relationship gap between farmers and councils. It’s different for dairy farmers (who are more organised and responsive) than sheep and beef farmers (who are often disjointed and uncoordinated). Wine-growers are well represented by Horticulture New Zealand”, and “I am not aware of any co-management projects around here. It is important here, something we want to head towards”.

8.3. The need for good processes

The need for ‘good’ processes to be followed for all decisions made around water in the Wairarapa was mentioned by numerous interviewees. People focused on two issues:

- **Access to information**

The need for access to information about water management was raised by several interviewees. One person mentioned that having access to groundwater information is very important to their work, but that *“interpretation of groundwater data is difficult – what does it mean for me?”* Another mentioned that *“having the regional council monitor bore on their property was very useful for keeping up to date with aquifer levels and water quality data”.*

- **Good consultation processes**

The need for good consultation processes was strongly emphasised by some interviewees.

“I’ve always been amazed by what can be achieved by getting two parties talking to each other. Give them a beer, have a talk. A bit simplistic. It takes a long time and you can only do it by starting to get people to talk to each other”.

“From what we’ve heard today, [at the wastewater hearings] it seems the lack of consultation is what has annoyed people and that has come through in quite a few submissions... people think they’ve been told this is going to happen, like informing people rather than consulting. I think that doesn’t work in the long run. If you annoy people, you’ll get people’s backs up and its going to be harder to get anything through. It can be an aggravating factor – that puts up more barriers that then makes it more difficult to get an agreed solution. Because until people have dealt with the justice issues, they’re going to be less likely to want to work with... it becomes much more an ‘us and them’ thing. I understand this is something the irrigation committee is quite aware of

and I think they're trying to work with people early on rather than repeat some of the problems they've had in the past".

Although interviewees were not specifically asked about their relationship with or knowledge of the Wairarapa Regional Irrigation Trust, several people commented that they would like to have more communication from the group;

"No one really knows what is going on that much. We had a meeting with them last year – they presented to us I think. It was just kind of a touching base thing, but we haven't really heard a lot from them since then. So I don't know what timeframe this whole thing is working on. They were saying then that they're very aware of potential public reaction and want to keep people informed about what's going on. I think it's a sensible approach because if people don't feel part of the process or not listened to, you'll get [negative reactions]"

"They did indicate that they want to work with us but we haven't had any invites to their meetings and don't know when they're on... we need to be providing our expectations to them on a longer-term basis".

- **Direct interaction with the Trust**

Representatives of Kahungunu ki Wairarapa were particularly focused on the need for kanohi ki te kanohi (face-to-face) relationships with the Trust, and involvement right from the beginning, rather than being consulted on a predetermined process, plan or outcome. Recognising and making space for Māori as Treaty partners and tangata whenua in future engagements are important and necessary considerations for WRIT.

QUESTIONS TO CONSIDER

- **What relationships or partnerships has WRIT already developed?**
- **What relationships or partnerships does WRIT plan to develop and how?**
- **How can existing relationships or partnerships provide networking opportunities?**
- **How can WRIT develop flexible or adaptive relationships or partnerships with district councils and Greater Wellington to cope with possible future changes (eg unitary council, one district council, combined district council planning etc)?**
- **What resources are available to WRIT to carry out effective community engagement?**
- **How can WRIT demonstrate their understanding of Māori as Treaty partners?**

9. Conclusion

Concerns about specific issues such as deteriorating water quality, impacts of water restrictions or low flows, and about continued access to rivers and waterways for present and future generations were raised by Wairarapa interviewees from a range of backgrounds including farmers, council staff and mayors, business people, families, iwi, recreationalists and resource management consultants. In addition, a number of wider issues were discussed, including potential impacts of (both desirable and undesirable) land-use changes, the need for equitable and fair processes and allocation of water, the need for good working relationships between a range of groups, and the need to acknowledge past, present and future uses and values for water.

This think-piece has highlighted and discussed a number of these issues, and has noted some examples from around New Zealand where similar issues have arisen and/or been addressed. At the same time, it is acknowledged and shown that Wairarapa is unique, and that each region in New Zealand has a specific context, geography and population that will require careful consideration in any decision-making and planning around natural resource use and protection.

The think-piece is a summary of how different people think about water issues, and is intended to inform the direction of community engagement by the Wairarapa Regional Irrigation Trust. The think-piece discusses issues that might arise and is aimed at helping WRIT get a good fit between community engagement and decision-making. It also helps to fill an ‘information gap’ – our research has shown that environmental, hydrological and engineering data and information is more readily available and accessible than information about social or cultural issues. A ‘social mapping’ exercise such as this is useful for revealing the range of perspectives, perceptions, attitudes and issues that people have about water, and for helping WRIT to think about a) how they can work through some of these issues with those who might be affected, and b) how they can work with others (councils, iwi, community, industry etc) to achieve positive changes for the Wairarapa region. To assist WRIT in discussing the think-piece and issues that interviewees have raised, a series of questions are listed through the report.

Wairarapa residents interviewed for this work have eloquently expressed a range of values and uses for water. We have used their quotes extensively in this think-piece to demonstrate the depth of understanding and feeling shown by interviewees. Many of them have described their visions for a sustainable Wairarapa, and express hope that future changes to water management and availability will account for the views of the community.

APPENDIX ONE: INTERVIEW SCHEDULE

Interview Schedule for Wairarapa Interviews

The following questions will provide the basis of the interview. The questions will not necessarily be asked in the order or wording written below.

Section 1

1. How long have you lived in the Wairarapa?
2. What changes have you seen over the time you have lived here?
(This is a narrative framing for people to tell a story and describe the big picture as they see it)

Section 2

3. What values or uses of water are important to you/your family/neighbours/
towns/ rural areas/the region?
4. What water-related activities are important to you/family/friends/others?
(Expand on previous question and likely to focus more on recreational activities)

Section 3

5. Thinking about water quantity (& availability) and water quality what water-
related issues do you/your family experience?
8. What are the issues for Martinborough and South Wairarapa/ other areas and
towns?
9. What are the issues for the Wairarapa region?

(This section can focus on reliability of supply for irrigation, frost protection, drinking water, stock water, traditional Māori food gathering opportunities, processing industries, recreational activities)

Section 4

10. What do you think are the possible solutions to any of the issues you have
identified?
11. How do you think these solutions could be achieved?

(This could include people/organisations, information required, leadership, political context)

Section 5

12. What does sustainability mean for you?

APPENDIX TWO: SCHOOL INITIATIVE

Students take action on water quality

By PIERS FULLER - Wairarapa News 18/03/2009



WATCHFUL EYE: Tamyka Hayes and Emma Taumoepeau check out the water turbidity with a special tubular measuring device. The best way for young people to understand their local ecology is to get out there and measure it for themselves. Greytown School year 5-8 students were testing the health of local streams as part of their involvement in Greater Wellington's newly revised Take Action for Water programme. They visited Mount Holdsworth earlier this month and took water samples and recorded observations of one of the tributaries to the Atiwhakatu Stream.

This is a pristine environment which is virtually unaffected by human and agricultural intervention. In the afternoon they visited a site in Tait Reserve in Greytown to measure the water quality in a stream that had been affected by mankind's activities.

Warren Field of Greater Wellington used to teach at Greytown School so he not only has experience teaching this ecological material but he is also familiar with many of these students.

The new Take Action for Water programme is an integrated teaching and learning programme for Year 5 - 8 students in line with both the New Zealand curriculum and the environmental education guidelines for New Zealand schools. It provides students with the knowledge and skills to make informed environmental decisions in daily life. The revised programme takes a broader approach, looking at the 'bigger picture' of catchments and the ecosystems they contain. It investigates the relationships between the living parts of the ecosystem and the impact we have on it. It shows how we can act to reduce our impacts and help to restore the processes and functions of these ecosystems.

The Explore Day enables students to see first hand the issues that they have learned about in the classroom - about the plants and animals within our native ecosystems and how human activities are affecting the health of streams and entire catchments.

Students visit two sites. At the native bush site they explore both the stream and the catchment through a series of tests and observations. At the second site in Greytown itself they test and observe a site that may be degraded by human activity. The contrast between both sites enables students to identify and discuss possible causes of, and solutions to, the issues they have identified.

Greytown School has been very active in assisting the Papawai Stream Care Group clean up the lower section of that particular waterway.

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