BANKS PENINSULA WATER MANAGEMENT ZONE COMMITTEE
15 MAY 2012

A meeting of the Banks Peninsula Water Management Zone Committee was held at Akaroa Sports Complex on Tuesday 15 May 2012 at 4.02pm

PRESENT: Richard Simpson, Community Representative (Chairperson)
Donald Couch, Commissioner Environment Canterbury
Claudia Reid, Councillor Christchurch City Council
Yvette Couch-Lewis, Community Representative
Iaean Cranwell, Te Rūnanga o Wairewa
Steve Lowndes, Community Representative
Pam Richardson, Community Representative
Kevin Simcock, Community Representative
June Swindells, Te Hapu O Ngati Wheke
Pere Tainui, Te Rūnanga o Ōnuku.

APOLOGIES: An apology for absence was received and accepted from Wade Wereta-Osborn.

Apologies were also received from members of the public including the McKellar family and Sylvia McAslan

1. CONFIRMATION OF MINUTES – 17 APRIL 2012

It was **decided** that the minutes of 17 April 2012 be approved as a true and accurate record of the meeting.

2. DEPUTATIONS BY APPOINTMENT

2.1 ANGELA SHEAT AND JUDY WILLIAMSON, COMMUNITY AND PUBLIC HEALTH

The Committee received a deputation from Angela Sheat, Health Protection Officer, and Judy Williamson, Health Protection Officer, regarding community drinking water and public health (refer **attached**).

3. IDENTIFICATION OF URGENT ITEMS

Nil.

4. IDENTIFICATION OF ANY GENERAL PUBLIC CONTRIBUTIONS

4.1 IAN TELFER, RESIDENT OF TIKAO BAY

Mr Telfer informed the Committee that the preservation of the water supply used in Tikao Bay is essential to the small number of residents that live there permanently. Tikao Bay currently has 160,000 litres of water storage which also supplies the public toilets in the bay. The water system has been in operation for approximately 50 years.

Richard Simpson thanked Mr Telfer for his comments.

4 Cont'd

4.2 **BRUCE NICHOLL, RESIDENT OF LE BONS BAY**

Mr Nicholl informed the Committee that the residents in Le Bons Bay arrange their own water supplies. The Council had looked a taking over the water supply 10-12 years ago but it was seen as too expensive.

Richard Simpson thanked Mr Nicholl for his comments.

4.3 **WILLEM PORTENGEN, RESIDENT OF OKAINS BAY**

Mr Portengen informed the Committee that the catchment for Okains Bay is located in a farmers paddock and it is not filtered. The water supply is used by approximately 1000 people at the campground in the summer.

Richard Simpson thanked Mr Portengen for his comments.

5. REGIONAL COMMITTEE UPDATE

Iaean Cranwell gave a review of the regional committee meeting held on 8 May 2012. Matters raised at the meeting included:

- review of the draft Regional Implementation Programme
- updates from each of the regions
- zone boundaries; including discussion of boundary between fresh water and the sea which is important for Banks Peninsula.

6. SKELETON ZONE IMPLEMENTATION PROGRAMME (ZIP) PRESENTATION AND DISCUSSION OF TIMEFRAME

The Committee discussed the framework and timeline of the Banks Peninsula Zip and **agreed** to hold a workshop on completion of the subject recommendations.

7. WATER FLOW DATA UPDATE

The Committee received a presentation from Daniel Clark, hydrologist at Environment Canterbury, regarding water flow in Banks Peninsula (refer **attached**).

8. TOURISM PRESENTATION

The Committee received a presentation from Hollie Hollander, Executive Officer – Akaroa District Promotions, regarding tourism in Banks Peninsula (refer **attached**).

The meeting concluded at 6.15pm.

CONFIRMED THIS 19TH DAY OF JUNE 2012

RICHARD SIMPSON
CHAIRPERSON

Water and Health

Judy Williamson Community and Public Health (A division of CDHB)

The Ministry of Health, through the provision of standards, guidelines and other tools, ensures that an appropriate infrastructure is present in New Zealand to support the provision of clean and safe drinking-water to communities. Community and Public Health, although a division of the Canterbury District Health Board, is in essence the Ministry of Health's local presence with respect to drinking water. We have a direct contract with the Ministry to provide these services.

Through the NZ Public Health and Disability Act (2000) every District Health Board has the responsibility to:

- *"improve, promote and protect the health of people and communities" [s22 (a)]*
- *"promote the reduction of adverse social and environmental effects on the health of people and communities" [s23 (1) (h)].*

The Resource Management Act (1991) in describing its purpose under section 5 includes:

(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, sustainable management *means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—*
(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.

Our work 'upstream' within environmental health hopes to reduce hospital admissions. Our approach to protecting drinking water is a multi barrier approach. The more barriers in place the

safer a water supply is considered, where one barrier might fail the actions of the others should compensate and lessen contamination. Four main barriers are considered:

- Catchment protection
- Some form of filtration
- Disinfection
- Protection within the reticulation network (including reservoirs)

Each barrier operates by removing a percentage of contamination, no barrier is absolute. The best protection offered is minimising levels of contamination in raw water (catchment protection).

A legislative frame work controls water from the catchment through to the tap. It can broadly be split into three areas.

1. The environment – The source of the water, either from below ground or from surface catchments, is primarily governed by the Resource Management Act 1991 and recently the National Environmental Standard (NES) for Sources of Human Drinking Water. Our role here is around advocating for public health at a policy and plan level and reacting to individual resource consent applications.

2. Water suppliers – This involves procuring the raw water from the environment, followed by assessment, treatment, and distribution to consumers via a piped or tankered supply. This system was previously governed by a largely voluntary regime. Our mandate here now comes from the Health (Drinking Water) Amendment Act (2007). The Act regulates this system of treatment and distribution, but reaches back to some degree to require some participation by the supplier in catchment management.

3. Storage and distribution – Storage and distribution of water in tanks and pipes within buildings up to the point of use (generally a tap) is governed by the Building Act 2004. This Act takes over responsibility for water once it leaves a public networked supply and enters the building-owner's property (usually at the water toby), and also applies to water distributed within a building from its own self-supply (e.g., a roof tank or bore).

Legislation and Drinking Water Standards

Until recently the system which governs the 'second part' (above) of drinking-water management by water suppliers was administered by the Ministry of Health. Prior to the Act the system, was comprised of the following entirely voluntary elements:

1. The New Zealand Drinking Water Standards. These standards have been published since 1984. They provide the yardstick against which water quality is measured and detailed specifications for drinking-water suppliers, including maximum acceptable values for a range of contaminants and monitoring requirements. Compliance with the standards was previously voluntary. (Under the Act suppliers must take all reasonably practicable steps to comply with the standards).
2. Register of Community Drinking-Water Supplies in New Zealand. The register of over 2000 supplies is maintained as part of the Water Information NZ (WINZ) database system for drinking-water. The register provides health professionals, drinking-water professionals and the general public with an authoritative summary of the health risk status of all community drinking-water supplies known to the Ministry (available at www.drinkingwater.co.nz). Inclusion on the register was previously voluntary. (It is now mandatory for all drinking-water supplies and also self supplies which supply water to community purposes buildings, such as town halls, schools, hospitals, ski-fields etc).
3. Public health grading of community drinking-water supplies. The principal driver of improvement in the quality of drinking-water in New Zealand since 1993 has been the public health grading of drinking-water supplies by drinking water assessors in district health boards.
4. Water Information New Zealand. The national electronic drinking-water information database.
5. Public Health Risk Management Plans. Under the previous voluntary system the Ministry encouraged and promoted the risk based management approach of drinking-water supplies through the adoption of Public Health Risk Management Plans (PHRMP). (The Act requires all supplies serving more than 500 people to develop and implement PHRMPs. Supplies smaller than this are encouraged to prepare such plans).
6. Annual Report on the Microbiological and Chemical Quality of Drinking-Water Supplies in New Zealand. The report, covering the previous year, is issued in

November / December each year it reviews the compliance for all registered supplies. (these reports are available from the Ministry of health's website)

7. Guidelines for Drinking-Water Quality Management in New Zealand. These technical Guidelines are a complement to the New Zealand Drinking Water Standards.
8. The use of Ministry-recognised laboratories. Only Ministry of Health-recognised laboratories may carry out testing and other procedures to demonstrate compliance with the Standards.

Rationale for the Health (Drinking Water) Amendment Act

The enactment of this legislation resulted from a concern that the organisation of New Zealand's drinking-water supplies was not adequate to safeguard communities. New Zealand had been unusual among developed nations in relying almost entirely on voluntary mechanisms to safeguard the treatment and distribution of drinking-water. This represents a risk to public health in two main ways:

- **Higher rates of disease** – New Zealand has relatively high rates of largely preventable enteric or gastro-intestinal disease. For example, the campylobacteriosis rate in NZ is twice that of England and three times that of Australia and Canada. This is at least partly attributable to contamination of drinking-water. Campylobacteriosis – which is just one of the potentially waterborne diseases in New Zealand – can involve fever, headache, abdominal pain, nausea, vomiting and diarrhea. Symptoms may persist for up to a week and prolonged illness or relapses may occur in adults. The burden of disease is more of a problem for rural communities.
- **Higher risk of a major disease outbreak** – The previous state of NZ's drinking-water legislation gave little effective protection or deterrence against a major outbreak of disease caused by deliberate or accidental contamination of drinking water supplies. Such events have occurred in overseas jurisdictions. For example Walkerton (pop 4000), Canada, where 7 deaths and 2321 reported cases resulted from E. coli in May 2000. Another example is Milwaukee (pop 583,000), Wisconsin, with 70–100 deaths and 400,000 people sick as a result of contracting cryptosporidiosis from the water supply in 1993.

  To date New Zealand has been fortunate. Apart from the 3500 people who became sick in Queenstown in 1984 because of contaminated drinking-water, most outbreaks of drinking-water disease have tended to be on a small scale, involving less than a hundred cases but the potential remains high.

Health (Drinking Water) Amendment Act 2007

This is the amendment to the Health Act that replaces a mainly voluntary approach detailed above to ensuring water supplies provide safe water. The Act was passed in October 2007

Purpose of the Act

"... to protect the health and safety of people and communities by promoting adequate supplies of safe and wholesome drinking water from all drinking-water supplies."

Requirements in the Act

Water suppliers must:

- register their supply
- monitor their water,
- implement a public health risk management plan (PHRMP),
- take all practicable steps to comply with the drinking-water standards,
- ensure an adequate supply and take practicable steps to protect the source.

The main duties in the Act only apply to supplies above a certain size, that is those that serve: 25 or more people for 60 or more days per year; or if there are fewer than 25 people, but 6000 or more 'person/days' (that is the number of people multiplied by the number of days they receive water from the supply).

The requirements around taking all practicable steps to comply with the Standards and preparing a PHRMP come into affect in a staged manner with those supplies serving>10,000 people required to comply with the legislation from July 2012.
Other requirements include:

- Catchment protection "Duty to take reasonable steps to contribute to protection of source of drinking water"
- Duty to investigate complaints
- Duty to take remedial action if the Standards are breached

The Act makes special provision for supplies that provide water for both agricultural and drinking-water purposes, to ensure that they are not required to make fit for humans water that is only used by animals or crops. These supplies fit into the 'rural agricultural drinking-water supply' category. Supplies in this category face no duties under the drinking-water standards until 1 July 2013 at the earliest. The drinking-water standards will be amended to determine exactly how such supplies will be managed, and the Ministry is seeking opinions on how this should be done.

Compliance with the Drinking Water Standards

For a drinking-water supply, compliance is determined by considering how the quality of the water compares with the requirements of the Standards. To meet these Standards, some sort of monitoring process is usually required.

Non-Compliance or Transgression. What's the Difference?

Monitoring is the process of taking samples from a water supply at specified intervals to measure potent contaminants. Good systematic and ongoing management is important.

If an individual sample result fails to meet the maximum allowable value (MAV) or some other requirement, it is said to be a **transgression**. In some cases (where lots of monitoring is undertaken) a few transgressions are allowable.

Compliance with the Standards is **not based on the results of a single monitoring sample**, but is an overall measure of whether the Standards requirements are met for a full 12 month period:

Compliance can include evaluation of aspects such as:

Taking enough samples
Taking them regularly, but not always at the same time of day or week.
Having no more than the acceptable number of transgressions
Having good quality procedures
having appropriate treatment processes in place and functioning
and many other details...

How much monitoring is necessary?

The amount of monitoring required is specified in the *Drinking-Water Standards for New Zealand 2005*. The standards speak about "determinands", which are chemical substances, microbiological organisms, or some other characteristic of the water that can be measured, "something for which you can test".

The standards divide all determinands of public health significance into four classes according to the priority with which they should be measured. This avoids unnecessary monitoring. Of the four classes, only determinands in the Priority 1 and 2 classes require measuring, but the others have been defined in case they are required in the future.

What are Priority 1 determinands?

The determinands with the highest priority for monitoring, appropriately called "Priority 1 determinands", must be measured in all drinking-water supplies. These are currently micro-organisms which are of public health significance.

The first of these is bacteria. To gain an indication of water contamination by faecal material, a bacteria called *E. coli* is measured.

Giardia and *Cryptosporidium* are protozoa becoming increasingly of concern in drinking-waters, so these are also Priority 1 determinands. Because direct testing for these protozoa is often not practicable, the standards offer options for stopping their passage. Treatment processes such as coagulation and filtration are recognised as effective when properly managed. Alternatively where groundwater is shown to be “secure” under the specific definition of “security” in the Standards then treatment for protozoa is not required. Within the Standards security has quite a specific meaning. If the water has been under ground for longer than a year then the tougher protozoa bacteria will not be present. Under ground for greater than 1 year is an interesting thing to prove, the water is sampled in controlled conditions and examined for chemicals such as tritium and CFC (chlorofluorocarbon) and SF6 (sulphur hexafluoride) – these substances have varied with known concentrations depending on activities – use of aerosols, nuclear tests etc. Surface water (rainfall, rivers etc) picks up a ‘signature’ of what is in the atmosphere at the time before going underground. In addition to meet the “secure” definition the well head needs to appropriately designed and e-coli needs to have been measured for in the water for a year and not found.

The standards specify how frequently monitoring samples must be taken, such as monthly for a small supply through to at least daily for a metropolitan area. In all cases, a minimum of a year’s sampling is required to demonstrate compliance with the standards.

What are Priority 2 determinands?

A second level of potential contaminants, known appropriately as "Priority 2 determinands", is also defined in the standards. These are determinands known to have adverse effects upon human health. Unlike Priority 1 determinands, they do not have to be measured in every supply. Monitoring is usually required if the Ministry of Health believes that levels in a particular supply exceed half the maximum allowable value (MAV) for a particular health-significant determinand.

How is a Priority 2 determinand identified? ESR, a Crown Research Institute, assesses supplies on behalf of the Ministry of Health. It uses questionnaires and targeted testing to identify those

supplies where significant levels of a particular chemical are likely to be present. Through formal procedures, the Ministry of Health then confirms these chemicals as Priority 2 determinands for that particular supply.

Only supplies with populations of 100 or more have been assessed, and the population must be at least 500 before a Priority 2 determinand is officially assigned and appears in this *Register*. These limits will be lowered in the future.

To date, around 450 Priority 2 determinands have been assigned, spread over approximately 50 treatment plants and 400 distribution zones

The water supplier is then required to test regularly for that chemical in the supply, to confirm that it remains below the MAV. Weekly testing is required for fluoride, but for other chemicals this is usually monthly. If concentrations measured remain less than half the MAV for 12 consecutive months, and the Ministry of Health is satisfied that the risk is not significant, that Priority 2 entry will be removed from the *Register*.

All Priority 2 determinands listed in this *Register* are chemicals, but micro-organisms or radiological constituents can also be defined.

How do the supplies within your zone measure up?

The CCC maintains 8 supplies in this zone (Akaroa, Birdlings Flat, Duvauchelle, Little River, Lyttelton (which also includes both Governors Bay and Diamond Harbour), Pigeon Bay, Takamatua and Wainui). There are also several small private supplies (wineries, schools, domains etc), the largest of these is the Living Springs Camp. Where a reticulated supply is not available residents rely on small streams and collection of roof water.

The Council owned supplies of Lyttelton (Governors Bay and Diamond Harbour) and Wainui source their water from secure groundwater (the Lyttelton source is actually across in Christchurch, near the large roundabout of Ferry Rd and Dyers Rd and is pumped through the tunnel to Lyttelton and across the harbour to Diamond Harbour)). These supplies are therefore able to meet full compliance with the DWSNZ05/08 without additional treatment. The remaining 6 supplies are sourced from surface water (Akaroa has a well which supplements the intake during the summer) and require treatment to comply with the DWSNZ05/08. Usually the Council does not own the catchment that the water is sourced from and so work with land owners to get some limited control over land use at least immediately upstream of the intakes, so that contamination may be lessened where possible. Birdlings Flat was upgraded last year and Pigeon Bay has recently been upgraded, so when adequate data is recorded they will be in a position to comply.

The other 4 supplies (Akaroa, Duvauchelle, Little River and Takamatua) all require upgrading in the next few years. This work was programmed in to the Council's last LTTP but it is understood that some timeframes may now be put back due to other priorities. For all the surface sourced supplies available quantity is also an important issue, especially as usage increases over the summer.

Recreational Water

Angela Sheat, Community and Public Health a division of CDHB

Good quality recreational water is an essential part of the natural ecosystem. Recreational water quality can affect the health of recreational water users if high levels of harmful organisms are present. These organisms include viruses, algal blooms, bacteria and protozoa. We encourage the zonal committee to consider these organisms along with chemical contaminants. Exposure to these may cause a variety of illnesses. Contamination found in water bodies is largely derived from dogs, water fowl, sewage, stormwater or farm run-off. Algal blooms occur naturally in lakes or rivers but their occurrence is also influenced by a number of complex factors. Some species produce toxins which can be a threat to the health of people and animals.
Fish or shellfish may also be contaminated in areas where there are high levels of harmful organisms and should therefore not be collected for human consumption.

Microbiological Quality

Environment Canterbury (ECan) monitors both marine and freshwater recreational water quality at popular recreational sites in Canterbury over the summer months. Water monitoring is based on the Ministry of Health/Ministry for the Environment Microbiological Water Quality Guidelines for Marine and Freshwater Areas ([1]). The microbiological guidelines provide a safe limit of 550 E. coli/mL in freshwater and 280 enterococci/mL in marine water. Any identified risk to the public is notified on the ECan website, the Christchurch City Council erect signage and Community and Public Health issue a media release. Each site is graded annually based on previous microbiological results and sanitary survey results. The grades listed below for Banks Peninsula sites have not changed for a number of years. Most sites are graded "good" although none are graded "very good".

Grading for 2011-2012

Lyttelton Harbour	
Corsair Bay	Good (with signage re risks after rainfall)
Cass Bay	Good
Rapaki Bay	Good
Governors at Sandy Bay	Good (with signage re risks after rainfall)
Charteris Bay at Paradise Beach	Good
Church Bay	Good
Diamond Harbour Beach	Good
Purau Bay	Good
Okains Bay	
Okains Bay Estuary	Good (with signage re risks after rainfall)
Akaroa Harbour	
Wainui Beach	Good
Tikao Beach	Fair
French Farm	Good
Duvauchelle	Good
Takamatua	Good
Akaroa main beach	Good (with signage re risks after rainfall)
Glen Bay	Good

Permanent signs are erected at sites where past monitoring has indicated consistently poor or very poor water quality, (rainfall dependant). Over the summer sampling period when the safe levels are exceeded at other sites, temporary signs warning people not to swim are erected.

Temporary signage has been erected over the years at the following sites:

Date	Site	Results (cfu/100ml)
11/2/11	Akaroa Main Beach	900 and 500
11/2/11	Glen Bay	700 and 1700
21/1/11	Okains Bay	330 and 2800

Non compliance levels:
>140 cfu/100ml alert level
>280 cfu/100ml action level

Permanent signage is placed at:

- Corsair Bay
- Sandy Bay
- Okains Bay Estuary
- Akaroa Main Beach

Water overlying the two recreational shellfish gathering areas at Rapaki and Wainui is also monitored to ensure the microbiological quality of the shellfish. This is due to shellfish being filter feeders and therefore concentrating the pollutants that have accumulated overtime in the environment

Cyanobacteria Risk in Recreational Water

The risks associated with cyanobacteria in recreational water are an emerging issue for Canterbury fresh waters. The risks to humans from exposure are around skin contact and respiratory irritation. Exposure may cause skin rashes, nausea, stomach cramps, tingling and numbness around the mouth and fingertips. Animals are particular sensitive and in the past sick or dead dogs have sometimes alerted us to the presence of a bloom.

ECan are responsible for the surveillance of cyanobacterial algal blooms on Canterbury lakes and rivers. Algal bloom protocols are based on the Interim Guidelines (²). Algae can multiply and form blooms in lakes or thick mats attached to rivers in stream beds. Some species produce natural toxins which can be a threat to people and animals. There have been numerous reports of dog deaths from eating the bloom which collects on the banks of rivers. Health messages are erected by the local authorities along the side of lakes and rivers when blooms are present and media releases produced by Community and Public Health to alert the public.

From a public health perspective Lake Wairewa over recent years (and possibly prior to monitoring occurring) has experienced toxic algal (cyanobacteria) blooms yearly. This has implications in terms of the suitability of the water for contact recreation which includes all those

activities that could involve a risk of involuntary ingestion or inhalation of the water. Fish can concentrate the toxins in the liver and therefore the gut of the fish should be avoided. This has implications for Te Wairewa's use as a food gathering source.

The algae occur naturally but can increase rapidly under favourable aquatic conditions. The science around what factors influence bloom growth are complex but it is presently thought that favourable conditions include high light, warm water conditions, stratification of lakes and (usually) access to nitrogen and phosphorus .during warmer months. Once a bloom has developed in a lake (or river) it can take a long time to disperse. Catchment management to prevent blooms developing or to manage the primary driver of bloom development (nutrients and low flows) is very important. Therefore any recommendations to rejuvenate lowland waterways that enter Te Wairewa and the Lake margins such as monitoring water quality (including bacterial), reducing nitrate and phosphorus levels, enforcing the Natural Resources Regional Plan NRRP rules relating to stock and waterways, will help to reduce these blooms.

It is thought that opening the lake, and other management regimes to deliver temperature control for algae growth, and exploring options to remove nutrient laden sediment in the lake bed should also reduce the favorable conditions under which toxic algae grow.

In recent years Te Wairewa has had warning signs erected and these have remained in place for extended periods of time. The bloom is the most toxic after it starts to break up and the algae releases its toxins, therefore the warning remains in place until after this time.

Warning signs erected	Warnings lifted
23/12/08	No records available
15/01/10	13/04/11
24/12/10	25/01/11
03/11/11	25/01/12

Nodularin and Anabaena are the common algae that bloom in Te Wairewa. Nodularia produces a hepatotoxin which affects the liver while anabaena produces an anatoxin which affects the neuromuscular system.

Phormidium is the common algal species that has caused concern in Canterbury rivers over the last few years. This has not been identified in any streams within the Banks Peninsula Zone Typically the Banks Peninsula streams are too small for contact recreational activity and the catchments themselves are too short and steep for the phormidium to become established.

Overall the harbours and bays of the peninsula are much more widely used for recreation than the streams.

Cyanobacteria Risk in Drinking Water

In relation to drinking water boiling does not remove the toxin and treatment of contaminated water is difficult and expensive. This means that catchment protection is by far the best way to control conditions which favour cyanobacteria.

The increase in incidents of cyanobacteria is thought to be as a result of climate change and enrichment of waterways but the scientists do not have direct answers to these questions. A study of the Hutt River looking at correlations with water flow, nutrients levels and temperature found flow to be the most closely correlated but this is not conclusive for all rivers and cyanobacteria species. With respect to drinking water, once a supply has had an occurrence of cyanobacteria near the intake the Local Authority are required to have a procedure for managing the risk during subsequent summers.

The concern in Canterbury, (including the Banks Peninsula area) relates to surface water intakes where infiltration galleries are close to rivers which could potentially be contaminated with cyanobacteria toxins. The protection provided by infiltration through the gravels is unknown.

As stated the factors which influence the creation of toxic cyanobacteria algal blooms are complex. It is therefore important to have a good understanding of the local conditions which contribute to the development of these blooms. Community and Public Health can facilitate access to one of New Zealand's expert scientists in relation to cause and control of the development of cyanobacterial algae blooms.

References:

[1]Ministry of Health/Ministry for the Environment. 2003. Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas. Wellington: Ministry of Health and Ministry for the Environment.

[2]Ministry for the Environment and Ministry of Health. 2009. New Zealand Guidelines for Cyanobacteria in Recreational Fresh Waters – Interim Guidelines. Prepared for the Ministry for the Environment and the Ministry of Health by SA Wood, DP Hamilton, WJ Paul, KA Safi and WM Williamson, Wellington: Ministry for the Environment.

Banks Peninsula zone:
overview of hydrology in the zone

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Environment Canterbury Regional Council

Canterbury Water Management Strategy

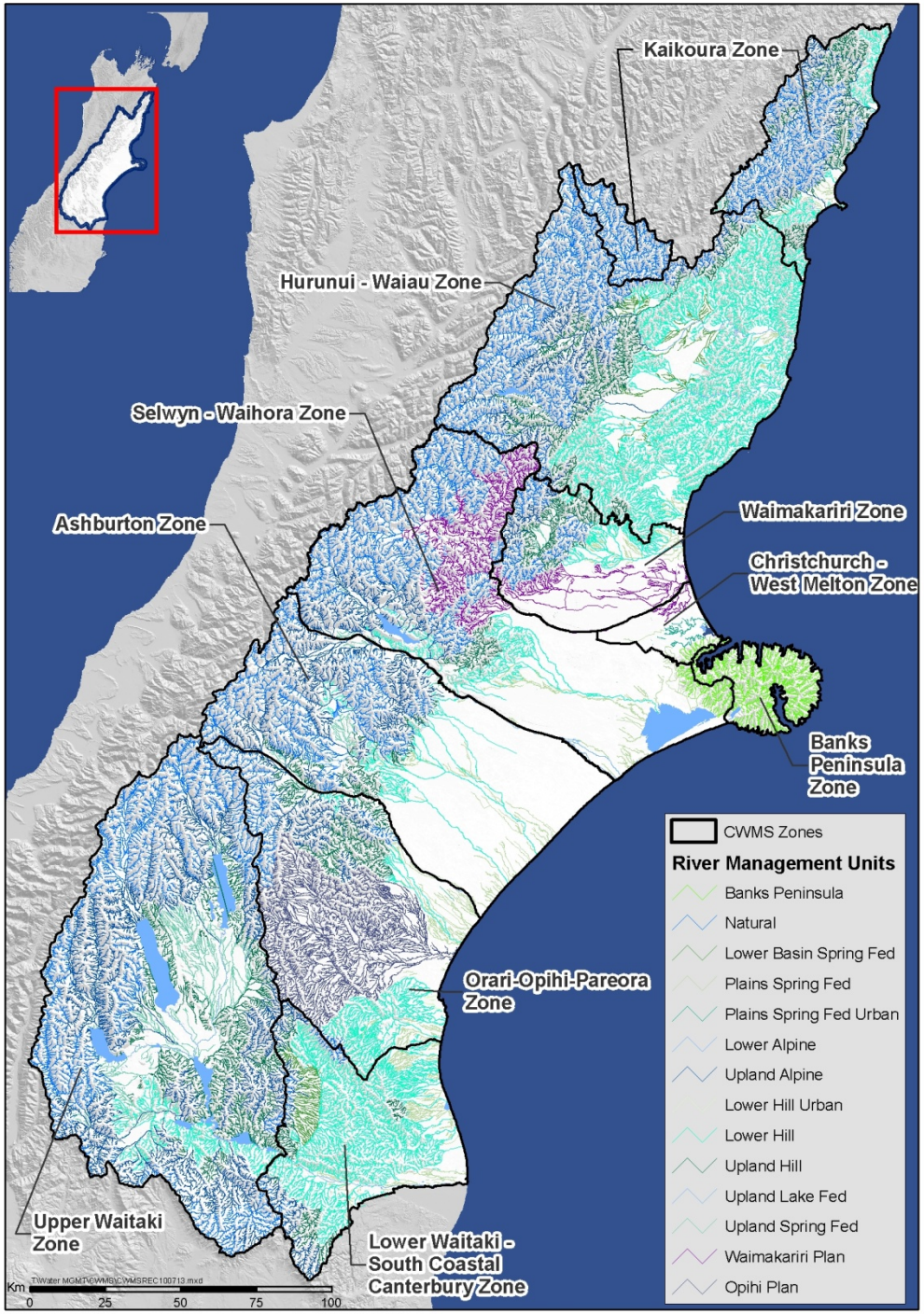
Banks Peninsula Zone

Overview

- Banks Peninsula is geologically the remnants of two large volcanoes – Lyttelton and Akaroa
- These have eroded to a very large extent and have had Loess (wind blown soil) deposited on some land surfaces
- The catchments are generally very short and steep

Environment Canterbury
Regional Council
Kaunihera Taiao ki Waitaha

River types



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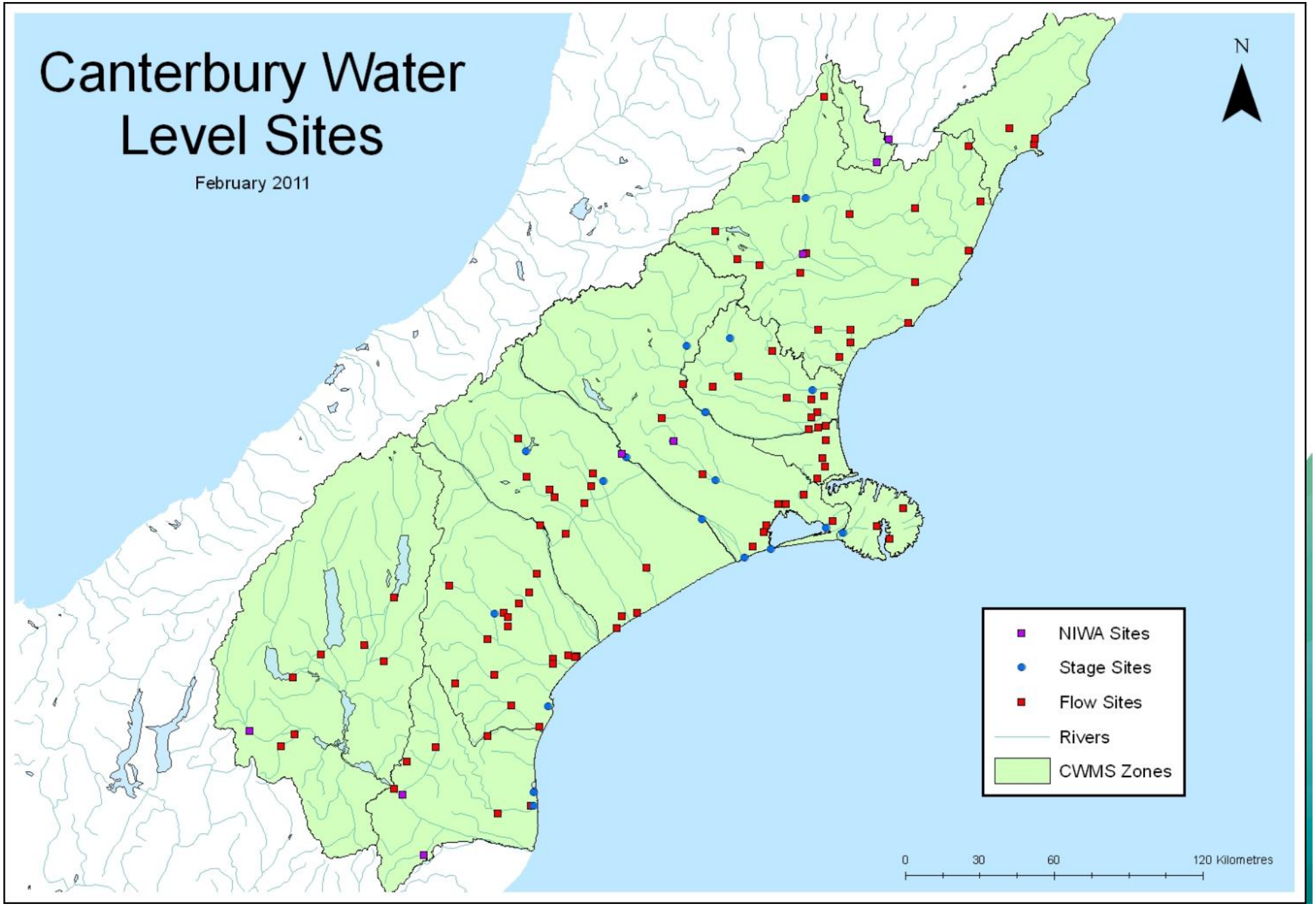
Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

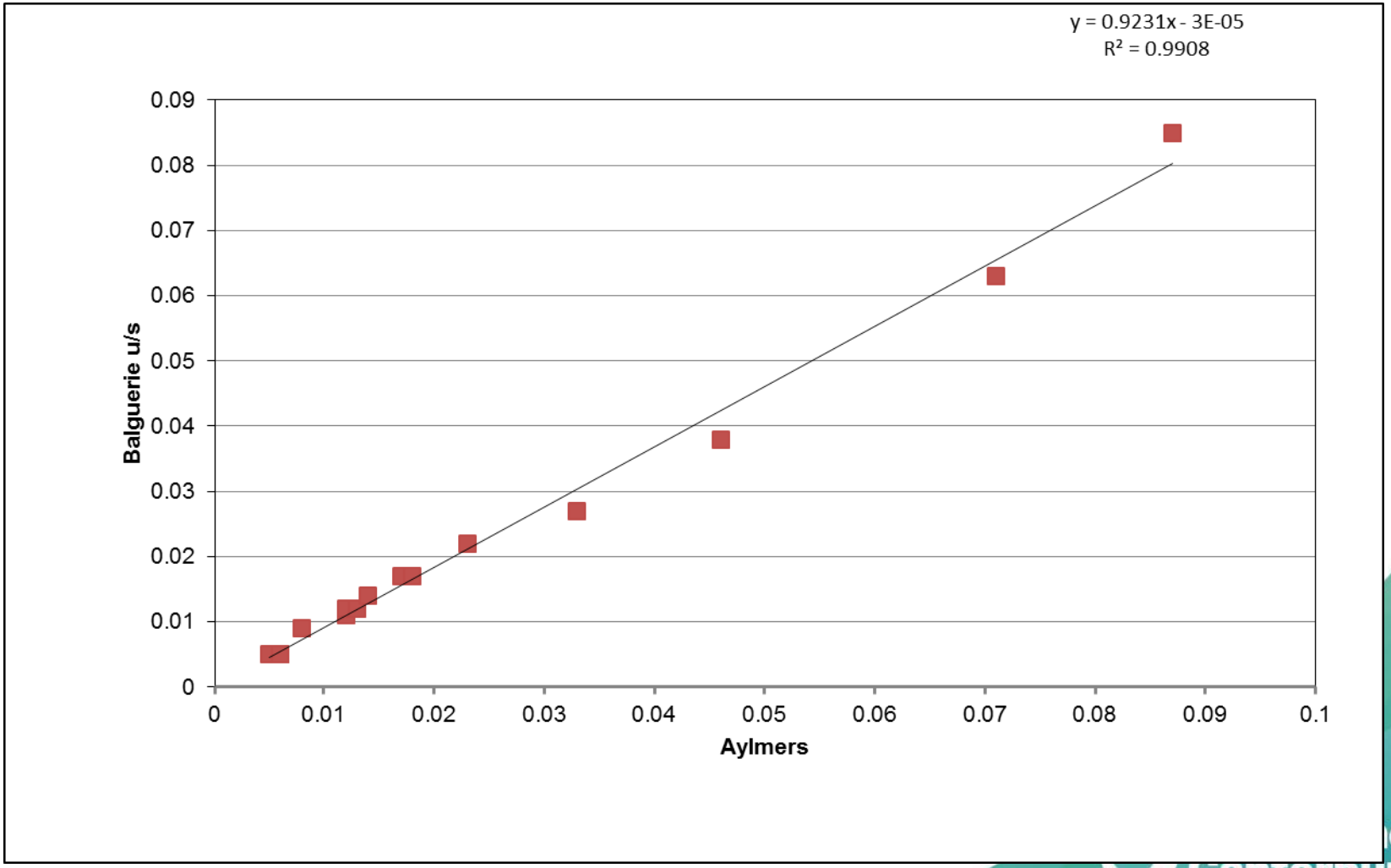
Records

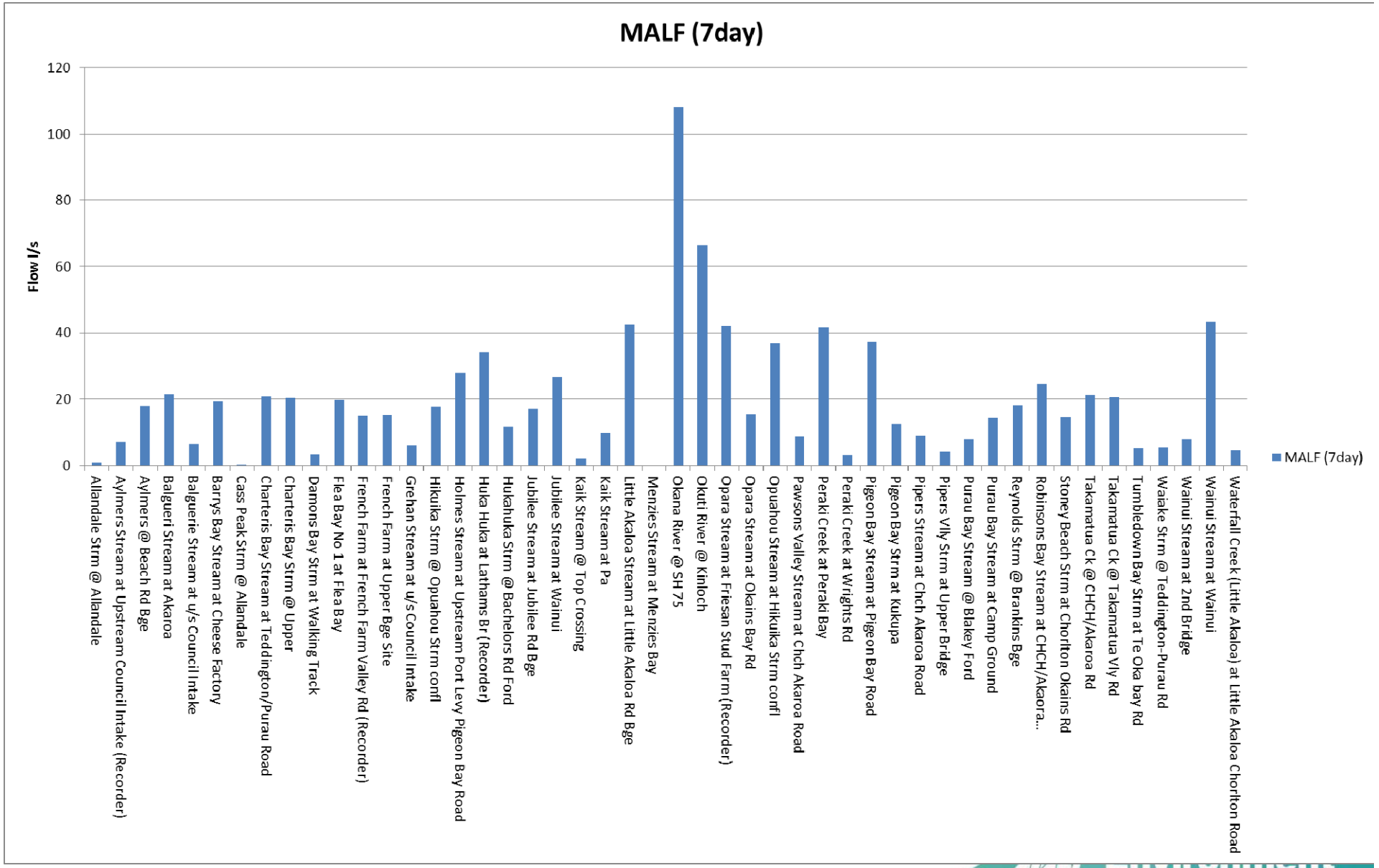
- Flow recorders (Opara River, Aylmers Stream, French Farm Stream)
- Water level recorders (Lake Forsyth/Wairewa)
- Rainfall
- Spot gaugings

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha


Canterbury Water Level Sites
February 2011
N
NIWA Sites
Stage Sites
Flow Sites
Rivers
CWMS Zones
0
30
60
120 Kilometres

Predicting flows at spot gauged sites





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Minimum flows

- Minimum flows are imposed on surface water abstractions to prevent flows falling below those that would naturally occur.
- These minimum flows are intended to protect the values in the river or stream

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Allocations

Site	Catchment	Min flow or residual	Min l/s	Allocation	No of consents in allocation	MALF 7d l/s	Mean Flow l/s
Barrys Bay Stream @ Lower Rd Bridge- Cheese Factory	Akaroa	Min flow	38	18.84	3	19	138
Pawson Valley Stream @ SH75 Bridge	Akaroa	Min flow	15	11.3	2	9	67
Pipers Valley Stream @ d/s of BPDC Take-Craw Property	Akaroa	Residual	3	5.5	1		
French Farm Stream @ French Farm Valley Rd	Akaroa	Min Flow	18	10.7	5	15	111
Pipers Creek @ Chirstchurch- Akaroa Rd Bridge	Akaroa	Min Flow	11	5	1	9	47
Aylmers Stream @ d/s BPDC Intake	Akaroa	Residual	0.5	19.2	1	7	41
Balguerie Stream @ d/s BPDC intake	Akaroa	Residual	0.5	13.2	1	7	38
Grehan stream @ d/s BPDC Intake	Akaroa	Residual	0.5	14.5	1	6	43
Smarts Rd Drain @ d/s of dam-Flatman property	Lyttelton	Residual	0.2	0	1		
Charteris Bay Stream @ Teddington/Purau Rd	Lyttelton	Min flow	22	10	1	21	177
Pigeon Bay Stream @ Port Levy /Pigeon Bay Rd	Outer Bays	Min flow	32	15	1	37	342
Dick Creek Stream @ BPDC Intake	Outer Bays	Residual	0.08	0.35	1		
Waterfall Creek @ Little Akaloa Rd Bdg	Outer Bays	Min flow	6	3	1	5	17
Little Akaloa Stream @ Little Akaloa Rd Bridge	Outer Bays	Min flow	16	8.3	1	42	176
Holmes Stream @ Port Levy Pigeon Bay Rd	Outer Bays	Min flow	30	0.5	1	28	145
Okuti River @ Kinloch Rd Bridge	Wairewa	Min Flow	45	10	1	66	342

SWAZ with no min flow	Catchment	Min flow or residual	Min l/s	Allocation	No of consents in allocation	MALF 7d l/s	Mean Flow l/s
Takamatua Bay	Akaroa	-	-	26.2	4	21	89
Wainui Valley Stream	Akaroa	-	-	3	1	44	202
Purau Bay	Lyttelton	-	-	5	1	14	230
Lebons Bay	Outer Bays	-	-	0.32	1	-	-
Okains Bay	Outer Bays	-	-	5	1	42	249
Menzies Bay Stream	Outer Bays	-	-	0.5	1	0	46
Police Creek	Wairewa	-	-	2.5	1	-	-

Permitted activities

- Stock water
- Drinking water
- Small takes (Rule WQN1of NRRP)

- These are not included within surface water allocations and not controlled by minimum flows.

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Community water supply

- Currently the Akaroa community water supply is fed from Aylmers Stream, Balguerie Stream and Grehan Stream.

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Summary

- Catchments are generally small
- Flows can be very low during summer
- There is very little natural storage within the catchments
- Banks Peninsula streams have a different river classification than the rest of the region
- Many allocations are small
- Permitted activities are not included in the allocation and may be significant.

Environment Canterbury Regional Council
Kaunihera Taiao ki Waitaha

Regional Council
Kaunihera Taiao ki Waitaha

Akaroa & the Bays

Lincoln University
Te Whare Wānaka o Aoraki

Residents and Holiday Home Owners:
Tell us your views on the future of tourism in Akaroa

LEaP
LAND ENVIRONMENT & PEOPLE

The Future for Tourism in Akaroa

Lincoln University—Tourism Carrying Capacity Study

How Tourism Benefits Akaroa:

- ✓ **Employment:** *50% of employment in Akaroa depends either directly or indirectly on tourism*
- ✓ **Visitor spending:** *In 2003, it was estimated that visitors contributed over $19 million to the local economy*
- ✓ **Facilities and services:** *Tourism enhances the number and range of facilities and services for residents*
- ✓ **Business investment:** *Tourism provides investment opportunities for businesses*
- ✓ **Property owners:** *Property owners have benefited from significant capital gains*

Concerns

- ⇒ **Tourism growth:** *Visitor numbers are likely to double in the next 20 to 30 years*
- ⇒ **Seasonality:** *Seasonal variations in visitor numbers affect business viability and investment, infrastructure capacity and the retention of experienced and qualified workers*
- ⇒ **Community values and visitor impacts:** *Poorly managed tourism development can degrade the very values that visitors seek and can affect community identity*
- ⇒ **Affordability:** *High demand for holiday homes has resulted in housing affordability issues for residents*
- ⇒ **Economic dependence on tourism**

What is Tourism Carrying Capacity?
Tourism Carrying Capacity is: *"the maximum number of people that may visit a tourism destination at the same time, without causing destruction of the physical, economic and socio-cultural environment and an unacceptable decrease in the quality of the visitors' satisfaction"* (World Tourism Organisation)

How can you help in determining the future of tourism in Akaroa?

? **What kind of Akaroa would you like to see in 2030?**
? **Will it be possible to accommodate visitor growth without degrading the values that people cherish?**
? **Can Akaroa meet the needs of visitors, industry and community while protecting the environment?**

Complete the survey form for residents and holiday home owners and place in the container provided

Desirable Futures – Main Features

Visitors	Industry	Community
Peaceful relaxing atmosphere	Retain peace and quiet	Keep village to a size that retains its relaxed friendly atmosphere
Protect the environment	Provide affordable housing	Retain the character of the town
Keep traffic out of town	Encourage high yielding visitors	Retain a fully functioning community
Address parking concerns	Develop conference market and complementary business to tourism	Akaroa is the destination for discerning visitors who stay and spend
	Accept that Akaroa is not a year round resort	
	Retain size and character of town	


TONIGHT
LAMB
visitor guide
OFFICIAL

Funding

Akaroa Business Subscriptions For Membership & Web Site Listings	$32,000
Christchurch & Canterbury Tourism	$ 21,000
Canterbury Community Trust	$10,000
CCC Strengthening Communities Fund	$2,250
Recover Canterbury	$17,000


Welcome to Akaroa & the Bays

CHOOSE YOUR PENINSULA WALK


www.akaroa.com
©Akaroa District Promotions
A-Class Sailing
0800-Sail-at-Akaroa
Hear the sounds of nature. See wildlife. Personal and exclusive. A beautiful 1946 classic. Help sail or just relax. Departs Main Wharf.
Bookings Ph 0800 724 528
Akaroa harbour nature cruise
Bully Hayes
Akaroa Fishing & Dive Charters
p 03 304 7220 www.akaroafishing.co.nz
Dolphins in Abundance
scenic wildlife and dolphin watching cruises
Call free 0800 SEAVENTURES (732 836) or text 027 566 5556
info@akaroaseaventures.co.nz
www.akaroaseaventures.co.nz
Ph 03 304 8774
L'Escargot Rougo
Akaroa
www.akaroa.com
French Bay
AKAROA VILLAGE WALKS
Akaroa Historic Walk self-guided walk of the main streets with booklet heritage references.
Explore Akaroa's bush backdrop various routes
A L'Aube Hill French Cemetery 45 min circuit
B Garden of Tane 1½-2 hours
C Graves of the Garden 1 hour circular
D Britomart Monument 1 hour circular
E Stanley Park (dogs permitted)
COUNTRY RAMBLES maps essential
Happy Hollow 1-1½ hours return
Otuhora – Pulpit Rock 2 hours circular
Ngaio Point; Coastal Track 1 hour circular
Round The Mountain 4-7 hours circular
Sky Line Circuit 5-7 hours return
Woodills Track North 2 hours circular
Woodills Track South 2 hours circular
HINEWAI RESERVE
20 kilometres of tracks through regenerating native forest and bush.
CONSERVATIONS & WALKS (DOC)
Pigeon Bay Walkway; 4-5 hours return
Ellangowan Scenic Reserve
Hay Scenic Reserve
Montgomery Park Scenic Reserve
Otapiotiu
walking maps available from Akaroa Visitor Centre
HISTORIC PLACES
F Langlois-Eteveneaux Cottage & Akaroa Museum This house is probably the oldest in Canterbury, circa 1840; it is furnished as the home of a French colonist. At the rear is the Museum with displays reflecting Akaroa's unique history.
G Orion Powerhouse Gallery formerly a Power House, is now a venue for concerts and exhibitions.
H Old French Cemetery first consecrated burial ground in Canterbury.
I Early Custom House this pit sawn and sod lined building dates from the 1850s.
J The Lighthouse completed in 1879, this historic landmark was relocated from the heads to Akaroa in 1980.
K Garden of Tane tracks lead to the historic Anglican, Roman Catholic and Presbyterian cemeteries. There are a myriad of tracks to explore with a signposted trail between the two cemeteries. (Dogs permitted)
D Britomart Monument commemorates the British proclaiming sovereignty over the South Island. (Dogs permitted)
St Peter's Church built in 1863, transepts added 1877.
St Patrick's Church site of the first Mass in the South Island by Bishop Pompallier, built 1864.
Trinity Church First Presbyterian service held in 1857, this church opened in 1886.
Onuku Church Onuku Maori Church, opened in 1878. 5kms from Akaroa.
Akaroa Visitor Centre
KEY
Akaroa Community Library
Akaroa Cruising Club
ATM
Boat Ramp
Boat Shed
Bus Parking
Campervan Parking (no overnight parking)
Medical Centre
Police station
Shopping area
State Highway
Swimming beach
Toilets
Walking tracks
Waterski lane
ACTIVITIES & ATTRACTIONS
1 A-Class Sailing
2 Black Cat. Swimming with the Dolphins & Harbour Cruises
3 Bully Hayes Restaurant
4 Akaroa Fishing & Dive Charters
5 Akaroa Sea Ventures
6 L'Escargot Rouge – Deli to Go
7 The Koru Gallery
8 Wildlife Kayaking. Akaroa Adventure Centre
9 Akaroa Dolphins & Harbour Cruises
10 Vangionis Trattoria and Bar
11 Wildlife Cruise & Sailing (Fox II)
12 Fire & Ice
13 The Little Bistro
14 Akaroa Guided Sea Kayak Safari
15 Okains Bay Maori and Colonial Museum*
16 Pohatu Penguins Tours & Sea Kayaking
17 Banks Peninsula Track
18 Akaroa 4 Square
19 Onuku Heights Horse Treks* Phone 0800 748 732
20 Eastern Bays Scenic Mail Run
21 La Thai Restaurant
22 Akaroa Golf Club*
23 Akaroa Blue Pearls
24 Akaroa Shuttle Phone 0800 500 929
25 Captain Hector's Akaroa Kayak, Canoe & Boat Hire
26 The Trading Rooms Restaurant & Pantry
27 The Giants House, Mosaic Garden
28 On 2 Wheels Cycle Tours, Phone 0800 662 943
29 Akaroa Jet
30 Barry's Bay Cheese*
31 L'Hotel Restaurant & Bar
*refer to Banks Peninsula map overleaf for these activities
Akaroa harbour nature cruise
Fire & Ice
FOX II
Sail with dolphins
0800 FOXSAIL
VANGIONIS
Akaroa Dolphins
THE INTIMATE NATURE EXPERIENCE
View Hector's dolphins and other wildlife on our nature harbour cruises.
06 Beach Road, Akaroa
FREEPHONE 0800 00 01 02
www.akaroadolphins.co.nz
Wildlife Kayaking
A natural friendly experience
Akaroa Adventure Centre
On the Beach north end of village Phone 03 420 0199
Homeware • Art
Jewellery • Gifts
THE KORU gallery
57 Rue Lavaud Ph/Fax 03 304 7781
www.thekorugallery.co.nz

FREEDOM CAMPING

Please help keep our area free from pollution and waste, and be active in caring for our beautiful Peninsula environment. Use the camping grounds and other accommodation facilities as much as possible. Camping is not allowed at our beaches, parks and reserves in the Banks Peninsula area, unless there are areas set aside specifically for camping.

Akaroa streets - no campervan parking on Beach Road from Rue Benoit to Smith Street, and Beach Road from Rue Jolie to Bruce Terrace. Campers are welcome provided that you:

1. **Respect our environment.** Leave the site clear of all rubbish, waste and damage.
2. **Act responsibly** and respect the access and enjoyment rights of other public space users.
3. **Have immediate access to,** or on-board, three day capacity toilet, wastewater collection and rubbish disposal facilities. Toilet and greywater must be disposed of in an approved campervan dump station.

PETROL AND DIESEL SUPPLIES

Akaroa Auto Centre: LPG bottle filling, camping gas, tyre services, vehicle servicing & breakdown services. 03 304 7055. Duvauchelle Garage, Cooptown & Little River Garages also supply fuel & services.

FOOD AND GROCERIES

There is a supermarket in Akaroa also a supply store, organic shop and smaller shops in Little River, Okains Bay and Duvauchelle.

DUMP STATIONS

Akaroa Top 10 Holiday Park, Duvauchelle Camping Ground, Okains Bay Campground & French Farm have dump stations. Fees & donations apply to these with the exception of Duvauchelle Camping Ground which is free.

PUBLIC LAUNDRY

Laundry facilities are available to the public at the Akaroa Waterfront Motels @ 56-64 Rue Jolie, $4 per load
Open 8am-9pm. Please inquire at motel office.

PUBLIC TOILETS

Public toilets can be found in Akaroa at the Britomart Reserve, Place de la Poste adjacent to the Akaroa Visitor Centre & at the Recreation Ground. Toilets are also located in Little River & other Bay locations and are signposted.

DAY PARKING IN AKAROA

Restaurant patrons and residents of Akaroa prefer campervans not parking for the day and obstructing their sea views.
Akaroa is a popular scenic resort and in summer is extremely busy when parking is at a premium. We encourage you to park behind the Recreation Ground. See map below for other locations.

RECYCLING

Your recycling wants to go on its own journey!

Play your part by keeping your recycling separate as you travel so you can easily drop it off at a recycling centre along the way.
There are *free recycling drop off points* at Barry's Bay Transfer Station and Rue Pompallier, Akaroa. Recycling is for newspapers, magazines, food and drink cans, plastic bottles, cardboard and paper.
Non recyclable rubbish can be dropped off at the skips at Barry's Bay transfer station.
Drop into an I-SITE or go to www.ontheroad.org.nz for more info.

You can still recycle when you are on holiday!

NARROW AND STEEP ROADS

The joy of Banks Peninsula is to discover remote bays and enjoy the freedom that a campervan brings to a holiday.

However, the roads to some of the bays are narrow and steep with drops on the side, ridged gravel surfaces and little opportunity to turn around. Some are totally inappropriate for campervans and are clearly marked as being "Not Suitable for Campervans" or "4WD Drive Only". Do not travel on these roads. Gravel roads are generally not recommended for campervans because they can cause driving difficulties and often lead to steeper and narrower roads. Even the sealed roads can be difficult for inexperienced drivers. Our advice is to stay on the main highway between Little River and Akaroa and on the sealed roads to Pigeon Bay, Little Akaloa, Okains Bay and Le Bons Bay, accessible from the Summit Road. The road around Akaroa harbour is sealed between Akaroa and Wainui.

Some driving tips:

1) Always give way to uphill traffic.
2) Watch for other vehicles (including cyclists) around blind corners.
3) Drive at a slower speed on gravel roads.
4) Remember your wing mirrors and use your rear vision mirror.
5) Drive on the LEFT – Akaroa may have a French inheritance, but this does not include the road rules.
6) Change into low gear when descending steep hills to avoid brake burnout .
7) Be prepared to stop often to look at the spectacular views and let those behind you pass. Do not hold up the traffic.

This brochure was sponsored by The Akaroa-Wairewa Community Board.

Camping Your Way
LOVE NZ

Christchurch City Council

For more information go to
www.camping.org.nz

Thanks for your cooperation. Have a great stay.

PHOTOS BY STEPHEN BRADLEY

Welcome to Akaroa & The Bays

Information for Motor Caravan Drivers, Camper Vans & Freedom Campers

WELCOME

Just 75 kilometres from the city of Christchurch, New Zealand, Akaroa is a historic French and British settlement nestled in the heart of an ancient volcano. Explore the village with its colonial architecture, galleries, craft stores, and cafés. Relax or take part in the many activities that are on offer. Explore the dramatic outer bays and take your time to soak in the magic of this area. You will need more than a day to explore this little piece of paradise.
A very big welcome to our wonderful home from all the residents of Akaroa & the Bays.
Thank you for visiting here.

AKAROA VISITOR CENTRE
Akaroa
www.akaroa.com
Open 7 days a week **03 304 8600** info@akaroa.com

ACCESS TO BANKS PENINSULA

Banks Peninsula is the remnant of volcanic activity which formed the harbours of Akaroa & Lyttelton. The main highway (SH75) from Christchurch to Akaroa passes through the rural town of Little River, rising to the crater rim at the Hilltop. There are two sealed roads to Akaroa from Hilltop – continue on SH75 or take the scenic Summit Road. From the Summit Road you have access to some of the remote bays on steep but sealed roads, including Pigeon Bay, Little Akaloa, Okains Bay and Le Bons Bay.

Akaroa Top 10 Holiday Park

map ref

Phone: 03-304 7471 www.akaroa-holidaypark.co.nz

Directions – Coming to Akaroa on Highway 75, turn left down Old Coach Road and left at the next fork. The Holiday Park entrance is almost immediately on your right. The Holiday Park is on Morgans road above Akaroa with great views of the harbour and a walking track to the town.

Power sites	100	Non-Powered sites	45	Sewage Disposal	Yes

Facilities: Toilets, showers, kitchens, laundry, playground, swimming pool, TV rooms, internet. Qualmark

Duvauchelle Holiday Park

map ref

Phone: 03-304 7471 www.duvauchelleholidaypark.co.nz

Location: Akaroa Harbour Basin/Duvauchelle

Directions – Coming from Christchurch on Highway 75, go through Duvauchelle village. Turn right onto Seafield Road along harbour front. Located on the Akaroa Harbour waterfront just outside Duvauchelle village. 10 minutes drive to Akaroa.

Power sites	32	Non-Powered sites	0	Sewage Disposal	Yes

Facilities: Big kitchen, TV room, playground, Tennis courts, nearby boat ramp, Duvauchelle store within walking distance. Disabled facilities.

Little River Campground

map ref

Phone: 03-325 1014 www.littleriver campground.co.nz

Location: 287 Okuti Valley Road, Little River

Directions – Turn into Kinloch Rd just before Little River. 5 km up this road, follow the signs to Manaia native habitat.

Power sites	10	Non-Powered sites	10	Sewage Disposal	No

Facilities Hot showers, playground, native walks, streams, birdlife, handy to Little River township.

Little River Hotel

map ref

Phone: 03-325 1007 www.littleriverhotel.co.nz

Location: Little River Valley, Highway 75

Directions – Coming from Christchurch, on the left side of Highway 75 between Birdlings Flat and Little River township. Park up behind the pub and enjoy an evening at the hotel without having to drive afterwards. Lake Forsyth and Rail Trail bike and walking track opposite.

Power sites	0	Non-Powered sites	100	Sewage Disposal	No

Facilities: Bar meals, toilets, TV. Little River shops nearby.

Onuku Farm

map ref

Phone: 03-304 7066 www.onukufarm.com

Location: 89 Hamilton's Road, Onuku

Directions – 6kms south of Akaroa on Onuku Road

Power sites	0	Non-Powered sites	12	Sewage Disposal	No

Facilities: Camping ground has hot showers and cooking facilities. Van park has toilets and shower and common room. Dolphin swimming, kayaking, great walks.

Okains Bay Campground

map ref

Phone: 03-304 8789 Location: Akaroa Outer Bay, Okains Bay

Directions – Drive all the way to the very end of the Okains Bay Valley Road to the Beach. Extensive camping area in a sheltered pine plantation just behind the beach and next to the river and lagoon. Little used outside the main summer holiday period.

Power sites	0	Non-Powered sites	100	Sewage Disposal	Yes

Facilities: Toilets, showers, kitchens, walking access to adjacent swimming beach and river. Superb museum in the valley, also small shop and petrol station. Kayak hire available. Children's playground.

Pigeon Bay Campground

map ref

Phone: 03-304 6888 Location: Akaroa Outer Bay, Pigeon Bay

Directions – Reach Pigeon Bay from the Akaroa crater summit road. At the beach turn right in Pigeon Bay and follow the road around to the camp. Located on the Pigeon Bay waterfront, near the wharf and with a sheltered swimming beach. Lots of trees give privacy and the camp is little used outside the main summer holiday period.

Power sites	0	Non-Powered sites	20	Sewage Disposal	No

Facilities: Toilets, fresh water, fishing wharf, swimming, good walks.

Purple Peak Camping

map ref

Phone: 03-420 0199 www.purplepeak.co.nz

Location: 10 km from Akaroa Township

33 ha of camping area with fantastic views. (80km horizons), 22km's of native forest walks

Directions – Drive up to the top of Long Bay road, turn right into Brocherie's road. Follow the signs.

Power sites	0	Non-Powered sites	50	Sewage Disposal	No

Facilities: Kitchen, showers, toilets, BBQ. Payment by donation if you are fully self contained.

YMCA Wainui Park

map ref

Phone: 03-304 8460 www.ymca.chch.org.nz/wainui

Location: Wainui Valley Road, Wainui

Directions – 8 kms from Barry's Bay to Wainui, 1 km up Wainui Valley Road.

Power sites	3	Non-Powered sites	50	Sewage Disposal	No

Facilities: Toilets, kitchens, showers, hot running water, basic shared amenities.

View across harbour from Beach Road, Akaroa.


THEIR NAME
LIVETH
FOREVER

EARTHQUAKE RELIEF IN AKAROA

Akaroa infrastructure and services are fully functioning. Highway 75 is open.

Akaroa community welcomes Christchurch residents in need

Emergency accommodation contact:
Heartlands 03-304 8659 WK
03- 304 7819 HM
Email: akaroaheartland2@paradise.net.nz
Txt: 027-304-7078
Work & Income here Thursday 3rd March

Visitor accommodation contact:
Akaroa Visitor Centre 03-304 8600
www.akaroa.com Email: info@akaroa.com

Akaroa community is pulling together to offer other support. Support offers contact Heartlands please.

Watch **www.akaroa.com** for further information

Christchurch
& Canterbury Tourism

Key Messages to Media & Travel Sellers

- Christchurch is still welcoming visitors as the gateway to the South Island
- Rest of Canterbury region and South Island is unaffected
- Airport is fully operational
- Over 8,400 beds operational in Christchurch
- Over 11,000 beds within a 1-2 hour drive from Christchurch
- Most of Christchurch's key attractions are open as usual and welcoming visitors

2011/12 Cruise Season

- From 7 to 80 cruise ship arrivals
- An outstanding opportunity but with logistical challenges
- The economic benefits are exciting

Activity Option	% of Pax	Pax	Ave Spend	Total Spend
Pre-booked Day Trips	25 %	26,600	$330	$8,778,000
Other Day Trips	20%	21,200	$190	$4,028,000
Shuttle to CHC	20%	21,200	$140	$2,968,000
Stay in & around Akaroa	35%	37,100	$70	$2,597,000
Total		**106,100**		**$18,371,000**


Akaroa


Akaroa

Event Tourism

- The systematic planning, development and marketing of planned events as tourist attractions, and for their benefits to place marketing, image making, and development.

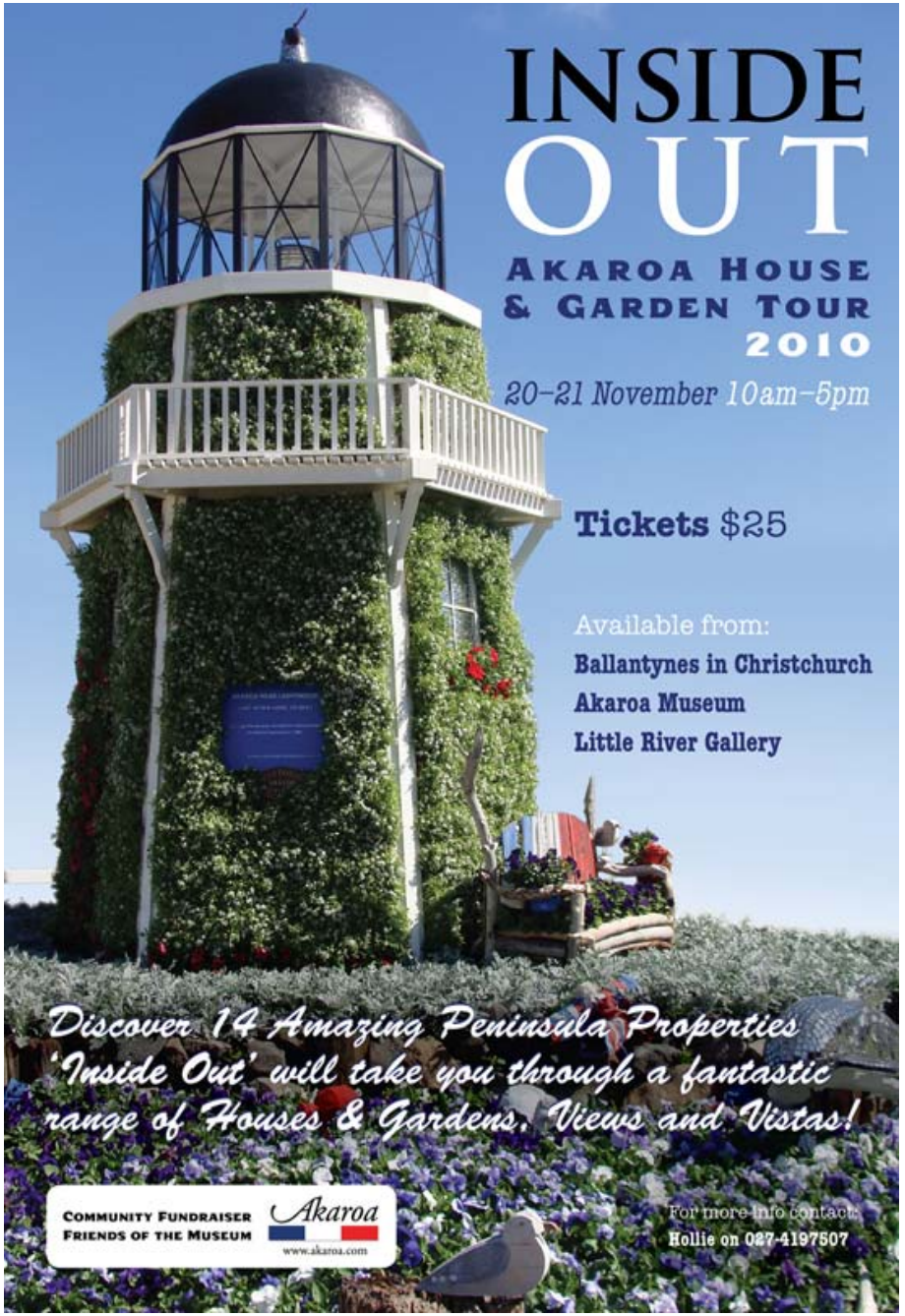
- Market segments consisting of those people who travel to attend events, or who can be motivated to attend events while away from home.

PIPER HEIDSIECK

FRENCH FEST

28-30 OCT 2011 • FRENCHFEST.CO.NZ

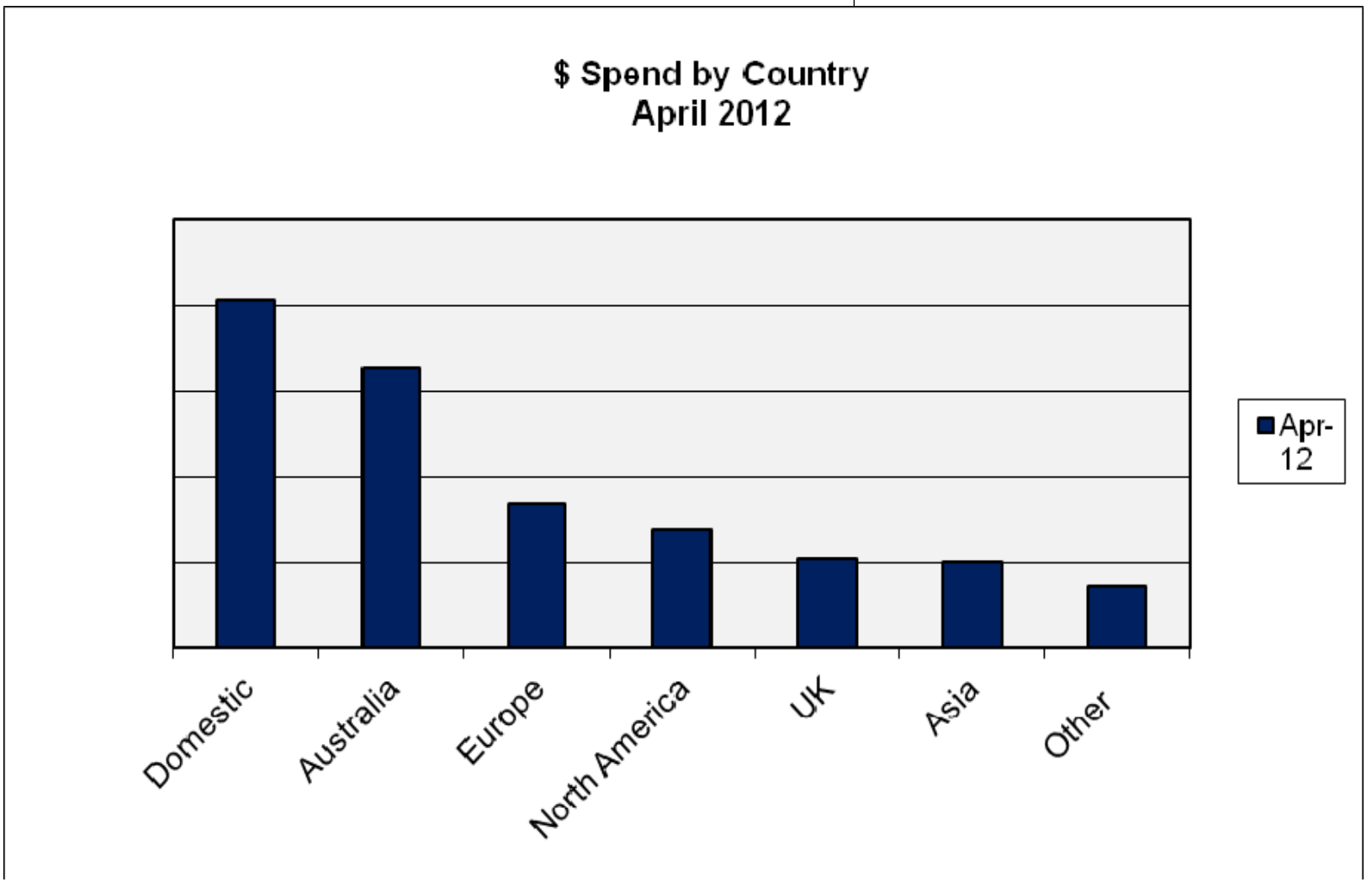
Christchurch City Council


INSIDE
OUT
AKAROA HOUSE
& GARDEN TOUR
2010
20–21 November 10am–5pm
Tickets $25
Available from:
Ballantynes in Christchurch
Akaroa Museum
Little River Gallery
Discover 14 Amazing Peninsula Properties
'Inside Out' will take you through a fantastic
range of Houses & Gardens, Views and Vistas!
COMMUNITY FUNDRAISER
FRIENDS OF THE MUSEUM
Akaroa
www.akaroa.com
For more info contact:
Hollie on 027-4197507

Opening up in Akaroa Soon
Hot Pools

Strategies for Akaroa

- Make the most of the cruise season
- Continue to pursue the domestic leisure market aggressively (cruising, walking, cycling, giant-ing, fishing, cheesing, cooking, eating, drinking and chilling out !)
- Pursuing tourism in winter
- Support our media hosting programme whole-heartedly
- Post more stories, videos and images on www.newzealand.com which now has 1million international viewers a month


$ Spend by Country
April 2012
Apr-12
Domestic
Australia
Europe
North America
UK
Asia
Other

Strategies for Akaroa

- Make the most of the next cruise season
- Continue to pursue the domestic leisure market aggressively (cruising, walking, cycling, giant-ing, fishing, cheesing, cooking, eating, drinking and chilling out !)
- Pursuing tourism in winter?
- Support CCT's media hosting programme
- Post stories, videos and images on www.newzealand.com which now has 1million international viewers a month
- Develop our www.akaroa.com web site