

**CHRISTCHURCH WEST MELTON
WATER MANAGEMENT ZONE COMMITTEE**

AGENDA

THURSDAY 27 SEPTEMBER 2012

AT 6PM

**IN THE BOARDROOM
FENDALTON SERVICE CENTRE
CORNER JEFFREYS AND CLYDE ROADS.**

PLEASE USE CAR PARK DIRECTLY IN FRONT OF SERVICE CENTRE.

Committee: Ian Fox, Community Representative (Chairperson)
Councillor Sally Buck, Christchurch City Council
Deidre Francis, Community Representative (Deputy Chairperson)
Jon Harding, Community Representative
Councillor Debra Hasson, Selwyn District Council
Arapata Reuben, Tūāhuriri Rūnanga
Yvette Couch-Lewis, Rāpaki Rūnanga
Hugh Thorpe, Community Representative
Robert Wynn-Williams, Community Representative
Ann Winstanley, Community Representative
Commissioner Rex Williams, Environment Canterbury

Principal Adviser
Diane Shelander
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Christchurch City Council

Zone Facilitator
Matthew Ross
0275642371
Environment Canterbury

Committee Adviser
Liz Blayney
Tel: 941 8185
Christchurch City Council

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1. APOLOGIES

2. CONFIRMATION OF MINUTES – 23 AUGUST 2012

The minutes of the Committee meeting held on 23 August 2012 are attached.

The Committee is asked to approve these minutes as a true and accurate record of the meeting.

3. DEPUTATIONS BY APPOINTMENT

4. IDENTIFICATION OF URGENT ITEMS

5. IDENTIFICATION OF ANY GENERAL PUBLIC CONTRIBUTIONS

**CHRISTCHURCH WEST MELTON WATER MANAGEMENT ZONE COMMITTEE
THURSDAY 23 AUGUST 2012**

**A meeting of the Christchurch West Melton Water Management Zone Committee was held in
The Boardroom, Fendalton Service Centre, on Thursday 23 August 2012 at 6pm**

PRESENT: Ian Fox, Community Representative (Chairperson)
Deidre Francis, Community Representative (Deputy Chairperson)
Jon Harding, Community Representative
Councillor Debra Hasson, Selwyn District Council
Hugh Thorpe, Community Representative
Robert Wynn-Williams, Community Representative
Ann Winstanley, Community Representative

APOLOGIES: Apologies for absences was received and accepted from Councillor Sally Buck, Commissioner Rex Williams, Yvette Couch Lewis and Arapata Reuben.

1. CONFIRMATION OF MINUTES – 25 JULY 2012

It was **decided** that the minutes of 25 July 2012 be approved as a true and accurate record of the meeting.

2. DEPUTATIONS BY APPOINTMENT

Nil.

3. IDENTIFICATION OF URGENT ITEMS

Nil.

4. IDENTIFICATION OF GENERAL PUBLIC CONTRIBUTIONS

Nil.

5. REGIONAL COMMITTEE UPDATE

The Committee was briefed by John Harding on items of relevance to the zone, arising from the latest meeting of the Regional Committee of the Canterbury Water Management Strategy.

A priority area of interest to the Zone Committee was nitrate high spots, and the Committee requested to consider the information on this matter that had been on the agenda for the Regional Committee.

6. UPDATE ON ENVIRONMENT CANTERBURY POLLUTION PREVENTION WORK PROGRAMME

The Committee received a presentation from Paul Gofton (Environment Canterbury) on Environment Canterbury's Pollution Prevention Work Programme (refer **attached**).

Key issues considered included:

- involvement of SKIRT in directing business services in relation to pollution prevention
- self regulation versus compliance monitoring
- stormwater facilities - retrofitting old subdivisions and the different issues with this compared to a new subdivision
- input to the draft ZIP – how the Committee can support the ongoing work of this unit.

7. WETLANDS IN CANTERBURY

The Committee was briefed by Tamsin Page and Philip Grove (both of Environment Canterbury), on wetlands in the context of the Canterbury Water Management Strategy (CWMS).

Key issues considered included:

- the incorporation of cultural significance, as well as ecological significance into the database
- how significant wetlands are defined
- landowner's awareness and the possibility on ongoing education programme alongside the farm management plans
- additional effort in the zone to identify and categorise wetlands, as smaller wetlands are not picked up.

8. INDIGENOUS BIODIVERSITY HABITAT ANALYSIS

The Committee reviewed the working draft ZIP content report from Mimouk Hannan (Environment Canterbury) related to indigenous biodiversity, on the basis of additional analysis provided by an expert panel on indigenous biodiversity habitats.

The Committee noted the information contained within the report, and agreed to hold a workshop on this subject. It was also noted that a map location would be useful.

9. WORKING DRAFT ZIP (REVISED CONTENT)

The Committee received a verbal update on the revised content for the working draft ZIP from Zone Facilitator, Matthew Ross.

The Committee noted the need for adequate time to work on the ZIP prior to the public meeting.

10. WORK PROGRAMME TO ZIP

The Committee noted the updated work programme to producing the Zone Implementation Programme (ZIP).

The Committee agreed to cancel the workshop scheduled for 30 August, and hold workshops on 12 and 13 September with the same content to ensure all of the Committee have an opportunity to attend.

11. WAIMAKARIRI RIVER AND CHRISTCHURCH AQUIFER INTERACTIONS

The Committee received a presentation from Paul White of GNS Taupo, regarding his knowledge of the interactions between the Waimakariri River and the Christchurch Aquifers / Groundwater Protection Zones.

Significant issues discussed included:

- Cumulative effect of taking water outside the Waimakariri River
- Ways of achieving objective of increasing sprint flow to reduce the amount extracted and the amount used per head
- Catchment of springs beyond zone boundaries – issue for discussion with Waimakariri Zone Committee Joint Meeting.

The meeting concluded at 9.56pm

CONFIRMED THIS 27TH DAY OF SEPTEMBER 2012

**IAN FOX
CHAIRPERSON**

6. REGIONAL COMMITTEE UPDATE

6.10PM

| | |
|---|--|
| AGENDA ITEM NO: 6 | SUBJECT MATTER: Regional Committee update |
| REPORT: Christchurch West Melton Zone Committee | DATE OF MEETING: 27 September 2012 |
| REPORT BY: Jon Harding, Committee Member | |

PURPOSE

This agenda item is for the Zone Committee to be briefed on items of relevance to the zone arising from the latest meeting of the Regional Committee of the Canterbury Water Management Strategy.

BACKGROUND

The Regional Committee's latest meeting was held on 11th September at Wigram Manor, Christchurch.

Jon Harding is the Christchurch West Melton Zone Committee's representative on the Regional Committee and will give a verbal brief at the public meeting.

7. "YOUTH HUI" FEEDBACK ON THE WORKING DRAFT ZONE IMPLEMENTATION PROGRAMME

6.20PM

| | |
|---|--|
| AGENDA ITEM NO: 7 | SUBJECT MATTER: "Youth Hui" feedback on the working draft Zone Implementation Programme |
| REPORT: Christchurch West Melton Zone Committee | DATE OF MEETING: 27 September 2012 |
| REPORT BY: Matthew Ross, Facilitator | |

PURPOSE

This agenda item is for the Zone Committee to receive feedback on the working draft Zone Implementation Programme from participants on a "Youth Hui" which was facilitated by Environment Canterbury on 24/25 August 2012.

BACKGROUND

Environment Canterbury facilitated a "Youth Hui" on 24/25 August 2012 for a group of 14-24 yrs to discuss water management issues in the Christchurch West Melton Zone.

A sub-set of participants will make a verbal presentation to the zone committee at the public meeting on 27th September 2012.

ATTACHMENTS

- Letter from Youth Hui participants to the Zone Committee to be tabled.

24 September 2012

Ian Fox, Chair of Christchurch West Melton Zone Committee

Care of:

Environment Canterbury
58 Kilmore Stret
PO Box 345
Christchurch 8013

Dear Ian

“Youth Hui feedback on the working draft Zone Implementation Programme (ZIP)”

We believe that it is important for younger people to have a say on how water will be managed to provide for *our* future. Our shared position is that the water management approach in the zone needs to balance the inter-related needs of people and a healthy environment.

On 24/25 August, nine people aged between 14 and 24 attended a two-day hui facilitated by Environment Canterbury to consider the management of water in the Christchurch West Melton Zone of the Canterbury Water Management Strategy. We (the participants) undertook a full-day field trip to visit significant sites for water management in the zone before discussing and agreeing our shared values and outcomes. We also reviewed the working draft ZIP to identify whether our values and outcomes are reflected in the document and to suggest ideas for further development of the ZIP.

Our shared values and outcomes (in bold) and comments on the working draft ZIP are as follows:

- **“We manage water in an integrated way that recognises the inter-connected consequences of our decisions on the inter-relationships between people and the environment”**

In general, we feel that this value/outcome is covered in the “key principles” of the working draft ZIP, but we think that the final ZIP will need to identify more specific actions to make this happen and implement the CWMS. For example:

- Kaitiakitanga (guardianship) should be consider in all decision making
- Management of riparian zones provides habitats for plants and animals, vegetation helps to minimise the impact of people on the water (e.g. pollution runoff), but also provides opportunities for people to enjoy the waterways
- The work of local community groups contributes to an overall plan of work for a catchment

- **“We use water more efficiently”**

In general, we feel that this value/outcome is covered for domestic users of water but that more consideration of industrial users is needed. We believe that domestic users of water should be encouraged to use less water and that one tool the Zone Committee could consider and investigate further would be charging people who use more than their “fair share” of water, in combination with rewarding people who use smaller amounts of water. In addition, we think that more practical examples of using water more efficiently should be included, for example:

- Use of rainwater harvesting systems
- Installation of grey-water recycling systems
- Use of more efficient irrigation systems for farming
- Encourage community gardens

- **“The quality of our water is protected so that it is safe for people to drink and it supports healthy ecosystems”**

We think that this value/outcome is included in the working draft ZIP and agree with protection of groundwater quality and the better management of storm water and waste water to protect surface water quality. We believe it is important to consider levels of specific pollutants (e.g. nitrates, phosphorus, heavy metals) in the way that manage water quality. In addition, we suggest that the draft ZIP could also consider the clean-up of areas that have been contaminated by historical industrial activities.

- **“People have a better understanding about water management and take more action themselves to reduce their impact”**

We feel that the ZIP needs to have a stronger focus on helping people to understand water management challenges in the zone i.e. where water comes from, where it goes to, what you can do to help. For example:

- Free community courses where people can find out what they can do to use water more sustainably
- Local communities are involved in the design of riparian zones in their areas
- Education activities involve all schools in the zone (not just Enviro-schools)
- ‘Did you know panels?’ are installed at the springheads of rivers and other locations along the catchment to the sea
- Information panels are installed at pumping stations to explain how we reticulate water and where it comes from

- **“Better protection and management of native fish populations and their habitats (whilst also providing opportunities for fishing salmon and trout)”**

We believe that it is important to protect native biodiversity. We think that native fish need to be given more specific consideration in the draft ZIP, but that this should not exclude opportunities for people to enjoy fishing for salmon and trout. For example:

- Ensuring there are areas for native fish that are free of salmon and trout
- Managing fishing in some areas to protect overall populations - could the Avon be a reserve for whitebait/inanga?
- Including a clear definition of what is a “pest species”

We also believe that whilst there is limited farming within in the zone, helping urban communities to understand the value and benefits of well managed farming practices is important in shifting the focus of urban people on to what they can do to help improve urban waterways. We think that education and awareness raising on this topic is important to the implementation of the ZIP in the zone.

We would like to thank you for the opportunity to offer feedback on the working draft ZIP and to share our thoughts and priorities for water management in the zone. We hope that you will use our comments to inform the development of the ZIP in a way that balances the needs of people and a healthy environment, as we believe it is important that younger people have a say in the management of water.

Yours sincerely

Signed on behalf of the participants by:

Bridget White
Erin Strampel
Louise Murphy
James Adams
Jess Chalmers
Raquelle de Vine
Tom Swan

8. GROUNDWATER QUALITY

6.40PM

| | |
|---|--|
| AGENDA ITEM NO: 8 | SUBJECT MATTER: Groundwater quality |
| REPORT: Christchurch West Melton Zone Committee | DATE OF MEETING: 27 September 2012 |
| REPORT BY: Matthew Ross, Facilitator | |

PURPOSE

This agenda item is for the Zone Committee to be briefed by Environment Canterbury on groundwater quality.

BACKGROUND

In developing the draft Zone Implementation Programme, the Zone Committee have sought additional information on the current quality of groundwater in the zone.

Carl Hanson, from Environment Canterbury, will give a presentation on groundwater quality, including the key points summarised in the briefing note.

ATTACHMENTS

- Briefing note from Carl Hanson, Environment Canterbury (**attached**)

GROUNDWATER QUALITY, CHRISTCHURCH-WEST MELTON ZONE
Environment Canterbury monitoring data
to be presented to the Christchurch-West Melton Zone Committee on 27 September 2012
Carl Hanson, Team Leader Groundwater Quality, Environment Canterbury

CHRISTCHURCH GROUNDWATER PROTECTION ZONE BOUNDARY

- Environment Canterbury boundaries (NRRP, LWRP) based on:
 - o groundwater level maps (piezometric contours)
 - o geology (former flow channels of the Waimakariri River; old river terraces)
 - o groundwater chemistry (oxygen isotopes; nitrate concentrations)

- groundwater modelling by Aqualinc Ltd:
 - o prepared for Central Plains Water irrigation scheme consent application
 - o presented to zone committee recently by Paul White of GNS Science Ltd
 - o shallow groundwater flow patterns consistent with Environment Canterbury boundaries
 - o deep groundwater flow patterns suggest some soil drainage from upper plains could reach Christchurch groundwater system
 - o interpretation
 - deep groundwater flow paths based on very few data
 - high degree of uncertainty
 - even if correct, suggest soil drainage from upper plains makes up only a very small portion of the total groundwater flow to the Christchurch system

NITRATE

- distribution
 - o low concentrations in north and central parts of the zone
 - generally less than 3 mg/L (nitrate nitrogen)
 - reflect Waimakariri River as dominant source of water
 - NOTE: If nitrate concentrations in the river increase, this is unlikely to have a major effect on drinking-water quality in the groundwater. Ecological thresholds for the river are much lower than drinking-water standards. For example, if concentrations in the river reached 3 mg/L (probably an extreme situation), this would cause major ecological problems for the river but would still be well below the MAV of 11.3 mg/L
 - also reflect low-intensity land use to west of city
 - o higher concentrations in south in Aquifer 1 (to roughly 40 m depth)
 - some concentrations above ½ MAV
 - historic concentrations have exceeded MAV in some wells, but we've only measured concentrations above MAV in one well since early 1990s
 - demonstrate greater influence of soil drainage and vulnerability of groundwater quality to land use in southern part of the city
 - o low concentrations in deeper aquifers throughout zone

- trends
 - o generally decreasing from late 1980s to early 2000s, but levelled off since then

OTHER CONTAMINANTS

- bacteria and pathogenic microbes
 - o localised contaminants – within a few hundred metres of source
 - o shallow wells (less than about 50 m deep) most vulnerable

- chemical contaminants
 - o petroleum compounds and solvents
 - have been detected in some wells in the southern and north-western parts of the city
 - concentrations generally very low – well below drinking-water standards
 - one public supply well at Hillmorton was closed in the late 1980s because of trichloroethene, an industrial solvent; concentrations have decreased over time
 - precise sources generally not known, likely to be industries, old landfills
 - some contaminated sites are likely to have caused contamination of shallow groundwater, but no records of any effects on drinking-water supplies
 - o heavy metals
 - some detections near old landfills – Harewood, Wigram
 - one private domestic well in Wigram abandoned
 - also natural occurrences of iron, manganese and arsenic in some areas
 - arsenic in shallow well on New Brighton spit – natural
 - arsenic in Harewood – could be from timber treatment or landfill
 - o pesticides – no significant detections

9. DRAFT ZONE IMPLEMENTATION PROGRAMME FOR CONSIDERATION

7.20PM

| | |
|--|--|
| AGENDA ITEM NO: 9 | SUBJECT MATTER: Draft Zone Implementation Programme for consideration |
| REPORT: Christchurch West Melton Zone Committee | DATE OF MEETING: 27 September 2012 |
| REPORT BY: Matthew Ross, Facilitator | |

PURPOSE

This agenda item is for the Zone Committee to consider the latest version of the draft Zone Implementation Programme with a view to agreeing a draft ZIP for public engagement and consultation.

BACKGROUND

A working draft Zone Implementation Programme (ZIP) was agreed for targeted early engagement at the 28th June 2012 public meeting.

In addition to two public meetings in July and August 2012, the Zone Committee has held 10 informal workshops and 1 informal feedback session, over the past 2 months to further develop content for the draft ZIP for public engagement and consultation.

The latest version will be discussed by the Zone Committee at the public meeting on 27th September with a view to agreeing a draft ZIP for public engagement and consultation

ATTACHMENTS

- Draft ZIP for consideration (to be tabled)

CHRISTCHURCH WEST MELTON

Draft Zone Implementation Programme (ZIP)?

This is a working draft ZIP for the zone committee to consider for further development and refinement. All content is currently subject to ongoing discussion by the committee and does not represent the agreed position of the committee until confirmed as the draft ZIP for consultation and engagement. The zone committee cannot commit any party named within the ZIP to any course of expenditure or policy. Named organisations and implementation timeframes are included for discussion purposes only.

September 2012

[Insert picture strip]

[Insert logos]

ZONE COMMITTEE MEMBERSHIP

Christchurch West Melton Zone Committee is a joint committee of Christchurch City Council, Selwyn District Council and Environment Canterbury Regional Council.

The members of the Zone Committee as of XXX public meeting are:

[Insert names]

Past members of the Zone Committee are:

[Insert names]

With support from:

[Insert names]

WHAKATAUKĪ

[Insert text]

[Insert translation]

WORKING DRAFT FOR COMMITTEE

CHAIRMAN'S COMMENT

[Insert text]

EXECUTIVE SUMMARY

[Insert text]

WORKING DRAFT FOR COMMITTEE

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WORKING DRAFT FOR COMMITTEE

1. INTRODUCTION

1.1 SCOPE OF THE ZONE IMPLEMENTATION PROGRAMME

[Insert text]

1.2 GEOGRAPHICAL SCOPE

[Insert overview]

[Insert maps]

1.3 BOUNDARIES WITH OTHER WATER MANAGEMENT ZONES

[Insert text]

1.4 ZONE COMMITTEE PROCESS

[Insert text]

1.5 DEVELOPING THE ZONE IMPLEMENTATION PROGRAMME

[Insert text]

WORKING DRAFT FOR COMMITTEE

2. CHRISTCHURCH WEST MELTON ZONE OVERVIEW

2.1 STATE OF WATER RESOURCES

2.1.1 WAIMAKARIRI RIVER CATCHMENT

2.1.2 GROUNDWATER CATCHMENT

2.1.3 ŌTUKAIKINO RIVER CATCHMENT

2.1.4 STYX RIVER CATCHMENT

2.1.5 AVON / ŌTĀKARO RIVER CATCHMENT

2.1.6 HEATHCOTE / ŌPAWAHO RIVER CATCHMENT

2.1.7 AVON-HEATHCOTE ESTUARY / IHUTAI

2.1.8 HALSWELL RIVER CATCHMENT

WORKING DRAFT FOR COMMITTEE

2.2 CONTEXT

2.2.1 MANA WHENUA

2.2.2 NATIONAL POLICY STATEMENT ON FRESHWATER

2.2.3 EARTHQUAKE RECOVERY STRATEGY

2.2.4 REGIONAL AND DISTRICT PLANNING

2.2.5 NON-STATUTORY PLANS AND STRATEGIES

WORKING DRAFT FOR COMMITTEE

3. KEY PRINCIPLES?

3.1 OVERVIEW

[Insert text]

Links to CWMS Targets

Priority outcomes related to the Key Principles will contribute to the achievement of the following CWMS Targets areas:

- Ecosystem Health and Biodiversity
- Natural Character of Braided Rivers
- Kaitiakitanga
- Drinking water standards
- Recreation and amenity
- Water use efficiency
- Irrigated land area
- Indicators of regional and national economies
- Environmental limits

3.2 BETTER INTEGRATION AND COLLABORATION

| Ref.# | Key principles? |
|-------|---|
| BIC1 | Kaitiakitanga infuses all water management decisions in the zone |
| BIC2 | The way we manage and use water enhances cultural, social, economic, and environmental well-being in the zone |
| BIC3 | We have a joined up and collaborative approach to managing water issues in the zone: <ul style="list-style-type: none"> • From mountains (source) to the sea / “Ki uta ki tai” • Across and between rural and urban areas • Across and between Central Government, Regional Council, Territorial Authorities and with Mana Whenua • Where our zone receives water from, or transfers water to other zones • Involving local community groups in implementation |

3.3 EARTHQUAKE RECOVERY HELPS TO IMPLEMENT THE CANTERBURY WATER MANAGEMENT STRATEGY

| Ref.# | Key principles? |
|-------|---|
| EQR1 | “Earthquake Recovery” helps to implement the Canterbury Water Management Strategy in the zone by taking an integrated approach to water management, so that; <ul style="list-style-type: none"> • We take opportunities created by the earthquakes do things differently, and; • We target our efforts to tackle and address the water related impacts of earthquakes in implementing the CWMS. |

3.4 LOCAL PEOPLE ARE INVOLVED IN IMPROVING WATER MANAGEMENT

| Ref.# | Key principles? |
|-------|--|
| LP1 | Local people have a sense of ownership and pride in the way water is managed in the zone |
| LP2 | Local people are well informed about the steps that they can take as individuals to help improve the way we manage water |
| LP3 | Local community groups have opportunities to be involved in implementation of recommendations |

3.5 IMPROVING THE EFFECTS OF FLOOD MANAGEMENT ON WATERWAYS

| Ref.# | Key principles? |
|-------|--|
| MF1 | Flood management strategies, plans, and activities (including urban and rural drainage systems) are aligned with the Canterbury Water Managements Strategy where possible, without compromising the overall level of flood protection provided |

WORKING DRAFT FOR COMMITTEE

4. PRIORITY ISSUE?

4.1 ENHANCING AND MANAGING WATERWAYS FOR RECREATION AND RELAXATION

[Insert text]

Links to CWMS Targets

Recommendations related to this priority issue will contribute to the achievement of the following CWMS Targets areas:

- Ecosystem Health and Biodiversity
- Natural Character of Braided Rivers
- Kaitiakitanga
- Recreation and amenity
- Indicators of regional and national economies

Priority Outcomes?

| Priority Outcomes? | Recommendations? | Who? | Implement within? |
|---|---|---|-------------------|
| RR1 More people enjoy spending time in, on, or beside the waterways for active and passive, recreation and relaxation | RR1.1 Establish and facilitate a collaborative process at a catchment level to involve local community groups that provide recreation and relaxation opportunities related to waterways in identifying priorities for multiple use waterway corridors | CCC, Community groups, ECan, SDC | 3 yrs |
| | RR1.2 Complete collaborative processes for the Waimakariri River, Brooklands Lagoon, and the Avon-Heathcote Estuary/Ihutai, as waterways with multiple uses that are sometimes in conflict (e.g. jet boating, fishing, significant native biodiversity) | CCC, Community groups, ECan, Regional Committee | 1.5 yrs |
| | RR1.3 Investigate opportunities to increase the number of safe and inviting areas for quiet contemplation | CCC, CERA, ECan, SDC | 3 yrs |
| | RR1.4 Investigate opportunities to establish environmental, cultural, and heritage education parks along waterways | CCC, ECan, CERA, Mana Whenua, SDC | 3 yrs |
| | RR1.5 Investigate opportunities to move flood banks further back from waterways in the residential red zone to provide more space for relaxation and recreation activities | CERA | 3 yrs |
| | RR1.6 Investigate opportunities to establish a large multiple-use park along the Avon/Ōtākaro River in a corridor from the central business district to the estuary | CERA | 3 yrs |

| | | | |
|--|--|--|----------|
| | RR1.7 Investigate opportunities to develop international standard flat-water and white-water courses in the residential red zone, including the potential for these facilities to benefit native ecosystems and biodiversity, storm water management, flood water management, other recreation and relaxation activities | CERA | 3 yrs |
| RR2 Waterway corridors are designed and managed as valued open spaces across the urban and rural landscape | RR2.1 For each of the major surface water catchment in the zone, develop and progress a co-ordinated programme of actions that are integrated in to a catchment plan, to improve recreation and relaxation opportunities in waterway corridors | CCC, CERA, ECan, SDC | 3 yrs |
| | RR2.2 Develop and progress at a zone level, a co-ordinated programme of actions to link and integrate recreation and relaxation opportunities in different catchments, to form a planned network of inter-connected and accessible waterway corridors | CCC, CERA, ECan, SDC | 5 yrs |
| | RR2.3 Review and strengthen set-back provisions in statutory planning frameworks and enforcement activities, to ensure that opportunities to reinstate or expand riparian strips to rehabilitate or reinstate waterway corridors are taken as part of earthquake recovery | CCC, CERA, ECan, SDC | 6 months |
| | RR2.4 Where land is redeveloped or sub-divided, work with developers and landowners to further enhance and/or expand riparian strips to rehabilitate or reinstatement waterway corridors | CCC, CERA, ECan, SDC | Ongoing |
| RR3 Wāhi Taonga and Wāhi Tapu in the zone are recognised and valued | RR3.1 Work with Mana Whenua to develop and progress a co-ordinated programme of actions to raise awareness and understanding of, and engender a sense of shared pride for, Wāhi Taonga and Wāhi Tapu in the zone | CCC, CERA, ECan, Mana Whenua SDC | 3 yrs |
| RR4 Earthquake Recovery helps to enhance and manage waterways for recreation and relaxation | RR4.1 Earthquake Recovery Programmes give effect to the following recommendations: RR1.3,1.4,1.5,1.6,1.7,2.1,2.2,2.3,2.4,3.1 | CERA | 1 yr |
| | RR4.2 Work with the Zone Committee to develop implementation plans and actions that give effect to ZIP outcomes and recommendations in Earthquake Recovery Programmes | CERA | 1 yr |

4.2 IMPROVING SURFACE WATER QUALITY AND SAFEGUARDING SURFACE WATER FLOWS

[Insert text]

Links to CWMS Targets

Recommendations related to this priority issue will contribute to the achievement of the following CWMS Targets areas:

- Ecosystem Health and Biodiversity
- Natural Character of Braided Rivers
- Kaitiakitanga
- Recreation and amenity
- Environmental limits

Priority Outcomes?

| Priority Outcomes? | Recommendations? | Who? | Implement within? |
|--|---|----------------------|-------------------|
| SWQ1 Surface water quality and flows are improved in all waterways across the zone | SWQ1.1a Establish and facilitate a collaborative community process to inform the development of a plan for each major surface water catchment that identifies suitable water quality and flows for multiple uses | CCC, CERA, ECan, SDC | 3 yrs |
| | SWQ1.1b Assess whether current statutory planning frameworks and enforcement activities give effect to: <ul style="list-style-type: none"> • Surface water quality and flows that are suitable for multiple uses, as identified by the collaborative community process (see SWQ1.1a) | CCC, CERA, ECan, SDC | 3-5yrs |
| | SWQ1.1c If required, update statutory planning frameworks and enforcement activities to implement the bullet points in SWQ1.1b | CCC, CERA, ECan, SDC | 3-5yrs |
| | SWQ1.2 Develop and progress a co-ordinated programme of actions to improve surface water quality and flows in waterways, that are integrated in to a plan for each major surface water catchment | CCC, CERA, ECan, SDC | 3-5 yrs |
| | SWQ1.3a Assess whether the Waimakariri River Regional Plan and the Proposed Land and Water Regional Plan to: <ul style="list-style-type: none"> • Protect, and where possible enhance, current levels of water quality and environmental flows in the Waimakariri River | ECan | 1 yr |
| | SWQ1.3b If required, update statutory planning frameworks and enforcement activities to implement the bullet points in SWQ1.3a | CERA, ECan | 1 yr |

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| | SWQ1.4 Review and confirm that gravel extraction from the Waimakariri River is managed to minimise negative impacts on braided river character, flows, water quality | ECan | 1 yr |
| | SWQ1.5 Review and confirm that current statutory planning frameworks and enforcement activities require good practice land-use activities in rural areas where water quality is currently degraded | ECan | 1 yr |
| | SWQ1.6 Continue to provide a 'Pollution Hotline' service that responds to pollution incidents | ECan | Ongoing |
| | SWQ1.7 Review and confirm that the current management approach for stock water races will maintain flows into naturally occurring waterways | SDC | Ongoing |
| | SWQ1.8a Investigate opportunities to artificially rehabilitate flows in spring-fed waterways for the benefit of ecological and cultural values, including the assessment of costs/benefits of individual projects | CCC, CERA, ECan, Mana Whenua, SDC | 3 yrs |
| | SWQ1.8b For each viable project assessed (see SWQ1.8a), develop and progress a co-ordinated programme of actions to implement the project | CCC, CERA, ECan, Mana Whenua, SDC | 3-5 yrs |
| | SWQ1.9a Where historical infrastructure (e.g. abandoned wells, dumps) is rediscovered during earthquake recovery/rebuild, assess the impact on surface water quality as quickly as possible | CCC, CERA, ECan, SDC | Ongoing |
| | SWQ1.9b Update work programmes to include the prioritised upgrade of historical infrastructure that is assessed to be having a detrimental impact on surface water quality (see SWQ1.9a) | CCC, CERA, ECan, SDC | Ongoing |
| SWQ2 The way we manage storm water improves surface water quality | SWQ2.1a Assess whether current statutory planning frameworks and enforcement activities require that : <ul style="list-style-type: none"> • Storm water infrastructure is upgraded or retrofitted where building density is changed • All new developments and subdivisions is treated at/or near to source and not discharged directly in to waterways | CCC, CERA, ECan, SDC | 6 months |
| | SWQ2.1b If required, update statutory planning frameworks and enforcement activities to implement the bullet points in SWQ2.1a | CCC, CERA ECan, SDC | 6 months |

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| | <p>SWQ2.2 On an annual basis, identify and take new opportunities to speed up improvements to existing storm water infrastructure, so that the direct discharge of storm water in to waterways is minimised (and eliminated where possible) as quickly as possible</p> | CCC, CERA, ECan, SDC | Ongoing |
| | <p>SWQ2.3 Investigate and apply performance standards for the permeability of new and resurfaced car-parks/footpaths/drives to reduce rates of storm water run-off</p> | CCC, CERA, SDC | 6 months |
| | <p>SWQ2.4 Investigate and apply ways to ensure that the design of new or redeveloped buildings incorporates the best practice treatment of storm water at/or near source and does not increase levels of contaminants (e.g. copper cladding) leaving the site</p> | CCC, CERA, SDC | 6 months |
| | <p>SWQ2.5 Review and strengthen set-back provisions in statutory planning frameworks and enforcement activities, to ensure that opportunities to reinstate or expand riparian strips to provide an enhanced capacity to buffer the impact of diffuse pollution from surrounding land on waterways, are taken as part of earthquake recovery</p> | CCC, CERA, ECan, SDC | 6 months |
| | <p>SWQ2.6 Where land is redeveloped or sub-divided, work with developers and landowners to further enhance and/or expand riparian strips to provide an enhanced capacity to buffer the impact of diffuse pollution from surrounding land on waterways</p> | CCC, CERA, ECan, SDC | Ongoing |
| | <p>SWQ2.7 Confirm that storm water infrastructure (new and retrofitted) in the new central city will be designed and installed to international best practice standards, with a view to Christchurch becoming an international exemplar of excellent urban storm water management</p> | CERA | 6 months |
| | <p>SWQ2.8 Review and update road sweeping operations to help minimise the input of contaminants from roads in to waterways</p> | CCC, SDC | 2 yrs |
| <p>SWQ3 The way we manage waste water improves surface water quality</p> | <p>SWQ3.1 Review and confirm that the design and operation of existing and new public waste water infrastructure ensures that there is no direct discharge to waterways in non-emergency situations</p> | CCC, CERA, SDC | 6 months |
| | <p>SWQ3.2 On an annual basis, identify and take new opportunities to speed up improvements to existing public waste water infrastructure so that all practical steps to phasing out discharge to waterways are implemented as soon as possible</p> | CCC, SDC | Ongoing |
| | <p>SWQ3.3 Review and update public waste water infrastructure strategies, plans, and work programmes, so that the operational resilience of systems in emergency situations are improved and direct discharge to waterways is avoided</p> | CCC, CERA, SDC | 3 yrs |

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| | SWQ3.4 Review and update the standards for private waste water treatment systems in the Groundwater Protection Zone to safeguard against contamination of groundwater resources in emergency situation | CERA, ECan | 3 yrs |
| SWQ4 Local communities are more empowered to help improve water quality in their local waterways | SWQ4.1 Develop and progress an enhanced programme of co-ordinated initiatives to facilitate and support both new and existing community groups to make a direct contribution to improving waterways (including project funding) | CCC, Community Groups ECan, SDC | 1 yr |
| | SWQ4.2 Develop and progress an enhanced programme of co-ordinated initiatives to increase the involvement of students at local schools and education institutions in improving waterways | CCC, ECan, <i>Education providers</i> SDC | 1 yr |
| | SWQ4.3 Develop and progress an enhanced programme of co-ordinated initiatives to engender a greater understanding of how local communities can make a collective contribution to improving water quality by making small individual changes | CCC, ECan, SDC | 1 yr |
| | SWQ4.4 Working with community groups that use waterways, identify and implement a co-ordinated programme of actions to make it easy for people to find out the latest information about their local waterways | CCC, CDHB, ECan, SDC | 1 yr |
| SWQ5 Industry actively helps to improve water quality in their local waterways | SWQ5.1 Support, encourage, and facilitate the phasing out of direct industrial discharges to waterways | CCC, ECan, SDC | Ongoing |
| | SWQ5.2 Confirm that statutory planning frameworks and enforcement activities prohibit new industrial discharges direct to waterways | ECan | 1 yr |
| | SWQ5.3 Develop and progress an enhanced programme of co-ordinated initiatives to encourage industry to go beyond the minimum required for compliance, prioritising areas with poor water quality | CCC, ECan, SDC | 1 yr |
| SWQ6 Earthquake Recovery helps to improve surface water quality and safeguard surface water flows | SWQ6.1 Earthquake Recovery Programmes give effect to the following recommendations: SWQ.1a/b/c,1.2,1.3,1.8a/b,1.9a/b,2.1a/b,2.2,2.3,2.4,2.5,2.6,2.7, 3.1,3.3,3.4 | CERA | 1 yr |
| | SWQ6.2 Work with the Zone Committee to develop implementation plans and actions that give effect to ZIP outcomes and recommendations in Earthquake Recovery Programmes | CERA | 1 yr |

4.3 ENSURING HEALTHY ECOSYSTEMS AND BIODIVERSITY

[Insert text]

Links to CWMS Targets

Recommendations related to this priority issue will contribute to the achievement of the following CWMS Targets areas:

- Ecosystem Health and Biodiversity
- Natural Character of Braided Rivers
- Kaitiakitanga

Priority Outcomes?

| Priority Outcomes? | Recommendations? | Who? | Implement within? |
|--|--|---|-------------------|
| EB1 The ecological health of waterways is improved (including both aquatic and riparian corridor values) | EB1.1a Assess whether current statutory planning frameworks and enforcement activities require that: <ul style="list-style-type: none"> • Human activities which negatively impact on the ecological health of waterways are appropriately managed • All naturally occurring wetlands are protected • New barriers to the movement of native in-stream and stream associated fauna are avoided or mitigated • Braided river bird habitats on the Waimakariri River are safeguarded from human activities | CCC, DoC, ECan, SDC | 1 yr |
| | EB1.1b If required, update statutory planning frameworks and enforcement activities to implement the bullet points in EB1.1a | CCC, DoC, CERA ECan, SDC | 1 yr |
| | EB1.2 Develop and progress a co-ordinated programme of actions to improve the ecological health of waterways, that are integrated in to a plan for each major surface water catchment | CCC, DoC, CERA ECan, Mana Whenua, SDC | 3 yrs |
| | EB1.3 Develop and progress a co-ordinated programme to identify all naturally occurring wetlands | CCC, DoC, ECan, SDC | 3yrs |

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| | <p>EB1.4 Develop and implement a management plan to rehabilitate two significant wetlands by 2015</p> | <p>CCC, DoC, ECan, Mana Whenua, SDC, ZC</p> | <p>3 yrs</p> |
| | <p>EB1.5 Review and strengthen set-back provisions in statutory planning frameworks and enforcement activities, to ensure that opportunities to reinstate or expand riparian strips are taken as part of earthquake recovery</p> | <p>CCC, CERA, ECan, SDC</p> | <p>6 months</p> |
| | <p>EB1.6 Where land is redeveloped or sub-divided, work with developers and landowners to further enhance and/or expand riparian strips to benefit native biodiversity and valued introduced species</p> | <p>CCC, CERA, ECan, SDC</p> | <p>Ongoing</p> |
| | <p>EB1.7 Continue to identify and take opportunities to rehabilitate the ecological health of waterways by removing earthquake silt</p> | <p>CERA</p> | <p>Ongoing</p> |
| | <p>EB1.8 Continue to identify and take opportunities to minimise the direct impacts of flood management operations (e.g. weed clearance, dredging) on native biodiversity and valued introduced species</p> | <p>CCC, ECan, SDC</p> | <p>Ongoing</p> |
| | <p>EB1.9 Continue to identify and take opportunities to increase the diversity of in-stream habitats when river systems are modified for flood protection</p> | <p>CCC, SDC, ECan</p> | <p>Ongoing</p> |
| | <p>EB1.10 Develop and co-ordinate an enhanced programme of initiatives to engender a greater understanding of native biodiversity and valued introduced species, including set-back provisions</p> | <p>CCC, ECan, SDC</p> | <p>1 yr</p> |
| <p>EB2 A good source of mahinga kai can be readily accessed</p> | <p>EB2.1 Working with interested land owners, identify where good sources of mahinga kai could be readily rehabilitated and accessed</p> | <p>CCC, DoC, ECan, Mana Whenua, SDC</p> | <p>1 yr</p> |
| | <p>EB2.2 Identify and progress opportunities to facilitate the implementation of management plans to rehabilitate mahinga kai (e.g. contribute staff time/project funding)</p> | <p>CCC, DoC, ECan, SDC</p> | <p>3 yrs</p> |

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| EB3 The diversity and abundance of indigenous species is increased | EB3.1 Target Immediate Steps Biodiversity Funding to increasing the diversity and abundance of native biodiversity in the following priority areas and ecosystems: <ul style="list-style-type: none"> • Springheads of spring fed waterways • Wetlands • Waimakariri River mouth • Brooklands Lagoon • Avon-Heathcote Estuary /Ihutai¹ • Other projects that score highly on cultural and ecological assessment • As a first preference, support projects that are led by or involve community groups | ECan, ZC | 3 yrs |
| | EB3.2a For waterways that have been heavily affected by earthquakes, identify and assess the impact of barriers that restrict the movement of native in-stream and stream associated fauna | CCC, DoC, ECan, Mana Whenua, SDC | 1 yr |
| | EB3.2b Prioritise and progress a programme of work to remove barriers identified in EB3.2a | CCC, DoC, ECan, Mana Whenua, SDC | 1 yr |
| | EB3.3a Identify and assess the impact of barriers that restrict the movement of native in-stream and stream associated fauna on all waterways | CCC, DoC, ECan, Mana Whenua, SDC | 3-5 yrs |
| | EB3.3b Prioritise and progress a programme of work to remove barriers identified in EB3.3a | CCC, CERA DoC, ECan, SDC | 3-5 yrs |
| | EB3.4 Continue to develop the draft Canterbury Regional River Gravel Management Strategy so that it provides protection for the diversity and abundance of indigenous species | ECan | Ongoing |
| EB4 The negative impacts of pest species ² are managed | EB4.1 Develop and progress a pest management plan for the residential red zone to safeguard ecological health of waterways | CERA | 6 months |

¹ This includes species that move between salt and freshwater environments and the up-stream habitat areas that are important in their lifecycle

² A pest species is defined as

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| to protect native biodiversity and valued introduced species | EB4.2 Develop and implement a co-ordinated control programme that targets pest species that have a negative impact on native biodiversity and valued introduced species | CCC, DoC, ECan, Mana Whenua, SDC | 3-5 yrs |
| EB5 The ecological health of dryland ecosystems is improved | EB5.1a Assess whether current statutory planning frameworks and enforcement activities protect remnant dryland ecosystems from changes of land use and/or new irrigation | CCC, DoC, ECan, SDC | 1 yr |
| | EB5.1b If required, update statutory planning frameworks and enforcement activities to ensure remnant dryland ecosystems are protected from changes of land use and/or new irrigation | CCC, DoC, CERA, ECan, SDC | 1 yr |
| | EB5.2 Develop and progress a co-ordinated programme of actions as part of an integrated management approach to: <ul style="list-style-type: none"> • Identify all remnant dryland ecosystems • Improve the ecological health of drylands and; • Increase the total area of dryland ecosystem | CCC, DoC, ECan, Mana Whenua, SDC | 5 yrs |
| | EB5.3 Work with landowners to support, facilitate, and encourage the development, funding, and implementation of management plans to improve dryland ecosystems | CCC, DoC, ECan, SDC | Ongoing |
| EB6 The significant ecological and cultural biodiversity values associated with the Avon-Heathcote Estuary/Ihutai are protected and where possible enhanced | EB6.1 Review the effectiveness and suitability of the current statutory and non-statutory regime to protect the significant biodiversity values associated with the Avon-Heathcote Estuary/Ihutai | CCC, Community Groups DoC, ECan, Mana Whenua | 3 yrs |
| | EB6.2 Agree and implement a package of protection measures that will ensure the significant biodiversity values of the Avon-Heathcote Estuary/Ihutai are protected | CCC ECan DoC Mana Whenua | 3 - 5 yrs |
| EB7 Earthquake Recovery helps to ensuring health ecosystems and biodiversity | EB7.1 Earthquake Recovery Programmes give effect to the following recommendations: EBb,1.2,1.5, 1.6, 1.7, 3.3b, 4.1, 5.1b | CERA | 1 yr |
| | EB7.2 Work with the Zone Committee to develop implementation plans and actions that give effect to ZIP outcomes and recommendations in Earthquake Recovery Programmes | CERA | 1 yr |

4.4 SAFEGUARDING GROUNDWATER QUALITY AND FLOWS FOR MULTIPLE USES

[Insert text]

Links to CWMS Targets

Recommendations related to this priority issue will contribute to the achievement of the following CWMS Targets areas:

- Ecosystem Health and Biodiversity
- Kaitiakitanga
- Drinking water standards
- Water use efficiency
- Irrigated land area
- Indicators of regional and national economies
- Environmental limits

Priority Outcomes?

| Priority Outcomes? | Recommendations? | Who? | Implement within? |
|---|--|----------------------|-------------------|
| GW1 The quality of our groundwater resources are safeguarded and enhanced where necessary for multiple uses | GW1.1a Assess whether current statutory planning frameworks and enforcement activities require: <ul style="list-style-type: none"> • Land-use activities over un-confined aquifers to be managed on a precautionary basis to protect groundwater quality • Maintain special provisions in relation to the Groundwater Protection Zone • New development and/or intensification/change of land use in the Groundwater Protection Zone only if it can be undertaken without reducing groundwater quality • Private bore casings to be installed to appropriate standards | CCC, ECan, SDC | 1 yr |
| | GW1.1b If required, update statutory planning frameworks and enforcement activities to implement the bullet points in GW1.1a | CCC, CERA, ECan, SDC | 1 yr |
| | GW1.2 Continue to implement a co-ordinated groundwater quality monitoring programme to keep nitrate levels and other contaminants under surveillance | CCC, CDHB, ECan, SDC | Ongoing |

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| <p>GW2 Aquifers that supply drinking water continue to provide an un-treated potable water source (of at least a BA rating in the NZ Drinking Water Standards)</p> | <p>GW2.1a Establish and facilitate an independent expert panel to review and advise on:</p> <ul style="list-style-type: none"> the spatial extent of the groundwater catchments of aquifers that currently provide an untreated potable water source (best assessment using currently available information and degree of confidence) the degree of risk posed by current and future land use activities over un-confirmed aquifers in the agreed groundwater catchment | <p>CCC, CDHB, ECan, SDC</p> | <p>6 months</p> |
| | <p>GW2.1b If required, update statutory planning frameworks and enforcement activities in line with the advice of the independent expert on bullet points in GW2.1a</p> | <p>CERA, ECan</p> | <p>6 months</p> |
| | <p>GW2.2 Develop and progress a programme of actions to improve the security of drinking water supply to the community water supply from wells in the north west of Christchurch (e.g. deeper wells)</p> | <p>CCC</p> | <p>2 yrs</p> |
| <p>GW3 Groundwater resources in the aquifers are actively managed and allocated for multiple uses</p> | <p>GW3.1 Update future demand projections for the community water supply, to ensure alignment with the following:</p> <ul style="list-style-type: none"> Earthquake Recovery Strategy Greater Christchurch Urban Development Plan Christchurch West Melton Zone Implementation Programme | <p>CCC, CERA, ECan</p> | <p>2 yrs</p> |
| | <p>GW3.2 Develop future demand projections for all other takes from groundwater, to ensure alignment with the following:</p> <ul style="list-style-type: none"> Earthquake Recovery Strategy Greater Christchurch Urban Development Plan Christchurch West Melton Zone Implementation Programme | <p>CERA, ECan</p> | <p>2 yrs</p> |
| | <p>GW3.3a Assess the extent to which the management of groundwater resources can give effect to the following outcomes in combination (not in order of priority):</p> <ul style="list-style-type: none"> Maintain and enhance flows from springs in to spring-fed waterways to sustain ecosystem health and cultural values, and; Where possible reinstate flows from historical springs in to spring-fed waterways, and; Safeguard recharge and water quality of the deeper aquifers so that resource is not unsustainably abstracted or degraded in quality and; Meet projected future demand for community water supply and; Meet projected demand of all other takes and; Remain resilient in reasonably foreseeable climate variation scenarios | <p>ECan</p> | <p>3 yrs</p> |
| | <p>GW3.3b Based on the assessment in GW3.3a, work with the Zone Committee to identify a preferred approach to managing and allocating groundwater resources</p> | <p>ECan</p> | <p>3 yrs</p> |

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| | <p>GW3.3c Update the Land and Water Regional Plan to give effect to the preferred approach identified in GW3.3b</p> | CERA, ECan | 3 yrs |
| | <p>GW3.4 Confirm that the relationship between the Waimakariri River and aquifer recharge is adequately understood, recognised and provided for in our allocation of groundwater resources</p> | ECan | 3 yrs |
| <p>GW4 There is a precautionary approach to maintaining groundwater levels, flows, and quality in the vicinity of springheads of spring fed waterways</p> | <p>GB4.1 Identify “sensitive” areas around the springheads of spring fed waterways where activities could alter or vary groundwater quality, levels, and flows</p> | ECan | 6 months |
| | <p>GB4.2 Identify and make changes to statutory planning frameworks and enforcement activities that will safeguard groundwater quality, levels, and flows in sensitive areas (identified in GB4.1) with particular consideration of:</p> <ul style="list-style-type: none"> • The design and construction of foundations for new and redeveloped buildings • Design and installation of new and replacement buried infrastructure (e.g. pipes, cables) | CCC, CERA, ECan, SDC | 6 months |
| | <p>GB4.3 Investigate opportunities to retire groundwater takes in the vicinity of springheads of spring fed waterways where they are assessed to have a negative impact on levels and/or flows</p> | ECan, CONSENT HOLDERS | 5 yrs |
| <p>GW5 Earthquake Recovery helps to safeguard groundwater quality and flows for multiple uses</p> | <p>GW5.1 Earthquake Recovery Programmes give effect to the following recommendations: GW1.1b, 2.1b, 3.1, 3.2, 3.3c, 4.1, 4.2</p> | CERA | 1 yr |
| | <p>GW5.2 Work with the Zone Committee to develop implementation plans and actions that give effect to ZIP outcomes and recommendations in Earthquake Recovery Programmes</p> | CERA | 1 yr |

4.5 MAKING EFFICIENT USE OF WATER AND MANAGING DEMAND

Draft text highlight in yellow below for discussion:

In the Christchurch West Melton Zone, we are very fortunate to have large aquifers (essentially natural reservoirs under the ground) containing vast amounts of good quality water for people to use. Whilst the total volume of groundwater is large, the rate at which water is replaced (or recharged) in to the aquifers is dependent on 2 key factors; how much rain falls on the plains to the west of the city and; how much water flows out of the Waimakariri River in to the ground.

The Zone Committee is concerned that if we take water from the aquifers at a rate which is faster than they are recharged, we will be taking water out of our underground reservoirs in an unsustainable way. Over time, there will be less water available in the aquifers for us to use. In addition, possible variations in climate may affect the amount and timing of rainfall on the plains or flows in the Waimakariri River. In turn this may affect the availability of water in the aquifers.

The amount of water taken by people from the aquifers in the zone has increased over time. The aquifers that provide water for domestic, commercial, and industrial use also feed water into spring-fed waterways (e.g. Avon/Ōtākaro River) that are valued by local communities. Taking water out of the system for people to drink, water gardens, flush toilets, clean cars, irrigate crops, and manufacture products, means that there is already less water available for the environment.

The Zone Committee believes that it is important to plan today, for how we will use water in the future. This means managing the available water resources now, so that they can continue to be used for multiple purposes and benefits. This means that everybody who uses water in the zone, whether in urban or rural areas, or for industrial, commercial, or domestic uses, needs to use water more wisely. This includes reducing the amount of water taken from the tap (e.g. re-using grey water, collecting and using rainwater), using water more efficiently in the irrigation of parks, farms, and gardens, or in industrial processes, and reducing leakage from pipes.

The Zone Committee believes that the “equitable use” of water is an important principle if urban residents are to be encouraged to use water more wisely i.e. what is a fair and equitable amount of water for a user to take? The Zone Committee thinks that an effective mechanism for managing the domestic water demand would be to allocated domestic users an “equitable amount” of water. Domestic users who take less than an equitable amount should then be rewarded for using less water, whilst domestic users that take more than an equitable amount of water should contribute more to the costs of water supply.

The Zone Committee accepts that not everybody in the zone will agree about the best way to encourage domestic users to use water more efficiently. The Zone Committee recognises that for residents of Christchurch, using water efficiently has historically been an emotive topic around charging for domestic water use and, for some people, a perception that agricultural irrigators and dairying had a “free for all.” In developing the ZIP the Zone Committee notes and highlights the following points:

- The CWMS sets targets for the efficient use of water for irrigation, stock water, industrial use, electricity generation, and community water use [e.g. By 2020, 10% reduction in community water use (litres per day per person) compared to 2010]

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- The vast bulk of agricultural irrigation and dairying in Canterbury is outside of the Christchurch West Melton Zone and thus beyond the remit of the Zone Committee
- The majority of Canterbury's domestic water users are within the Christchurch West Melton Zone
- The Zone Committee's recommendations are inclusive of commercial, industrial, and domestic uses of water, in both rural and urban areas of the zone

Ultimately, the Zone Committee believes that if we are to realise the vision of CWMS by 2040, we need to work out the best way for people in Christchurch West Melton Zone to use water more efficiently and manage demand. It is essential that we continue to have access to water for community water supplies, industrial, commercial, and environmental uses. Agreeing a clear way forwards on how to manage our water resources is the first urgent step to take.

Links to CWMS Targets

Recommendations related to this priority issue will contribute to the achievement of the following CWMS Targets areas:

- Water use efficiency
- Irrigated land area
- Indicators of regional and national economies

Priority Outcomes?

| Priority Outcomes? | Recommendations? | Who? | Implement within? |
|---|---|----------------|-------------------|
| EU1 Efficient domestic use of water is encouraged, incentivised, and improved | EU1.1a Review work programmes to reduce leakage from community water supplies, taking into account: <ul style="list-style-type: none"> • The effects of earthquake damage on leakage • Improving the resilience of water supply infrastructure to earthquakes | CCC, CERA, SDC | 1 yr |
| | EU1.1b If required, update and progress work programmes to reduce leakage from community water supplies, having taken into account the bullet points in EU1.1a | CCC, CERA, SDC | 1 yr |
| | EU1.2 Develop and run a process to establish and allocate an equitable level of water use for different domestic users of the reticulated system and private supplies | CCC, SDC, ECan | 2 yrs |
| | EU1.3 Enhance and progress a co-ordinated programme of initiatives to promote and encourage the public to reduce domestic water use | CCC, ECan, SDC | 2 yrs |

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| | <p>EU1.4 Develop a water supply management approach for the community water supply where domestic users that take less than an equitable level are rewarded whilst domestic users that take more than an equitable level contribute more to the costs of water supply</p> | CCC | 3 yrs |
| | <p>EU1.5 Implement a water supply management approach (see EU1.4) in line with plans to manage overall demand from the community water supply within the groundwater allocation</p> | CCC | 5 yrs |
| | <p>EU1.6 Investigate and apply ways to encourage and ensure that users of private domestic supplies use an equitable level of water</p> | ECan | 5 yrs |
| <p>EU2 Efficient commercial and industrial use of water is encouraged, incentivised, and improved, to reduce consumption</p> | <p>EU2.1 Every 3 years, require commercial and industrial users of water supplied via the community water supply system, to demonstrate how they have implemented water efficiency plans</p> | CCC | Ongoing |
| | <p>EU2.2 Continue to operate a water supply management approach for the reticulated system where non-domestic users of water are charged according to usage</p> | CCC | Ongoing |
| | <p>EU2.3a Assess whether current statutory planning frameworks and enforcement activities ensure that commercial and domestic water takes have implemented water efficiency plans</p> | ECan | 2 yrs |
| | <p>EU2.3b If required, update statutory planning frameworks and enforcement activities to ensure that commercial and domestic water takes have implemented water efficiency plans</p> | ECan | 2 yrs |
| <p>EU3 Irrigation use in both rural and urban areas is optimised (targeted and efficient use of water by agricultural users, parks, sports fields, golf courses)</p> | <p>EU3.1a Assess whether current statutory planning frameworks and enforcement activities require managers of irrigation systems to implement “smart³” water efficiency plans</p> | ECan | 2 yrs |
| | <p>EU3.1b If required, update statutory planning frameworks and enforcement activities to ensure that managers of irrigation systems have implemented “smart” water efficiency plans</p> | ECan | 2 yrs |
| | <p>EU3.2 Every 3 years, identify and action improvements to publically managed irrigation systems (e.g. sprinklers in parks) to demonstrate best practice water use efficiency</p> | CCC, ECan, SDC | Ongoing |
| <p>EU4 Earthquake Recovery helps to make efficient use of water and manage</p> | <p>EU4.1 Earthquake Recovery Programmes give effect to the following recommendations: EU1.1a,b</p> | CERA | 1 yr |

³ “Smart use” = how much used, when applied, what application mechanism

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| demand | EU4.2 Work with the Zone Committee to develop implementation plans and actions that give effect to ZIP outcomes and recommendations in Earthquake Recovery Programmes | CERA | 1 yr |
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Alternative version: differences highlighted in yellow for discussion

| Priority Outcomes? | Recommendations? | Who? | Implement within? |
|--|--|----------------------|-------------------|
| EU1 Efficient domestic use of water is encouraged, incentivised, and improved | EU1.1a Review work programmes to reduce leakage from community water supplies, taking into account the effects of earthquake damage and more resilient standards for water supply infrastructure | CCC, CERA, SDC | 1 yr |
| | EU1.1b If required, update and progress work programmes to reduce leakage from community water supplies, having taken into account the effects of earthquake damage and more resilient standards for water supply infrastructure | CCC, CERA, SDC | 1 yr |
| | EU1.2 Establish and facilitate an independent forum to recommend the best mechanisms to encourage efficient domestic use of water taken from community water supplies | CCC | 2 yrs |
| | EU1.3 Enhance and progress a co-ordinated programme of initiatives to promote and encourage the public to reduce domestic water use | CCC, ECan, SDC | 2 yrs |
| | EU1.4 Develop and progress a programme of action to give effect to the recommendations of the independent forum on domestic water use of water taken from community water supplies | CCC | 3-5 yrs |
| | EU1.5 Implement a water supply management approach (see EU1.4) in line with plans to manage overall demand from the community water supply within the groundwater allocation | CCC | 5 yrs |
| EU1.6 Investigate and apply ways to encourage and ensure that users of private domestic supplies use an equitable level of water | | ECan | 5 yrs |

WORKING DRAFT FOR COMMITTEE

5. APPENDIX

5.1 SUMMARY INFORMATION ON THE CANTERBURY WATER MANAGEMENT STRATEGY

[Insert text]

WORKING DRAFT FOR COMMITTEE

6. GLOSSARY AND ACRONYMS

[Insert text]

WORKING DRAFT FOR COMMITTEE

10. WORK PROGRAMME TO ZIP

8.40PM

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|--|--|
| AGENDA ITEM NO: 10 | SUBJECT MATTER: Work Programme to ZIP |
| REPORT: Christchurch West Melton Zone Committee | DATE OF MEETING: 27 September 2012 |
| REPORT BY: Matthew Ross, Facilitator | |

PURPOSE

Agenda item is for the Zone Committee to note the updated work programme to producing the Zone Implementation Programme (ZIP).

ATTACHMENTS

- Work Programme as of 27 September 2012