

DRAFT WASTEWATER STRATEGY 2012-13 HEARINGS PANEL AGENDA

THURSDAY 29 NOVEMBER 2012

AT 8.50AM

IN COMMITTEE ROOM 1, SECOND FLOOR, CIVIC OFFICES, 53 HEREFORD STREET

AND

MONDAY 3 DECEMBER 2012

AT 1.30PM

IN COMMITTEE ROOM 2, SECOND FLOOR, CIVIC OFFICES, 53 HEREFORD STREET

Panel: Councillors Sally Buck, Jimmy Chen and Barry Corbett.

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1. ELECTION OF CHAIRPERSON

2. STAFF BRIEFING

3. CONSIDERATION OF SUBMISSIONS

It is recommended that the Hearings Panel receive all written submissions.

4. HEARING OF SUBMISSIONS

A timetable for hearings on the Draft Wastewater Strategy 2012 is **attached**.

Written submissions have been **separately circulated to panel members**.

5. HEARINGS PANEL CONSIDERATION

Note: Staff comments on the submissions will be **separately circulated to Panel members**.

6. DELIBERATIONS

Draft Wastewater Strategy 2012-13 Submissions Timetable

Thursday 29 November 2012

Time	Submission No	Submitter
8.45am		STAFF BRIEFING
9am	WWS0019	Greg Miller - Beckenham Residents Association
9.10am	WWS0020	Kate Bould Governors Bay
9.20am	WWS0017	Lyttelton Mt Herbert Community Board - Paula Smith
9.30am	WWS0010	Burwood Pegasus Community Board - Linda Stewart
9.40am	WWS0023	MKT - Andrea Lobb and Shane Orchard
9.50am	WWS0011	Tom Taylor
10am	WWS0021	Ecan - speaker to be confirmed
10.10am	WWS0015	Silver Fern Farms Ltd - Alison Johnstone
10.20am	WWS0005	Christchurch Estuary Association - Murray Sim
10.30-10.40am		MORNING TEA
10.40am	WWS0022	John Norton
10.45am	WWS0003	SigJaws Trust - Gary Watts
10.55am	WWS0014	Lyttelton Harbour Wakaraupo Issues - Claire Findlay
11.05am - Midday		CONSIDERATION

**CHRISTCHURCH CITY COUNCIL
DRAFT WASTEWATER STRATEGY**

CONSULTATION ANALYSIS

Summary for Hearings Panel

**Prepared by Diane Shelander
Strategy & Planning
Christchurch City Council**

November 2012

EXECUTIVE SUMMARY

From late 2011 through mid-2012 a draft Wastewater Strategy was developed as part of the Healthy Environment Strategies Programme. There are five key issues with respect to sustainable wastewater management in Christchurch:

- Wet weather overflows;
- Sewer system resilience;
- Long term wastewater treatment and disposal;
- Banks Peninsula wastewater;
- Treatment product reuse (water and biosolids).

The draft Wastewater Strategy sought to address how the Council will respond to these issues.

The Strategy is not a statutory document. Rather it is a strategic framework to enable the Council to sustainably manage its wastewater infrastructure and services now and into the future.

Early consultation with key stakeholders was first initiated in March 2012 with a stakeholder workshop. A follow-up workshop was held in June 2012. Hui with Christchurch and Banks Peninsula iwi were held in June and July 2012.

Council seminars were held May 2012.

The Council approved the release of the draft Wastewater Strategy for public consultation on 27 September 2012.

Public consultation commenced on 8 October and closed 8 November 2012.

The consultation was publicly notified in The Press and other local print publications. Drop-in informational sessions, promoted in advertising in The Press and other local print publication, were held in October 2012. The public was able to make submissions through the Council Have Your Say web page, via email, by fax or in hard copy.

A total of 24 submissions were received during the public consultation period, as follows:

Submitter	Submissions
Individuals	7
Residents associations	5
Iwi	1
Community Boards	4
Social/cultural	1
Commercial/business	1
Environmental organisations	2
Health organisations	1
Governmental organisations	1
Unknown submission type	1

Of the 24 submitters, 15 requested to speak on their submissions to the Hearings Panel.

Staff have recommended a number of changes to the draft Strategy following the public consultation. These are found in section 5 of this report and in the tracked changes version December 2012 version of the draft Strategy provided to the Hearings Panel under separate cover.

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1. INTRODUCTION

1.1 *Background*

The Wastewater Strategy (the Strategy) is the third of the water-related strategies to be developed as a part of the Council's Healthy Environment Strategies programme. The Water Supply and the Surface Water Strategies were adopted by the Council in 2009.

It is important to note that this Strategy is not a statutory document. Rather it is a strategic framework to enable the Council to sustainably manage its wastewater infrastructure and services now and into the future.

Drivers for a Council wastewater strategy included:

- the Independent Advisory Panel's suggestion that the development of a Council Wastewater Strategy, as the key instrument for managing Christchurch's wastewater system, should be accelerated due to the impact of the earthquakes;
- a lack of an overarching Council wastewater strategy;
- a need for updated analysis of the ability of the existing wastewater collection, treatment and disposal systems to meet future capacity in the medium and long term;
- a need to incorporate the learnings from the Christchurch earthquakes into a strategy that recognises the heightened risks to the wastewater infrastructure that have eventuated in the Christchurch seismic environment.

Five key issues were identified in the draft Strategy:

- Wet weather overflows;
- Sewer system resilience;
- Long term wastewater treatment and disposal;
- Banks Peninsula wastewater; and
- Treatment product reuse (treated wastewater and biosolids).

The aim of the Strategy is to establish the Council's strategic direction for sustainably managing wastewater over the next 10, 30 and 100 years.

A project team comprised of Council staff from the City Water and Waste Unit, the Asset and Network Planning Unit and the Strategy and Planning Group plus a representative of Mahaanui Kurataiao Ltd led the development of the draft Strategy, which was prepared with consulting firm CH2M Beca.

The development of the draft Strategy was a collaborative process that included the active participation of representatives of Stronger Christchurch Infrastructure Rebuild Team (SCIRT), Canterbury Earthquake Recovery Authority (CERA), Selwyn District Council (SDC) and Waimakariri District Council (WDC).

On 6 and 17 September 2012 the Environment and Infrastructure Committee considered the draft Strategy, and recommended that the Council agree to release the draft Strategy to the public for consultation. At the 27 September 2012 Council meeting the Council approved the release of the Draft Wastewater Strategy for public consultation.

1.2 Options for Consideration

Initiatives that are proposed in the Strategy are listed in Table 1.

Table 1. Draft Strategy Recommended Actions

Section (page no.)	Recommendation
4.1.3 Sewer system resilience (p. 18)	Use of alternative sewer options (e.g. vacuum systems and pressure systems) as determined on an area-by-area basis using whole-of-lie or net present value cost analysis
4.1.3 Sewer system resilience (p. 18)	Using ductile pipe materials for repairs/replacements balancing risk reduction against increased costs
4.1.3 Sewer system resilience (p. 18)	Pump station relocation and redesign based on risk assessment methodology
4.1.3 Sewer system resilience (p. 18)	Undertaken a network asset criticality and seismic vulnerability assessment
4.2.3 Wet weather overflows (p.19)	Review status of network overflows annually against 2-year ARI overflow standard
4.2.3 Wet weather overflows (p. 19)	Commence Wairakei Diversion from 2013
4.2.3 Wet weather overflows (p. 19)	Establish baseline ARI for each overflow point for wastewater hydraulic model
4.2.3 Wet weather overflows (p. 20)	Collect level and discharge data at each overflow point
4.2.3 Wet weather overflows (p. 20)	Calibrate/validate wastewater hydraulic model against data collected over next 5 years
4.2.3 Wet weather overflows (p. 20)	Re-calibrate wastewater hydraulic model to establish revised AI for each overflow point once SCIRT design programme is complete to identify further works needed to achieve 2-yr ARI
4.2.3 Wet weather overflows (p. 20)	Undertake inspection of all laterals connecting to rebuilt pressure and vacuum sewer networks, and require the property owner to repair damage on their property via their insurance cover
4.2.3 Wet weather overflows (p. 20)	Encourage property owners with gravity laterals to inspect their private lateral and repair damage on their property via their insurance cover
4.2.3 Wet weather overflows (p. 20)	Continue inflow and infiltration reduction on Banks Peninsula
4.2.3 Wet weather overflows (p. 20)	Analyse relative environmental benefits of improving stormwater discharge quality and reducing wastewater overflow frequency
4.2.3 Wet weather overflows (p. 20)	Identify/mitigate areas prone to stormwater flooding that adds to stormwater inflow to sewers in wet weather
4.3.8 Long-term treatment & disposal (p. 24)	Renewals/maintenance and future (circa 2035) major expansion of Christchurch wastewater treatment plant (CWTP)
4.4.3 Banks Peninsula long-term treatment & disposal (p. 25)	Investigate provision of peak flow storage at Diamond Harbour, Governors Bay and Lyttelton
4.4.3 Banks Peninsula long-term treatment & disposal (p. 25)	Connect Diamond Harbour to Lyttelton (and thence to CWTP) via road corridor rather than under Harbour
4.5.1 Water reuse (p.26)	Expand Christchurch wastewater treatment plant water reuse scheme in 2018
4.5.2 Biosolids (p. 27)	Continue to dry CWTP biosolids at drying facility using renewable fuels over next 20 years
4.5.2 Biosolids (p. 27)	Continue transporting biosolids to Stockton mine for land rehabilitation
4.5.2 Biosolids (p. 27)	Continue to explore other reuse methods as second alternative to mine land rehabilitation including use as fertiliser and/or incineration over next five years

1.3 Consultation Process

Consultation was not required under the Local Government Act 2002 as a special consultative procedure. Nevertheless the Council deemed that the public should be consulted on the draft Wastewater Strategy, in line with the Council's Consultation Policy 2003. On 27 September 2012 the Council resolved to release the draft Wastewater Strategy for public consultation.

The consultation was held from 8 October through 8 November 2012 and was conducted as part of the Council's Have Your Say programme.

In the first week of the consultation period, copies of a summary document and the draft Strategy were provided in hard copy to each open community library and Council customer service centre, Councillors and the Mayor, Community Boards and the Council's Executive Team and other key Council officers, and other key stakeholders. The individuals and organisations that were contacted are listed in Appendix 4.

Information about the consultation was provided through a variety of media. These are illustrated in Figure 1.

Figure 1. Consultation Documents



Draft Wastewater Strategy web site, draft Strategy, Strategy summary document, Have Your Say page

The public was able to make a submission through any one of several means: completing the online version of the questionnaire on the Have Your Say web site, mailing or faxing the hard copy version of the questionnaire to the Council, sending an email to the Council, or sending a letter or other written submission to the Council.

The public could access information electronically through the Have Your Say page and the draft wastewater strategy page on the Council web site and in hard copy at open libraries and service centres.

The consultation process, including consultation with key stakeholders that occurred prior to the commencement of the public consultation period, is outlined in Table 2.

Table 2. Consultation Process

February 2012	Issues identification workshop – Council staff, and representatives from SCIRT, CERA, SDC, WDC and MKT
March 2012	Issues workshop – external stakeholders
March 2012	Meeting with Environment Canterbury representatives
April 2012	Combined Community Board seminar
April 2012	Issues and Options workshop – Council staff, and representatives from SCIRT, CERA, SDC, WDC and MKT
May 2012	Water and Wastewater Committee seminar
May 2012	Council seminar
May 2012	Hui with Mahaanui Kurataiao Ltd Board of Directors
June 2012	Options review workshop - Council staff, and representatives from SCIRT, CERA, SDC, WDC and MKT
June 2012	Options workshop – external stakeholders
June 2012	Hui with Ngāi Tūāhuriri and Te Taumutu Rūnanga
July 2012	Strategy review workshop – Council staff, and representatives from SCIRT, CERA, SDC, WDC and MKT
July 2012	Hui with Banks Peninsula rūnanga
8 October – 8 November 2012	<p>Draft Wastewater Strategy released for public consultation</p> <ul style="list-style-type: none"> ▪ Have Your Say web site, with promotion on the Council home page ▪ Press releases on 8 October and 29 October 2012 ▪ Advertisements in The Press, The Star, and local neighbourhood newspapers during the first and third weeks of the consultation period ▪ Draft Strategy and summary documents distributed to service centres and libraries and key stakeholders ▪ Summary documents distributed to organisations and community groups ▪ Drop-in sessions held: <ul style="list-style-type: none"> – 16 October at the Little River service centre – 18 October at the Papanui service centre – 24 October at the Woolston Club ▪ Item in 27 October 2012 edition of Our Christchurch publication

1.4 Received Submissions

A total of 24 written submissions were received during the public consultation period. Staff acknowledge the time and consideration that each of the submitters have given on this consultation.

Seven of the submissions were from individuals and the remainder were from community groups, organisations and businesses.

Eleven submitters chose to use the questionnaire either in hard copy or electronically. One submitter used both the questionnaire and an open-ended document. The remaining 12 submitters opted to make open-ended submissions.

Table 3 summarises the types of responses received, the mode of submission, and respondent locations. A summary of submissions is provided in Appendix 3.

The majority of submitters (62.5%) requested an opportunity to present their submissions to the Council Hearings Panel. Table 4 lists the submitters who had indicated at the time of their written submission that they wish to be heard by the Hearings Panel.

Table 3. Submission Types

Representing	#	Mode of submission	Location (s)
Self	3	Have Your Say Web site	Cashmere Redcliffs Hoon Hay
	2	Written questionnaire	Mt Pleasant Linwood
	1	Email	Christchurch
Commercial/business	1	Other written document	Ashburton
Community Board	4	Other written document	Akaroa/Wairewa Lyttelton/Mt Herbert Burwood/Pegasus Shirley/Papanui
Governmental organisation	1	Other written document	Christchurch
Residents associations	3	Have Your Say Web site	Church Bay Governors Bay Diamond Harbour
	1	Other written document	Beckenham
Health organisation	1	Other written document	Christchurch
Social organisation	1	Written questionnaire	Redwood
Environmental organisations	1	Have Your Say Web site	Lyttelton
	1	Written questionnaire + Other written document	Bexley
	1	Other written document	Christchurch
Iwi	1	Other written document	Christchurch
Self – non-resident	1	Have Your Say Web site	Auckland
	1	Other written document	Kaipoi

Table 4. Submitters Requesting to be Heard

Submitter	Representing
G. Watt	SigJaws Trust
M. Sim	Christchurch Estuary Association Inc
M. Galambos	self
L. Stewart	Burwood/Pegasus Community Board
T. Taylor	self
R. Suggate	Diamond Harbour Community Association
C. Findlay	Lyttelton Harbour/Whakaraupo Issues Group
A. Johnstone	Silver Fern Farms Limited
P. Richardson	Akaroa/Wairewa Community Board
P. Smith	Lyttelton/Mt Herbert Community Board
G. Miller	Beckenham Neighbourhood Association Inc
K. Bould	Governors Bay Community Association, Lyttelton Harbour Issues Group
K. Huxford	Environment Canterbury
J. Norton	self
A. Lobb	Mahaanui Kurataiao Ltd (MKT) on behalf of Ngai Tahu

2. ANALYSIS OF SUBMISSIONS

2.1 Introduction

Submitters were able to utilise a questionnaire for their submission, which 11 submitters chose to use plus one submitter who used it in combination with an open-ended document. The other submissions were open-ended.

Section 2.1 summarises the results from the questionnaire, while section 2.1 summarises the key points from the 12 open-ended submissions.

2.1 Submission form

The questionnaire provided on the submission form on the Have Your Say web site, the hard and electronic copies of the draft Strategy and the hard and electronic copies of the summary document consisted of five questions for which quantitative responses were solicited plus two open-ended questions.

Table 5. Submission questionnaire

- | |
|---|
| <ol style="list-style-type: none"> 1. Overall do you support the direction of the draft Wastewater Strategy?
Yes No 2. How much do you agree or disagree with the aim, vision and guiding principles for managing wastewater in Christchurch?
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree 3. How much do you agree or disagree with the goals and objectives of the draft Wastewater Strategy?
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree 4. How much do you agree or disagree with the key issues facing wastewater management in Christchurch? <ol style="list-style-type: none"> (a) Sewer system resilience
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree (b) Wet weather overflows
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree (c) Long-term wastewater treatment and disposal
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree (d) Banks Peninsula long-term wastewater treatment and disposal
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree (e) Reuse of treatment products (e.g. treated wastewater, biosolids)
Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree 5. Which TWO recommendations do you think are the MOST important for achieving the aim and vision for wastewater management in Christchurch?
Fixing damaged infrastructure; Building resilience; Controlling overflows; Being affordable;
Supporting long-term treatment options; Reducing/improving discharges to marine environments; Reusing biosolids and treated wastewater 6. What are the best aspects of the draft Wastewater Strategy? [open-ended response] 7. What are the aspects of the draft Wastewater Strategy that need the most improvement? [open-ended response] |
|---|

2.1.1 Support for strategy overall (Q.1)

Of the 12 submitters that used the submission form questionnaire, 75% supported the draft Strategy.

2.1.2 Aim, vision and guiding principles (Q. 2)

41.7% of the submitters using the submission form agreed or strongly agreed with the draft Strategy's aims, vision and guiding principles, 25% were neutral and 33.3% disagreed or strongly disagreed.

2.1.3 Goals and objectives (Q.3)

33.3% of the submitters using the submission form agreed or strongly agreed with the draft Strategy's goals and objectives, 50% were neutral and 16.7% disagreed or strongly disagreed.

2.1.4 Key issues (Q.4)

The responses to each of the five key areas varied. Among the 12 submitters that submitted the questionnaire there was strong agreement that network resilience and wet weather overflows are key issues for wastewater management in Christchurch, as well as reasonably strong agreement with reuse of treatment products as a key issue.

(a) Sewer system resilience

83% of submitters agreed or strongly agreed that this is a key issue.

(b) Wet weather overflows

75% of submitter agreed or strongly agreed that this is a key issue

(c) Long-term wastewater treatment and disposal

Half of the submitters agreed or strongly agreed that this is a key issue, a third were neutral and one-sixth disagreed or strongly disagreed,

(d) Banks Peninsula long-term wastewater treatment and disposal (out of 10 submissions, as 2 submitters did not respond to this item)

30% of those that responded agreed or strongly agreed that this is a key issue, while 20% were neutral and 50% disagreed or strongly disagreed.

(e) Reuse of treatment products (e.g. treated wastewater, biosolids)

Two-third of those who submitted the questionnaire agreed or strongly agreed that this is a key issue and one-third were neutral.

2.1.5 Most important recommendations (Q.5)

Of the seven recommendations from which submitters could choose, two-thirds selected building resilience as one of the two most important recommendations for achieving the aim and vision of the draft Strategy.

The results for each of the seven recommendations were as follows.

Fixing damaged infrastructure - 2

Building resilience - 8

Controlling overflow - 3

Being affordable - 1

Supporting long-term treatment options - 3

Reducing/improving discharges to marine environments - 4

Reusing biosolids and treated wastewater - 3

2.1.6 Best aspects of the draft strategy (Q.6)

This was one of the two open-ended questions on the questionnaire. The responses varied widely, with the following results.

Table 6. Question 6 Responses

Submission	Section(s) in strategy
Decrease in negative effects to environment	2.3, 3, 4.2
Reuse of wastewater	4.5.1
Use of more ductile materials	4.1.2 & 4.1.3
Analysis of whole system to identify vulnerability	4.1.3

Submission	Section(s) in strategy
Correctly identifies the issues	4
System repair	4.1.3
Maintaining Bromley treatment plant and associated reticulation	4.3.8
No change to proposed 2-yr ARI for wet weather overflows	4.2.2 & 4.2.3
Mothballing Lyttelton treatment plant so it could be reactivated in event of emergency	4.4.3
Building resilience in reinstatement works	4.1.2 & 4.1.3
Support re-use of treatment products, although this section needs more detail	4.5
Controlling overflows	4.2.3
lwi management plans	1.7.11

2.1.7 Areas for improvement (Q.7)

The second of the two open-ended questions on the submission form asked the public about aspects of the draft strategy most in need of improvement. As with the other open-ended question there was a wide variety in the responses.

Table 7. Question 7 Responses

Submission	Section(s) in strategy	Staff response
Need policy on unserved areas	0.0.0	The Strategy is clear on the expansion of reticulation in the urban area. 1.2.2(g) refers to "unserved areas" and means the rural townships currently not serviced with reticulated systems.
Need to move away from centralised system to clustered/on-site treatment systems	4.3	In areas of liquefaction and lateral spreading there is no evidence that on-site systems performed any better than pipes in the ground.
Flood controls need improving/updating urgently	?4.2	If the submitter is referring to wet weather overflows, this is being addressed in section 4.2.
Need to mitigate against another crisis by maintaining sewage sub-systems like Lyttelton and Diamond Harbour treatment plants	4.4.3	This is proposed to be investigated further in section 4.4.3.
Need for the Council to work with SDC to service growing residential areas of southwest.	4.3	As noted in 4.3.8, the recommendation is for expansion of Bromley treatment plant in the 2035 time frame.
Need to see more closed loop ideas coming through	4	It is not clear what closed loop systems the submitter is referring to.
Further detailed consideration required for decentralised treatment and local reuse of treatment products to build future resilience, promote greater beneficial reuse, reduce pumping costs and lowering environmental impacts in times of system failure	4.3 & 4.5	Decentralised treatment investigated in some depth. Bromley treatment has capacity until 2035. Even past this date decentralisation with a second plant is far more expensive and the resilience benefits are dubious.
Don't use rivers as dumping ground for waste – primary objective to repair Avon/Heathcote/Estuary	4.2	The Strategy clearly shows the intent to reduce overflows into the rivers.

Submission	Section(s) in strategy	Staff response
Strongly disagree with Aim/Vision/Principles and Goals/Objectives based on emphasis on disposal to land (costs, adverse environmental effects)	2.3 & 3	Land disposal options appropriate to consider where suitable land is available. The Council and the working parties on Banks Peninsula have spent considerable time looking at land disposal. This approach works for some areas, such as Wainui, but is not feasible for Lyttelton Harbour.
Section 4.4 needs to recognise the mediated agreement with the Council concerning the Lyttelton Harbour discharge	4.4	It was not considered necessary to include in the Strategy an extensive discussion of actions that have already been agreed for Banks Peninsula, such as plans to remove treated wastewater discharges from Lyttelton Harbour.
More resilient methods to deal with waste other than mixing human waste and heavy metal with clean water to make toxic sewage	4.3 & 4.4	It is not clear what alternatives the submitter prefers.

2.2 Open-ended submissions

The key points from the open-ended submissions are discussed in sections 2.2.1 through 2.2.11. Some comments supported specific elements of the draft Strategy, some comments sought minor changes in text and other comments disagreed with or sought other changes to the draft Strategy.

Appendix 3 lists submission points by submitter from the 12 open-ended submissions.

There were five submissions that were explicit in their support for the Strategy in general: WWS0006, WWS0010, WWS0011, WWS0015 and WWS0018.

2.2.1 General comments

General comments that were not attributed to specific sections of the draft Strategy varied widely.

- WWS0006-2 asked that in the event that other districts access the City's wastewater system, their wastewater should be pre-treated. Staff note that currently there is a very small amount of wastewater entering the City's system from Selwyn District (less than 5% of total). Pre-treatment of that wastewater is neither necessary nor efficient, and therefore staff do not support this recommendation.
- WWS0011-5 was concerned with surface water quality objectives and monitoring. Staff consider that these are determined by Environment Canterbury through its rules and consents.
- WWS0018-11 recommended that management of water and wastewater reticulation to red-zoned suburbs is specified in the Strategy. Staff note that drinking water reticulation is beyond the scope of the Strategy. A statement regarding management of wastewater in red-zoned suburbs is supported.
- WWS0021-23 claimed that sea level rise and climate change are not necessarily "natural hazards" and therefore should be separately and explicitly addressed. Staff do not agree and believe that no change to the Strategy is needed.

The following comments were supported by staff and are included in the staff recommendations in section 4 of this report: WWS0018-11, WWS0023-1, WWS0016-1, WWS0023-2, WWS0021-1, WWS0021-7, WWS0023-7, WWS0021-3, WWS0021-4, WWS0021-5, WWS0023-3.

2.2.2 Comments on the Introduction

There were 18 comments on parts of the Introduction. Many of the comments are supported by staff and are noted in the recommendations in section 5 of this report.

- WWS0005-2 and WWS0005-3 supported an approach that includes a satellite treatment plant, comments that also apply to section 4.3 of the Strategy. Analyses of various satellite plant options found that these

were not the best option for Christchurch. Bromley treatment plant has capacity for a growing city through approximately 2035.

- WWS0021-2 recommended that section 1.7.1 include a reference to a bill currently under consideration in Parliament. As the bill is still in discussion it is too early to determine its impact. Staff therefore do not support this recommendation at this time.
- WWS0023-4 recommended changing the order of the regional plans in the text. Staff consider that this is not necessary.
- WWS0021-6 stated that the “list” of discharge consents is not complete and recommends listing all wastewater discharge consents. As there is no list of consents in the draft Strategy, this submission point seems to be in error. Staff do not support this submission point as it is unnecessary.
- WWS0023-5 requested details for consent conditions for overflows. This is a level of detail not appropriate to the Strategy and as a result staff do not support this recommendation. Staff do agree with the request for the addition of a statement concerning the current status of compliance, however due to earthquake damage and until the rebuild is sufficiently advanced it will not be possible to determine when compliance can be achieved.
- WWS0023-6 asked for change to the third paragraph of section 1.7.8 to include recognition that the Bromley treatment plant site is within an area of high cultural significance to Ngāi Tahu. Staff consider that while this may be relevant to the site it is not indicated in the City Plan for the area. This may be more appropriate for consideration when the City Plan is reviewed.

The following comments were supported by staff and are included in the staff recommendations in section 4 of this report: WWS0023-1, WWS0016-1, WWS0023-2, WWS0021-1, WWS0021-7, WWS0023-7, WWS0021-3, WWS0021-4, WWS0021-5, WWS0023-3, and WWS0023-5.

2.2.3 Comments on Aim, Vision and Principles

There were 13 comments on the aim, vision and guiding principles. Several of these comments are included in the staff recommendations.

- WWS0010-5 sought greater emphasis and commitment given to pre-treatment measures prior to discharge in the guiding principles. It is unclear what specific wording changes were sought.
- WWS0015-3 asked that the Strategy ensure that infrastructure is resilient in the guiding principles. It is the staff view that as this is already stated, further changes are not needed.
- WWS0023-8 and WWS0023-9 commented that the guiding principles do not align with the goals, and that they may undermine policy objectives such as those under the Resource Management Act. It is the staff view that the goals and guiding principles are well-aligned, and that there is not a conflict with the Resource Management Act.

The following comments were supported by staff and are included in the staff recommendations in section 4 of this report: WWS0006-4, WWS0010-4, WWS0017-2, WWS0021-8, WWS0017-3, and WWS0021-9.

2.2.4 Comments on Goals and Objectives

There were 12 comments on the draft Strategy’s goals and objectives. The majority of comments supported the goals, although some sought minor text changes.

- WWS0015-5 asked that Goal 1 ensure that infrastructure is resilient. Staff consider that because this is already stated in the goals and objectives, further changes are not needed.
- WWS0017-4 wanted an additional statement about improving the health of the natural environment under Goal 2. As environmental considerations are addressed in the second and third objectives, staff do not consider that an additional statement is necessary.
- WWS0021-11 sought an additional statement under Goal 2 with respect to overflows. It is the staff view that this is not needed as the broader aspects of resource consents is addressed in objective point 4.

- WWS0023-11 sought to delete objective point 2 under Goal 2 as it is unnecessary and inconsistent with the goal. Staff do not agree, as the objective is in line with the goals and guiding principles.
- WWS0015-8 sought clarification in the first objective under Goal 3 that network development does not compromise service to existing users. It is the staff view that this is clear in the objectives for Goal 2 and as such no change to Goal 3 is necessary.

The following comments were supported by staff and are included in the staff recommendations in section 4 of this report: WWS0021-10, WWS0023-10 and WWS0023-12.

2.2.5 Comments on Sewer System Resilience

Nine comments were received on sewer system resilience (section 4.1 in the draft Strategy), most of which generally supported the recommendations.

- WWS0011-2 suggested using unused existing sewers for additional storage. Staff note that there are minimal unused sewers that are intact.
- WWS0011-3 stated that septicity may be issue for long-run sewers. Staff consider that all long sewers can suffer from septicity but this will be mitigated by using correct pipe sizing and likely dual pipe system.
- WWS0011-7 sought an explanation of how pump station failure will be handled. Staff note that the Council follows the requirements of NRRP WQL 45, which includes a variety of measures according to the criticality of the pump station. This is covered in the contractor management plan.
- WWS0019-1 wanted analysis of asset criticality to include consideration of risk to industrial users. It is the staff view that this is a level of detail not appropriate to the Strategy and as a result staff do not support this recommendation.
- WWS0018-12 recommended that it should be explicitly stated that the public should avoid contact with waterways for 48 hours following rainfall. It is the staff view that this is an operational detail that is not needed in a high-level strategy.

Comments WWS0023-13 and WWS0023-14 were supported in general and are included in the staff recommendations in section 4 of this report.

2.2.6 Comments on Wet Weather Overflows

There were 25 comments on wet weather overflows (section 4.2 in the draft Strategy).

- Several comments (including WWS0010-1, WWS0019-2, WWS0023-15, WWS0005-6, WWS0019-3, WWS0023-16, WWS0019-5) expressed concern about the impact of the earthquakes on the ability of the Council to avoid wet weather overflows beyond its consent conditions over the next decade. There were suggestions that actions be undertaken with urgency to address the issue. Staff draw attention to the fact that many of the recommendations in the draft Strategy are already underway. The need to address wet weather overflows is a major consideration in the programme of works to repair and replace damaged wastewater and stormwater infrastructure. These works are already underway and are being completed as quickly as is practicable. The draft Strategy emphasises the commitment to achieving the two-year ARI as soon as reasonably achievable, but recognises that this will take several years to achieve. Staff consider that additional text to this effect is not required in the Strategy.
- WWS00006-5 expressed concern over possible inundation of Styx River from wet weather overflow given land subsidence and possible effects of proposed housing developments. Staff are unclear about the change sought to the Strategy.
- WWS0011-1 sought a timeframe for hydraulic modelling. Staff note that the city's trunk sewer model has been rebuilt and calibrated to recognise the effects of the earthquake on the pipe network and ground levels. Further work will be done, as outlined in section 4.2.3 of the Strategy.
- WWS0011-4 sought an explanation of how wet weather overflows would be reduced. Staff note that this is addressed in section 4.2.3 of the Strategy.

- WWS0011-6 sought an explanation on how private laterals will be handled. Staff note that this is addressed in section 4.2.3. Staff also note that repair of private sewer laterals is a matter for the private property owner to address and if there is earthquake damage it will be claimable under their insurance cover. The Council and CERA are promoting to the public to survey their private sewer laterals and add any damage to their claims.
- WWS0015-10 suggested determining if other overflow routes may be more appropriate. Staff consider that this is a level of detail that is not needed in a high-level strategy.
- WWS0017-5 sought to add Lyttelton Harbour to the following sentence in 4.2.1: With flows already relatively high during dry weather, when wet weather comes there are more frequent overflows into the Avon and Heathcote Rivers. Staff do not have data that indicates an issue for wet weather overflows in Lyttelton Harbour.
- WWS0019-4 recommended that a timeframe for works to mitigate overflows along with performance metrics is published. It is the staff view that this is an operational matter outside the scope of a high-level strategy and is therefore not supported.
- WWS0021-12 and WWS0021-13 sought to have the Strategy more closely aligned to the “zero tolerance” policy of the pLWRP. Staff note that the pLWRP proposes that discharges from spills, overflows or equipment failure would be non-complying activities. The draft Strategy has highlighted the extensive works that are and will be undertaken to reduce overflows. These works will take time to achieve. Staff also note that it is not possible to give or imply public guarantees that there will not ever be overflows from a wastewater system. Further, the cost to increase containment is very expensive and needs to be weighed up against the benefits to the environment of stormwater treatment assets that are utilised every time it rains.

Comments WWS0023-18 and WWS0005-5 supported and are included in the staff recommendations.

2.2.7 Comments on Long-term Wastewater Treatment and Disposal

Section 4.3 of the draft Strategy covers long-term wastewater treatment and disposal for those areas of Christchurch other than Banks Peninsula. There were 17 comments on this portion of the draft Strategy.

- WWS0019-6 requested consideration that long-term effects of disposing of wastewater to land can include accumulation of heavy metals. Staff note that a variety of factors are investigated as a matter of course when wastewater disposal options are considered.
- WWS0021-15 requested acknowledgment of potential implications of business movement on wastewater treatment. Staff do not consider that movement of businesses will have a substantive impact on the wastewater treatment plant at Bromley.
- WWS0015-12 requested clarification over the users of a Belfast satellite treatment plant. Staff question the need to do this as a northern satellite treatment plant was not a recommended option.
- WWS0021-14 wanted more detail about the approach to assess options. Staff note that the description of the assessments was not highly detailed as this is a high-level strategy. A more in-depth discussion of the options was included in the background documents that aided in the preparation of the draft Strategy.
- WWS0021-16 suggested that the Strategy refer to the Selwyn-Waihora ZIP and the Selwyn-Waihora sub-regional plan [of the pLWRP] in the context of the southwestern satellite options. Staff note that none of the satellite options in the draft Strategy were recommended. As such staff consider that the suggested amendment is not necessary.
- WWS0021-17 requested consideration of ocean outfall alternatives in the 100-year time frame. Staff do not consider that this necessary to add this to the Strategy at this time.
- WWS0023-19 and WWS0023-20 disagreed with the total score and the ranking presented in the discussion of options. Staff do not agree that changes are needed to the Strategy. Staff note that there was substantive work to assess decentralised treatment options. The Bromley treatment plant has capacity to meet the growth of the City for at least the next 23 years. The outcome of the assessment

showed that even after that time decentralisation with a second (satellite) plant is far more expensive than expansion of the Bromley treatment plant.

- Several submitters supported one of the satellite options, including WWS0005-2, WWS0015-13, WWS0024-1, WWS0005-8, WWS0010-8, WWS0015-14, WWS0018-5. A southern satellite option was preferred by one submitter (WWS0024), while five submitters supported a northern satellite option and one submitter (WWS0005) expressed no preference. Staff consider that at this time, the analysis strongly favours the current recommendation to improve/expand the treatment plant at Bromley.
- WWS0010-9 suggested that a 200 faecal coliform standard should be emulated by the Council. Staff note that this is not necessary. Bromley treatment plant treats the final effluent to a high standard. Beach results are heavily influenced by what flows down the rivers and how the tides and currents move the water along the coast. Modelling shows an increase of 1 faecal coliform at beaches in the worst case condition.

Comment WWS0011-8 is supported and is included in the staff recommendations.

2.2.8 Comments on Banks Peninsula Long-term Wastewater Treatment and Disposal

Section 4.4 addresses aspects of Banks Peninsula long-term treatment options that have not already been the subject of extensive community consultation and scheme development.

- WWS0002-1 suggested using existing and new septic tanks as holding tanks to control flow volume. The systems being considered for Banks Peninsula townships incorporate many of the features in the submission. For example, for Wainui the Council is looking at using existing septic tanks and pumping from those into smaller diameter pressure mains to the treatment plant for subsequent land disposal.
- WWS0002-3 suggested barging excess volumes of wastewater from Akaroa Harbour to Bromley. Staff do not consider this to be an efficient or cost-effective means of managing wastewater in Akaroa Harbour.
- Two comments (WWS0011-13 and WWS0021-21) suggested putting wastewater piping across Lyttelton Harbour. The information available to staff has indicated that this may pose a greater risk, as indicated in the draft Strategy.
- WWS0017-7 requested more detail to be added on agreed actions for Lyttelton Harbour. Staff consider that the draft Strategy already indicates what has been previously agreed.
- WWS0018-9 recommended Birdlings Flat for reticulated wastewater system consideration of other Banks Peninsula communities such as Takamatua. Staff note that Birdlings Flat is included in the draft Strategy.
- WWS0021-20 sought detail about Banks Peninsula treatment plants other than Lyttelton Harbour. It is the staff view that it was not considered necessary to include in the Strategy an extensive discussion of actions that have already been agreed for Banks Peninsula, as there has already been extensive public consultation and agreements in place for Council wastewater systems.

Comments WWS0016-3 and WWS0018-7 are supported and are included in the staff recommendations.

2.2.9 Comments on Reuse of Treatment Products

There were five comments on reuse of treatment products (section 4.5 in the draft Strategy) that supported or conditionally support the reuse of treated wastewater and biosolids. Conditional support centred on options that are consistent with Ngai Tahu policy and controls to minimise risk to public health.

Staff have not recommended any changes to this portion of the draft Strategy.

2.2.10 Comments on Monitoring, Evaluation and Review

There were five comments on section 5 of the draft Strategy. One comment (WWS0011-16) sought addition of a statement on a watching brief for emerging technologies. Staff consider that this is not necessary as the existing text recognises change.

Comment WWS0023-24 is supported and included in the staff recommendations.

2.2.11 Comments on Resources and Capability

Section 6 of the draft Strategy addresses Council resources and capabilities in implementing the Strategy. There was one comment on this part. One (WWS0015-16) sought consideration of costs to industry. It should be noted that this section is aimed at Council costs and resources.

Slight changes to this section of the draft Strategy have been recommended by staff for clarification.

2.3 Consultation with Maori

Mahaanui Kurataiao Ltd (MKT) was involved throughout the development of the draft Strategy. The membership of the strategy development project team and the Strategy Advisory Group included MKT staff, who participated in project team and advisory group meetings and workshops.

As noted in Table 2 above, two hui on wastewater issues and the draft strategy for iwi were held in June and July 2012 at Rehua and Rāpaki maraes and input from the hui informed the draft Strategy.

Earlier versions of the draft Strategy, as well as other documents prepared during the project, were provided to MKT as project team and advisory group members.

3. ISSUES AND LIMITATIONS

As with any robust consultation and analysis, it is important to note the issues and limitations that creep into the process, in order to ensure that findings are reliable and for the Council to have faith in them.

As those who made submissions were self-selected the summary of submissions reflects the views of the submissions received and does not necessarily reflect a scientifically robust representation of the opinions of Christchurch residents concerning the future of wastewater management in Christchurch.

Although some of the submissions received were in the format of the feedback form provided with the draft Strategy, the summary document and the Have Your Say web site, other submissions were open-ended, which required manual interpretation.

The analysis was conducted as thoroughly as possible, given time and resource constraints on the preparation of this report.

4. RECOMMENDED CHANGES TO THE STRATEGY

As a result of the feedback received during the public consultation, staff recommend a number of changes to the draft Strategy, which are summarised in Table 8 below. Added text is shown in bold blue font, and deleted text is shown in red strikethrough font.

Table 8. Staff Recommended Changes to Strategy

Section	Text in Draft	Consultation Feedback	Recommended Change
<i>Typos and clarifications – staff notations</i>			
Section 1.4.1	Two hui with urban Christchurch and Banks Peninsula iwi were held in June and July 2012.	Make “hui” plural	Two huis with urban Christchurch and Banks Peninsula iwi were held in June and July 2012.
Section 1.6.2	Human activities (domestic, commercial and industrial) using water generates wastewater, which eventually returns to the wider environment, as illustrated in Figure 3.1.	The reference should be to Figure 1.1 rather than Figure 3.1	Human activities (domestic, commercial and industrial) using water generates wastewater, which eventually returns to the wider environment, as illustrated in Figure 1.1 .
Section 1.6.2	These contaminants can find their way into surface or groundwater either directly or through stormwater runoff.	For clarification add “water” after ‘surface’	These contaminants can find their way into surface water or groundwater either directly or through stormwater runoff.
Section 1.7.14	SDC can continue to be met, and a suitable operational and cost-sharing model can be put in place..	Remove extra full stop at end of sentence	SDC can continue to be met, and a suitable operational and cost-sharing model can be put in place. .
Section 4.2.1	These will require major remedial efforts to meet the currently consented two year average return interval overflow frequency within the next ten to twelve years	Add a full stop at the end of the paragraph	These will require major remedial efforts to meet the currently consented two year average return interval overflow frequency within the next ten to twelve years.
Section 4.2.2	This is a challenging area for the Council as they have no jurisdiction over the private lateral since it is owned by the private landowner and is located on private property. This could involve undertaking closed circuit television CCTV inspection or pressure testing of the private laterals.	First sentence should read “This is a challenging area for the Council as it has....” (rather than “they have”). Put CCTV in brackets in second sentence.	This is a challenging area for the Council as they have it has no jurisdiction over the private lateral since it is owned by the private landowner and is located on private property. This could involve undertaking closed circuit television (CCTV) inspection or pressure testing of the private laterals.

Section	Text in Draft	Consultation Feedback	Recommended Change
Section 4.3.2	<ul style="list-style-type: none"> A satellite plant at Belfast treating one to three cubic metres per second with discharge to land or sea 	Change “one to three” to “one or three”	<ul style="list-style-type: none"> A satellite plant at Belfast treating one or three cubic metres per second with discharge to land or sea
Section 4.3.2	Figure 4.1 - Indicative cost pie charts for wastewater treatment and disposal options	Correct figure number from 4.1 to 4.3	Figure 4.3 - Indicative cost pie charts for wastewater treatment and disposal options
Section 4.3.2	Capital costs for alternative treatment options are summarised in Figure 4.1.	Change figure number in text from 4.1 to 4.3	Capital costs for alternative treatment options are summarised in Figure 4.3 .
Section 4.3.2	Figure 4.2 – Cumulative cash flow curves for treatment scheme options	Correct figure number from 4.1 to 4.3	Figure 4.4 – Cumulative cash flow curves for treatment scheme options
Section 4.3.2	An NPV comparison of the alternative treatment schemes with the centralised and upgraded Bromley treatment facility is provided in Figure 4.2.	Change figure number in text from 4.2 to 4.4	An NPV comparison of the alternative treatment schemes with the centralised and upgraded Bromley treatment facility is provided in Figure 4.4 .
Section 4.3.7	The northern treatment plant schemes treating one cubic metre per second with the continued operation of the Bromley facility are ranked fifth and sixth respectively.	Sentence should read “The northern treatment plant schemes treating three cubic metres per second...”	The northern treatment plant schemes treating three cubic metres s per second with the continued operation of the Bromley facility are ranked fifth and sixth respectively.
Section 4.5.2	After extensive investigations a decision was taken to implement a thermal drying facility located at CWTP utilising 100 per cent renewable fuels to process dewatered biosolids into stabilised dried Class Ab biosolids suitable for reuse as a fertiliser or fuel.	Add footnote after “Class Ab biosolids” reference <i>Guidelines for the Safe Application of Biosolids to Land in New Zealand</i> (Ministry for the Environment and New Zealand Water and Wastes Association, 2003)	<p>After extensive investigations a decision was taken to implement a thermal drying facility located at CWTP utilising 100 per cent renewable fuels to process dewatered biosolids into stabilised dried Class Ab biosolids suitable for reuse as a fertiliser or fuel.*</p> <p>* Per Guidelines for the Safe Application of Biosolids to Land in New Zealand (Ministry for the Environment and New Zealand Water and Wastes Association, 2003)</p>
6	Resources will be allocated to implement the tasks and actions to meet programme and cost goals established by the Council.	Clarification that this section refers to Council costs and resources	Council resources will be allocated to implement the tasks and actions to meet programme and cost goals established by the Council.

Section	Text in Draft	Consultation Feedback	Recommended Change
List of abbreviations	BOD, DO, GHG, MLWS, MHWS, m ³ /d, m ³ /s, NZTA, PPCP, SCADA, UDS, UV, WEF	These abbreviations are not found anywhere in the strategy and should be deleted as they are not needed.	List of abbreviations should be: ADWF - Average Dry Weather Flow; ARI - Annual Recurrence Interval; BPDP - Banks Peninsula District Plan; CCTV - Closed circuit television; CERA - Canterbury Earthquake Recovery Authority; Council - Christchurch City Council; CRPS - Canterbury Regional Policy Statement; CWTP - Christchurch Wastewater Treatment Plant; Ecan - Environment Canterbury; LTP - Long Term Plan; MKT - Mahaanui Kurataiao Ltd; NES - National Environmental Standard; NPS - National Policy Statement; NZCPS - National Coastal Policy Statement; m ³ - Cubic met; ; RMA - Resource Management Act; SCIRT - Stronger Christchurch Infrastructure Rebuild Team; SDC - Selwyn District Council; WDC - Waimakariri District Council; ZIP - Zone Implementation Programme
<i>Submitter-prompted changes</i>			
1.1.1		Include tangata whenua perspective on wastewater	<i>Pending provision of text from MKT</i>
1.2.2 (g)	To develop a position on the extension of reticulated services in currently unserved areas	Include Community Boards in approach to unserved areas	To develop a position on the extension of reticulated services in currently unserved areas with input from Community Boards
1.7		Include section on Treaty of Waitangi	<i>New 1.7.x to be added with input from MKT</i>
1.7.1		Add reference to LGA 2002	The Local Government Act 2002 (LGA 2002) requires local authorities to assess their communities' needs for sanitary services, to provide sanitary services and to maintain their capacity to provide these services (Part 7 sections 125 and 130).
1.7.2		Add text on CER Act recovery programmes	Recovery plans are mandated under the Canterbury Earthquake Recovery Act 2011. An infrastructure recovery plan that includes a five-year schedule for the rebuild of Christchurch's infrastructure, including the wastewater network and assets, was released in September 2012. The infrastructure recovery plan and the Council's Wastewater Strategy are complementary documents that place a strong emphasis on resilience.

Section	Text in Draft	Consultation Feedback	Recommended Change
1.7.5	<p>In October 2011, CERA incorporated Proposed Change 1 into the Operative CRPS as Chapter 12A with minor amendments. This chapter addresses land use and urban growth management in greater Christchurch for the next 35 years. Chapter 12A promotes the intensification of land use within existing urban areas and also identifies appropriate areas for greenfield developments to accommodate projected growth and population relocation. It requires consideration of environmental challenges (including liquefaction and rockfall) so as to avoid areas of risk. It sets urban limits and requires territorial authorities to provide for sequencing of urban development within those limits and to restrain urban activities locating outside these limits.</p> <p>The Proposed Canterbury Regional Policy Statement 2011 (Proposed CRPS) will replace the Operative CRPS, as the RMA requires that regional policy statements be reviewed every ten years. Hearings on the Proposed CRPS have been held. Appeals have been lodged that will be dealt with through the High Court. The Proposed CRPS will not be made operative until the appeal process has been resolved</p>	Amend to reflect current status of pCRPS; make other changes to reflect status, including Chapter 12A	<p>In October 2011, CERA incorporated Proposed Change 1 into the Operative CRPS as Chapter 12A with minor amendments. This chapter addresses land use and urban growth management in greater Christchurch for the next 35 years. Chapter 12A promotes the intensification of land use within existing urban areas and also identifies appropriate areas for greenfield developments to accommodate projected growth and population relocation. It requires consideration of environmental challenges (including liquefaction and rockfall) so as to avoid areas of risk. It sets urban limits and requires territorial authorities to provide for sequencing of urban development within those limits and to restrain urban activities locating outside these limits. Plan Change 1 (PC1) of the 1998 Canterbury Regional Policy Statement is under appeal. PC1 includes Chapter 12A, which addresses land use and urban growth management in greater Christchurch for the next 35 years. It sets urban limits and requires territorial authorities to provide for sequencing of urban development within those limits and to restrain urban activities locating outside these limits.</p> <p>The Proposed Canterbury Regional Policy Statement 2011 (Proposed CRPS) will replace the Operative CRPS, as the RMA requires that regional policy statements be reviewed every ten years. Hearings on the Proposed CRPS have been held. Appeals have been lodged that will be dealt with through the High Court. The Proposed CRPS will not be made operative until the appeal process has been resolved. The Canterbury Regional Policy Statement 2012 is effectively operative and is replacing the 1998 Canterbury Regional Policy Statement.</p> <p>...</p> <p>The Proposed CRPS 2011</p> <p><i>Staff note: As of the date that this report was written, judgement from the High Court was forthcoming. The pCRPS is considered to be "effectively operative".</i></p>

Section	Text in Draft	Consultation Feedback	Recommended Change
1.7.6	It is proposed to replace Chapters 1, 2 and 4 – 8 of the NRRP with a new Land and Water Regional Plan (LWRP) by 2013. The plan is likely to be publicly notified in August 2012.	Amend to reflect current status of pLWRP.	It is proposed to replace Chapters 1, 2 and 4 – 8 of the NRRP with a new Land and Water Regional Plan (LWRP) by 2013. The plan is likely to be publicly notified in August 2012. The proposed Land and Water Regional Plan (pLWRP) replaces Chapters 1, 2, 4, 5, 6, 7 and 8. The pLWRP was publicly notified in August 2012. The pLWRP proposes that discharges from spills overflows or equipment failure would be non-complying activities. <i>[Staff note: As of the date of this summary of submission report, further submissions on the pLWRP had recently closed. Hearings are expected to be completed by mid-2013.]</i>
1.7.6	The Waimakariri River Regional Plan controls point and non-point source discharges of contaminants to water bodies in the Waimakariri River catchment although currently the Council does not discharge any wastewater to the Waimakariri River or its tributaries.	Amend to reflect that Styx River no longer part of WRRP	The Waimakariri River Regional Plan controls point and non-point source discharges of contaminants to water bodies in the Waimakariri River catchment* although currently the Council does not discharge any wastewater to the Waimakariri River or its tributaries. *Puharakekenui/Styx River is no longer part of the WRRP.
1.7.7		Add statement about current consent for overflows	As a consequence of the extensive earthquake-induced damage compliance with the existing wet weather overflow consent will not be possible until the infrastructure rebuild is sufficiently advanced
1.7.10		<i>Add text to clarify how ZIPs will be implemented</i>	The actions set out in the ZIPs will be implemented through the sub-regional plans and district plan, as well as through non-regulatory means. ... The draft Strategy is aligned with the general direction of the Christchurch-West Melton and Banks Peninsula ZIPs. Both of these documents are currently under development as of the date that this Strategy was prepared. <i>[Staff note: Public consultation recently closed for the Banks Peninsula ZIP, and the final ZIP is not expected to be endorsed by ECan until the first quarter of 2013. The draft Christchurch-West Melton is still in development and will likely not go out for public consultation until December 2012 or January 2013].</i>

Section	Text in Draft	Consultation Feedback	Recommended Change
1.7.11		Amend to describe relevant lwi management plans	<i>Pending provision of text from MKT</i>
2.2	The strategic vision is an affordable, reliable, culturally acceptable, sustainable and resilient wastewater system that protects public health and meets the needs of present and future communities.	Insert “environment” into vision statement	The strategic vision is an affordable, reliable, culturally acceptable, sustainable and resilient wastewater system that protects public health and the natural environment and meets the needs of present and future communities.
2.3	<ul style="list-style-type: none"> Effects on the environment from wastewater systems will be minimised The Council will work collaboratively with communities, businesses and other stakeholders to achieve wastewater management goals and objectives 	Amend second and third principles to add words “avoided, mitigated or”, “including”, and “Rūnanga”	<ul style="list-style-type: none"> Effects on the environment from wastewater systems will be avoided, mitigated or minimised The Council will work collaboratively with communities, including businesses and other stakeholders, and Rūnanga to achieve wastewater management goals and objectives
3	Where loss of service cannot be avoided during major adverse events due to inherent risks, business continuity plans will be regularly reviewed and tested, to manage potential public health risks.	Amend Goal 1 to include environmental and cultural risks	Where loss of service cannot be avoided during major adverse events due to inherent risks, business continuity plans will be regularly reviewed and tested, to manage potential public health, and environmental and cultural , risks.
3	<ul style="list-style-type: none"> The Council will consider future alternative treatment, conveyance and disposal or reuse options and technologies on their merits, where the risks and benefits are well defined. Wastewater reuse by the Council or by others will be considered where the public health risks can be managed effectively, and where it is economically viable and environmentally sustainable. 	Amend Goal 3	<ul style="list-style-type: none"> The Council will consider and implement future alternative treatment, conveyance and disposal or reuse options and technologies on their merits, where the risks and benefits are well defined. Wastewater reuse by the Council or by others will be considered and implemented where the public health risks can be managed effectively, and where it is economically viable and environmentally sustainable.

Section	Text in Draft	Consultation Feedback	Recommended Change
4	The Christchurch wastewater system, which incorporates a gravity sewer network, pumping stations, treatment and disposal facilities, has been severely affected by the Christchurch earthquake sequence in 2010 and 2011.	Specify management of wastewater reticulation to red-zoned suburbs is specified in the Strategy	The Christchurch wastewater system, which incorporates a gravity sewer network, pumping stations, treatment and disposal facilities, has been severely affected by the Christchurch earthquake sequence in 2010 and 2011. It should be noted that existing services to residential red zone areas will be retained, and existing pipes that convey wastewater through a red zone area will be maintained, until the areas are vacated. As there will be no properties remaining in a residential red zone once the area is vacated, no wastewater services will required.
4.1	The Council has conducted extensive consultation and scheme development on Banks Peninsula wastewater systems over the last six years. In summary, the Council proposes to:	Include in consideration of land discharges the environmental impacts on receiving environment	The Council has conducted extensive consultation and scheme development on Banks Peninsula wastewater systems over the last six years. This has included consideration of environmental impacts on receiving environments as well as community desires and cultural concerns. In summary, the Council proposes to:
4.1.3	<ul style="list-style-type: none"> ...The NPV analysis should take into account the comparative cost of future earthquake damage repairs as well as comparative capital and operating costs over their operating life. ... Pump station relocation and redesign decisions will be based on a standardised risk assessment method to ensure that design and location options. 	Amend points 1 and 3	<p>...The NPV analysis should take into account the comparative cost of future earthquake damage repairs, including environmental and cultural costs, as well as comparative capital and operating costs over their operating life.</p> <p>...</p> <p>Pump station relocation and redesign decisions will be based on a standardised risk assessment method, including consideration of environmental and cultural risks, to ensure that design and location options.</p>

Section	Text in Draft	Consultation Feedback	Recommended Change
4.2.3	Sewer system repairs and replacement using alternative options (likely to include pressure and vacuum sewer systems for vulnerable parts of the network and greenfield areas) will contribute to reduced inflows of stormwater and infiltration of groundwater and will assist the Council in meeting the wet weather overflow standard. The Council will develop a process for incorporating potential benefits in reducing wet weather overflows into repair and replacement decisions. The purpose of this activity is to make the most cost-effective choices overall for repair and replacement works.	Delete last sentence in second bullet point.	Sewer system repairs and replacement using alternative options (likely to include pressure and vacuum sewer systems for vulnerable parts of the network and greenfield areas) will contribute to reduced inflows of stormwater and infiltration of groundwater and will assist the Council in meeting the wet weather overflow standard. The Council will develop a process for incorporating potential benefits in reducing wet weather overflows into repair and replacement decisions. The purpose of this activity is to make the most cost-effective choices overall for repair and replacement works.
4.2.3		Add screening of overflows	<ul style="list-style-type: none"> identify and mitigate areas prone to stormwater flooding that adds to stormwater inflow to the sewers in wet weather. undertake an investigation of screens on overflows.
4.3.1		Add explanation of methods to mitigate against Bromley treatment plant failure.	The CWTP has an N-1 power supply system, multiple sources of cooling water, plant redundancy, dual PLC processor capability and a range of other measures to mitigate against plant failure.
4.4.1	The Council has conducted extensive consultation and scheme development on Banks Peninsula wastewater systems over the last six years.	Add consideration of impacts.	The Council has conducted extensive consultation and scheme development on Banks Peninsula wastewater systems over the last six years. This has included consideration of environmental impacts on receiving environments as well as community desires and cultural concerns.
4.4.1		Add statement regarding Duvauchelle treatment plant discharge	<ul style="list-style-type: none"> investigate options for Duvauchelle wastewater treatment plant discharge
5	The Implementation Plan should be reviewed annually to assess if there are additional approaches that can be taken, or whether changes to current methods are required.	Implementation plan should be developed in consultation with tangata whenua	The Implementation Plan should be developed in consultation with tangata whenua. The Implementation Plan should be reviewed annually to assess if there are additional approaches that can be taken, or whether changes to current methods are required.

6. APPENDICES

1. Consultation feedback form
2. List of submitters
3. Submission points – Open-ended submissions
4. Organisations and individuals contacted

1. Consultation Feedback Form

Draft Wastewater Strategy Questionnaire

The information you provide below will be used to help the Council develop the Wastewater Strategy. The views expressed form part of a public participation process and will be considered by the Council when finalising the Strategy and how it will function.
(Please tick the appropriate boxes below.)

1. Overall do you support the direction of the draft Wastewater Strategy?

☐ Yes ☐ No

2. How much do you agree or disagree with the aim, vision and guiding principles for managing wastewater in Christchurch?

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

3. How much do you agree or disagree with the goals and objectives of the draft Wastewater Strategy?

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

4. How much do you agree or disagree with the key issues facing wastewater management in Christchurch?
(See Chapter 4 of the draft Strategy).

- (a) Sewer System Resilience

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

- (b) Wet Weather Overflows

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

- (c) Long-term Wastewater Treatment and Disposal

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

- (d) Banks Peninsula Long-term Wastewater Treatment and Disposal

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

- (e) Reuse of Treatment Products (e.g. treated wastewater, biosolids)

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

5. Which **TWO** recommendations do you think are the **MOST** important for achieving the aim and vision for wastewater management in Christchurch? (Please tick **ONLY TWO**)

- ☐ Fixing damaged infrastructure
☐ Building resilience
☐ Controlling overflows
☐ Being affordable
☐ Supporting long-term treatment options
☐ Reducing/improving discharges to marine environments
☐ Reusing biosolids and treated wastewater

6. What are the best aspects of the draft Wastewater Strategy?

7. What are the aspects of the draft Wastewater Strategy that need the most improvement?

About the respondent:

No anonymous submissions will be accepted.

Hearings may be available where you can present your submission at a hearing. If you would like to present (if available), please tick the appropriate box below. Five to 10 minutes will be allocated for speaking to your submissions, including time for questions from the Councillors. The Council will confirm whether hearings will be held and the date and time of your hearing in writing, by email or by telephone call.

☐ I do NOT wish to present my submission at the hearing, and ask that this written submission be considered, OR

☐ If available, I wish to talk to the main points in my written submission at the hearings (to be confirmed)

Are you completing this submission:

☐ For yourself ☐ For a group or organisation

Your Name:

Organisation Name/Role (if applicable):

Contact address:

Postal Code:

Phone Number:

Evening Number:

Email:

Date:

Public comment on the draft Strategy will close on 5pm, Thursday 8 November 2012.

Please note: We are legally required to make all written or electronic submissions available to the public and to Councillors, including the name and address of the submitter, subject to the provisions of the Local Government Official Information and Meetings Act 1987. If you consider there are compelling reasons why your contact details and/or submission should be kept confidential, you should contact the Consultation Team Leader, telephone 941-8999.

2. *List of submitters*

Community Boards	Akaroa/Wairewa Burwood/Pegasus Lyttelton/Mt Herbert Shirley/Papanui
Residents' Associations	Beckenham Neighbourhood Association Inc Church Bay Neighbourhood Assn Inc Diamond Harbour Community Association Governors Bay Community Assn
Iwi	Mahaanui Kurataiao Ltd on behalf of Ngai Tahu
Government	Environment Canterbury
Public health organisation	Canterbury District Health Board
Environmental organisations	Avon-Heathcote Estuary Ihutai Trust Board Christchurch Estuary Association Inc. Lyttelton Harbour/Whakaraupo Issues Group
Social welfare organisation	SigJaws Trust
Commercial/industrial	Silver Fern Farms Ltd
Self	C. Brown M. Galambos M. de Hamel J. Norton J. Paprill J. Porter T. Taylor K. Whitla

3. Submission Points – Open-Ended Submissions

Strategy section	Submission ID	Submitter	Submission Point
4.4.2	WWS0002-1	M. de Hamel	Use existing septic tanks/new septic tanks, with small additional holding tanks and large emergency-only tank for system to control flow volume in reticulated areas in Banks Peninsula
4.4.2	WWS0002-2	M. de Hamel	Minimise flow volume via infiltration control, land use management, low-use and re-use systems
4.4.2	WWS0002-3	M. de Hamel	In case of emergency excess volumes of effluent could be barged to Bromley treatment plant
Exec Summary	WWS0005-1	Christchurch Estuary Assn Inc	Supports 5-yearly review of strategy
1.4.1/4.3	WWS0005-2	Christchurch Estuary Assn Inc	Support for satellite plant
1.4.1/4.3	WWS0005-3	Christchurch Estuary Assn Inc	Support for Council acquisition of land for future satellite plant
1.7.14	WWS0005-4	Christchurch Estuary Assn Inc	Support collaboration with Selwyn District Council for growth in western Christchurch/eastern Selwyn District
4.2.2	WWS0005-5	Christchurch Estuary Assn Inc	Action on Environment Canterbury decision on consent application CRC09692 with respect to screening of outfall pipes [at overflow sites]
4.2.2	WWS0005-6	Christchurch Estuary Assn Inc	Support wet weather overflow options with early implementation
4.2.3	WWS0005-7	Christchurch Estuary Assn Inc	Support annual review of network status
4.3.8	WWS0005-8	Christchurch Estuary Assn Inc	Strongly disagree that best option is expansion of Bromley - need a satellite facility for system resilience
4.5.2	WWS0005-9	Christchurch Estuary Assn Inc	Support options for biosolids
5	WWS0005-10	Christchurch Estuary Assn Inc	Support monitoring, evaluation and review
all	WWS00006-1	Shirley/Papanui Community Board	Supports the strategy overall
3	WWS00006-2	Shirley/Papanui Community Board	Supports the goals
2.3	WWS00006-3	Shirley/Papanui Community Board	Supports the guiding principles
0.0.0	WWS00006-4	Shirley/Papanui Community Board	Consider filters on stormwater systems to remove contaminants such as cigarette butts that are toxic to aquatic and marine environments
4.2	WWS00006-5	Shirley/Papanui Community Board	Concern for inundation of Styx River from wet weather overflow given land subsidence and possible effects of proposed housing developments
4.2	WWS0010-1	Burwood/Pegasus Community Board	Reservations about circumstances that will still see emergency wastewater discharges to local waterways
0.0.0	WWS0010-2	Burwood/Pegasus Community Board	If Selwyn or Waimakariri District Councils access City's wastewater network in future their wastewater should be pre-treated before release into City's network
0.0.0	WWS0106-3	Burwood/Pegasus Community Board	Timeframes should be outlined in more detail
2.2	WWS0010-4	Burwood/Pegasus Community Board	Insert " environmental " into vision statement
2.3	WWS0010-5	Burwood/Pegasus Community Board	Greater emphasis needed on pre-treatment measures prior to discharge
4.1	WWS0010-6	Burwood/Pegasus Community Board	Strongly agree with sewer system resilience as a key issue
4.2	WWS0010-7	Burwood/Pegasus Community Board	Strongly agree with wet weather overflows as a key issue
4.3.8	WWS0010-8	Burwood/Pegasus Community Board	Prefers satellite option(s) rather than relying solely on Bromley treatment plant
4.3	WWS0010-9	Burwood/Pegasus Community Board	The 200 faecal coliform standard for Waimakariri District Council should be emulated by the Council

Strategy section	Submission ID	Submitter	Submission Point
4.5	WWS0010-10	Burwood/Pegasus Community Board	Strongly agree with options for reuse of treatment products
4.2 & 4.4	WWS0010-11	Burwood/Pegasus Community Board	2 most important recommendations in Strategy are controlling overflows and reducing/improving discharges to marine environments
0.0.0	WWS0010-12	Burwood/Pegasus Community Board	Best aspects of strategy are readability and intent for on-going review
0.0.0	WWS0010-13	Burwood/Pegasus Community Board	Aspect of strategy needing improvement = environmental elements should be at forefront
4.2.3	WWS0011-1	T Taylor	Timeframe sought for hydraulic model
4.1	WWS0011-2	T Taylor	Use unused existing sewers for additional storage
4.3	WWS0011-3	T Taylor	Septicity may be issue for long-run sewers, e.g. Bromley to Rolleston, Bromley to Diamond Harbour
4.2.2	WWS0011-4	T Taylor	Explain how wet weather overflows will be reduced
0.0.0	WWS0011-5	T Taylor	Identify water quality objectives for surface waters and how these will be monitored
4.2.3	WWS0011-6	T Taylor	Explain how infiltration for private laterals will be addressed
4.1.2	WWS0011-7	T Taylor	Explain how pump station failure will be handled
4.3.1	WWS0011-8	T Taylor	Explain the methods to mitigate effects of failures at Bromley
0.0.0	WWS0011-9	T Taylor	Explain how stream pollution from unreticulated systems will be dealt with
3	WWS0011-10	T Taylor	Supports goals
all	WWS0011-11	T Taylor	General support for strategy
4.1	WWS0011-12	T Taylor	Supports sewer system resilience
4.4.2	WWS0011-13	T Taylor	Take Diamond Harbour wastewater across Lyttelton Harbour rather than along road corridor
4.1.3	WWS0011-14	T Taylor	Supports alternative conveyance systems
4.5.1	WWS0011-15	T Taylor	Consider greywater reuse
5	WWS0011-16	T Taylor	Maintain a watching brief on emerging technologies such as algal biofuel, power generation using membrane systems
2.2	WWS0015-1	Silver Fern Farms Ltd	Retain intent of principle
2.3	WWS0015-2	Silver Fern Farms Ltd	Guiding principles point 1 – retain intent of principle
2.3	WWS0015-3	Silver Fern Farms Ltd	Guiding principles point 5 – ensure that infrastructure is resilient so that wastewater can still be received into the network during weather events less than 1 in 30-year probability
2.3	WWS0015-4	Silver Fern Farms Ltd	Guiding principles point 7 - retain intent of principle
3	WWS0015-5	Silver Fern Farms Ltd	Goal 1, objective point 1 - ensure that infrastructure is resilient so that wastewater can still be received into the network during weather events less than 1 in 30-year probability
3	WWS0015-6	Silver Fern Farms Ltd	Goal 1, objective point 5 - retain intent of objective
3	WWS0015-7	Silver Fern Farms Ltd	Goal 2, objective point 3 - retain intent of objective, Silver fern Farms to be included in stakeholder consultation
3	WWS0015-8	Silver Fern Farms Ltd	Goal 3, objective point 1 – ensure network development does not compromise service to existing users
4.1	WWS0015-9	Silver Fern Farms Ltd	Analysis of network asset criticality should include consideration of risk to industrial users
4.2	WWS0015-10	Silver Fern Farms Ltd	Determine if other overflow routes may be more appropriate
4.2.3	WWS0015-11	Silver Fern Farms Ltd	Recommendation on point 4 – provide more detail on storm water quality programme
4.3.2	WWS0015-12	Silver Fern Farms Ltd	Clarify whether Belfast satellite treatment plant is for residential or industrial use or both
4.3.5 and 4.3.7	WWS0015-13	Silver Fern Farms Ltd	Provide more detail on northern treatment option
4.3.8	WWS0015-14	Silver Fern Farms Ltd	Review Belfast options prior to 2035
5	WWS0015-15	Silver Fern Farms Ltd	Support 5-yearly review of strategy

Strategy section	Submission ID	Submitter	Submission Point
6	WWS0015-16	Silver Fern Farms Ltd	Ensure reliability, capacity and cost to industry is considered when allocating resources to meet programme goals
1.2.2	WWS0016-1	Akaroa/Wairewa Community Board	Asks that Community Boards are involved in process to develop a position on extension of reticulation to unserved areas
4.4.1	WWS0016-2	Akaroa/Wairewa Community Board	Supports description of issues
4.4.3	WWS0016-3	Akaroa/Wairewa Community Board	Add statement – continue investigations of land disposal for Duvauchelle wastewater treatment plant discharge
1.2.2	WWS0017-1	Lyttelton/Mt Herbert Community Board	Support sub-clauses (f), (g) and (h).
2.2	WWS0017-2	Lyttelton/Mt Herbert Community Board	Amend vision statement – The strategic vision is an affordable, reliable culturally acceptable and resilient wastewater system that protects public health and the natural environment , and meets the needs of present and future communities.
2.3	WWS0017-3	Lyttelton/Mt Herbert Community Board	Supports guiding principles, but suggests amendment to point 3: The Council will work collaboratively with communities, including businesses and other stakeholders, to achieve wastewater management goals and objectives
3	WWS0017-4	Lyttelton/Mt Herbert Community Board	Goal 2 – add statement making it explicit that the Council intends to improve, maintain and enhance the health of the natural environment as it manages the city's wastewater.
4.2.1	WWS0017-5	Lyttelton/Mt Herbert Community Board	Amend sentence – With flows already relatively high during dry weather, when wet weather comes there are more frequent overflows into the Avon and Heathcote Rivers and Lyttelton Harbour .
4.2.2	WWS0017-6	Lyttelton/Mt Herbert Community Board	Supports work to address inflow and infiltration in Lyttelton Harbour wastewater system
4.4.1	WWS0017-7	Lyttelton/Mt Herbert Community Board	Add sentence or two summarising mediated agreement regarding Lyttelton Harbour with key milestones in agreed timeline
4.4.2	WWS0017-8	Lyttelton/Mt Herbert Community Board	Supports the 2 new, and more resilient options but express concern that investigation of a new option could delay implementation of plans to remove discharges from Lyttelton Harbour
all	WWS0018-1	Canterbury District Health Board	Supports strategy
4.1.3	WWS0018-2	Canterbury District Health Board	Supports improving resilience of wastewater conveyance and collection systems
4.2.3	WWS0018-3	Canterbury District Health Board	Supports identifying areas prone to flooding and overflow
4.2.3	WWS0018-4	Canterbury District Health Board	Supports on-going work to address wet weather overflows
4.3.8	WWS0018-5	Canterbury District Health Board	Supports expansion/upgrade of Bromley as preferred option
4.4.2	WWS0018-6	Canterbury District Health Board	Supports diversion of Lyttelton Harbour wastewater to Bromley
4.4.1	WWS0018-7	Canterbury District Health Board	Supports cessation of discharges to Akaroa Harbour but notes that consideration of land discharges should include environmental impacts on receiving environment
4.5.2	WWS0018-8	Canterbury District Health Board	Supports additional methods for biosolid disposal
4.4.1	WWS0018-9	Canterbury District Health Board	Recommends Birdlings Flat for reticulated wastewater system, and recommends consideration of other Banks Peninsula communities such as Takamatua.

Strategy section	Submission ID	Submitter	Submission Point
4.5.1	WWS0018-10	Canterbury District Health Board	Recommends that greywater reuse is not supported without good controls due to high bacterial loads and associated health risks.
0.0.0	WWS0018-11	Canterbury District Health Board	Recommends that the Council specify in its plans management of water and wastewater reticulation to red-zoned suburbs.
4.2	WWS0018-12	Canterbury District Health Board	Recommends that the Council explicitly states that the public avoid contact with waterways for 48 hours following rainfall.
4.1	WWS0019-1	Beckenham Neighbourhood Assn Inc	Supports options and recommendations
4.2	WWS0019-2	Beckenham Neighbourhood Assn Inc	Expresses concern that re-negotiation with Environment Canterbury could lead to non-compliance indefinitely.
4.2.2	WWS0019-3	Beckenham Neighbourhood Assn Inc	Recommends that hydraulic modelling should be undertaken as a matter of urgency.
4.2.3	WWS0019-4	Beckenham Neighbourhood Assn Inc	Recommends that the Council should publish a timeframe for works to mitigate wet weather overflows along with performance metrics comparing pre-earthquake with current and expected overflow frequencies
4.2.3	WWS0019-5	Beckenham Neighbourhood Assn Inc	Strongly supports investigation and identification of areas prone to leakage of stormwater into wastewater network and recommends that this work is undertaken with urgency.
4.3	WWS0019-6	Beckenham Neighbourhood Assn Inc	Long-term consequences of disposing wastewater, including accumulation of heavy metals to land should be carefully considered.
1.7.1	WWS0021-1	Environment Canterbury	Add a reference to Local Government Act 2002 as it is also relevant to wastewater management.
1.7.1	WWS0021-2	Environment Canterbury	Add a reference to Resource Management (Restriction of Duration of Certain Discharge and Coastal Permits) Amendment Bill which may place further restrictions on wastewater discharges.
1.7.2	WWS0021-3	Environment Canterbury	Add a section on CERAct-mandated Recovery Programmes.
1.7.5	WWS0021-4	Environment Canterbury	Amend fourth paragraph to reflect updated status of pCRPS
1.7.6	WWS0021-5	Environment Canterbury	Amend fourth paragraph regarding pLWRP re discharges
1.7.7	WWS0021-6	Environment Canterbury	Notes that list of wastewater discharge consents is not complete and recommends listing all wastewater discharge consents.
1.7.10	WWS0021-7	Environment Canterbury	Add text to clarify how actions in ZIPs will be implemented.
2.2	WWS0021-8	Environment Canterbury	Amend vision statement – The strategic vision is an affordable, reliable, culturally acceptable, sustainable and resilient wastewater system that protects public and ecosystem health and meets the needs of present and future communities.
2.3	WWS0021-9	Environment Canterbury	Supports guiding principles in general with 3 suggested amendments: <ul style="list-style-type: none"> Effects on the environment from wastewater systems will be avoided, mitigated or minimised The Council will work collaboratively with communities, Rūnanga, businesses and other stakeholders to achieve wastewater management goals and objectives The Council will take a flexible approach to new technologies and methods for conveyance, treatment, reuse and disposal and will consider adopting new technologies in future where the benefits and risk are well defined
3	WWS0021-10	Environment Canterbury	Amend Goal 2 point 5 – <ul style="list-style-type: none"> The Council will monitor and investigate scientific evidence regarding existing and emerging contaminants
3	WWS0021-11	Environment Canterbury	Add an additional objective to Goal 2 concerning a reduction in sewage overflows.
4.2.3	WWS0021-12	Environment Canterbury	Needs to more closely align with policy for sewage overflows in pLWRP.

Strategy section	Submission ID	Submitter	Submission Point
4.2.3	WWS0021-13	Environment Canterbury	Make clear in second bullet point that reducing wet weather overflows is a priority to be incorporated into infrastructure repair/replacement decisions
Table 4.1 (4.3)	WWS0021-14	Environment Canterbury	Further explanation of criteria for different ranking scores is needed.
4.3.1	WWS0021-15	Environment Canterbury	Acknowledge potential implications of movement of business activity, not just residential activity, on wastewater treatment
4.3.2	WWS0021-16	Environment Canterbury	Need to refer to Selwyn-Waihora ZIP and sub-regional chapter in pLWRP when considering options
4.3.2	WWS0021-17	Environment Canterbury	In the 100-year time frame need to consider alternatives to ocean outfall
4.4.1	WWS0021-18	Environment Canterbury	Need to provide more detail on each of the Banks Peninsula treatment plants
4.4.2	WWS0021-19	Environment Canterbury	Need to provide options for each of the Banks Peninsula treatment plants
4.4.3	WWS0021-20	Environment Canterbury	Need to provide recommendation and timeframes already agreed for each of the Banks Peninsula treatment plants not just Lyttelton Harbour plants
4.4.2	WWS0021-21	Environment Canterbury	Consider trenching wastewater pipe across Lyttelton Harbour when assessing resilience.
7.1	WWS0021-22	Environment Canterbury	Need to identify stakeholders and their responsibilities
0.0.0	WWS0021-23	Environment Canterbury	Need to make specific reference to issues related to sea level rise and climate change in addition to earthquakes and other natural hazards.
1.1.1	WWS0023-1	Mahaanui Kurataiao Ltd	Recommends amending to include tangata whenua perspective on wastewater.
1.7	WWS0023-2	Mahaanui Kurataiao Ltd	A section on relevance of Te Tiriti o Waitangi/Treaty of Waitangi is needed
1.7.6	WWS0023-3	Mahaanui Kurataiao Ltd	Amend description of WRRP to reflect that Puharakekenui/Styx River is no longer plan of that Plan.
1.7.6	WWS0023-4	Mahaanui Kurataiao Ltd	Recommends order of regional plans changed to: NRRP, WRRP, pLWRP
1.7.7	WWS0023-5	Mahaanui Kurataiao Ltd	Recommends inclusion of details of current consent for overflows with the clarification of the locations to which it applies. Also recommends a statement concerning the current level of compliance with CRC092692.
1.7.8	WWS0023-6	Mahaanui Kurataiao Ltd	Amend paragraph 3 to include recognition that the Bromley treatment plant site is within an area of high cultural significance to Ngāi Tahu.
1.7.11	WWS0023-7	Mahaanui Kurataiao Ltd	Amend to adequately describe relevant Iwi management Plans.
2.3	WWS0023-8	Mahaanui Kurataiao Ltd	Guiding Principles don't align with goals
2.3	WWS0023-9	Mahaanui Kurataiao Ltd	Point 1 should be removed as it is not an accurate reflection of the purpose of the RMA.
3	WWS0023-10	Mahaanui Kurataiao Ltd	Amend Goal 1 point 4 – <ul style="list-style-type: none"> Where loss of service cannot be avoided during major adverse events due to inherent risks, business continuity plans will be regularly reviewed and tested, to manage potential public health, and environmental and cultural risks.
3	WWS0023-11	Mahaanui Kurataiao Ltd	Delete Goal 2 point 2 as it is unnecessary and inconsistent with achievement of this goal.
3	WWS0023-12	Mahaanui Kurataiao Ltd	Amend Goal 3 points 4 and 5 – <ul style="list-style-type: none"> The Council will consider and implement future alternative treatment, conveyance and disposal or reuse options and technologies on their merits, where the risks and benefits are well defined. Wastewater reuse by the Council or by others will be considered and implemented where the public health risks can be managed effectively, and where it is economically viable and environmentally sustainable.
4.1.3	WWS0023-13	Mahaanui Kurataiao Ltd	Amend point 1 – <p>The NPV analysis should take into account the comparative cost of future earthquake damage repairs as well as environmental and cultural costs and comparative capital and operating costs over their operating life.</p>
4.1.3	WWS0023-14	Mahaanui Kurataiao Ltd	Amend point 3 to include minimisation of environmental and cultural risks for designing/relocating pump stations

Strategy section	Submission ID	Submitter	Submission Point
4.2.1	WWS0023-15	Mahaanui Kurataiao Ltd	This section needs to be re-worded as the 10 to 12-year time frame does not have any basis in current policy framework. It must also be emphasised that compliance with consent conditions should happen as soon as possible in the earthquake recovery process.
4.2.2	WWS0023-16	Mahaanui Kurataiao Ltd	Recommend that options considered must strive to reduce environmental and cultural risks
4.2.3	WWS0023-17	Mahaanui Kurataiao Ltd	Oppose point 1 – recommend that it is removed.
4.2.3	WWS0023-18	Mahaanui Kurataiao Ltd	Amend point 2 to delete final sentence.
4.3.2 and 4.3.3 - 4.3.7	WWS0023-19	Mahaanui Kurataiao Ltd	Disagree with approach taken to score/rank options
4.3.8	WWS0023-20	Mahaanui Kurataiao Ltd	Disagree method used to derive recommendation
4.4.2	WWS0023-21	Mahaanui Kurataiao Ltd	Support the two preferred options
4.5	WWS0023-22	Mahaanui Kurataiao Ltd	Support options provided they are consistent with Ngāi Tahu policy
5	WWS0023-23	Mahaanui Kurataiao Ltd	Support improved monitoring but more details are needed
5	WWS0023-24	Mahaanui Kurataiao Ltd	Implementation Plan should be developed in consultation with tangata whenua
4.3.6	WWS0024-1	Avon Heathcote Estuary Ihutai Trust Board	Supports southern satellite plant treating one cubic metre per second with disposal to land, with additional supporting programmes for reuse of water and working in combination with Bromley treatment plant.

4. Organisations and Individuals Contacted

The following organisations and individuals were contacted about the public consultation on the draft Strategy.

Mayor	Commerce Commission
Councillors	Community & Public Health
CEO	Condell Avenue Group
Libraries	Corsair Bay Residents' Association
Service centres	Council of Social Services
Akaroa/Wairewa Community Board	Council's Disability Advisory Group
Burwood/Pegasus Community Board	Cowlshaw St, Patten St & Retreat Rd Residents' Society Inc
Fendalton/Waimairi Community Board	Cracroft Residents' Association
Hagley/Ferrymead Community Board	Dallington Residents' Association
Lyttelton/Mt Herbert Community Board	Davie Lovell-Smith Ltd
Riccarton/Wigram Community Board	Deaf Association of New Zealand, Canterbury
Shirley/Papanui Community Board	Deans Ave Precinct Society
Spreydon/Heathcote Community Board	Department of Conservation
Addington Bush Society	Department of Internal Affairs
Addington Neighbourhood Association	Diamond Harbour Community Association
Age Concern Canterbury	Ellington Residents Association
Akaroa Civic Trust	Englefield Residents' Association
Aranui Community Trust	Environment Canterbury
Arawa Canoe Club	Environment Institute of Australia & New Zealand NZ Chapter
Ascot/Freeville Residents' Group	Federated Farmers North Canterbury
Association of Blind Citizens	Federated Farmers of New Zealand Inc
Avon Heathcote Estuary Ihutai Trust	Federated Farmers, Canterbury
Avon Loop Planning Association	Ferrymead Brookhaven Residents Association
Avon Otakaro Network (AvON)	Ferrymead Heritage Park
Avondale Residents' Association	Fish & Game North Canterbury
Avonside Community Group	Friends of Banks Peninsula
Awatea Residents Association	Gilberthorpes Estate Residents' Group
Banks Peninsula A & P Society	Golf Links Residents' Group
Banks Peninsula Conservation Trust	Governors Bay Community Association
Beckenham Neighbourhood Association	Grey Power Federation Inc
Belfast Area Residents' Association	Halswell Residents' Association
Burnside Residents' Support Group	Healthy Christchurch
Burwood East Residents' Association	Heathcote Valley Community Association
CanCERN	Horseshoe Lake Residents' Group
Canterbury Anglers Club	Ihutai Trust
Canterbury Anglers' Club	Ilam & Upper Riccarton Residents Association
Canterbury Development Corporation	Inner City East Neighbourhood Group
Canterbury Employers' Chamber of Commerce	Inner City West Neighbourhood Association Inc
Canterbury Hospitality Group	Institute of Environmental Science & Research Ltd
Canterbury Jet Sports Club	Islington Residents' Association
Canterbury Manufacturers Association	Jet Boating NZ (Canterbury)
Canterbury Museum	Kainga Residents' Association
Canterbury Property Investment Association	Kennedy's Bush Road Neighbourhood Association
Canterbury Rowing Association	Landcare Research
Canterbury University	Le Bons Bay Residents' Association
Canterbury Windsports Association	Lincoln University
Canterbury Youth Workers Collective	Linden Grove Residents Association
Cashmere Residents' Association	Linwood Neighbourhood Committee
Central Riccarton Residents' Association	Little River Residents' Association
Charleston Neighbourhood Association Inc	Living for One Residents' Association
Charteris Bay Residents' Association	Lyttelton Community Association
Chester Street East Neighbourhood Group	Lyttelton Harbour Business Association
Christchurch & Canterbury Tourism	Lyttelton Port of Christchurch
Christchurch Civic Trust	Mahaanui Kurataiao Ltd
Christchurch Estuary Association	Merivale Precinct Society
Christchurch Fishing & Casting Club	Middleton-Matipo Community Association
Christchurch Heritage Trust	Ministry for the Environment
Christchurch Resettlement Services	Ministry of Pacific Island Affairs
Christchurch Yacht Club	MOA Neighbourhood Committee
Christchurch-Little River Railtrail Trust	Mt Pleasant Memorial Community Centre & Ratepayers Assn
Church Bay Neighbourhood Assn	National Institute of Water & Atmospheric Research
Clifton Neighbourhood Committee	New Brighton Residents' Association

New Regent Street Network
New Zealand Historic Place Trust (Canterbury)
New Zealand Jet Boat Association
New Zealand Retailers Association
North New Brighton Residents' Association
Northshore Residents' Association
Northwood Residents' Association
NW Richmond Residents' Association
NZ Institute of Management Canterbury
Opawa/St Martins Residents' Association
Otamahua/Quail Island Trust
Ouruhia Residents' Association Inc
Papanui Village Business Association Inc
Parklands Residents' Association Inc
Port Levy Residents' Association
Project Lyttelton
Purau Residents' Association
QEII Trust
Quail Island Ecological Restoration Trust
Redcliffs Residents' Association
Redwood Residents' Association
Riccarton Park Residents' Association
Riccarton/Kilmarnock Residents' Association
Road Transport Association NZ
Roimata Community Incorporated Society
Royal Forest & Bird Society North Canterbury Branch
Royal NZ Foundation of the Blind
Russley Avonhead & Memorial Residents' Association
Scion (New Zealand Forest Research Institute Ltd)
Selwyn District Council
Shirley Residents' Group
Somerfield Residents' Group
South New Brighton Residents' Association
Southshore Residents' Association
Spencerville Residents' Association
St Albans Residents' Association
St James Avenue Residents' Association
Steadman Road Area Residents' Group
Stewarts Gully Residents' Association
Styx Residents' Group
Summit Road Society
Sumner Residents' Association
Sustainable Aoteroa New Zealand
Sustainable Business Network
Sustainable Living Education Trust
Sustainable Otautahi-Christchurch
Taipuri Management Committee
Takamatua Ratepayers Association
Taylors Mistake Association
Taylors Mistake Ratepayers' Association
Templeton Residents' Group
Tikao Bay Ratepayers Association
Tikao Bay Boating Club
Travis Wetland Trust
Union Rowing Club
University of Canterbury Rowing Club
Victoria Neighbourhood Committee
Waihora Ellesmere Trust
Waimakariri District Council
Waimakariri Sailing & Power Boat Club
Wainui Residents' Association
Waterways Centre for Freshwater Management
Westmorland Residents' Association
Wigram Residents' Association
Woolston Community Association
Yaldhurst Rural Residents' Association Inc