

Report No:	RESC12-02-04
File No:	
Date:	18 January 2012
<b>Information Only – no decision required</b>	

## REPORT SUMMARY

**Report to:** Engineering Services Committee  
**Meeting Date:** 2 February 2012  
**Report Author:** Jeff Cuthbertson, Utilities Asset Manager  
**Subject:** Utilities Report

### EXECUTIVE SUMMARY

This report provides a summary of the Utilities activities for November-December 2011.

Of particular note was the performance of the contractor Downer whose staff provided excellent response, dedication and ownership of the network issues experienced leading up to, during and after the extreme weather events of mid- and late-December 2011.

Despite the events, Downer performed well with all proactive, routine and non-routine maintenance on the water/wastewater treatment plants, pumpstations, reservoir sites and stormwater assets as scheduled.

In solid waste operations, contractors are performing well, with volumes to landfill consistent with forecasts and comparable to actual quantities delivered at the same time last year.

Capital projects are generally on track but priority, timing and expenditure requirements are being reassessed due to the flooding events of December.

### RECOMMENDATION

**That the report be received.**

### DRAFT RESOLUTION

**THAT the Engineering Services Committee receives the Utilities Report, RESC12-02-04.**

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**1. Utilities General**

- 1.1 Downer undertook all proactive, routine and non-routine network maintenance on the water and wastewater treatment plants, pumpstations, reservoir sites and stormwater assets as scheduled and required within their programme.
- 1.2 MWH carried out audits across all areas of the utilities network on both ongoing and completed work. Downer has had some issues and areas of concern over the October/November period which are identified below. However, they provided an excellent response and ownership of network issues before, during and after the extreme rainfall events in December.
- 1.3 Downer continues to perform well on the general reactive and proactive work undertaken within the contract as they have now completed the second quarter of the 2011/12 financial year. The information below indicates that the contractor has been advised of some areas identified for improvement.

Performance Standards - Contract 688 -- 2011 -- 2012												
	July 2011	Aug 2011	Sept 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	Mar 2012	April 2012	May 2012	June 2012
Contract Management	Green	Green	Green	Green/Red	Green	Green						
Water Supply Network	Green	Green	Green	Green/Red	Green	Green						
Wastewater Network	Green	Green	Green	Green	Green	Green						
Stormwater Network	Green	Green	Green	Green	Green/Red	Green						

Key: ■ Passed appropriate Performance Standard in accordance with C688  
■ Not achieved appropriate Performance Standard in accordance with C688

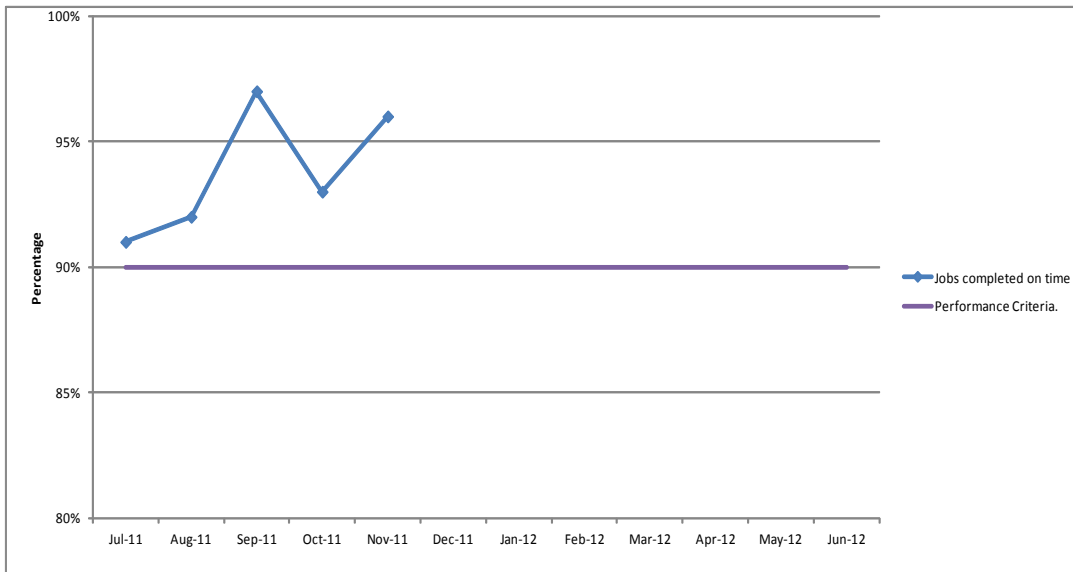
Date	Reason	Amount Deducted
Oct-11	Numerous weekly exception and sewer overflow reports not received on time	\$1,201.65
Oct-11	Upper Takaka UV plant out of operation for two to three days, could have been avoided with more pro-active maintenance.	\$1,969.99
Nov-11	Stormwater maintenance score of 75% on assets audit in November 2011, excess vegetation / weed growth in the SW channels.	\$843.92
	<b>Total Deductions to date 2011-2012</b>	<b>\$4,015.56</b>

## 1.4 Customer Services - Job Completion

Targets and requirements under Contract 688 are for the contractor to achieve 90% or above for completion of allocated jobs on time. The contractor has achieved 96% for November with no result yet available for December 2011 due to workloads associated with the December flooding events.

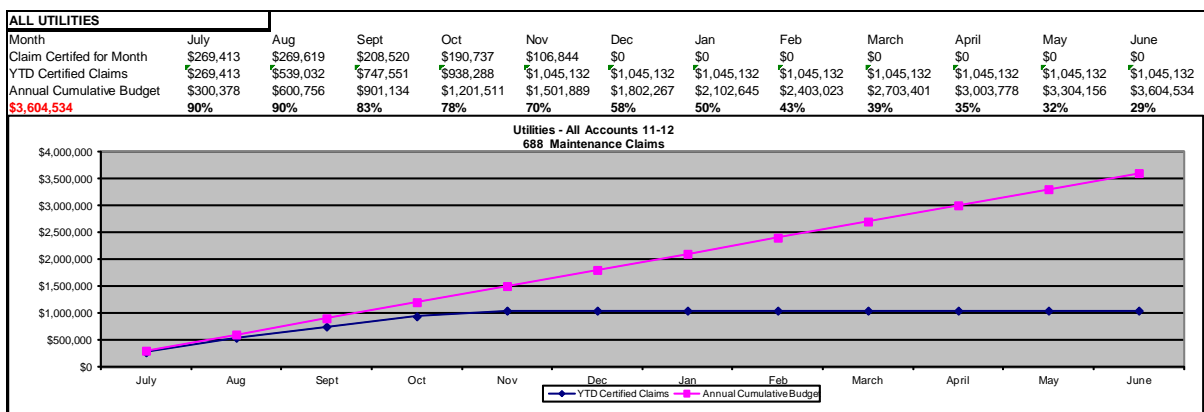
Contract 688 Performance Measurement scores achieved July 2011 to June 2012 - Jobs completed on time												
	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12
Jobs completed on time	91%	92%	97%	93%	96%							
Performance Criteria	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%

Tasman District Councils' customer service job completion on time target = minimum of 90%



## 1.5 Financial Performance

As shown in the graph below, the overall Utilities expenditure is only available up to the end of October 2011 as the final November costs are still being finalised and the December claim is currently being assessed and processed.



## 2. Wastewater Networks

### 2.1 Operations and Maintenance

The majority of the wastewater networks have performed well during the last reporting period, particularly during the flooding events in December.

2.2 While Pohara suffered damage to the sewer system and many overflows occurred in Richmond and Pohara, the overall effects have been isolated and tidy up works completed.

2.3 The wastewater reticulation systems received additional loadings of silt and gravels. These are of particular concern with regard to reduced flow capacity within the sewer pipes or causing damage to pumps.

2.4 The contractor was proactive in the cleaning of pumpstations and there appear to be few ongoing sewer blockage issues since the flooding events.

## 2.5 Wastewater Exceptions

As the table below indicates a variety of faults occurred over this period, some requiring further follow up work to prevent recurrence.

Date	Location	What	Why	Remedial Action
3 Oct	181 Hill Street, Richmond	Overflow	Stormwater infiltration and heavy rainfall caused backup	Attended by contractor, steady flow but unsure of volume
4 Oct	8A Darcy Street, Richmond	Overflow	Private failure of non-return valve (NRV) causing backup in basement	Attended by contractor who disinfected the basement but unable to access private NRV
26 Oct	Ruby Bay	Taits SPS Pump 2 Blocked	Blocked from raggage	Unblocked by contractor
26 Oct	Woodland Avenue, Motueka	Woodlands Ave SPS Pump 2 Blocked	Blocked from raggage	Unblocked by contractor
26 Oct	Waimea West, Brightwater	Waimea West SPS Pump 2 Blocked	Blocked from raggage	Unblocked by contractor
28 Oct	2 Greenwood Street, Motueka	Blockage, no overflow	Build up of fat in private lateral	Cleared by contractor, however thinks this could be a regular occurrence unless a grease trap is installed
31 Oct	Corner River Terrace and Lightband Road, Brightwater	Odour complaint	Unsure	Manhole lid to be replaced with heavier and better sealing lid
31 Oct	Aranui Road, Mapua	Aranui Road SPS Pump 1 Blocked	Blocked from raggage	Unblocked by contractor
31 Oct	13 Trewavas Street, Motueka	Excess debris and raggage in wet well	Due to build up	Cleaned by contractor
31 Oct	45 Trewavas Street, Motueka	Excess debris and raggage in wet well	Due to build up	Cleaned by contractor

Date	Location	What	Why	Remedial Action
2 Nov	9A Roeske Street, Richmond	Sewerage leak	Blocked from raggage	Cleaned by contractor
3 Nov	Corner Tapu Place and Anawera Crescent, Kaiteriteri	Overflow	Faulty air valve	Repaired by contractor, estimated discharge 200 L
9 Nov	School Road WPS and Collingwood Motels WPS	Dispose of commercial effluent	Unsure	Cleaned by contractor
17 Nov	69A Woodlands Avenue, Motueka	Object stuck in main	Became stuck when cleaning a blocked lateral	Retrieved by contactor
18 Nov	Waller Street SPS, Murchison	Anomaly with pump performance	Possible pump blockage	Being investigated as of 22/11/11
21 Nov	Hill Street, Richmond	Blockage, no overflow	Root intrusion	Repaired by contractor
2 Dec	16 Highland Drive, Richmond	Odour complaint	Unsure	Ongoing investigation
5 Dec	40 Tata Heights, Tata Beach	Blocked drain	Caused by builder next door	Repaired by contractor
12 Dec	Greenwood Street, Motueka	Blocked sewer lateral	Repeat of blockage which occurred 28/10/11	Unblocked by contractor

2.6 A carbon filter odour control unit was installed at the Motueka WWTP inlet towards the end of December 2011.

2.7 A significant number of sewer overflows occurred during the extreme rainfall event that occurred on 14 and 15 December. The wet weather capacity overflows were mainly in Richmond and Pohara and the effects were reasonably localised. These exceptions will be listed in the next report.

## 2.8 Wastewater Treatment Plant Compliance

During November-December environmental and performance monitoring was routinely undertaken at all Council WWTPs.

2.9 The table over the page indicates whether full compliance with resource consent conditions was achieved at each WWTP. Where full compliance was not achieved, the likely factors contributing to the non-compliance event are listed.

WWTP	Compliance	If “no”, What	Why	Remedial action
Collingwood	No	<ul style="list-style-type: none"> <li>14-15 December 2011 – Approximately 512 m<sup>3</sup> discharged to Burton Ale Creek with only partial UV treatment.</li> <li>30 December 2011 – 2 January 2012 - Approximately 180 m<sup>3</sup> discharged into Burton Ale Creek with only partial UV treatment.</li> </ul>	<ul style="list-style-type: none"> <li>Heavy rain, high flows.</li> <li>Heavy rain, high flows, UV issues.</li> </ul>	<ul style="list-style-type: none"> <li>Tasman District Council Compliance notified.</li> </ul>
Motueka	Yes			
Murchison	Yes			
St Arnaud	Yes			
Takaka	Yes	<ul style="list-style-type: none"> <li>The total volume of wastewater discharged breached the consent limit of 1680m<sup>3</sup>/day on the following dates</li> <li>14 December – 5867 m<sup>3</sup></li> <li>15 December – 8650 m<sup>3</sup></li> <li>16 December – 3445 m<sup>3</sup></li> <li>17 December – 2271 m<sup>3</sup></li> <li>18 December – 1956 m<sup>3</sup></li> <li>30 December – 4980 m<sup>3</sup></li> <li>31 December – 2657 m<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Heavy rain, high flows.</li> </ul>	<ul style="list-style-type: none"> <li>Tasman District Council Compliance notified.</li> </ul>
Tapawera	Yes			
Upper Takaka	No	<ul style="list-style-type: none"> <li>14-16 December 2011 – Flows ranging between 35m<sup>3</sup> – 110m<sup>3</sup> recorded entering the WWTP.</li> <li>30 December 2011 – 1 January 2012 – Flows ranging between 38m<sup>3</sup> – 45m<sup>3</sup> recorded entering the WWTP.</li> </ul>	<ul style="list-style-type: none"> <li>Heavy rain, high flows.</li> </ul>	<ul style="list-style-type: none"> <li>Tasman District Council Compliance notified.</li> </ul>

## 2.10 Capital Projects

Sewer renewal contracts for Motueka have progressed well. Courtney Street works have been completed and Grey Street is in progress.

2.11 Works through Lowe Street and along High Street have the potential to incur additional pavement repairs and options are still being worked through. The start date for the work in High Street is 7 February 2012. The sewer renewals (Contract 846) along York Street, Boyce Street and Moffat Street has been completed.

2.12 The contract for the Murchison Wastewater Pumpstation Upgrade is completed. The Waller Street pumpstation rising main replacement of approximately 120m across the Matakitaki Bridge is now operational.

2.13 Mapua Wharf Wastewater Pumpstation Upgrade – The contract has been accepted with Ching Contracting and work is to commence on 1 March 2012.

### 3. Water Networks

#### 3.1 Operations and Maintenance

The majority of the urban water supply networks have performed well.

3.2 Downer has installed seismic valves and associated pipework and chambers at the Valhalla Lane reservoir site as part of improvement works under the 2011/2012 renewals programme and are now awaiting the installation of the control cabinet.

3.3 Planned improvements to the Pohara water reservoirs are now on hold and the supply system is subject to an assessment of future supply options following the damage from the flooding event.

3.4 Proactive water meter replacements have commenced along selected streets to replace older meters.

3.5 Summer water supply monitoring has commenced and while water use is relatively high there have been no concerns with the level of demand at this stage.

3.6 Water supply exceptions are noted in the table below:

Date	Location	What	Why	Remedial action
1 Dec	Bird Street, Richmond	100mm AC main break	Caused by tapping band failure	New section of pipe installed

3.7 Water service connections were as follows:

- One in Wakefield
- One in Kaiteriteri
- One in Motueka
- One in Richmond
- Two in Mapua

3.8 There was one water meter disconnection in Richmond.

#### 3.9 Capital Projects

Land negotiations for the Richmond East Reservoir and pipework have been successful. Contract documents for the reservoir site and access road are at tender stage. It is intended that the earthworks be undertaken this financial year. The resource consent application is being processed and a decision is expected within the coming weeks.

- 3.10 Investigation work on the proposed site for the Richmond Water Treatment Plant has been completed. Consultation with major water users about the proposed changes to water consistency is also complete. Detailed design continues on the pipe reconfiguration and treatment process.

## **4. Stormwater Networks**

### **4.1 Operations and Maintenance**

December was a very wet month with a number of significant rainfall events. In particular, the significant rainfall event during 14-16 December and to a lesser extent, the event on 30-31 December caused major flooding and slips in many areas throughout the Tasman region. Many of the stormwater assets required debris and silt to be cleared and there are ongoing investigations into damage to the network. Further information will be provided in a later report.

- 4.2 Pre storm checks were undertaken on four occasions in December 2011.
- 4.3 The Motueka Wharf Road gates were shut intermittently while they were being replaced in November and were shut during the 14–16 December 2011 event.

### **4.4 Capital Projects**

The Ruby Bay Stormwater contract (Tait Street and Stafford Drive – Ching Contracting) is now completed. There are further separable portions to the contract that are being considered but may not proceed this financial year.

- 4.5 Kotare Place Stormwater Upgrade– CJ Industries have completed this contract.

## **5. Telemetry**

- 5.1 The analogue telemetry network has performed well over this reporting period.
- 5.2 The base station has operated well over the past six weeks. Server software has undergone an operating system upgrade.
- 5.3 To continue implementing new digital telemetry sites, a radio firmware upgrade has become necessary. The new firmware upgrade device will be installed in early January 2012.
- 5.4 The new digital sites are now on-line in Murchison in conjunction with waste-water pumpstation upgrades at Hotham and Waller Streets and performing correctly as expected.
- 5.5 Communication faults continue to occur at the St Arnaud Kerr Bay pumpstation and are possibly due to vegetation growth. The site has remained fully operational during the telemetry faults.



## 6. Solid Waste

### 6.1 Kerbside Recycling and Bag Collection

Management of kerbside operations continues at a high level of performance, with consistently efficient management of customer enquiries. Kerbside recycling quantities have recently been decreasing but quantities of exported material have increased – an indication of an increasing use of drop-off facilities at Resource Recovery Centres.

6.2 A condition assessment of the four remaining compactor bins (used at Richmond and Takaka) has indicated significant repairs and maintenance are required. Three of the bins are 26 years old and the assessment concluded that replacement will be more cost-effective than performing ongoing repairs. Council is working with the compactor and bin supplier to negotiate purchase of two replacement bins.

6.3 A tender for work scheduled at Mariri was advertised in November and awarded in late December, with works commencing on site in the third week of January. The works include the development of a recycling drop-off area on the lower section of the site. This work will separate recycling and refuse drop-off zones and is expected to improve waste diversion and safety for site users.

### 6.4 Eves Valley Landfill

Data for the first half of the year indicate landfill tonnages at Eves Valley are on target for the year, and tracking slightly over those from the same time last year.

Month	This Month 2011	Equivalent Month Last Year	Year to Date	Same Time Last Year	Reduction / Increase
October	2,280	2,203	9,010	8,729	3.2%
November	2,416	2,242	11,426	10,971	4.1%
December	2,705	2,520	14,131	13,497	4.7%



6.5 Stormwater upgrade works that have been completed at the landfill site were damaged in recent rainfall events. Repairs to this system are scheduled for January and will include installation of a flocculent system to improve sediment retention.

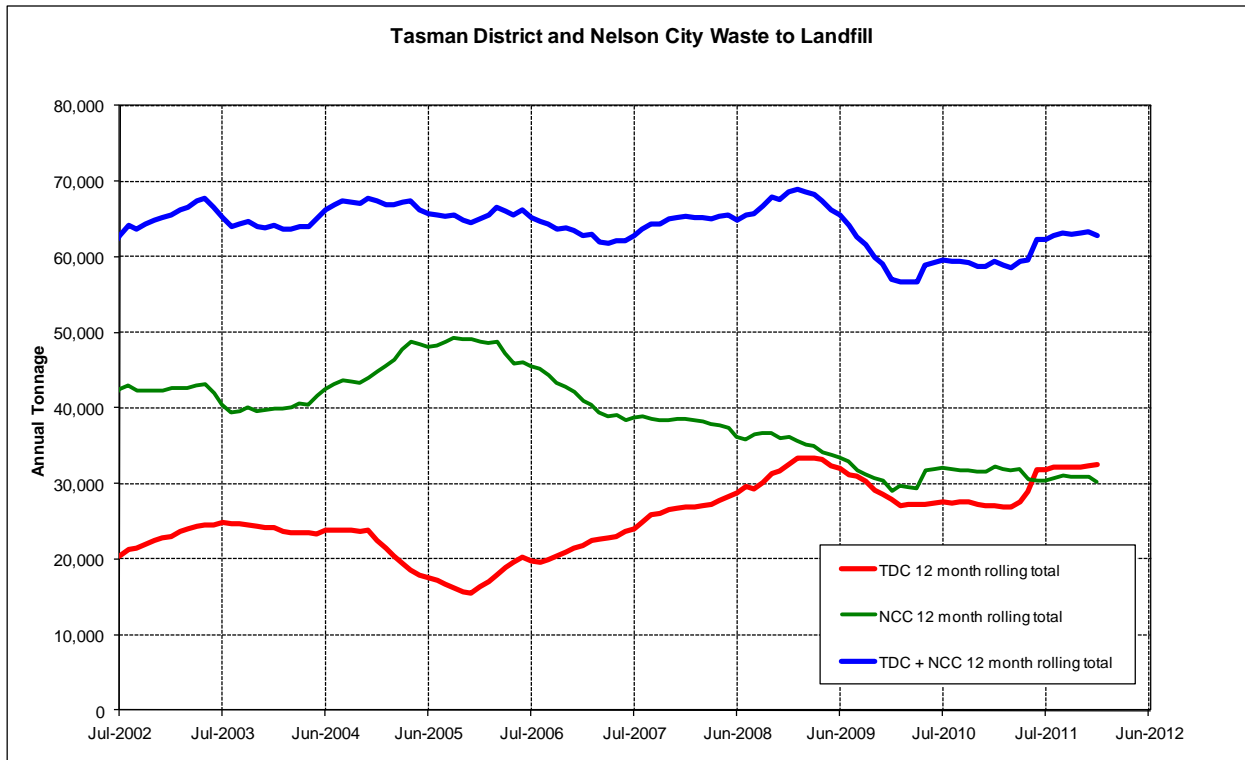
6.6 Improvements are also scheduled for the controls of the leachate collection system in January. Recent rainfall events have exceeded the capacity of the leachate collection system, and have resulted in the requirement to tanker leachate off-site to the sewer network. In the rainfall event of 14-15 December, access to the landfill was cut-off resulting in the requirement to discharge some leachate through the stormwater disposal ponds. Future work will review the capacity of the leachate storage pond and the need for additional works on site.

### 6.7 Solid Waste Operations - Procurement

At the meeting on 8 December 2011 the Committee resolved to extend the contract term of Contracts 613 (RRC operation and kerbside collections, Smart Environmental) and 652 (Murchison RRC, Fulton Hogan). Since that meeting, the Engineering Manager has formally accepted the offers to extend the contracts to September 2014.

### 6.8 Regional Waste Minimisation

Members of the Joint Waste Working Party recently completed a draft Joint Waste Management and Minimisation Plan (JWMMP) for Nelson City and Tasman District Councils. The JWMMP is open for public consultation with submissions closing on 31 January 2012. Hearings are scheduled for mid-February.



## 7. Tenders

7.1 Tenders recently awarded are as below.

No.	Contract name	No. of tenders	Successful tenderer	Amount	Highest amount	Council estimate	Budget for this item	Comment
829	Richmond New Source Exploratory Bore Drilling and Testing	1	Waimea Drilling Company Ltd	\$59,860	-	-	\$200,000	Tender accepted
835	Water Meter Renewals 2011 – 2012	2	Downer	\$423,530	\$610,801	\$531,460	\$452,838	Tender accepted
839	Mapua Wharf Pump Station	2	Ching Contracting Ltd	\$1,868,916	\$1,868,916	\$1,559,740	\$1,333,870	Additional funding via Renewals budget
859	Mariri Resource Recovery Centre Site Development	6	Concrete and Metals Ltd	\$156,985	\$191,330	\$183,655	\$260,000	Tender accepted

## 8. Recommendation

8.1 That the report be received.

## 9. Draft Resolution

**9.1 THAT the Engineering Services Committee receives the Utilities Report RESC12-02-04.**

RESC12-02-04 Utilities Report