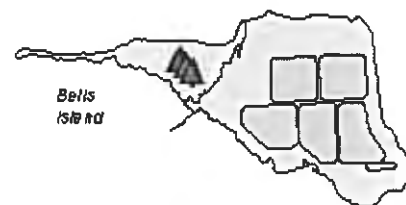


## **Nelson Regional Sewerage Business Unit**



# **AGENDA**

## **Nelson Regional Sewerage Business Unit**

**Friday 23 August 2013  
Commencing at 1.30pm**

**Nelson Regional Sewerage Treatment Plant,  
Bell Island, Richmond**

**Members:**

D Hiser (Chair)

Councillors P Matheson and D Shaw (Nelson City Council)

M Higgins and Councillor G Glover (Tasman District Council)

**In attendance:**

M Hippolite (Iwi Representative)

P Wilson (Industry Customers' Representative)

**Apologies**

**1.0 Conflicts of Interest**

- 1.1 Updates to the Interests Register
- 1.2 Identify any conflicts of interest in the agenda

**2.0 Confirmation of Minutes 5-13**

2.1 5 July 2013

Document number 1550277

Recommendation

***THAT the minutes of the meeting of the Nelson Regional Sewerage Business Unit, held on 5 July 2013, be confirmed as a true and correct record.***

**3.0 Status Report – 23 August 2013 14-15**

Document number 950967 v21

Recommendation

***THAT the Status Report (950967 v21) be received.***

**4.0 Checklist (Board Work Plan)**

Meeting Date	Activity	Papers required	Status
23 August 2013 Board Meeting	Review Draft Annual Report and Financial Statement	Draft Annual Plan and Draft Financial Statement	Included
	Adopt Strategic Plan	Strategic Plan	Included
	Board Performance Review	Discussed at meeting on 30 July 2013	Review to be tabled
29 November 2013 Board	Induction	Memorandum of	

member induction		Understanding Board Charter Briefing paper	
13 December 2013 Board meeting	Review board planning/meeting schedule  Adopt draft business plan for presentation to Joint Shareholders Committee.  Review and update of Interest Register.	Planning meeting schedule  Draft Business Plan  Interest Register	

**5.0 Chairperson's Verbal Report**

**6.0 Staff Report – 23 August 2013 16-23**

Document number 1560065

Recommendation

***THAT the Staff Report – 23 August 2013 (1560065) be received.***

**7.0 Major Projects Report 24-25**

Document number 1540942

**7.1 Treatment Plant: A-Train Remediation Progress Report**

Recommendation

***THAT the A-Train Remediation Progress Report report (1540942) be received.***

**8.0 Nelson Regional Sewerage Business Unit Strategic Plan 2013/2016 26-29**

Document number 1572434

Recommendation

***THAT the Nelson Regional Sewerage Business Unit Strategic Plan 2013-2016 (1572434) be adopted.***

**9.0 Annual Financial Statements for the Year Ended 30 June 2013 30-44**

Document number 1574481

Recommendation

***THAT the Nelson Regional Sewerage Business Unit Annual Financial Statements for the Year Ended 30 June 2013 (1574481) be received.***

**10.0 Nelson Regional Sewerage Business Unit Annual Report 2012/2013 45-74**

Document number 1555239

Recommendation

***THAT the Nelson Regional Sewerage Business Unit Annual Report 2012/2013 (1555239) be adopted.***

**11.0 Nelson Regional Sewerage Business Unit Resource Consent Monitoring: Discharge Permit 75-84**

Document number 1560412

Recommendation

***THAT report NRSBU Resource Consent Monitoring Discharge Permit (1560412) be received;***

***AND THAT the increase of Suspended Solids and Biological Oxygen Demand and variance in Biological Oxygen Demand be investigated as part of the operation and maintenance contract and a further report be submitted to the Board regarding this matter in March 2014.***

**12.0 Nelson Regional Sewerage Business Unit Board Performance Review Workshop 30 July 2013 85-89**

Document number 1573846

Donna Hiser will lead a discussion about the Performance Review Workshop.

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## **Minutes of a meeting of the Nelson Regional Sewerage Business Unit**

**Held in the Council Chamber, Civic House, Trafalgar Street, Nelson  
On Friday 5 July 2013, commencing at 1.04pm**

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Present: D Hiser (Chair), Nelson City Councillors P Matheson and D Shaw, Tasman District Councillor G Glover, Tasman District Council Representative M Higgins, P Wilson (Customer Representative), M Hippolite (Iwi Representative)

In Attendance: Nelson City Council Engineering Adviser (J Thiant), Nelson City Council Administration Adviser (E-J Ruthven)

### **1. Interests**

There were no updates to the Interests Register, and no conflicts of interest with any agenda items were declared.

### **2. Confirmation of Order of Business**

There was no change to the order of business.

### **3. Confirmation of Minutes**

#### **3.1 15 March 2013**

Document number 1481176, agenda pages 7-17 refer.

It was noted that, in the first paragraph of page 4 of the minutes, the word 'entirely' should be substituted by the word 'entirety'.

Resolved

***THAT the minutes of a meeting of the Nelson Regional Sewerage Business Unit, held on 15 March 2013, be confirmed as a true and correct record, with the amendment as noted.***

Higgins/Hiser

Carried

Attendance: Councillor Glover joined the meeting at 1.10pm.

There was a brief discussion regarding the Bell Island Environmental Development Plan suggestion that the Joint Committee consider establishing a wildlife corridor through the area of Bell Island ear-marked for future pond development.

A suggestion was made that a wildlife corridor could be put in place until such time that the land was needed for pond development. The majority view was that this issue had been well canvassed at the previous meeting at which a decision not to establish a wildlife corridor had been taken, and that any potential change to the decision should follow the notice of motion process.

3.2 6 May 2013

Document number 1504320, agenda pages 18-19 refer.

Resolved

***THAT the minutes of a meeting of the Nelson Regional Sewerage Business Unit, held on 6 May 2013, be confirmed as a true and correct record.***

Higgins/Shaw

Carried

4. **Status Report – 5 July 2013**

Document number 950967 v20, agenda pages 20-22 refer.

Resolved

***THAT the Status Report (950967 v20) be received.***

Hiser/Shaw

Carried

5. **Checklist**

There was a discussion regarding the proposed Board Workshop in August. Mr Thiart explained that the new contractor would attend the workshop to explain the process of benchmarking, and to discuss the plant's performance and management, and the development of a model to determine the capacity of the plant. He added that the workshop would also facilitate a process of reviewing the Strategic Plan. Ms Hiser asked that the contractor be requested to provide specific suggestions on the specific recommendations for implementing benchmarking within the NRSBU, rather than a broad and theoretical presentation.

There was general agreement that it would be useful for an external facilitator to encourage a critical review of the Strategic Plan, and that customers should also be invited to take part in the workshop.

There was a discussion regarding potential dates for the workshop. It was agreed that the workshop should take place on Tuesday 30 July,

starting at 11.00am, and that Friday 9 August should be held as an alternate date.

## **6. Chairperson's Verbal Report**

Ms Hiser explained that she had met with the Chief Executives of both Councils, and had attended the Joint Shareholder Committee meeting on 5 April 2013 to present the Unit's Annual Report and Business Plan. She added that she had presented to each Council the Joint Committee's decision to award the Operations and Maintenance Contract to Nelmac.

## **7. Staff Report – 5 July 2013**

Document number 1409653, agenda pages 23-37 refer.

Mr Thiart spoke to the report.

### **7.1 Contributor Flow Meters**

Mr Thiart said that Alliance was currently installing its new flow meter, and that Nelson Pine Industries was expecting to do likewise by the end of August 2013.

### **7.2 Awarding of Operation and Maintenance Contract**

Mr Thiart noted the new contract with Nelmac would be operative from 1 October 2013.

A suggestion was made that senior representatives from Nelmac be invited to an upcoming meeting to meet Joint Committee members.

### **7.3 Disposal of Trade Waste Agreement**

Mr Thiart explained Alliance's request to decrease its contracted loads. He said that both Councils were considering taking up the additional load to increase capacity to 100%.

### **7.4 Orphanage Creek Pipeline Reinstatement**

Mr Thiart described the damage that occurred to the Orphanage Creek Pipeline during the April 21 rainfall event. He said that repair work was underway, and would cost approximately \$95,000. He added that fish passage was being accounted for during repair work, and that the large number and variety of fish found to be in the stream during the course of repair work had surprised Council officers.

### **7.5 Audit 30 June 2012 Management Report**

Mr Thiart noted that Mike Drummond, Corporate Services Manager Tasman District Council, was continuing to develop a Treasury Policy.

## 7.6 Customer Contingency Plan Review

Mr Thiart noted that customers were no longer requested to stop pumping during storm events, because the network now coped with large wet weather flows.

## 7.7 Health and Safety

Mr Thiart explained that Nelson City Council was responsible for the health and safety aspects of Business Unit projects.

## 7.8 Operations and Maintenance Contract

Mr Thiart described the damage to the Airport pump station. He said a new pump had been ordered at a cost of approximately \$192,000. He explained the remedial works using parts of the old Saxton pump pending the new pump's arrival, and noted that the Saxton pump would be held as a spare for any future pump failure.

In response to a question, Mr Thiart explained that the pump's life expectancy was 20 years, and the failed pump was approximately 21 years old. He added that an investigation was considering whether the pump's maintenance schedule had been adhered to. The Committee discussed likely maintenance requirements going forward, and Mr Thiart noted that the relevant section of the Operations and Maintenance Manuals could be reviewed by the new contractor.

In response to a further question, Mr Thiart explained that Nelson City Council Executive Manager Network Services, Alec Louverdis, had delegated authority to authorise expenditure for the new pump.

## 7.9 Biosolids Contract

Mr Thiart explained that the biosolids capacity was running at approximately 53%, and explained the use of the primary clarifier to receive as much sludge as possible prior to entering the ponds. The Committee discussed the importance of the long-term budgetary implications of removing sludge to Rabbit Island, also noting that this was an environmentally sensitive way of dealing with sludge.

It was noted that Tasman District Council was currently undertaking a Parks and Reserves Review, and the Committee noted the importance of feeding into the Rabbit Island Management Plan that was likely to arise from this review.

In response to a question, Mr Thiart explained that there was capacity to divert sludge to other forestry blocks, but that the transport costs to do so were expensive. The Committee expressed a desire to consider at the workshop a cost/benefit analysis of diverting sludge to Rabbit Island, rather than to landfill, and to consider options for the sludge currently in the ponds. The Committee also expressed a desire to consider the



possibility of diverting sludge to other nearby forestry blocks in the future.

7.10 Level of Service

The Committee discussed the pump station overflow that occurred during the April 21 rainfall event. Mr Thiart explained that this had occurred as a result of a power outage, following which only one of two pumps re-started in emergency mode.

There was also a discussion regarding BOD levels, and Mr Thiart explained the preferred use of CBOD measures to give accurate readings. However, he noted that current CBOD readings were still tracking at a higher level than total BOD readings from 2009; and suggested that the Committee would need to be mindful of pond capacity in the coming years.

7.11 Performance

Mr Thiart explained that, with the new pipe and pump station upgrades completed, the plant was now using less energy.

7.12 General

In response to a question, Mr Thiart explained that fencing around the waahi tapu sites on Bell Island had been examined and found to be in good condition.

Resolved

***THAT the Staff Report – 5 July (1409653) be received.***

Hiser/Glover

Carried

**8. Treatment Plant: A-Train**

Document number 1540942, agenda page 38 refers.

Mr Thiart explained that removal of the A-Train roof had uncovered damage in the form of rust and distortion, caused by a storm some years ago.

It was noted that the figure in the recommendation should be \$804,000.

Resolved

***THAT the Executive Manager Network Services be authorised to approve a variation to the sludge tank upgrade and renewal work to a value not exceeding \$80,000 bringing the total cost of the work to \$804,000.***

Higgins/Shaw

Carried

Attendance: The meeting adjourned for afternoon tea from 2.43pm to 2.58pm

**9. Nelson Regional Sewerage Business Unit: Customer Survey.2012/13**

Document number 1540469, agenda pages 39-42 refer.

The Joint Committee noted the Customer Survey results. Mr Thiant suggested that he arrange to meet customers in between the quarterly Joint Committee meetings, in order to better understand the customers' needs, and there was general agreement with this initiative.

There was a brief discussion regarding consideration of the risks of any customers leaving the scheme.

Resolved

***THAT the Nelson Regional Sewerage Business Unit: Customer Survey 2012/13 (1540469) be received, noting officer suggestions for improvement.***

Shaw/Glover

Carried

**10. Construction Index**

Document number 1540460, agenda pages 43-46 refer.

Mr Thiant explained that the Construction Index was based on figures provided by Statistics New Zealand. He said that the index would be used to adjust the valuation for the coming year.

Surprise was expressed at the level of decrease in the Pipeline Index, however it was confirmed that the March Index was required to be used and, short of a corrective publication by Statistics New Zealand, the figures identified should be used.

Resolved

***THAT the Nelson Regional Sewerage Business Unit Construction Index for the 2012/13 valuation be set as follows:***

- ***Pipeline:***                   ***-6.26%***
- ***Electrical:***               ***2.25%***
- ***Mechanical:***           ***-1.66%***
- ***Civil:***                      ***1.19%***
- ***Structural:***              ***-2.85%;***

**AND THAT no peer review of the valuation be required following the use of the NRSBU Construction Index.**

Higgins/Matheson

Carried

**11. Finance report**

Document number 1419497 v11, agenda pages 47-48 refer.

Resolved

**THAT the Nelson Regional Sewerage Business Unit: Financial report (1419497 v11) be received.**

Glover/Shaw

Carried

**12. Exclusion of the Public**

Resolved

**THAT the public be excluded from the following parts of the proceedings of this meeting.**

***The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:***

Item	General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Particular interests protected (where applicable)
1	<p><b>Nelson Regional Sewerage Business Unit – Public Excluded Minutes – 15 March 2013</b></p> <p>These minutes confirmed the public excluded minutes of the Nelson Regional Sewerage Business Unit meeting of 14 December 2012, and otherwise contain information</p>	<p>Section 48(1)(a)</p> <p>The public conduct of this matter would be likely to result in disclosure of information for which good reason exists under section 7.</p>	<p>The withholding of the information is necessary:</p>

Nelson Regional Sewerage Business Unit  
5 July 2013

	regarding:		
	Re-testing of the regional pipeline and consideration of liquidated damages.		Section 7(2)(b) <ul style="list-style-type: none"> <li>To protect information that may disclose a trade secret or the commercial position of a person</li> </ul>
<b>2</b>	<b>Nelson Regional Sewerage Business Unit – Public Excluded Extraordinary Minutes – 6 May 2013</b>  These minutes contain information regarding:	Section 48(1)(a)  The public conduct of this matter would be likely to result in disclosure of information for which good reason exists under section 7.	The withholding of the information is necessary:
	The tender of an operation and maintenance contract.		<ul style="list-style-type: none"> <li>Section 7(2)(i) To carry out negotiations</li> </ul>

Matheson/Glover

Carried

The meeting went into public excluded session at 3.12pm and resumed in public session at 3.15pm.

### 13. Confirmation of Public Excluded Minutes

In public excluded session, the meeting confirmed the public excluded minutes of the meetings of 15 March 2013 and 6 May 2013.

Resolved

***THAT the minutes of the part of a meeting of the Nelson Regional Sewerage Business Unit, held with the public excluded on 15 March 2013, be confirmed as a true and correct record.***

Glover/Hiser

Carried

Resolved

***THAT the minutes of the part of a meeting of the Nelson Regional Sewerage Business Unit, held with the public excluded on 6 May 2013, be confirmed as a true and correct record.***

Glover/Shaw

Carried

Nelson Regional Sewerage Business Unit  
5 July 2013

**14. Re-admittance of the Public**

Resolved

***THAT the public be re-admitted to the meeting.***

Glover/Shaw

Carried

There being no further business the meeting ended at 3.15pm.

Confirmed as a correct record of proceedings:

\_\_\_\_\_ Chairperson \_\_\_\_\_ Date

**NRSBU STATUS REPORT - 23 August 2013**

No	Meeting Date	Document Number	Report Date	Report Title / Item Title	Officer	Resolution or Action	Status
A	5/07/13	1552561			J Thiart	Review Board Performance Review/External Facilitator	Completed
B	5/07/13	1552561			J Thiart	Review Strategic Plan/External facilitator	Completed
C	5/07/13	1552561			J Thiart	Board Workshop/Meet Nelmac representatives	Completed
D	5/07/13	1552561			J Thiart	Allocation of additional load following change to Alliance allocation	Waiting response from TDC
E	5/07/13	1552561			M Drummond	Treasury Policy	Mike Drummond
F	5/07/13	1552561		Minutes of meeting	J Thiart	Airport pump station: Investigation	Downer/Wastewater Specialist
G	5/07/13	1552561		Minutes of meeting	J Thiart	TDC Parks and Reserves Review/Rabbit Island Management Plan	
H	5/07/13	1552561		Minutes of meeting	J Thiart	Cost/Benefit of sludge disposal compared to disposal to landfill	
I	5/07/13	1552561		Minutes of meeting	J Thiart	Increase of CBOD in discharge compared to 2009	
J	5/07/13	1540469		Customer Survey 2012/13	J Thiart	Meetings with contributors between quarterly meetings	
K	20/04/12	1277777	20/04/12	Minutes Item 3.1	J Thiart	Hazard and Operability Study (HAZOP) to be carried out as part of the Operation and Maintenance Contract procurement process	Part of O&M procurement process
L	5/07/13	1476829		Staff Report	J Thiart	Flow meter accuracy review.	Alliance flow meter installed.
M	5/07/13	1476829		Staff Report	J Thiart	Risk assessment if contributor exits the contributor agreement	NPI flow meter installation programmed for August/September 2013.
N	17/09/10				J Thiart	Benchmarking of treatment plant operations	Part of O&M procurement process
O	22/06/12		22/06/12	Minutes	J Thiart	Energy audit at pump stations	Plan for 2015
P	14/12/12			Bell Island power supply	J Thiart	Improvement of power supply by Network Tasman	Network Tasman activity
Q	15/03/13				J Thiart	Sludge survey 2013/14. Facultative ponds.	Next survey will be carried out in November 2013
R	15/03/13	1481176				Include item in Board Workplan for feedback on Audit Management Report	
1	5/07/13	1540942	5/07/13	Treatment Plant: A-train Remediation		<del>THAT</del> the Executive Manager Network Services be authorised to approve a variation to the sludge tank upgrade and renewal work to a value not exceeding \$80,000 bringing the total cost of the work to \$804,000.	Work programmed for completion in September 2013.
2	5/07/13	1540460	5/07/13	NRSBU: Construction Index		<del>THAT</del> the Nelson Regional Sewerage Business Unit Construction Index for the 2012/13 valuation be set as follows: Pipeline: -6.26%, Electrical: 2.25%, Mechanical: -1.66%, Civil: 1.19% and Structural 2.85%. <del>AND THAT</del> no peer review of the valuation be required following the use of the NRSBU Construction Index.	AuditNZ advised that they would prefer it if the NRSBU carries out a peer review.
1	15/03/13	682846V29	15/03/13	Major Projects Report	J Thiart	<del>THAT</del> the sum of \$788,000 previously budgeted for the installation of launder covers and centrifuge, and unused to date, be released and excluded from the 2013/14 budget. <del>AND THAT</del> the review of the management processes at the plant be deferred until the new Operations and Management contract has been in place for sufficient time for the new contractor to become thoroughly familiar with the plant. <del>AND THAT</del> it is noted that a variation to the value of \$724,000 (inclusive of a \$24,000 contingency) for the remediation of the A-Train ATADs and associated changes to the walkway was made to the existing Operation and Maintenance Contract (2791).	
5	22/06/12	1307226	22/06/12	Bell Island Energy Audit	J Thiart	<del>AND THAT</del> the removal of the time of use meter at the dewatering building will be considered once the deferment of the thickening upgrade is confirmed;	Consider during procurement process.

						AND THAT the optimisation of O <sub>2</sub> levels in the aeration basin will be considered as part of the waste water treatment capacity review; AND THAT the cost of changing the point of supply for the ponds and irrigation pump station will be investigated in order to establish the return on capital investment.	
6	22/06/12	1310909	22/06/12	Allocation of Reticulation Costs	J Thiar	THAT the matter be discussed with all the customers and the results of those discussions be reported back to the next meeting of the Business Unit for decision;  AND THAT the Business Unit urge the Nelson City Council and Tasman District Council to have their senior management involved in these discussions; AND THAT in the meantime the single node model is used for charging purposes and if there are any alterations agreed to following the discussions then the revised charges are backdated to 1 July 2012.	With TDC engineers.  Implemented
7	9/03/12	1042662	9/03/12	Staff report	J Thiar	AND THAT the NRSBU continue supporting the tree trials and that the monitoring continues until the trees are harvested.	Ongoing
8	16/09/11	11497595	16/09/11	NRSBU BIWWTP Capacity and commissioning report	J Thiar	AND THAT an independent review be undertaken of the charging mechanism and user contracts once the capacity review in 2012/13 is complete;	
9	15/02/11	1042982	3/02/11	Bell Island Spit Restoration	J Thiar	AND THAT the project committee submit a progress report to the NRSBU on a Quarterly basis;	

**Staff Report  
23 August 2013**



**1. Action Items**

**Disposal of Trade Waste Agreement**

- 1.1 The allocation of the additional capacity following the agreement to reduce the flow and load allocations for Alliance will be considered once feedback on the matter is received from Tasman District Council. Nelson City Council has indicated that they wish to apply for this additional capacity.

**2. Health and Safety**

- 2.1 There have been 11 Health and Safety inductions and 139 visitors to the Bell Island site over the past three months.
- 2.2 No Health and Safety incidents are outstanding.

**3. Operations and Maintenance Contract**

- 3.1 The main maintenance activity during June was the work on the sludge (ATAD) treatment facility at Bell Island.
- 3.2 Preparation work on the A-train sludge (ATAD) tanks revealed significant pitting of blower circulation units. Remedial work is programmed to coincide with the commissioning of work being carried out on the A-train sludge (ATAD) tanks.
- 3.3 B and C-train are coping with the sludge loads and biosolids continue to comply with stabilisation/treatment standards.
- 3.4 Following the cleanout of the Nelson North sludge reception tanks at and discharge pipelines at Bell Island the performance of the sludge transfer pumps returned to normal. This work has not been carried out before and have now been scheduled into the work programme.

**4. Biosolids Contract**

- 4.1 Table 4.1 shows there is adequate capacity within the Rabbit and Bell Island pine plantations to receive biosolids.

Biosolids		
36 Month Rolling Average/Used as percentage of capacity available		
Nitrogen Capacity used in 3 year cycle	Concentration Workability limit 5%	Area used in 3 year cycle
56%	2.3%	63%

Table 4.1: Biosolids Application



4.2 The workability of biosolids for application is well within the contracted limit. The contractor has reported no issues with biosolids spraying. 30,040 m<sup>3</sup> of biosolids were applied during the year. (Long-term average biosolids applied = 25,000m<sup>3</sup>)

## 5. Level of Service

5.1 Level of Service performance for the previous three months is as follows:

<b>Environmental: Treatment and Disposal</b>			
RMA consent - wastewater Discharge to Coastal Marine Area	RMA Consent - Discharge of Contaminants to Air (Odour complaints)	RMA Consent - Discharge of Contaminants to Land	Equipment Failure of critical components within treatment and disposal system
<b>Environmental: Pump Stations</b>			
Odour complaints from pump stations	Pump station wet weather overflows	Pump station overflows resulting from power failure	Pump station overflows resulting from mechanical failure
<b>Environmental: Pipeline</b>			
Reticulation breaks	Air valve malfunction		
<b>Capacity: Overloading system capacity</b>			
Treatment & Disposal	Pump Stations		
<b>Reliability: Equipment failure of critical components</b>			
Treatment & Disposal	Pump Stations	Pipelines	
<b>Responsiveness: Speed of response for emergency and urgent maintenance works</b>			
Treatment & Disposal	Pump Stations	Pipelines	
<b>Responsiveness: Speed of response for routine and programmable maintenance works</b>			
Treatment & Disposal	Pump Stations	Pipelines	
<b>Key customer relationships: Overall satisfaction</b>			
Treatment & Disposal	Pump Stations	Pipelines	

Note 1: Overflows occurred at the Beach Road and Saxton Road pump stations following the cloud burst on 21 April 2013. The operation of the Saxton pump station was affected by a dip in power supply causing the pump station to go into emergency mode. Stormpumps at both pump stations were running in parallel at the time when the cloud burst occurred. Both pump stations overflowed for less than 40 minutes.

5.2 Level of Service performance for the previous 12 months is as follows:

<p><b>i)</b></p>	<p><b>Resource Consent Compliance (rolling 12 month record)</b></p> <ul style="list-style-type: none"> <li>➤ Discharge to Estuary Permit      Achieved: Exceeded the Total Biochemical Oxygen Demand (TBOD) limits for a considerable period. Tests carried out over the last six months have demonstrated that the BOD tests were affected by nitrification that occurred in the 5 day Total BOD test and that this skewed the results. Carbonaceous Biological Demand (CBOD) tests are considered a more appropriate test to demonstrate the quality of the effluent and have shown that the effluent complies with the resource consent conditions. TBOD and CBOD</li> <li>➤ Discharge to Air Permit      100% Compliance</li> <li>➤ Biosolids Disposal      100% Compliance</li> <li>➤ Discharge treated waste water to land      100% Compliance</li> </ul>
<p><b>ii)</b></p>	<p><b>Odour Complaints</b></p> <ul style="list-style-type: none"> <li>➤ Past three months      Nil.</li> <li>➤ Last 12 months      Two requests for information around odours were received. Both were associated with the spraying of Biosolids at Bell Island. Following an explanation that the odours were associated with the application of biosolids as a fertiliser at Bell Island both parties choose not to pursue the matter any further. The Tasman District Council Compliance Officer instructed the NRSBU to stop the spraying of biosolids if further complaints were raised by the public.</li> </ul>
<p><b>iii)</b></p>	<p><b>Overflows</b></p> <ul style="list-style-type: none"> <li>➤ Past three months      Two Overflows. Overflows occurred at the Beach Road and Saxton Road pump stations following a heavy rain event on 21 April 2013. The overflow at Saxton Road followed a short disruption of power supply during the cloud burst that occurred on 21 April 2013.</li> <li>➤ Last 12 months      Five overflows. All overflows were associated with heavy rainfall events and exceeded the design standards and contracted discharge limits. Performance of the pump stations following the completion of the pipeline upgrade suggest that three of these overflow events would not have occurred had the pump station worked as designed. A fourth overflow resulted from a power failure that occurred during the heavy rain event on 21 April 2013.</li> </ul>
<p><b>iv)</b></p>	<p><b>Speed of response for maintenance works</b></p> <p>No call-outs were recorded over the past three months:</p>
	<ul style="list-style-type: none"> <li>➤ Response within 30 minute response requirement. Achieved.</li> </ul>

## 6. 2012 Action Plan Implementation

6.1 The following table indicates the possible time lines for the individual action items.

AP	Action	Target Date	Completion Date	Comments
<b>Levels of Service</b>				
1.1	Annual customer survey.	March 2014		
<b>Demand Management</b>				
2.1	Extending/renewing the Memorandum of Understanding that expires in 2010.	2014/15		The Councils have indicated that they intend dealing with this matter during the next 18 months.
2.2	Review Improvement Plan, consider and if appropriate prioritise and move to action.		Ongoing	Continuing.
2.3	Flow and load analyses.	July 2013	25 July 2013	Completed. Included in Annual Report.
<b>Risk Management</b>				
3.1	Carry out a risk assessment at component level and maintain risk schedules.	December 2013		
3.2	Annual calibration.	June 2014		
3.3	Emergency spillage contingency plans and alarms procedures reviewed.	March 2014		
<b>Financial</b>				
4.1	Valuation.	August 2013		Internal valuation completed. Peer review required by Audit NZ.
4.2	Business Continuity Plan updated.	December 2013		
4.3	Internal review of customer charging model.	July 2013		Waiting for comment from TDC regarding allocation of additional capacity.

AP	Action	Target Date	Completion Date	Comments
<b>Asset Management</b>				
5.1	Review Asset Management Plan.	June 2014		
5.2	Renewal programme review.	October 2013		
5.3	Treatment Plant Capacity Review.	December 2013		Included in operation and maintenance contract procurement process.
5.5	Review flow meter and sampling.	30 August 2013		Alliance flow meter installation completed. NPI flow meter installation programmed for August/September 2013.
5.6	Benchmarking.	December 2013		Subject of NRSBU workshop in August 2013.
<b>General</b>				
6.1	Board Workshop.	August 2013		Presentation by preferred operation and maintenance contractor and wastewater specialist on benchmarking.

## 7. Loads

7.1 The increase in peak discharges relate to the increase in pumping and network capacity following the regional pipeline upgrade.

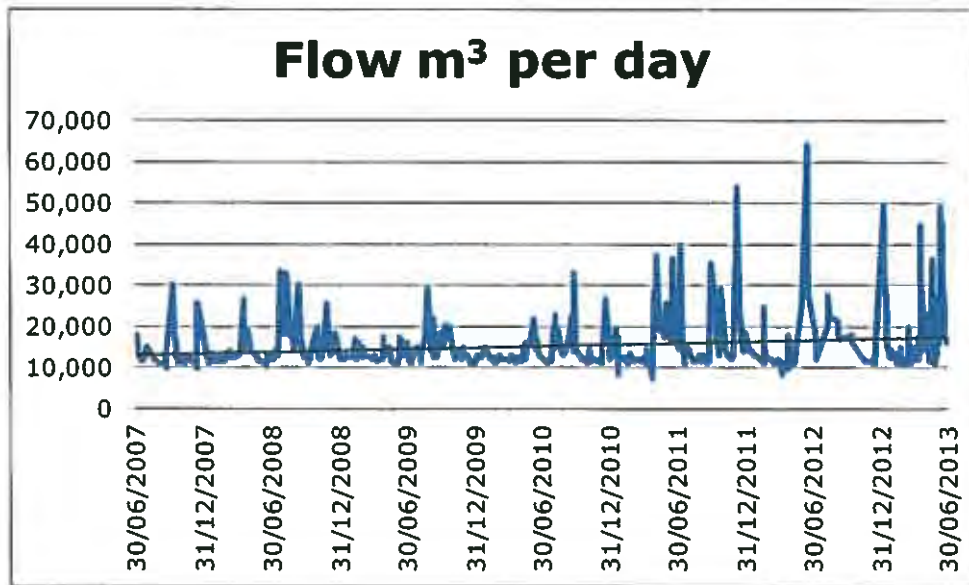


Figure 7.1 Volume discharged to Bell Island

7.2 The loads discharged to the plant appear to have decreased since 2007.

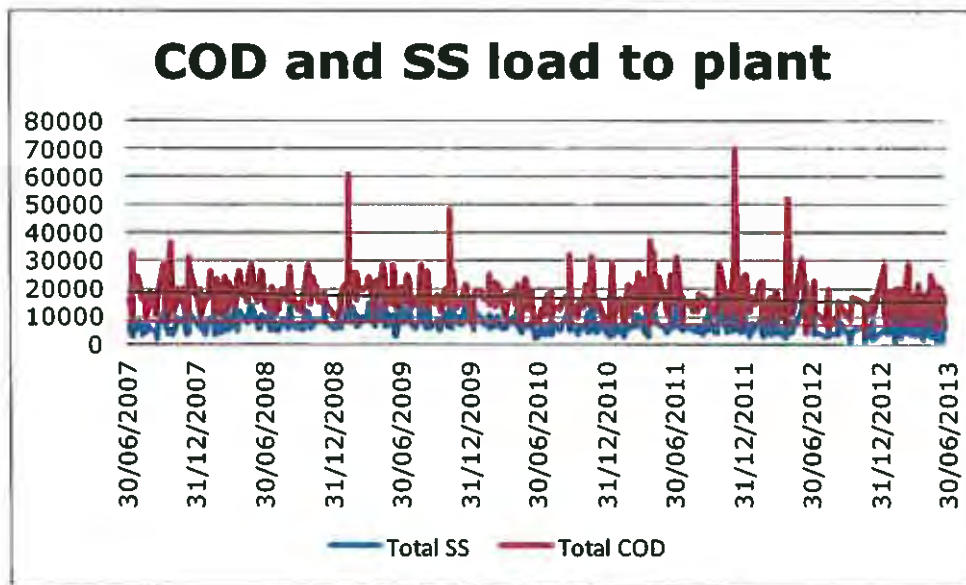
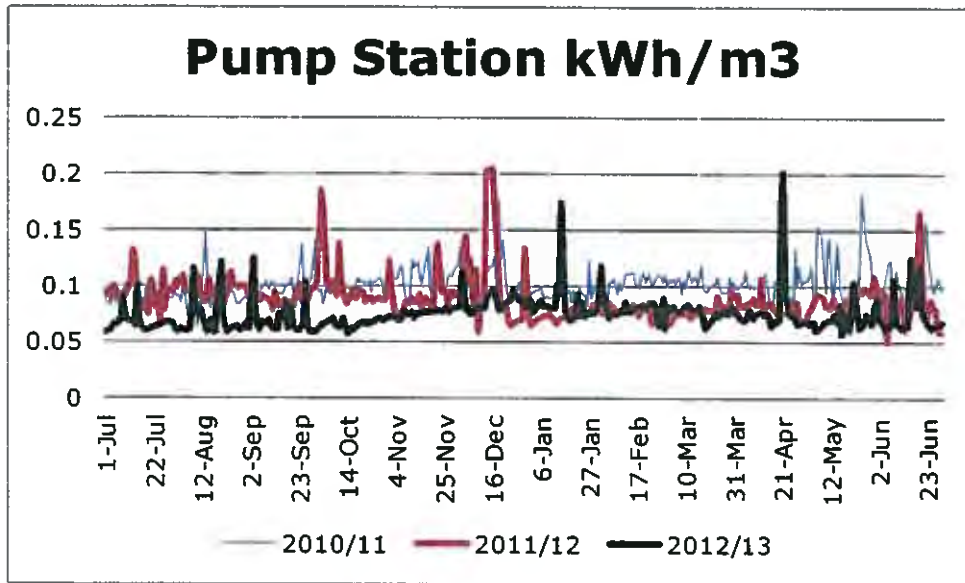


Figure 7.2 Load discharged to Bell Island

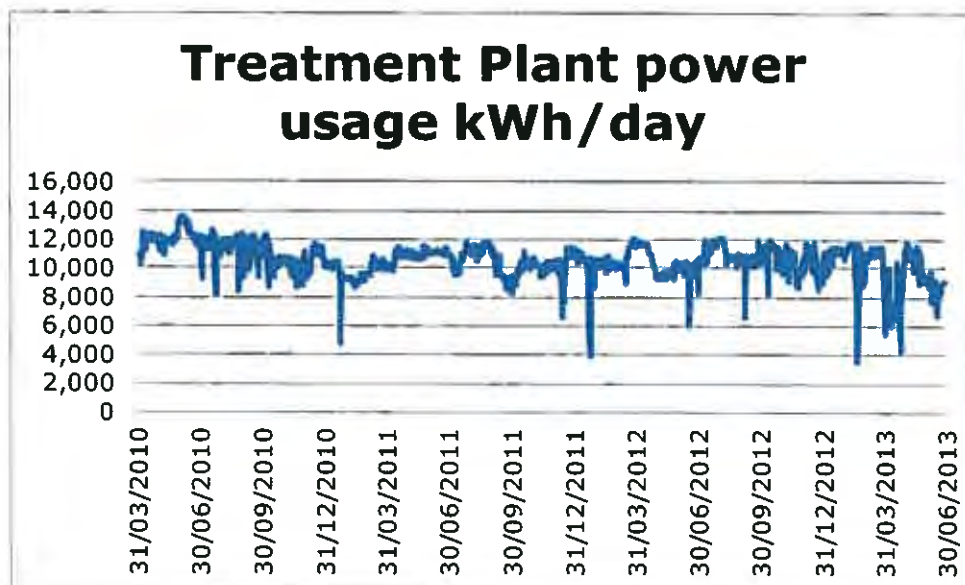
## 8. Performance

- 8.1 The efficiency of pump stations in terms of power used per unit of flow has improved since changing the flow from the old pipeline to the new pipeline.



**Figure 8.1 Combined pump stations power usage**

- 8.2 The consumption of power at Bell Island has decreased since the implementation of the primary clarifier upgrade. The drop in power usage this year is related to the temporary decommissioning of the aeration basin for programmed maintenance and diversion from A-train to accommodate the work on the sludge tanks.



**Figure 8.2 Power usage per day at Bell Island**

## **9. Financial**

### **Operations and Maintenance**

- 9.1 The operation and maintenance costs exceeded the budget by 1% and resulted mainly from the cost associated with the remedial work carried out at Orphanage Creek following the wash out of the pipeline and the additional cost incurred for the management of the operation and maintenance contract procurement.
- 9.2 The cost of power used was 5% less than budget and resulted mainly from the fact that the aeration basin, secondary clarifier, primary clarifier and A-train were not operated for extended periods during the second part of the financial year to allow programmed maintenance and remedial work.

## **10. General**

- 10.1 A workshop to review the NRSBU Strategic Plan was held on 30 July 2013. Tim Maples of Inova Group facilitated the workshop attended by Board members, NRSBU staff and contributor representatives. A copy of the draft plan is appended and will be considered for adoption at the meeting.
- 10.2 The Nelmac and MWH team was introduced to the Board on 9 August 2013 and presented their operation and maintenance strategy to the Board.
- 10.3 The resource consent monitoring report providing an assessment of test and monitoring results was forwarded to the consent authority, Tasman District Council, on 9 July 2013. (The monitoring report is appended to this agenda as an separate item)

J K Thiart  
**Engineering Adviser**

### **Attachments:**

Nil



## Treatment Plant: A-Train Remediation Progress report



A variation was approved for the remediation and upgrade of the A-train sludge treatment tanks. The work is programmed for completion in September 2013.

Budget: \$1,000,000 (Upgrade) and \$432,000 (Renewal budget)

Approved variation: \$804,000.

### **Progress**

The remedial work on the A-Train sludge tanks are progressing well and is expected to be completed before the end of September 2013. The prefabrication of the roofs has been completed and the tanks have been emptied and are being prepared to fit the pre-fabricated roofs.



Figure 1: A-Train Sludge tanks with ring fitted

Preparation work of the walls is continuing and it is expected that the inside of the tanks will be coated later this year before the end of August 2013.





Figure 2: Riveted joint after preparation



Figure 3: Tank A Coating partially applied

A variation to the ring resulted in a change in methodology making it possible to fit the roof ring without affecting the insulation or external sheets. This change is expected to create a saving that will allow the project to be completed well within the approved budget.

**Recommendations**

**That** the report be received.

**NELSON REGIONAL SEWERAGE BUSINESS UNIT  
STRATEGIC PLAN 2013-2016**

**1. Mission Statement**

The NRSBU's mission statement is:

*"To identify the long term wastewater processing and reticulation needs of our customers and to meet current and future needs in the most cost effective and sustainable manner."*

**2. Strategic Goals**

- 2.1. Wastewater reticulation, treatment and disposal services meet customers' long term needs
- 2.2. The costs of wastewater reticulation, treatment and disposal services are minimised
- 2.3. Risks associated with the services provided are identified and mitigated to a level agreed with customers and owners
- 2.4. We engage the right people with the right skills and experience
- 2.5. NRSBU operates sustainably and endeavours to remedy or mitigate any identified adverse environmental impact
- 2.6. Good relationships are maintained with all stakeholders
- 2.7. All statutory obligations are met

All strategic goals are important and no one goal will be pursued at the expense of another.

**3. Strategic Objectives and Performance Measures**

The objectives below describe the long term aims of the business unit. Performance measure targets and dates (where they are not specified below) will be set annually in the Business Plan along with performance measures for projects identified in the Asset Management Plan. Performance will be reported on quarterly to the NRSBU Joint Committee and annually or six monthly, as appropriate, to the shareholding Councils.

<b>1. Wastewater reticulation, treatment and disposal services meet customers' long term needs</b>	
<b>Long Term Objectives</b>	<b>Key Performance Measures</b>
Sufficient reticulation, treatment and disposal capacity is available for loads received.	Loads do not exceed the capacity of the system components.
Intergenerational equity is maintained.	Loans are repaid over 30 years (the average life of the assets).

Customers are encouraged to engage with the organisation and are satisfied with the service.	All customer representatives attend at least 75% of customer meetings.  Customer surveys show an average score of at least 5 out of 7 on satisfaction with services.
Levels of service are defined in all contracts and are met.	100% compliance with service level agreements by all major contractors.
<b>2. The cost of wastewater reticulation, treatment and disposal services are minimised</b>	
<b>Objectives</b>	<b>Key Performance Measure</b>
The costs of reticulation, treatment and disposal are minimised.	The operational costs of reticulation, treatment and disposal processes are maintained under the cost for these services at 30 June 2013 when adjusted by the Producer Price Index as measured against the cost for these services at 30 June 2013.  All capital projects are delivered within budget.
The economic lives of all assets are optimised.	Three yearly independent audit of asset management practices confirms this.
Customers understand the benefits of demand management and the costs, risks and environmental implications of increasing demand.	Demand management policy is developed by June 2014.  Customer contracts are reviewed by December 2014 to ensure that charging mechanisms support the demand management policy.  NCC and TDC implement their own load management policies, priorities and plans by June 2014.  Combined loads do not exceed the capacity of the components of the system.  Peak storm water inflows are reduced by 10% per year and that this target is reviewed annually.
New technology choices are well understood and are proven to be reliable, sustainable and cost effective.	All significant technology choices are supported by cost benefit analysis, independent peer review, energy efficiency analysis, risk analysis and, where appropriate, by other users of those technologies.

<b>3. Risks associated with the services provided are identified and mitigated to a level agreed with customers and owners.</b>	
<b>Objectives</b>	<b>Key Performance Measures</b>
Risk management plans include all significant health and safety, environmental, cultural, social, economic and contractual risks.	No event, which impact on agreed levels of service, occurs that has not been identified in the NRSBU risk management plans.
Contingency plans adequately address emergency events.	Customer representatives review and approve the plans annually.  Effectiveness of plans is reviewed and confirmed following incidents which require activation of the plan.
Customers engage with the risk assessment process, understand and accept the important risks and the level of mitigation provided.	Customer representatives review and approve the risk management plan annually and following any incidents which require activation of the plan.
<b>4. We engage the right people, with the right skills and experience.</b>	
<b>Objectives</b>	<b>Key Performance Measures</b>
Those engaged with the NRSBU have the right skills, experience, and support to perform well.	Annual staff performance reviews include assessment of the skills and experience required in their role in NRSBU and their development needs are identified and met.  Development and succession plans are in place.  The Board reviews its performance at least annually.  A workshop is conducted at least annually to develop the skills and industry knowledge of Board members and staff.
Management and operation of the plant and reticulation systems conforms to best practice.	Independent audit of operation and maintenance manual procedure and practices every three years confirms this.

<b>5. NRSBU operates sustainably and endeavours to remedy or mitigate any identified adverse environmental ,social or cultural impact</b>	
<b>Objectives</b>	<b>Key Performance Measures</b>
NRSBU minimises adverse environmental, social and cultural impacts where this is economically viable.	<p>Targets are set for energy efficiency improvements by June 2014 and are reported on and reviewed annually from that date.</p> <p>Current capacity to utilise beneficial application of biosolids to land is sustained.</p> <p>Beneficial economic and environmental reuse of treated waste water is maintained or increased.</p> <p>Environmental, social and cultural impacts are considered in all decision making.</p>
<b>6. Good relationships are maintained with all stakeholders</b>	
<b>Objectives</b>	<b>Key Performance Measures</b>
Shareholders are satisfied with the strategic direction and the economic performance of the business unit.	<p>All strategic and business plans are approved by shareholders.</p> <p>All budget projections are met.</p>
Good relationships are maintained with all stakeholders including owners, iwi, customers, contractors, neighbours, and the wider community.	<p>All complaints or objections are addressed promptly.</p> <p>All applications for resource consents are approved.</p> <p>Up to date information on activities and achievements is publically available.</p> <p>All stakeholders are identified and reporting, communication and consultation targets are set and met by June 2014.</p>
<b>7. All statutory obligations are met</b>	
<b>Objectives</b>	<b>Key Performance Measures</b>
All statutory obligations are identified and met and are included in contracts with suppliers.	100% compliance with all statutory obligations.
All resource consent requirements are met.	100% compliance with all resource consents.

**NELSON REGIONAL SEWERAGE BUSINESS UNIT**

**ANNUAL FINANCIAL STATEMENTS**

**For the Year ended 30 June 2013**

# NELSON REGIONAL SEWERAGE BUSINESS UNIT

## Representatives for year ended 30 June 2013

Representing Tasman District Council  
Cr G Glover  
Mr M Higgins

Representing Nelson City Council  
Cr D Shaw  
Cr P Matheson

Independent Member  
Ms D Hiser (Chair)

## Principal Administration Office

C/- Nelson City Council  
110 Trafalgar St  
Nelson

## Auditor

Audit New Zealand on behalf of the office of the Auditor-General

## Bankers

Westpac New Zealand Ltd  
Queen St  
Richmond

## Solicitors

Duncan Cotterill  
197 Bridge St  
Nelson

## **NELSON REGIONAL SEWERAGE BUSINESS UNIT**

Statement of Accounting policies

For the year ended 30 June 2013

### **Reporting Entity**

The Nelson Regional Sewerage Business Unit is a Joint Committee of Nelson City Council and Tasman District Council, under Section 48 of the Local Government Act 2002.

The primary purpose of the Nelson Regional Sewerage Business Unit is to manage the treatment facilities and network in a cost efficient and environmentally sustainable manner rather than making a financial return. Accordingly, the Business Unit has designated itself as a public benefit entity for the purposes of New Zealand Equivalents to International Financial Reporting Standards (NZ IFRS)

The financial statements of the Business Unit are for the year ended 30 June 2013. The financial statements were authorised for issue by the Board on the XXth September 2013.

### **Basis of Preparation**

#### **Statement of compliance**

The financial statements of the Business Unit have been prepared in accordance with the requirements of the Local Government Act 2002, which includes the requirement to comply with New Zealand generally accepted accounting practice (NZ GAAP) They comply with NZ IFRS, and other applicable Financial Reporting Standards, as appropriate for public benefit entities.

The accounting policies set out below have been consistently applied to all periods presented in the financial statements.

#### **Measurement base**

The financial statements have been prepared on a historical cost basis, modified by the revaluation of land, infrastructural assets and biological assets.

#### **Functional and presentation currency**

The financial statements have been prepared in New Zealand dollars and all values are rounded to the nearest dollar. The functional currency of the Business Unit is New Zealand dollars.

#### **Changes in Accounting Policies**

The Minister of Commerce has approved a new Accounting Standards Framework (incorporating a Tier Strategy) developed by the External Reporting Board (XRB). Under this Accounting Standards Framework, the Business Unit will be eligible to apply the reduced disclosure regime (Tier 2 reporting entity) of the public sector Public Benefit Entity Accounting Standards. The effective date for the new standards for public sector entities is for reporting periods beginning on or after 1 July 2014. Therefore, the Business Unit will transition to the new standards in preparing its 30 June 2015 financial statements. The Business Unit has not assessed the implications of the new Accounting Standards Framework at this time.



## **Accounting Policies**

The following particular accounting policies which materially affect the measurement of results and financial position have been applied:

### **a) Revenue**

Revenue is measured at the fair value of consideration received.

### **b) Borrowing Costs**

Borrowing costs are recognised as an expense in the period in which they are incurred.

### **c) Financial Instruments**

The Business Unit is party to financial instruments as part of its normal operations. These financial instruments include bank accounts, investments, receivables, payables and loans. All financial instruments are recognised in the Statement of Financial Position and all revenues and expenses in relation to financial instruments are recognised in the Surplus or Deficit.

Except for loans, which are recorded at cost, and those items covered by a separate accounting policy, all financial instruments are shown at their estimated fair value.

### **d) Derivative financial instruments**

The Council uses derivative financial instruments (interest rate swaps) to minimise its risk associated with interest rate fluctuations. Such derivative financial instruments are initially recognised at fair value on the date on which the derivative contract is entered into and subsequently re-measured to fair value. Derivatives are carried as assets when their fair value is positive and as liabilities when their fair value is negative.

Swaps are entered into with the objective of reducing the risk of rising interest rates. Any gains or losses arising from the changes in fair value of derivatives are taken directly to the surplus or deficit for the year. The fair value of interest rate swaps is determined by reference to market values for similar instruments. The net differential paid or received on interest rate swaps is recognised as a component of interest expense or interest revenue over the period of the agreement.

### **e) Cash and Cash equivalents**

Cash and Cash equivalents includes cash on hand, deposits held at call with banks, other short term highly liquid investments with maturities of three months or less, and bank overdrafts.

Bank overdrafts are shown within borrowings as a current liability in the statement of financial position.

**f) Trade and other receivables**

Trade and other receivables are initially measured at fair value and subsequently measured less any provision for impairment.

A provision for impairment of receivables is established when there is objective evidence that the Board will not be able to collect all amounts due according to the original terms of the receivables.

**g) Financial Assets**

Investments in bank deposits are measured at fair value.

**h) Income tax**

As a Joint Committee of Nelson City Council and Tasman District Council the Business Unit is taxable in the two Councils. However, the Business Unit operations are a non-taxable activity for each Council.

**i) Goods and Services Tax**

The financial statements have been prepared exclusive of goods and services tax (GST) with the exception of trade receivables and payables, which are stated with GST included.

**j) Property, Plant and Equipment**

There are three categories of Property, Plant and Equipment:

- Freehold land
- The Infrastructural Network – incorporates pipelines, pump stations, ponds, aerators, clarifiers, odour control unit, power supply and buildings
- Work in Progress

i) Land is reviewed annually and revalued at market value every five years or if there is a material movement. The latest valuation was conducted as at 30 June 2009 by QV Valuations.

ii) Infrastructural assets are valued annually internally at depreciated replacement cost by Council engineers as at 30 June 2013. The valuation methodology has been peer reviewed by MWH New Zealand Ltd and revaluations are updated annually.

Vested infrastructure assets have been valued based on the actual quantities of infrastructure components vested and the current 'in the ground' cost of providing identical services

Depreciation is provided on a straight line basis which will write off the cost/valuation of the assets over their useful lives. The useful lives of the major classes of infrastructural assets have been estimated as follows:

<b>Buildings</b>	50 years
<b>Ponds and Channels</b>	
- earthworks	999 years
- wave bands, electromechanical	25 years
- pipelines, chambers, aeration basin outfall	50 – 80 years
<b>Aerators</b>	25 years
<b>Power Supply</b>	25 years

## **j) Property, Plant and Equipment continued**

### Clarifier

- earthworks	999 years
- civil works	50 years
- pipes	50 – 60 years
- pumps	10 – 25 years
- other	10 – 25 years

### Odour Control Unit

10 – 50 years

### Pump Stations

- pumps	15 years
- variable speed drive units	10 years
- pipes and civil works	50 years
- other	25 years

### Pipelines

- pipes	45 – 80 years
- air valves	25 years

### Aeration Basin Upgrade

10 years

The Business Unit has implemented an activity management plan for the continuing replacement and refurbishment of components to ensure that conveying, treatment and disposal systems are maintained to provide a satisfactory service on an ongoing basis.

iii) Work in progress is valued at cost of construction. Depreciation is applied at time of commissioning.

## **k) Biological Assets**

Forestry consisting of 18 hectares planted on Bell Island adjacent to the ponds is revalued annually by P F Olsen and Company Ltd to Market Value. The latest valuation available is at 30 June 2013.

The movement in the Forestry valuation is recorded in the Surplus or Deficit.

## **l) Revaluation Reserves**

The results of revaluing land and infrastructural assets are credited or debited to other comprehensive income and are accumulated to an asset revaluation reserve in equity for that class of asset. Where this results in a debit balance in the asset revaluation reserve for any class of asset, this is expensed in the Surplus or Deficit. To the extent that increases in value offset previous decreases debited to the Surplus or Deficit, the increase is credited to the Surplus or Deficit.

**m) Statement of Cash Flows**

Cash means cash balances on hand, held in bank accounts, demand deposits and other highly liquid investments in which the Business Unit would invest as part of its day to day cash management.

Operating activities include cash received from participants and all other sources and records the cash payments made for the supply of goods and services.

Investment activities are those activities relating to the acquisition and disposal of non current assets.

Financing activities comprise the change in equity and debt capital structure of the Business Unit.

**n) Budget figures**

The budget figures are those approved by the Board at the beginning of the year in the Business Plan. The budget figures have been prepared in accordance with NZ IFRS, using accounting policies that are consistent with those adopted by the Board for the preparation of financial statements.

**o) Critical accounting estimates and assumptions**

In preparing these financial statements the Business Unit has made estimates and assumptions concerning the future. The key assumptions relate to the valuation of the Business Unit's property, plant and equipment. These estimates and assumptions may differ from the subsequent actual results. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including estimates and expectations of future events that are believed to be reasonable under the circumstances.

## NELSON REGIONAL SEWERAGE BUSINESS UNIT

### Statement of Comprehensive Income

For the year ended 30 June 2013

	Notes	Actual 2012/13 \$	Budget 2012/13 \$	Actual 2011/12 \$
<b>Income</b>				
Sales		7,736,835	8,332,400	7,399,478
Other Recoveries		185,701	172,000	160,069
Interest		146	1,000	217
Loss/(Gain) in Fair Value of Forestry	5	4,700	-	10,900
Revaluation Derivative Instruments		335,844	-	-
<b>Total Income</b>		<u>8,263,225</u>	<u>8,505,400</u>	<u>7,570,664</u>
<b>Less Expenses</b>				
Management		221,240	133,700	114,908
Audit Fees		26,500	10,000	14,000
Members Fees	7	18,500	18,500	27,959
Interest Paid		762,697	1,209,000	795,398
Insurance		60,074	42,000	55,668
Depreciation	6	1,819,403	2,062,000	1,897,052
Abandoned Assets		-		194,175
Electricity		743,734	754,000	692,336
Operations & Maintenance		1,715,276	1,688,100	1,498,451
Monitoring		138,353	167,100	211,500
Biosolids Disposal		510,750	456,000	507,525
Consultancy		101,476	100,000	112,979
Sundry		60,059	77,000	111,845
Forestry Costs		13,784	-	-
Revaluation Derivative Instruments		-	-	75,992
<b>Total Expenses</b>		<u>6,191,845</u>	<u>6,717,400</u>	<u>6,309,788</u>
<b>Net Surplus</b>		<u>2,071,380</u>	<u>1,788,000</u>	<u>1,260,876</u>
<b>Other Comprehensive Income</b>				
Revaluation of Fixed Assets		306,528		2,506,596
<b>Total Comprehensive Income</b>		<u>2,377,908</u>	<u>1,788,000</u>	<u>3,767,472</u>

### Statement of Changes in Equity

For the year ended 30 June 2013

	Notes	Actual 2012/13	Budget 2012/13	Actual 2011/12
<b>Equity at the start of Year</b>		\$	\$	\$
Opening Equity		35,687,766	30,040,000	33,040,047
Plus Total Comprehensive Income		2,377,908	1,788,000	3,767,472
Less Owners Distribution		1,736,223	1,788,000	1,119,752
<b>Equity at the end of Year</b>		<u>36,329,452</u>	<u>30,040,000</u>	<u>35,687,766</u>

The attached notes form part of and should be read in conjunction with these financial statements

# NELSON REGIONAL SEWERAGE BUSINESS UNIT

## Statement of Financial Position as at 30 June 2013

	Notes	Actual 2013 \$	Budget 2013	Actual 2012 \$
<b>Equity</b>				
Retained earnings	1(a)	16,104,634	15,628,000	15,769,477
Contingency reserve		100,000	100,000	100,000
Revaluation reserve	1(b)	20,124,817	17,312,000	19,818,289
<b>Total Equity</b>	1	<u>36,329,451</u>	<u>30,040,000</u>	<u>35,687,766</u>
This was represented by:				
<b>Current Assets</b>				
Cash and cash equivalents		52,517	94,000	76,066
Trade receivables		197,150	236,000	58,685
<b>Total Current Assets</b>		<u>249,667</u>	<u>330,000</u>	<u>134,751</u>
<b>Current Liabilities</b>				
Trade and other payables		123,873	655,000	593,132
Inter-entity trade payables	4	2,449,663	3,541,000	2,034,761
Borrowings	2	16,400,000	-	-
<b>Total Current Liabilities</b>		<u>18,973,536</u>	<u>4,196,000</u>	<u>2,627,893</u>
<b>Net Working Capital</b>		<u>(18,723,869)</u>	<u>(3,866,000)</u>	<u>(2,493,142)</u>
<b>Non Current Assets</b>				
Property, plant and equipment	6	54,777,869	55,550,000	55,296,000
Forestry assets	5	15,600	85,000	10,900
Derivative Financial Instruments	8(e)	259,852	-	-
<b>Total Non Current Assets</b>		<u>55,053,321</u>	<u>55,635,000</u>	<u>55,306,900</u>
<b>Non Current Liabilities</b>				
Borrowings	2	-	18,729,000	17,050,000
Derivative Financial Instruments	8(e)	-	-	75,992
<b>Total Non Current Liabilities</b>		<u>-</u>	<u>18,729,000</u>	<u>17,125,992</u>
<b>Net Assets</b>		<u>36,329,451</u>	<u>33,040,000</u>	<u>35,687,766</u>

For and on behalf of the Nelson Regional Sewerage Business Unit

Chairman

Date

The attached notes form part of and should be read in conjunction with these financial statements

## NELSON REGIONAL SEWERAGE BUSINESS UNIT

### Statement of Cash Flows For the year ended 30 June 2013

	Notes	2012/13 \$	2011/12 \$
<b>Cash Flows from Operating Activities</b>			
Cash was provided from:			
Receipts from customers		7,784,070	7,736,951
Interest received		146	217
		<u>7,784,216</u>	<u>7,737,169</u>
Payments to suppliers		(4,148,185)	(3,100,183)
Interest paid		(821,597)	(840,982)
		<u>(4,969,782)</u>	<u>(3,941,165)</u>
<b>Net Cash Flows from Operating Activities</b>	3	<u>2,814,433</u>	<u>3,796,003</u>
<b>Investing Activities</b>			
Purchase of property, plant and equipment		(1,068,231)	(6,094,589)
<b>Net Cash from Investing Activities</b>		<u>(1,068,231)</u>	<u>(6,094,589)</u>
<b>Financial Activities</b>			
Owners Distribution		(1,119,752)	(1,768,908)
Loan raised		(650,000)	4,050,000
<b>Net Cash from Financing Activities</b>		<u>(1,769,752)</u>	<u>2,281,092</u>
<b>Net Increase/(Decrease) in cash</b>		(23,550)	(17,493)
Add Opening Cash and cash equivalents		76,066	93,559
Closing Cash and cash equivalents		<u>52,516</u>	<u>76,066</u>

The attached notes form part of and should be read in conjunction with these financial statements

## NELSON REGIONAL SEWERAGE BUSINESS UNIT

Notes to and forming part of the Financial Statements  
for the year ended 30 June 2013

	2012/13	2011/12
	\$	\$
<b>1 Equity</b>		
The Business Unit is jointly owned by the Nelson City Council and the Tasman District Council.		
<b>1(a) Retained Earnings</b>		
Opening Balance	15,769,477	15,628,353
Net Surplus	2,071,380	1,260,876
Distribution to Owners	<u>(1,736,223)</u>	<u>(1,119,752)</u>
Closing Balance	<u>16,104,635</u>	<u>15,769,477</u>
<b>1(b) Revaluation Reserve</b>		
Opening Balance	19,818,289	17,311,693
Revaluation Movements		
Infrastructure revaluation	<u>306,528</u>	<u>2,506,596</u>
Total Revaluation Movement	<u>306,528</u>	<u>2,506,596</u>
Closing Balance	<u>20,124,817</u>	<u>19,818,289</u>
<b>Balance held as follows:-</b>		
Land	1,679,500	1,679,500
Buildings	192,158	174,853
Sewerage network	18,172,799	17,895,305
Plant & Equipment	<u>80,360</u>	<u>68,631</u>
<b>Total Revaluation Reserve</b>	<u>20,124,817</u>	<u>19,818,289</u>
<b>2 Term Loans</b>		
A \$25m multi-option facility exists that is secured over rates revenue of the Tasman District and Nelson City which expires 30th June 2014.		
Interest rates payable range from 3.69% to 3.69% with a weighted average of 3.69%. (For 2011/12 the range was 3.48% to 5.9% with a weighted average of 3.95%).		
Total Loans	16,400,000	17,050,000
Less Current Portion	<u>16,400,000</u>	<u>-</u>
Term Portion	<u>-</u>	<u>17,050,000</u>
1 to 2 years	-	-
2 to 5 years	<u>-</u>	<u>17,050,000</u>
	<u>-</u>	<u>17,050,000</u>

The weighted average cost of funds as at 30 June 2013 was 4.706% (2012 4.4%)



### 3 Reconciliation of Net Surplus with Net Cash Flow from Operating Activities

Net Surplus	2,071,380	1,260,876
Add back non cash items		
Depreciation	1,819,403	1,897,052
Abandoned Assets	-	194,175
Gain (Loss) in fair value of forestry	4,700	(10,900)
Revaluation gain (loss) derivative instruments	-	75,992
Movements in Working Capital		
(Increase)/Decrease in receivables	(138,466)	177,404
(Increase)/Decrease in fixed asset related payables	73,488	1,119,548
Increase/(Decrease) in payables	(54,357)	(1,567,298)
Items classified as financing activities		
(Increase)/Decrease in owner distribution accrual	649,154	649,154
	<u>4,425,302</u>	<u>3,796,003</u>

### 4 Transactions for Related Parties

For the year ended 30 June 2013, Nelson Regional Sewerage Business Unit -

	2012/13	2011/12
Purchased the following from:		
Tasman District Council:		
- Rates & Water	25,651	24,524
- Consent & Monitoring Fees	87	5,790
Nelson City Council:		
- Management, Engineering Secretarial and Accounting Services	231,709	125,088
- Rates & Water	5,489	4,193
- Engineering Services Capitalised	4,505	20,942
- Consent & Monitoring Fees	4,608	3,450
Nelmac		
- Maintenance and capital work	5,581	6,547
Provide bulk sewage services to:		
- Tasman District Council	2,585,358	2,536,806
- Nelson City Council	3,184,951	2,951,846
At year end the Business Unit owed related parties as follows:		
- Nelson City Council	1,836,448	1,435,227
- Tasman District Council	613,214	599,535

### 5 Forestry Assets

The Biological Assets are valued at Market Value. Any movement in the valuation is recorded in the Profit and Loss Account.

	<u>2013</u>	<u>2012</u>
Current Market Value (NZ IFRS)	15,600	10,900
Current increase (decrease) in Market Value	4,700	10,900

**6 Property, plant and equipment**

	Land	Sewerage Network	Buildings	Plant & Equipment	Total
<b>Valuation / Cost</b>					
Balance June 2011	2,169,000	47,458,113	231,394	47,082	49,905,589
Additions 2012		4,975,042			4,975,042
Abandoned Assets		- 194,175			- 194,175
Revaluation 2012		2,481,307	23,184	2,105	2,506,596
Revaluation transfer		(1,861,865)	(19,467)	(15,720)	(1,897,052)
Balance June 2012	2,169,000	52,858,422	235,111	33,467	55,296,000
Additions 2013	194,643	800,100	-	-	994,743
Abandoned Assets					0
Revaluation 2013		277,494	17,305	11,729	306,528
Revaluation transfer		(1,787,451)	(17,288)	(14,663)	(1,819,402)
Balance June 2013	2,363,643	52,148,565	235,128	30,533	54,777,869
<b>Accumulated Depreciation</b>					
Balance June 2011	-	-	-	-	-
Depreciation charge 2012		1,861,865	19,467	15,720	1,897,052
Revaluation transfer		(1,861,865)	(19,467)	(15,720)	(1,897,052)
Balance June 2012	-	-	-	-	-
Depreciation charge 2012		1,787,451	17,288	14,663	1,819,402
Revaluation transfer		(1,787,451)	(17,288)	(14,663)	(1,819,402)
Balance June 2012	-	-	-	-	-
<b>Carrying amounts</b>					
Balance June 2012	2,169,000	52,858,422	235,111	33,467	55,296,000
Balance June 2013	2,363,643	52,148,565	235,128	30,533	54,777,869

## 7 Members Fees

Remuneration and other benefits paid or due and payable to directors, for services as members during the year ending 30 June 2013, are as follows:

- Donna Hiser	18,500	27,500
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(Note 2012 included \$9,000 in relation to 2011)

## 8 Financial Instruments

The Nelson Regional Sewerage Business Unit is party to financial instrument arrangements as part of its every day operations. These financial instruments include accounts receivable, accounts payable, loans and investments.

### a) Credit Risk

Financial instruments which are potentially subject to credit risk consist of bank balances, accounts receivable and short term deposits.

	<u>2013</u>	<u>2012</u>
Bank Balances	52,517	76,066
Accounts Receivable	197,150	58,685

No collateral is held on the above accounts

### b) Concentration

Concentrations of credit risk with respect to accounts receivable are high, with Nelson City Council, Tasman District Council and three private users as major customers. However, all are considered high credit quality entities.

### c) Currency Risk

Nelson Regional Sewerage Business Unit has no currency risk as any financial instruments it deals with are all in New Zealand dollars.

### d) Financial instruments

The Business Unit is party to financial instrument arrangements as part of its everyday operations. These financial instruments include cash and cash equivalents, accounts receivable and payable, investments, and loans which have all been recognised in the financial statements. Revenues and expenses in relation to all financial instruments are recognised in the Statement of Comprehensive Income.

### e) Derivative financial instruments

	<u>2013</u>	<u>2012</u>
Non-Current asset portion	259,852	-
Non-Current liability portion	-	75,992

**Fair value**

The fair value of interest rate swaps have been determined by calculating the expected cash flows under the terms of the swaps and discounting these values to present values. The inputs into the valuation model are from independently sourced market parameters such as interest rate yield curves. Most market parameters are implied from instrument prices.

### Interest rate swaps

The notional principal amounts of the outstanding interest rate swap contracts for the council are \$16 million (2012 \$16 m). At June 2012, the fixed interest rate swaps varied from 2.77% to 3.83% (2012 2.77% to 3.83%)

**8 Financial Instruments e) Derivative financial instruments continued  
Sensitivity analysis**

The table below illustrates the potential profit and loss impact for reasonably possible market movements, with all other variables held constant, based on the Business Unit's derivative financial instrument exposures at balance date

+100bps	848,792	602,174
-100bps	(368,602)	(808,254)

**9 Statement of Contingent Assets and Contingent Liabilities**

The Business Unit has no contingent asset or contingent liabilities as at 30 June 2013. (2012 There was a contingent asset as a result of a dispute with a contractor. This dispute was resolved in the current year.)

**10 Statement of Commitments**

The Business Unit has capital commitments as at 30 June 2013 of \$20,000. (2012 \$607,546).

**11 Post Balance Date Events**

There are no significant events after Balance date. (2012 Nil).

**12 Explanation of major variances against budget**

Explanations for major variations from the Nelson Regional Sewerage Business Unit's 2012/13 Business Plan are as follows:

**Statement of Comprehensive Income**

Total Expenses are \$526,000 less than budget due to \$446,000 less Interest being incurred as a result of lower than budgeted interest rates and capital expenditure. Depreciation is \$243,000 less than budget due to the June 2011 and 2012 revaluations.

Total Income is \$242,000 less than budget due to Sales from Customers being \$596,000 less than budget as a result of the 2012 valuation and a lower interest rate being used in the calculation of charges, less the \$336,000 revaluation of Derivative Instruments not being budgeted for as this item is not funded.

The net surplus is \$283,000 more than budget due to the Revaluation of Derivative Instruments.

The annual fixed asset revaluation this year is \$307,000.

**Statement of Financial Position**

The revaluation reserve has increased by \$2,813,000 compared to budget principally due to the movement in valuation indices in both 2012 and 2013 years.

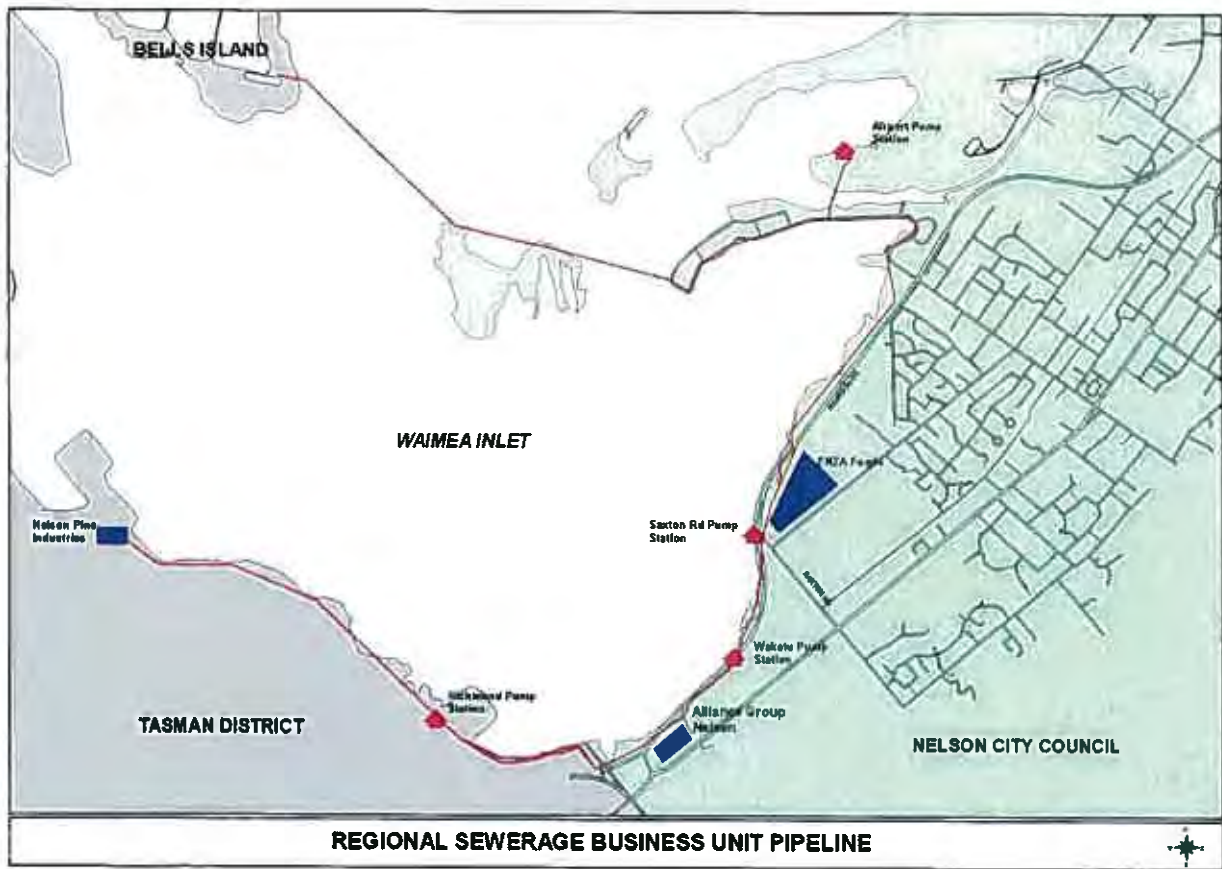
Retained earnings has increased by \$477,000 as a result of not distributing the unfunded elements of the surplus such as revaluations.

Trade and other payables and Inter-entity payables have reduced due to the reduction in capital expenditure activity in June 2013.

Borrowings are \$2,329,000 less than budget due to savings in Capital Expenditure. The Borrowings have been reclassified as Current Liabilities as the facility hasn't been reviewed during the year and is due to expire within 12 months of balance date.

**Nelson Regional Sewerage Business Unit**

# ANNUAL REPORT 2012/2013



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**Prepared by: Johan Thiar  
Engineering Adviser  
Nelson Regional  
Sewerage Business Unit**

**Adopted**

## **1. Introduction**

- 1.1 This Annual Report is a review of what has been achieved by the Nelson Regional Sewerage Business Unit (NRSBU) in the 2012/13 financial year and its level of performance against Key Performance Indicators.

## **2. The Year in Review**

- 2.1 With the completion of several major upgrades over the last five years:

- improved screening, removing load off the activated sludge system by primary sludge removal through the commissioning of a primary clarifier,
- improvements to the outfall system to reinstate capacity of the system and increasing the capacity of the network through the installation of a second pipeline across the estuary, and
- increases in pump capacity at pump stations,

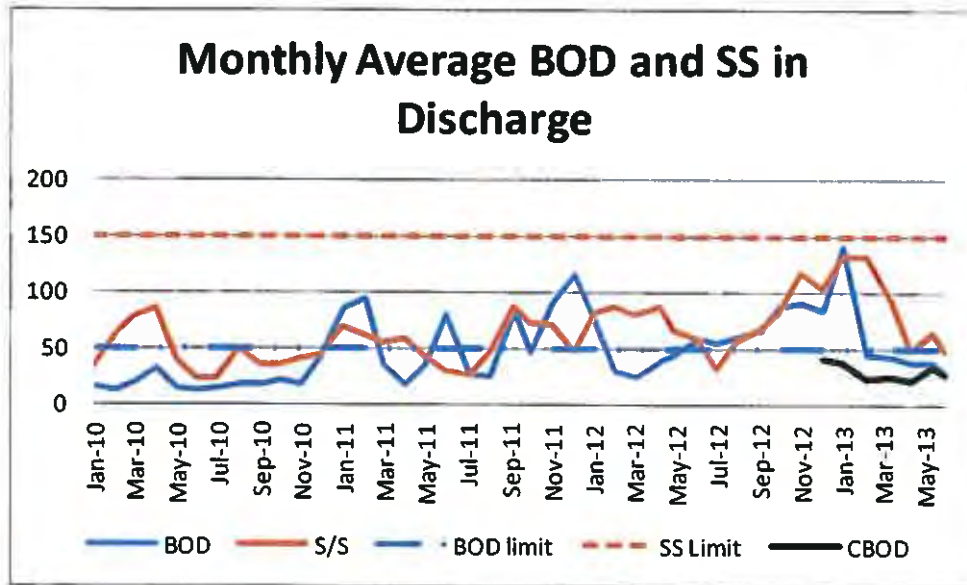
all components of the system are now capable of managing loads and flows discharged to the scheme for the next five to ten years. These upgrades have also provided significantly more flexibility for dealing with the waste stream. The primary focus going forward is therefore to improve the efficiency of services.

- 2.2 The NRSBU met its budget targets with a surplus of \$2,071,380, which will be distributed to the owners of the scheme. Expenses are 7.8% less than budget largely due \$446,000 less interest being incurred as a result of lower than budgeted capital expenditure. Depreciation is \$242,597 less than budget due to the June 2011 and 2012 revaluations.
- 2.3 All projects have been delivered within budget. Savings to the value of \$1,573,000 and \$200,000 were made on the renewal and upgrade budgets respectively following further detailed reviews of the condition of assets associated with the programmes in the 2012/13 Business Plan.
- 2.4 With few exceptions business plan targets have been met and resource consents complied with, the most significant exceptions being overflows at pump stations caused by extreme weather events.
- 2.5 The Operations and Maintenance contract with Downer expired in June 2013. Following a robust procurement process the NRSBU entered into a contract with the preferred supplier for the operation and maintenance of the NRSBU assets for the next three to seven years starting 1 October 2013 (the Downer Contract was extended to cover the interim period of 3 months). The new contract was negotiated at a considerable saving on the budget. The allocation of risk in the new contract makes the business unit responsible for most of the reactive maintenance activities but creates opportunities to generate cost savings by optimising the use of plant components. The Contract includes a complete review of management practices at the plant as

well as recommendations on the improvement of management reporting and benchmarking.

- 2.6 A review of sludge treatment at Bell Island showed that it was possible to refurbish the sludge treatment facilities at the plant enabling the business unit to defer the decision to increase sludge treatment capacity by between 5 and 10 years saving \$600,000 on the 2012/13 budget and delaying further expenditure signalled in the long term capital programme for improvements of sludge treatment at Bells Island. This work will be completed by the end of September 2013.
- 2.7 A review of the performance of the wastewater treatment plant following the completion of the primary clarifier upgrade in July 2010 found that it might be possible to avoid the installation of launder covers on the primary clarifier to manage odours and the centrifuge to dewater treated sewage sludge which were part of the original design. It was decided to operate the plant without those components for two summers to ensure that they were not needed and that trial was successful. The \$750,000 budget allocation for the installation of these components has now been removed.
- 2.8 An extensive survey of the treatment ponds demonstrated that while the sludge is not highly concentrated and not evenly spread throughout the ponds it may be possible to defer the desludging of the ponds for three to four years. Further sludge monitoring is programmed for 2013/14 and a project to review the active management the ponds will be undertaken during 2014/15.
- 2.9 Two of the three industrial contributors have signalled their intentions to improve their on-site treatment processes over the next year. A request from one of the contributors to decrease their contracted allocation was approved and the additional capacity created offered to the other four contributors. Both Councils have expressed an interest in contracting for this additional capacity.
- 2.10 Following an independent review of the financial instruments used in the Trade Waste Agreement with customers, the Board considered it desirable that the Business Unit develop a debt/equity ratio policy in consultation with the owners in order to improve transparency in the charging mechanism. Ideally this policy should be developed in conjunction with the governance review signalled by the owners.
- 2.11 The Coastal Permit limit for Biological Oxygen Demand (BOD) concentrations were exceeded on a number of occasions during the last three years. Investigations into this matter showed that the test used by the business unit to report this requirement is affected by nitrification occurring in the BOD test bottle which does not occur in the environment. This results in over-reporting of BOD levels. The following graph shows that when the effects of nitrification are eliminated that the Total BOD and Carbonaceous BOD converge at levels lower than the Coastal Permit limit. This issue continues to be monitored and the business unit has expanded the testing regime to test for Total BOD, Carbonaceous BOD and Soluble BOD.





**Figure 4: Increase in Biological Oxygen Demand in effluent.**

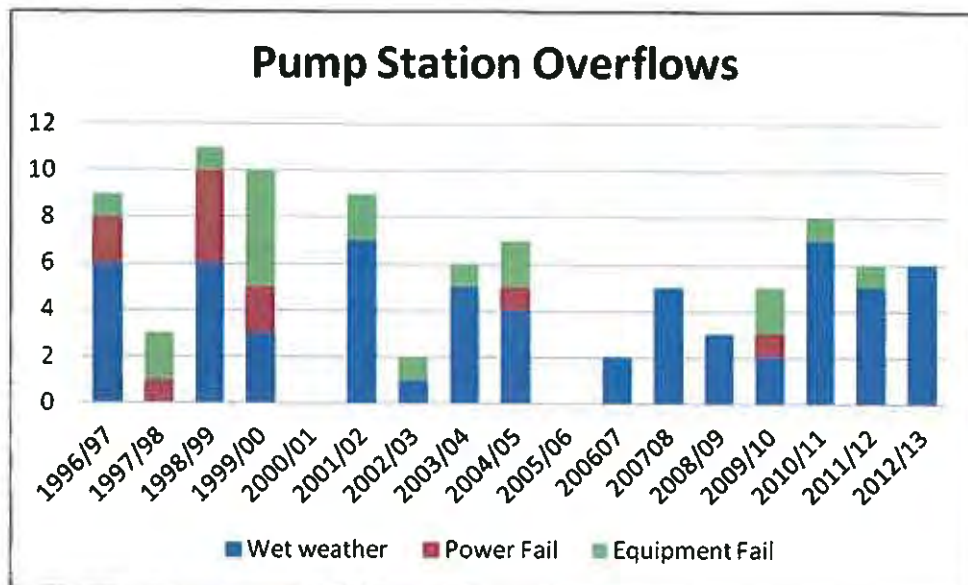
2.12 The graph above shows that when the effects of nitrification are eliminated that the Total BOD and Carbonaceous BOD converge at levels lower than the Coastal Permit limit. This issue continues to be monitored and the business unit has expanded the testing regime to test for Total BOD, the Carbonaceous BOD and soluble BOD.

### 3. Level of Service Performance

3.1 The levels of service recorded over the past three years have stayed reasonably consistent. Most of the pump station overflows were associated with extreme wet weather conditions and three occurred during a period when the new pipeline was out of commission to allow for the testing of the pipeline.

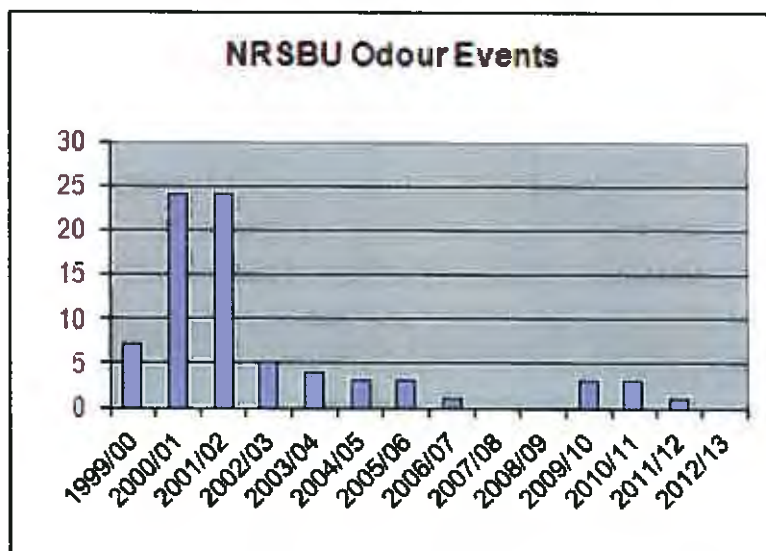
**Table 1: Level of Service Summary**

Level of Service	Function	Category	Target Technical Level of Service	Level of Service Compliance				
				2009/10	2010/11	2011/12	2012/13	
Environmental Impacts	Treatment & Disposal	RMA Consent - Wastewater Discharge to Coastal Marine Area	100% compliance with consent conditions	Yes	No	No	No	
		RMA Consent - Discharge of Contaminants to Air	100% compliance with consent conditions	No	Yes	Yes	Yes	
		RMA Consent - Discharge of Contaminants to Land	100% compliance with consent conditions	Yes	Yes	Yes	Yes	
		Equipment Failure of critical components within the treatment and disposal system	No equipment failures that impact on compliance with resource consent conditions	Yes	Yes	Yes	Yes	
	Pump Stations	Odour complaints from pump stations	No odour complaints originating from pump stations	No 2 events	No 2 events	No 1 event	Yes	
		Pump station wet weather overflows	No overflow events occurring for the contracted contributor flows	No 2 events	No 7 events	No 5 events	No 6 events	
		Pump station overflows resulting from power failure	No overflow events occurring	No 1 event	Yes	Yes	Yes	
		Pump station overflows resulting from mechanical failure	No overflow events occurring	No 2 events	No 1 event	No 1 event	Yes	
	Pipelines	Resolator Breaks	No resolator breaks	Yes	Yes	No	Yes	
		Air valve malfunctions	No air valve malfunction that result in wastewater overflows	Yes	Yes	Yes	Yes	
Capacity	Treatment & Disposal	Overloading system capacity	Treatment and disposal up to all contracted loads and flow	Yes	Yes	Yes	Yes	
	Pump Stations	Overloading system capacity	No overflows for all pump stations	No 2 events	No 7 events	No 5 events	No 6 events	
Reliability	Treatment & Disposal	Equipment failure of critical components	No equipment failures that could lead to non-compliance with resource consent conditions	No	Yes	Yes	Yes	
	Pump Stations			Yes	Yes	Yes	Yes	
	Pipelines			Yes	Yes	Yes	Yes	
Responsiveness	Treatment & Disposal	Speed of response for emergency and urgent maintenance works	Achievement of Response times specified in Maintenance Contract	Yes	Yes	Yes	Yes	
	Pipelines	Speed of response for routine and programmable maintenance works	Achievement of Response times specified in Maintenance Contract	Yes	Yes	Yes	Yes	
Key Contributor Relationships	Treatment & Disposal	Overall satisfaction	Agreed levels of service provided to all Contributors	Yes	Yes	Yes	Yes	
	Pump Stations			Robust charging structure is put in place	Yes	Yes	Yes	Yes
	Pipelines			Contributors are satisfied with Sewerage Scheme	Yes	Yes	Yes	Yes



**Figure 5: Pump Station Overflow Causes**

3.2 It is anticipated that the capacity improvements completed as part of the regional pipeline upgrade project will significantly improve the ability to avoid overflows at pump stations during wet weather events.



**Figure 6: Odours**

3.3 While a number of odour complaints were investigated none were found to be associated with any NRSBU activities.

#### 4. Customer Group

- 4.1 Four Customer group meetings were held during the year. Customers continue to see cost effective and efficient operation of the regional scheme as the most important task of the NRSBU and this is a high priority for the Board.
- 4.2 The survey also showed that most customers feel that the NRSBU is responsive to their needs.

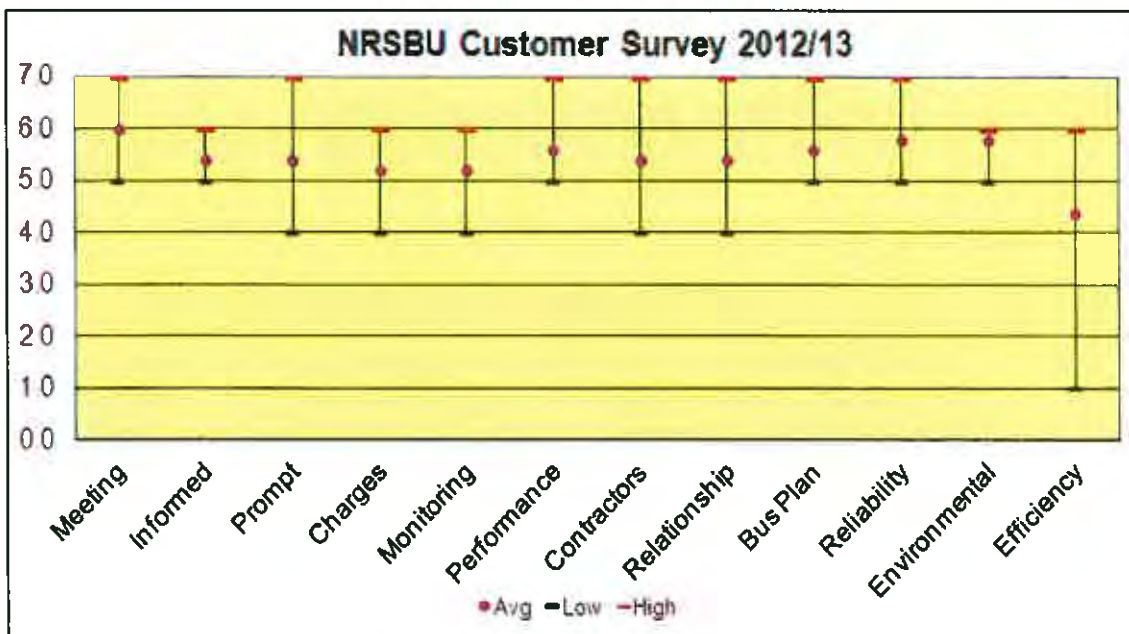


Figure 7: Customer Survey Results 2012/2013

- 4.3 Areas of dissatisfaction identified will be dealt with.

#### 5. Performance Measured Against Strategic Business Objectives

- 5.1 The strategic goals of the NRSBU set the basis for performance measurement and longer term strategies. Six Key Result Areas are identified and a set of Key Performance Indicators developed to measure the performance of the NRSBU. The following section reports the performance of the NRSBU towards achieving the 2012-13 performance objectives.

#### Wastewater reticulation, treatment and disposal services meet customers' long term needs

Objective	Key Performance Indicator	Performance
Sufficient reticulation, treatment and disposal capacity is available for loads received.	Loads do not exceed the capacity of system components.	The loads discharged to Bell Island is reported in appendix C and show that the plant continues to have adequate capacity.

<b>Objective</b>	<b>Key Performance Indicator</b>	<b>Performance</b>
Intergenerational equity is maintained.	Loans are repaid over 30 years (the average life of the assets).	The distribution to shareholders, as measured over a three year period, does not breach this requirement.
Customers are encouraged to engage with the organisation and are satisfied with the service.	All customer representatives attend at least 75% of customer meetings.  Customer surveys show an average score of at least 5 out of 7 on satisfaction with services.	Achieved. Customer engagement will be improved by scheduling meetings with individual contributor representatives between combined NRSBU customer meetings.  An average of 5.4 was achieved.
Levels of service are defined in all contracts and are met.	100% compliance with service level agreements by all major contractors.	The new operation and maintenance contractor is required to review existing operation and manuals.

5.2 The cost of wastewater reticulation, treatment and disposal services is minimised

<b>Objective</b>	<b>Key Performance Indicator</b>	<b>Performance</b>
The costs of reticulation, treatment and disposal processes are minimised.	Total reticulation, treatment and disposal costs per population equivalent are maintained at current levels or reduced when adjusted for CPI.  All capital projects are delivered within budget.	The operational cost for 2012/13 is \$16.65 per population equivalent <sup>1</sup> , an increase of 4.8% over the previous year. Note1: Used European Union standard of 54g BOD/day per person and based the calculation on sum of the mean contributor discharge to Bell Island.  Achieved. Performance is reported in section 6.
The economic lives of all assets are optimised.	A 3 yearly independent audit of asset management practices confirms this.	Assessment programmed for 2014/15.
Customers understand the benefits of demand management and the costs, risks and environmental implications of increasing demand.	Demand management policy is developed by December 2012.  Customer contracts are reviewed by December 2012 to ensure that charging mechanisms support the demand management policy.	Implementation delayed until 2014 to allow new operation and maintenance contract to be embedded. The new operation and maintenance contract includes the development of capacity model and review of the treatment plant capacity.



5.2.1 The cost per population equivalent is affected by changes in the loads discharged to Bell Island. This performance measure is considered a perversion as a decrease in loads discharged to the plant lead to an increase in the value reported. This performance measure will be amended to provide a more meaningful result in future.

Objective	Key Performance Indicator	Performance
<p>Customers understand the benefits of demand management and the costs, risks and environmental implications of increasing demand.</p>	<p>Report on Nelson City Council (NCC) and Tasman District Council (TDC) progress towards implementing their own load management policies and plans by June 2013.</p> <p>Loads do not exceed the capacity of the components of the system.</p>	<p>NCC has initiated the first stages of their inflow and infiltration (I/I) programme and continues to develop this programme. Their 2012/13 I/I was based on operator knowledge and issues identified. The programme included smoke testing, dye testing and closed circuit television inspections at a cost of \$70,000. For the 2013/14 financial year NCC has allocated \$87,000 for stormwater inflow reduction and \$41,000 for CCTV work targeting infiltration reduction. NCC is working towards using their wastewater model to develop a longer term I/I programme through the identification of high inflow and infiltration areas.</p> <p>TDC has a budget provision of on average \$175,000 per annum for the next 20 years to investigate and reduce inflow and infiltration.</p> <p>All contributors have exceeded contracted loads on occasions. Performance is reported in Appendix C. The monitoring of the combined effect of discharges continues to indicate that individual discharges does not seriously affect the ability of the NRSBU to treat the wastewater discharged.</p>
<p>Technology choices are well understood and are proven to be stable and cost effective.</p>	<p>Technology choices are supported by cost benefit analysis, independent peer review, energy efficiency analysis, risk analysis and, where appropriate, by other users of those technologies.</p>	<p>The development of benchmark reporting is ongoing and is a deliverable in terms of the new operation and maintenance contract that starts on 1 October 2013.</p>

5.3 Risks associated with the services provided are identified and mitigated to a level agreed with customers

<b>Objective</b>	<b>Key Performance Indicator</b>	<b>Performance</b>
Risk management plans include all significant environmental, cultural, social economic and contractual risks.	Zero unidentified events which impact the agreed levels of service occur.	Achieved. Risk management plans will be further developed as part of the 2013-15 asset management plan review.
Contingency plans adequately address emergency events.	Customer representatives review and approve the plans annually.	Contingency plans for the NRSBU and contributors were amended to reflect the additional network capacity following the commissioning of the regional pipeline upgrade work completed in 2012.
Customers engage with the risk assessment process, understand and accept the important risks and the level of mitigation provided.	Customer representatives review and approve the risk management plan annually and following any incidents which require activation of the plan.	Risks associated with earthquakes and other natural hazards were reviewed based on the Christchurch, other international earthquake events and technical information available on specific subject matter during the asset management plan review processes. Initiatives to gain a better understanding of these events by the owners of the NRSBU will be fed into the asset management plan as this information becomes available through "Lifelines" and owner organisations.

5.4 NRSBU operates sustainably and endeavours to remedy or mitigate any identified adverse environmental impact.

Objective	Key Performance Indicator	Performance
Energy efficiency at the plant is increased.	An energy audit is conducted by December 2012.  Targets are set for reductions in energy use by June 2013 and are reported on from that date.	Energy review was completed in 2012 and the auditor reported that the site was found to fit into the top 1% of Energy Audits they have completed for operation efficiency.  Programmed for implementation with new operation and maintenance contract.
Reuse of outputs from the scheme is regularly considered and implemented where there are benefits.	Current capacity to utilise beneficial application of biosolids to land is sustained.  Beneficial reuse of treated waste water is maintained or increased.	100% of the biosolids treated at Bell Island are beneficially applied to Radiata pine plantations belonging to Tasman District and Nelson City Council.  75,788m <sup>3</sup> used for irrigation during 2012/13.

5.5 The operation and maintenance contract that will become operational on 1 October 2013 includes the operational review of all processes employed at Bells Island and incorporates the development of benchmarking of operational performance.

Objective	Key Performance Indicator	Performance
Shareholders are satisfied with the strategic direction and the economic performance of the business unit.	All strategic and business plans are approved by shareholders.  All budget projections are met.	The Business and Strategic Plan was considered by both owners in April 2013.  Actual expenditure was well within the approved budgets. Saving on renewal budgets were generated as a result of the review of the condition of assets and adjustment of useful lives of specific assets.



<p>Good relationships are maintained with all stakeholders including owners, iwi, customers, contractors, neighbours, and the wider community.</p>	<p>All complaints or objections are addressed promptly.</p> <p>All applications for resource consents are approved.</p> <p>Up to date information on activities and achievements is publicly available.</p> <p>All stakeholders are identified and reporting, communication and consultation targets are set and met by June 2013.</p>	<p>Achieved.</p> <p>A resource consent was obtained for the emergency repair work to the rising main at Orphanage Creek.</p> <p>The NRSBU website is reviewed annually and news items are posted following Quarterly Board meetings.</p> <p>Achieved.</p>
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5.6 Following the most recent customer review it was decided that staff will in future meet separately with the five contributors between quarterly Board meetings to provide feedback and procure improved understanding of customer concerns and needs.

5.7 All statutory obligations are met.

Objective	Key Performance Indicator	Performance
<p>All statutory obligations are identified and met and are included in contracts with suppliers.</p>	<p>Full statutory compliance requirements are identified by June 2013 and reporting mechanisms defined.</p>	<p>Achieved.</p>
<p>All resource consents requirements are met.</p>	<p>Compliance with resource consent conditions.</p>	<p>Achieved.</p>

## 6. Capital Expenditure 2012/13

<b>Renewal Plan (\$,000)</b>	<b>Budget plus carry-overs</b>	<b>Actual</b>	<b>Comments</b>
Miscellaneous	20	0	Scada implementation delayed.
Pump Stations and Rising Mains		19	Replaced Variable Speed Drive (20 years old) for duty pump at the Beach Road pump station. Brought replacement forward by one year.
Inlet, Aeration Basin, Clarifier and Ponds	78	0	Delayed replacement of Zullig dissolved oxygen equipment (10 years old) following repairs. The performance of the automated systems is monitored against manually operated systems. Once the evaluation is completed a decision will be made relating to the automated monitoring of dissolved oxygen on the ponds.
Solids Handling	354	107	A-Train renewal. Replace floor section with concrete floor and replace roofs. Work programmed for completion in September 2013.
Rabbit Island	20	35	Replaced tank three based on condition. Sections of tank rusted through.
Roads	100	111	Improved condition of access road and surfacing of road along the top of the pond embankment.
<b>Total</b>	<b>572</b>	<b>272</b>	

- 6.1 Renewals are programmed based on expected life and condition assessments carried out as part of the annual valuation review. During the year that the renewal is programmed the asset condition is reviewed by the operation and maintenance contractor before the renewal is approved.
- 6.2 Following a condition assessment of the A-train sludge tanks it was decided to recondition the tank, replace the floor and roofs.

<b>Upgrade Plan (\$,000)</b>	<b>Budget plus carry-overs</b>	<b>Actual</b>	<b>Comments</b>
New Rising Main and Pump Station upgrade. Richmond to Bells Island	1,396	688	Project completed. Final sign off December 2013 following maintenance period. Surplus following review of condition of old outfall pipeline indicated that no additional remedial work was

			required.
Primary Clarifier	788	53	Project completed. Surplus following review of requirement for installation of launder covers and centrifuge.
Outfall Capacity Upgrade	144	14	Project completed.
Expand Biosolids Treatment	1,000	71	Project delayed following negotiations with contractor around Regional Pipeline Upgrade completion. Revised completion date 30 September 2013.
Resource Consent	15	2	Programmed to follow completion of Regional Pipeline Upgrade, revised completion date 30 June 2014.
Purchase of land	210	195	Purchase of land from New Zealand Transport Agency for Saxton pump station completed.
<b>Total</b>	<b>3,554</b>	<b>1,023</b>	

## 7. Scheme Capacity Trends

### Treatment Plant

- 7.1 The increase in flow to Bells Island is consistent with the flow projections on which the most recent upgrades were based.

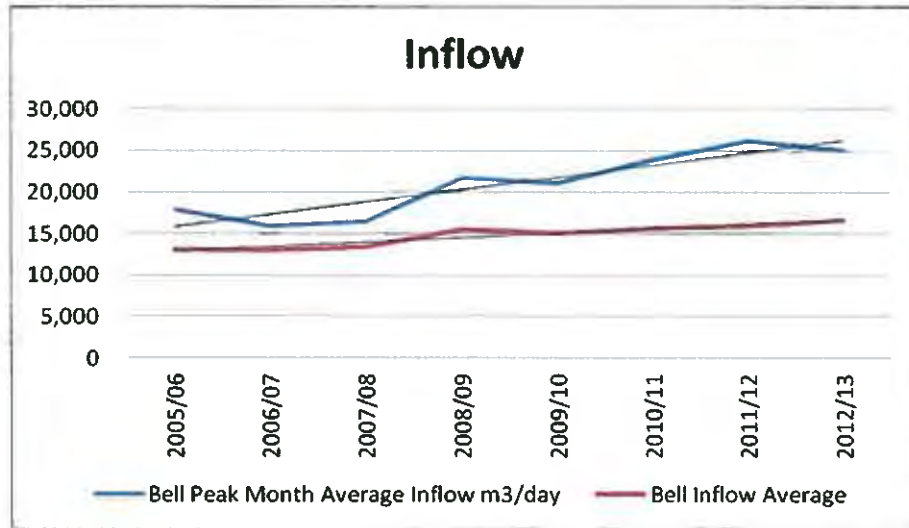


Figure 8: Shows the increased inflows into Bells Island

- 7.2 The total suspended solids discharging to Bells Island has shown a significant decrease since the new disposal of trade waste agreements were put in place. It is considered that this decrease results from the improved on site wastewater treatment by the three industrial contributors leading up to and following the implementation of the new customer contracts that were signed in 2007.

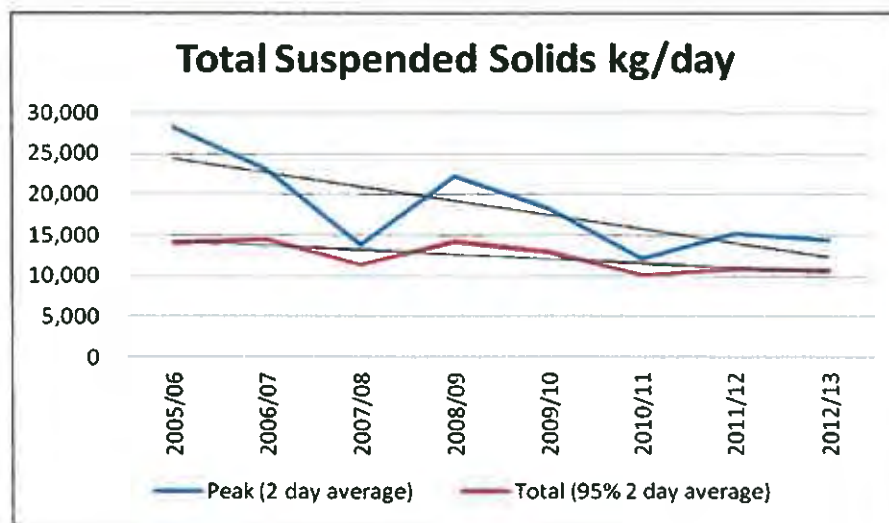
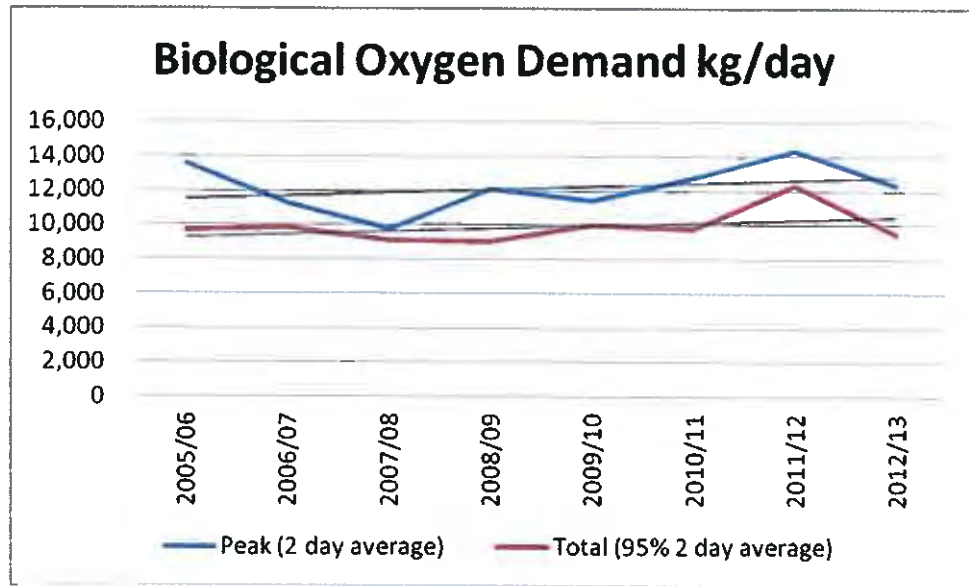


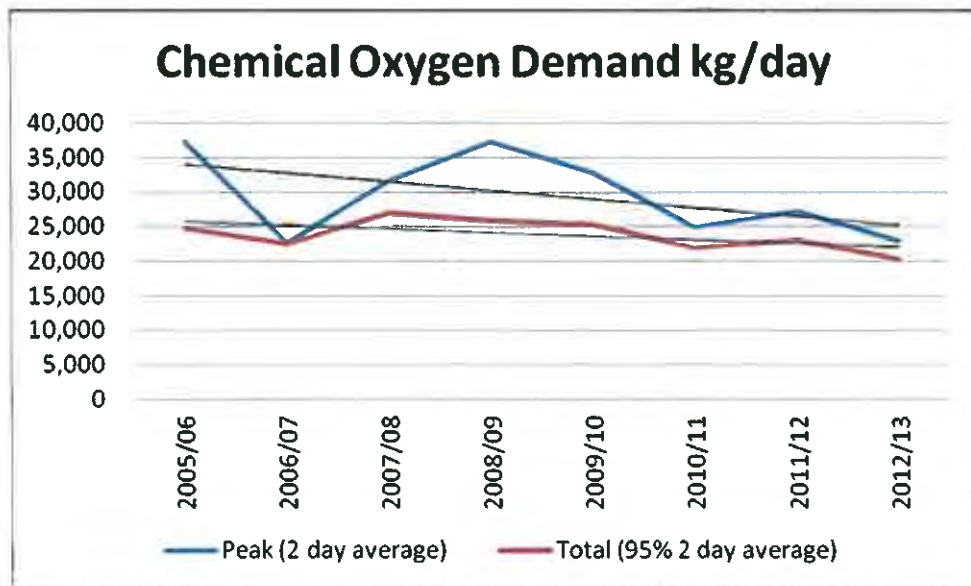
Figure 9: Decrease in suspended solids following the signing of the Disposal of Trade Waste Agreement

7.3 The detailed graphs in appendix C shows that the biological oxygen demand in the inflow has decreased consistently over the period since the new trade waste agreements were affected.



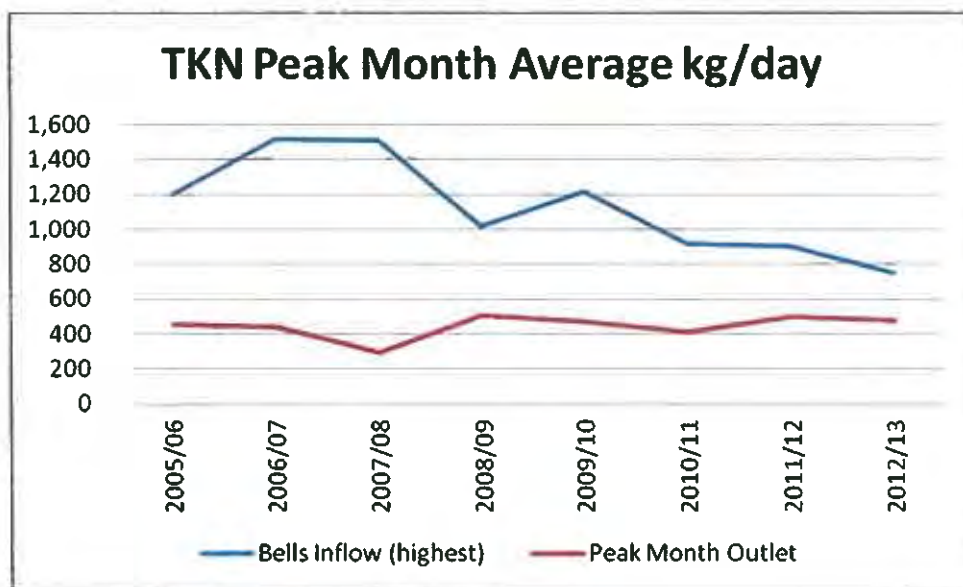
**Figure 10: Biological oxygen demand**

7.4 The chemical oxygen demand (figure 11) is clearly trending lower and it is considered that the peak loads are likely to grow moderately from present levels. Future demand projections should be adjusted to these base levels as it is considered that the decrease in loads is related to the implementation of the new disposal of trade waste agreements in 2007. These agreements provided incentives to industrial customers to improve on site treatment of waste water.

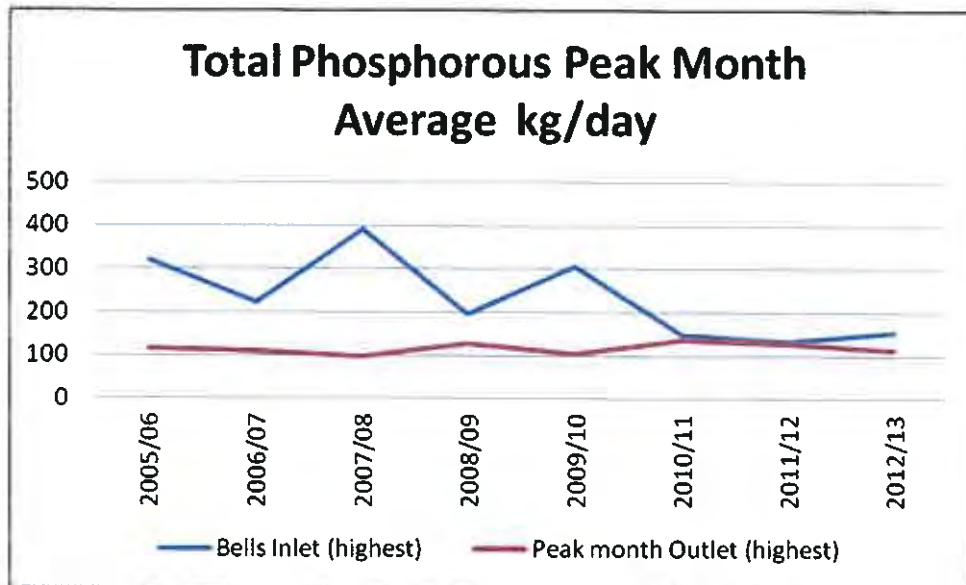


**Figure 11: Shows the decrease of peak chemical oxygen demand since the implementation of the Disposal of Trade Waste Agreement in 2007**

7.5 The Total Kjeldahl Nitrogen and Total Phosphorous graphs show a decrease in demand. There appears to be a slight increase in the nutrients discharged from Bells Island.

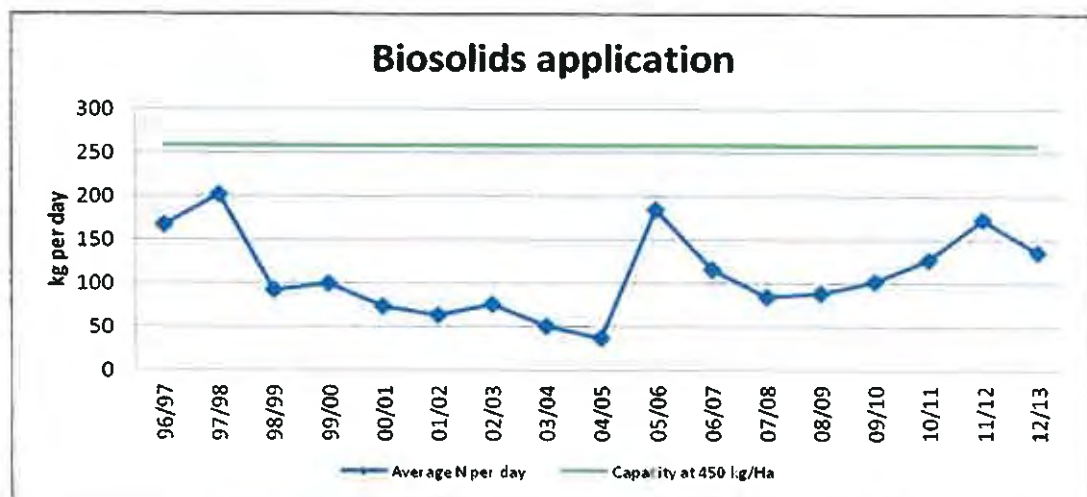


**Figure 12: Shows a decrease in the nutrients discharging to Bells Island**



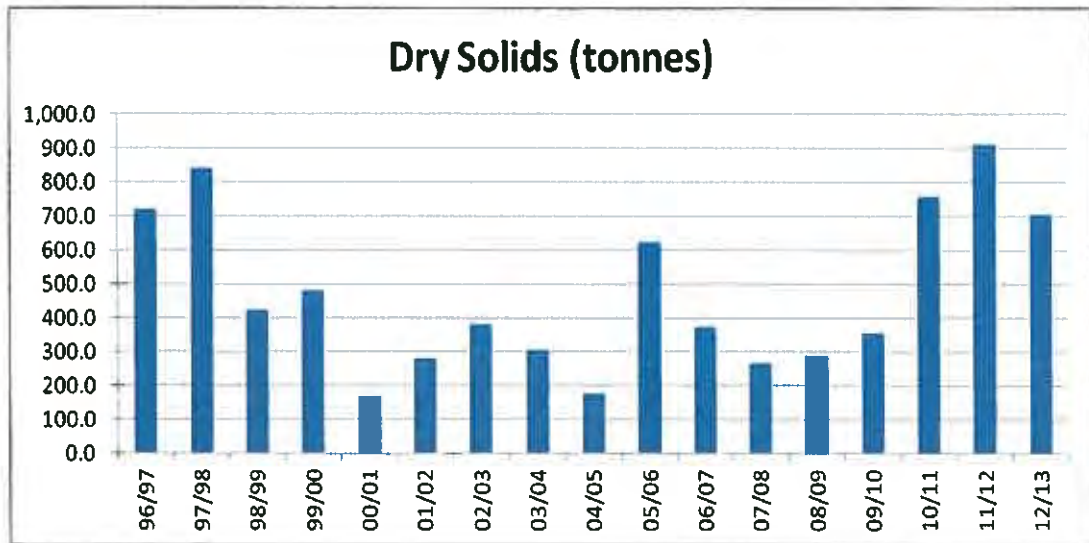
**Figure 14: Shows a decrease in the nutrients discharging to Bells Island**

- 7.6 With average total nitrogen and total phosphorous loads discharging from Bells Island at around 50% of the resource consent limits it is likely that the nutrient removal projects included in the asset management plan will be deferred.
- 7.7 The review of the sludge treatment capacity at Bells Island has confirmed that there is adequate redundancy in the system to establish an operation regime whereby the constraints identified with biosolids storage at Rabbit Island can be mitigated.
- 7.8 The graph below shows that the daily application of nitrogen at Bells Island is less than 60% of the capacity of the forests at Rabbit and Bells Island. This demonstrates that there is adequate land available for biosolids application at the current rate of biosolids production.



**Figure 15: Average daily biosolids application**

- 7.9 The diversion of solids away from the ponds since the completion of the primary clarifier upgrade is significant. This will allow further flexibility in the management of sludge treatment at Bells Island without compromising the ponds.



**Figure 16: Dry solids diverted to pine plantations**

### Contributors

- 7.10 The trends (refer graphs in Appendix C) for discharges from contributors to the NRSBU network shows continued growth in flows and loads. The flows appear to be increasing at the same trend as the increase in flow as recorded at the inlet which is expected if there are no leakages on the network. However, what is significant is decreasing trends for BOD, COD and SS loads at the inlet compared to the increases recorded for these loads at the points where the loads are discharged to the network.
- 7.11 This phenomenon is considered to result from the fact biological treatment is initiated in the network through the interaction of organisms developed in the pre-treatment of wastewater at on-site treatment facilities and also the significant aeration of wastewater that occurs at pump stations
- 7.12 A substantial volume of storm water continues to enter Bells Island. NRSBU work with the two Councils to determine a long term strategy to reduce inflow and infiltration under the management and control of the two Councils.

### Conclusion

- 7.13 The analysis of the scheme capacity trends confirms that there is adequate capacity within the system to treat wastewater discharged to Bells Island and that the decrease in nutrients discharged to the network is significant enough to require a review of the strategies for additional nutrient treatment in future.



## 8. Financial Performance

- 8.1 Explanations for major variations from the NRSBU's 2012/13 Business Plan are as follows:

### Statement of Comprehensive Income

- 8.2 Total Expenses are \$526,000 less than budget due to \$446,000 less interest being incurred as a result of lower than budgeted interest rates and capital expenditure. Depreciation is \$243,000 less than budget due to the June 2011 and 2012 revaluations.
- 8.3 The net surplus is \$283,000 more than budget due to the Revaluation of Derivative Instruments.
- 8.4 The annual fixed asset revaluation this year is \$307,000.

### Statement of Financial Position

- 8.5 The revaluation reserve has increased by \$2,813,000 compared to budget principally due to the movement in valuation indices in both 2012 and 2013 years.
- 8.6 Due to the delays in upgrades the operating cashflows have been used to fund the capital expenditure rather than increasing borrowings.
- 8.7 Trade and other payables and Inter-entity payable have reduced due to the reduction in the capital expenditure activity in June 2013.
- 8.8 Borrowings are \$2,329,000 less than budget due to savings in Capital expenditure.

Signed: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_  
Donna Hiser  
Chair  
NRSBU

## Appendix A Discharge Consent Compliance

Month	Average Daily Inflow	Average Daily Discharge			BOD5 g/m3	CBOD5 g/m3	Suspended Solids g/m3	Total Nitrogen kg/day	Total Phosphorus kg/day	Faecal Coliforms MPN/100ml	Enterococci MPN/100 ml
	m3/day	hrs/day	m3/day	Meter Diff (%)							
Limit	20 000		20 000	5 00	50		150	600	150	100 000	
Jul 12	16 920	5 8	21 466		69		40	335	73	1 60E+03	2 00E+02
					78		17	313	71	1 50E+03	1 20E+02
					43		28	279	64	1 60E+03	3 20E+02
					17		33	331	64	1 60E+03	2 00E+01
					69		37	352	58	5 40E+02	1 40E+02
Aug 12	23 090	5 5	20 582		72		54	321	62	7 00E+02	8 00E+01
Sep 12	23 127	5 7	20 328		116		47	222	55	3 50E+02	8 00E+01
Oct 12	16 515	5 4	15 373		137		104	252	54	3 00E+02	1 00E+01
Nov 12	12 210	3 0	8 618		64		117	153	41	8 00E+02	4 00E+01
Dec 12	11 031	3 0	9 299		99		155	214	66	2 00E+03	3 00E+02
Jan 13	15 061	3 9	10 840		167	45	124	325	88	1 90E+03	1 30E+03
Feb 13	10 881	3 2	7 870	3 00	56	23	92	173	47	4 90E+03	5 60E+02
Mar 13	12 255	3 3	8 650		33	23	92	130	61	2 90E+03	1 30E+03
Apr 13	19 066	5 0	14 801		38	26	40	207	11	1 90E+03	5 40E+01
May 13	17 414	3 8	19 952		39	29	42	479	112	2 50E+04	4 10E+02
Jun 13	24 292	4 5	19 114		27	26	66	459	65	1 60E+03	2 00E+01
	16 822		14 741	5 00%	67	26	51	296	63	1 60E+03	1 30E+02

Test	Results	Limits	Comments
Median Faecal Coliform Count	1 60E+03 /100ml	<20,000 /100ml	O K
No of samples over 100,000/100ml	0	<6.25%	O K
Median BOD5	67 g/m3	<40 g/m3	Over Limit
No of samples over 50 g/m3	10	<6.25%	Over Limit
Median Suspended Solids	51 g/m3	<100 g/m3	O K
No of samples over 150 g/m3	1	<6.25%	O K
1 April - 31 July			
Median Total Nitrogen	333 kg/day	<500 kg	O K
No of samples over 600 kg	0	<12.5%	O K
1 Aug - 31 March			
Maximum Total Nitrogen	325 kg/day	<600 kg	O K
No of samples over 500 kg	0	<12.5%	O K
Maximum Total Phosphorous	112 kg/day	<180 kg	O K
No of samples over 150 kg	0	<6.25%	O K
Mean Daily Flow	14 741 m3	<20,000	O K

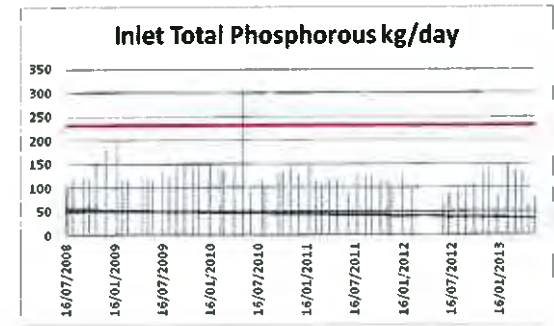
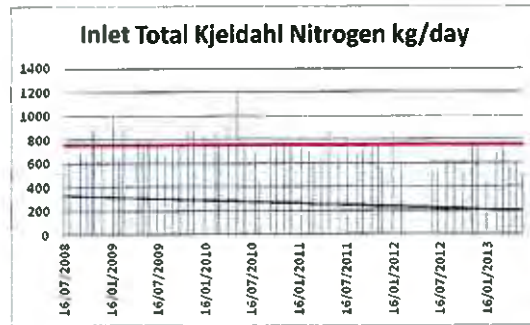
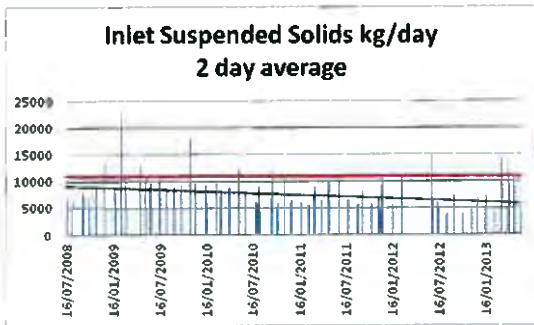
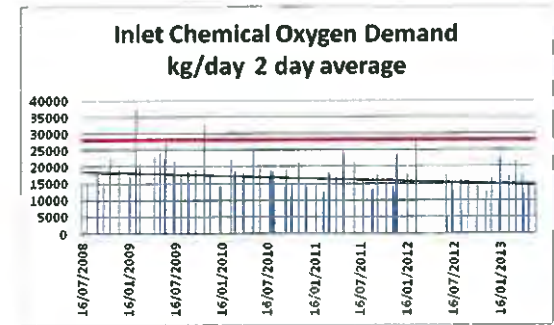
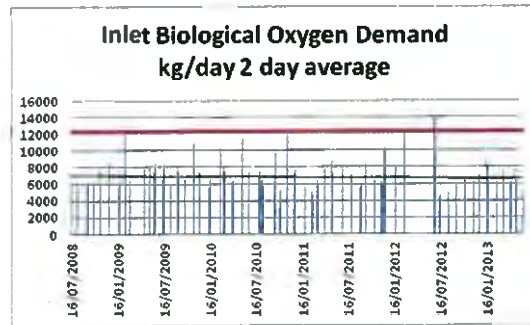
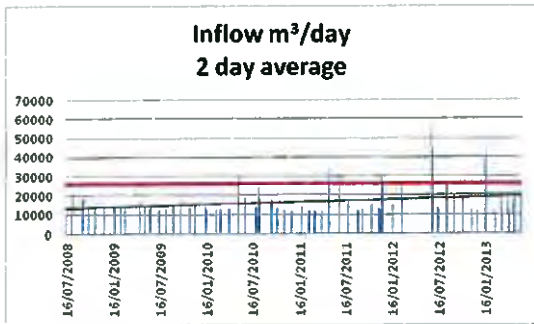
## Appendix B Contributor Heavy Metal Results

2012-13

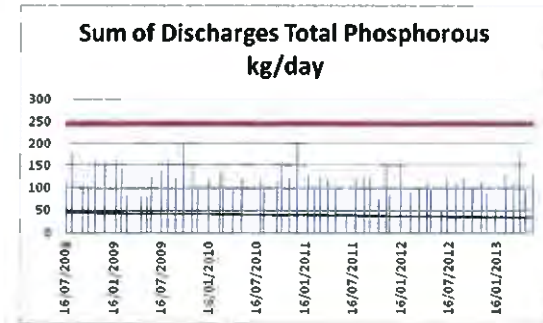
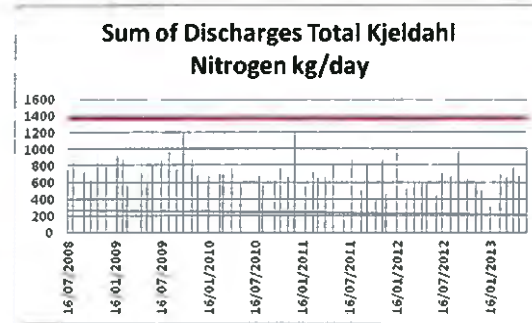
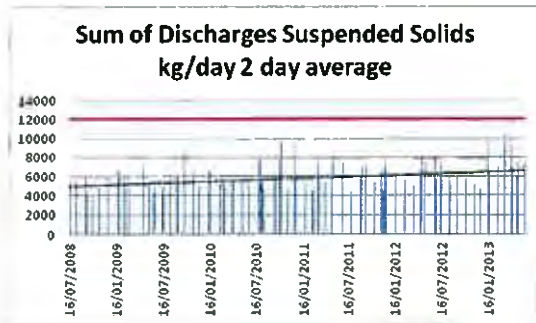
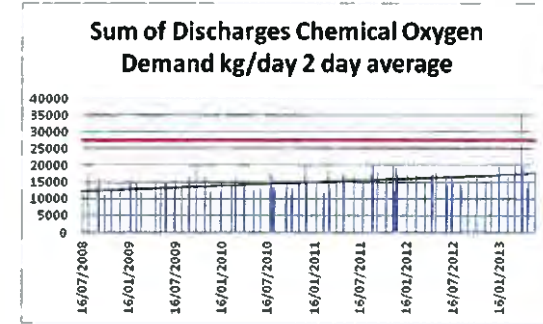
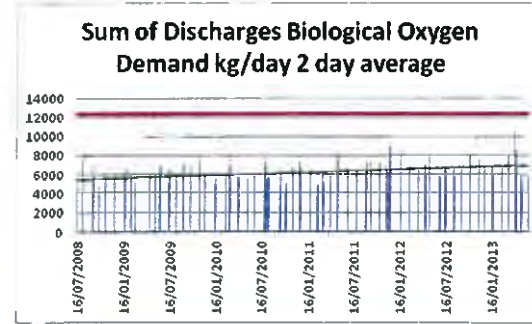
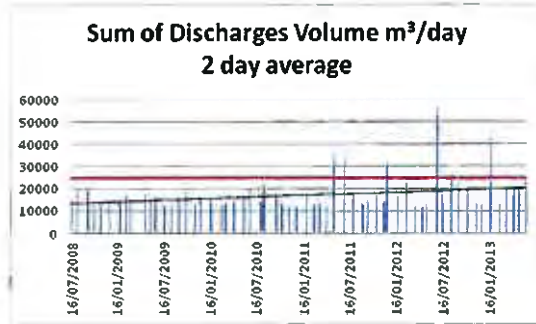
Heavy Metals & Other Substances	Alliance 16/08/2012	ENZA 17/08/2012	Sextons 16/08/2012	Richmond 16/08/2012	Airport 16/08/2012	Mepua 16/08/2012	NPI 16/08/2012	Wakatu 16/08/2012	Songer 16/08/2012	Trade Waste Bylaw Limit
Cadmium	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.5
Copper	0.102	0.051	0.029	0.035	0.025	0.063	0.09	0.112	0.024	5
Nickel	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.028	<0.011	<0.011	5
Zinc	0.30	0.07	0.08	0.15	0.08	0.08	0.30	0.20	0.06	5
Chromium	<0.011	0.012	<0.011	<0.011	0.021	<0.011	0.016	<0.011	<0.011	5
Lead	0.0032	0.0057	0.0029	0.0024	<0.0021	<0.0021	0.0081	0.0117	<0.0021	5
Boron	<0.11	0.13	<0.11	0.24	0.16	<0.11	0.12	<0.11	<0.11	25
Arsenic	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	1
Fluoride	0.06	<0.05	0.08	0.13	0.08	0.06	0.05	0.1	0.09	5
Sulphide	1.28	0.042	0.116	0.106	0.14	0.023	0.066	0.34	0.043	1
Sulphates(SO4)	16.7	6.5	22	35	30	18	23	43	23	200
Phenols	1.070	0.080	0.032	0.081	0.010	0.020	1.700	0.750	0.340	50
Oil and Grease	92	17	33	24	28	19	240	56	25	
Mercury	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	0.05
pH	7	7	6.7	7	5.9	6.9	4.8	7.3	7.3	
Pesticides										
Cyanide	<0.0010	0.001	<0.0010	<0.0010	0.001	<0.0010	0.003	<0.0010	<0.0010	5

Appendix C

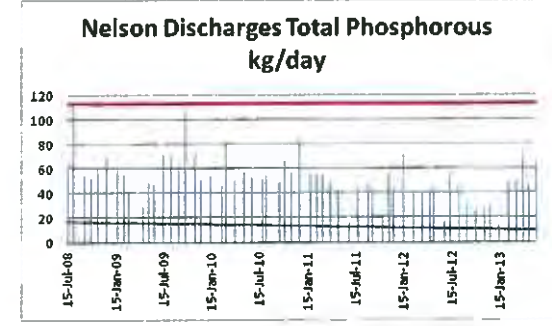
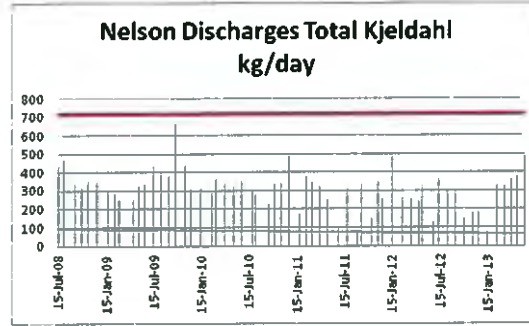
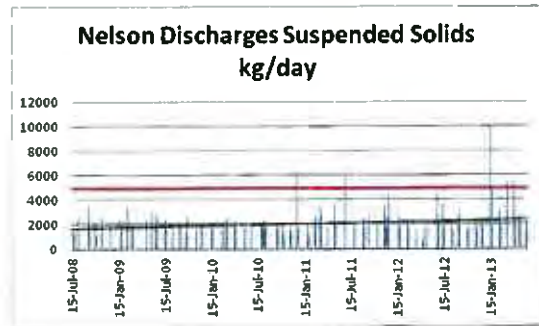
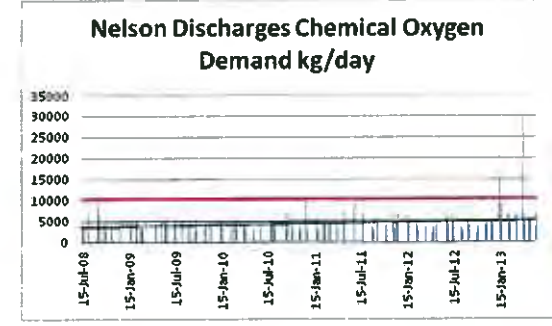
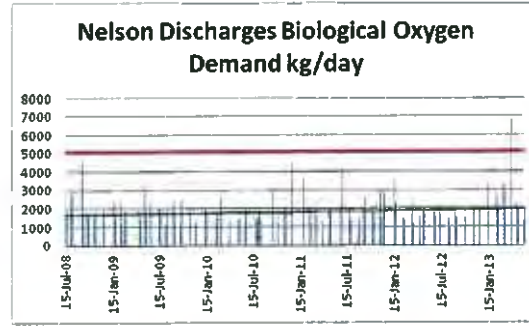
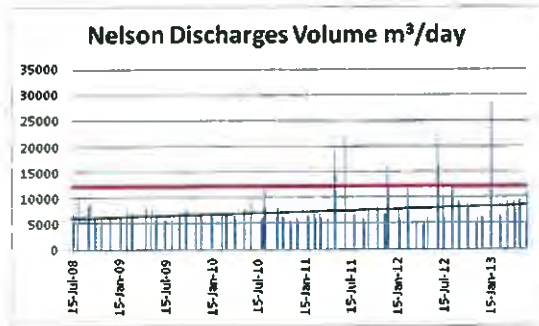
Discharge to Bells Island



## Sum of Discharges to NRSBU Network

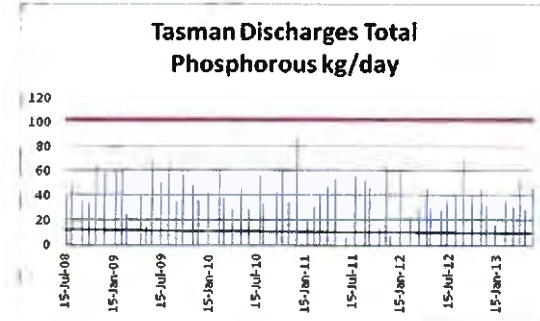
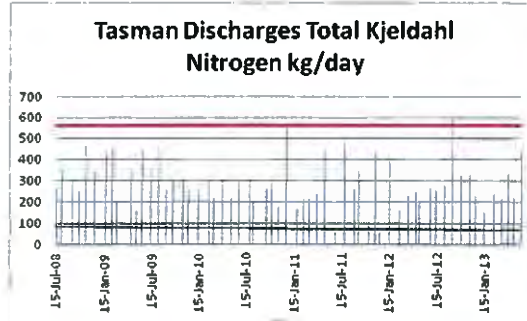
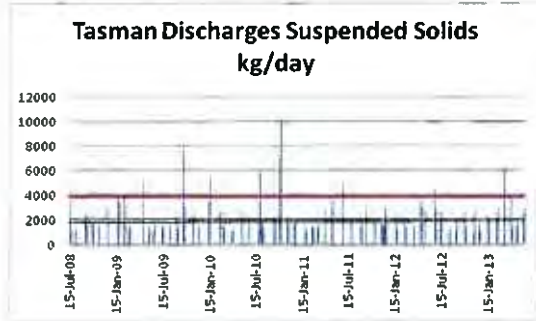
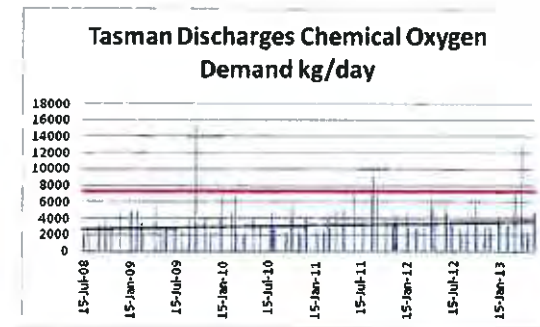
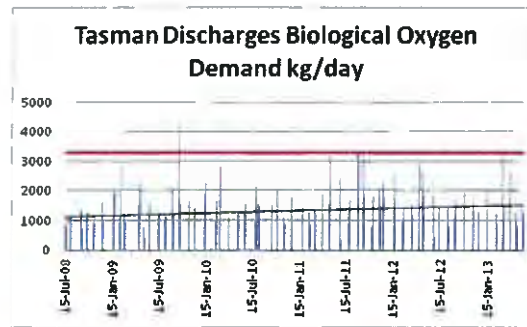
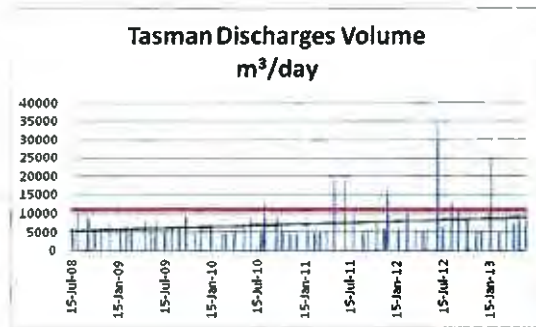


### Sum of Nelson City Council Discharges to NRSBU Network

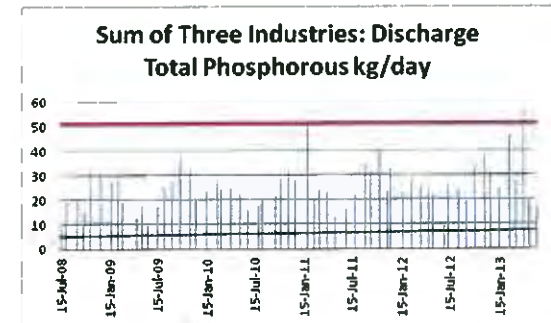
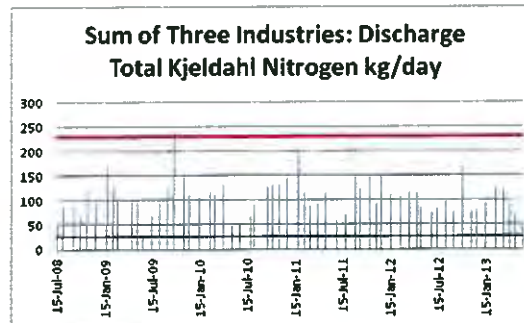
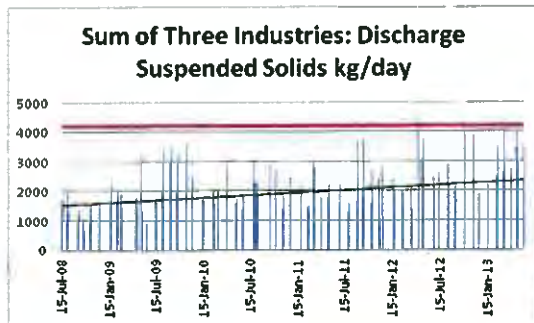
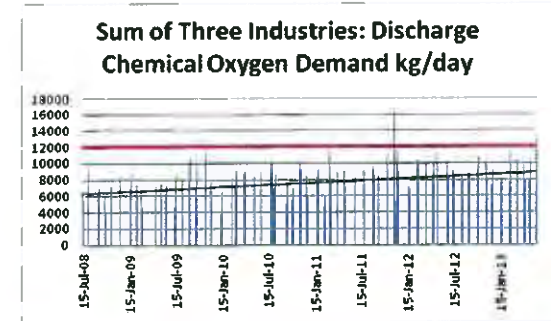
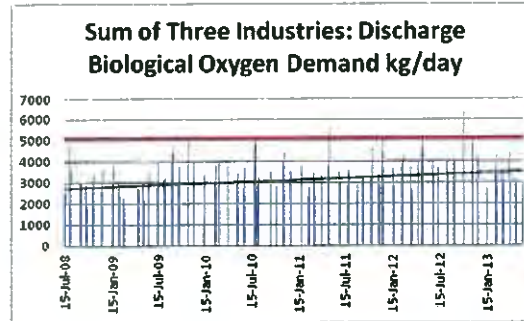
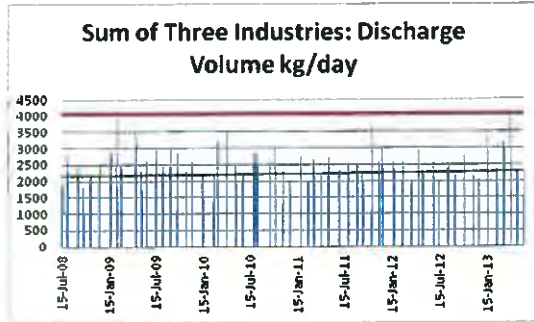




## Sum of Tasman District Council Discharges to NRSBU Network



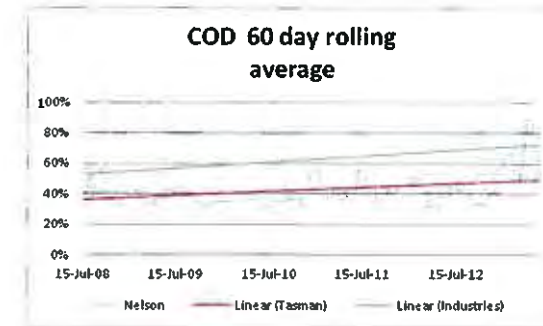
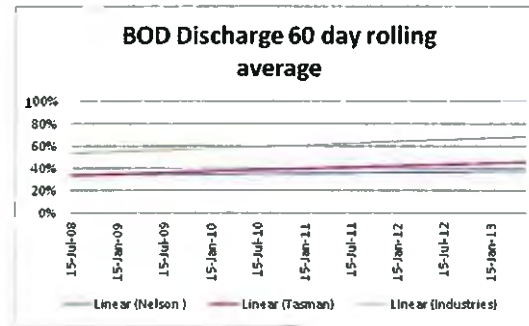
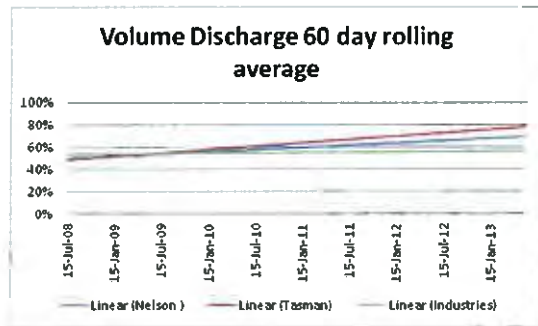
### Sum of the Three Industries



The sum of the three industries demonstrate that agreed limits were occasionally y seldomly exceeded.



## 60 Day Rolling Average of Discharges to NRSBU Network as % of Treatment Capacity



The three groups are well under the agreed allocations.

# Audit Report

## NRSBU Resource Consent Monitoring: Discharge Permit



### 1. Purpose of Report

- 1.1. This report constitutes an assessment of all the monitoring carried out in terms of this resource consent as required in terms of section 4 of resource consent NN000539V1 (Coastal Permit).

### 2. Recommendation

***THAT report NRSBU Resource Consent Monitoring Discharge Permit (1560412) be received;***

***AND THAT the increase of Suspended Solids and Biological Oxygen Demand and variance in Biological Oxygen Demand be investigated as part of the operation and maintenance contract and a further report be submitted to the Board regarding this matter in March 2014.***

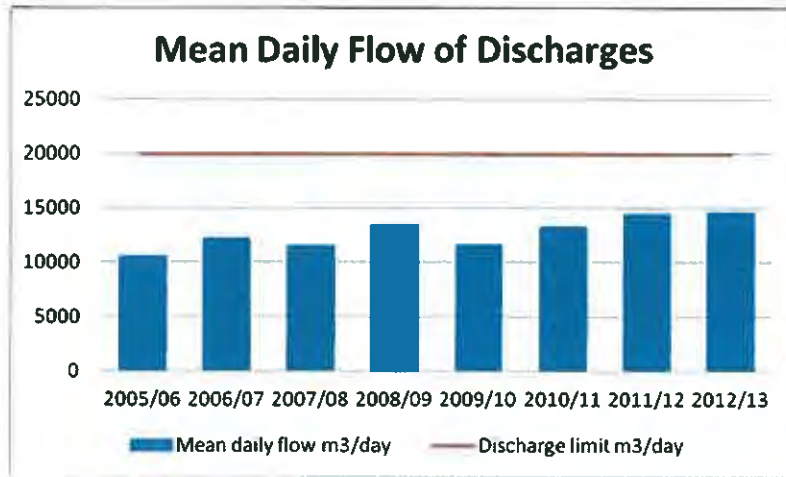
### 3. Background

- 3.1. The Nelson Regional Sewerage Business Unit owns a resource consent requiring reporting to the consenting Authority on the tenth anniversary of the date of commencement of the resource consent.
- 3.2. The aim of the report is to identify any trends or problems that may require a review of the conditions of consent.
- 3.3. A report recommending that no changes to the monitoring are required was forwarded to the compliance officer who will advise the NRSBU of any changes that they may deem necessary.

### 4. Discussion

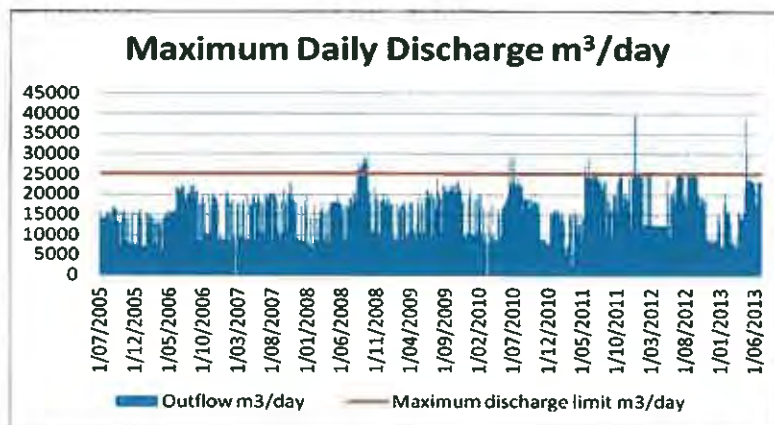
**Monitoring results** (The following sections provide monitoring information in graphical form for easy reference)

- 4.1. Section 8. "The mean daily flow of effluent discharges over a one year period shall not exceed 20,000 cubic metres per day (m<sup>3</sup>/day)".



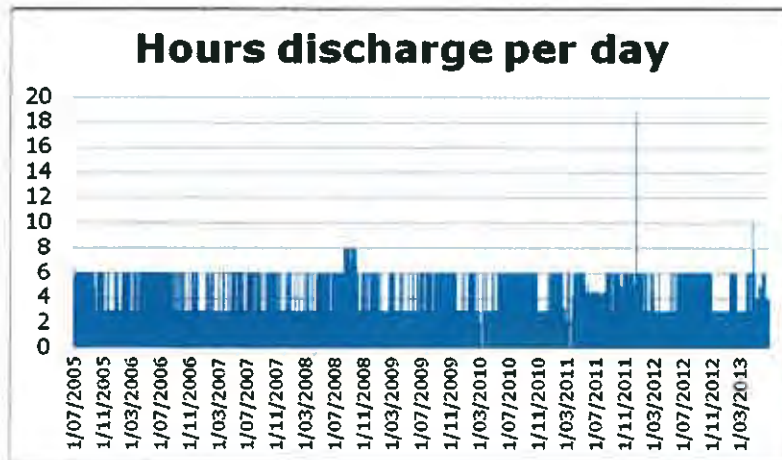
**Figure 4.1: Mean Daily Discharge**

4.2. Section 8 continued. "The total volume of discharges shall not exceed 25,000 cubic metres (m<sup>3</sup>) during any 24 hour period, including the 1,040cubic metres per day (m<sup>3</sup>/day) spray irrigated to land approved under RM071151".



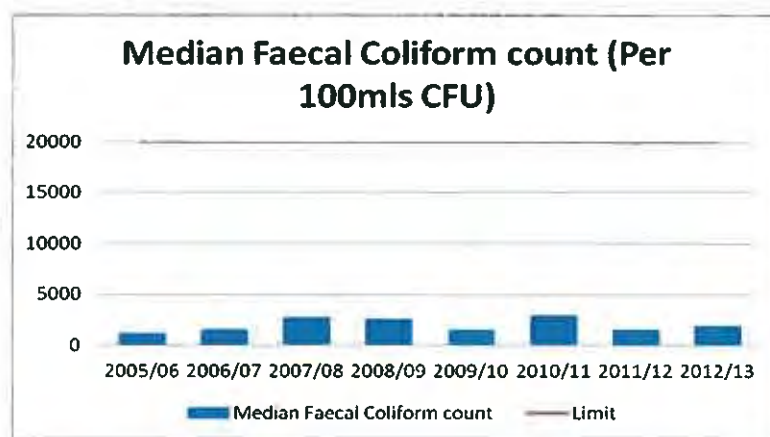
**Figure 4.2: Maximum Daily Discharge**

- 4.2.1. The maximum limit was exceeded on a number of occasions and followed heavy rain events. The outfall booster pump commissioned in June 2011 provides the business unit with more flexibility to better manage the pond buffer capacity.
- 4.3. Section 9. "The discharge of effluent is authorised for a period of up to three hours after any high tide at the outfall, under normal operating conditions."



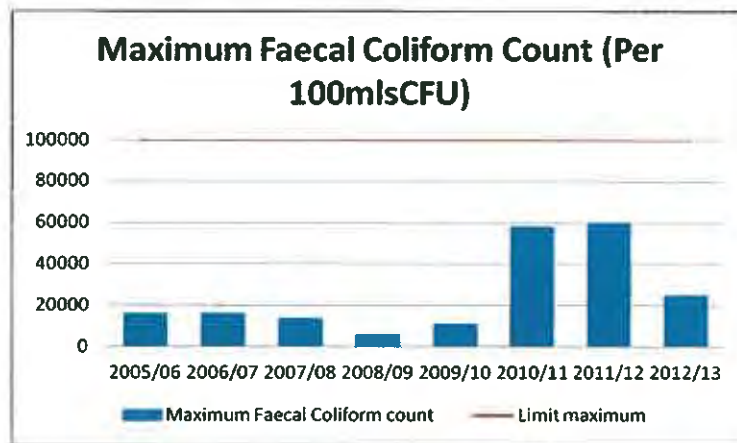
**Figure 4.3: Hours Discharged per Day**

- 4.3.1. The instances where discharges exceeded the 3 hour limit followed heavy rain events and approval for emergency discharges under section 330 of the Resource Management Act.
- 4.3.2. The outfall gate is set so that it will not allow a discharge exceeding 11,900m<sup>3</sup> per discharge or three hours (whichever limit is reached first). Where approval is procured from the consent authority allowing the business unit to exceed these resource consent limits the system must be adjusted by a specialised contractor.
- 4.4. Section 11. a) "The median faecal coliform count over a one-year period shall not exceed 20,000 per 100mls CFU"



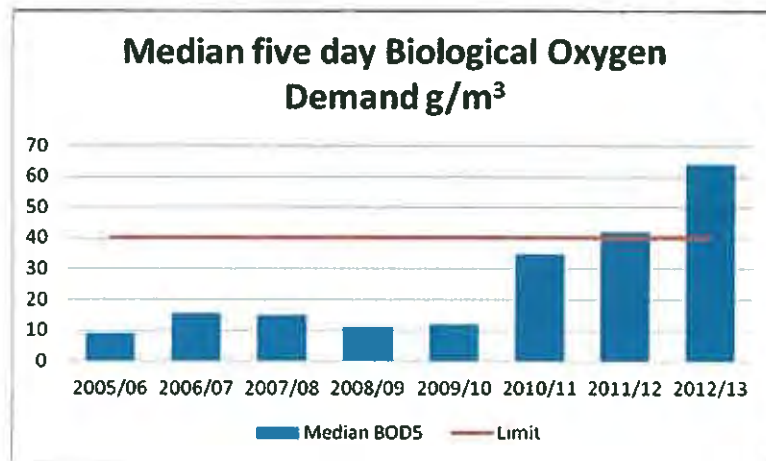
**Figure 4.4: Median Faecal Coliform in Discharge**

- 4.5. Section 11. a) continued.."and not more than 6.25% of samples shall exceed 100,000mls CFU.."



**Figure 4.5: Maximum Faecal Coliform in Discharge**

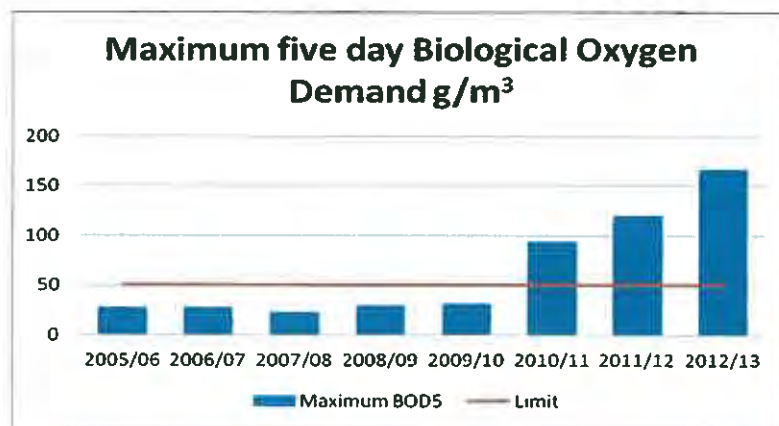
4.6. Section 11 b) "The median five-day Biological (Biochemical) Oxygen Demand (BOD) concentration over a one-year period shall not exceed 40g/m<sup>3</sup>,.."



**Figure 4.6: Median Biological Oxygen in Discharge**

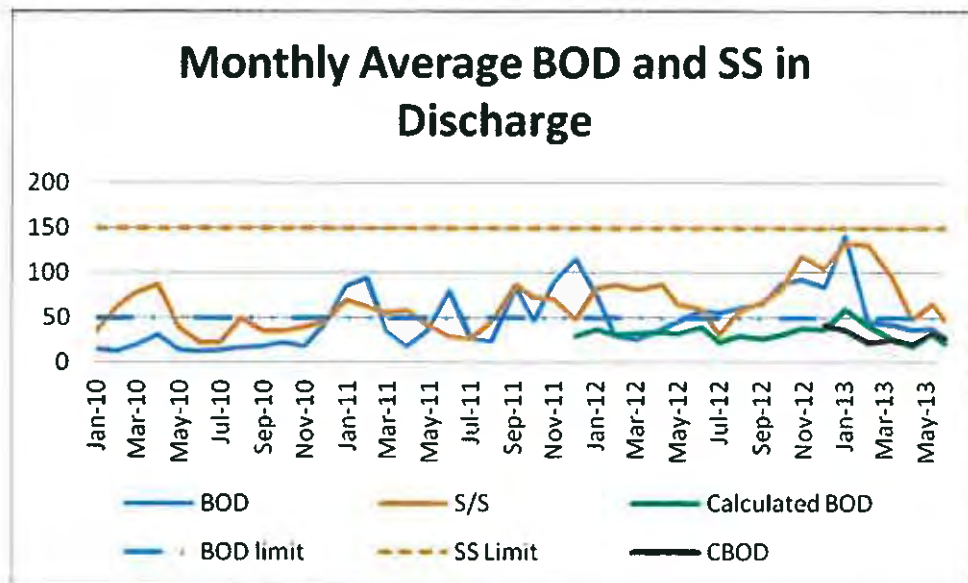
4.6.1. Since January 2011 the Biological Oxygen Demand (BOD) concentration has increased substantially and has also shown considerable variance.

4.7. Section 11 b) continued.. "and no more than 6.25% of the samples shall exceed 50g/m<sup>3</sup>."



**Figure 4.7: Maximum Biological Oxygen Demand**

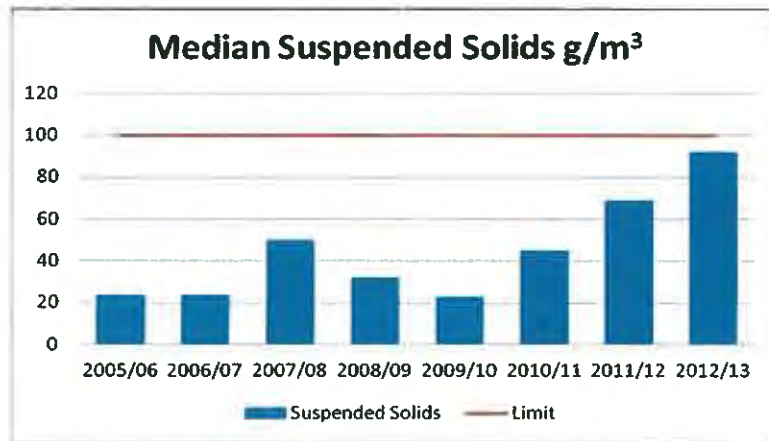
- 4.7.1. Investigations into this matter showed that the test used by the business unit to report this requirement is affected by nitrification occurring in the test bottle which does not occur in the environment. The nitrification in the BOD test distorts the result as the purpose of the BOD test in terms of the resource consent is to measure the biodegradable organic (carbonaceous) content of the effluent.
- 4.7.2. The business unit have expanded the testing regime to test for Total BOD, Carbonaceous BOD and soluble BOD. The following graph shows that the TBOD and CBOD are now converging.



**Figure 4.7.2: Monthly Average BOD and SS in Discharge**

- 4.7.3. The cause for the increased TBOD continues to be investigated but appears to be associated with the introduction of the Primary Clarifier in July 2010. The primary clarifier has generally been out of commission since the end of November 2012 to allow for pro-active maintenance on other parts of the wastewater treatment plant. Considering that the treatment plant has a 40 to 60 day retention period our observations suggest that there is a correlation between the operation of the primary clarifier and the BOD issues observed since January 2011.
- 4.7.4. The business unit will continue testing for and reporting TBOD and CBOD until the cause and effects have been determined.
- 4.8. Section 11 c) "The median Suspended Solids (SS) concentration over a one-year period shall not exceed 100 g/m<sup>3</sup> "





**Figure 4.9: Median Suspended Solids in Discharge**

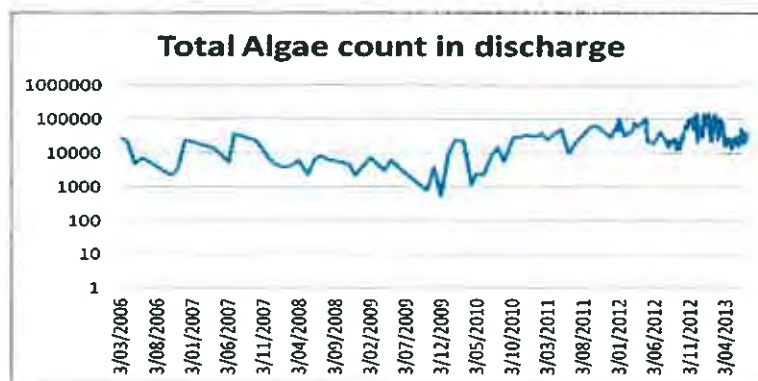
4.9. Section 11 c) continued "and no more than 6.25% shall exceed 150g/m<sup>3</sup>."



**Figure 4.9: Maximum Suspended Solids in Discharge**

4.9.1. The increased suspended solids are also thought to be associated with the introduction of the primary clarifier in July 2010.

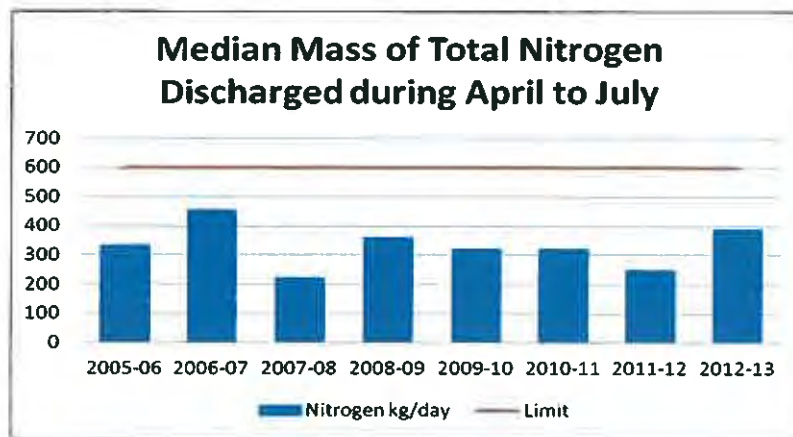
4.9.2. Figure 4.9.1 below shows the sustained increase in algae in the discharge following the introduction of the primary clarifier in June 2010.



**Figure 4.9.1: Total Algae Count in Discharge**

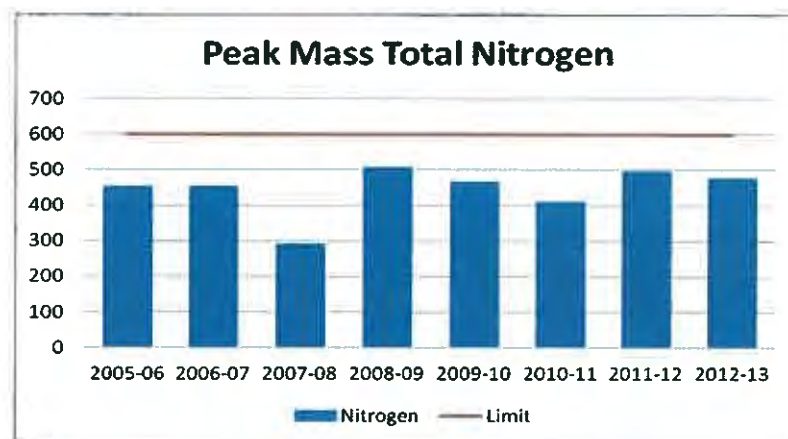
4.10. Section 12 d) "Over the period 1 April to 31 July of any year the median mass of total nitrogen discharged daily shall not exceed 500kg/day".





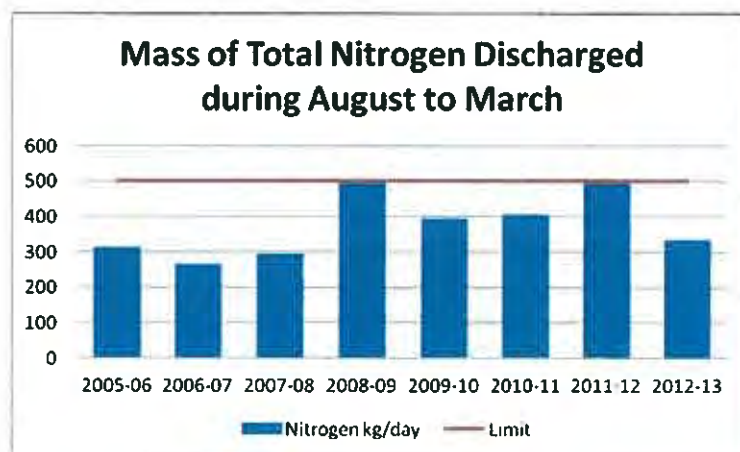
**Figure 4.10: Median Mass Total Nitrogen**

4.11. Section 12 d) continued "and at least 87.5% of samples shall be less than 600kg/day."



**Figure 4.11: Peak Mass Total Nitrogen in Discharge**

4.12. Section 11 e) "Over the period 1 August to 31 March in any year the mass of total nitrogen discharged daily shall not exceed 500kg/day for at least 87.5% of samples taken, and shall at no time exceed 600kg/day."



**Figure 4.12: Seasonal: Mass Total Nitrogen in Discharge**

4.13. Section 11 f) "The mass of total phosphorous discharged daily shall be less than 150kg/day for at least 93.75% of samples and shall at no time exceed 180kg/day."

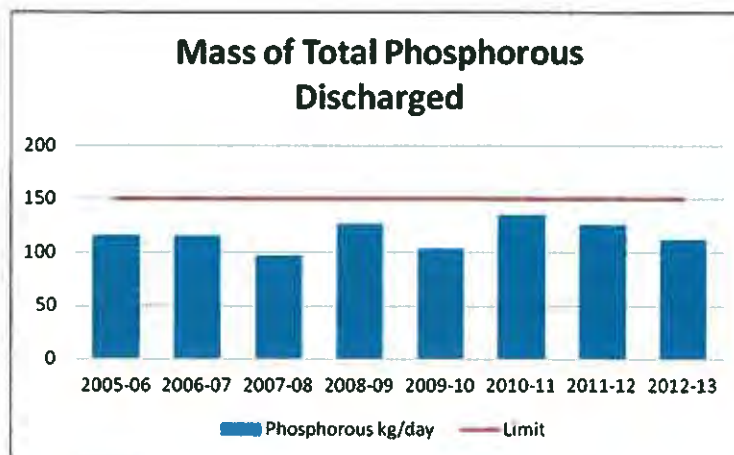


Figure 4.13: Mass Total Phosphorous in Discharge

4.14. Section 11 g) "The amount of the following substances, in grams per cubic metre (g/m<sup>3</sup>) of effluent, shall not exceed the following:"

	Cadmium	Copper	Nickel	Zinc	Chromium	Lead	Arsenic	Sulphide	Cyanide	Phenols	Mercury
Limit	0.28	0.028	0.28	0.5	0.176	0.176	0.5	0.44	0.16	16	0.016
2005	<0.0005	0.003	0.009	<0.01	0.009	<0.003	<0.01	<0.2	<0.001	0.03	<0.0002
2006	<0.003	<0.005	0.01	<0.05	0.009	<0.002	<0.05	<0.5	<0.001	0.02	<0.0002
2007	<0.0005	0.005	0.0031	0.013	0.006	0.006	<0.01	<0.2	0.001	<0.01	<0.0002
2008	<0.0005	0.003	0.0025	<0.005	0.01	<0.003	<0.01	<0.2	0.002	<0.01	<0.0002
2009	<0.0005	0.002	0.0019	0.006	0.006	0.004	<0.01	<0.2	<0.001	<0.01	<0.0002
2010	<0.0005	0.013	0.0022	0.011	0.004	<0.003	<0.01	<0.2	0.001	0.002	<0.0002
2011	<0.0005	0.002	0.0059	0.009	0.005	<0.003	<0.01	<0.2	0.003	<0.01	<0.0002
2012	<0.0003	<0.003	0.004	0.01	0.008	<0.001	0.006	0.028	0.0011	0.017	<0.0003
Max value as percentage of Limit	0.00%	46.43%	3.57%	2.17%	5.68%	3.41%	1.20%	6.36%	1.88%	0.19%	0.00%

Figure 4.14: Heavy Metals in Discharge

4.14.1. The maximum values detected since 2005 have consistently been significantly less than the limits set in the resource consent. There does not appear to be any significant change in trends over time.

4.15. Section 14 "Impact monitoring of the receiving environment shall be commenced in the year starting 1 July 2006 and thereafter at five-yearly intervals. The monitoring shall be in accordance with Annex 2".

4.15.1. The Cawthron Report 2088 (January 2012) received on 7 February 2012 concludes that no adverse effects due to the Bells Island wastewater discharge were detected and that nickel and chromium concentrations in sediments and arsenic concentrations in cockle tissues are thought to be attributable to natural catchment inputs as comparisons amongst potential impact and reference sites suggest that these elevated concentrations were not related to the effluent discharge. Changes observed between the 2006 and 2011 surveys were not indicative of over enrichment and are considered to be related to natural variability over time.

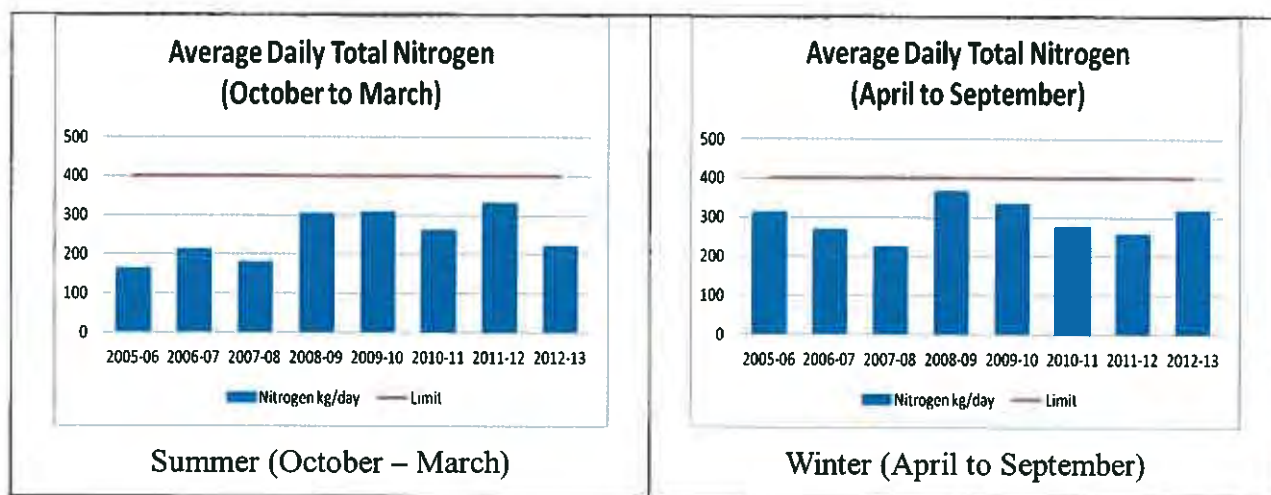
4.16. Section 15 "An assessment of microbiological and nutrient levels shall be carried out in accordance with the sampling programme shown in Annex 3".

4.16.1. The Cawthron report 2046 (November 2011) concludes that:

- The low salinity wastewater discharged to the Waimea Inlet from Bells Island rapidly mixes in the ebb flow channels.
- The water nutrient concentrations are adequately diluted to mitigate eutrophication.
- Potentially toxic conditions were not achieved.
- Phytoplankton characteristics at inner Tasman Bay are typical for the region.
- Receiving water faecal coliform and enterococci concentrations indicate that the Bells Island outfall is not a significant source of bacterial contamination.
- Faecal coliform and enterococci concentrations of deployed mussels indicate that Faecal Indicator Bacteria contributions from Bells Island were minor by way of comparison to catchment runoff.

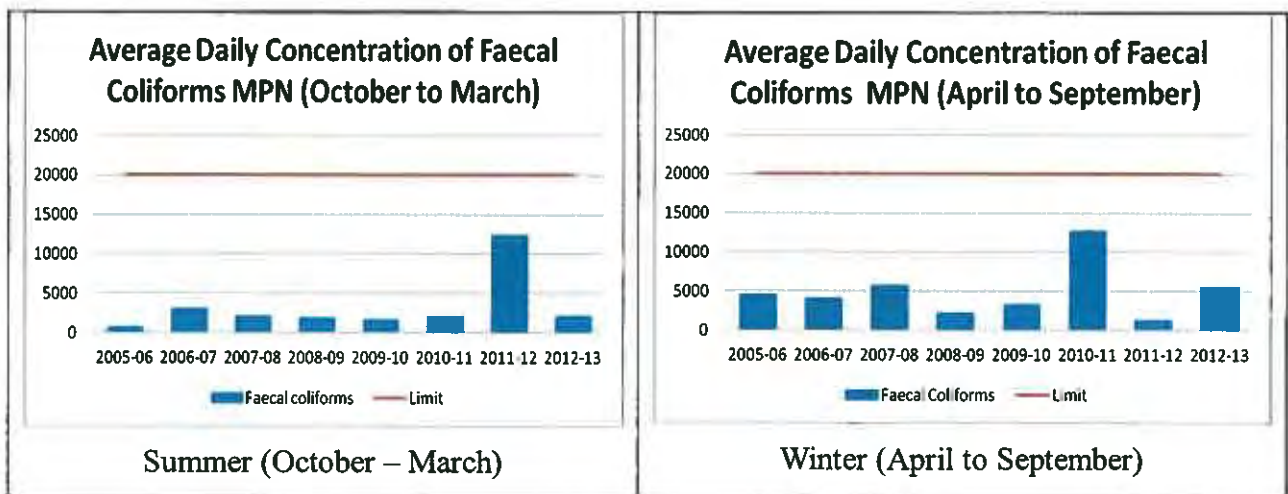
4.17. Section 15A "In the event that the following effluent triggers are exceeded, the monitoring intervals specified in Annex 3 (five yearly for Part A and six monthly for Part B) shall be reviewed when:

- Average daily loadings of total nitrogen for summer, (October – March) and winter (April – September) exceed 400kg."



**Figure 4.17: Seasonal Nitrogen**

- "Average daily concentrations of faecal coliforms for summer, (October – March) and winter (April – September) exceed 20,000 MPN or CFU/100ml."



**Figure 4.17 (a): Faecal Coliforms**

## 5. Conclusion

- 5.1. Monitoring carried out has generally shown that the discharge of treated wastewater from Bells Island is within consent limits. Trends are generally showing that continued operation of the wastewater treatment plant is unlikely to cause distress to the receiving environment.
- 5.2. The increase in effluent discharged to the wastewater treatment plant has been moderate and is mainly associated with storm water inflow and infiltration. With the reticulation networks discharging to NRSBU network aging it is important that the business unit work closely with the two Councils to improve the management of the networks.
- 5.3. The loads to the wastewater treatment plant have not increased at historically projected trends. Trend projections based on loads received since the introduction of revised Disposal of Tradewaste Agreements with the five customers in 2007, designed around demand management principles, shows that loads discharged to the treatment plant are decreasing or have flat-lined.
- 5.4. The Total Biological Oxygen Demand and Suspended Solids trends observed since January 2011 are of concern in terms of compliance with the resource consent conditions. However, the trends for both of these attributes have decreased since peaking in December 2012 and are now within consent limits. A closer inspection of the Carbonaceous Biological Oxygen Demand and Suspended Solids suggests that these loads have increased gradually over time and investigations to establish the cause of the increases are ongoing.

Johan Thiart  
**Engineering Adviser**

**Attachments - Nil**

## NRSBU BOARD PERFORMANCE REVIEW WORKSHOP 30 JULY 2013

### DRAFT NOTES FOR REVIEW

The Nelson Regional Sewerage Business Unit held a workshop on 30 July 2013 to discuss its performance and to identify any actions required to improve performance in the future.

Present: Tim Maples (Facilitator, Inova Group), D Hiser (Independent Member), Councillor D Shaw (NCC Representative), Councillor G Glover (TDC Representative) and M Higgins (TDC Representative), P Wilson (Industry Representative), Matt Hippolite (Iwi Representative)

The key points are summarised below.

#### 1. Determination of purpose

- 1.1. Members have a strong focus on strategy and performance improvement.
- 1.2. The annual Board workshops have developed a good level of industry knowledge of members over time.
- 1.3. The continuity of membership and long term member experience/knowledge is seen as beneficial, however consideration should be given to recruiting relevant specialist skills (in particular a Chartered Accountant and/or independent engineer) when new Board members are appointed. Having at least one Councillor from each Council provides an important link back to the owners.
- 1.4. There are some areas where better guidance is needed from Councils, eg what return on investment is required, and this should be built into the review of the governance structure.
- 1.5. The staff structure has been less than ideal for a long time, but is likely to be addressed in the current NCC restructuring.
- 1.6. There is a need to ensure that NRSBU staff are involved in (and the Board is aware of) the work the Councils are doing around natural disasters, climate change, extreme weather events etc.
- 1.7. There is a need to determine to what extent the Nelson Sustainability Policy should be applied to NRSBU strategy.
- 1.8. The new O&M contract includes implementation of benchmarking and presents an opportunity for further work on ensuring all performance measures are quantifiable.
- 1.9. The Board adopts a strategic focus in its deliberations. Strategic plans are of a high standard in terms of their relationship to the Business Unit's purpose and have been distilled into appropriate business objectives and performance measures.

#### 2. Governance culture

- 2.1. The members of the Board work well together with a strong sense of shared goals, at the same time respecting and encouraging dissenting views.
- 2.2. The induction process for new Board members is important and must be improved.
- 2.3. Generally relationships with owners and key stakeholders are good. The levels of trust tend to reflect the level of communication with stakeholders and extent of their involvement with NRSBU.
- 2.4. The input of the Industry and Iwi Representatives has been important and beneficial for all.

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### **3. Holding to account**

- 3.1. Changes to the staffing structure at NCC should allow the GM role to be formalised as required by the MOU. This should improve the clarity of roles, accountability and succession planning.
- 3.2. There is a good relationship with the Engineering Advisor and the performance and reporting of the EA and the business unit as a whole are of a high standard.

### **4. Compliance**

- 4.1. The Board receives and monitors regular reports on compliance, risk management, financial and operating performance.
- 4.2. External advice is sought where appropriate.
- 4.3. Policy reviews have been delayed pending the review of the governance structure.

### **5. Key challenges**

- 5.1. Ensuring we have the right capacity at the right time and deliver services efficiently in the short and long term.
- 5.2. Anticipating and managing technology and environmental changes – should performance targets aim at current consent limits or aim for further improvements whilst taking into account economic constraints?
- 5.3. Timing of capital expenditure and technology changes to balance risk and cost (making the right decisions at the optimum time).
- 5.4. Facilitating the implementation of governance and management structure changes.
- 5.5. Optimising communications with both Councils. A briefing paper to incoming Councils should be produced.

## APPENDIX 1

The following issues for discussion are based on the NZ Institute of Directors Four Pillars of Effective Board Governance. The purpose of the discussion is to review what the Board does well and should continue, where there is room for improvement and what action should be taken to achieve that improvement.

### 1. Determination of purpose

***A value-adding board leads the exploration and development of, and signs off on, a company's purpose, goals and its strategy to achieve those goals.***

Consider the extent to which the Board does the following well and should continue, where there is room for improvement and what action should be taken to achieve that improvement.

- Assess the environment within which it is operating (including operational capacity) and is likely to operate in the future;
- Formulate strategy to achieve the entity's purpose;
- Distil the strategy into a set of business objectives and performance measures.

### 2. Governance culture

***A value-adding board works well as a team that deals effectively with the right issues at the right time and in the right manner. It operates within a high-performance culture that celebrates debate, thoughtful challenge and dissent, commitment, candour and trust. In particular this culture is characterised by effective relationships within the board and with management, shareholders and other stakeholders.***

Consider the extent to which the Board does the following well and should continue, where there is room for improvement and what action should be taken to achieve that improvement.

- Work as an effective team, striving to improve its own performance and that of the business unit;
- Encourage robust and open debate and support the expression of dissenting views;
- Remain focused on NRSBU goals, eschew personal agendas and disclose conflicts of interest;
- Maintain the skills and knowledge to make good judgments on what the board and the business unit should do;
- Maintain a governance policy which articulates the culture and expectations of board members;



- Maintain a board work plan which it follows;
- Maintains good relationships with shareholders and key stakeholders.

### 3. Holding to account

***A value-adding board holds management strictly and continuously to account through informed, astute, effective and professional oversight. It does not do management's job but it ensures purpose and strategy are understood by management and implemented according to a clear plan with proper resource deployment, task allocation and performance management. Board and management responsibilities are clearly demarcated through delegated authorities and policies. CE selection, scrutiny and succession processes are thorough and ongoing.***

Consider the extent to which the Board does the following well and should continue, where there is room for improvement and what action should be taken to achieve that improvement.

- Hold management to account for achievement of the business unit purpose and strategies through an effective process of performance reporting and management;
- Maintain good relationships with the Engineering Adviser based on clarity of roles, candour, accountability and trust;
- Maintain clear policies and delegated authorities where necessary;
- Ensure succession planning for key roles.

### 4. Compliance

***A value-adding board ensures the company is, and remains, solvent. It ensures the probity of financial reports and processes and the accuracy of compliance with regulatory environments. It ensures that all risks, existing and prospective, affecting the company's ability to fulfil its fundamental purpose are identified and managed.***

Consider the extent to which the Board does the following well and should continue, where there is room for improvement and what action should be taken to achieve that improvement.

- Ensure full compliance with all applicable laws, regulations, codes and consents;
- Astutely monitor the business unit's financial position and ensure that best practice is followed for the audit function.
- Maintain a formal process for assessing and managing operational risk, incorporating external inputs where necessary;
- Maintain and monitor appropriate policies and delegated authorities to cover internal governance, values, conflicts of interest, confidentiality, budgetary and capital expenditure authorities.



## 5. Challenges

What are the key challenges facing the NRSBU board in the next three years and what action needs to be taken to ensure that the challenges are met?

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