# Nelson Regional Sewerage Business Unit





## NRSBU BUSINESS PLAN 2019/20

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Cover photograph: Bell Island

### 1. PURPOSE

The purpose of the Nelson Regional Sewerage Business Unit Business Plan 2019/20 is to summarise management goals and objectives to deliver wastewater collection and treatment services to the region; and also to improve the effectiveness and efficiency in the delivery of those services.

### 2. MEMORANDUM OF UNDERSTANDING REQUIREMENTS

The Memorandum of Understanding states that the NRSBU Board shall by 31st December each year supply to the Councils (Nelson City and Tasman District Councils) a copy of its draft Business Plan for the management of the Nelson Regional Sewerage Business Unit and the assets for the ensuing year, together with any variations to the charges proposed for that financial year.

The Memorandum of Understanding (MOU) commenced on 1 July 2015 and shall terminate on 30 June 2025. The MOU was updated November 2018.

#### 3. INTRODUCTION

This Business Plan 2019/20 outlines the projects and initiatives to be implemented during the year. It also outlines the associated funding required and the details of the performance targets and measures.

The Business Plan is aligned with the NRSBU Strategic Plan and the NRSBU Wastewater Asset Management Plan 2017. It includes business objectives and performance targets (Section 7) and the 3-year financial forecasts (Section 8). The following key pieces of information from those other documents are included in the appendices of this business plan;

Appendix A - Board Activity Schedule;

Appendix B - Targeted levels of service established by the Asset Management Plan;

Appendix C - Internal business improvement plan;

Appendix D - The 10-year financial plan;

Appendix E - Schematic layout of the NRSBU operations.

Appendix F – Reduction of Adverse Environmental Effects

#### 4. 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."

### 5. STRATEGIC GOALS

The NRSBU aspires to achieve the following goals:

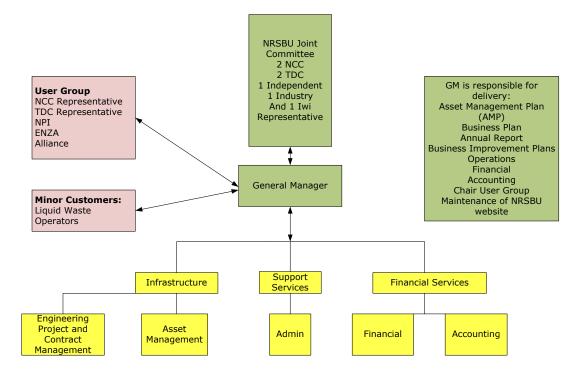
- Wastewater reticulation, treatment and disposal services meet customers' longterm needs.
- The costs of wastewater reticulation, treatment and disposal services are minimised.
- Risks associated with the services provided are identified and mitigated to a level agreed with customers and owners.
- We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

The NRSBU functional activities are managed by the Nelson City Council and therefore the NRSBU functional activities shall comply with the requirements of the Nelson City Council Health and Safety Policy, and fully subscribe to the vision for a Zero Harm Culture.

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

### 6. NRSBU STRUCTURE

The structure of the Nelson Regional Sewerage Business Unit is as follows:



The Nelson Regional Sewerage Business Unit was established in July 2000, replacing the former Nelson Regional Sewerage Authority established in the 1970s.

Following the adoption of a new Strategic Plan in August 2013 the 2017 Wastewater Asset Management Plan was developed and adopted on 15 September 2017. A draft of

the long-term financial plan based on the Asset Management Plan was provided to Tasman District Council and Nelson City Engineers in July and October 2017 respectively to enable them to consolidate the NRSBU long term plan into their own strategic documents.

### 7. BUSINESS OBJECTIVES AND PERFORMANCE MEASURES

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

Long Term Objectives	Key Performance Measures
Wastewater reticulation, treatment long-term needs	and disposal services meet customers'
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.
The cost of wastewater reticulation minimised	n, treatment and disposal services are
The costs of reticulation, treatment and disposal are minimised.	The operational costs of reticulation, treatment and disposal processes are benchmarked against costs incurred up to 30 June 2014.  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.	Combined loads do not exceed the capacity of the components of the system.
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.

Long Term Objectives	Key Performance Measures		
Risks associated with the services provided are identified and mitigated to a level agreed with customers and owners.			
Risk management plans include all significant health and safety, environmental, cultural, social, economic and contractual risks.	No event, which impacts on agreed levels of service, occurs that has not been identified in the NRSBU risk management plans. Customer representatives review and approve the risk management plan annually and following any incidents which require activation of the plan.		
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.		
We engage the right people, with	the right skills and experience.		
Those engaged with the NRSBU have the right skills, experience, and support to perform well.			
Operation and maintenance manuals reflect best practice for the management of the plant and reticulation systems and are followed consistently.	r confirms this.		
NRSBU operates sustainably and endeavours to remedy or mitigate any identified adverse environmental, social or cultural impact			
NRSBU minimises adverse environmental, social and cultural impacts where this is economically viable.	That progress towards meeting energy efficiency targets reported on and reviewed annually in June. Current capacity to utilise beneficial application of biosolids to land is sustained. Beneficial economic and environmental reuse of treated waste water is maintained or increased. Environmental, social and cultural impacts are considered in all decision making.		

Long Term Objectives	Key Performance Measures	
Good relationships are maintained	with all stakeholders	
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.	
Good relationships are maintained with all stakeholders including owners, iwi, customers, contractors, neighbours, and the wider community.	promptly. All applications for resource consents are	
All statutory obligations are met		
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.	

## 8. THREE YEAR RENEWAL EXPENDITURE FORECAST (\$'000)

Renewal Plan (\$,000)	Projected 2018/19	2019/20	2020/21	2021/22
Miscellaneous	120	120	120	120
Pump Stations and Rising Mains	85	67	42	218
Inlet, Aeration Basin, Clarifier and Ponds	88	88	190	259
Solids Handling	114	55	63	336
ATAD rust proofing		110		
Rabbit Island	223	38	153	48
Biosolids and sludge storage tank refurbishment			75	
Facilities (Operator Buildings)		95	150	
Replace water blaster & steam cleaner		10		
Replace isolation switches		25		
Replace microscope	12			
PLC renewal	100	100		
Roads		25	75	
Consents	130	137		
Total =	872	870	868	981

The renewal programme of NRSBU assets is developed around lifecycle and condition assessment. An iterative process is followed whereby the renewal programme is

considered annually with inputs from the Operation and Maintenance operator and the review of remaining useful life of assets.

Condition assessment reports may be commissioned where additional information is required to ensure optimal spend on renewals.

### 9. NRSBU Capital Upgrade Plan

The following table outlines the capital upgrades proposed over the next 3 years. This is followed by a commentary outlining more detail on each of the proposals.

Year	Description of Projects	Estimated Costs \$
	Partial Desludging oxidation ponds	750,000
Pump Station and Treatment Plant Upgrade (Resource Consent related; plus Operational and H&S improvements)		2,800,000
	Regional Pipeline Upgrade	1,000,000
2020/21	Treatment Plant Upgrade (Resource Consent dependent; plus facilities improvements)	2,800,000
	Rabbit Island Biosolids Consent	240,000
Partial Desludging oxidation ponds		750,000
	Regional Pipeline Upgrade	6,500,000
2021/22	Pump Station and Treatment Plant Upgrade (Resource Consent related)	500,000

### Commentary on Upgrade Proposals for 2019/20

Desludging of Ponds: Partial desludging will be carried out over two financial years. The intention is to reduce the depth of sludge in ponds F1 & F3 to improve the available vertical space in those ponds.

Pump Station upgrade is to comply with the conditions of the aberrational discharge consent. For example, to install screens and to develop a programme of work to investigate and implement ways to reduce overflows from the sewerage pump stations to the estuary.

Treatment Plant upgrade covers items such as:

- trials to re-use treated wastewater to clean the inlet screens (reducing the use of potable water and consequently the volume discharged to the estuary)
- further develop investigations into the potential re-use (by others) of treated wastewater
- investigate and implement potential tree and vegetation planting around the perimeter of Bell Island
- review the reuse of Biosolids on Rabbit Island to consider if there are any adverse impacts on the marine environment
- commission a high-level report into alternative wastewater treatment systems (that would avoid or significantly reduce the discharge of treated wastewater to the Waimea Inlet)
- equipment and physical improvements to improve health & safety on-site

The modification of ponds budget is an allowance that is conditional on the review of the performance of improvements made to the final maturation pond. So, this expenditure may be deferred and/or the amount amended.

The consent for the application of biosolids at Rabbit Island expires 8 November 2020.

Regional Pipeline Upgrade: will be conditional on a review of growth projections of wastewater generated in Nelson and Tasman. So, this expenditure may be deferred.

## 10. FINANCIAL PLAN

## Nelson Regional Sewerage Business Unit Budget Summary for 2019 to 2021

	Projection		Budget	
	18/19	19/20	20/21	21/22
Income				
Contributors	8,296	8,333	8,779	9,284
Interest	0	0	0	0
Other Recoveries	168	158	158	158
Total Income	8,464	8,491	8,938	9,443
Expenditure				
Operations & Maintenance	4,000	3,718	3,760	3,865
Interest	595	658	816	1,058
Insurance	58	60	60	60
Depreciation	1,987	2,154	2,253	2,339
<b>Total Operating Cost</b>	6,640	6,590	6,889	7,322
Surplus/Deficit	1,824	1,901	2,049	2,121
Use of Funds				
Loan Repayment	1,115	1,284	1,385	1,358
Renewals	872	870	868	981
Owners Distribution	1,824	1,901	2,049	2,121
Upgrades	2,992	3,550	4,790	7,000
	6,803	7,605	9,092	11,460
Sources of Funds				
Surplus/Deficit	1,824	1,901	2,049	2,121
Depreciation	1,987	2,154	2,253	2,339
New Loans	2,992	3,550	4,790	7,000
	6,803	7,605	9,092	11,460

APPENDIX A

NELSON REGIONAL SEWERAGE BUSINESS UNIT BOARD ACTIVITY SCHEDULE 2019-20

Date	Activity	Papers required
By 31 August 2019	Review draft Annual Report and Financial Statement.	Draft annual report and financial statement.
By 30 September 2019	Deliver annual financial statement to Councils.	Financial Statement.
By 31 December 2019	Review board planning/meeting timetable.	Planning/meeting timetable.
	Adopt draft business plan for presentation to Tasman District Council and Nelson City	Business Plan.
	Council.	Interests Register.
	Review and update Interests Register.	Draft business continuity plan.
	Adopt business continuity plan.	
By 20 March 2020	Present Annual Report and Business Plan to Tasman District Council and Nelson City Council.	Annual Report and Business Plan.

Nelson Regional Sewerage Business Unit Business Plan 2019/20

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Date	Activity	Papers required
By 30 June 2020	Review board performance	Checklist for board effectiveness.
	Review governance policy	Governance Policy
	Review Demand Management Plan	Draft Demand Management Plan.
	Receive report on Contingency Plan review by customer representatives.	Report on Contingency Plan review by customer representatives.
	Receive report on Risk Management review by customer representatives.	Report on Risk Management review by customer representatives.
	Review customer satisfaction survey results	Customer survey report.
	Annual review of Strategic Plan	Strategic plan.
	Adopt Energy Conservation Plan	Energy Conservation Programme.
	Review Audit Management Report	

### **APPENDIX B**

## **LEVELS OF SERVICE**

The following levels of service are included in the Nelson Regional Sewerage Business Unit Asset Management Plan 2017 and compliance demonstrates

progress towards achieving the Strategic Goals:

progress towards aclilev	ing the Strategic Goals:	
ENVIRONMENTAL	Category	Level of Service
Treatment & Disposal	RMA Consent - Wastewater Discharge to Coastal Marine Area	100% compliance with consent conditions
	RMA Consent – Discharge of Contaminants to Air.	100% compliance with consent conditions
	RMA Consent - Discharge of Contaminants to Land	100% compliance with consent conditions
	Equipment Failure of critical components within the treatment and disposal system.	No equipment failures that impact on compliance with resource consent conditions.
Pump Stations	Odour complaints from pump stations	No odour complaints originating from pump stations
	Pump station wet weather overflows	No overflow events occurring for the contracted contributor flows
	Pump station overflows resulting from power failure	No overflow events occurring
	Pump station overflows resulting from mechanical failure.	No overflow events occurring
Pipelines	Reticulation Breaks	No reticulation breaks.
·	Air valve malfunctions	No air valve malfunctions that result in overflows

CAPACITY	Category	Level of Service
Treatment & Disposal	Overloading system capacity	Treatment and disposal up to all contracted loads and flows
Pump Stations	Overloading system capacity	No overflows for all pump stations for the contracted contributor flows
RELIABILITY	Category	Level of Service
Treatment & Disposal	Equipment failure of critical components	No equipment failures that lead to non- compliance with
Pump Stations		resource consent conditions
Pipelines		

RESPONSIVENESS	Category	Level of Service
Treatment & Disposal	Speed of response for emergency and urgent maintenance works	Achievement of response times specified in the maintenance contract
Pump Stations		
Pipelines	Speed of response for routine and programmable maintenance works	Achievement of response times specified in the maintenance contract
KEY CUSTOMER RELATIONSHIPS	Category	Level of Service
Treatment & Disposal	Customer satisfaction	Agreed levels of service provided to all Customers
Pump Stations Pipelines		Robust charging structure is in place

## **Appendix C**

### **BUSINESS IMPROVEMENT PLAN**

This section describes initiatives to improve the efficiency and effectiveness of the Business Unit and is based on the Nelson Regional Sewerage Business Unit Strategic Plan and referenced to the 2017 Wastewater Asset Management Plan.

IP	Description	Resource Requirements	Progress
IP-1	Consolidate all risk and natural disaster information; and review the related planning and mitigation.	In-house and consultants	2019-2020
IP-2	Renewal of effluent discharge permits.	In-house, Legal and Consultants	Ongoing 2018-2019
IP-3	Develop sludge removal programme.	In-house and Contractor	On-going 2019-2021
IP-4	Review long term plan.	In-house	2019-2020
IP-5	Review AMP.	In house	2019-2020
IP-6	Investigate use of gravity belt thickener for use to thicken secondary sludge.	In-house.	2020-2021

## **APPENDIX D**

### **10 YEAR PLAN**

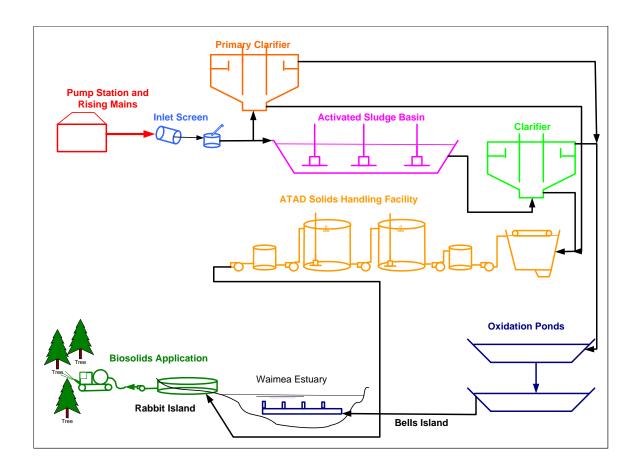
### **CAPITAL EXPENDITURE**

Upgrade programme			
Year	Description of Projects	Estimated Costs	
2019/20	Desludging oxidation ponds	750,000	
	Treatment Plant and Network Upgrade (Bell Island Discharge and Aberrational Discharge Consent compliance related; plus H&S improvements)	2,800,000	
2020/21	Regional Pipeline Upgrade (Demand dependent)	1,000,000	
	Treatment Plant Upgrade (Bell island Resource Consent dependent; plus facilities improvements)	2,800,000	
	Rabbit Island Biosolids Consent Application	240,000	
	Desludging oxidation ponds	750,000	
2021/22	Regional Pipeline Upgrade (Demand dependent)	6,500,000	
	Treatment Plant and Network Upgrade (Consent related)	500,000	
	Regional Pipeline Upgrade (Demand dependent)	6,500,000	
2022/23	Treatment Plant and Network Upgrade (Consent related)	500,000	
	Modify Facultative Pond (Consent dependent)	420,000	
2023/24	Treatment Plant and Network Upgrade (Consent related)	500,000	
2024/25	Disposal of dried sludge	700,000 *	
2025/26	Songer street PS upgrade (Demand dependent)	100,000	
2025/26	Disposal of dried sludge	700,000*	
2026/27	Disposal of dried sludge	700,000*	
2029/30	Activated sludge management (2 <sup>nd</sup> Secondary clarifier)	2,800,000	

\*note: These forecast amounts will not be required if we successfully obtain Resource Consent to use the material in bunds on site (to protect the low-lying area adjacent to the ATADs)

## **APPENDIX E**

## **BELL ISLAND TREATMENT PLANT SCHEMATIC**



#### **APPENDIX F**

### REDUCTION OF ADVERSE ENVIRONMENTAL EFFECTS

The NRSBU intends to:

- reduce overflow into the coastal marine environment and Tasman Bay beyond
- have a greater focus on the immediate coastal marine environment and impacts on the ecology of Tasman Bay
- consider water quality, biodiversity and estuary health as priorities over the next three years
- reduce the volume of wastewater discharged to Waimea Inlet

To implement this vision, the NRSBU will:

- develop a programme of work to investigate and implement ways to reduce overflows from the sewerage pump stations to the estuary
- implement the Conditions associated with the pump stations Aberrational Discharge resource consent
- undertake a trial to re-use treated wastewater to clean the inlet screens (reducing the use of potable water and consequently the volume discharged to the estuary)
- further develop investigations into the potential re-use (by others) of treated wastewater
- investigate potential tree and vegetation planting around the perimeter of Bell Island
- review the reuse of Biosolids on Rabbit Island to consider if there are any adverse impacts on the marine environment
- continue to operate the treatment plant well and achieve high quality effluent
- commission a high-level report into alternative wastewater treatment systems (that would avoid or significantly reduce the discharge of treated wastewater to the Waimea Inlet)