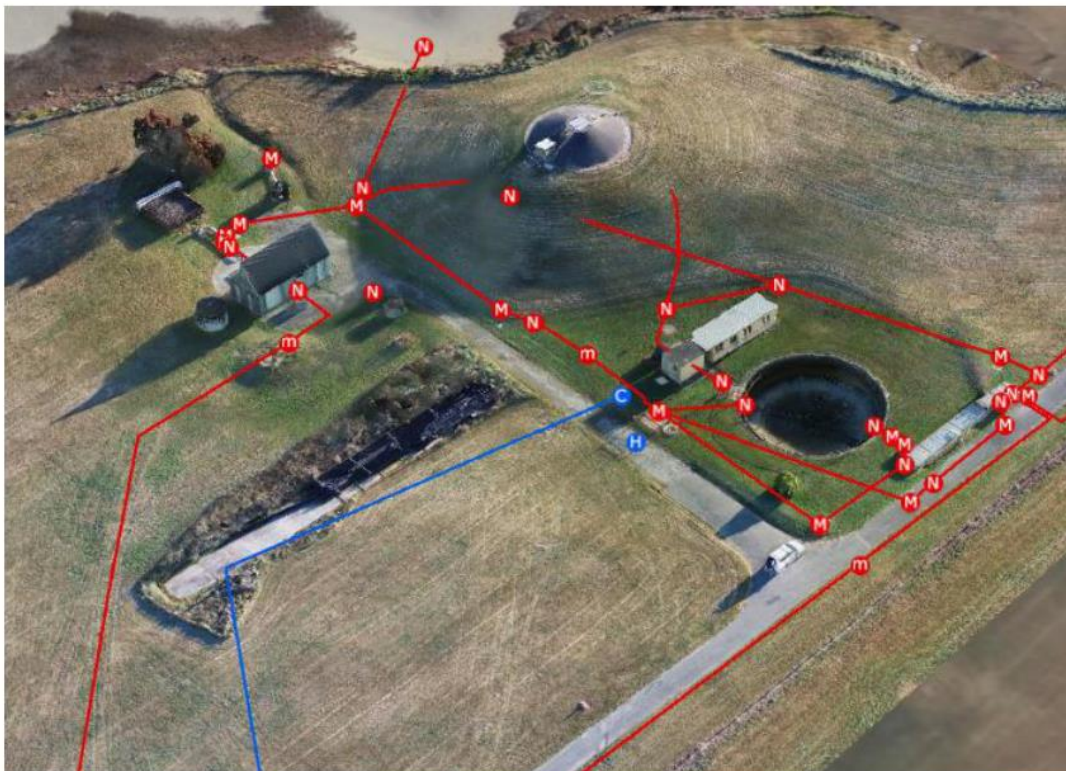


Nelson Regional Sewerage Business Unit

BUSINESS PLAN
2022/2023



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NRSBU Business Plan 2022-2023

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Rev 1 Feb 2022

For Board Final Approval- prepared by:

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Cover

Image of GIS system for Airport Pump Station

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1. PURPOSE

The purpose of the Nelson Regional Sewerage Business Unit Business Plan 2022/2023 is to summarise management goals and objectives to deliver wastewater collection and treatment services to the region; and 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 31 December each year supply to the Councils (Nelson City and Tasman District Councils) a copy of its Business Plan. The Business Plan outlines 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 in March 2019.

3. INTRODUCTION

This Business Plan 2022/23 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 Activity Management Plan 2021-2031. It includes business objectives and performance targets (Section 7) and the three-year financial renewal forecasts (Section 8) and the three-year capital plan (Section 9). The following key pieces of information from those other documents are included in the appendices of this business plan:

Appendix A - Committee Activity Schedule

Appendix B - Internal business improvement plan

Appendix C - Schematic layout of the NRSBU operations

Appendix D - Reduction of Adverse Environmental Effects

4. MISSION STATEMENT

The NRSBU's mission statement is:

Resilient, reliable, and effective infrastructure that supports and protects our community and environment.

Area	Goal
Our approach	Implement and operate infrastructure considering the needs of our community. Our priorities for this are protection of public health, the environment, and cultural values.
Our Vision/Ambition/Aspiration	We will work towards the beneficial reuse of resources.
Our conduct	We will undertake our activities transparently, fairly, respectfully, in a timely manner and we will provide regional infrastructure leadership.

5. STRATEGIC GOALS AND PERFORMANCE OBJECTIVES

The NRSBU aspires to achieve the following goals:

Strategic Goal	Objective (This is what it looks like)	Level of Service (This is how we do it)
We will implement and operate infrastructure considering the needs of our community. Our priorities for this are protection of public health, the environment, and cultural values.	Containment and conveyance that is resilient and minimises adverse impacts on the health of the environment and community	We have sufficient capacity in our network to cope with peak flows
		We are resilient to mechanical and electrical failures and natural hazards
		We can readily maintain the network
	Resilient wastewater treatment that minimises the impact on the environment and community	The treatment plant can reliably accept (N+1 for critical assets) all peak flows from the network
		The treatment plant can fully treat all dry weather flows
		The treatment plant does not create odour issues for the community
		Effluent Quality meets or exceeds required discharge requirements
	Long term vision that considers the future needs of the community	Our ongoing business is safeguarded through engagement with council planning processes
		We have long term plans for our activities and their impacts
		Have systems in place for the ongoing monitoring and reporting of emissions
Alternative methods of biosolids disposal that protect public health and the environment and are sensitive to cultural values	Have a backstop for issues with biosolids disposal	
We will work towards the beneficial reuse of resources	Use of ongoing improvement processes to identify, implement, and operate feasible biosolids reuse	Treatment to maintain 100% reuse of biosolids
		Increase reuse value
		Maintain 100% diversion of biosolids from disposal to landfill
	Identified implement and operate feasible systems and infrastructure for the reuse of wastewater	We minimise the amount of effluent we discharge to water

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.

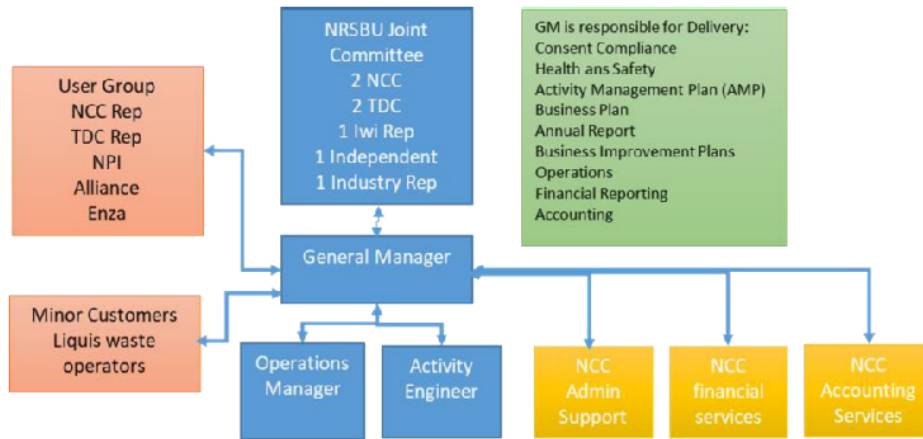
All strategic goals are important and no one goal will be pursued at the expense of another.

It is important to note that discussion is occurring nationally regarding the delivery of water services in New Zealand. This discussion includes the implementation of national discharge standards for wastewater treatment facilities. This work could have a significant influence on NRSBU, at this time NRSBU is unable to identify the outcome of this work and therefore will continue with Business as Usual.

It is necessary for NRSBU to maintain an understanding of these issues so that an appropriate response can be made if required.

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.

This business plan relates to the second year of the NRSBU Activity Management Plan 2021-2031 adopted by NCC and TDC during June 2021.

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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 Activity Management Plan. Performance will be reported quarterly to the Board and annually to the shareholding councils.

Performance Measure (This is how we know we're doing it)	Target
Number of overflows per year (all networks) due to NRSBU network capacity constraints, or mechanical or electrical failures.	Zero
Number of pump stations with redundant pumps and power supply.	All by June 2023**
Pump stations are to a level 3 importance level standard.	All by 2023
Number of pump stations where able to carry out routine PS maintenance works while managing ADWF.	All by 2031
Number of times PWWF flows exceed inlet works capacity.	Zero by 2031
Number of times diurnal flows bypass the mechanical system annually OR Treatment capacity of mechanical plant.	Zero OR 500L/s by 2029
Number of odour complaint events annually.	Zero by 2025
Pond free water above sludge layer.	>1m in all ponds by June 2023
Chemical Parameters comply with consents for discharge to water when discharge occurs.	Ongoing consent compliance for all parameters
Effluent quality appropriate for safe and sustainable use with land irrigation systems.	Pathogens, Nitrogen defined for land application requirements by 2023
Obtain reuse consents for appropriate land areas for Reuse Water.	Demonstrated quality performance and consents in place for reuse for dust suppression by June 2024
We have up to date plans as follows: Master plan (50 years focus) Activity Plan (10 years Focus) Business plan (1 year focus, but also with tentative three-year actions)	Master plan developed by June 2023 Activity and Business Plans are reviewed annually
The number of alternate methods/options for biosolids disposal.	One by 2035
Increase in quality of biosolids.	Biosolids Reuse Development Plan Draft by June 2023
Percentage of biosolids that is reused.	100%
Annual volume of biosolids sold.	Biosolids Reuse Development Plan Draft by June 2023
Proportion of biosolids to land or reuse/sale	100%
Number of days effluent is discharged to water in summer period (1 Dec to 31 March).	Draft Wastewater reuse plan developed by June 2023, with a goal to reaching zero by 2035
Volume of high-value water-reuse we achieve.	Draft Wastewater reuse plan developed by June 2023
Amount of total flow we can divert from discharge to water during summer period.	At least 75 th percentile by 2040

**** Redundant pumps may include Duty / Assist with a Shelf Spare until pumpstation upgrades are complete**

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

Renewal Plan (\$,000)	2021/22*	2022/23	2023/24	2024/25
Pump Stations and Rising Mains	539	537	168	635
Inlet, Aeration Basin, Clarifier and Ponds	1409	41		610
Solids Handling and Biosolids pipelines.	592	254	1704	100
ATAD rust proofing				30
Rabbit Island	91	49		20
Fittal Street Septage Facility				200
Facilities and Roads	222	135	11	25
Wet Weather Discharge Pump				95
Road and causeway renewals	173			
General	217	130	41	120
Total	3243	1146	1924	1835

* 2021/22 renewals budgets include carry overs from the 2020/2021 financial year

The renewal programme of the 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 a review of remaining useful life of assets.

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

One key renewal item that is currently unquantified is any repair works arising following the inspection work in 21/22 for the existing 600mm diameter concrete pipe between Monaco and Bell Island. This work may necessitate reprioritisation of the Capital and Renewal plans if significant repairs are required.

General items are at the discretion of the General Manager.

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9. THREE YEAR CAPITAL UPGRADE PLAN

The following table outlines the capital upgrades proposed over the next three years.

Capital upgrades:

Project	21/22	22/23	23/24	24/25
Improved Operator Facilities	313			
Road Improvements	50			
Regional Generator Upgrade	1042			
Management systems	80			
Sludge Storage Tanks	750			
Pump station overflow screens and monitoring	300			
Regional pipeline capacity upgrades	6400	2,470	2,150	2,000
Inlet and ATAD Odour Upgrade	340			
Pump and discharge pipework upgrades at		2,050	350	250
Strategic review and seismic strengthening of PSs	50		50	
Flood protection of pump stations	120			
Storage at pump stations			50	50
Additional screening and duplicate grit trap at				50
Hydraulic capacity upgrades at WWTP		80	1,500	
Design of system to remove algae from pond	20			
Desludging ponds	499			25
New technology assessments to meet Consent	50			
Biosolids drying		100		
Odour and equipment upgrades at Rabbit Island	200		150	
Buffer storage at WWTP			25	200
Best Island irrigation	100	100	50	
Bell Island irrigation and effluent re-use	250	50		
Rabbit Island Irrigation	124			
Resource Consents	90			
Total capex upgrades	10,778	4,850	4,325	2,575

Note: the 2021/22 column has been updated to include the 2020/21 carryover.

Commentary on Upgrade for 2022/23

The programme of work for the NRSBU has been significantly altered as a result of the Activity Management review. The smoothing undertaken during the AMP process means that the regional pipework funding may need to be bought forward if the schedule can be accelerated. Tasman District Council staff have requested NRSBU minimise delays in implementation of the upgrade.

A number of overflows to the estuary have been caused by insufficient capacity being available at the Beach Road Pumpstation.

Pump station upgrades to comply with the conditions of the aberrational discharge consent have been partly completed, the final pump station (Saxton Rd) needs to be completed during the 2022/2023 year.

The rising main upgrades for Saxton to Monaco, and Beach Road to Saxton Road have been spread over four years to reduce the expenditure profile.

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The Capital upgrades for 2022/23 covers items such as:

- Works associated with the Beach Road to Saxtons Rd pipeline, including pump reconfiguration, MCC upgrades and new pipework.

Regional Pipeline Upgrade:

- Capacity improvements (in particular, downstream of Beach Road), but this programme of work has been extended into 2023/24 due to concerns that NRSBU staff will not be able to deliver the programme of works.

Emission Management System

Emission management will be ongoing, however 2022/23 will be used to implement initial steps for reducing emissions developed from the Emission mitigation plan developed during 2021/22.

This Emission Management work involves an assessment of the emission profile from the Bell Island WWTP ponds during 2022/23, review of emissions from Rabbit Island Biosolids application system and the Nelson Regional Sewerage System.

It will include a calculation method that can be used annually to redo the Carbon Emission Assessment based on the information collected as part of the Operations and Maintenance.

This model should be suitable for use by NRSBU staff to annually assess and report on the emissions from the NRSS and to outline emission reduction opportunities.

It needs to be noted that this calculation method may result in a different emission profile compared to a standard emission model that only uses theoretical emission factors which is what is currently used by NCC and NRSBU

NRSBU Records and data:

Additionally, we will continue to collate all the NRSBU historic and current information into a single access point electronic storage location, and this record system will disaggregate the asset information further than currently undertaken by NCC GIS system. The system will include all NRSBU data irrespective of it being located in TDC or NCC territories.

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10. FINANCIAL PLAN

Nelson Regional Sewerage Business Unit				
Budget Summary for 2022/23				
	Budget	1	2	3
	21/22	22/23	23/24	24/25
Income				
Contributors	9,522	10,594	11,117	12,020
Interest	0	0	0	0
Other Recoveries	158	330	330	330
Total Income	9,680	10,924	11,447	12,350
Expenditure				
Operations & Maintenance	4,277	4,241	4,279	4,629
Management	500	500	500	500
Interest	730	1,167	1,401	1,604
Insurance	98	98	98	98
Depreciation	2,553	3,039	3,148	3,221
Total Operating Cost	8,159	9,045	9,425	10,052
Surplus/Deficit	1,521	1,879	2,021	2,298
Use of Funds				
Loan Repayment	(718)	1,894	1,224	1,386
Renewals	3,272	1,146	1,924	1,835
Owners Distribution	1,521	1,879	2,021	2,298
Upgrades	10,778	4,850	4,325	2,575
	14,852	9,769	9,494	8,094
Sources of Funds				
Surplus/Deficit	1,521	1,879	2,021	2,298
Depreciation	2,553	3,039	3,148	3,221
New Loans	10,778	4,850	4,325	2,575
	14,852	9,769	9,494	8,094

Note: the 2021/22 New Loan has been changed to reflect the carryover from 2020/21

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APPENDIX A

Nelson Regional Sewerage Business Unit Committee Activity Schedule 2022-2023		
Date	Activity	Papers required
By 31 August 2022	Review draft Annual Report and Financial Statement.	Draft annual report and financial statement.
By 30 September 2022	Deliver annual financial statement to Councils.	Financial Statement.
By 31 December 2022	Review board planning/meeting timetable. Adopt draft business plan for presentation to Tasman District Council and Nelson City Council. Review and update Interests Register. Adopt business continuity plan.	Planning/meeting timetable. Business Plan. Interests Register. Draft business continuity plan.
By 20 March 2023	Present Annual Report and Business Plan to Tasman District Council and Nelson City Council.	Annual Report and Business Plan.
By 30 June 2023	Review board performance Review governance policy. Review Demand Management Plan. Receive report on Contingency Plan review by customer representatives. Receive report on Risk Management review by customer representatives. Review customer satisfaction survey results. Annual review of Strategic Plan. Adopt Energy Conservation Plan. Review Audit Management Report. Annual Carbon Emission Review.	Checklist for committee effectiveness. Governance Policy. Draft Demand Management Plan. Report on Contingency Plan review by customer representatives. Report on Risk Management review by customer representatives. Customer survey report. Strategic plan. Energy Conservation Programme. Carbon Mission Measurement System development

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Appendix B

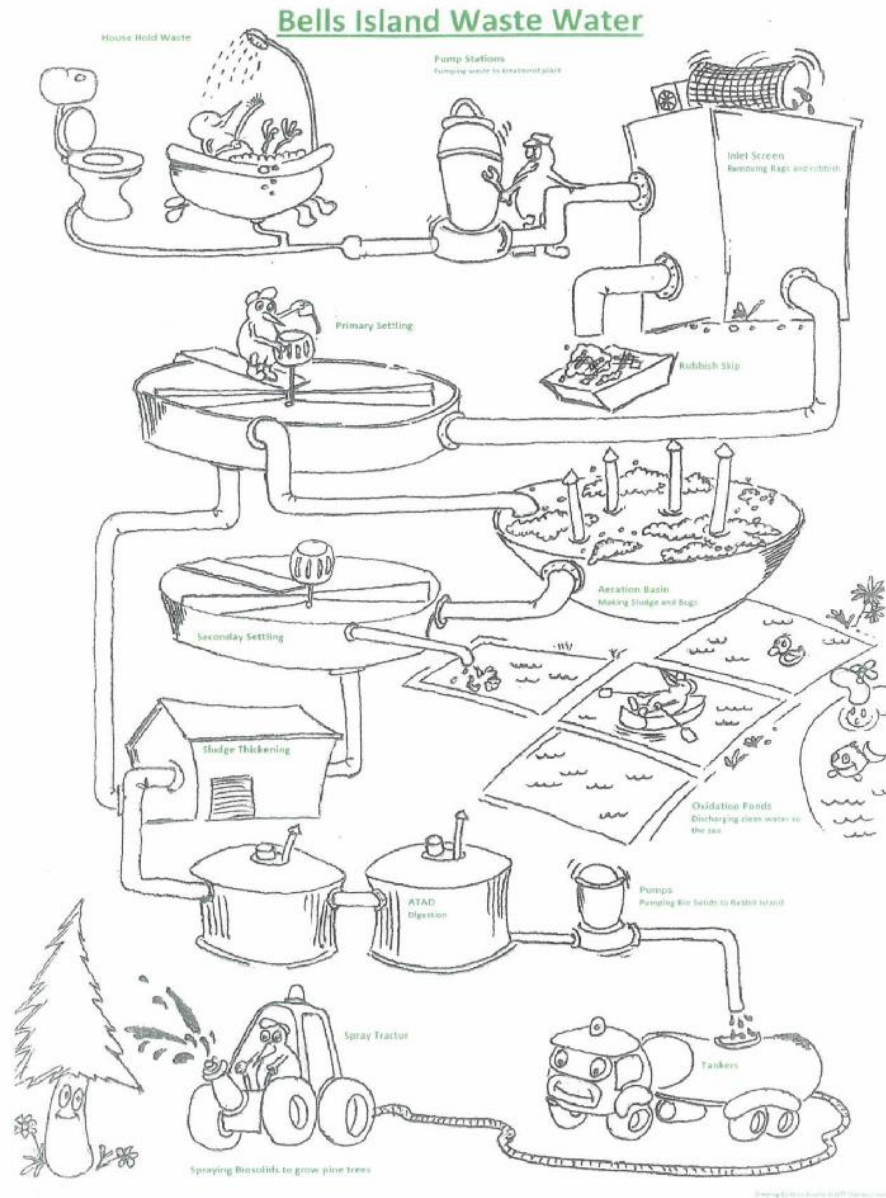
BUSINESS IMPROVEMENT PLAN

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 data and information; review and develop access method. July 22- June 23 will include disaggregation of assets within this system, and to include links from this system to Dashboards, Infor and other visualisation tools.	In-house and consultants External consultants will need to work with NCC IT and GIS to host the new system	Implementation ongoing for completion by June 2022 for the initial consolidation access method. July 22- 23 progress is expected to include all critical equipment to have specific assets with data and maintenance information accessible through this single system
IP-2	Continue sludge removal programme.	In-house and Contractor	On-going, Sludge Bund Consent granted 2019/2020 complete. Sludge containment area complete 2020/2021 Desludging to be begin 2020 – Pond F2 complete by Calendar Year End 2021. F1 and F3 desludging to be completed during 2022/23.
IP-3	Determine the long-term strategy (Master Plan)	In-house and consultants	Consultant seconded to assist preparation. Draft to be available by June 2022 and the finalised Master Plan to be completed by December 2022
IP-4	Implement Hazardous Gas Management system for Gravity Belt Thickener system	In-house and consultants	This is programmed for early 2022/23.
IP5	Electrical Supply to Bell Island	In-house and Consultants.	Investigation and implementation of mitigation measured. Progress 2021/22 Generators to be installed. 21/22 Solar array options reviewed 22/23 Additional Power cable options review and Consent Application

APPENDIX C

BELL ISLAND TREATMENT PLANT SCHEMATIC



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APPENDIX D

FOCUS ON COMMUNITY AND ENVIRONMENTAL BENEFITS

The NRSBU intends to:

- have facilities that are robust and resilient – focusing on collection and conveyance system, followed by Bell Island volumetric treatment capacity.
- reduce overflows 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
- Develop a water reuse strategy and implement initial reuse actions using existing reuse water and expand as financial constraints allow reuse water volume and infrastructure.
- reduce the volume of wastewater discharged to Waimea Inlet over time
- Maintain focus on biodiversity and estuary health as priorities over the next two years.
- increase attention to facilitating cultural and recreational and educational activities where these don't adversely affect core business activities.

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
- 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).