WAIMAKARIRI
DISTRICT COUNCIL

Activity Management Plan 2024

Stock Water Race Scheme

3 Waters | July 2024

Prepared by

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Action	Name		Signed	Date
Prepared by	Dan Lewis	Land Drainage Engineer		17/01/2024
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Reviewed by	Kalley Simpson	3 Waters Manager		17/01/2024
Approved by	Gerard Cleary	Manager Utilities and Roading		10/7/02024
Adopted by	Council			

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1. EXECUTIVE SUMMARY

The following table provides a summary of the key asset management issues of the stockwater race system identified through consideration of the levels of service, consents, asset condition, risk analysis, disaster resilience, growth projections, and capacity assessment:

Table 1: Key Asset Management Components

Levels of Service	Some levels of service are not being achieved for the stock water races. These mainly pertain to nuisance and threatening flooding of adjoining property or roads and associated complaints that occur during extreme rainfall events, over which WIL has no control. Consideration needs to be given to reviewing the levels of service
Resource Consents	The activity complies with its resource consent conditions.
Asset Condition	Condition of hard stockwater assets such as pipes and culverts is based on asset age, and material type. Knowledge of these assets is not good. Water races themselves are maintained in perpetuity and not assessed for condition
Risk Assessment	A risk assessment was last carried out in 2011. An updated process has been developed, with the risk analysis currently in progress. Expected to be completed across all of Council's water activities in 2024
Growth Projections	There is a shift from large farms to life style properties within the scheme. This translates into an increase in rated properties and static stock water demand.
	Intensive farming relies less on stock water due to on farm reticulation. This translates into races delivering stock water that are seen as an environmental liability.
Capacity & Performance	Construction of a new major irrigation storage pond is planned by WIL which will increase irrigation scheme reliability during drought years. However, there is no formal provision for stock-water supply from this pond.

2. INTRODUCTION

The purpose of this Activity Management Plan (AMP) is to outline the significant assets and issues associated with the stock water race system and show how the Council proposes to manage these in the future.

This plan summarises the various components of the stockwater race system, its condition and performance, and identifies future funding requirements including upgrades where necessary.

The data that has been relied upon to produce this document was taken at the end of the 22/23 financial year. i.e 30 June 2023.

Further details of the asset management practices used by Council to manage its rural drainage assets are contained in the Rural Drainage Activity management Plan 2024 .

Projects identified to improve asset management processes for this scheme that will also benefit the performance of the other 3 waters schemes are managed at a District level for efficiency.

Projects are also identified within this AMP that will maintain or improve levels of service.

All figures within this AMP exclude inflation

3. SCHEME DESCRIPTION (WHAT DO WE HAVE?)

The water race network consists of an open channel system, taking water from the Waimakariri River at the Browns Rock intake. It comprises of a stock water scheme owned by the Waimakariri District Council (Council) and an irrigation scheme owned by Waimakariri Irrigation Ltd (WIL).

WIL are contracted by Council to manage the stock water scheme operations and maintenance. Refer to Trim 080721022383 for a copy of the contract document.

The stock water scheme takes 2.1 cumecs of water and delivers it to approximately 44,000 hectares of land for stock drinking water purposes. In addition there are two small takes each of 28 litres per second on the Cust River at Patersons Road and upstream of Stokes Bridge on the Rangiora Oxford Road.

The area supplied lies between the Waimakariri and Ashley rivers, east of Burnt Hill and Oxford and west of Rangiora and Eyreton.

The irrigation scheme supplies an additional 11.041 cumecs of water to approximately 23,000 hectares of land for irrigation. Within this allocation, 1.5 cumecs can be discharged into the Eyre River for ground water replenishment if requested by Environment Canterbury.

WIL and the Council share the water race assets that make up the stock water and irrigation networks. The asset ownership ratio is based on a historic water use split of 32% Council and 68% WIL. Council plan to review the Service Level Agreement with WIL, which will also include a review of asset ownership.

The percentages of Waimakariri District Council ownership of assets as indicated in the 2022 asset valuation of stock water races are shown in the table below. Note that the valuation was carried out one year earlier than the normal three year interval on account of the current high inflation levels

Table 2: Waimakariri District Council Ownership

Asset	Council Ownership
Channel	100%
Bridges & Culverts in Farm	0% & 32% respectively
Bridges & Culverts in road reserve	100% & 32% respectively
Tunnel Intake (but not valued as no replacement programme)	100%
Resource Consents for Stock Water	100%
Syphon	32%
Weir & Gate Structures	32%

Some key statistics (2022/23 year) of the scheme are shown in Table 3.

Table 4: Related Council documents shows other Council documents relevant to this AMP. A plan of the stock water race network is available at the following link: Stockwater Map . Stockwater rated properties are available in the AMP Plans and Figures Viewer.

Table 3: Key Statistics 2022/23

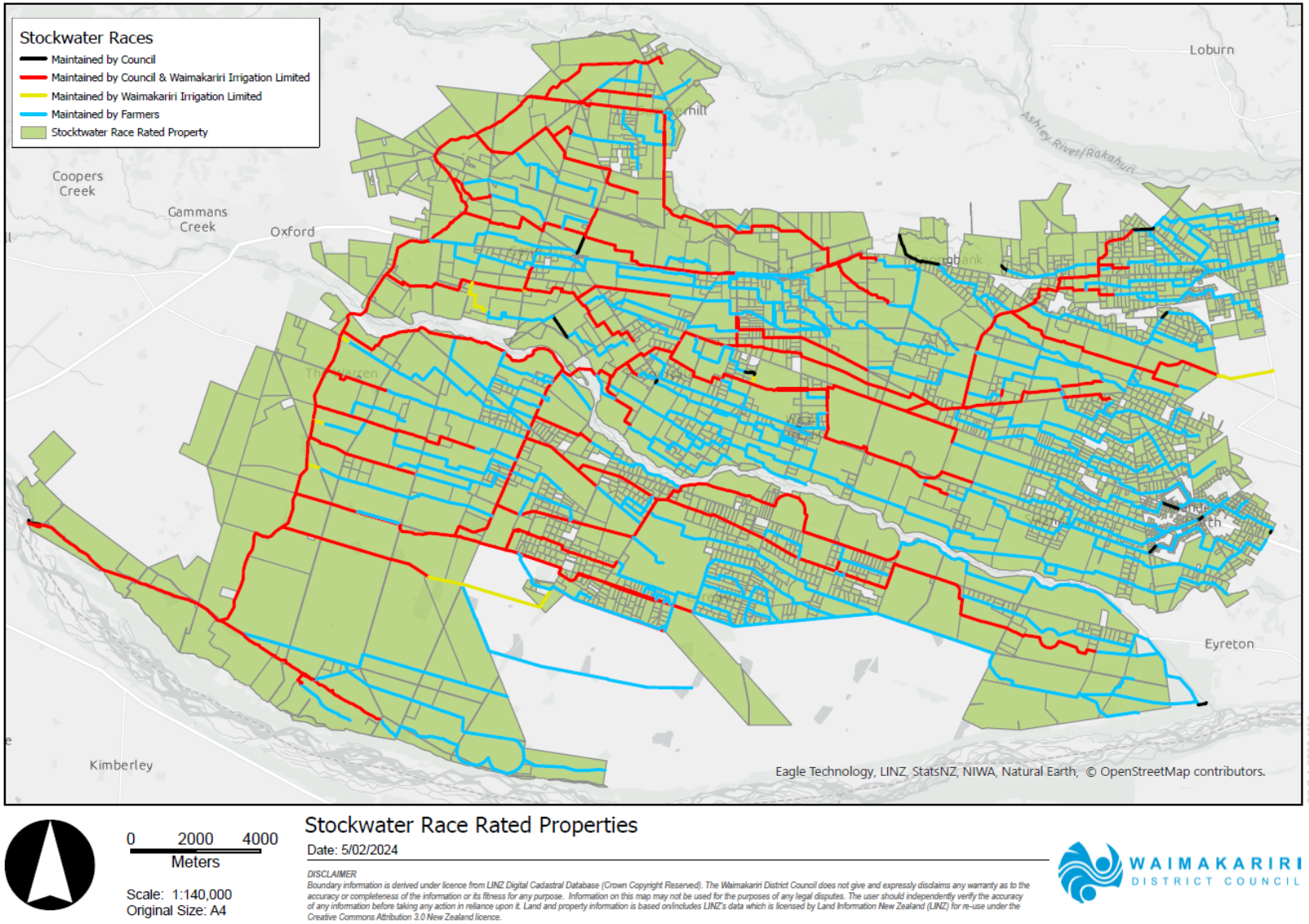
Group	Type	Quantity	Data Source
Area	Rated	42,730 Ha	Rates Strike 2022/23
Rates	Rated Properties	1,673	
	Properties < .4046 hectares	93	
	Properties > .4046 hectares	1499	
	Special Rate	5	
Valuation - Races (non-depreciating)	Length (Races)	828km	Water Races Asset Valuation 2021/22
	Replacement Cost	$12.6 Million	
	Depreciated Replacement Cost	$12.6 Million	
Valuation – Other Assets (depreciated)	Replacement Cost	$6.3 Million	Water Races Asset Valuation 2021/22
	Depreciated Replacement Cost	$4.3 Million	
Intakes	Waimakariri River - Browns Rock	1	
	Cust River – Stokes Bridge	1	
	Cust River – Patersons Road	1	

Gates / Weirs	Total	33	Water Races Asset Valuation 2021/22
Siphons	Total	68 (1.89km)	
Culverts	Road	401 (5.66km)	
	Farm	110 (0.98km)	
Intake Control	Total	1	
Consents – Take Water	Browns Rock Intake	CRC133965 (Expires 2039)	3 Waters Consents Database
	Cust River at Patersons Road	CRC012084) (Expires 2039)	
Consents – Discharge Water	Discharge – Various Locations	11 Consents (Various Expiry Dates)	

Table 4: Related Council documents

Data Reference	Trim Reference
Agreement in Relation to Management of Water Race System: Waimakariri District Council and Waimakariri Irrigation Limited 29 November 2000	080721022383
Water Races Asset Valuation 2021/22 (section 10)	220803132120
3 Waters Consents Data spreadsheet	230705100599
513 Wrights Road Resource Consent Decision Irrigation Storage Pond for Waimakariri Irrigation Limited	141006108705
Waimakariri Irrigation Limited Annual report for year ending June 2022	231107177954
Waimakariri Water Race System Operations and Maintenance Manual July 2007	070910029035
Waimakariri Stockwater Scheme Efficiency Audit	041110016
Compliance Monitoring Report for Browns Rock water Intake July 2020.	200727094289

Figure 1: Stock Water Races Rated Properties



4. SCHEME MANAGEMENT ISSUES (WHAT DO WE NEED TO CONSIDER?)

There are a number of key aspects to consider when managing the stock water race network; these include:

- Desired & actual levels of service
- Asset condition & Criticality
- Risks associated with the service
- Growth predictions for the scheme
- Capacity & performance of the service

These issues have been assessed in detail and are summarised in the following sections

4.1 Levels of Service

The levels of service measures included in the table below are reported on in the WIL Monthly Reports with latest results from 2022/23 shown.

sets out the performance measures and targets for the stock water race activity, and records current and past achievement against those targets.

Taken from the 22/23 WIL end of June monthly report

Table 4: Levels of Service Targets and Performance Measures

Level of Service	2021-2023 Performance Measure	2021-2023 Target	2023				Previous Results#			
			Result	Commentary	Status	Action to Address	2020	2017	2014	2011
Scheme efficiency	Independent efficiency assessment to determine losses within the system	High rating	-	Scheme efficiency rated "Medium to High" in a 2004 Audit. No subsequent audit has been carried out.	Unknown	Include in review of levels of service	Y	Y	Y	Y
The stockwater race system is managed to an appropriate standard.	The number of water outages exceeding 24 hours duration	Nil	23	The outages were related to the debris blockages following the significant rainfall in July, high winds causing trees to topple in September, damage to the Stoke intake weir in October, managing flows during water restrictions in January / February, race failure in Pesters Road in March and shut down of the intake structure for	Improvement required.	Improve service request reporting to allow better analysis of why performance measures are not met. Review contractor reporting at next iteration of contract.	Nil	N	N	N

Level of Service	2021-2023 Performance Measure	2021-2023 Target	2023				Previous Results#			
			Result	Commentary	Status	Action to Address	2020	2017	2014	2011
				inspection and maintenance in May.						
	The percentage of service requests responded to within 48 hours	95%	99%	429 of the 434 service requests received this year were responded to within 48 hours.		Target reduced in 2021 to 95%. See report 200406043184	N	N	Y	-
Flooding-Roads	No flooding of any road adjacent to a water race	None occurred	38 service requests received for flooding roads	Flooding of roads can be a result of blocked culverts, high flows due to storm events or flow management.	Improvement required.	Improve service request reporting to allow better analysis of why performance measures are not met. Review performance measure as current reporting includes flood events.	N	N	N	N
Flooding-Private property, non threatening	No flooding of any property non-threatening to any stock or chattels	None occurred	93 service requests received for non-threatening flooding properties	Flooding of any property can be a result of blocked culverts, high flows due to storm events or flow management.	Improvement required.	Improve service request reporting to allow better analysis of why performance measures are not met. Review performance measure as	N	N	N	N

Level of Service	2021-2023 Performance Measure	2021-2023 Target	2023				Previous Results#			
			Result	Commentary	Status	Action to Address	2020	2017	2014	2011
						current reporting includes flood events.				
Flooding-Private property, threatening	No flooding of any property threatening to any stock or chattels	None occurred	30 service requests received for threatening flooding of properties	Flooding of any property can be a result of blocked culverts, high flows due to storm events or flow management.	Improvement required.	Improve service request reporting to allow better analysis of why performance measures are not met. Review performance measure as current reporting includes flood events.	N	N	N	N
Continuity of supply	No closure or blockage of the main stock water race intake	None occurred	Intake closed for total of 5 days.	Closure due to high flows in the Waimakariri River. Intake closed to prevent damage.	Improvement required.	Review LoS so issues that cannot be controlled by WIL are excluded	N	N	Y	Y
Continuity of supply	No blocked intake at the tunnel	None occurred	Pass	----------	Achieved	N/A	Y	Y	Y	Y

Level of Service	2021-2023 Performance Measure	2021-2023 Target	2023				Previous Results#			
			Result	Commentary	Status	Action to Address	2020	2017	2014	2011
Culvert maintenance	No blocked culverts at any time	None occurred	134 blockages reported	Blocked culverts can occur throughout the network. Most often caused by poor race cleaning frequencies.	Not achieved	Improve maintenance awareness of landowners.	N	N	N	N
Water Quality	No complaints about race failure, dirty water or odours	None occurred	1 reports of race failure, dirty water or odours	1 case recorded, but insufficient additional information recorded to be useful for analysis or planning improvements	Not achieved	Improve service request reporting to allow better analysis of why performance measures are not met. See IP057.	N	N	N	N
Consent Breach	Resource Consent Breaches leading to minor adverse effects: Target - 0	None occurred	Pass	No breaches reported.	Achieved	N/A	Y	Y	Y	Y
Consent Breach	Resource Consent Breaches leading to significant adverse effects: Target - 0	None occurred	Pass	No breaches reported.	Achieved	N/A	Y	Y	Y	Y

4.2 Asset Condition

The stock water race system consists of an intake tunnel, open races, pipes, culverts, drop structures, gates and siphons.

Once created, the stockwater open races are considered to have an unlimited life and only require maintenance intervention to ensure ongoing performance. For this reason the water races are not subject to depreciation.

The remaining man-made assets are subject to deterioration and have a finite lifecycle which needs to be carefully managed to ensure good performance from the assets. Asset condition is monitored and managed using remaining useful life profiles informed from the Councils 3 yearly infrastructure revaluation. Insufficient information is recorded about actual asset condition.

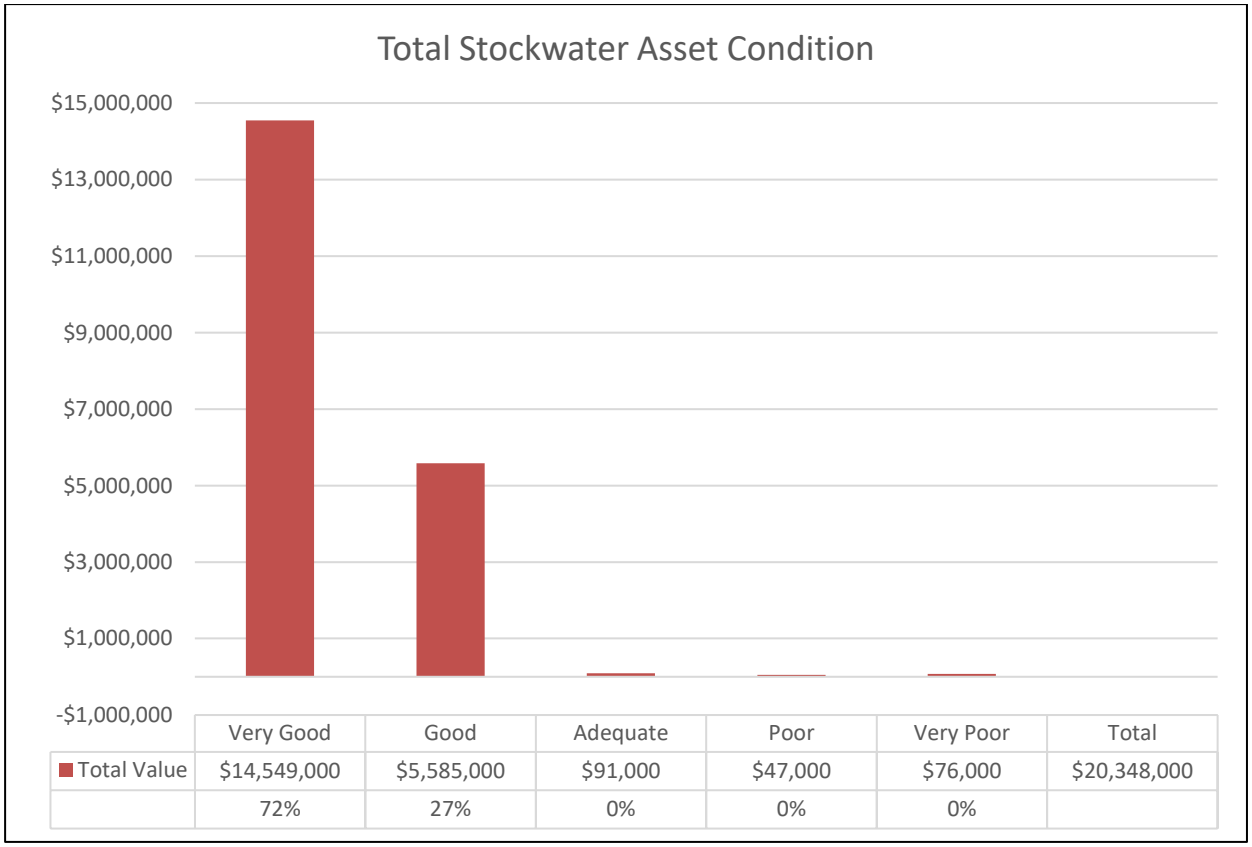
Approximately 2kms of open channel through Cust has been converted over time to a piped network by private landowners. Much of this is in short pipe lengths of unknown size, material and condition.

Funding of a CCTV programme is included in annual budgets to survey the piped network, culverts and siphons and assign evidence based condition ratings. As data is gathered and analysed, this can be used in the renewals model.

There is also a programme of culvert replacement managed by WIL based on a set annual budget.

Figure 2 below illustrates the remaining useful life profiles for the man-made water race assets (excluding open channels) based on component age and asset design life.

Figure 2: Remaining Useful Life Profile by Replacement Value



	Very Good	Good	Adequate	Poor	Very Poor	Total
Total Value	$14,549,000	$5,585,000	$91,000	$47,000	$76,000	$20,348,000
	72%	27%	0%	0%	0%	

Parameter	Very Good (Grade 1)	Good (Grade 2)	Adequate (Grade 3)	Poor (Grade 4)	Very Poor (Grade 5)
Definition	*More than 80% of life remaining*	*Between 50% and 80% of life remaining*	*Between 20% and 50% of life remaining*	*Between 10% and 20% of life remaining*	*Less than 10% of life remaining*

4.3 Asset Criticality

Asset criticality provides an indication of the importance of an individual asset and the corresponding impact on the service delivery should the asset fail for any reason. Criticality is used in risk based investment decisions to help decide when an asset should be replaced to avoid the consequences of failure.

The stock water assets have not yet been assessed for criticality. The Council will consider the timing and best process for assigning criticality to assets in collaboration with WIL.

4.4 Risk Assessment

A risk assessment was last carried out in 2011 for the stock water race system. The key output from the risk assessment is the identification of any extreme and high risks to the delivery of stock water, which need to be mitigated.

A total of 50 possible events were assessed for their "risks to the delivery of stock water in the following categories:

- Intake
- Distribution
- Discharge
- Management

A Risk Assessment Update project is under way. A risk assessment process has been developed that integrates the existing operational risk assessment process with the disaster resilience assessment with the objective of reducing duplication and making updates simpler. It is expected the new risk analysis across all of Council's water activities will be completed in 2024

4.5 Growth Projections

There has been a trend towards conversion of large farms into smaller life style blocks within the district for a number of years. This has translated into a steady increase in the number of properties rated for stock water.

The life style block profile generally follows a decrease in stocking rates and stock water while increasing demand for recreational and irrigation water. The Council considers that the overall demand for stock water has remained static throughout this behavioural shift.

The increased demand for domestic irrigation water is being managed by the Council through an application process to take additional water and, restricting the offtake pipe diameter to 20 mm per property. The Council maintains a register of properties granted this right and monitors the presence of offtakes in collaboration with WIL to help prevent the misuse of stock water.

The increase of intensive farming has led to less reliance on stock water due to on farm reticulation. Races are often seen as a liability due to increased environmental outcomes. Many races are being relocated around the perimeter of properties. Requests from owners to fence and plant riparian areas are also being received.

4.6 Capacity & Performance

The capacity of the stock water system is a function of the resource consent conditions and water race conveyance potential. Given the demand for water in the catchment, it is considered unlikely that Council will be seeking consent to take additional water for stock purposes in the near term. This effectively caps the supply of water that can be offered to stock water customers.

The performance of the existing networks is considered to be good with most channels requiring only annual maintenance to optimise their performance.

The culvert replacement programme includes extending the width of some existing culverts to cross the road corridor and pass under any adjacent fences. This was in response to sections of water race being vulnerable to blockages from material being caught in the fence and impeding flow in the water race.

In 2014 WIL sought to obtain resource consent to construct two new storage ponds of up to 8.2 million cubic metres capacity at its Wrights Road and Dixon's Road property. Consent was granted in August 2020, although a decision to proceed with construction has yet to be made. There has been an increase in the number of on farm storage ponds in the intervening years since the consent was first applied for.

A 2004 audit rated the scheme as operating at a medium to high level of water efficiency (medium to low water losses).

5. FUTURE WORKS AND FINANCIAL PROJECTIONS (WHAT DO WE NEED TO DO?)

This section covers the future works required to meet the target levels of service, maintain the asset in an acceptable condition, reduce the risks to an acceptable level and accommodate growth.

5.1 Operation & Maintenance

Maintenance of stockwater races is separated into three areas of responsibility; Council, Waimakariri Irrigation Ltd (WIL) and property owners. These are shown on the stockwater map (available here: Stockwater Map). The red lines denote races that are physically maintained by WIL, but costs are shared.

In summary, Council are responsible for some feeder races or where a race does not supply stockwater to the adjacent property through which it runs. Waimakariri Irrigation Ltd are responsible for all races supplying a combination of irrigation and stockwater and property owners are responsible for races supplying stockwater. This includes races located within the adjacent road reserve. Maintenance of structures such control gates, piped races and road culverts is the responsibility of Council. Council maintenance is undertaken by WIL under the existing service level agreement.

Encouraging property owners to maintain races is an ongoing concern. Reliability of the supply is impacted by poor maintenance. Educational information explaining best practice for maintenance methods, is made available on the Council website for land owners who are responsible for conducting stockwater race maintenance.

The fact sheet that the Council makes available is here: Stockwater Races - Maintenance-and-Biodiversity.pdf

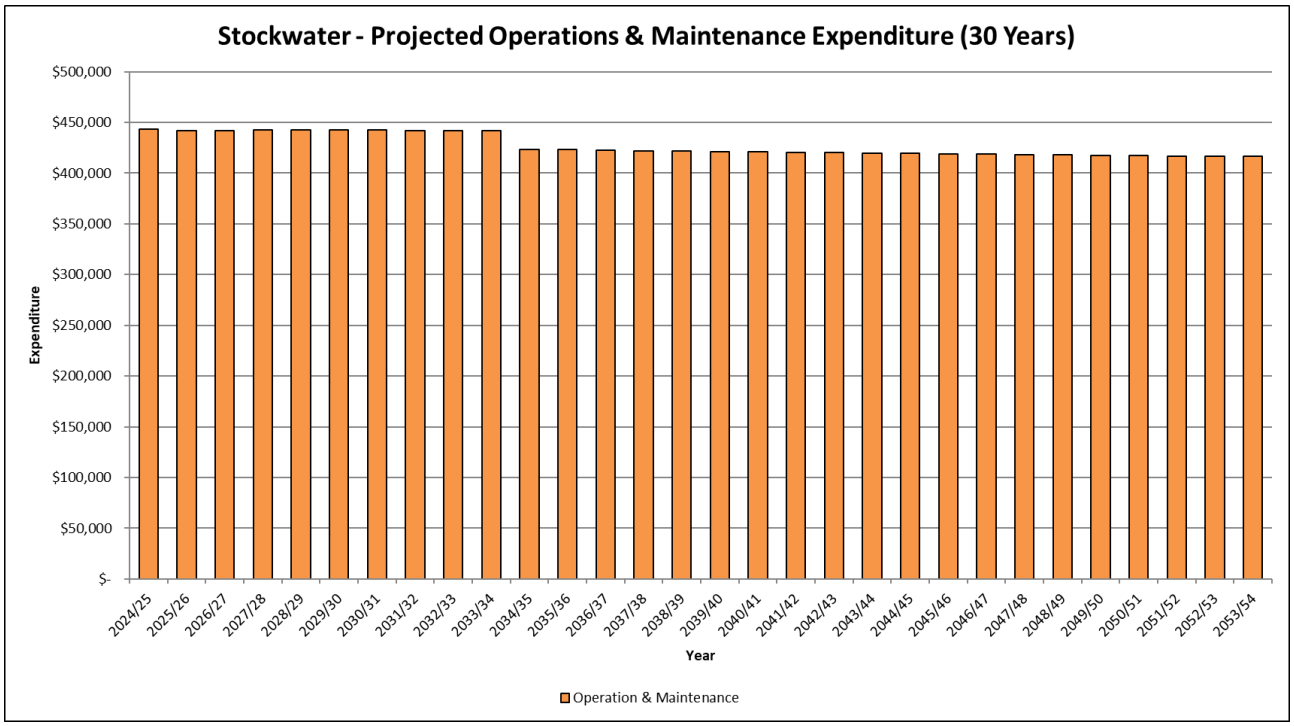
Maintenance of the open channel and closed pipelines within the Cust village is an issue. Many properties have incorporated the open channel into landscaping which restricts the ability to access the race for maintenance. Cleaning of pipes requires specialised truck mounted equipment to remove silt from the pipe.

The following 30 year graph showing the current maintenance programme is largely re-active with a programme of annual maintenance including user education.

The operations and maintenance budgets are generally kept the same as the previous year unless some known specific item causes a fluctuation.

Systems are not yet in place to capture the cost distinction between planned and unplanned maintenance.

Figure 3: Annual Stock Water Operation & Maintenance 30-Year Budget



5.2 Renewals Programme

Renewal expenditure is work that does not increase the capacity of the existing assets, rather it restores the system to its original capacity.

The renewals programme is determined in two stages. The renewals model, details of which are provided in the overview document, provides a long term view of the income required to ensure that a renewals fund is sufficient to enable future asset renewals, without needing to borrow. This is shown in Figure 4: Annual Stock Water Renewals 150-Year Budget

. The graph shows that the depreciation funding is sufficient to fully fund future renewals.

The model prioritises candidates for consideration by Asset Managers for renewal based on criticality, risk, and expected asset life. Asset managers will consider other factors such as roading resurfacing programmes, in prioritising the actual renewals programme.

The first ten years of the LTP programme are based on assessments by the Asset Manager (using the model outputs to inform this assessment, among other factors), but from year 11 forward expenditure is taken directly from the model. Currently the culvert replacement programme is the only ongoing capital project to be funded by the WDC.

Figure 4: Annual Stock Water Renewals 150-Year Budget

below only shows the output from the model. The final renewals budget put forward into the draft LTP, is included in the capital works graph, Figure 5: Projected Capital works Expenditure

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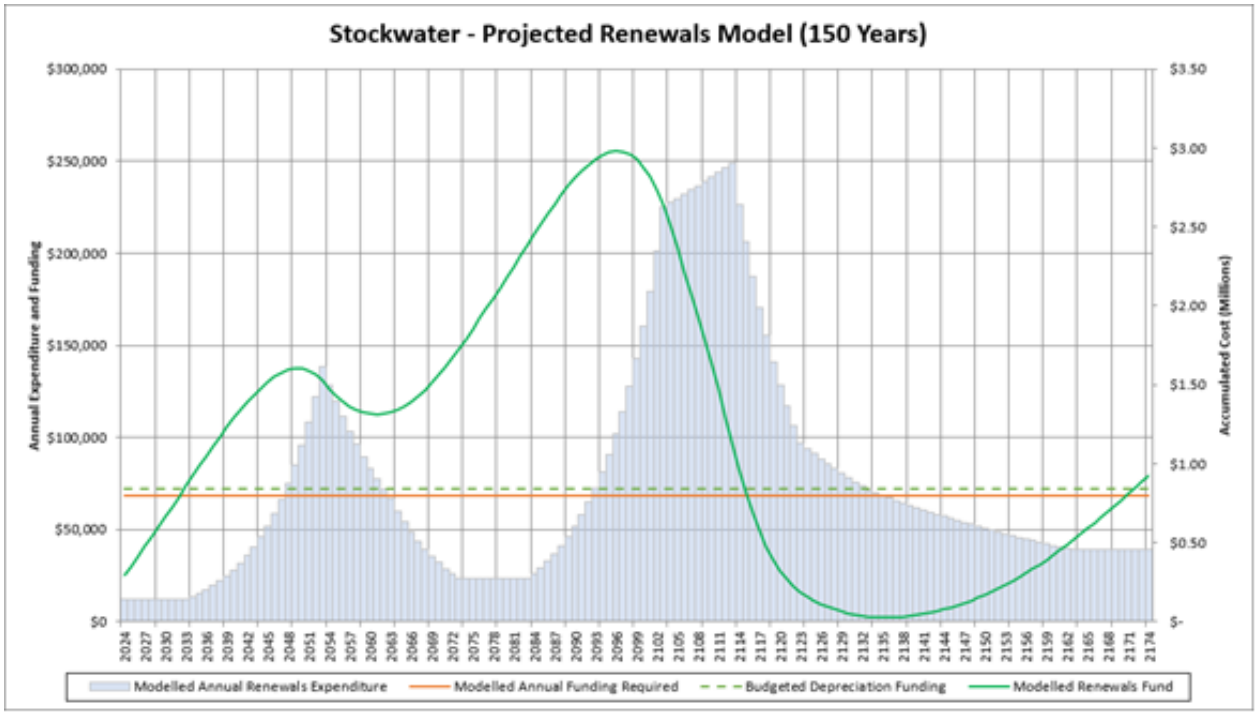
Figure 4: Annual Stock Water Renewals 150-Year Budget



The key parameters in the figure above are explained below:

- **Modelled Annual Renewals Expenditure**: This is the direct output from the renewals model, recommending the annual investment to be made in renewals each year.
- **Modelled Annual Funding Required**: This is the amount of annual renewals funding required, to ensure there are sufficient funds available to carry out the recommended annual renewals each year.
- **Budgeted Depreciation Funding**: This is the actual amount of depreciation being collected, which is extracted from the Council's budgets.
- **Modelled Renewals Fund**: This is the modelled balance in the renewals account, assuming the annual funding and annual expenditure is completed as per the recommendations from the renewals model. As can be seen, this account is maintained as a surplus, peaking later this century, before being drawn down as the first lifecycle of current assets is completed.

It is noted also that there are a wide number of factors influencing specific planning for renewals projects, which mean that the outputs from the renewals model are not strictly followed. In general, district wide final renewals budgets have been set at a higher level to that recommended by the renewals model (229% overall) for the next 10 years. The difference across the scheme is shown in the table below.

Table 5:Planned Budget versus Renewals Model Recommendations 2024-34

	Renewals model recommendation	Planned Budget	Budget as a percentage of model recommendation
Stockwater	$120,000	$275,000	229%

It is noted that beyond the first 10 year window, the outputs from the renewals model have been fully adopted to inform the renewals budgets for each scheme.

5.3 Capital Works

The following graph shows the 50 year budget for all capital works, including projects driven by growth and levels of service (Figure 5: Projected Capital works Expenditure

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Figure 5: Projected Capital works Expenditure

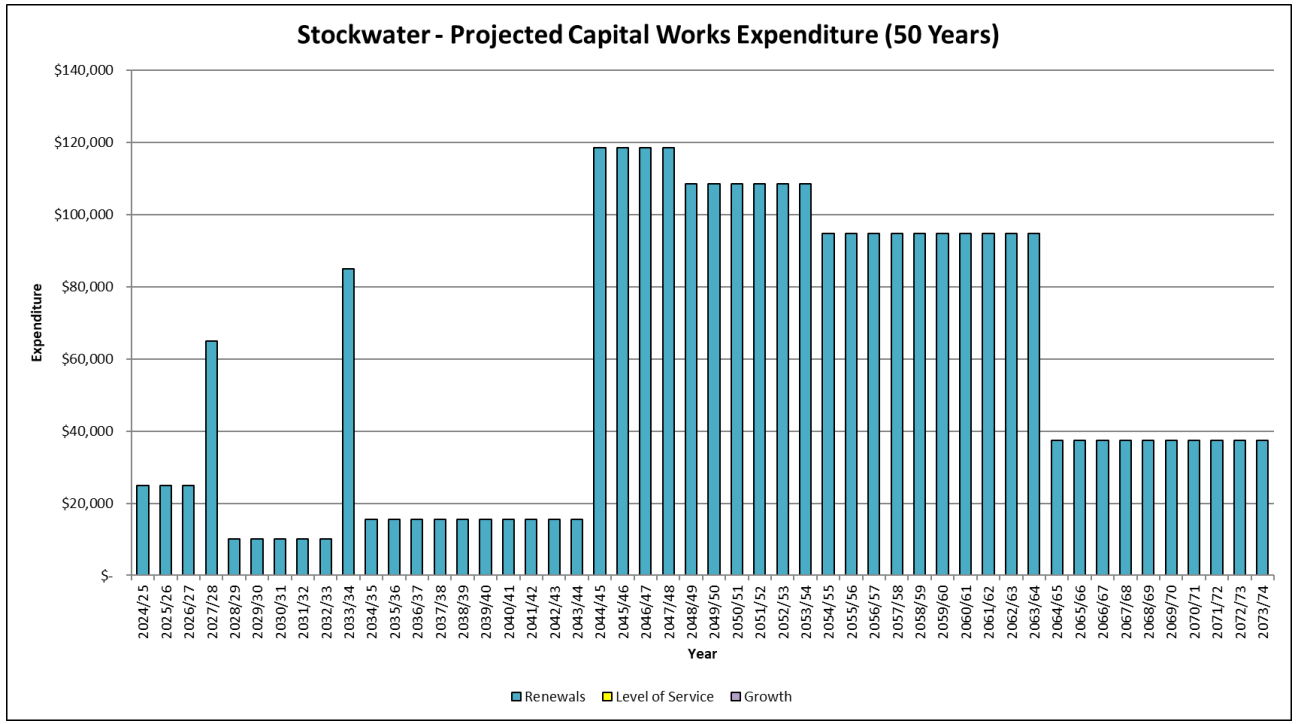


Table 6 summarises the projected capital works for the next 50 years, including renewals. The only capital works actively programmed at present for the stock water races relates to the ongoing culvert replacement programme. The programme is managed by WIL and includes

culvert extensions to improve levels of service and replacing culverts. Renewal budgets out beyond the culvert replacement programme come from the renewals model.

The level of confidence in the budget for the works is presented in the table. For a more complete discussion on the level of optimisation, refer to the introductory chapter of the AMP. The figures in the table are not adjusted for inflation.

The renewals programme, which occurs over a number of years is only shown within the table for the first year in which it occurs. The Project Value indicates the projected full total cost of the project over the number of years it occurs.

Table 6: Summary of Capital Works (Includes Renewals)

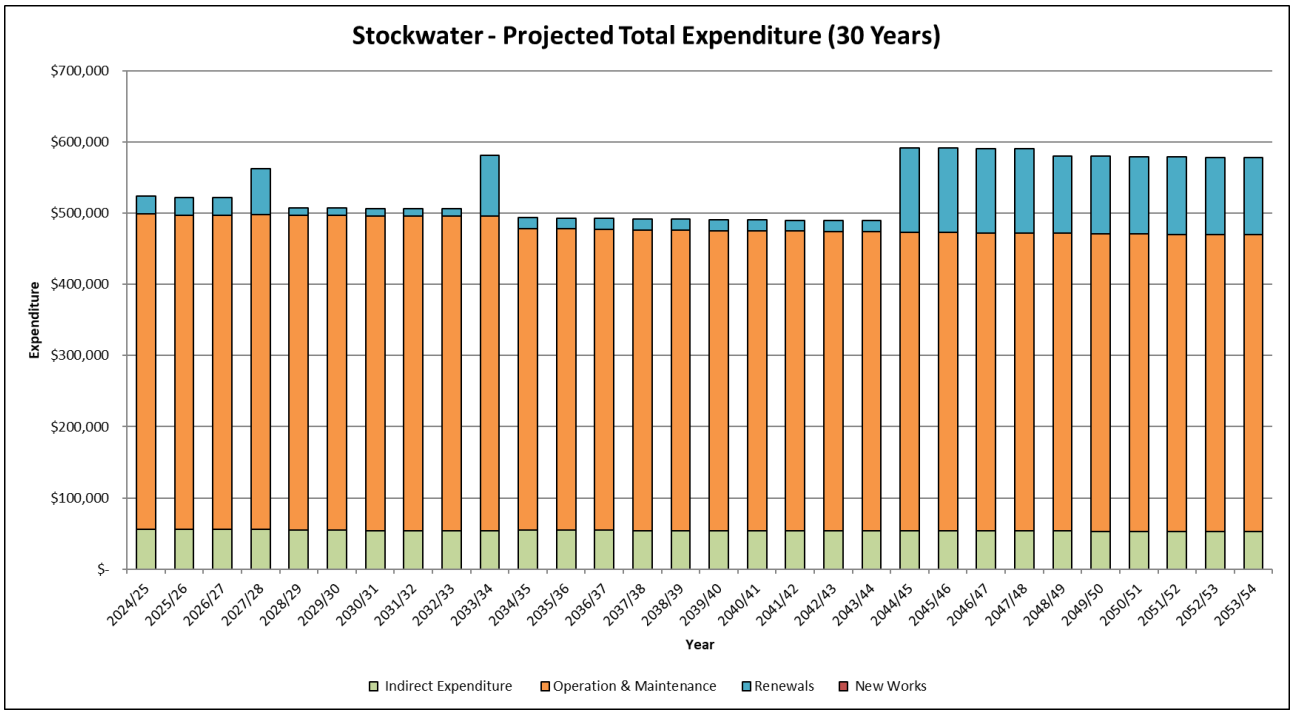
Year	Project ID	Project Name	Level of Confidence	Project Value	LOS Component	Renewals Component	Growth Component
Year 1 - 10							
2025	URT0002	Stockwater Culvert Replacement	3 - Low	$ 300,000	$ -	$ 300,000	$ -
2028	URT0001	Stockwater Long Term Renewals		$ 2,578,079	$ -	$ 2,578,079	$ -
Grand Total				$ 2,878,079	$ -	$ 2,878,079	$ -

Note: the Water Race Culvert Renewals item indicates the total projected renewals programme value over a period of 50 years, beginning in 2024/2025

5.4 Financial Projections

The following graph summarises the breakdown of projected total expenditure over a 30 year time horizon. It includes both operational and capital expenditure. Operational costs include operations and maintenance, and indirect expenditure. Indirect expenditure includes interest, rating collection costs, costs associated with maintaining the Asset Register, and internal overhead costs. Capital includes expenditure for growth, levels of service and renewals.

Figure 6: Projected Expenditure



5.5 Valuation

A full peer reviewed valuation of assets is usually carried out on a three yearly cycle, using the asset data in our asset management information system. Due to the high recent level of inflation the valuation interval was reduced to two years. Table 7 below provides a summary of the replacement cost, depreciated replacement cost and annual depreciation for this scheme

Table 7: Replacement Costs and Annual Depreciation

Asset Type	2022 Replacement Cost	2022 Depreciated Replacement Cost	2022 Annual Depreciation
Resource Consents	$708,568	$231,566	$20,245
Farm Crossing	$825,214	$531,550	$12,801
Road Crossing	$3,738,874	$2,904,144	$35,905
Water Races	$12,611,112	$12,611,112	$0
Syphons	$943,337	$597,243	$17,123
Other Structures	$91,853	$81,207	$1,348
Total	**$18,918,959**	**$16,956,822**	**$87,422**

5.6 Revenue Sources

Revenue for the stockwater portion of the costs is from targeted rates which are charged in accordance with Council's Revenue and Financing Policy, included in the Long Term Plan (TRIM 231114183205). Funding for the irrigation portion of the scheme comes from subscribers to the Waimakariri Irrigation Limited scheme, the company also managing the expenditure.

6. IMPROVEMENT PLAN

6.1 2021 Improvement Plan

details the scheme specific improvements recommended to address issues identified earlier in this AMP. Each improvement item has been tagged to either a capital project or, a process improvement project to help manage and track Councils response. Expected timeframes are also shown.

Table 8: 2021 AMP Improvement Plan

Project Ref	Project name	Project description	Timeframe
IP055	Stockwater Reticulation AMS Improvements	Update spatial accuracy of GIS layers. Create spatial features in GIS for Tech1 assets.	2024-26 Work in progress
IP057	Stockwater service request management	Integrate WIL service request reporting with Asset Management System to improve LOS reporting. (May be appropriate to roll into the overall review of the WIL contract, creation of a SLA etc)	Ideally 2024-26, and integrated with implementation of new Asset Management System (ADAPT)
-	Culvert Replacement Programme	An ongoing replacement programme of old culverts on a like for like basis.	Ongoing

7. FUTURE CHALLENGES

- **Future Challenges and Key Decisions for Council**

The five most significant challenges facing Waimakariri District Council in the stockwater area are water take consents, Waimakariri Irrigation Ltd licence, climate change, Levels of Service, and how to best mange the tunnel intake.

- **Water Take Consents**
  Council have two consents from Environment Canterbury to take and use surface water. One for the Browns Rock intake and the second for the two intakes on the Cust River. Both consents will expire in May 2039.
- **Waimakariri Irrigation Ltd licence**
  In 1999, Council made the water race system available to Waimakariri Irrigation Ltd to construct and operate an irrigation scheme. This licence will expire in November 2031. On expiry of this licence, all assets owned by WIL transfer to Council, unless a renewal is negotiated.
- **Climate Change**
  The potential impacts of climate change and global warming to water supplies requires consideration. Weather patterns, ground water allocation and minimum river flows may impact demand for stockwater supplies.
- **Levels of Service**
  The levels of service are in need of a review. A review has not been done for some time and many of them lack clarity. Agreement will need to be reached with WIL and representatives of both stockwater and irrigation customers
- **Tunnel Intake**

  An assessment of the old tunnel and associated assets should be made, and decisions made whether to continue their use, or decommission the tunnel

APPENDIX 1: LONG TERM PLAN STOCK WATER PERFORMANCE MEASURES

The following table outlines the Council's community outcomes and performance measures for its stock water activity. Monitoring results are reported annually in the Council's Annual Report. There are no mandatory reporting requirements applicable to the Council's management of the stock water races.

Stock Water			
Community Outcomes	**Major Level of Service**	**Performance Measures**	**Targets**
The natural and built environment in which people live is clean, healthy and safe.	The stockwater race system is managed to an appropriate standard.	*The number of water outages exceeding 24 hours in duration. *The percentage of service requests responded to within 48 hours.	Nil 95%