Wastewater Activity Management Plan

Westland District Council

2025 - 2034

WESTLAND
District Council | Te Kahui o Poutini

Document Control

The following revisions have been made to this document since its initial publication.

Document Control		Activity Management Plan			
Document ID:		Wastewater Activity Management Plan			
Rev No	**Date**	**Revision Details**	**Author**	**Reviewer**	**Approver**
1.0	19 Mar 2025	Draft for Consultation	WD	AP	AP
1.1	03 Jun 2025	Final for Long-Term Plan Adoption	WD	AP	AP

Cover photo: Franz Josef Wastewater Treatment Plant.

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Figure: Hokitika Z-line Replacement (December 2022)

1. Hokitika Wastewater Scheme

1.1. Overview and History

Council operates and maintains the Hokitika township wastewater collection, transfer, treatment and disposal system. The Hokitika Wastewater Scheme, which was originally constructed and operational in 1973 with Kaniere joining in 1999 – 2000. The scheme serves approximately 3,500 people.

Wastewater is received at the Fitzherbert Street pump station and then pumped and gravity fed from this pump station to the treatment plant. The wastewater treatment plant is currently located adjacent to State Highway 6, located approximately 2km north of Hokitika township. A minor wastewater reticulation area further north of the oxidation ponds is also collected and pumped to the ponds from the West Drive catchment pump station.

Treatment is facilitated by a two-pond oxidation process currently operating in parallel with an above ground outlet which discharges final treated wastewater to the coastal marine area. The ponds are 2.5 hectares each with an average depth of 1.5m. The average daily discharge is approximately 3172m^3 with a consented maximum daily discharge of 10,000m^3. The treatment plant receives trade waste including:

- Silver Fern Farms (meat processor),
- Septage (septic tank),
- Stock truck effluent and,
- In-transit campervans.

Due to the current resource consent expiring in 2026, the Hokitika wastewater treatment plant is undergoing a major upgrade. While no formal decision has been made on the type of plant or its location, it will most likely be a mechanical plant and is expected to be operational by 2028. Stantec have been engaged to deliver this project from inception to completion. Council may need to apply for an extension to the resource consent to ensure there is no breach of compliance. If enacted, new legislation as part of the Government's Local Water Done Well and new quality standards for Wastewater, may grant an additional two years for expiring consents to allow for upgrades in-line with the new standards.

Figure 1-1: Hokitika Wastewater Scheme Map.

1.2. Scheme Summary

A summary of the Hokitika Wastewater Scheme is provided below in Table 1-1. Demand is not currently recorded for the scheme.

Table 1-1: Summary of Hokitika Wastewater Scheme.

Description		Quantity
Estimated Population Served		3,500
Scheme Coverage	Residential Charges	1650
	Commercial Charges	187
System Components	Piped Mains	42.2 km
	Manholes	547
	Pump Stations	8
	Treatment	2 Oxidation Ponds
	Disposal	Above ground
History – Original Scheme Install Date		1973
Value (2024 Valuation)	Optimised Replacement Cost	$31,788,568
	Depreciated Replacement Cost	$12,976,825
Financial	Operator cost per connection	$176.35
Demand	Annual	-
	Average Daily	-
	Peak Daily	-
	Minimum Daily	-
	Infiltration	-
Sustainability	Discharge Point	Coastal marine

1.3. Key Issues

The Hokitika Scheme's key issues have been identified and are detailed below in Table 1-2. A list of the district wide wastewater issues is located in Section 3.2 of the Three Waters AMP 2025.

Table 1-2: Hokitika Scheme Key Issues.

Key Issue	Response
Wastewater treatment plant	Expiring resource consent. Stantec engaged to design new WWTP and relevant processes.
Trade Waste Impacts	Stantec are including these implications in the design of the new WWTP.
Ageing Infrastructure	Prioritising replacements when funding allows.
Inflow and Infiltration	Significant I & I investigations were undertaken in 2022, however due to lack of resourcing no further action has been taken with properties identified.
Changes within the Water Authority regulations within this space	The changes are not expected to impact the treated quality effluent requirements; however, it is expected that the level of data required to reported on will be significantly increased which has been allowed for in the LTP.

1.4. System Capacity

The current capacity of the Hokitika Wastewater Scheme is considered sufficient.

The current capacity of this scheme is considered sufficient based on the few overflows in the last couple of years, most of which are related to Inflow & Infiltration (I&I) issues. There were several blockages relating to fat build-up, mostly around the CBD and businesses not using their grease traps appropriately.

There is expected to be growth within the scheme due to large upcoming subdivisions.

1.5. Resource Consents

The resource consents related to this scheme are detailed below in Table 1-3.

Table 1-3: Supply Resource Consents.

Consent	Description	Location	Granted Date	Expiry Date	Consented Discharge
RC-2015-0141-01	To discharge treated sewage effluent from the Hokitika Oxidation Ponds to the Coastal Marine Area via an outfall pipe.	Hokitika	07/04/2016	07/04/2026	10,000m^3/day
RC-2015-0141-02	To discharge contaminants (odour) to air.		07/04/2016	07/04/2026	-

1.6. Scheme Assets

A summary of the material, diameters and ages of mains pipes within the Hokitika Scheme are shown below in Figure 1-2, Figure 1-3 and Figure 1-4.

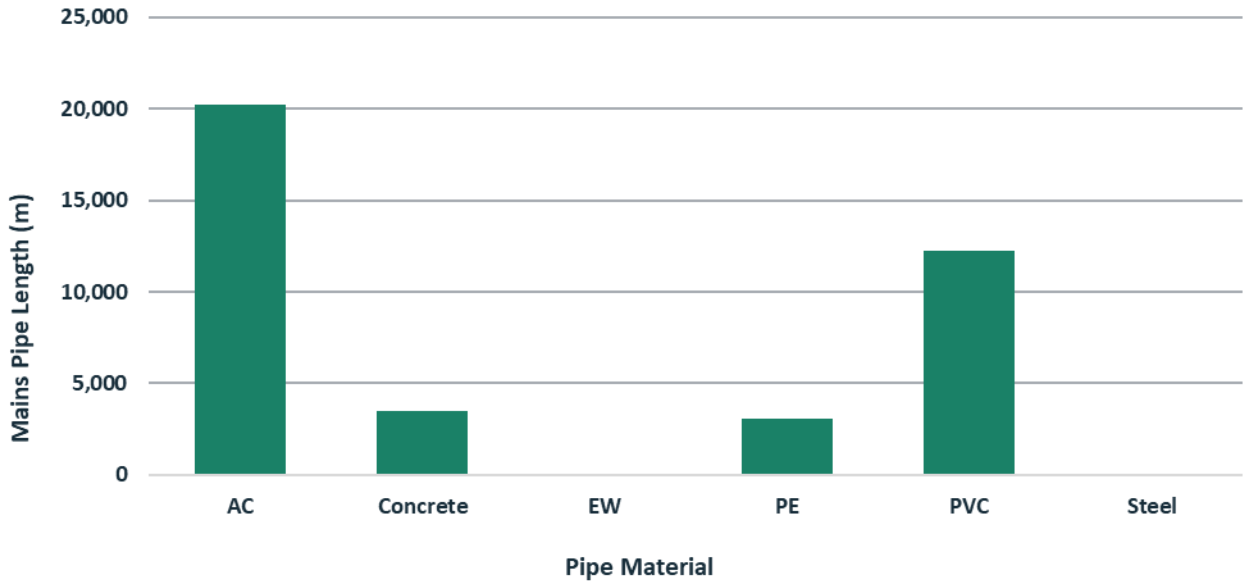

Figure 1-2: Hokitika Scheme Mains Pipe Material.

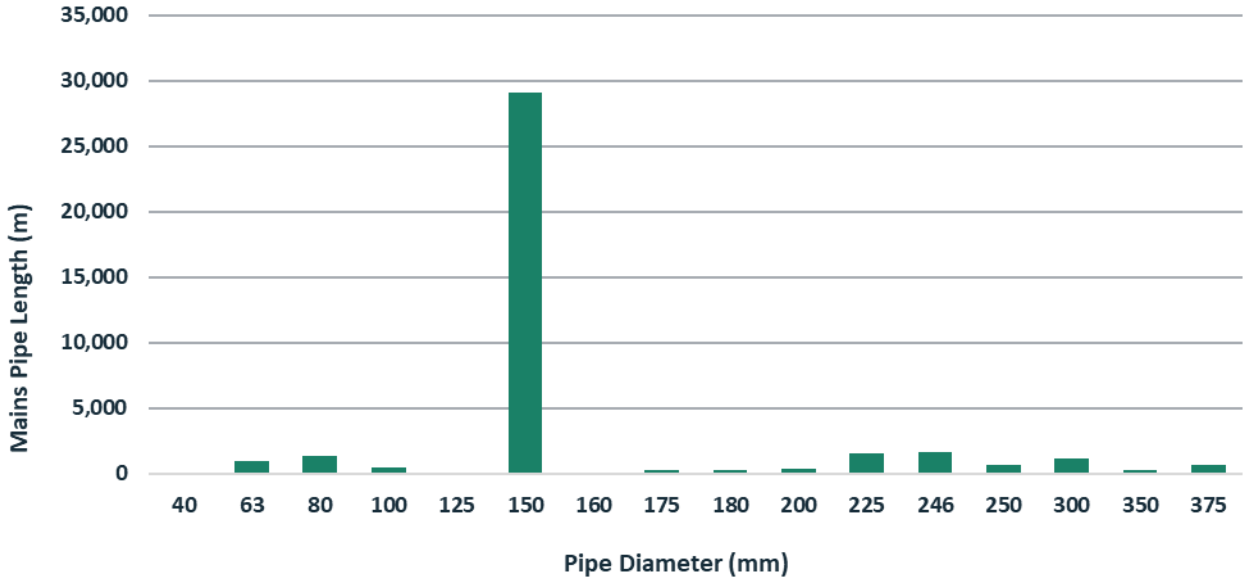

Figure 1-3: Hokitika Scheme Mains Pipe Diameter.

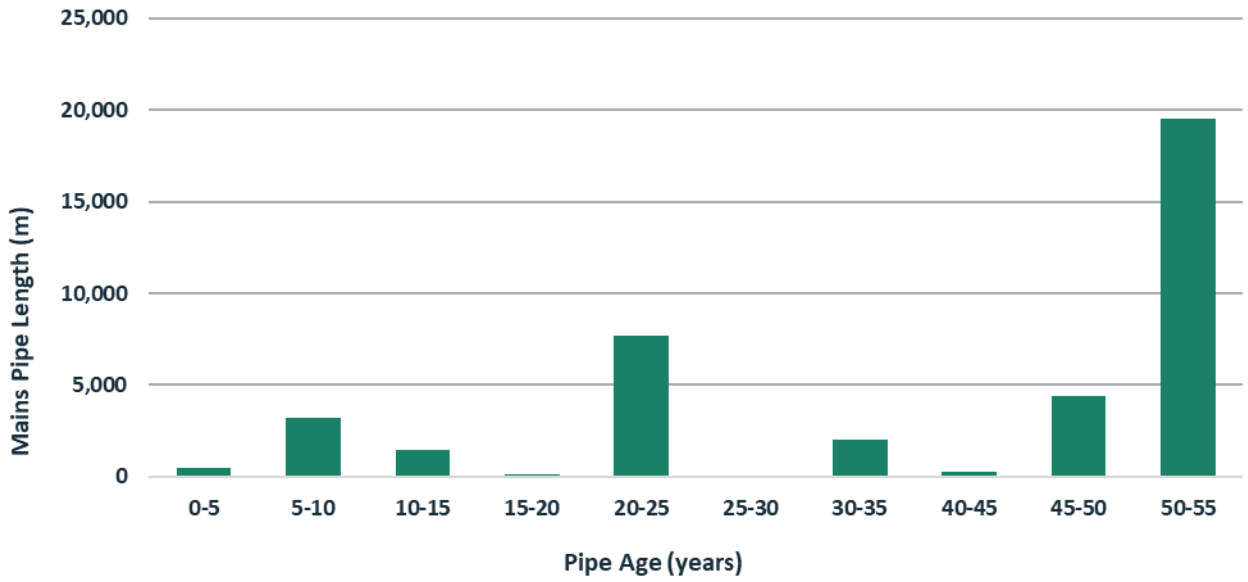

Figure 1-4: Hokitika Scheme Mains Pipe Age.

1.7. Operational Management

The operation and maintenance of the supply is part of the Westland District Utilities Maintenance Contract (22-23-03). The current contract was awarded to Westroads Ltd in August 2022. The term of the contract is 5 years.

1.8. Photos of Main Assets

Figure 1-5: Fitzherbert Pump Station.

Figure 1-6: Treatment Plant Outfall.

1.9. Risk Assessment

A risk assessment has been undertaken for the Hokitika Scheme. Risks that have been identified as unacceptable have been listed below in Table 1-4.

Table 1-4: Hokitika Wastewater Scheme Risks.

Risk	Risk Rating	Actions & Mitigation	Residual Risk Rating
New treatment plant not commissioned prior to consent expiry.	Very High	Apply for extension to consent on the premise that the designs and/or tendering is underway.	Medium

1.10. Asset Valuation Details

The total replacement value of the assets within the Hokitika wastewater scheme was $35,338,506 as valued at 30 June 2024.

Table 1-5: Hokitika (incl Kaniere) Wastewater Scheme Valuation Breakdown.

Asset Class	Asset sub-class	Optimised Replacement Value	Depreciated Replacement Value
Treatment Plant		$3,996,512	$3,208,657
Pump Station		$3,273,117	$1,416,571
Dump Station (Campervan/Stock Effluent)		$170,422	$75,152
Reticulation	Mains Pipe	$16,181,486	$6,356,711
	Service Lateral	$7,265,433	$2,343,257
	Manholes	$4,451,536	$2,109,327
TOTAL		**$35,338,506**	**$15,509,674**

1.11. Critical Assets

The criticality rating of the pipeline assets for the Hokitika Scheme is provided below in Table 1-6.

Table 1-6: Mains Pipe Criticality Rating.

Criticality Level		Length (m)	
1	Very High	-	-
2	High	5,106	12.9%
3	Medium	31,313	79.3%
4	Low	67	0.2%
5	Very Low	202	0.5%
	Unknown	2,778	7%

1.12. Asset Condition

The condition rating of the assets is currently age based and not a physical site assessment. The condition rating of the pipeline assets for the Hokitika Scheme is provided below in Table 1-7.

Table 1-7: Mains Pipe Condition Rating.

Condition Rating		Length (m)	
1	Excellent	7,417	17.6%
2	Good	10,379	24.6%
3	Average	242	0.6%
4	Poor	20,704	49%
5	Very Poor	3,494	8.3%
	Unknown	-	-

1.13. Funding Programme

The 9-year financial programme for Hokitika Wastewater is divided into the following categories:

- **Operations** – includes operational and maintenance costs,
- **Renewals** – replacement of assets on a 'like for like' basis,
- **Levels of Service (LOS)** – new assets to increase the level of service,
- **Growth** – new assets to meet additional demand.

The financial programme presented should be viewed noting that:

- **Allowance for CPI** – Consumer price index adjustments 'inflation' has not been included; and
- **All data is held in IBIS** – the database which Council conducts the majority of its financial rates storage and reporting.

The funding programme for Hokitika Wastewater is provided below in Table 1-8.

Table 1-8: Hokitika Wastewater Funding Programme[1].

	Operations	Renewals	LOS	Growth
Year 1	$257,330	$2,675,000	$82,500	
Year 2	$260,300	$13,131,750	$182,500	
Year 3	$260,300	$10,276,751		
Year 4	$260,300	$1,510,000		
Year 5	$260,300	$2,135,000		
Year 6	$260,300	$1,170,000		
Year 7	$260,300	$1,160,000		
Year 8	$260,300	$1,185,000		
Year 9	$260,300	$1,810,000		
TOTAL	**$2,339,730**	**$35,053,501**	**$265,000**	**$0**

The projects included in the LTP for the Hokitika Wastewater are listed below in Table 1-9.

[1] Throughout the document, the classification of renewals, levels of service and growth may differ from the financial model.

Table 1-9: Hokitika Wastewater Projects.

Project Name	Project Description	Criticality	Funding	Y1	Y2	Y3	Y4-9	Total
Fitzherbert St Pump Station Building Assessment	Assessment on remaining life for the Fitzherbert Pump Station Building. A budget for replacement will be allowed for in the next LTP.	Medium	Renewal				$25,000	**$25,000**
Hokitika Pump Station Upgrades	Replacement of pumps and electrics at various pump stations including Shenandoah, Sewell St, Fitzherbert St and Kaniere Tram.	High	Renewal	$220,000	$140,000		$375,000	**$735,000**
Reticulation Upgrades	Replacement of mains and laterals including manholes	High	Renewal				$7,710,000	**$7,710,000**
WWTP & Pump Station SCADA system	Current units are being phased out and need to be replaced. Year 1 share in one off costs. Year 2 implementation.	High	LOS	$82,500	$182,500		$0	**$265,000**
Hokitika WWTP Upgrade	Procurement and installation of new wastewater treatment plant and components	High	Renewal	$2,365,000	$12,991,750	$10,276,751	$750,000	**$26,383,501**
Upgrade Dump Station	Upgrade of stock effluent dump in Hokitika (Western side).	Medium	Renewal	$90,000			$0	**$90,000**
WWTP Component Upgrade	Renewal of components at the WWTP i.e. cameras etc.	Medium	Renewal				$10,000	**$10,000**
Upgrade Stock Effluent Dump Station	Upgrade of stock effluent dump in Hokitika.	Medium	Renewal				$100,000	**$100,000**

2. Franz Josef Wastewater Scheme

2.1. Overview and History

The Franz Josef Wastewater Scheme serves the township of Franz Josef which has population of approximately 2,600, however, during peak season the influx of tourists can be up to 5000 additional persons per night. The scheme was originally operational installed in 1972 with basic two-pond oxidation treatment plant. As a result of major flooding in 2016 and a following court order, the treatment plant was upgraded at the same site with a 15-year consent in 2020.

Franz Josef's wastewater is predominately gravity fed to the treatment ponds. However, there is one pumping station located on Gibb Memorial Drive. This pump station receives wastewater from the northern area of town, including north Cron Street, Kamahi Crescent, Paganini Road and Baston Place. Wastewater entering the ponds is derived from the following sources:

- Property connections,
- Septage (septic tanks) and,
- In-transit Campervans via dump stations.

The wastewater treatment ponds are located on the northern side of the Waiho River, approximately 500m west of State Highway 6. It consists of two oxidation ponds and two maturation ponds. The new oxidation ponds have baffle curtains and are PE lined with provision for mechanical aerators to supplement oxygen as and when required. The two new ponds are approximately one hectare each with a depth of 1.5 metres. The average daily discharge via Rapid Infiltration Basins is 350m^3 with a consented maximum annual daily discharge of 800m^3.

The ponds are also located adjacent to the flood-prone Waiho River. In March 2016, the river breached the former oxidation ponds in and destroyed them. A stopbank was constructed to protect the treatment plant and the ponds were reactivated some months later and continue to be an active part of the recent treatment plant upgrade. An extension to the stopbank was constructed in 2023 as floodwaters further threatened the ponds downstream of the existing stopbank.

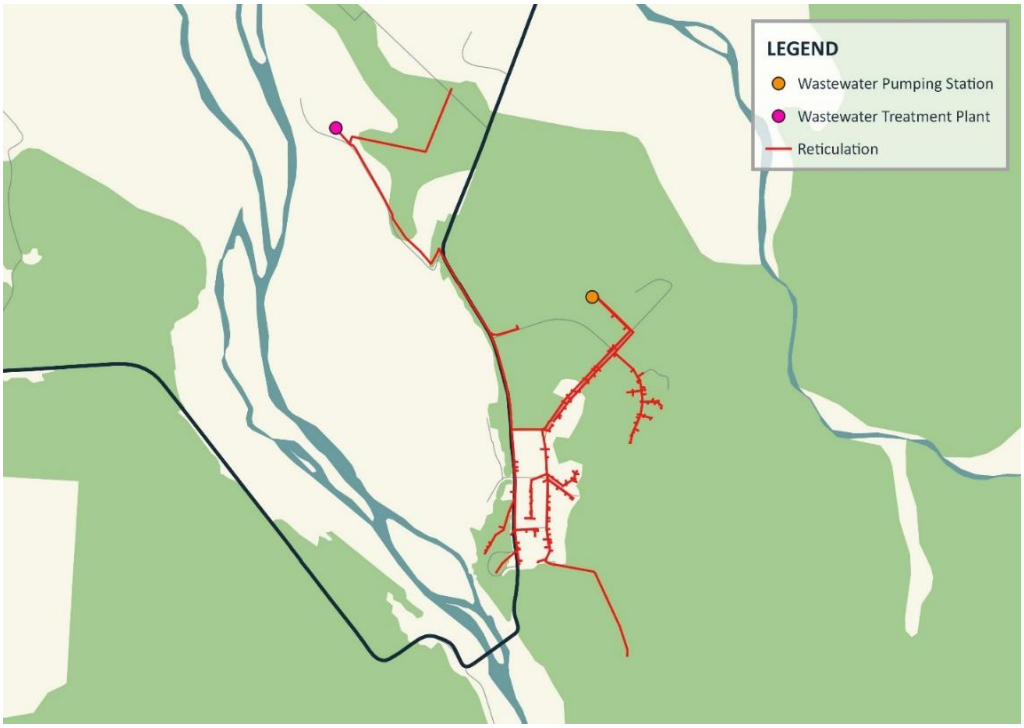

Figure 2-1: Franz Josef Scheme Map.

2.2. Scheme Summary

A summary of the Franz Josef Wastewater Scheme is provided below in Table 2-1. Demand is not currently recorded for the scheme.

Table 2-1: Summary of Franz Josef Wastewater Scheme.

Description		Quantity
Estimated Population Served		2600
Scheme Coverage	Residential Charges	62
	Commercial Charges	50
System Components	Piped Mains	6.7 km
	Manholes	83
	Pump Stations	1
	Treatment	2 Oxidation Ponds 2 Maturation Ponds
	Disposal	RIBs (Rapid Infiltration Basins)
History – Original Scheme Install Date		1972
Value (2024 Valuation)	Optimised Replacement Cost	$9,029,928
	Depreciated Replacement Cost	$7,278,728
Financial	Operator cost per connection	$1,807.04
Demand	Annual	-
	Average Daily	-
	Peak Daily	-
	Minimum Daily	-
	Infiltration	-
Sustainability	Discharge Point	RIBs (Rapid Infiltration Basins)

2.3. Key Issues

The Franz Josef Scheme's key issues have been identified and are detailed below in Table 2-2. A list of the district wide wastewater issues is located in Section 3.2 of the Three Waters AMP 2025.

Table 2-2: Franz Josef Scheme Key Issues.

Key Issue	Response
Wastewater Treatment Plant location and consent expiring in 2034.	Due to the location of the WWTP, investigations have been made for relocation. This may have been mitigated by the flood wall height increase. It is unknown at this stage if the current WWTP will get a new consent (with minimal upgrades) at the current location.
Ageing Infrastructure	Prioritise replacements when funding available.
Inflow and Infiltration	Significant I & I investigations were undertaken in 2022, however due to lack of resourcing no further action has been taken with properties identified.
Changes within the Water Authority regulations within this space	The changes are not expected to impact the treated quality effluent requirements; however, it is expected that the level of data required to reported on will be significantly increased which has been allowed for in the LTP.

2.4. System Capacity

The current capacity of the Franz Josef Wastewater Scheme is considered sufficient. There have been very few system blockages or overflows in the last couple of years, even with minor developments within the township.

2.5. Resource Consents

The resource consents related to this scheme are detailed below in Table 2-3.

Table 2-3: Franz Josef Scheme Resource Consents.

Consent	Description	Location	Granted Date	Expiry Date	Consented Flow
RC-2018-0068-01	Land use consent: To undertake earthworks, including vegetation clearance, in the non-erosion prone area, Franz Josef.	Franz Josef	21/01/2019	21/01/2034	-
RC-2018-0068-02	Discharge permit: To discharge treated sewage effluent to land where it may enter water (Waiho River), Franz Josef.				800m^3/day
RC-2018-0068-03	Discharge permit: To discharge contaminants (odour) to air from sewage oxidation ponds, Franz Josef.				-

2.6. Scheme Assets

A summary of the material, diameters and ages of mains pipes within the Franz Josef Scheme are shown below in Figure 2-2, Figure 2-3 and Figure 2-4.

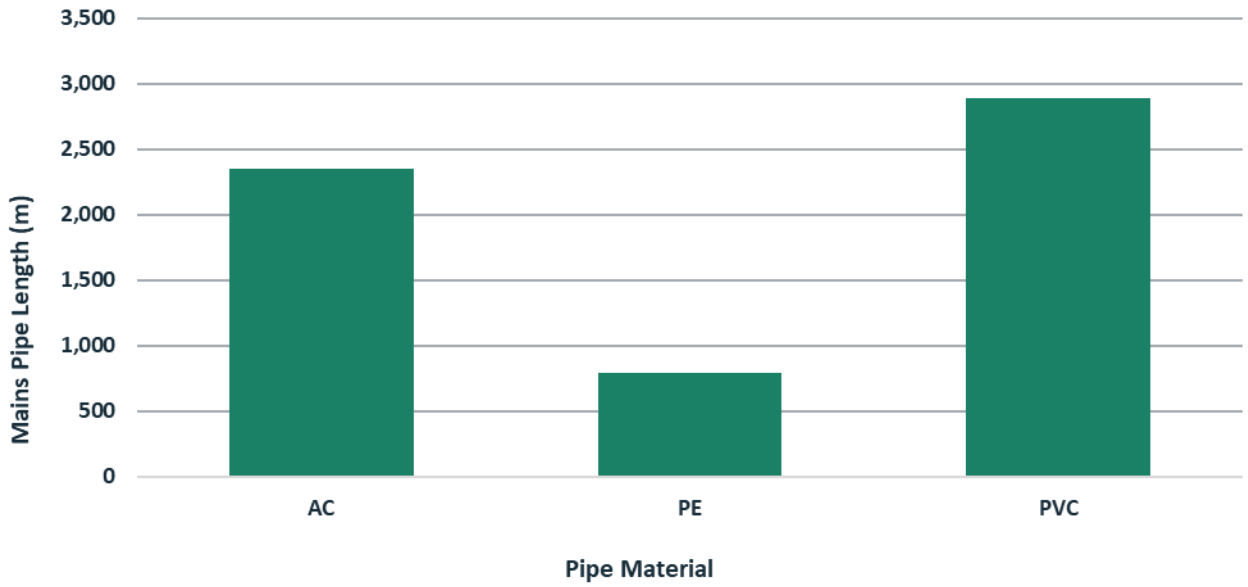

Figure 2-2: Franz Josef Scheme Mains Pipe Material.

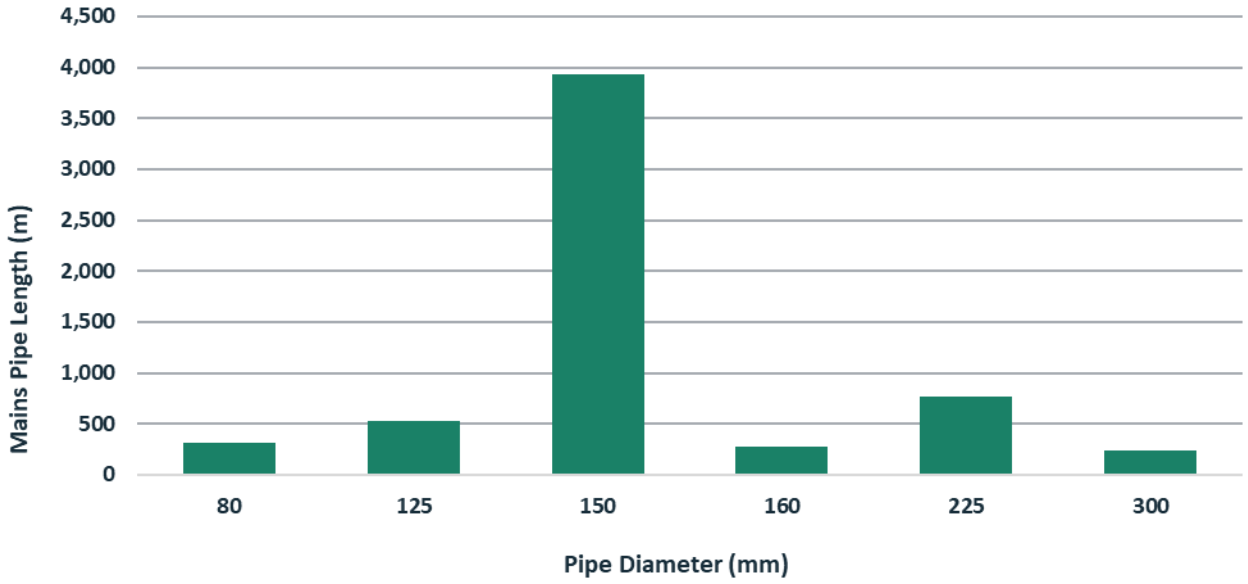

Figure 2-3: Franz Josef Scheme Mains Pipe Diameter.

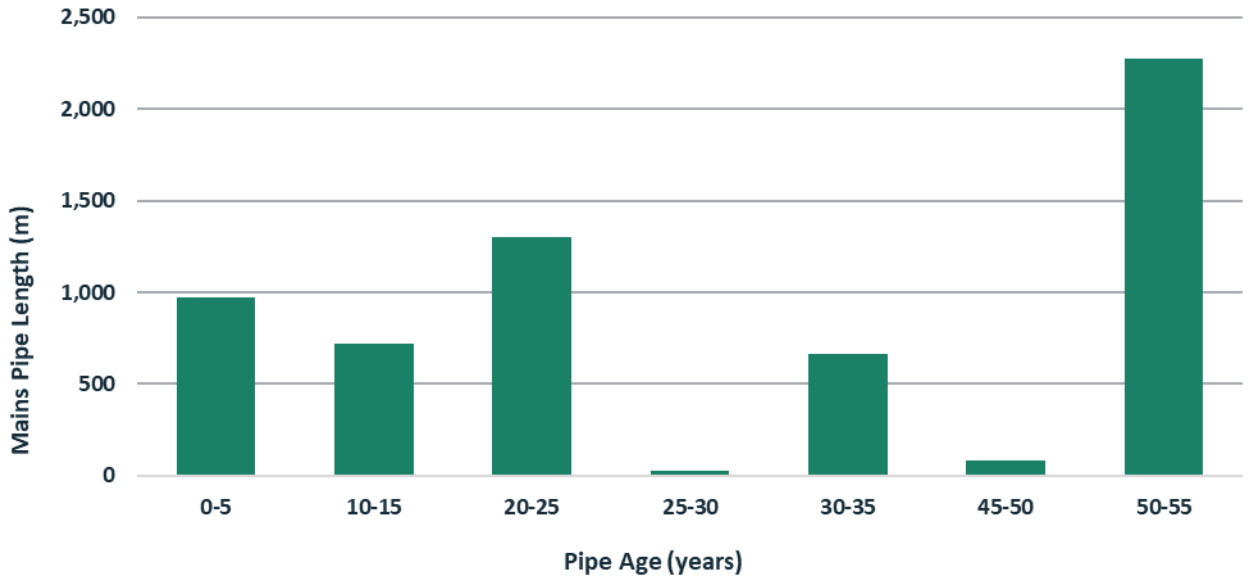

Figure 2-4: Franz Josef Scheme Mains Pipe Age.

2.7. Operational Management

The operation and maintenance of the supply is part of the Westland District Utilities Maintenance Contract (22-23-03). The current contract was awarded to Westroads Ltd in August 2022. The term of the contract is 5 years.

2.8. Photos of Main Assets

Figure 2-5: Pump Station.

Figure 2-6: Septage Receiver.

Figure 2-7: Treatment Plant.

2.9. Risk Assessment

A risk assessment has been undertaken for the Franz Josef Scheme.

Risks that have been identified as unacceptable have been listed below in Table 2-4.

Table 2-4: Franz Josef Wastewater Scheme Risks.

Risk	Risk Rating	Actions & Mitigation	Residual Risk Rating
Inundation of Treatment Plant from Waiho River.	High	Construct stop bank to protect the Treatment Plant and plan for the long-term relocation of the treatment plant.	Medium

2.10. Asset Valuation Details

The total replacement value of the assets within the Franz Josef wastewater scheme was $9,029,928 as valued at 30 June 2024.

Table 2-5: Franz Josef Wastewater Scheme Valuation Breakdown.

Asset Class	Asset sub-class	Optimised Replacement Value	Depreciated Replacement Value
Treatment Plant		$5,246,866	$5,022,504
Pump Station		$294,738	$241,597
Dump Station (Campervan/Stock Effluent)		$69,856	$57,352
Reticulation	Mains Pipe	$2,431,684	$1,355,850
	Service Lateral	$422,400	$248,273
	Manholes	$564,384	$353,152
TOTAL		**$9,029,928**	**$7,278,728**

2.11. Critical Assets

The criticality rating of the pipeline assets for the Franz Josef Scheme is provided below in Table 2-6.

Table 2-6: Mains Pipe Criticality Rating.

Criticality Level		Length (m)	
1	Very High	685	10.2%
2	High	311	4.6%
3	Medium	5,123	76.5%
4	Low	-	-
5	Very Low	-	-
	Unknown	575	8.6%

2.12. Asset Condition

The condition rating of the assets is currently age based and not a physical site assessment. The condition rating of the pipeline assets for the Franz Josef scheme is provided below in Table 2-7.

Table 2-7: Mains Pipe Condition Rating.

Condition Rating		Length (m)	
1	Excellent	973	15.9%
2	Good	2,190	35.8%
3	Average	-	-
4	Poor	2,958	48.3%
5	Very Poor	-	-
	Unknown	-	-

2.13. Funding Programme

The 9-year financial programme for Franz Josef Wastewater is divided into the following categories:

- **Operations** – includes operational and maintenance costs,
- **Renewals** – replacement of assets on a 'like for like' basis,
- **Levels of Service (LOS)** – new assets to increase the level of service,
- **Growth** – new assets to meet additional demand.

The financial programme presented should be viewed noting that:

- **Allowance for CPI** – Consumer price index adjustments 'inflation' has not been included; and
- **All data is held in IBIS** – the database which Council conducts the majority of its financial rates storage and reporting.

The funding programme for Franz Josef Wastewater is provided below in Table 2-8.

Table 2-8: Franz Josef Wastewater Funding Programme.

	Operations	Renewals	LOS	Growth
Year 1	$171,100		$85,000	
Year 2	$171,100	$65,000		
Year 3	$171,100	$750,000		
Year 4	$171,100			
Year 5	$171,100	$85,500		
Year 6	$171,100	$660,000		
Year 7	$171,100	$1,320,000		
Year 8	$171,100	$4,210,000		
Year 9	$171,100	$2,330,000		
TOTAL	**$1,539,900**	**$9,420,500**	**$85,000**	

The projects included in the LTP for the Franz Josef Wastewater are listed below in Table 2-9.

Table 2-9: Franz Josef Wastewater Projects.

Project Name	Project Description	Criticality	Funding	Y1	Y2	Y3	Y4-9	Total
Pump Station Upgrade	Replacement of pumps and electrical components.	High	Renewal				$120,000	**$120,000**
Reticulation Upgrades	Replacement of mains and laterals including manholes	High	Renewal				$1,370,000	**$1,370,000**
WWTP & Pump Station SCADA System	Current units are being phased out and need to be replaced. Share in one-off costs and implementation.	Medium	Renewal	$85,000			$0	**$85,000**
WWTP Aerator Replacement	Replacement of aerator, will only complete if it can be used in new wastewater treatment plant (required by 2034).	High	LOS				$60,500	**$60,500**
WWTP Upgrade	New wastewater treatment plant to be commissioned before resource consent expires in 2034. New treatment method will be required as ponds are unlikely to be consented. New plant location required. Includes storage shed & septage receiver	Medium	Renewal		$30,000	$750,000	$7,030,000	**$7,810,000**
Upgrade of WWTP components	Renewal of components at the WWTP i.e. cameras etc.	High	Renewal		$35,000		$25,000	**$60,000**

3. Fox Glacier Wastewater Scheme

3.1. Overview and History

The Fox Glacier wastewater scheme serves a population of approximately 300 people. Similarly to Franz Josef, the township experiences high visitor numbers during the peak tourist season.

Wastewater gravitates from the township reticulation network to the wastewater treatment ponds and there are no pump stations associated with this scheme. Wastewater entering the ponds is derived from the following sources:

- Property connections and,
- Septage (septic tanks).
- Department of Conservation back country hut septic waste

The wastewater treatment plant consists of two oxidation ponds and is located on council land situated within the boundary of a private farm on Cook Flat Road, approximately two kilometres from the Fox Glacier township. The two ponds have a combined approximate area of 1.7 hectares with an average depth of 1.5m. The final effluent discharges to the Cook River which is adjacent to the plant.

Figure 3-1: Fox Glacier Scheme Map.

3.2. Scheme Summary

A summary of the Fox Glacier Wastewater Scheme is provided below in Table 3-1. Demand is not currently recorded for the scheme.

Table 3-1: Summary of Fox Glacier Wastewater Scheme.

Description		Quantity
Estimated Population Served		300
Scheme Coverage	Residential Charges	57
	Commercial Charges	36
System Components	Piped Mains	4.5 km
	Manholes	55
	Pump Stations	0
	Treatment	2 Oxidation Ponds
	Disposal	River
History – Original Scheme Install Date		1972
Value (2024 Valuation)	Optimised Replacement Cost	$4,075,325
	Depreciated Replacement Cost	$2,778,343
Financial	Operator cost per connection	$617.44
Demand	Annual	-
	Average Daily	-
	Peak Daily	-
	Minimum Daily	-
	Infiltration	-
Sustainability	Discharge Point	River

3.3. Key Issues

The Fox Glacier Scheme's key issues have been identified and are detailed below in Table 3-2. A list of the district wide wastewater issues is located in Section 3.2 of the Three Waters AMP 2025.

Table 3-2: Fox Glacier Scheme Key Issues.

Key Issue	Response
Wastewater Treatment Plant resource consent expires in 2036.	Expiring resource consent means sufficient funds are required to be spent to upgrade the current plant to a mechanical plant as the current will not get a consent.
Ageing Infrastructure	Prioritise replacements when funding available.
Inflow and Infiltration	Projects put forward for Year 5 & 6 to undertake I & I study
Changes within the Water Authority regulations within this space	The changes are not expected to impact the treated quality effluent requirements; however, it is expected that the level of data required to reported on will be significantly increased which has been allowed for in the LTP.

3.4. System Capacity

The current capacity of the Fox Glacier Wastewater Scheme is considered sufficient. There have been very few system blockages or overflows in the last couple of years.

3.5. Resource Consents

The resource consents related to this scheme are detailed below in Table 3-3.

Table 3-3: Fox Glacier Scheme Resource Consents.

Consent	Description	Location	Granted Date	Expiry Date	Consented Flow
RC00388/1	Discharge permit to land to authorise the discharge of treated wastewater into and onto land from the Fox Glacier Wastewater Treatment Plant.	Fox Glacier	21/09/2001	21/09/2036	400 m^3/day
RC00388/2	Discharge permit to water to authorise the discharge of treated wastewater into the Fox River from the Fox Glacier Wastewater Treatment Plant.				
RC00388/3	Discharge permit to air to authorise the discharge of contaminants to air from the Fox Glacier Wastewater Treatment Plant.				-

3.6. Scheme Assets

A summary of the material, diameters and ages of mains pipes within the Fox Glacier Scheme are shown below in Figure 3-2, Figure 3-3 and Figure 3-4.

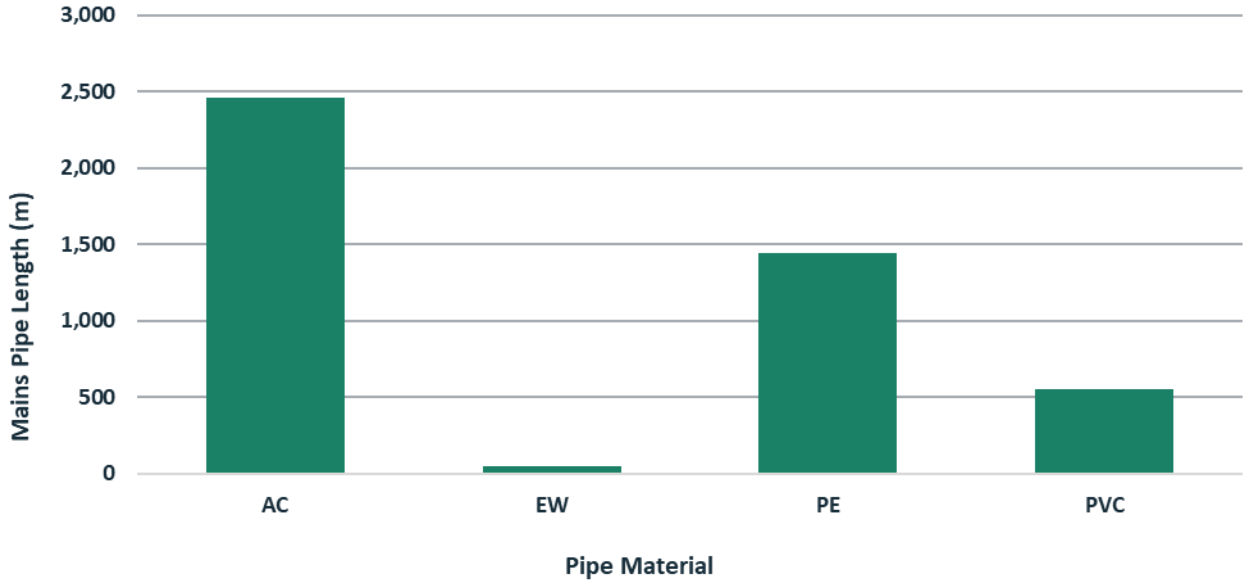

Figure 3-2: Fox Glacier Scheme Mains Pipe Material.

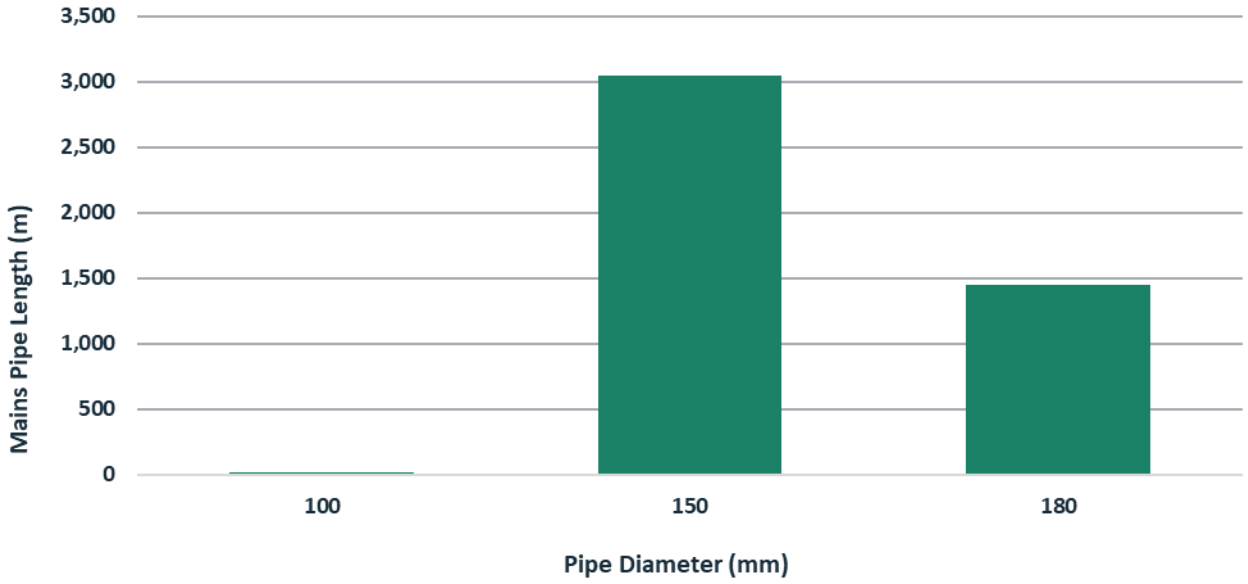

Figure 3-3: Fox Glacier Scheme Mains Pipe Diameter.

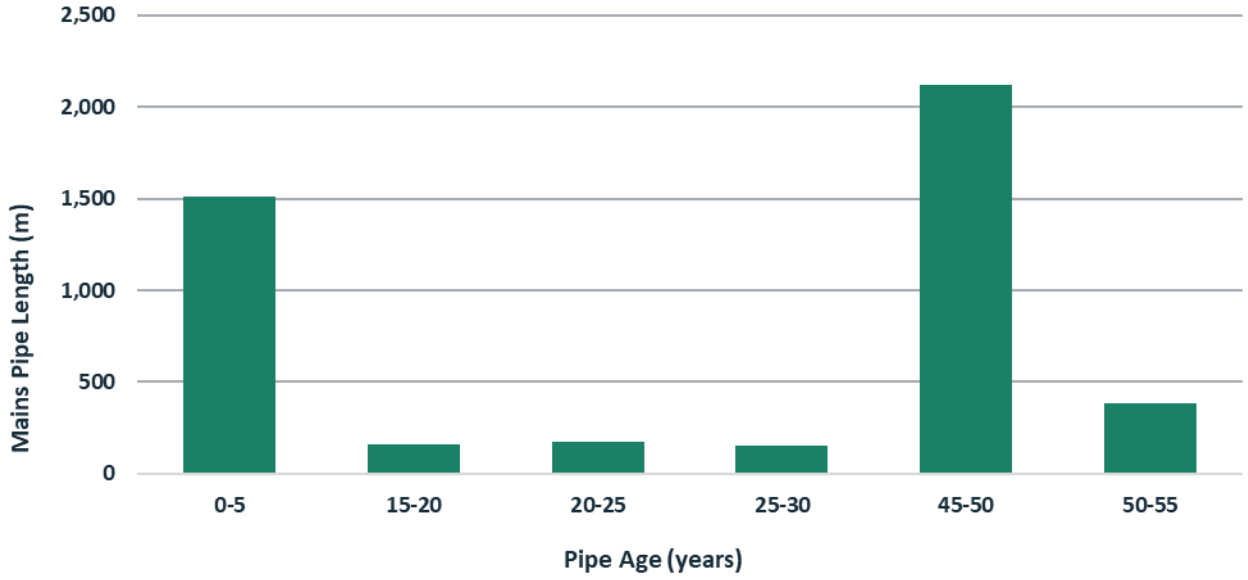

Figure 3-4: Fox Glacier Scheme Mains Pipe Age.

3.7. Operational Management

The operation and maintenance of the supply is part of the Westland District Utilities Maintenance Contract (22-23-03). The current contract was awarded to Westroads Ltd in August 2022. The term of the contract is 5 years.

3.8. Photos of Main Assets

Figure 3-5: Oxidation Ponds.

Figure 3-6: Aerator.

3.9. Risk Assessment

A risk assessment has been undertaken for the Fox Glacier Scheme.

Risks that have been identified as unacceptable have been listed.

3.10. Asset Valuation Details

The total replacement value of the assets within the Fox Glacier Wastewater Scheme was $4,075,325 as valued at 30 June 2024.

Table 3-4: Fox Glacier Wastewater Scheme Valuation Breakdown.

Asset Class	Asset sub-class	Optimised Replacement Value	Depreciated Replacement Value
Treatment Plant		$1,369,385	$1,264,992
Pump Station		-	-
Dump Station (Campervan/Stock Effluent)		-	-
Reticulation	Mains Pipe	$1,874,498	$996,094
	Service Lateral	$345,575	$186,002
	Manholes	$485,867	$331,255
TOTAL		**$4,075,325**	**$2,778,343**

3.11. Critical Assets

The criticality rating of the pipeline assets for the Fox Glacier Scheme is provided below in Table 3-5.

Table 3-5: Mains Pipe Criticality Rating.

Criticality Level		Length (m)	
1	Very High	1,445	31.8%
2	High	-	-
3	Medium	2,701	59.4%
4	Low	401	8.9%
5	Very Low	-	-
	Unknown	-	-

3.12. Asset Condition

The condition rating of the assets is currently age based and not a physical site assessment. The condition rating of the pipeline assets for the Fox Glacier Scheme is provided below in Table 3-6.

Table 3-6: Mains Pipe Condition Rating.

Condition Rating		Length (m)	
1	Excellent	1,898	41.7%
2	Good	526	11.6%
3	Average	-	-
4	Poor	2,123	46.7%
5	Very Poor	-	-
	Unknown	-	-

3.13. Funding Programme

The 9-year financial programme for Fox Glacier Wastewater is divided into the following categories:

- **Operations** – includes operational and maintenance costs,
- **Renewals** – replacement of assets on a 'like for like' basis,
- **Levels of Service (LOS)** – new assets to increase the level of service,
- **Growth** – new assets to meet additional demand.

The financial programme presented should be viewed noting that:

- **Allowance for CPI** – Consumer price index adjustments 'inflation' has not been included; and
- **All data is held in IBIS** – the database which Council conducts the majority of its financial rates storage and reporting.

The funding programme for Fox Glacier Wastewater is provided below in Table 3-7.

Table 3-7: Fox Glacier Wastewater Funding Programme.

	Operations	Renewals	LOS	Growth
Year 1	$78,900		$10,000	
Year 2	$79,500	$40,000	$45,000	
Year 3	$79,500	$50,000		
Year 4	$79,500			
Year 5	$179,500	$630,000		
Year 6	$79,500			
Year 7	$79,500	$630,000		
Year 8	$79,500	$70,000		
Year 9	$79,500	$1,130,000		
TOTAL	**$814,900**	**$2,550,000**	**$55,000**	

The projects included in the LTP for the Fox Glacier Wastewater are listed below in Table 3-8.

Table 3-8: Fox Glacier Wastewater Projects.

Project Name	Project Description	Criticality	Funding	Y1	Y2	Y3	Y4-9	Total
Reticulation Upgrades	Replacement of mains and laterals including manholes.	High	Renewal				$1,940,000	**$1,940,000**
WWTP SCADA systems	Current units are being phased out and need to be replaced. Year 1 share in one-off costs. Year 2 implementation.	High	LOS	$10,000	$45,000			**$55,000**
WWTP Upgrade	New wastewater treatment plant to be commissioned before resource consent expires in 2036. New treatment method will be required as ponds unlikely to be consented.	High	Renewal		$30,000	$50,000	$500,000	**$580,000**
Upgrade of WWTP Components	Renewal of components at the WWTP i.e. cameras etc.	Medium	Renewal		$10,000		$20,000	**$30,000**

4. Haast Wastewater Scheme

4.1. Overview and History

The Haast Wastewater scheme is the Westland District's southernmost Wastewater scheme. The permanent resident population of the town is approximately 110 people with seasonal variation during the tourist and whitebait season.

Wastewater gravitates to a pump station located within the township and is then pumped to a single oxidation pond. Wastewater entering the ponds is derived from the following sources:

- Property connections,
- Septage (septic tanks) and,
- In-transit campervans.

The Treatment Plant consist of a single oxidation pond and is located off State Highway 6. The pond has a baffle curtain to maximise retention time by eliminating short circuiting. The pond is approximately 1,500m^2 with an average depth of 1.3m. Final effluent is discharged to an infiltration trench locate in the adjacent Haast riverbed.

Figure 4-1: Haast Scheme Map.

4.2. Scheme Summary

A summary of the Haast Wastewater Scheme is provided below in Table 4-1. Demand is not currently recorded for the scheme.

Table 4-1: Summary of Haast Wastewater Scheme.

Description		Quantity
Estimated Population Served		80
Scheme Coverage	Residential Charges	67
	Commercial Charges	13
System Components	Piped Mains	2.7 km
	Manholes	35
	Pump Stations	1
	Treatment	1 Oxidation Pond
	Disposal	Infiltration Trench
History – Original Scheme Install Date		1972
Value (2024 Valuation)	Optimised Replacement Cost	$2,552,448
	Depreciated Replacement Cost	$1,569,382
Financial	Operator cost per connection	$1,140.19
Demand	Annual	-
	Average Daily	-
	Peak Daily	-
	Minimum Daily	-
	Infiltration	-
Sustainability	Discharge Point	Infiltration trench in riverbed

4.3. Key Issues

The Haast Scheme's key issues have been identified and are detailed below in Table 4-2. A list of the district wide wastewater issues is located in Section 3.2 of the Three Waters AMP 2025.

Table 4-2: Fox Glacier Scheme Key Issues.

Key Issue	Response
Wastewater Treatment Plant resource consent expires in 2036	Expiring resource consent means sufficient funds are required to be spent to upgrade the current plant to a mechanical plant as the current will not get a consent.
Ageing Infrastructure	Prioritise replacements when funding available.
Inflow and Infiltration	Significant I & I investigations were undertaken in 2022, however due to lack of resourcing no further action has been taken with properties identified.
Changes within the Water Authority regulations within this space	The changes are not expected to impact the treated quality effluent requirements; however, it is expected that the level of data required to reported on will be significantly increased which has been allowed for in the LTP.

4.4. System Capacity

The current capacity of the Haast Wastewater Scheme is considered sufficient. There have been very few system blockages or overflows in the last couple of years.

4.5. Resource Consents

The resource consents related to this scheme are detailed below in Table 4-3.

Table 4-3: Haast Scheme Resource Consents.

Consent	Description	Location	Granted Date	Expiry Date	Consented Flow
RC00389/01	Discharge permit to land to authorise the discharge of treated wastewater into and onto land from the Haast Wastewater Treatment Plant.	Haast	21/09/2001	21/09/2036	150m^3/day
RC-00389-02	Discharge permit to water to authorise the discharge of treated wastewater into the Haast River from the Haast Wastewater Treatment Plant.				
RC-00389-03	Discharge permit to air to authorise the discharge of contaminants to air from the Haast Wastewater Treatment Plant.				-
RC-2015-0146-01	Land use consent: To disturb the bed of the Haast River to divert water into a side channel.		01/03/2016	01/03/2037	-
RC-2015-0146-02	Water permit: To divert water, Haast River.				-

4.6. Scheme Assets

A summary of the material, diameters and ages of mains pipes within the Haast Scheme are shown below in Figure 4-2, Figure 4-3 and Figure 4-4.

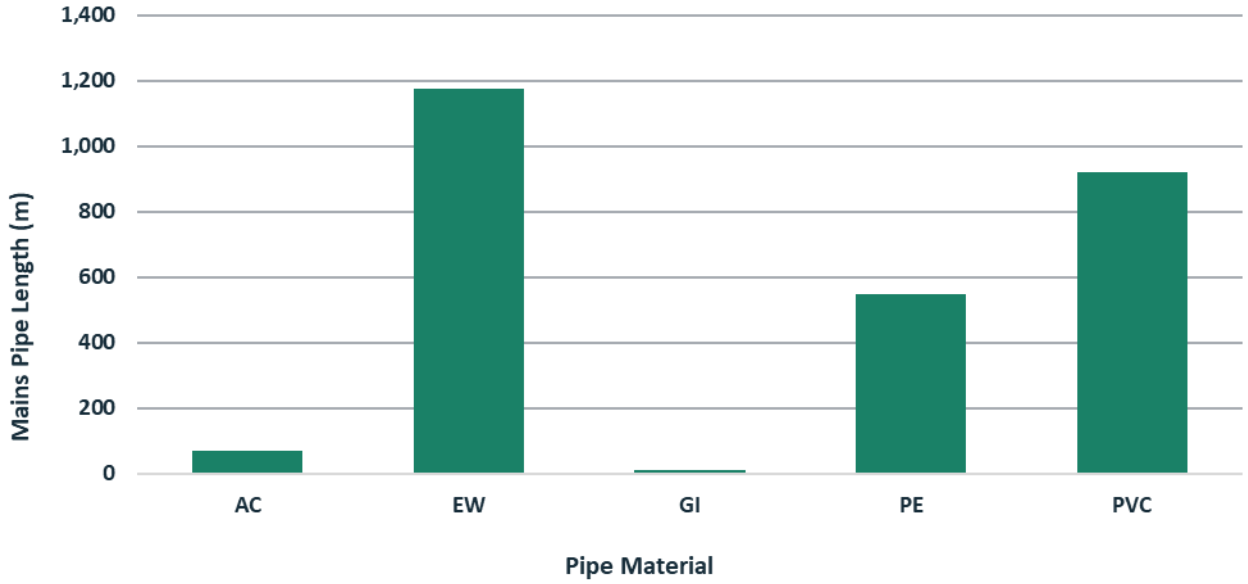

Figure 4-2: Haast Scheme Mains Pipe Material.

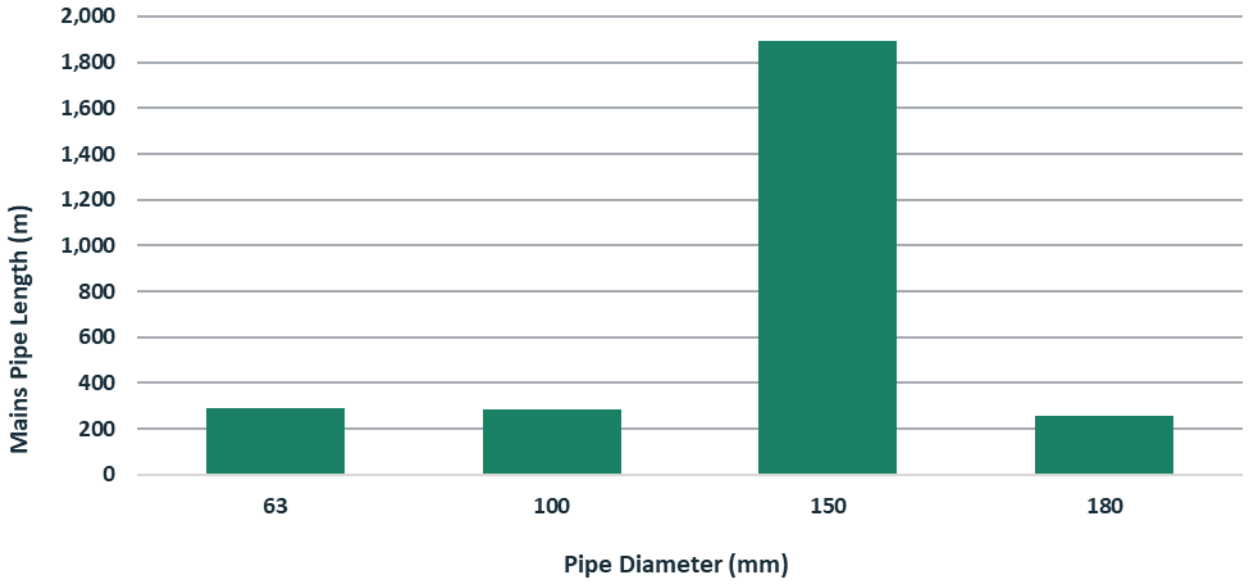

Figure 4-3: Haast Scheme Mains Pipe Diameter.

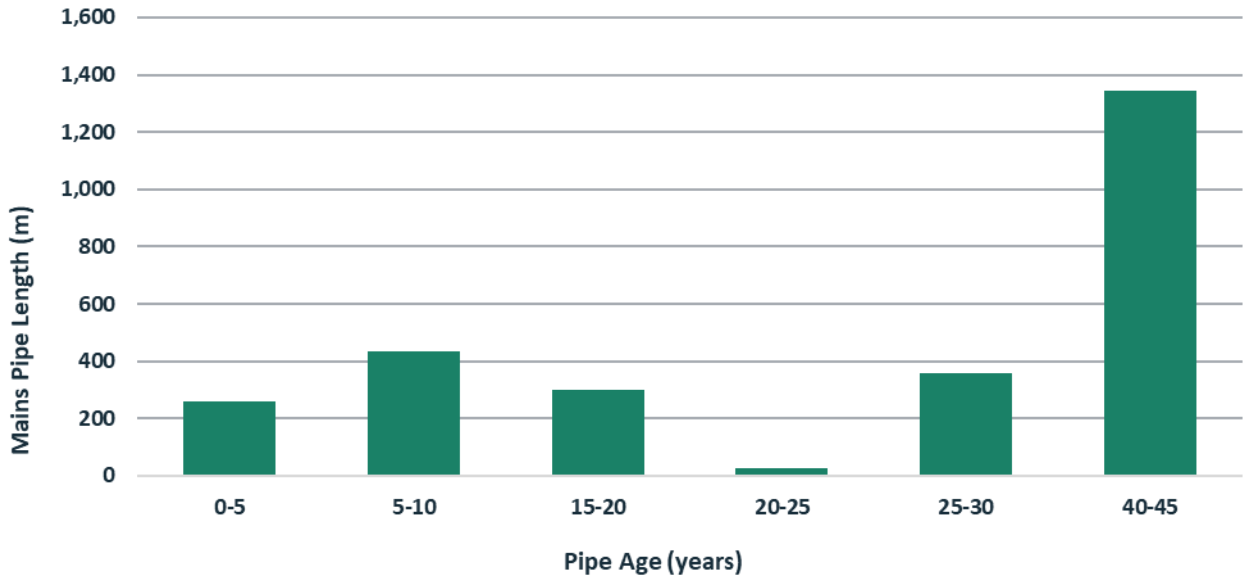

Figure 4-4: Haast Scheme Mains Pipe Age.

4.7. Operational Management

The operation and maintenance of the supply is part of the Westland District Utilities Maintenance Contract (22-23-03). The current contract was awarded to Westroads Ltd in August 2022. The term of the contract is 5 years.

4.8. Photos of Main Assets

Figure 4-5: Treatment Plant.

Figure 4-6: Septage Receiver.

Figure 4-7: Pump Station.

Figure 4-8: Treatment Plant.

4.9. Risk Assessment

A risk assessment has been undertaken for the Haast Scheme.

Risks that have been identified as unacceptable have been listed.

4.10. Asset Valuation Details

The total replacement value of the assets within the Haast Wastewater Scheme was $2,552,488 as valued at 30 June 2024.

Table 4-4: Haast Wastewater Scheme Valuation Breakdown.

Asset Class	Asset sub-class	Optimised Replacement Value	Depreciated Replacement Value
Treatment Plant		$740,192	$504,413
Pump Station		$200,668	$115,029
Dump Station (Campervan/Stock Effluent)		$69,856	$52,986
Reticulation	Mains Pipe	$1,019,820	$581,179
	Service Lateral	$247,758	$137,143
	Manholes	$274,154	$178,632
TOTAL		**$2,552,448**	**$1,569,382**

4.11. Critical Assets

The criticality rating of the pipeline assets for the Haast Scheme is provided below in Table 4-5.

Table 4-5: Mains Pipe Criticality Rating.

Criticality Level		Length (m)	
1	Very High	542	19.9%
2	High	421	15.4%
3	Medium	1,615	59.3%
4	Low	-	-
5	Very Low	-	-
	Unknown	146	5.4%

4.12. Asset Condition

The condition rating of the assets is currently age based and not a physical site assessment. The condition rating of the pipeline assets for the Haast Scheme is provided below in Table 4-6.

Table 4-6: Mains Pipe Condition Rating.

Condition Rating		Length (m)	
1	Excellent	692	25.4%
2	Good	686	25.2%
3	Average	1187	43.6%
4	Poor	158	5.8%
5	Very Poor	-	-
	Unknown	-	-

4.13. Funding Programme

The 9-year financial programme for Haast Wastewater is divided into the following categories:

- **Operations** – includes operational and maintenance costs,
- **Renewals** – replacement of assets on a 'like for like' basis,
- **Levels of Service (LOS)** – new assets to increase the level of service,
- **Growth** – new assets to meet additional demand.

The financial programme presented should be viewed noting that:

- **Allowance for CPI** – Consumer price index adjustments 'inflation' has not been included; and
- **All data is held in IBIS** – the database which Council conducts the majority of its financial rates storage and reporting.

The funding programme for Haast Wastewater is provided below in Table 4-7.

Table 4-7: Haast Wastewater Funding Programme.

	Operations	Renewals	LOS	Growth
Year 1	$105,690	$50,000	$25,000	
Year 2	$106,850	$55,000	$62,500	
Year 3	$106,850			
Year 4	$106,850			
Year 5	$106,850			
Year 6	$156,850	$20,000		
Year 7	$106,850	$60,500		
Year 8	$106,850	$70,000		
Year 9	$106,850	$500,000		
TOTAL	**$1,010,490**	**$755,500**	**$87,500**	

The projects included in the LTP for the Haast Wastewater are listed below in Table 4-8.

Table 4-8: Haast Wastewater Projects.

Project Name	Project Description	Criticality	Funding	Y1	Y2	Y3	Y4-9	Total
Reticulation Upgrades	CCTV inspection programme.	High	Renewal				$50,000	**$50,000**
WWTP & Pump Station SCADA systems	Current units are being phased out and need to be replaced. Year 1 share in one off costs. Year 2 implementation.	High	LOS	$25,000	$62,500		$0	**$87,500**
WWTP Aerator Replacement	Replacement of aerator, will only if it can be used in new wastewater treatment plant (required by 2036).	Medium	Renewal				$60,500	**$60,500**
WWTP Upgrade	New wastewater treatment plant to be commissioned before resource consent expires in 2036. New treatment method will be required as ponds unlikely to be consented.	High	Renewal	$50,000	$30,000		$500,000	**$580,000**
Upgrade of WWTP Components	Renewal of components at the WWTP i.e. cameras etc.	Medium	Renewal		$25,000		$40,000	**$65,000**

5. Financial Summary

This section summaries the financial projections and funding requirements for the Wastewater Activity the total expenditure for the Wastewater Activity is shown below in Figure 5-1.

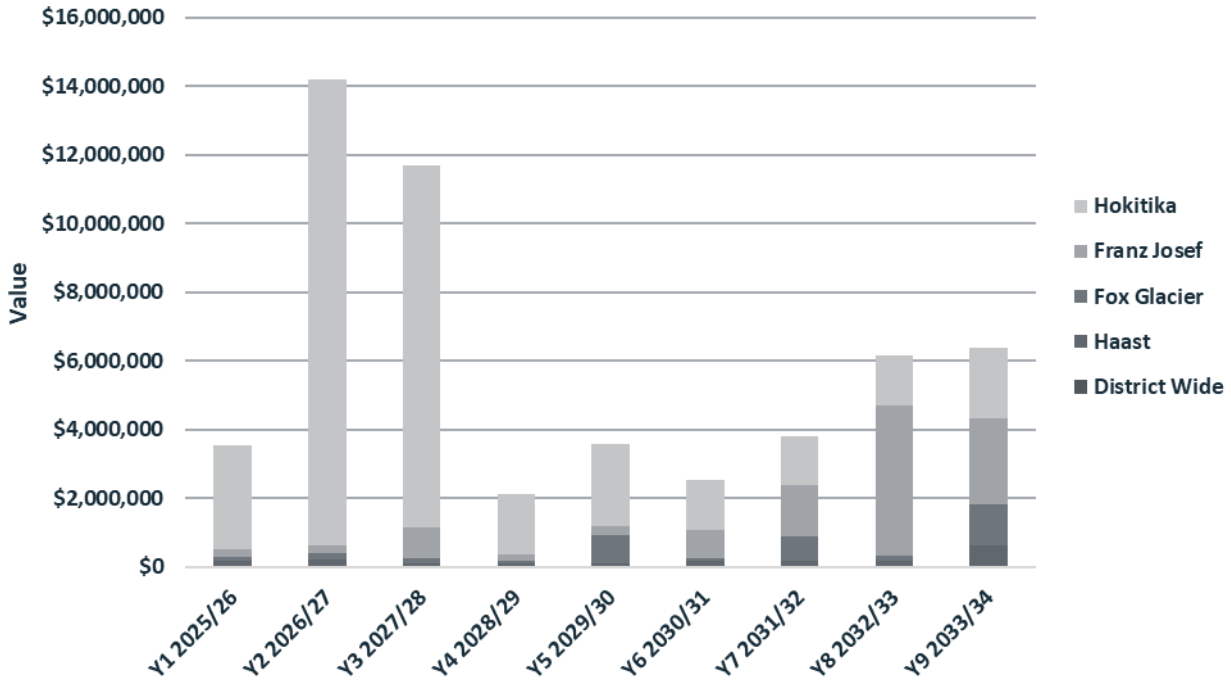

Figure 5-1: Wastewater Activity Expenditure Forecast.

5.1. Summary of Operations and Maintenance

A summary of the forecast Operations and Maintenance expenditure for the Wastewater activity is provided below in Figure 5-2.

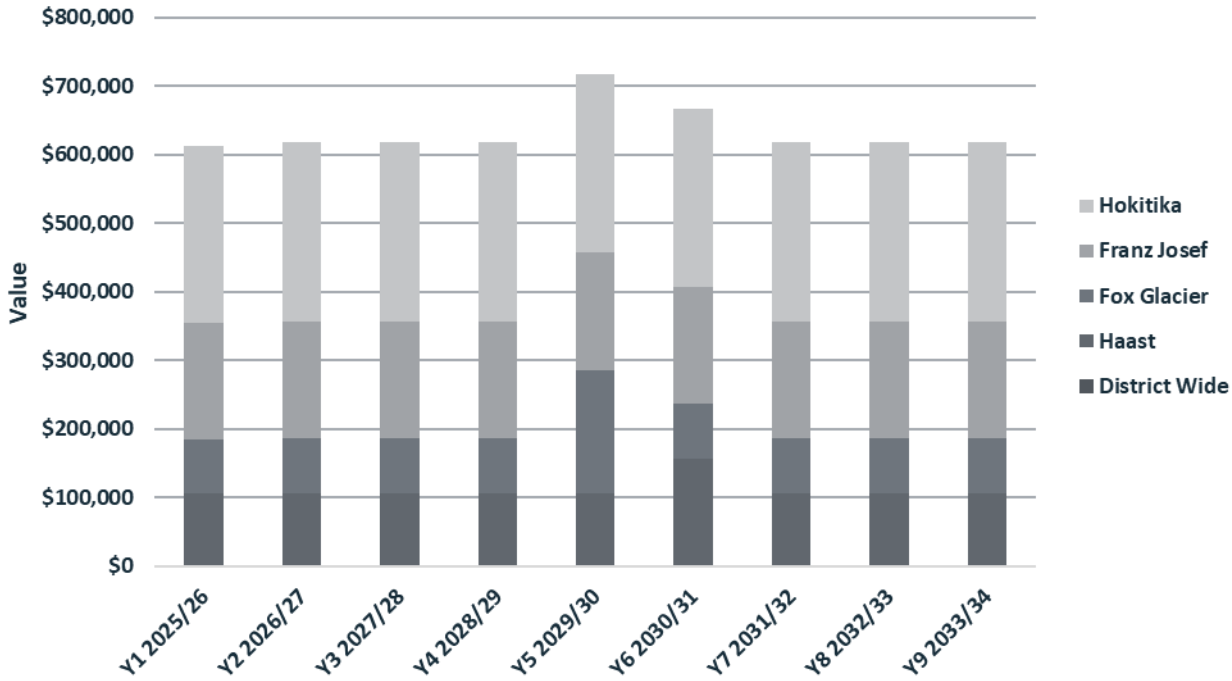

Figure 5-2: Wastewater Activity Operations and Maintenance Forecast.

5.2. Summary of Capital Expenditure

A summary of capital expenditure for the Wastewater Activity is shown below in Figure 5-3. The capital expenditure consists of 98.8% renewal projects and 1% level of service projects. Growth consists of 0.2% of capital projects and is a general budget for the activity which includes new service connection at request of the ratepayer.

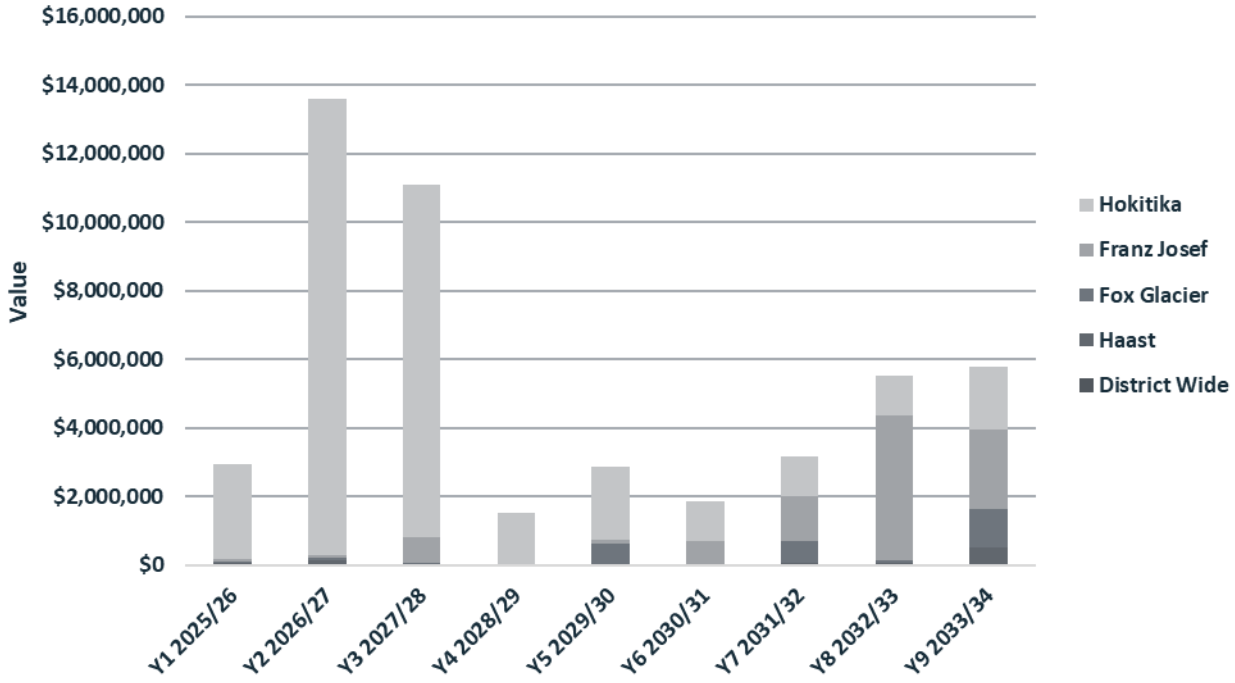

Figure 5-3: Wastewater Activity Capital Expenditure Forecast.