Water Services Strategy Options Workshop
3 Waters



Workshop Agenda – times are approximate

Background and Overview	35 mins	9.00
Finance Strategy recap	30 mins	9.35
Renewals Programmes	30 mins	10.05
Break	*10 mins*	*10.35*
South Dunedin No Regrets	30 mins	10.45
South Dunedin SDF Short Term Stormwater Infrastructure (30 Years)	50 mins	11.15
Mosgiel Stormwater	30 mins	12.05
Lunch	*40 mins*	*12.35*
Wastewater Wet Weather Overflows	50 mins	1.15
Rural Schemes	50 mins	2.05
Break	*10 mins*	*2.55*
Service Extensions	30 mins	3.05
Bioresources	30 mins	3.35
Wrap up	30 mins	4.05

Background and Purpose

- 9 Year Plan and Infrastructure Strategy in June 2025 including significant 3 Waters budget
- Potential significant net budget increase in particular relating to stormwater and wet weather wastewater management > +$300M over 10 years.
- Key drivers
  - Key programme decisions or development eg South Dunedin Futures and Musselburgh to Tahuna
  - Legislative changes since 9 Year Plan adoption eg Wastewater Environmental Performance Standards (WEPS)
  - LTP (now Water Services Strategy or WSS) budgets beyond 1-2 years are high level budgetary estimates eg AACE Class 5 (-50%/+100%)
- Potential cost increase has a material rates and debt limit impact
- Need to consider options and seek direction for Water Services Strategy

What we do

Water supply

- We collect, supply, treat and distribute water to customers in Dunedin, to maintain the health of the community and to support the local economy.



$1.83 billion of assets

Wastewater

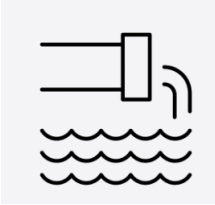
- We collect, treat, and dispose of wastewater from residential and commercial customers across Dunedin, to protect the health of the community and the environment.



$2.04 billion of assets

Stormwater

- We collect rainwater from the roofs of houses and buildings, footpaths and roads and divert it to the ground, into waterways or the ocean, to prevent flooding of properties and businesses.



$1.17 billion of assets

*asset values in 2025 Gross Replacement Cost

Key 3W infrastructure themes and challenges

- Aging infrastructure
- Regulatory and service delivery reforms
- Public health / environmental
- Growth / changing demands
- Resilience
- Zero carbon
- Asset management
- Infrastructure delivery programmes
- Performance and compliance monitoring

Integrated System Planning (ISP)



- Objective to develop a future investment plan that will meet current and adapt to future standards and levels of and achieve affordability for customers



- Assessed current performance, where we need to get to in future, and how we get there



- Developed core investment pathway, with alternatives



- Outputs informed key interventions in 9 Year Pan and 30 Year Infrastructure Strategy

ISP – Key Issues

Water Supply

- Vulnerable and concentrated sources
- Over-allocation of sources – reconsenting risk in early 2040s
- Reduced takes on reconsenting, insufficient raw water storage

Wastewater

- Poor network performance in wet weather
- Critical assets at end of life and/or vulnerable to failure
- Biosolids impact on carbon footprint

Stormwater

- Areas of Dunedin with high flood risk
- Poor freshwater and coastal water health in urban areas
- Watercourses provide significant drainage, but large proportion are private







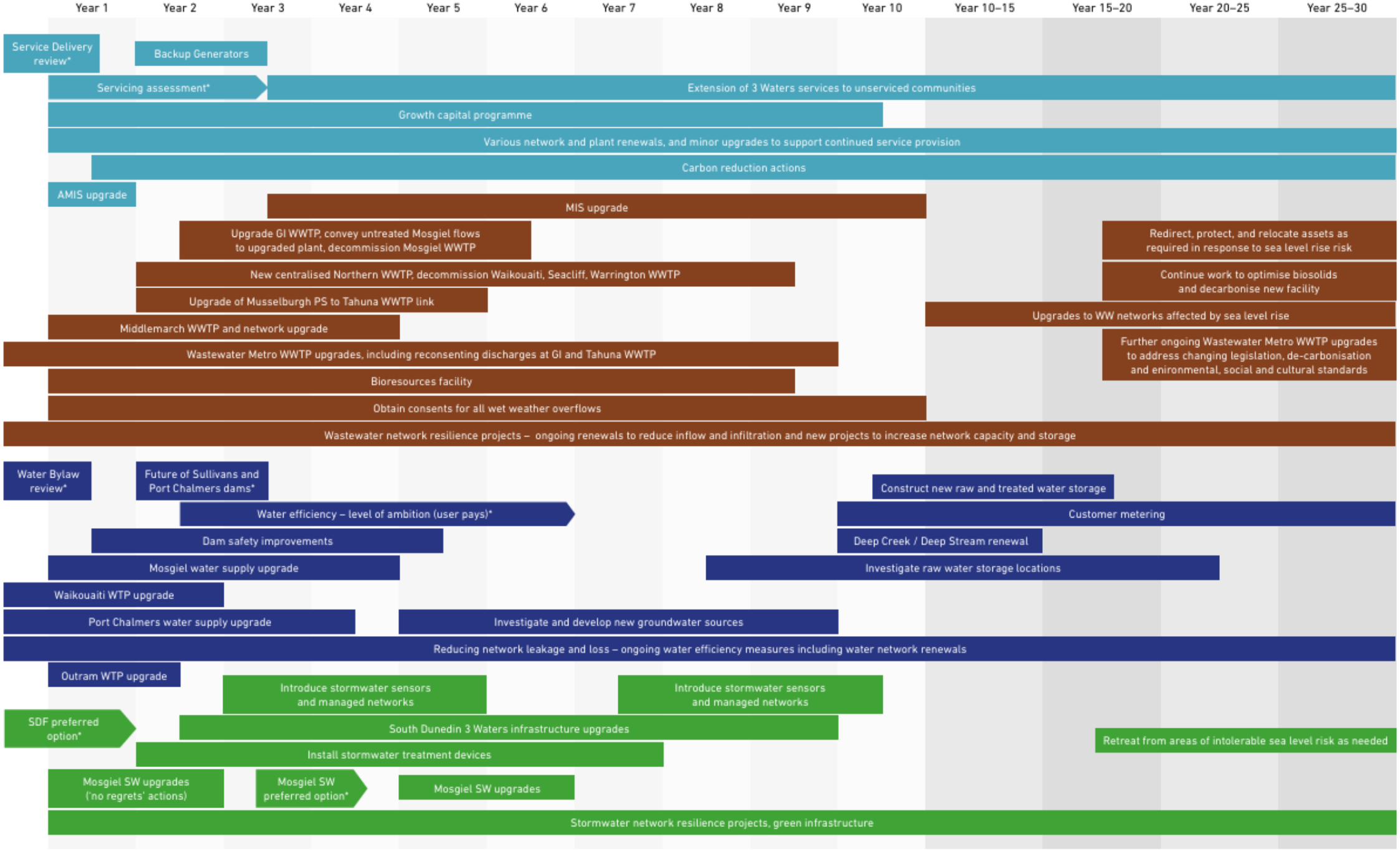


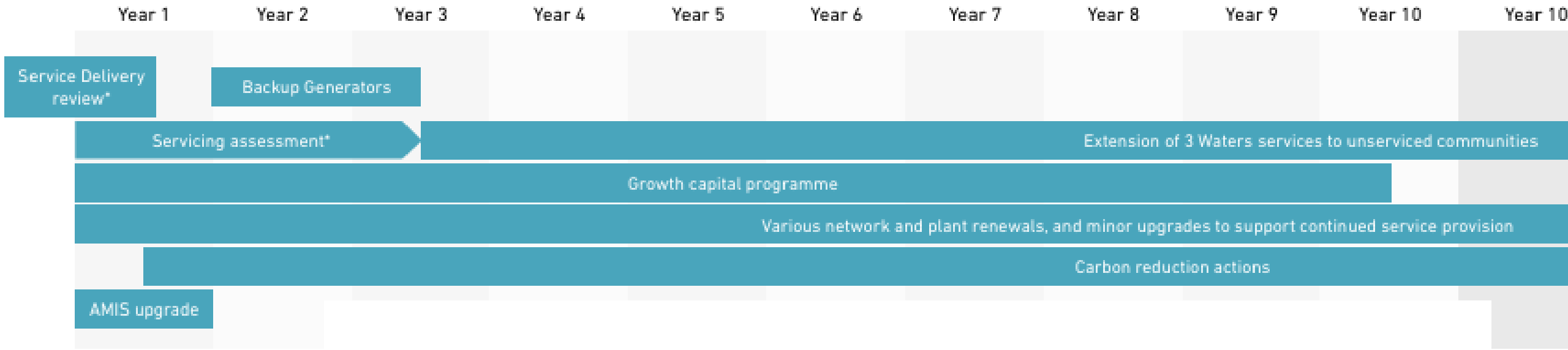


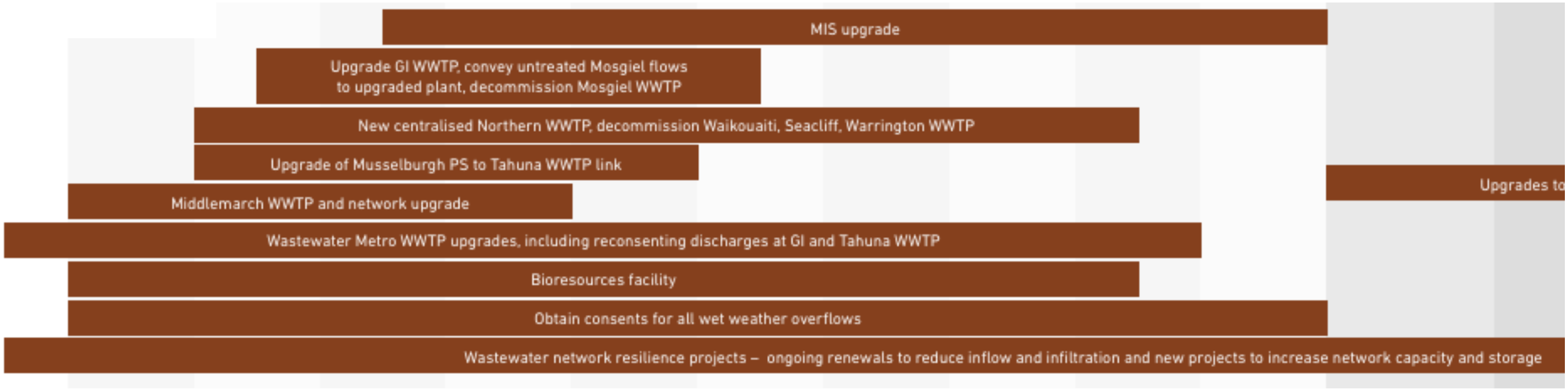
9 Year Plan and Infrastructure Strategy Overview

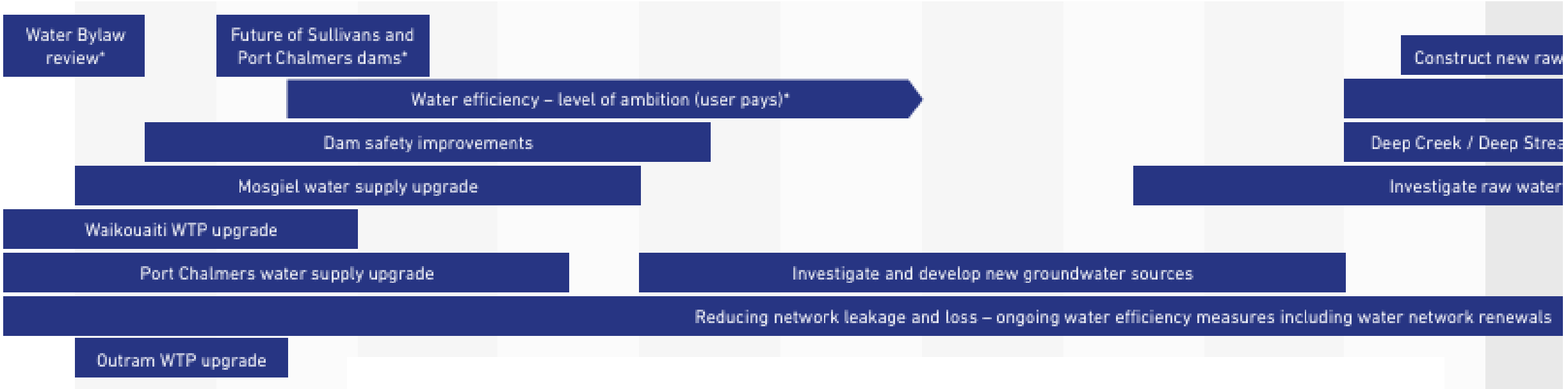
- 9 Year Plan and 30 Year Infrastructure Strategy approved by Council in June 2025
- Includes interventions identified in ISP as well as renewals and growth work
- Total 9 Year Plan Spend – $1.03B (9 Years)
  Total 30 Year Spend – $4.73B (30 Years including year 0)
- Investment plans adopted into Water Service Delivery Plan – accepted by DIA in November 2025
- Council commitment to DIA to be financially sustainable in an inhouse model

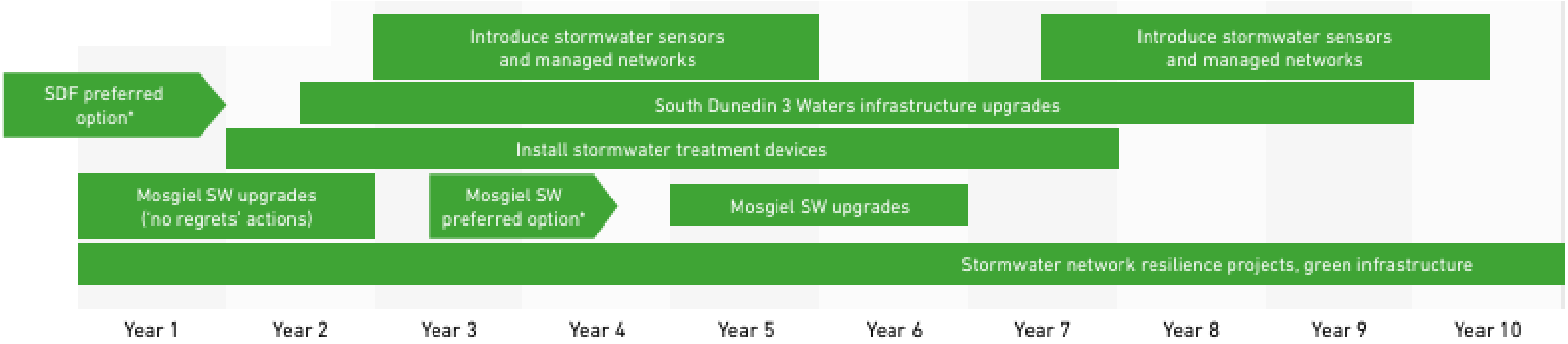



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Year 15–20
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Year 25–30
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Backup Generators
Servicing assessment*
Extension of 3 Waters services to unserviced communities
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Various network and plant renewals, and minor upgrades to support continued service provision
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AMIS upgrade
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Upgrade GI WWTP, convey untreated Mosgiel flows to upgraded plant, decommission Mosgiel WWTP
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Future of Sullivans and Port Chalmers dams*
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Water efficiency – level of ambition (user pays)*
Customer metering
Dam safety improvements
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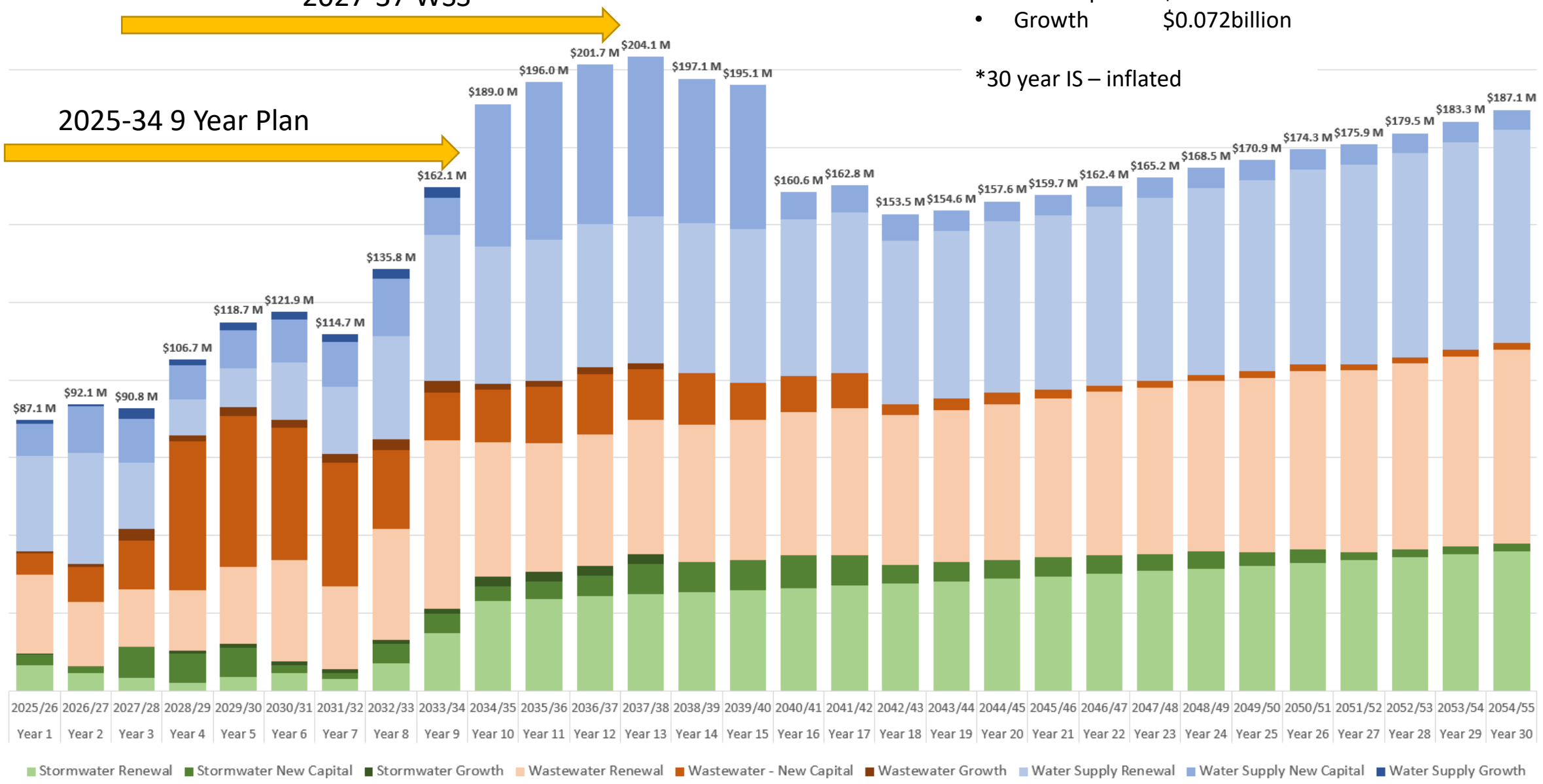

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What we plan to do

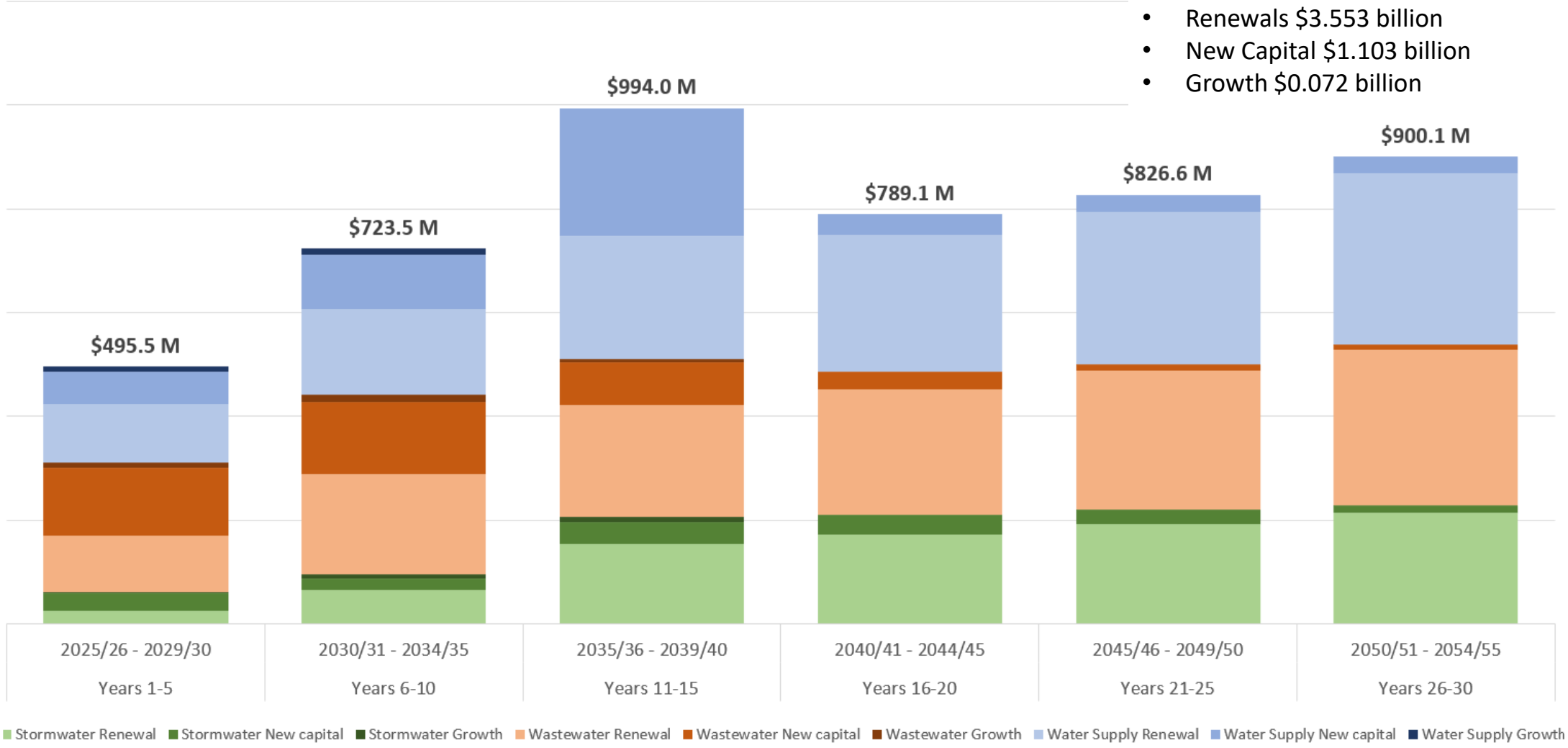
- Renewals $3.553 billion
- New Capital $1.103 billion
- Growth $0.072billion

*30 year IS – inflated



2025 Infrastructure Strategy

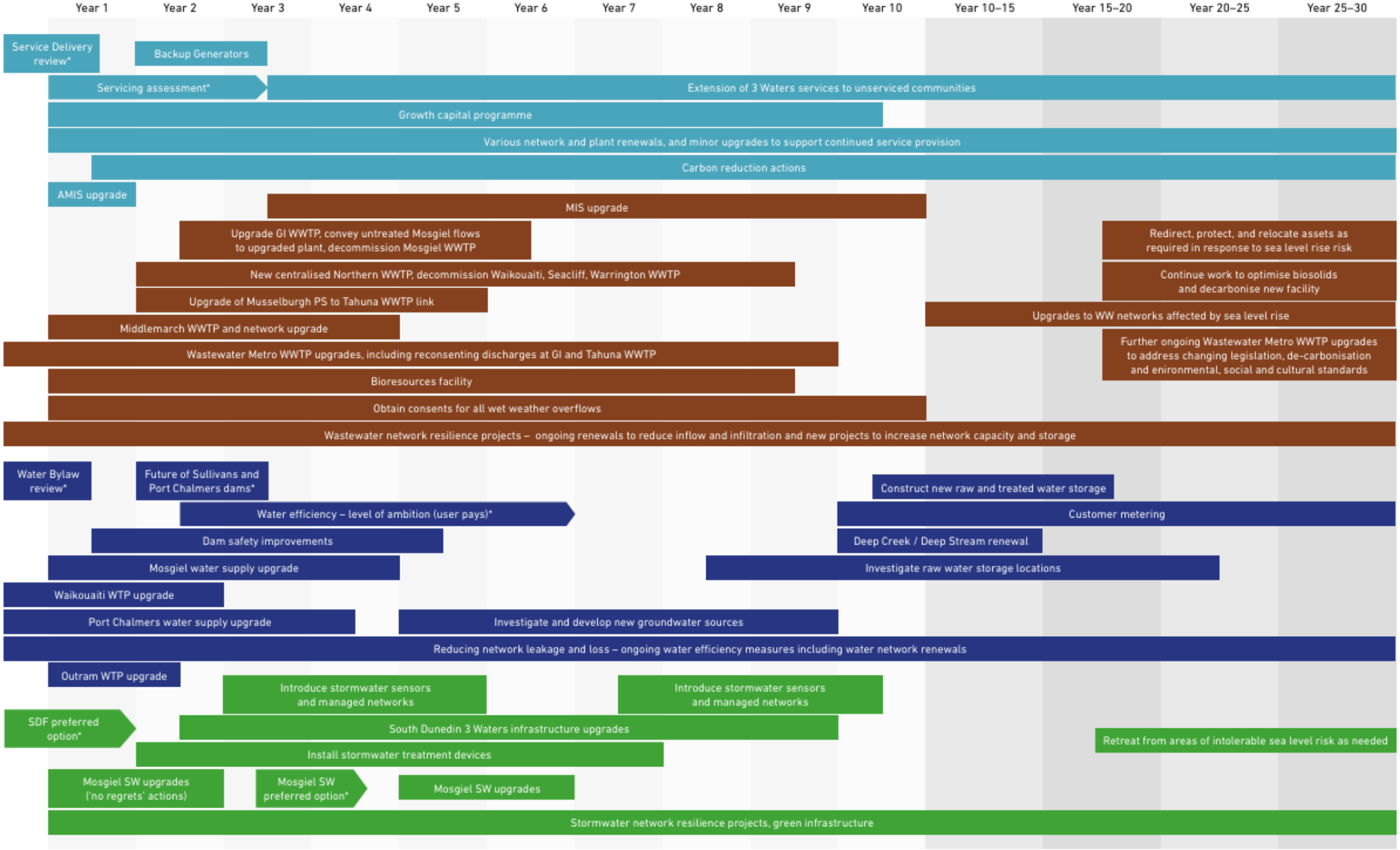
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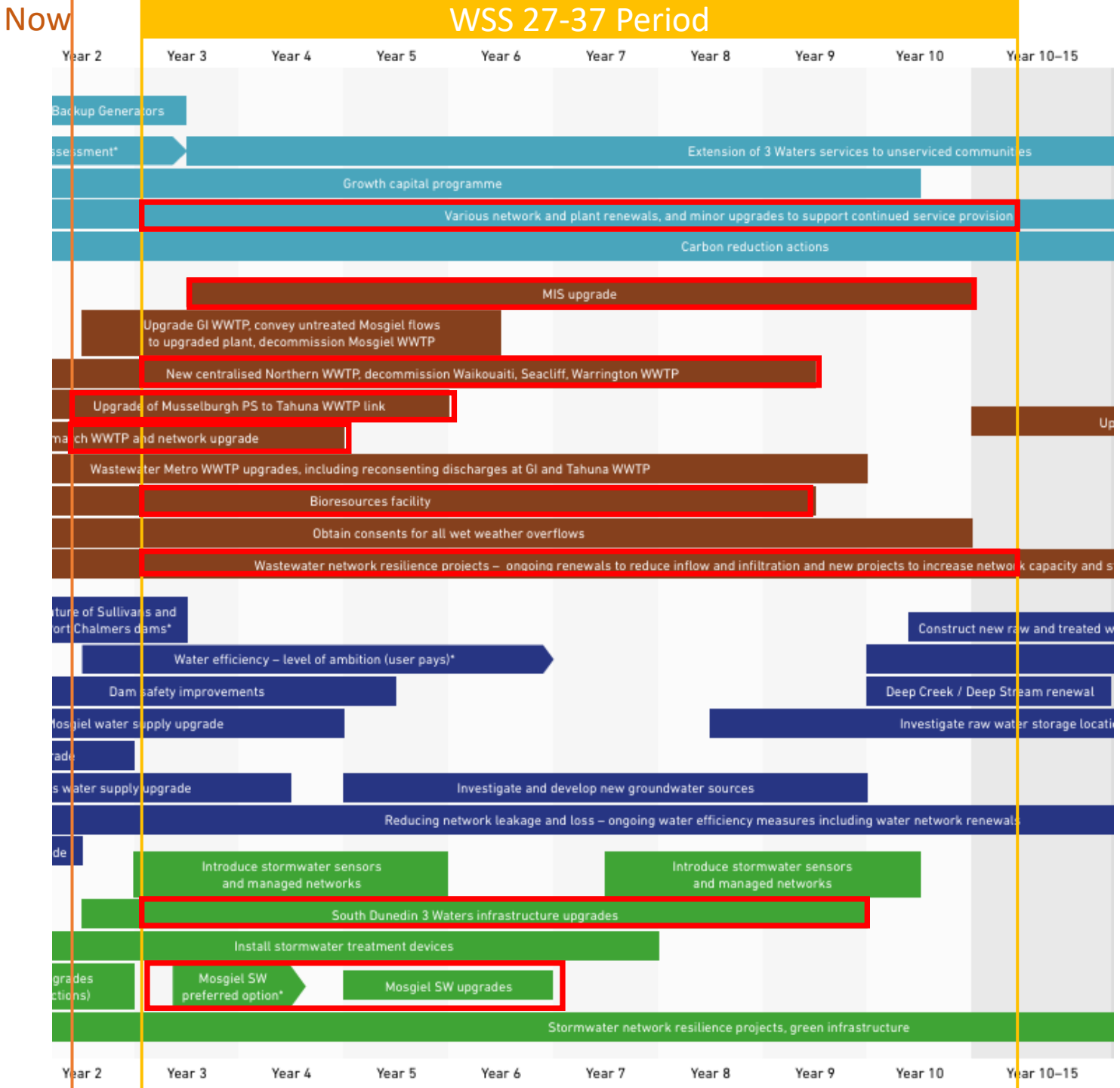


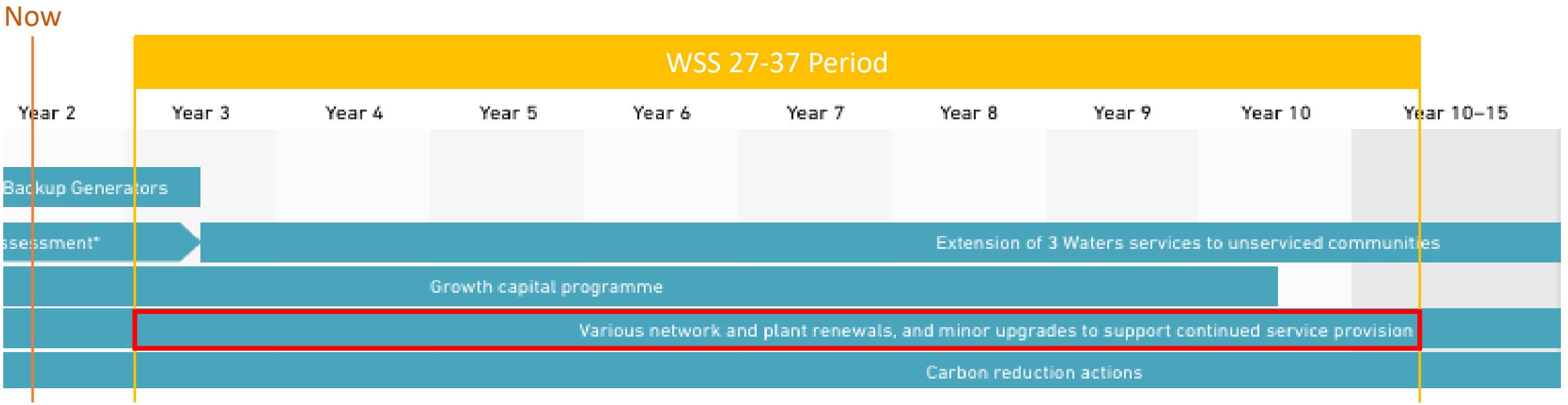
Water Services Strategy

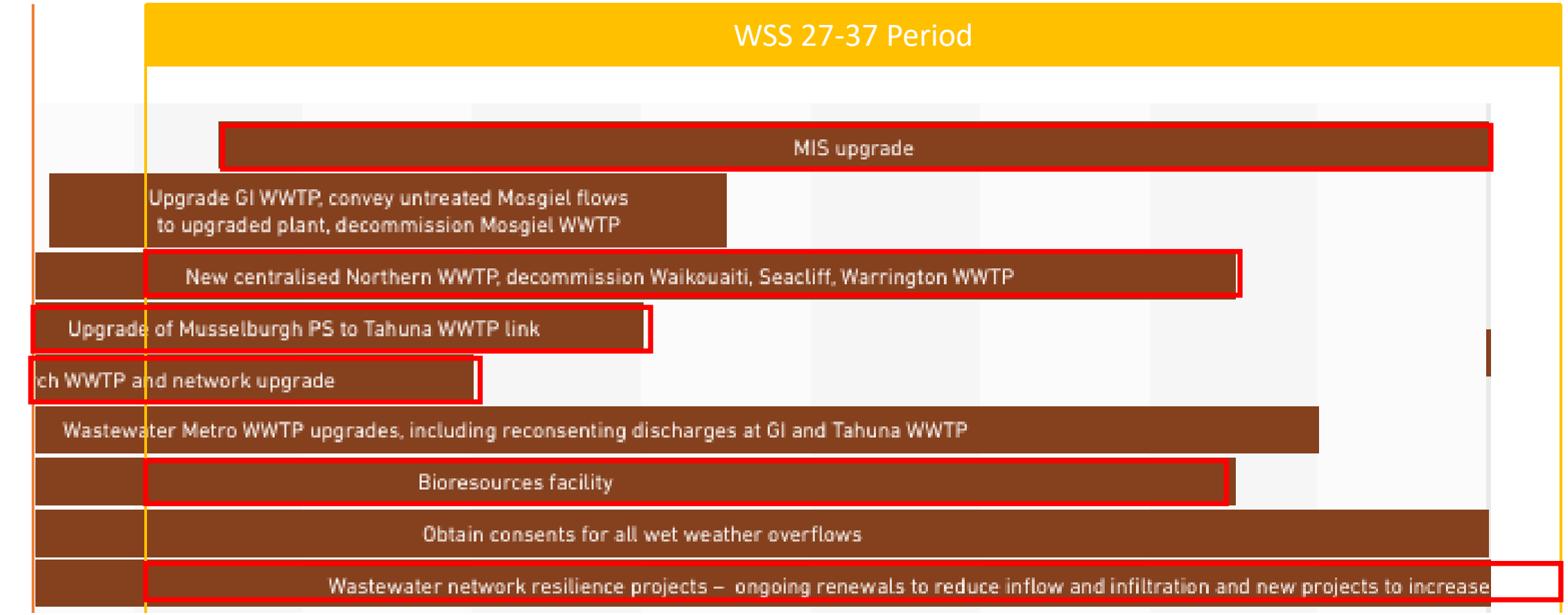
- Water Services Strategy replaces the LTP for water content
- Statutory baseline – all WSPs must adopt a WSS by no later than 30 June 2027

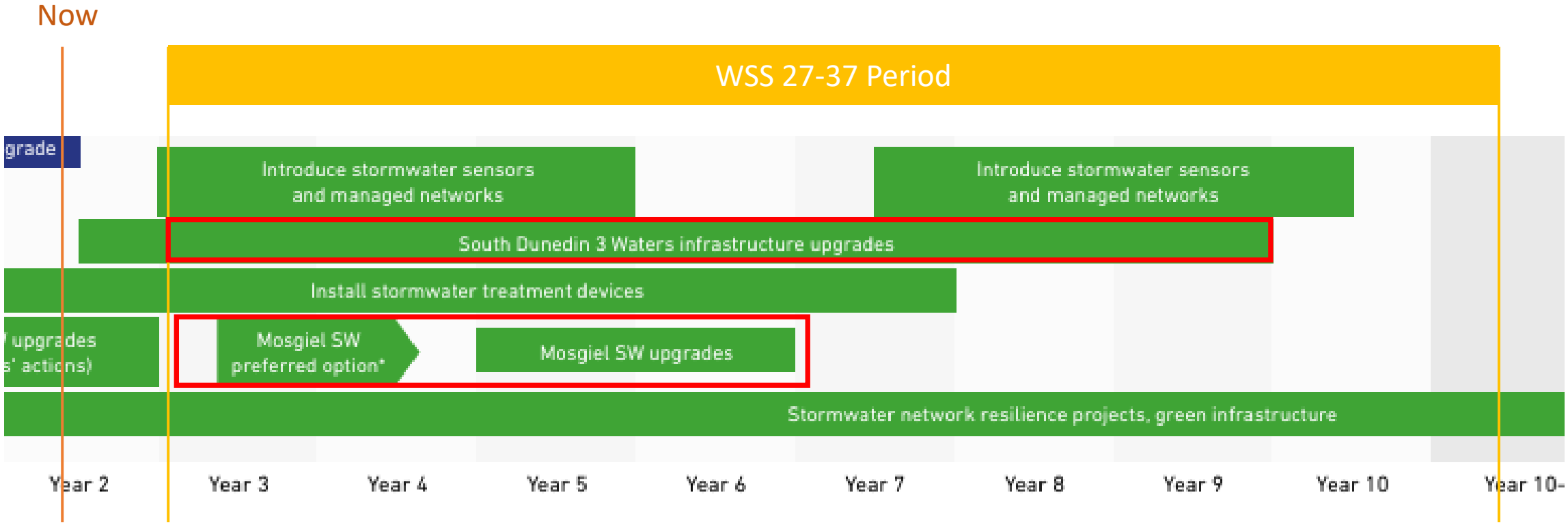
- Work identified in 9 Year Plan has continued to be developed with potential changes to scope or budget identified in a number of key programmes
- Key drivers for change
  - Key programme decisions or development affecting scope eg South Dunedin Futures, Musselburgh to Tahuna Tunnel
  - Legislative changes since 9 Year Plan adoption eg WEPS and now operative LGWSA
  - Design development and more detailed budget estimates - LTP (now Water Services Strategy or WSS) budgets beyond 1-2 years are high level budgetary estimates eg AACE Class 5 (-50%/+100%) – such as South Dunedin No Regrets options.


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Cost Estimates and Typical Accuracy

AACE – Association for the Advancement of Cost Engineering

AACE Class	ANSI Classification	Typical Use	Project Definition	Expected Range of Accuracy: Low Expected Actual Cost	Expected Range of Accuracy: High Expected Actual Cost	Other Terms
Class 5	Order-of-Magnitude	Strategic Planning; Concept Screening	0% to 2%	-50% to -20%	+30% to +100%	ROM; Ballpark; Blue Sky; Ratio
Class 4		Feasibility Study	1% to 15%	-30% to -15%	+20% to +50%	Feasibility; Top-down; Screening; Pre-design
Class 3	Budgetary	Budgeting	10% to 40%	-20% to -10%	+10% to +30%	Budget; Basic Engineering Phase; Semi-detailed
Class 2	Definitive	Bidding; Project Controls; Change Management	30% to 75%	-15% to -5%	+5% to +20%	Engineering; Bid; Detailed Control; Forced Detail
Class 1		Bidding; Project Controls; Change Management	65% to 100%	-10% to -3%	+3% to +15%	Bottoms Up; Full Detail; Firm Price

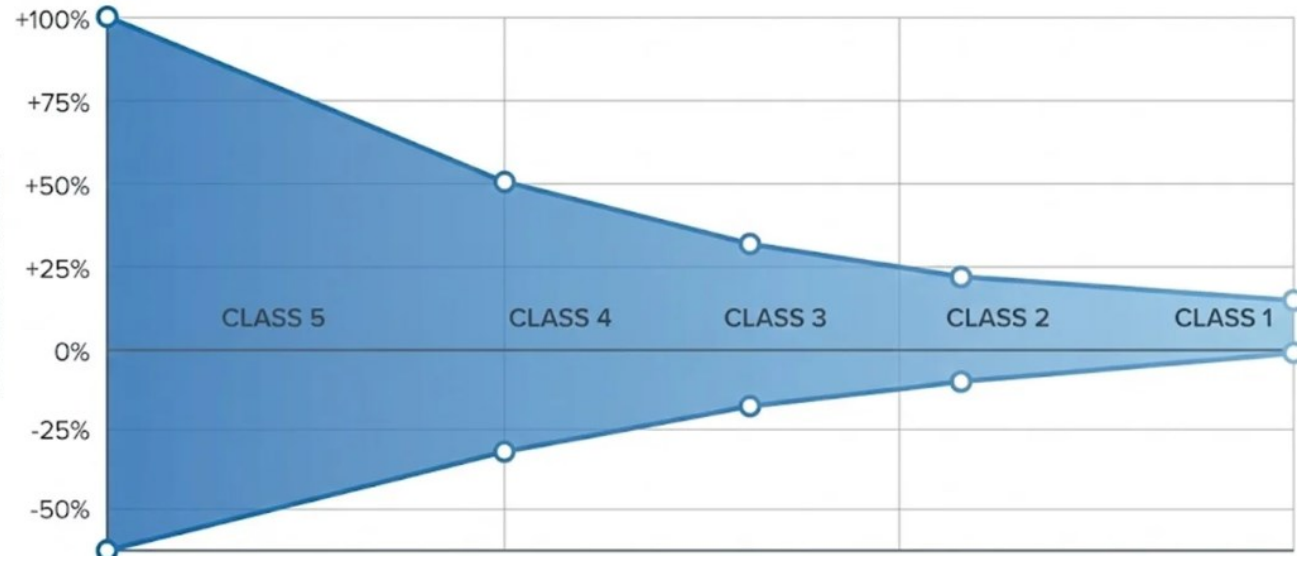


Table based on AACE International Recommended Practice No. 18R-97

Draft WSS Budget Scenario Overview

- 2027 – 2037 period (10 years)
    - total budget in 9YP IS = $1.44B
    - Total budget in example WSS scenario = $1.748B
    - $308M increase
- 2027 – 2055 (28 Years – remainder of adopted 30Y IS)
    - total budget in 9YP IS = $4.553B
    - Total budget in example WSS = $4.69B
    - $137M increase
- Key drivers for this
    - Flattening renewals profile
    - stormwater including South Dunedin (and to lesser extent Mosgiel) and
    - wet weather wastewater management

Discussion Topics

Potential significant additions or amendments to operative 9 Year Plan

- Renewals Programmes
- South Dunedin No Regrets
- South Dunedin SDF Short Term Stormwater Infrastructure (30 Years)
- Mosgiel Stormwater
- Wastewater Wet Weather Overflows
- Rural Schemes
- Service Extensions
- Bioresources

Other significant capital programme components

- Water efficiency
- Water resilience

Questions/Patai



Financial Strategy

10 Year Plan and Water Services Strategy 2027-37

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

What is a Financial Strategy?

Local Government Act 2002 - s101A(2)

"The purpose of the financial strategy is to—

(a) **facilitate prudent financial management** by the local authority by providing a guide for the local authority to consider proposals for funding and expenditure against; and

(b) **provide a context for consultation** on the local authority's proposals for funding and expenditure by making transparent the overall effects of those proposals on the local authority's services, rates, debt, and investments".

Local Government (Water Services) Act 2025 - s18(2)

"(d) If the (water services) provider is a local authority, (it **must demonstrate compliance** with financial principles) in its financial strategy prepared and adopted under section 101A of the LGA 2002".

Financial Limits

Rate Limits

- Must set a limit on rate increases

Debt Limit

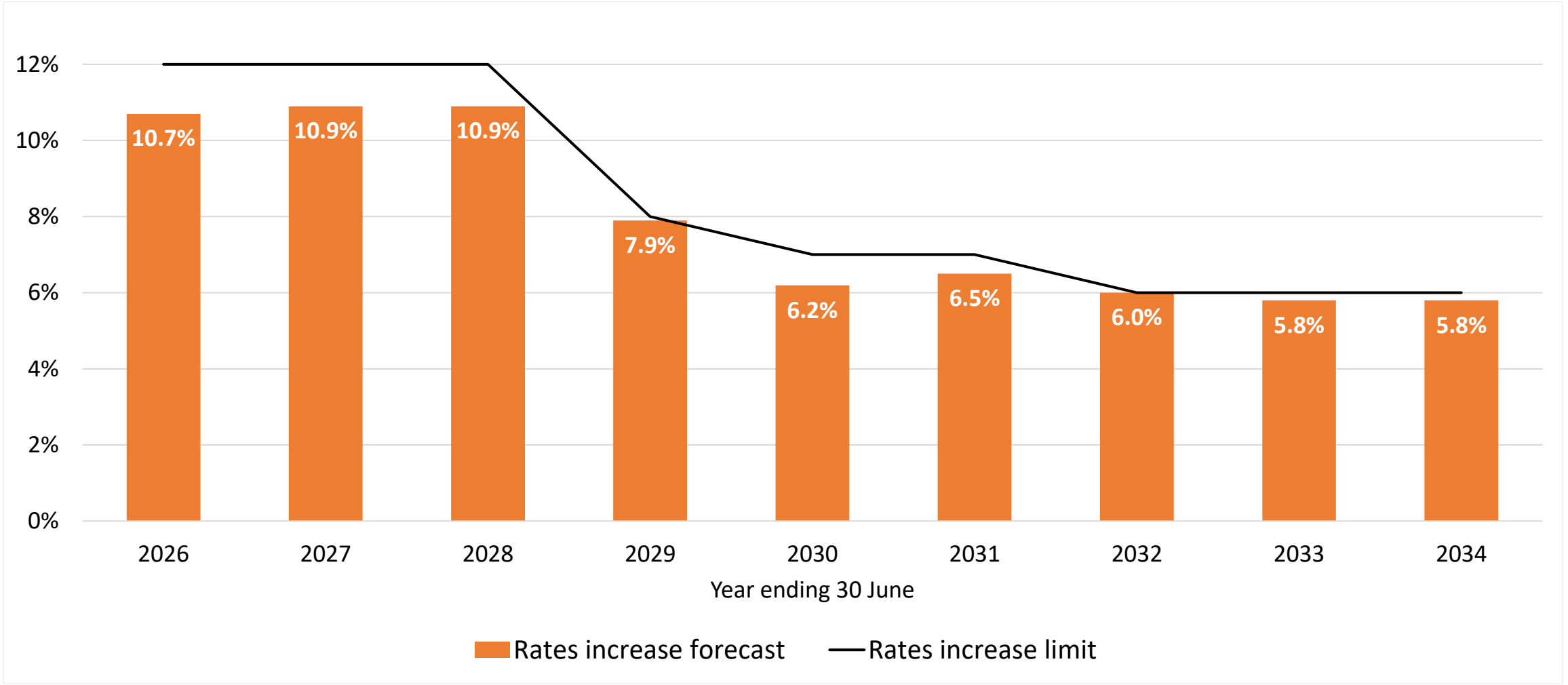
- Must set a limit on debt
- Limits to be quantifiable

Annual Rate Increase Limits – 9 Year Plan

The Council's Financial Strategy includes limits on annual rate increases as follows:

Years 1 – 3:	no more than 12% per annum
Year 4:	no more than 8% per annum
Years 5 – 6:	no more than 7% per annum
Years 7 – 9:	no more than 6% per annum

Annual Rate Increase – 9 Year Plan



Annual Rate Increase – 9 Year Plan

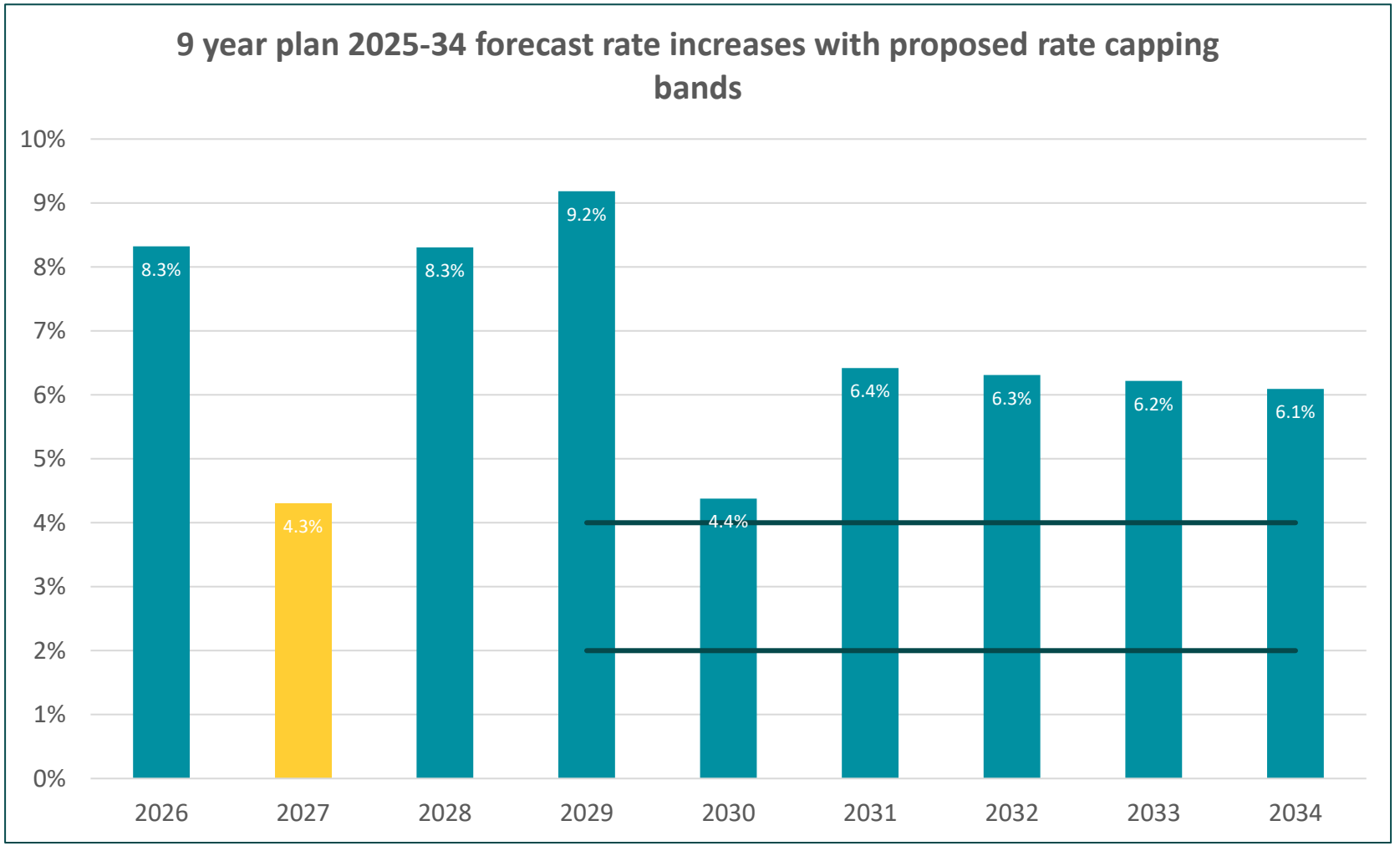
Water services

9 Year Plan Rate Increases	2026	2027	2028	2029	2030	2031	2032	2033	2034
Water Rates	15.0%	15.0%	15.1%	6.0%	9.0%	6.6%	5.5%	5.2%	5.4%

Non-water services

9 Year Plan Rate Increases	2026	2027	2028	2029	2030	2031	2032	2033	2034
Non-Water Rates	8.3%	8.5%	8.3%	9.2%	4.4%	6.4%	6.3%	6.2%	6.1%

Current Context – Non-Waters



Local Government (Rates Capping) Amendment Bill

- Introduced on 24 August 2026
- Proposes a framework to limit annual increases in non-waters rates
- Implementation 1 July 2029
- Councils must consider the cap during the lead-up period
- Exemptions
- Regulatory Function

Local Government (Rates Capping) Amendment Bill

Target range

- Interim target range 2-4%
- Includes penalties
- Target range per rating unit average calculation
- Places a cap on minimum and maximum increases
- Post transition
  - years 1-3 of an LTP to comply on average over 3 years
  - years 4-10 of an LTP to comply each year

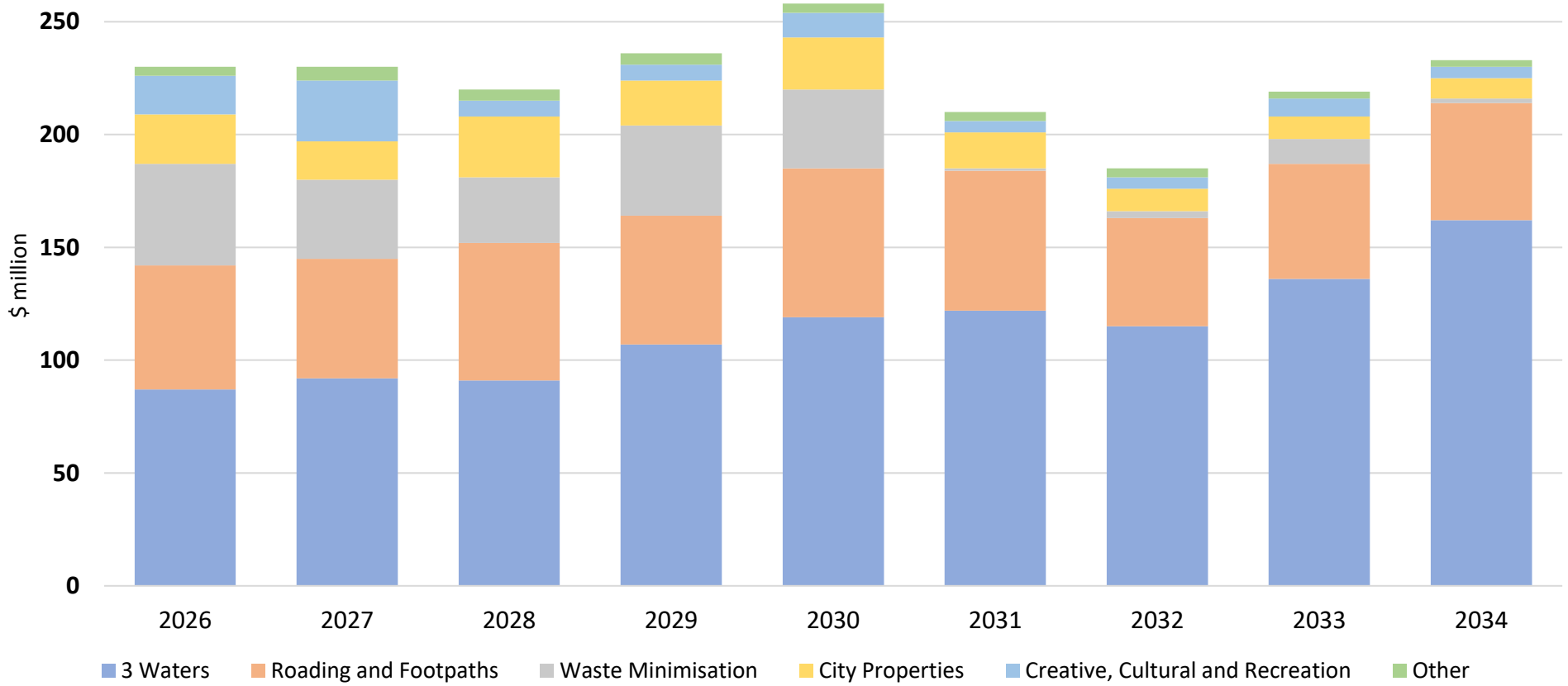
Annual Rate Increase Limits – 10 year plan 2027-37

Direction from Council:

- 4% limit for non-waters services

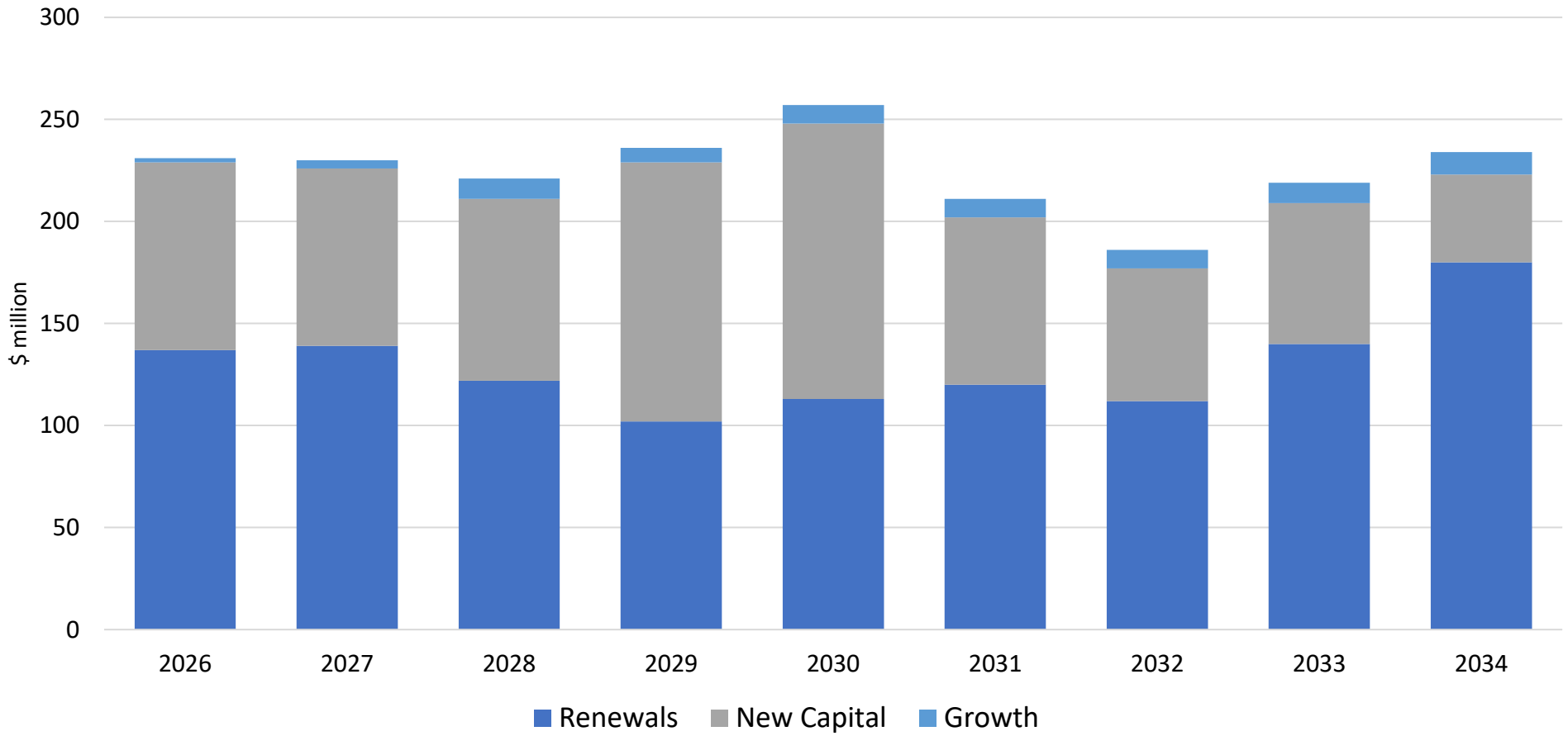
CAPEX Budget - 9 Year Plan

By Group of Activity



CAPEX Budget - 9 Year Plan

By Type



CAPEX Budget – 9 Year Plan

Progress to date

2025/26 Budget	$231 million	2025/26 Actual	$174 million
• 3 Waters	$87 million		$86 million
• Non waters	$144 million		$88 million

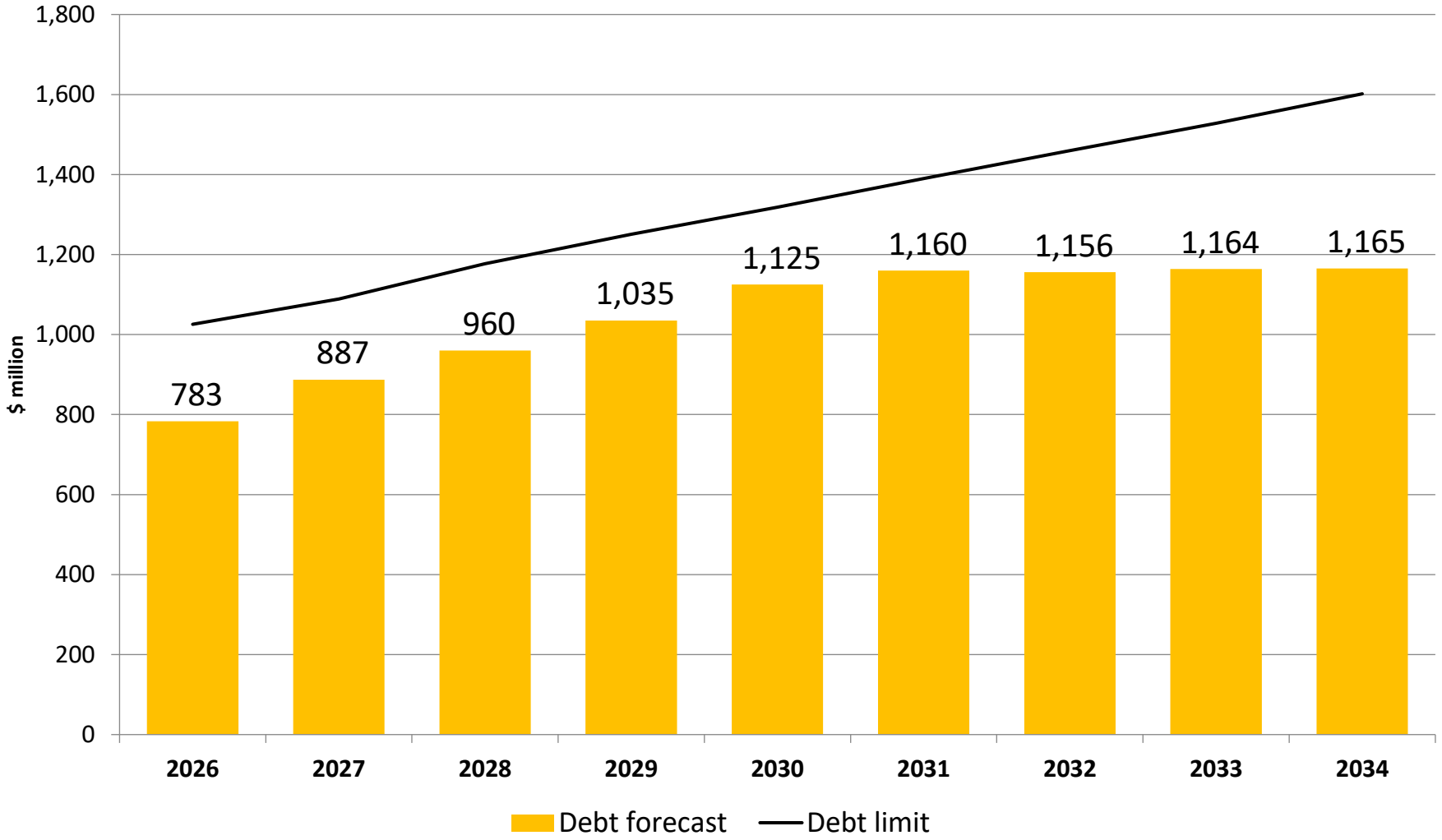
2026/27 Budget	$198 million
• 3 Waters	$92 million
• Non waters	$106 million

Debit Limits

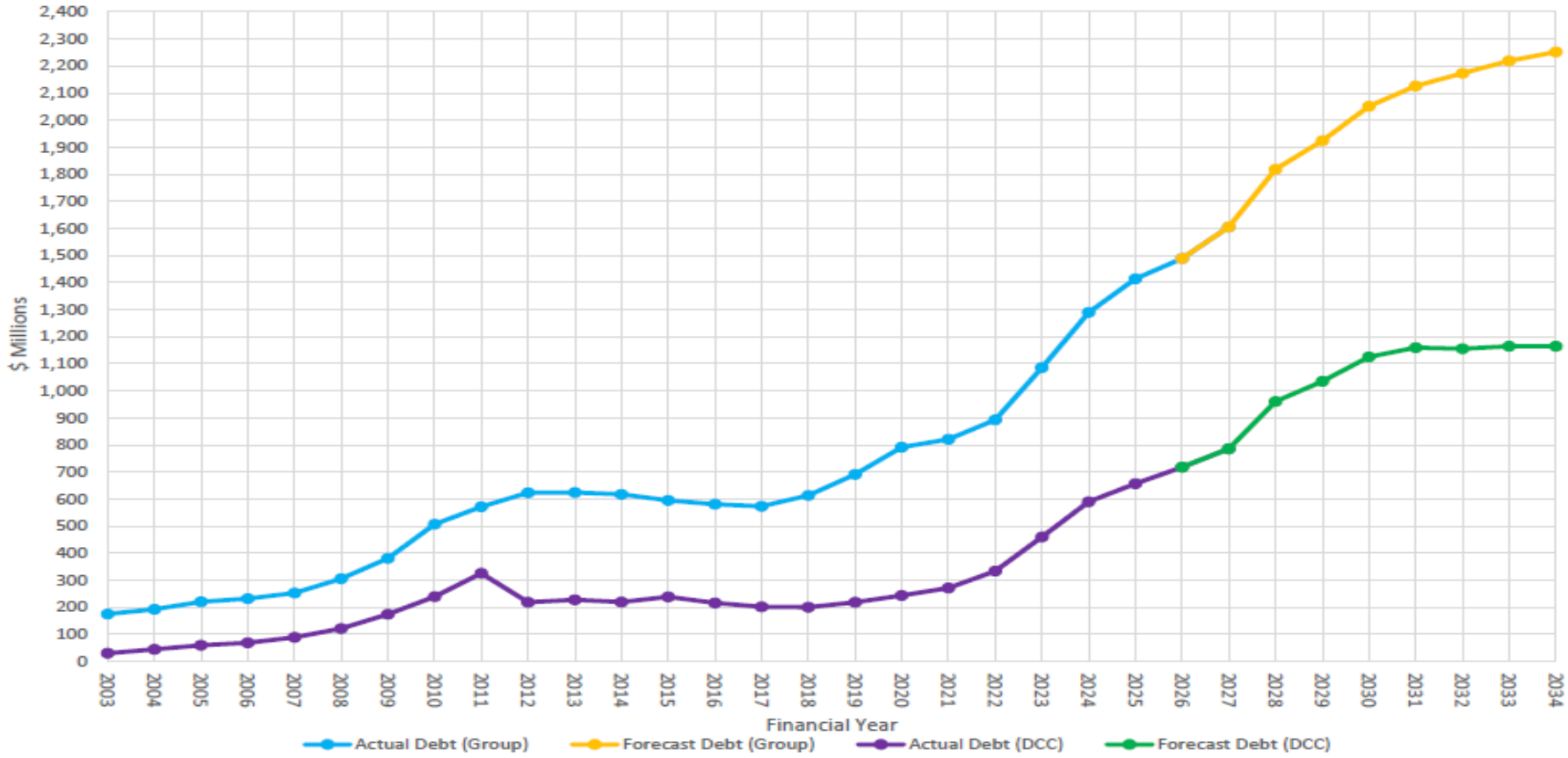
Debt limit of 250% of revenue

- Budgeted revenue 2026/27 $439 million
- 250% of revenue in 2026/27 is $1,097 million
- Budgeted debt 30 June 27 is $786 million
- Budgeted debt is 179% of revenue in 2026/27

9 Year Plan Forecast Debt

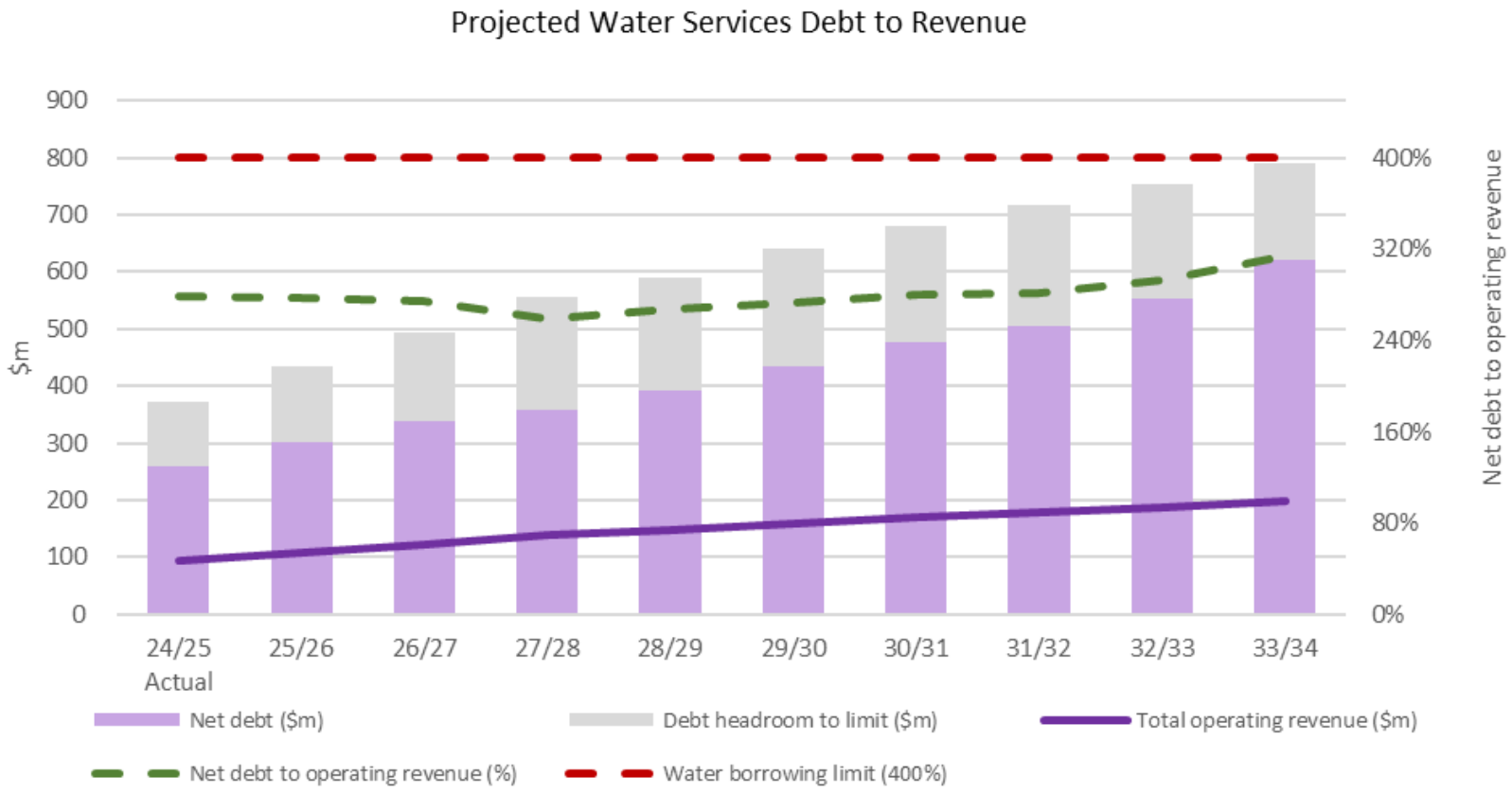


DCC and Group Debt Actual (2003-2026) and Forecast (2027-2034)



Debt Limit – Water Services

400% of Water Services revenue



Group Borrowing Arrangements

- Total DCC group debt $1.5 billion at 30 June 2026
- Total DCC group debt forecast $2.3 billion at 30 June 2034

LGFA Financial metrics for Council and DCC Group

- Net debt/total revenue <280%
- Net interest/total revenue <20%
- Net interest/rates revenue <30%

Group Borrowing Arrangements

Uncalled capital $1.9 billion

- Will be increased in future years as required
- Next review July 2027

S&P

- S&P credit rating AA-, outlook negative
- Next review November 2026

Scenario 1:

9 Year Plan Comparison

- Updated for 2026/27 Annual Plan
- 4% non-water rates increase

Metrics	2028	2029	2030	2031	2032	2033	2034
Net Debt to Revenue (LGFA)							
DCC Non-Water	123%	139%	155%	159%	154%	151%	143%
DCC Including Water	169%	184%	197%	203%	201%	203%	205%
DCHL	232%	226%	223%	218%	213%	213%	212%
Group	**199%**	**205%**	**210%**	**211%**	**207%**	**208%**	**209%**
Limit (LGFA)	280%	280%	280%	280%	280%	280%	280%
Net Interest to Total Revenue							
DCC Non-Water	4.9%	6.1%	7.3%	8.7%	8.6%	8.4%	8.0%
DCC Including Water	7.0%	8.1%	9.3%	10.9%	11.0%	10.9%	11.0%
DCHL	9.8%	10.2%	10.8%	11.6%	11.4%	11.4%	11.3%
Group	8.3%	9.1%	10.0%	11.2%	11.2%	11.2%	11.2%
Limit (LGFA)	20%	20%	20%	20%	20%	20%	20%
Net Interest to Annual Rates Revenue							
Revised Rates Revenue	318	333	353	371	388	405	424
DCC Including Water	12%	13%	14%	16%	16%	16%	16%
Limit (LGFA)	30%	30%	30%	30%	30%	30%	30%
Water Services Strategy							
Debt ($ million)	386	420	462	503	532	579	648
Limit at 400% of Revenue ($ million)	567	599	650	691	727	763	802
Debt at 400% of Revenue (%)	273%	281%	285%	291%	293%	303%	323%
Limit at 400% of Revenue (%)	400%	400%	400%	400%	400%	400%	400%
Council Overall Financial Strategy							
Debt ($ million)	890	987	1,096	1,167	1,199	1,254	1,312
Limit at 250% of Revenue ($ million)	1,161	1,198	1,256	1,310	1,363	1,416	1,472
Debt at 250% of Revenue (%)	192%	206%	218%	223%	220%	221%	223%
Limit at 250% of Revenue (%)	250%	250%	250%	250%	250%	250%	250%

Scenario 2:

9 Year Plan Comparison

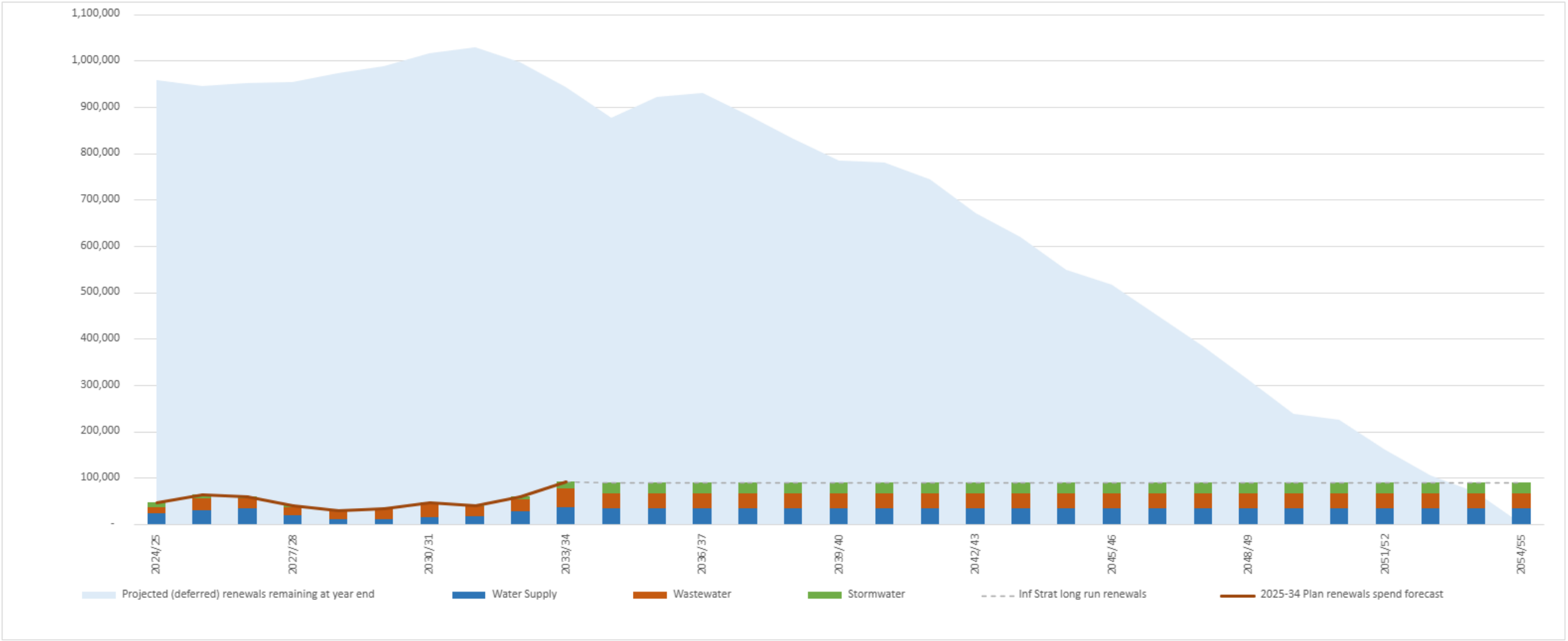
- Updated for 2026/27 Annual Plan
- 4% non-water rates increase
- Water Services capital uplift

Metrics	2028	2029	2030	2031	2032	2033	2034
Net Debt to Revenue (LGFA)							
DCC Non-Water	123%	139%	155%	159%	154%	151%	143%
DCC Including Water	172%	190%	212%	233%	246%	251%	253%
DCHL	232%	226%	223%	218%	213%	213%	212%
Group	**201%**	**208%**	**218%**	**227%**	**232%**	**235%**	**235%**
Limit (LGFA)	280%	280%	280%	280%	280%	280%	280%
Net Interest to Total Revenue							
DCC Non-Water	4.9%	6.1%	7.3%	8.7%	8.6%	8.4%	8.0%
DCC Including Water	7.1%	8.4%	9.8%	12.0%	12.9%	13.3%	13.5%
DCHL	9.8%	10.2%	10.8%	11.6%	11.4%	11.4%	11.3%
Group	8.4%	9.2%	10.3%	11.8%	12.2%	12.5%	12.6%
Limit (LGFA)	20%	20%	20%	20%	20%	20%	20%
Net Interest to Annual Rates Revenue							
Revised Rates Revenue	318	335	357	380	406	430	452
DCC Including Water	12%	13%	15%	18%	19%	19%	19%
Limit (LGFA)	30%	30%	30%	30%	30%	30%	30%
Water Services Strategy							
Debt ($ million)	403	454	545	679	817	910	995
Limit at 400% of Revenue ($ million)	568	605	665	728	797	863	914
Debt at 400% of Revenue (%)	284%	300%	328%	373%	410%	422%	436%
Limit at 400% of Revenue (%)	400%	400%	400%	400%	400%	400%	400%
Council Overall Financial Strategy							
Debt ($ million)	907	1,020	1,178	1,343	1,484	1,585	1,660
Limit at 250% of Revenue ($ million)	1,162	1,202	1,266	1,334	1,406	1,478	1,542
Debt at 250% of Revenue (%)	195%	212%	233%	252%	264%	268%	269%
Limit at 250% of Revenue (%)	250%	250%	250%	250%	250%	250%	250%

Questions/Patai

Renewals

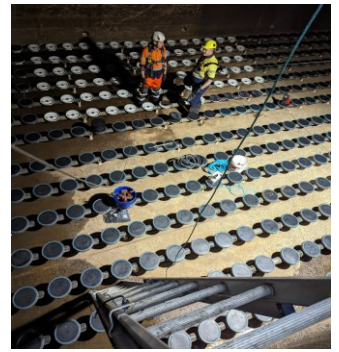
The Challenge: Assets condition deteriorates increasing failure risk and requiring renewal at or before end of life and depreciation to fund this. DCC ‘backlog’ of ≈ $1B.



Renewals

9YP/IS Allowance:

- IS allowance based on holding at current backlog for approx. 10 years
- IS intent to reduce backlog to NIL in 30 years (or year 28 of WSS)
  - Year 1-9: $553M
  - Year 10-30: $3B



What's changed since 9YP?

- Renewals components allocated to specific projects such as South Dunedin
- Review of renewals profile over 10 years



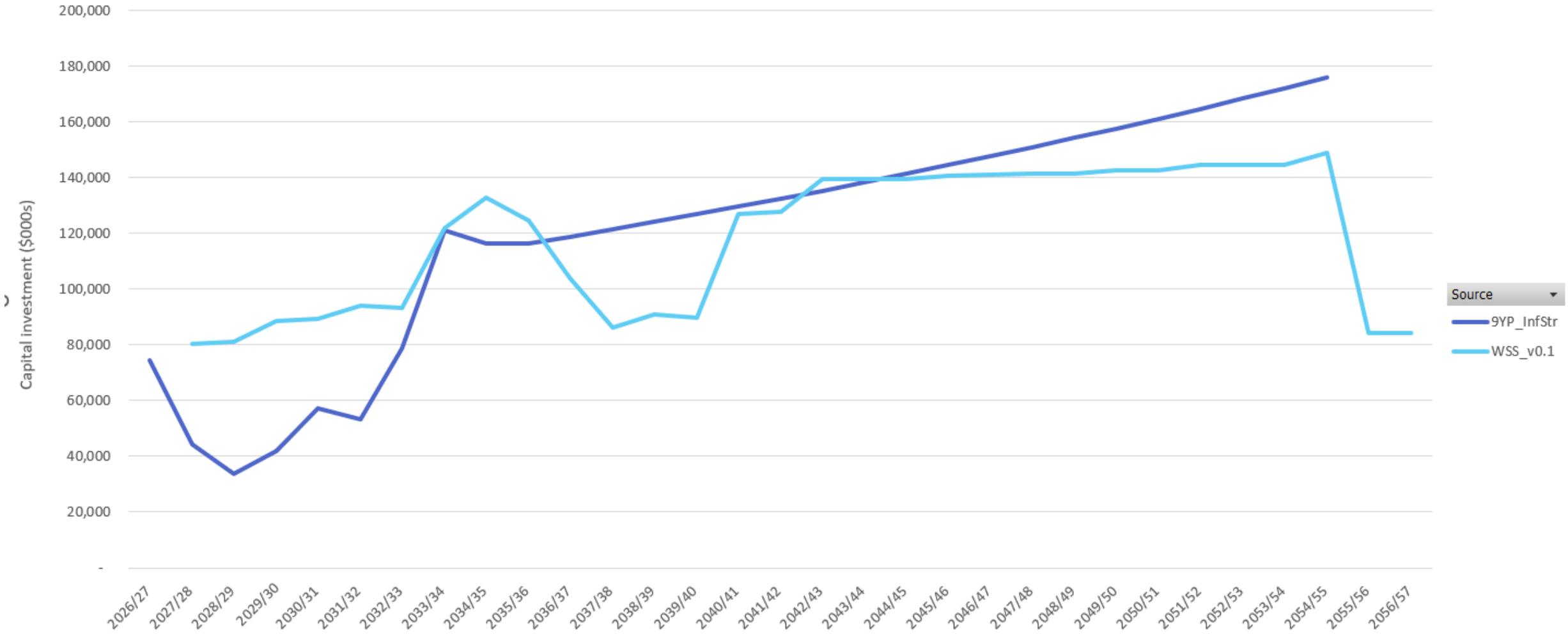
Renewals

- Established renewals programmes for networks, pumps stations and treatment plants – currently one of very few WSP delivering programme annually

- 9YP Profile - renewals programmes flex significantly to maintain total budget deliverability/affordability and accommodate major projects

- Proposed WSS profile – renewals programmes hold steady for consistent programme over 10 years
  - reduced risk of loss of momentum, reduced efficiency and failure to deliver
  - net effect – increase in renewals capex in years 1 to 7, decrease in years 7+ compared to 9YP.

Renewals – Indicative Profile 9YP v WSS



Questions/Patai

Break Time – back in 10 minutes

Stormwater

The Challenge: Both South Dunedin and Mosgiel are located on low-lying land with constrained natural drainage. Stormwater infrastructure does not meet desired levels of service and climate change exacerbates flood risk.

9YP/IS Allowance:

- South Dunedin 'No Regrets' - Year 1-9: $29.214M (new capital)
- South Dunedin Flood Alleviation - Year 1-9: $15M (new capital)
- Mosgiel - Year 1-9: $9.587M (new capital and renewals)

What's changed since 9YP?

- Improved modelling and climate risk assessments have substantially changed understanding of future requirements
- Detailed investigations and concept designs
- Larger infrastructure requirements, higher construction costs and more comprehensive solutions than were assumed when the original funding allowances were established.

Stormwater

Drivers:

- Public health risk
- Meeting Level of Service
- Improving infrastructure and community resilience
- Environmental impacts on sensitive environments
- Aging infrastructure

Challenges Addressed	
Aging infrastructure	✓
Growth / changing demands	
Resilience	✓
Zero carbon	
Regulatory, Services Delivery	
Public Health / Environmental	✓

Stormwater – South Dunedin ‘No Regrets'

9YP/IS Allowance:

- South Dunedin Short Term Options - Year 1-9: $29.2m (new capital), of which $27.5m was expected to be spent from 2027/28 onwards.

9YP Proposed solution:

- Diversion of the Bay View Road and New Street stormwater systems to a new pipe directly to the Portobello Pumping Station
- Upsize Forbury Road pipe
- Hillside Road mains disconnected and pumped to Orari Street outfall

At its meeting on 28 January 2025, Council included three short-term, ‘no regrets’ stormwater projects to support flood mitigation in South Dunedin. Council resolved:

Moved (Mayor Jules Radich/Cr Jim O'Malley):

That the Council:

a) Approves for inclusion in the draft budget funding of $44.214 million South Dunedin Flood Alleviation.

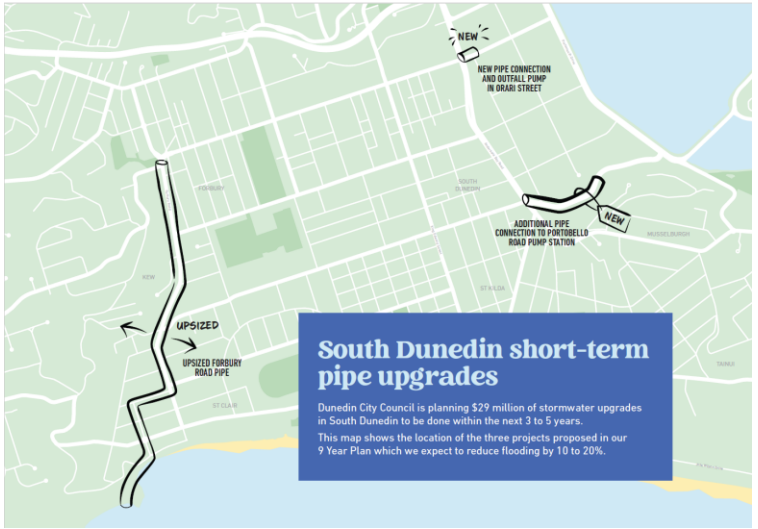
b) Notes the South Dunedin Flood Alleviation Budget include the following projects:

i. Diversion of the Bay View Rd and New St stormwater systems to a new pipe directly to the Portobello PS at a Class 5 Cost Estimate of $1.916 million.

ii. Upsize Forbury Road pipe at a Class 5 Cost Estimate of $12.000 million.

iii. Hillside Road mains disconnected and pumped to Orari St outfall at a Class 5 Cost Estimate of $15.298 million.

iv. South Dunedin Flood Alleviation medium term option, $15.000 million



Stormwater – South Dunedin ‘No Regrets'

What’s changed since 9YP?

- Completion of condition assessment (Forbury), hydraulic modelling, detailed investigations and concept design (Portobello)
- Target Level of Service aligned to South Dunedin Future
- Larger infrastructure requirements, but increased performance
- Updated cost estimates, project contingency 35% added
- Additional project scope required
  - Screens at Portobello Stormwater Pump Station
  - Replacement and increasing capacity of Bell Tower outfall at end of Forbury aqueduct



Stormwater – South Dunedin 'No Regrets'

Option	Capital Yrs 1-10	Annual Rates Funding	Benefits	Disadvantages
Option 1 - Fully fund revised No Regrets Programme	**$82.3M**	$4.8M	• Greatest reduction in current flood risk • Supports all future adaptation pathways • Improves resilience • Protects community assets • Avoids future rework	• Significant increase in capital expenditure • Higher rates and debt impacts
Option 2 - Retain Existing 9YP Funding	**$27.5M**	$0.6M	• Lower financial impact • Allows some flood mitigation works to proceed	• Only part of the required programme can be delivered • Won't fully support all future adaptation pathways • Reduced flood risk reduction • May delay benefits and increase future costs

Questions/Patai

Stormwater – South Dunedin ‘Short Term’ 30 Years

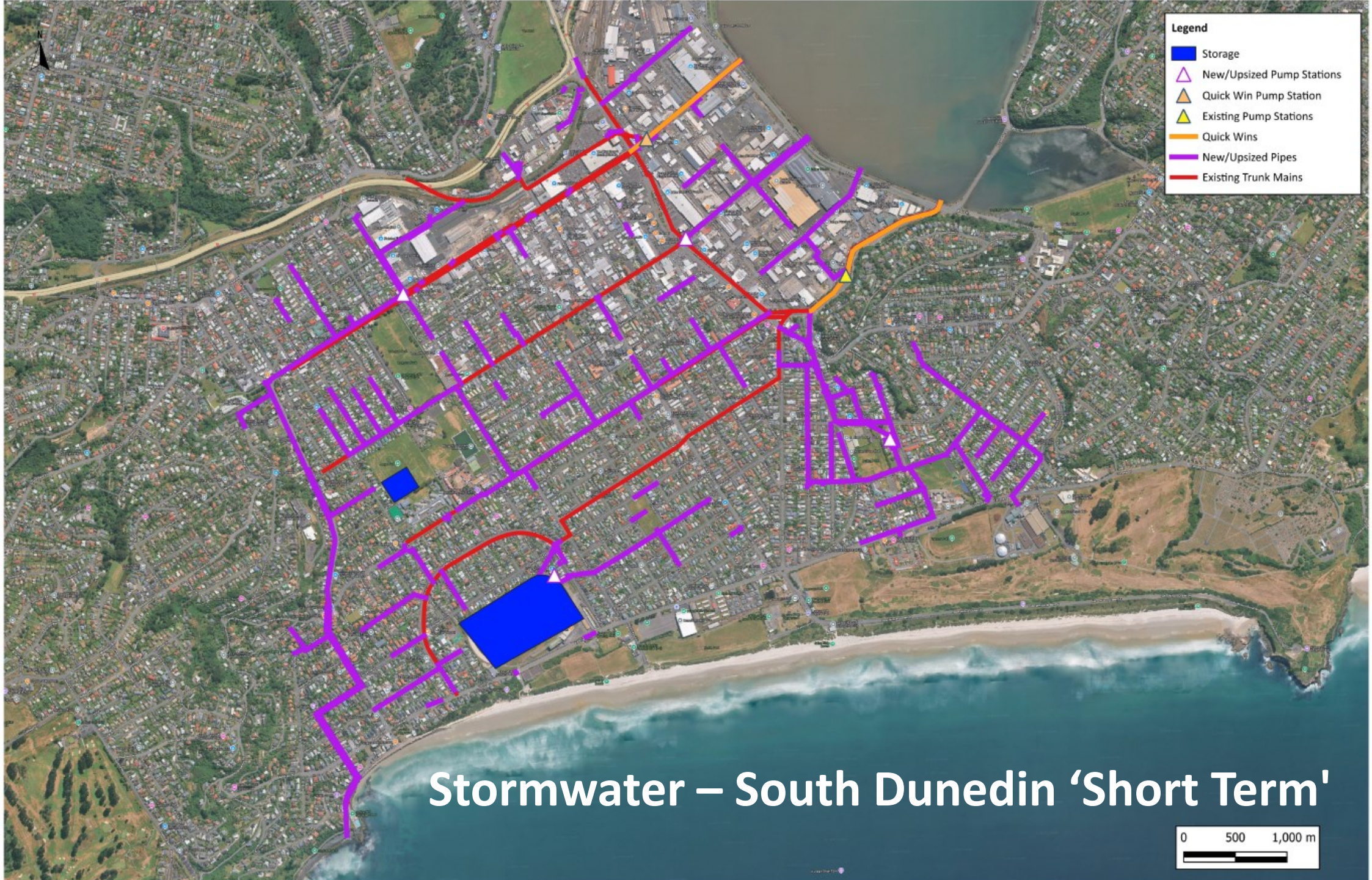
9YP/IS Allowance:

- South Dunedin Short Term Options - Year 1-9: $15 (new capital), of which $14.3M was expected to be spent from 2027/28 onwards.



What’s changed since 9YP?

- 9YP budget was a “placeholder” awaiting direction from SDF
- Completion of more detailed hydraulic modelling
- More clarity on infrastructure required to meet target LoS (10% AEP)



Stormwater – South Dunedin ‘Short Term'

Stormwater – South Dunedin ‘Short Term'

Infrastructure required:

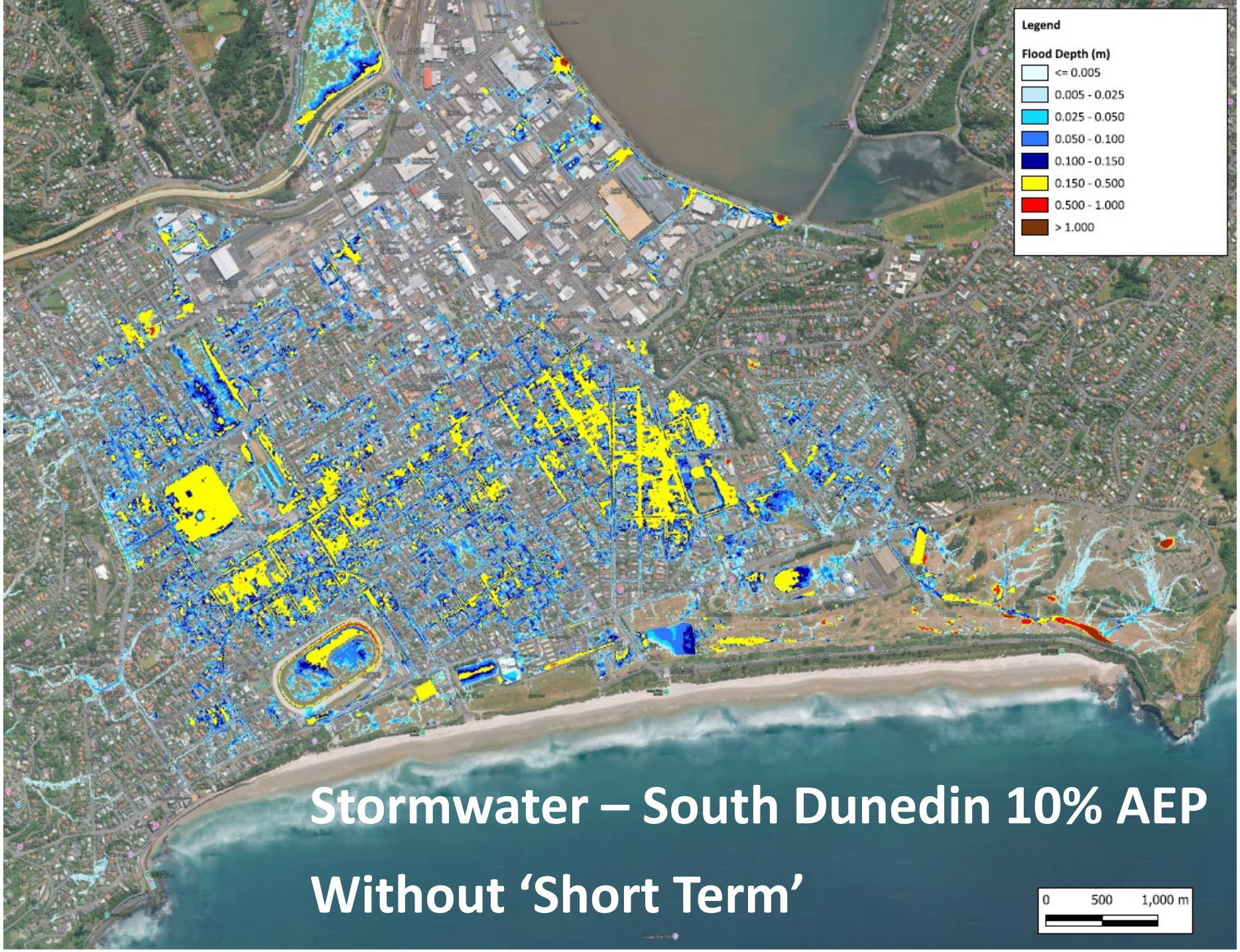
- Two storage basins – 1ha x 1m deep
- Wetland – 9ha
- 4 x new pump stations
- New outfall structure to Otago Harbour
- 2 km of groundwater drainage network
- Over 25km of new pipe ranging in size from 150mm diameter to 2.1m x 1m box culvert

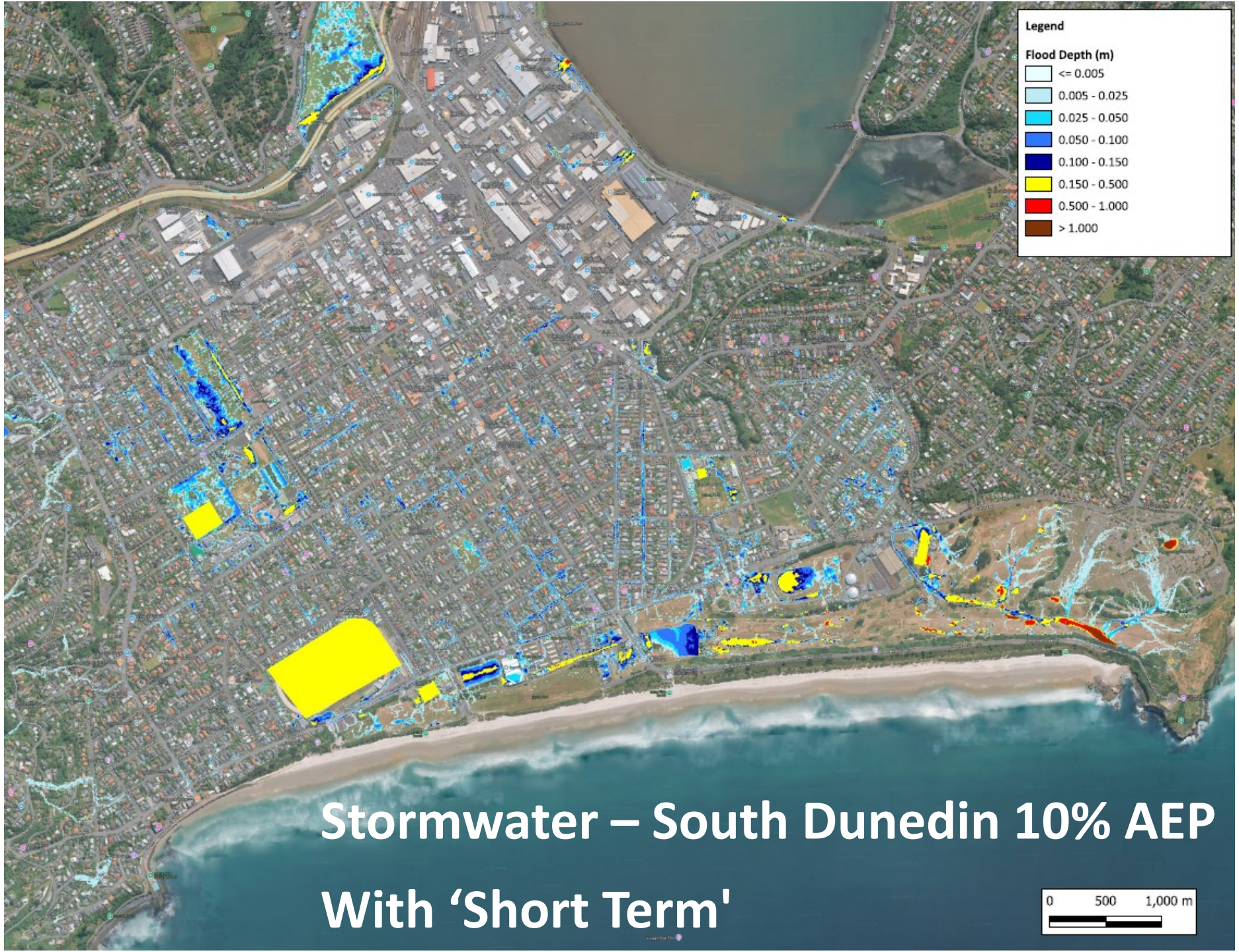
Performance outcomes:

- 10% AEP, critical duration event – water in pipes, no more than 150mm on roads
- 2% AEP, reduced habitable floor flooding

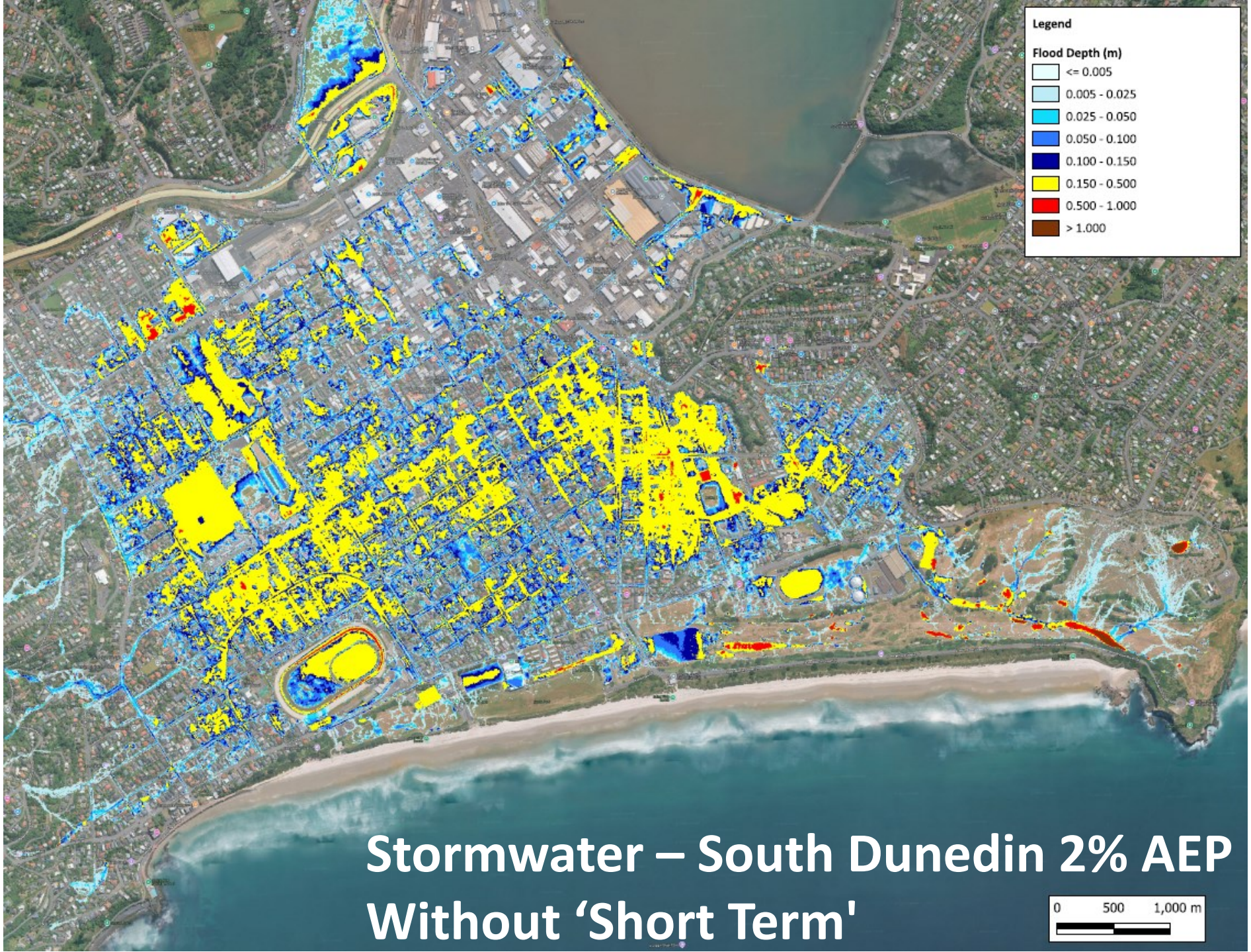
Total cost:

- $573M, including the following on base estimates:
  - 25% contingency
  - 66% ‘optimism bias’

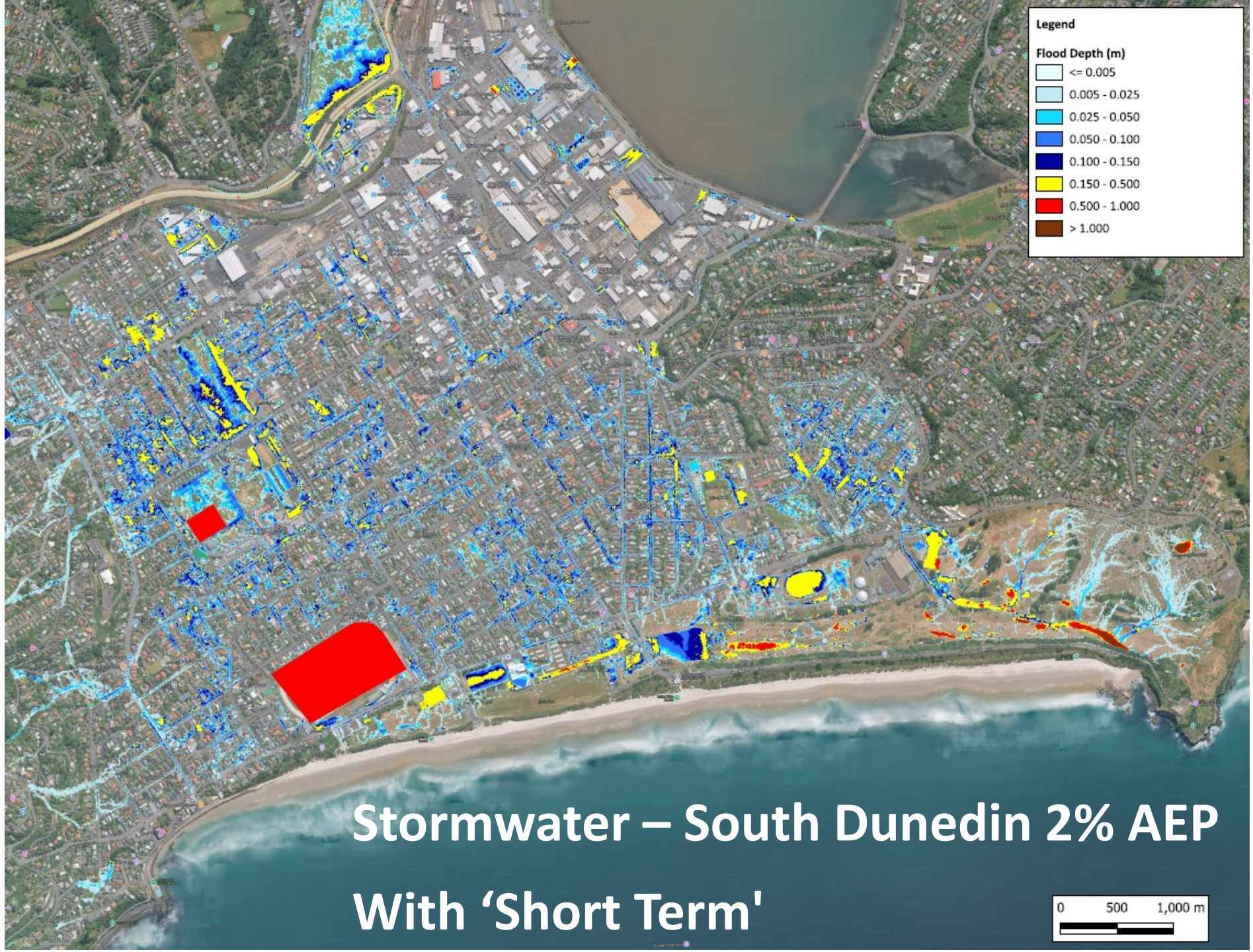

Legend
Flood Depth (m)
<= 0.005
0.005 - 0.025
0.025 - 0.050
0.050 - 0.100
0.100 - 0.150
0.150 - 0.500
0.500 - 1.000
> 1.000
Stormwater – South Dunedin 10% AEP
Without 'Short Term'
0
500
1,000 m



Stormwater – South Dunedin 10% AEP With ‘Short Term'



Stormwater – South Dunedin 2% AEP Without 'Short Term'



Stormwater – South Dunedin 2% AEP With ‘Short Term'

Option	Capital Yrs 1-10	Annual Rates Funding *	Benefits	Disadvantages
Option 1 – 30 Year Delivery Programme	**$193M**	$12.9M	• Consistent with SDF modelling and technical investigations • Reduces future adaptation costs and infrastructure risk	• Higher rates and debt requirements • Significant construction disruption to the community • Requires substantial delivery capability and programme management resources
Option 2 - Retain Existing 9YP Funding	**$14M**	$0.8M	• Lowest cost and rates impact over the next 10 years • Simplest programme to deliver • Preserves short-term financial flexibility	• Does not achieve desired levels of service • Does not deliver infrastructure identified through SDF programme • Significant flood risks remain unresolved • Greater future flood damage and adaptation risk
Option 3 – 12 Year Delivery Programme	**$463M**	$31.9M	• Achieves flood protection outcomes ~18 years sooner • Potentially lower whole-of-life programme cost due to reduced inflation impacts	• Highest rates and affordability impact • Greatest construction disruption • Increased procurement, resource and programme delivery risk
Option 4 – 45 Year Delivery Programme	**$111M**	$7.4M	• Some improvement in flood resilience compared with status quo	• Does not achieve target level of service within intended timeframe • Benefits realised much later • Flood risks remain for longer • Likely to have the highest overall cost due to inflation and deferred delivery

Questions/Patai

Stormwater – Mosgiel

9YP/IS Allowance:

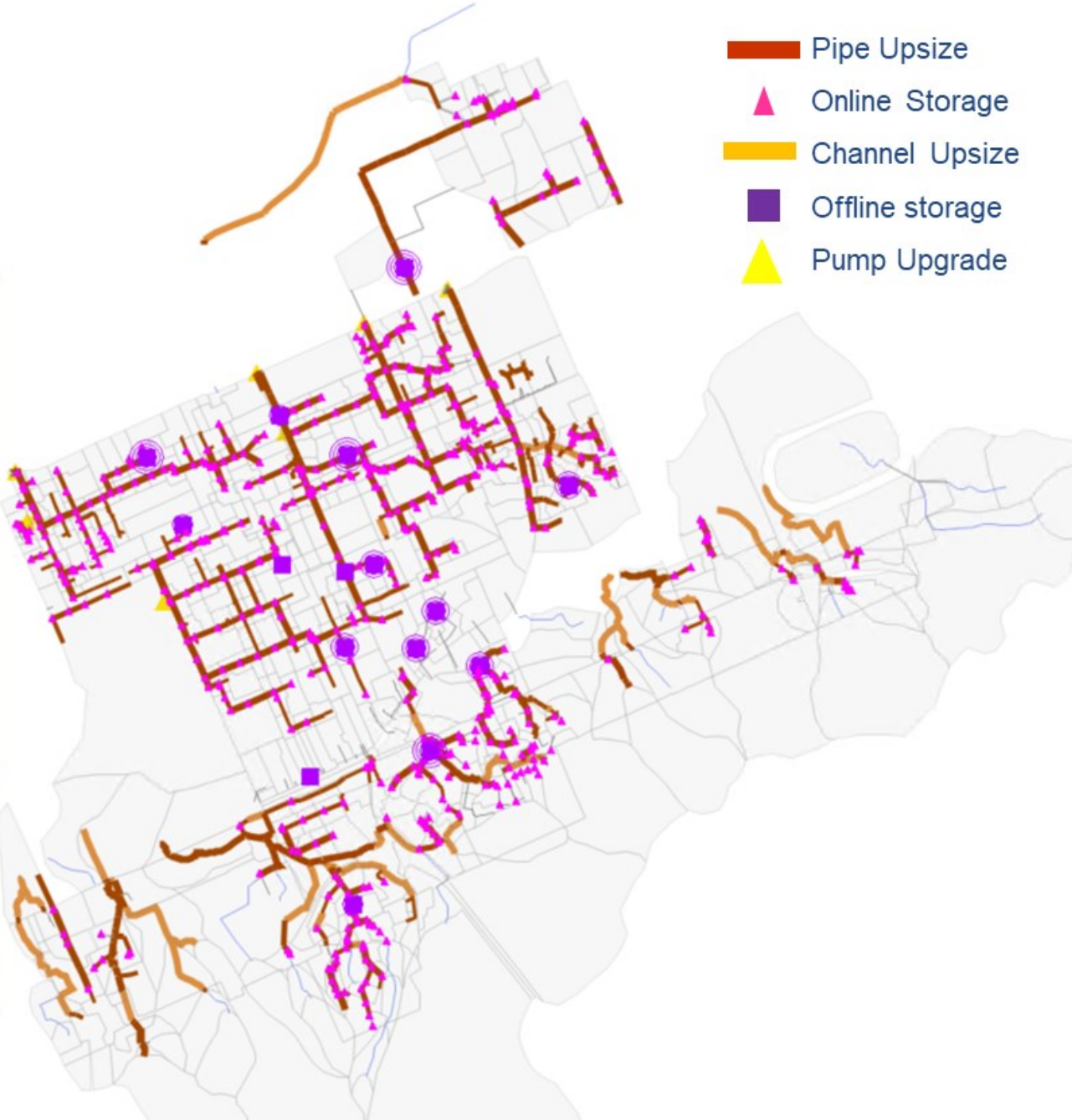
- Year 1-9: $9.6M (new capital and renewals), of which $5.4M was expected to be spent from 2027/28 onwards.

What's changed since 9YP?

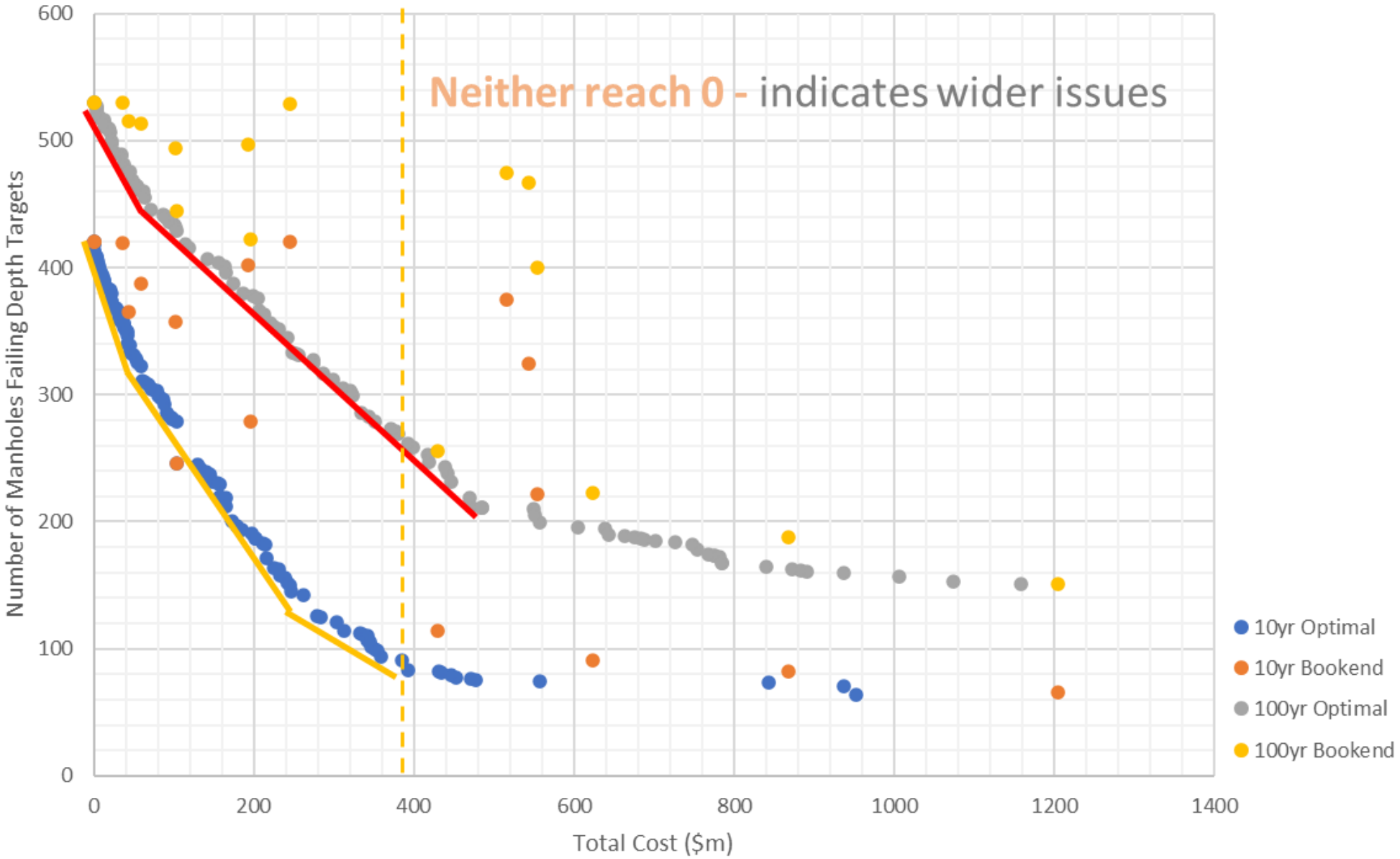
- Completion of hydraulic modelling
- More clarity on infrastructure requirements

Stormwater – Mosgiel





Stormwater – Mosgiel



Stormwater – Mosgiel

Option	Capital Yrs 1-10	Annual Rates Funding*	Benefits	Disadvantages
Option 1 – Priority infrastructure	**$13.6M**	$0.7M	• Reduces flood risk by approximately 10% • Progresses "no regrets" investments • Supports climate adaptation and resilience objectives • Balances affordability with meaningful service improvements	• Requires additional borrowing and/or rates funding above the 9YP allowance • Does not fully resolve all flooding issues in Mosgiel
Option 2 - Retain Existing 9YP Funding	**$9.6M**	$0.4M	• Lowest rates and debt impact • No additional capital funding required • Preserves funding capacity for future decisions	• Existing flood impacts continue and are expected to worsen over time • Limited improvement in flood resilience • Higher long-term flood damage and recovery risks
Option 3 – Highest Benefit Cost Infrastructure	**$40.0M**	$2.7M	• Reduces flood risk by approximately 24% • Strong benefit-cost performance • Significant flood depth reduction • Targets the highest-benefit projects • Provides visible flood reduction outcomes	• Significantly higher capital funding requirement • Benefits concentrated in priority catchments rather than across all of Mosgiel • Flooding issues remain in some areas

Questions/Patai

Lunch Time – back in 40 minutes

Wet weather wastewater network performance

The Challenge: Wet weather overflows from the wastewater system are a public health, environmental and regulatory risk and potentially restrict growth.

9YP/IS Allowance:

- Wet Weather Flow Management (part of network resilience and efficiency budget line)
  - Year 1-9: $60.6M (mostly new capital)
  - Year 10-30: NIL
- Main Intercepting Sewer
  - Year 1-9: $20.4M (mostly renewal)
  - Year 10-30: $5.9M
- Musselburgh to Tahuna Link
  - Year 1-9: $56.9M (mix)
  - Year 10-30: $5.9M NIL
- The total budget in the 9-Year-Plan is $137.9M



Wet weather wastewater network performance

What's changed since 9YP?

- Legislation – introduction of WEPS – previous policy direction was prohibitive of overflows (proposed regional plan under RMA)
- Wastewater network optimisation project has developed understanding
- Development of Musselburgh to Tahuna design
- Development of MIS upgrade cost estimates

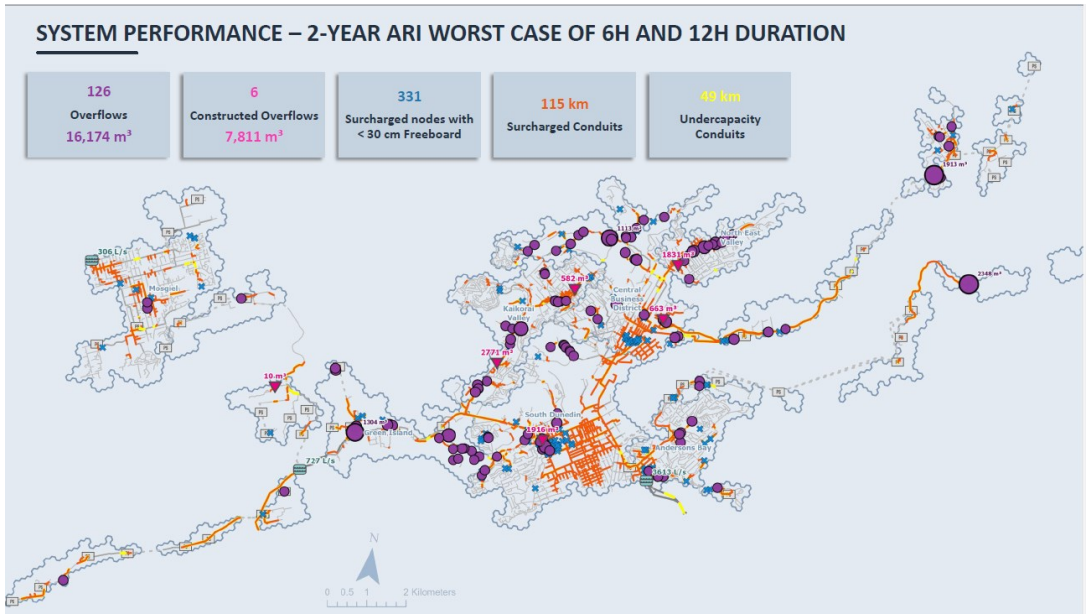


Wet weather wastewater network performance

Wet weather overflows across the city

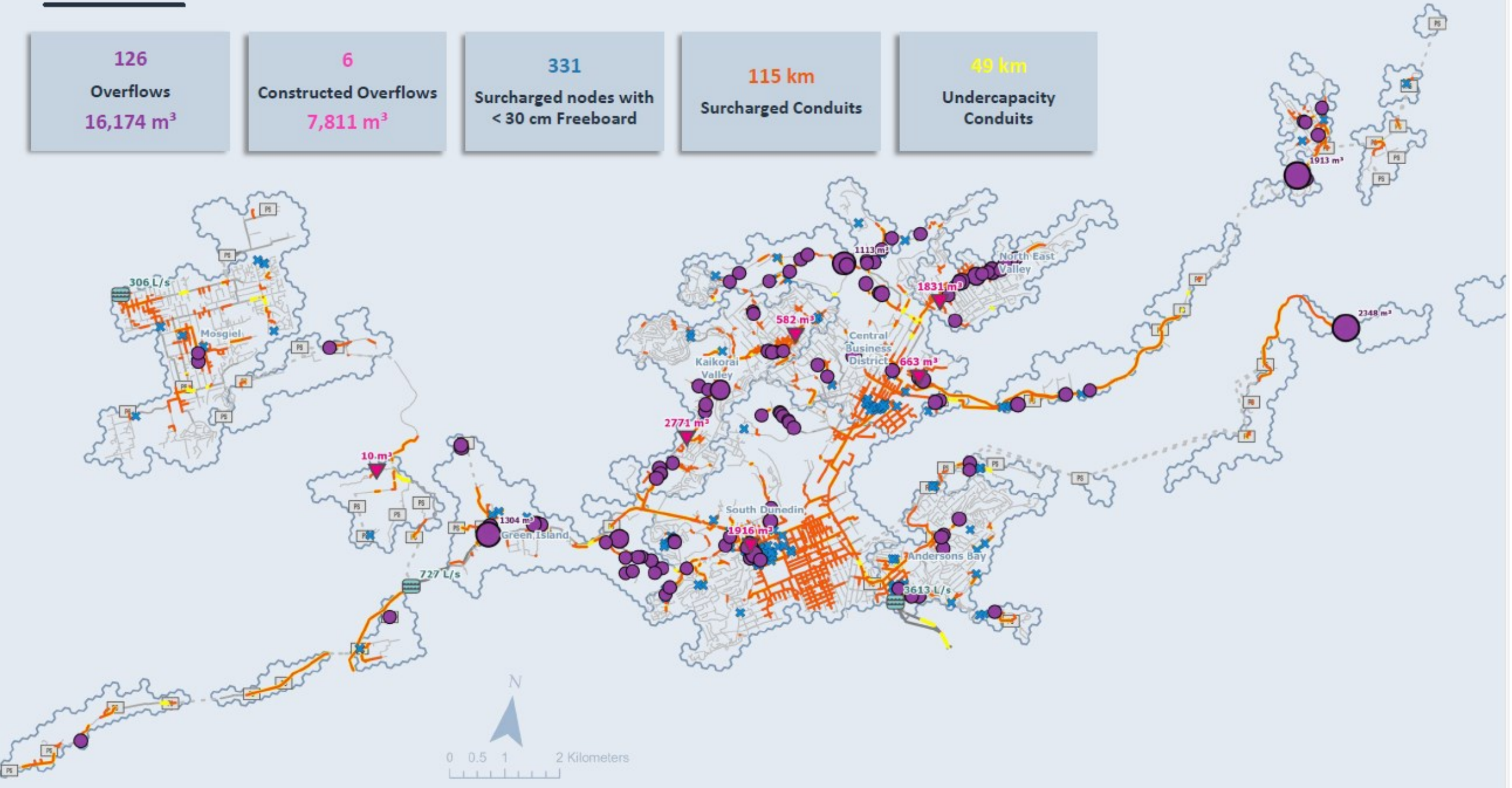
- Controlled – through constructed overflows ultimately to Otago Harbour, Kaikorai estuary, ocean and Taieri

- Uncontrolled – through manholes across the city including Surrey Street, Mosgiel (around Carlyle Road), Tainui and North East Valley



SYSTEM PERFORMANCE – 2-YEAR ARI WORST CASE OF 6H AND 12H DURATION

126	6	331	115 km	49 km
Overflows	Constructed Overflows	Surcharged nodes with < 30 cm Freeboard	Surcharged Conduits	Undercapacity Conduits
16,174 m³	7,811 m³			

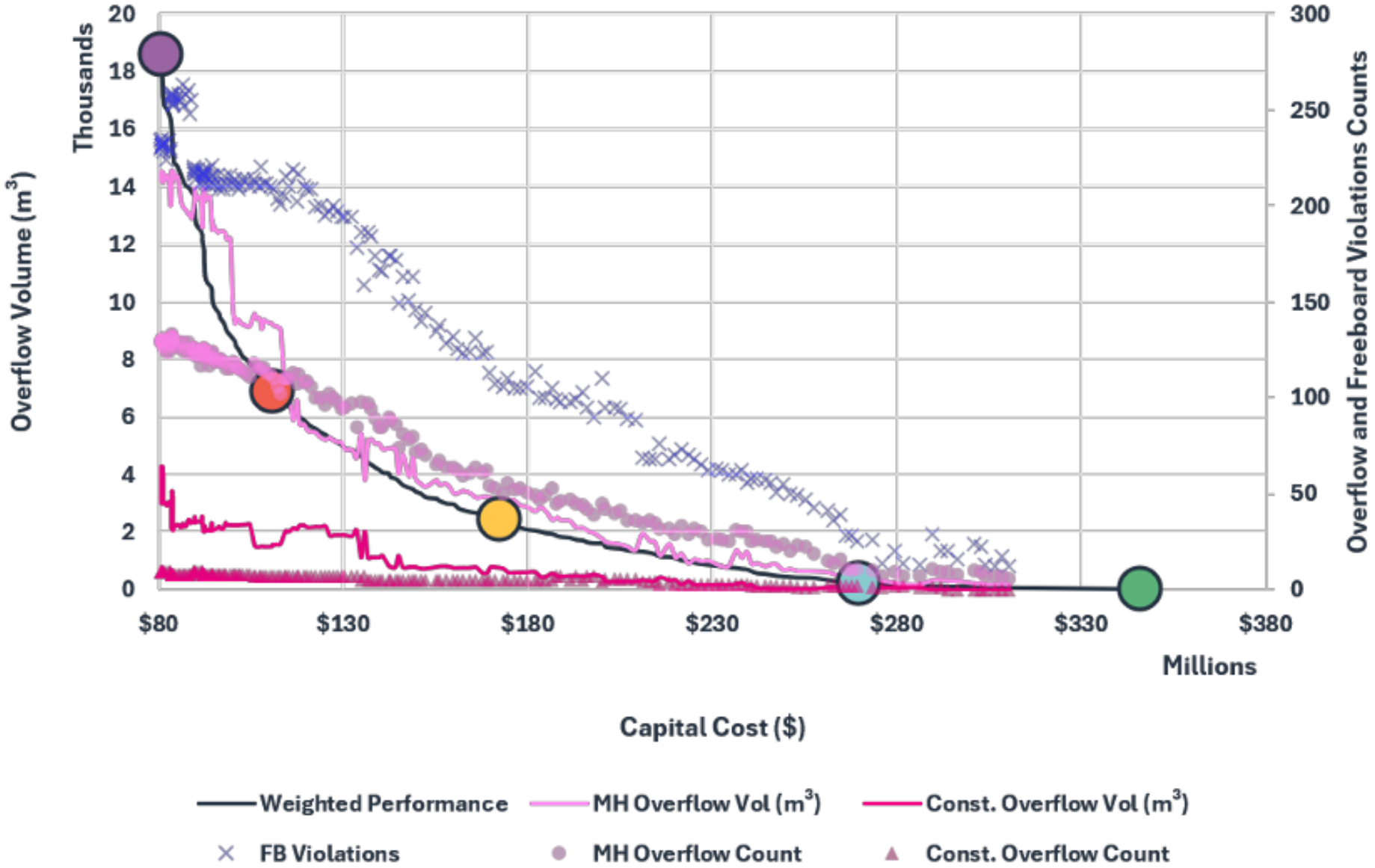


Wet weather wastewater network performance

Wastewater optimisation

- Broad intent to eliminate environmental overflows (uncontrolled and controlled) as far as practicable
- Hundreds of interventions considered including network storage and increasing pipe sizes to reduce bottlenecks
- Interventions prioritized based on risk - consequence and frequency to find best value for money solutions
- Entirely eliminating all overflows in all rain events is unlikely to be achievable

Wet weather wastewater network performance



Wet weather wastewater network performance – MPS and MIS development



Musselburgh Pump Station to Tahuna Tunnel

- Conveys wastewater from the city to Tahuna wastewater plant
- Aged infrastructure with some parts in poor condition presenting failure risk
- 9 Year Plan includes allowance to reline existing pipes and replace MPS and pipelines with a tunnel and new PS
- Further condition assessment has been completed and Relining of rising main A (one of 3) is complete
- **Network optimization identifies that addition of larger tunnel storage has significant wet weather benefits**
- 9YP Allowance of $56.9M in years 1 to 9 (mix new and renewals) has now increased to $73.6M due to design development

Wet weather wastewater network performance – MPS and MIS development

MIS



- Conveys wastewater through the city to Musselburgh Pumping Station.

- 9 Year Plan/Infrastructure Strategy allowance of Year 1-9: $20.4M (mostly renewals) and Year 10-30: $6.0M (mostly renewals Year 10-30: $NIL

- **Network optimization identifies that larger sizing has significant wet weather benefits**

- **Cost estimate/budget has increased to $56.5M due to design development**

Impact of cost increase for MIS and Musselburgh to Tahuna potentially means less funding available for other wet weather reduction projects

Wet weather wastewater network performance

Option	Capital Yrs 1-10	Annual Rates Funding*	Benefits	Disadvantages
Option 1: MPS to Tahuna, MIS and suite of additional wet weather interventions including Kaikoari Valley detention tank ≈ 92% risk reduction	**$190.7M**	$11.9M	- 92% risk reduction - Removes or significantly reduces all very high risk and most high risk overflows (manhole overflows, including Surrey Street) in most rain events - Significant improvement in level service - Reduction in environmental, public health and potentially regulatory risk	- Overflow risk is not eliminated in largest rain events - Lower risk overflows, including to environment such as Kaikorai stream, Lyndsay Creek and harbour remain
Option 2: MPS to Tahuna, MIS and Kaikoari Valley detention tank ≈ 72% risk reduction	**$137.9M**	$6.9M	- 72% risk reduction - Significant improvement in level service - Reduction in environmental, public health and potentially regulatory risk	- Several high and very high risk overflows remain - Relatively extensive constructed overflows to environment such as Kaikorai stream, Lyndsay Creek and harbour remain

Wet weather wastewater network performance

Option	Capital Yrs 1-10	Annual Rates Funding*	Benefits	Disadvanatges
Option 3: MPS to Tahuna, MIS and suite of additional wet weather interventions including Kaikoari Valley detention tank ≈ 96% risk reduction	**$202.7M**	$12.8M	- 96% risk reduction - Eliminates all very high and high risk overflows (manhole overflows, including Surrey Street) in most rain events - Significant improvement in level service - Environmental overflows mostly eliminated in 1 in 2 year event - Reduction in environmental, public health and potentially regulatory risk	- Overflow risk is not eliminated in largest rain events
Option 4: Per option 3 with risk reduction to a higher level of service in Surrey Street	**$215.1M**	$14.3M	- >96% risk reduction - Provides additional level of service in Surrey Street area eliminating overflows in beyond a 1 in 50 year event (<2% AEP) - ally regulatory risk	-

Questions/Patai

Rural Schemes

Warrington, Waikouaiti and Middlemarch Wastewater

The Challenge: Expiry of RMA discharge consents for wastewater plants at Warrington, Waikouaiti and Middlemarch

9YP/IS Allowance:

- Year 1-9: $76.9M (mostly new capital)
- Year 10-30: $34.7M

What's changed since 9YP?

- Option development including land identification
- New legislation – Wastewater Environmental Performance Standards (WEPS)
- Impact of WEPS and alternative options being considered

Challenges Addressed	
Aging infrastructure	✓
Growth / changing demands	✓
Resilience	✓
Zero carbon	
Regulatory, Services Delivery	✓
Public Health / Environmental	✓

Rural Schemes – Warrington and Waikouaiti

Warrington and Waikouaiti:

- Consent expiry and regulatory risk
- Climate change / sea level risk
- Environmental impact on sensitive environment
- Cultural significance of sites and mana whenua feedback
- Future Development Strategy (FDS) alignment.

9YP Proposed solution:

- New northern schemes wastewater plant and transfer of wastewater from Warrington and Waikouaiti to a centralised scheme





Rural Schemes – Warrington and Waikouaiti Options

Option	Capital Yrs 1-10	Annual Rates Funding*	Benefits	Disadvantages
Option 1: Progress 9YP – new northern schemes plant and transfer	$75.7M	$7.4M	- Maintain level of service - Smooth consenting pathway - Sea level and flood resilience - Environmental benefit - Alignment with FDS direction - Meeting Te Tiriti obligations and mana whenua relationship - Potential capacity for service extensions	- Significant capital programme - Land procurement risk
Option 2: Assess alternative to upgrade and retain plants and seek consent in current location	$12.1M	$1.4M	- Maintain level of service - Reduce environmental impact (compared to status quo) - Lower cost	- Potential complex consenting pathway and high risk (environment court) - Sea level and flood risk - Does not align with FDS direction - Cultural impact - Future investment need

Questions/Patai

Rural Schemes – Middlemarch Wastewater

Drivers

- Consent expiry and regulatory risk
- Environmental impact on sensitive environment – Taieri River
- Regulatory, cultural and community intent – avoid discharge to Taieri River

9YP Proposed solution:

- Upgrade existing plant
- Relocate discharge from Taieri River (via dry oxbow) to land application site

Impact of WEPS and alternative option considered



Rural Schemes – Middlemarch Wastewater Options

Option	Capital Yrs 1-10	Annual Rates Funding*	Benefits	Disadvantages
Option 1: Progress 9YP – plant upgrade with new land application field	$7.8M	$0.6M	- Suitable land already identified - Remove discharge from sensitive environment - Taieri River - Aligned with regional regulatory considerations - Aligned with cultural considerations	- Higher cost
Option 2: Seek consent for discharge to existing location – to Taieri River via dry oxbow.	$4.0M	$0.3M	- Lower cost	- Missed opportunity to remove Taieri River discharge - Not aligned to regional regulatory considerations - Not aligned to cultural considerations

Questions/Patai

Break Time – back in 10 minutes

Service Extensions

The Challenge: Funding allocated by priority areas for extension of services are unclear, lacking in evidence.

9YP/IS Allowance:

- Year 1-9: $23.1M (new capital)
- Year 10-30: $23.2M (new capital)

What's changed since 9YP?

- Completed district-wide Servicing Assessment in 2026
- Identified several communities with potential servicing needs
- No transparent, evidence-based process for determining where investment should occur first

Challenges Addressed	
Aging infrastructure	
Growth / changing demands	✓
Resilience	
Zero carbon	
Regulatory, Services Delivery	
Public Health / Environmental	✓

Service Extensions

Drivers:

- Public health risk
- Environmental impacts on sensitive environments
- Future Development Strategy alignment
- Limited funding, competing priorities

9YP Proposed solution:

- Servicing Assessment would clearly identify priority areas for servicing, leading to detailed investigation and implementation





Service Extensions

Option	Capital Years 1-10	Annual Rates Funding *	Benefits	Disadvantages
Option 1 - Remove 9YP funding and develop a prioritisation framework	$0.0M	$0M	• Transparent and evidence-based decision making • Avoids committing funding before priorities are known • Aligns with Servicing Assessment, FDS and 9YP intent • Allows future reprioritisation.	• Defers service extension decisions • May create uncertainty for communities expecting future service extensions.
Option 2 (Status Quo) Retain existing funding programme	$23.1M	$2.1M	• Maintains current funding commitments • Signals intent to continue service extensions • Allows projects to proceed sooner if priorities emerge	• No prioritisation framework • Risk funding does not target highest-need communities • Investment decisions may be challenged as lacking transparency • May lock funding into lower-priority projects • Increased cost to Council

Question/Patai

Bioresources

The Challenge: Disposal of wastewater biosolids has high carbon emissions, disposal security and regulatory risk, relies on aging infrastructure and is not aligned with Council's environmental objectives.

9YP/IS Allowance:

- Year 1-9: $17.4M (new capital), of which $15.1M was expected to be spent from 2027/28 onwards.

What's changed since 9YP?

- Completion of Business Case
- Updated cost estimates

Challenges Addressed	
Aging infrastructure	✓
Growth / changing demands	
Resilience	✓
Zero carbon	✓
Regulatory, Services Delivery	✓
Public Health / Environmental	✓

Bioresources

Drivers:

- Improving disposal resilience and security
- Aging Tahuna Wastewater Treatment Plant incinerator
- Beneficial reuse opportunities
- Zero Carbon Plan objectives
- Waste Minimisation objectives
- Alignment with Te Taki Haruru
- Increasing landfill and disposal costs

9YP Proposed solution:

- Construct a Bioresources facility at Tahuna WWTP to process 20% of biosolids





Bioresources

Option	Capital Yrs 1-10	Annual Rates Funding*	Benefits	Disadvantages
Option 1 - 20% Bioresources Facility	**$17.4M**	$3.9M	• Some emissions reduction • Reduced landfill dependency • Some beneficial reuse • Supports strategic objectives • Enables learning before larger investment	• Still reliant on landfill/incineration for ~80% of biosolids • Added operational complexity • Emerging technology risk
Option 2 - Status Quo	**$4.3M**	$3.4M	• Lowest funding impact • Proven processes • No technology transition risk	• High emissions • Relies on ageing assets • Increasing disposal costs • Poor alignment with strategic objectives
Option 3 - Transport All Biosolids to Winton	**$0.0M**	$6.8M	• Quick implementation • No new debt • Allows Tahuna WWTP incinerator closure	• No resource recovery • Long-term reliance on third party provider • Transport and contract cost risk • Unlikely to align with mana whenua intent • Highest operating costs
Option 4 - 100% Bioresources Facility	**$76.2M**	$8.0M	• Best environmental outcome • Removes landfill dependence • Highest emissions reduction • Strongest strategic alignment • Regional commercial opportunity	• High capital cost • Greater delivery and technology risk • Longer implementation timeframe

Questions/Patai

Wrap Up Session

Next Steps

- Options reports will be tabled to Council
- Draft WSS budgets will be developed and presented to Council for adoption

- Final questions or discussion
- Financial implications
- Any direction on Options Reports e.g. alternative options or reports