

A close-up, high-angle photograph of water ripples on a dark blue surface. The ripples are concentric and spread out from the top left towards the bottom right, creating a sense of movement and depth. The lighting highlights the texture of the water's surface.

RDC Assets and Infrastructure Committee Meeting Wastewater Projects – Status update and Forward Look

Steve Carne
02 April 2026

Content

Recap on WW Discharge Standards

Taihape WWTP Improvements

Ratana Consent - alternatives

Marton- Bulls Centralisation

- Status and Program

National Wastewater Discharge Standards

B What does this package of wastewater standards cover?

The Water Services Act 2021 (the Act) (section 138) enables the Authority to make wastewater standards following public consultation.

Standards only apply to Council and Crown-owned infrastructure, and may include requirements, limits, conditions, or prohibitions related to activities associated with wastewater treatment plants and networks, including:

- + **Discharges to land, air or water**
- + **Biosolids** and other **by-products** from wastewater
- + **Energy use**
- + **Waste** introduced by a third party into a wastewater network (such as trade waste).

The initial package of proposed standards covers areas where resource consents are commonly sought for wastewater treatment plants and networks, specifically:



Discharges to water

THIS STANDARD PROPOSES:

- + Treatment requirements for the main contaminants discharged from a treatment plant, varying by the risk and sensitivity of the receiving environment.



Discharges to land

THIS STANDARD PROPOSES:

- + A framework for identifying suitable land for discharge application, based on a site-specific risk assessment.
- + Treatment requirements for nutrients and pathogens discharged to land.



Beneficial reuse of biosolids

THIS STANDARD PROPOSES:

- + A grading system for processing biosolids from wastewater treatment plants, with corresponding activity status for how and when biosolids can be reused based on Water NZ guidelines.



Wastewater network overflow and bypass arrangements

THIS STANDARD PROPOSES:

- + Risk-based planning, monitoring and reporting requirements for overflows from networks and bypasses of plants.
- + All existing overflow points must be consented.

+ Monitoring and reporting requirements will apply across all the standards.

Discharge To Waterways – recap to 10/04 mtg

Contaminant/measure	Measurement approach	Lakes and wetlands	Rivers and streams (low dilution)	Rivers and streams (moderate dilution)	Rivers and streams (high dilution)	Estuaries	Low energy coastal	Open ocean
Carbonaceous Biochemical Oxygen Demand (cBOD ₅)	Annual median	15 mg/L	10 mg/L	15 mg/L	20 mg/L	20 mg/L	50 mg/L	Not applicable
Total Suspended Solids (TSS)	Annual median	15 mg/L	10 mg/L	15 mg/L	30 mg/L	25 mg/L	50 mg/L	Not applicable
Total Nitrogen	Annual median	10 mgN/L	5 mgN/L	10 mgN/L	35 mgN/L	10 mgN/L	10 mgN/L	Not applicable
Total Phosphorus	Annual median	3 mgP/L	1 mgP/L	3 mgP/L	10 mgP/L	10 mgP/L	10 mgP/L	Not applicable
Ammoniacal-nitrogen (ammonia)	Annual 90th percentile	3 mgN/L	1 mgN/L	3 mgN/L	25 mgN/L	15 mgN/L	20 mgN/L	50 mgN/L
<i>E. coli</i>	Annual 90th percentile	6,500 cfu/100mL	1,300 cfu/100mL	6,500 cfu/100mL	32,500 cfu/100mL	Not applicable	Not applicable	Not applicable
Enterococci	Annual 90th percentile	Not applicable	Not applicable	Not applicable	Not applicable	2,000 cfu/100mL	4,000 cfu/100mL	40,000 cfu/100mL

HRC One Plan

5

5

4

1

1

Taihape WWTP

- Membrane upgrade in 2024
 - Treatment process sequence changed
- Papakai PS and storage – 2024/5.
- Operational problems
 - Controls
 - Process
- Struggle to meet consent reqs.
- Very high inflow/infiltration in network
- Overloading WWTP
 - Ponds
 - Membranes
 - clarifiers



Taihape I/I Program

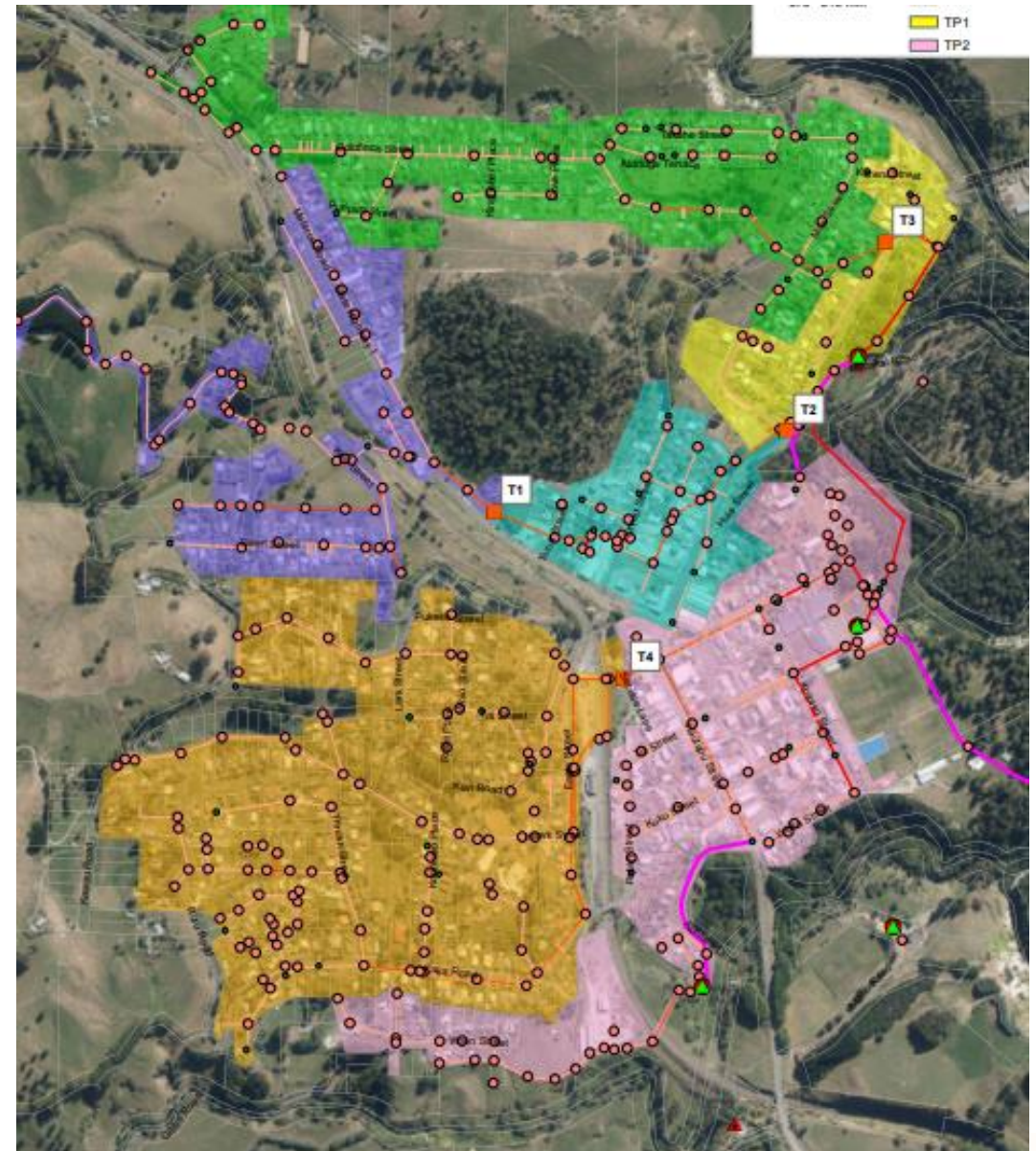
Source Detection Works

- Smoke testing
- Manhole inspections
- CCTV

- Rehabilitation Works

- Fix property defects – who pays?
- \$70k
- Rehabilitate sewers

**Reduce I/I by up to 50%
to match req'd treatment
Std & process capacity.**



Taihape WWTP

- Short Term Fix
 - Sort out operational problems and issues
 - Data and alarms
 - Process re-alignment
- Long Term Strategy
 - Confirm BOD load
 - Reduce I/I in network – field works already completed
 - WWTP capex
 - Desludge
 - Flow path in ponds

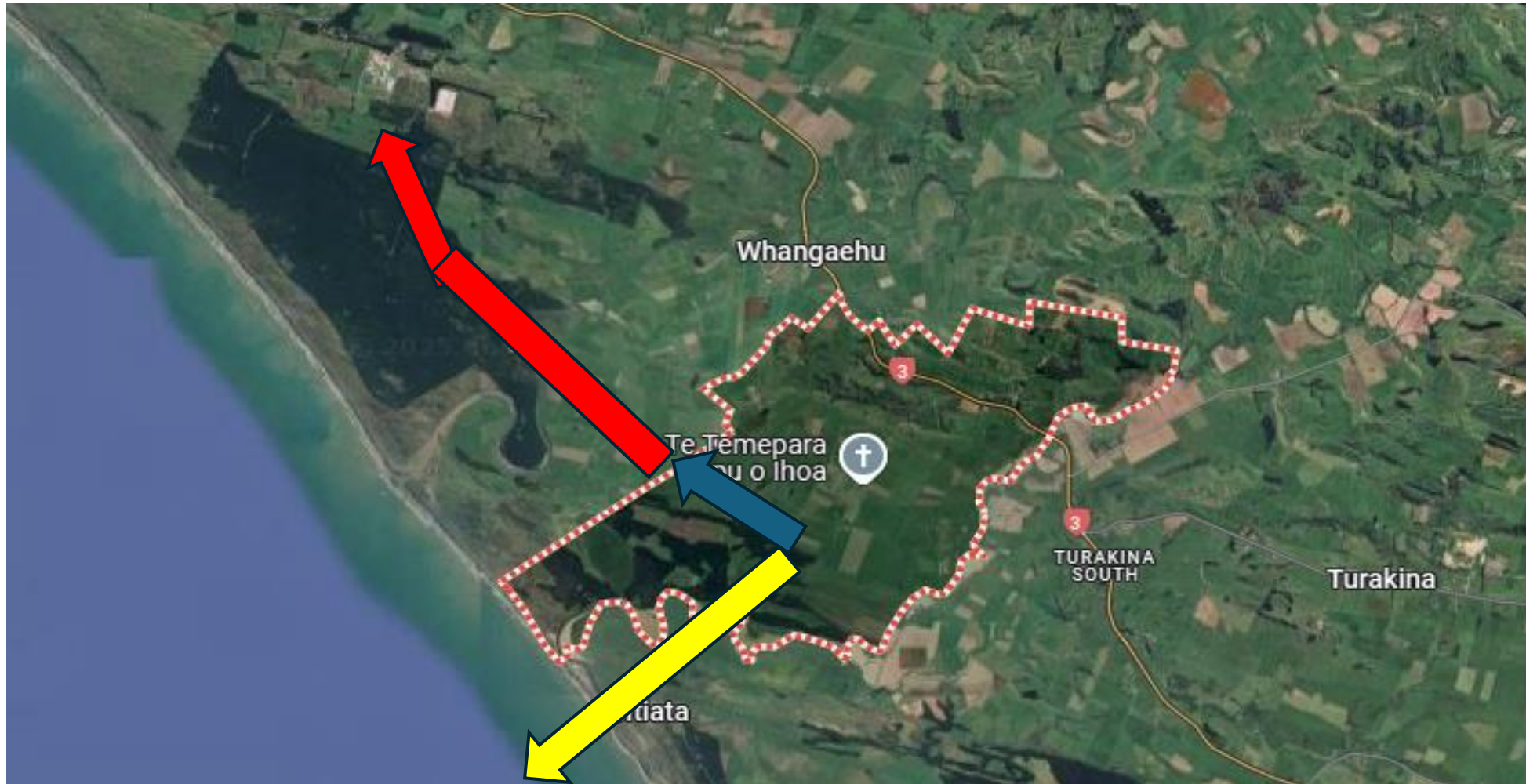
Ratana WWTP

Remove discharge to Lake Waipu

“Current” Solution

- Pump to land disposal at Whangehu River
- Winter Storage
- Irrigate land
- Capex estimate ~\$8M.
- ~350 people ?
- Effluent is saline due to softening at WWTP
- Salinity will have to be reduced to irrigate
- **ALTERNATIVES REQUIRED**

Ratana WWTP Alternatives



Whangaehu



Kaitoke



Koitiata



Ratana WWTP Alternatives

Current - Option A - Whangaehu - ~\$8-9M

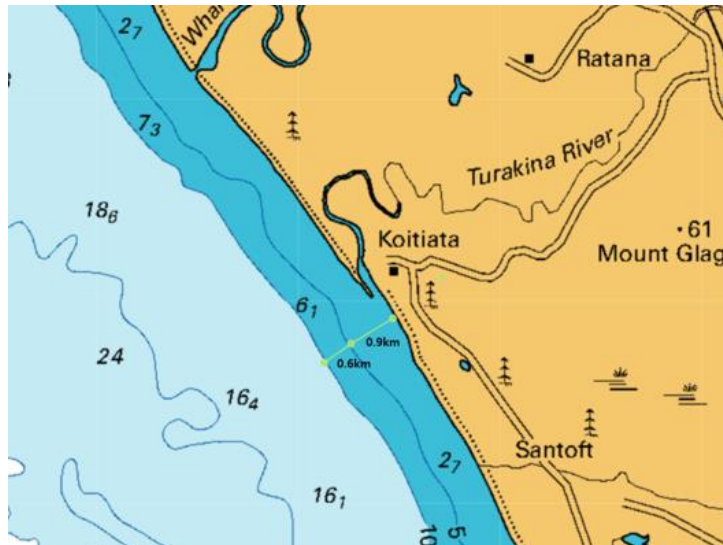
Option B – Kaitoke - \$4.5M

- WDC Trade Waste Agreement- risks ?
- CCO dependent

Option C – Koitiata and Short Outfall

- Total = \$5.4M
 - Reticulate + WWTP @Koitiata- \$2.4M
 - Transfer - \$2.3M
 - Outfall – \$0.7M- tbc
- Consentability TBC

Ratana WWTP Alternative – Kotiata and Outfall



Bulls-Marton Wastewater Centralisation



Short List Options- Key Points & Issues

- All options remove wastewater from the Tūtaenui Stream
- All options include allowances for growth
- ANZCO discharge is included in all options
- Options 1-6 - Treatment ponds are retained (incl. desludging & relining)
- Option 7 – Ponds only for Buffer storage- full mechanical plant
- Options 2 and 6 have I/I reduction programmes

Shortlisted Option Overview

100% Discharge to Land

- **Option 1** – Without Inflow and Infiltration Reduction
- **Option 2** – with inflow and infiltration reduction (reduced design flows)

Combined Discharge to Land and River

- **Option 3** – Discharge to land and river (without inflow and infiltration reduction)

100% Discharge to Rangitikei River

- **Option 4** – Moderate dilution standards as per the proposed wastewater EPS
- **Option 5** – Periphyton Risk
- **Option 6** – High dilution standards (with inflow and infiltration reduction, achieved through reduced design flow)
- **Option 7** – *No oxidation ponds - Moderate/low dilution standards*

	Option 1 – 100% Discharge to land	Option 2 – 100% Discharge to land with I&I reduction	Option 3 – Land and River discharge	Option 4 – 100% Discharge to river (moderate dilution)	Option 5 – 100% Discharge to river periphyton risk	Option 6 – 100% Discharge to river (high dilution, I&I reduction)
Design Flow	120 l/s	100 l/s	120 l/s	120 l/s	100 l/s	100 l/s
Effluent quality	• TN = 150 kg/ha/year • TP = 20 kg/ha/year • E. coli = < 1,000 cfu/100 ml		• CBOD₅ = 15 mg/L • TSS = 15 mg/L • TN = 10 mg/L • TAN = 3 mg/L • TP = 3 mg/L		• BOD₅ = 5 mg/L • TSS = 5 mg/L • TN = 4 mg/L • TAN = 1 mg/L • TP = 1 mg/L	• CBOD₅ = 20 mg/L • TSS = 30 mg/L • TN = 35 mg/L • TAN = 25 mg/L • TP = 10 mg/L

18 Sept 25 Workshop Assessment Criteria

Affordability Gate then TOTEX as a criteria

- CAPEX
- OPEX
- TOTEX
- Opportunities for value engineering

Solution Surety Risk incl Compliance

- Certainty of meeting standards
- Resourcing / skill required
- Reliance on achieving I&I.
- Overflow risks

Iwi and Te Tiriti considerations

- Extent of waterway discharges
- statutory obligations under Treaty Settlements
- WS-CCO will "*ensure meaningful recognition of kaitiakitanga and participation of manawhenua within governance, management and operational structures of the WS-CCO*".

Consenting Risk

- Part 2 RMA
- Matters not covered by WW Standards → normal RMA
- Risk of notification / adversarial consenting / onerous conditions.
- Risk of periphyton growth

Future Proofing

- Climate variability and extremes
- Scalability for growth and / or industrial
- Compatibility/synergies with PNCC's Nature Calls

Refining the Short-List: Affordability Gateway

Long-Term Plan and WSDP budget (Capital Projects) as proxy for Affordable

Summary of Wastewater significant projects

- Marton to Bulls wastewater treatment upgrade.....2024-35.....\$79.3 million

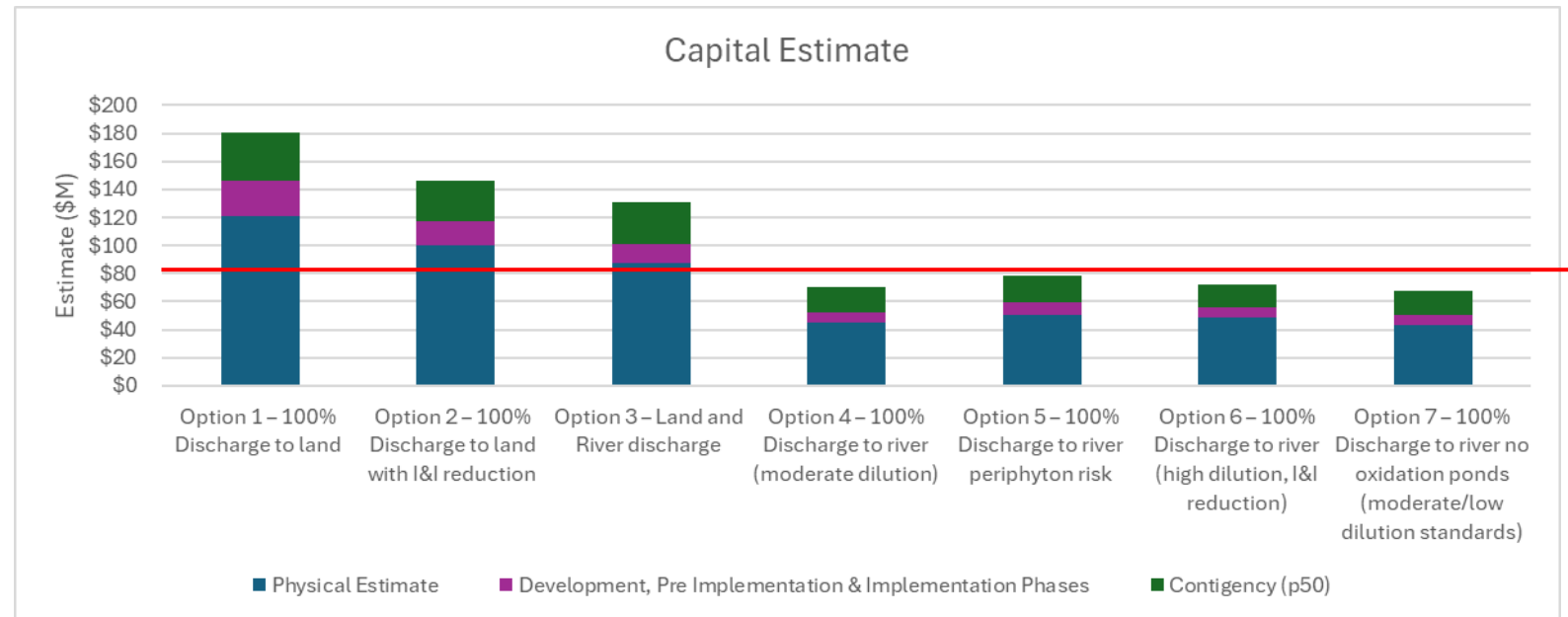
Options 4-7 are the only options that meet the Affordability test

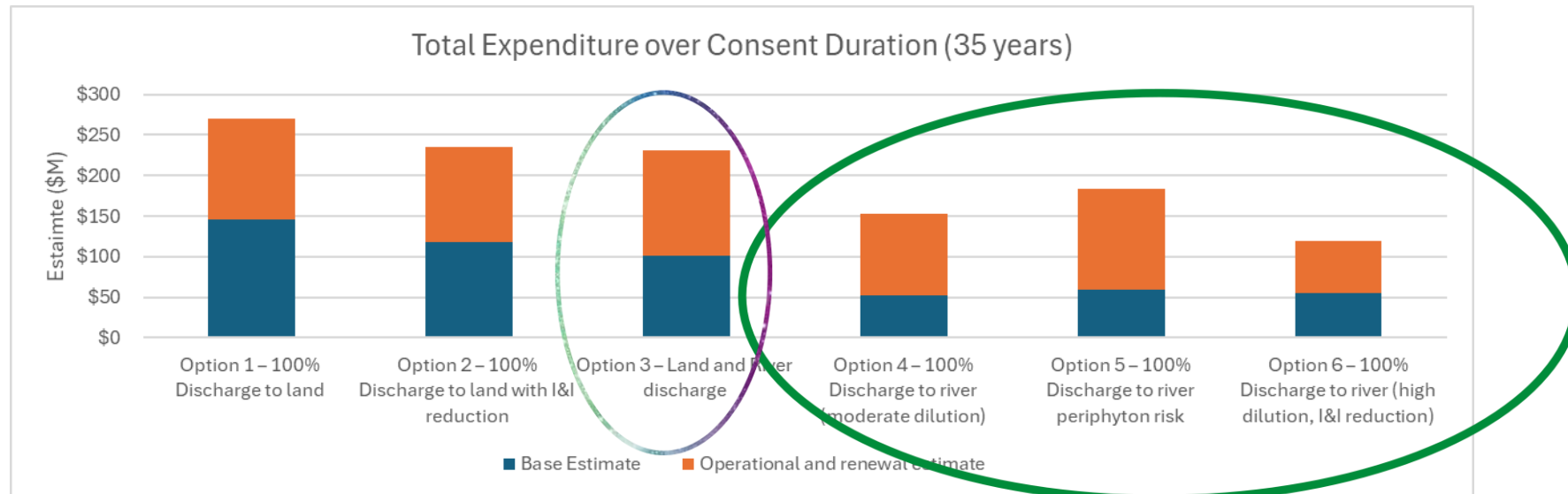
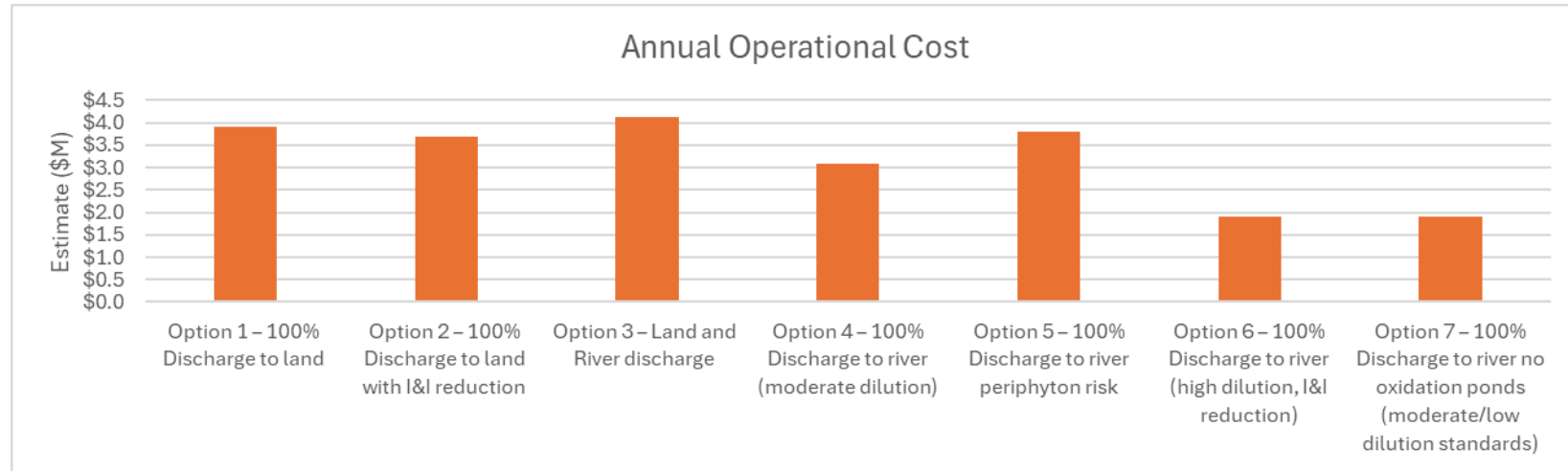
Option 3 also retained

Physical Estimate \$42-48M

Base Estimate \$50-60M

Land Discharge delta = \$70M





Waterway Loadings – considers multiple criteria

Solution Surety Risk incl Compliance

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- Resourcing / skill required
- Reliance on achieving I&I.
- Overflow risks

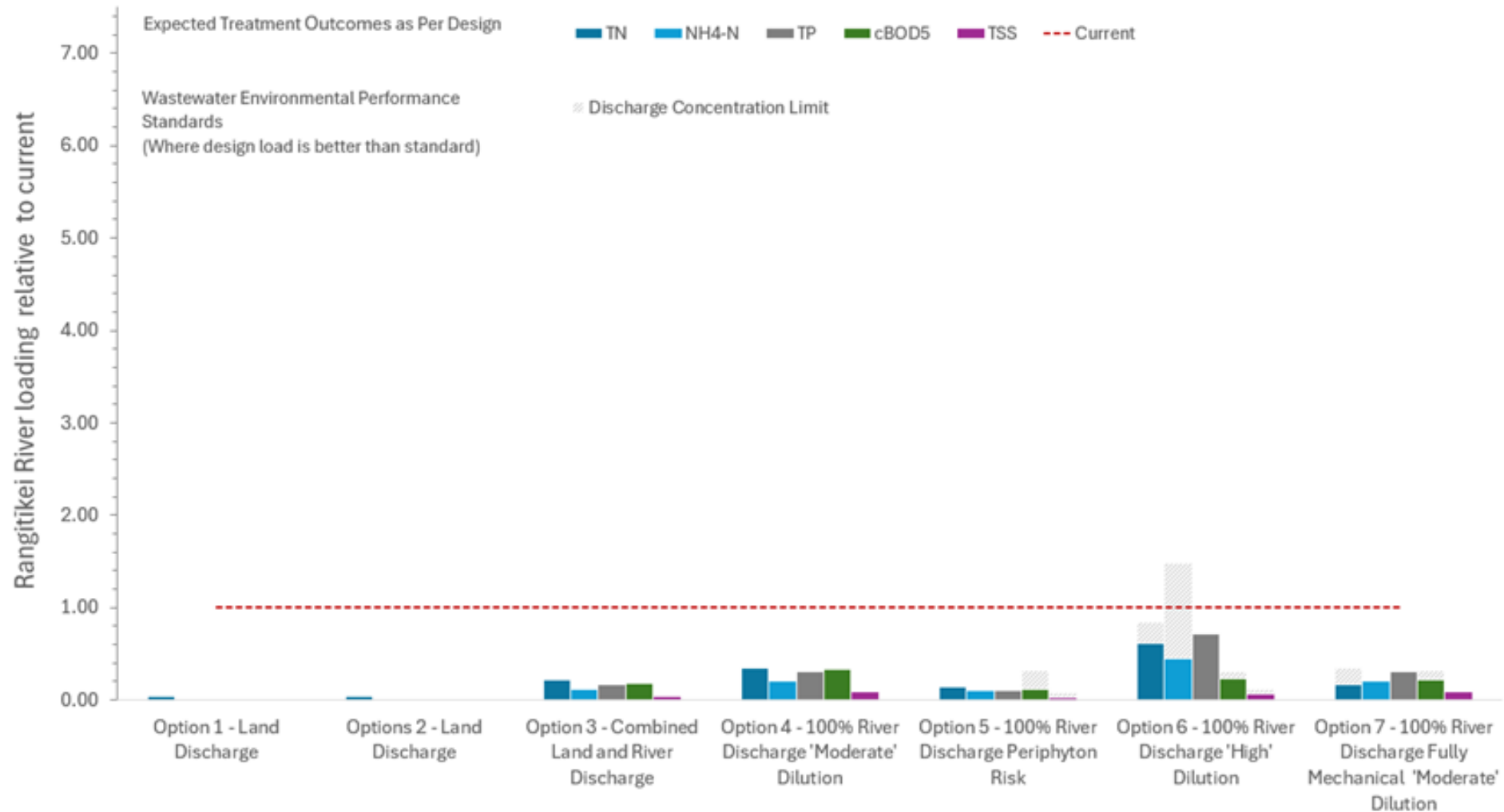
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Consenting Risk

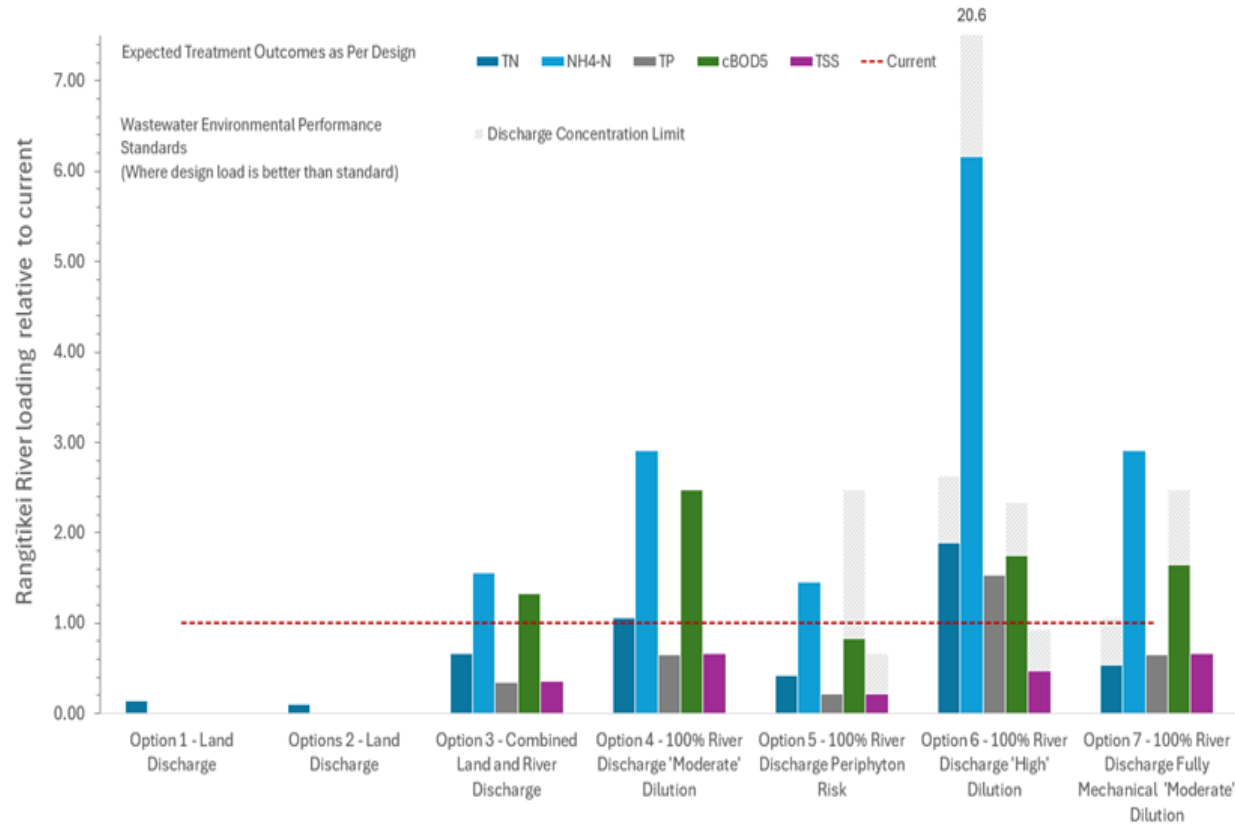
- Part 2 RMA
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Waterways Discharges- whole system

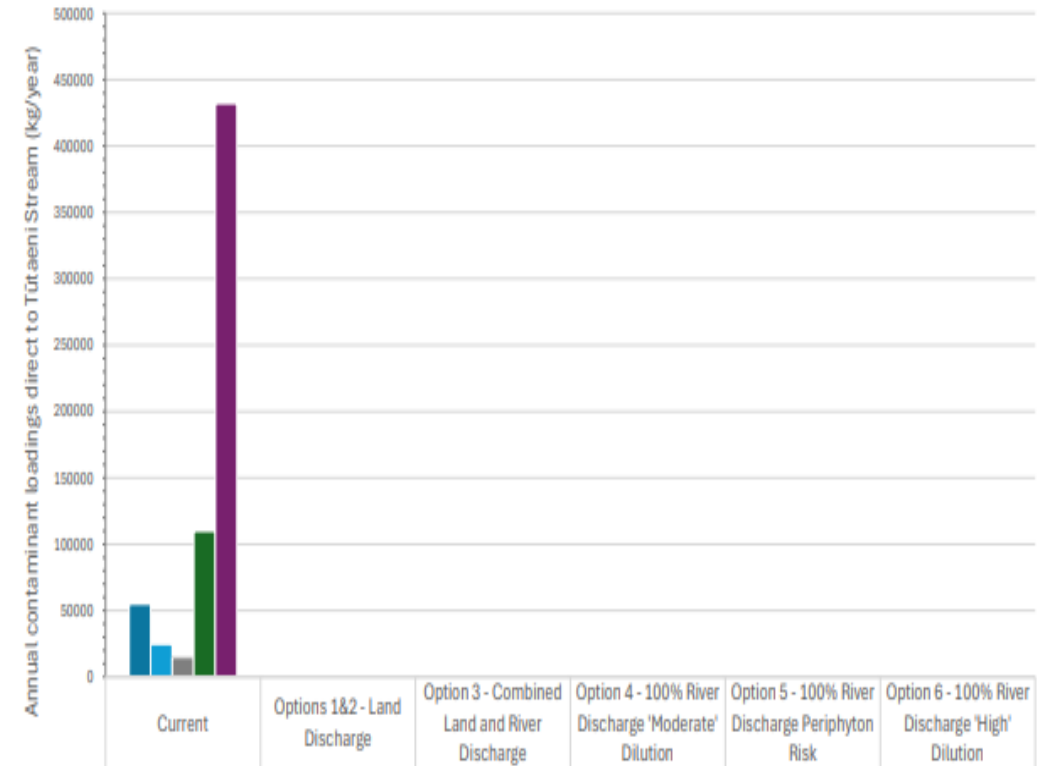


Waterways Loadings

Rangitikei



Tutaenui



Options Comparison Outcomes- Qualitative

	Option 3	Option 4	Option 5	Option 6	Option 7
Totex	5	3	4	1	1
Surety/Compliance	3-4	2	2	5	1
Te Tiriti	2-3	4-5	4	5	4
Consenting Risk	2-3	2-3	1	2-3	1
Future Proofing	4-5	3	3	3	3

Current and Imminent Works

- Periphyton Risk Assessment
 - As per WW NEPS Regs
 - May set a higher nutrient removal std
- Do Ponds leak ?
 - Desludge and Reline ? – cost \$4-5M?
 - Monitoring Bores in place now
- Co-design of land passage discharge with iwi
- Refine options and costings
- TW Agreement with ANZCO?

Likely Program from here

Identify Preferred Option

- Late July – early August
- Council ratify
 - August meeting
- Lodge Consent application
 - Late Nov- early Dec

