RDC Assets and
Infrastructure Committee Meeting

Wastewater Projects – Status update and Forward Look

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10 July 2025

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Recap on WW Discharge Standards

Taihape WWTP Improvements

Ratana Consent - alternatives

Marton- Bulls Centralisation

- Status and Program
- Options
- Opportunities

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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	HRC One Plan
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	5
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	5
Total Nitrogen	Annual median	10 mgN/L	5 mgN/L	10 mgN/L	35 mgN/L	10 mgN/L	10 mgN/L	Not applicable	4
Total Phosphorus	Annual median	3 mgP/L	1 mgP/L	3 mgP/L	10 mgP/L	10 mgP/L	10 mgP/L	Not applicable	1
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	1
E. coli	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	

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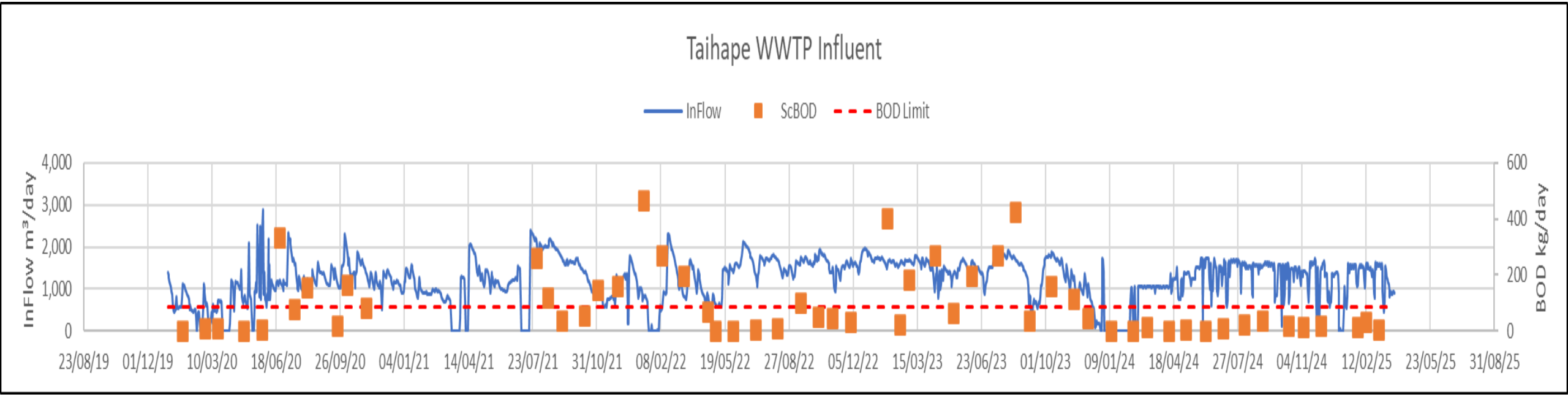
Small Plant Standards

- <85 kg BOD 5/day (1400 people at 60 g/day)
- No nutrient removal N or P requirements
- Only the following – reqs TBC
  - Ammonia
  - BOD
  - SS
- Mangaweka, Hunterville, Ratana- Kotiata qualify
- Taihape – probably.

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.
- Significant inflow/infiltration in network
  - Overloading WWTP
    - Ponds
    - Membranes
    - clarifiers

Small Plant Standards



BOD loadings need to be confirmed by enhanced sampling program

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Taihape WWTP

- Short Term Fix
  - Sort out operational problems and issues
    - Data and alarms
    - Process re-alignment
- Long Term Strategy
  - Confirm BOD load
  - Await Small Plant Stds
  - Reduce I/I

Taihape I/I Program

Source Detection Works

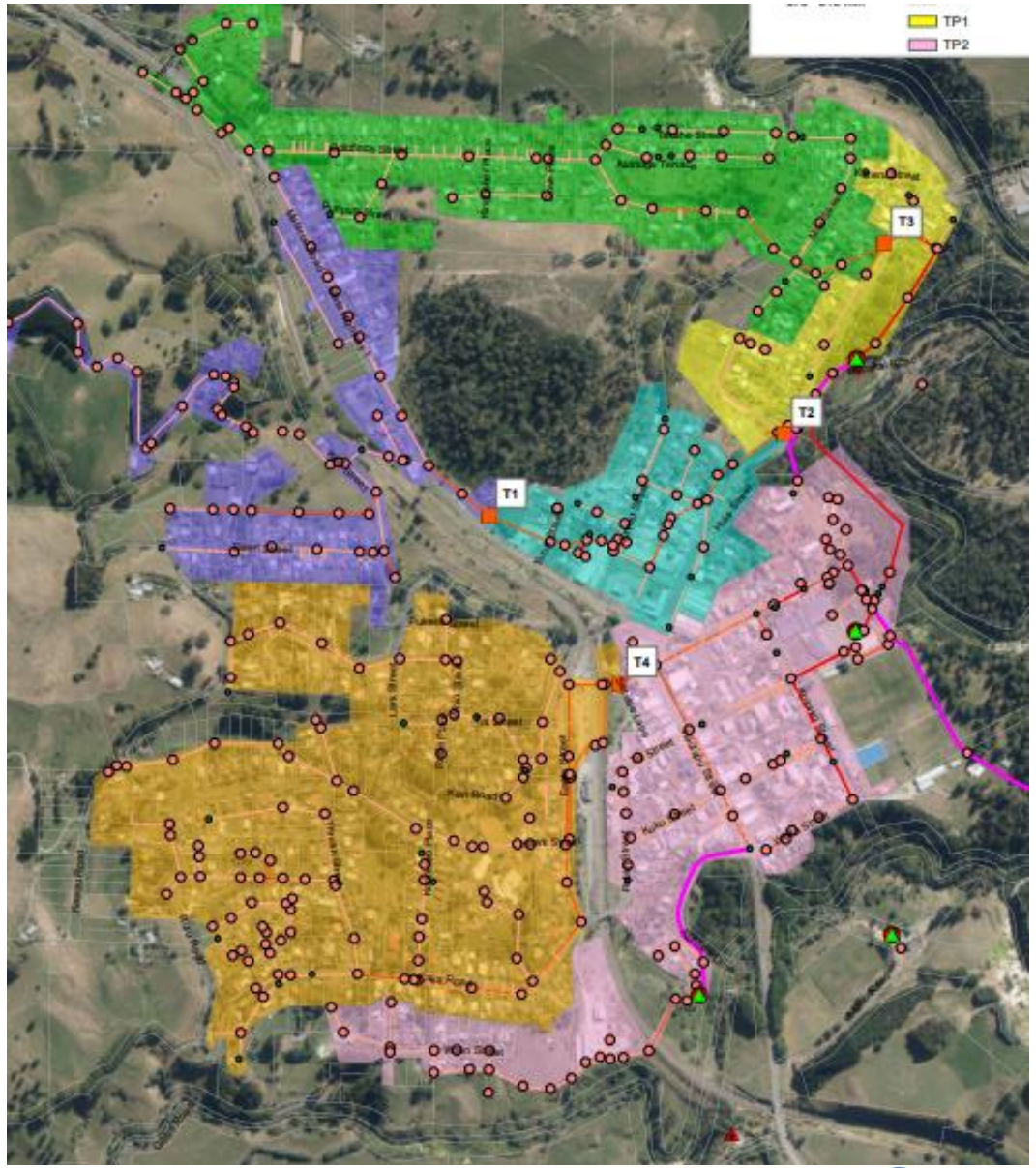
- Smoke testing
- Manhole inspections
- CCTV

- Rehabilitation Works
  - Fix property defects – who pays?
  - Rehabilitate sewers
  - Rehabilitate house laterals
    - Who pays ?

Reduce I/I by up to 75%

Costs ?

Vs WWTP Upgrade



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Taihape I/I Program- Engagement Plan

Communications and community engagement approach

Primary audiences	Elected Members	Taihape residents	Impacted residents
Purpose	Keep informed	Make aware	Inform and engage
What	• Regular updates through Assets and Infrastructure workshops, meetings. • Utilise fortnightly email from CE to provide updates to Council. • Inform and update the Taihape Community Board. • FAQs	• Share what we're doing and why through our usual comms channels: *website, Talk-up Taihape, Rangitīkei Connect, social media.* • FAQs • Equip community engagement and customer experience staff with information about the activity.	• Letterbox drops • FAQs • Equip community engagement and customer experience staff with information about the activity. • Establish process for residents with questions, concerns or feedback.

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

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Ratana WWTP Alternatives

Whangaehu

Kaitoke

Koitiata

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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

- Reticulate Koitaita
- Costs , Consentability TBC

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Marton- Bulls Wastewater

Options 1 and 2

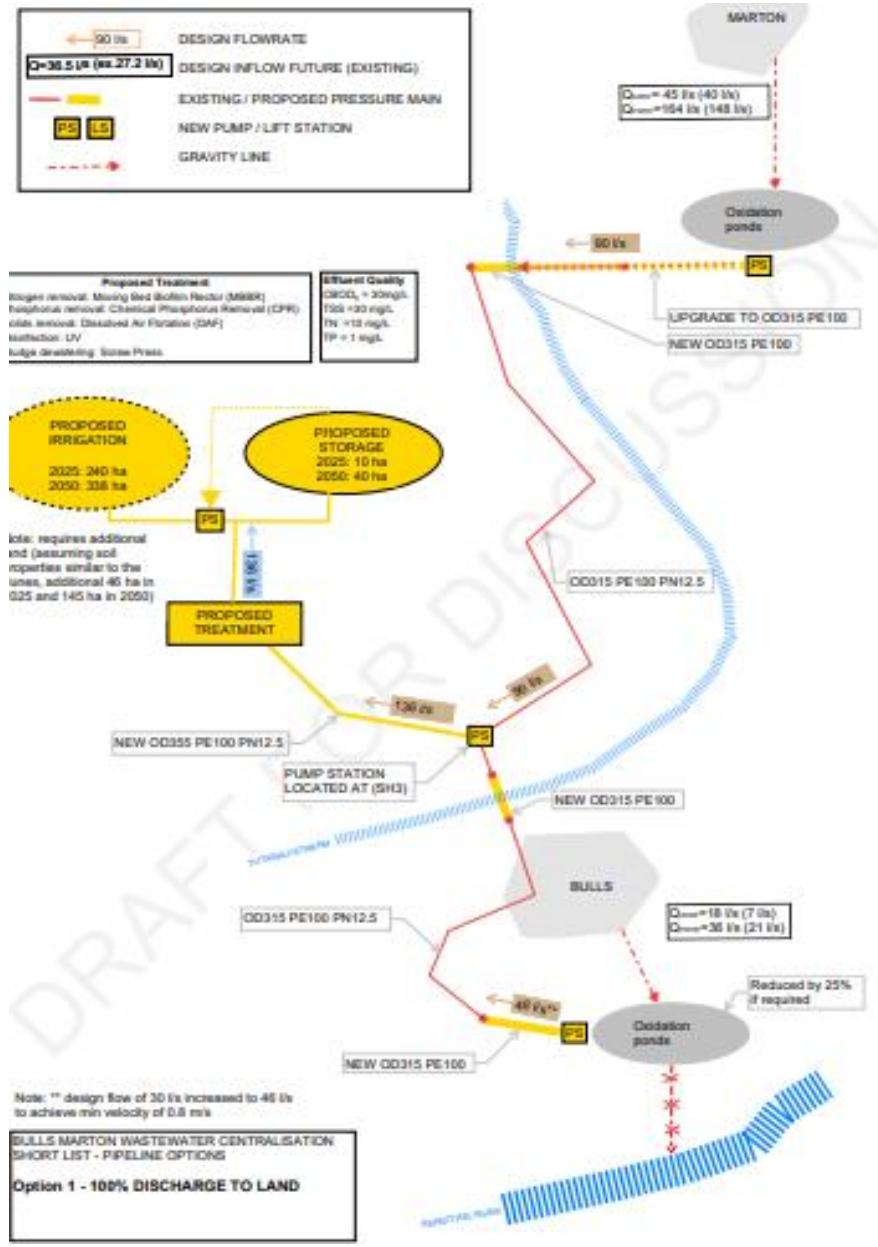
100% Discharge to Land

With and Without I/I reduction

Reduce flows by 30% for ~$20M capex

Almost enough land with I/I Reduction

Storages

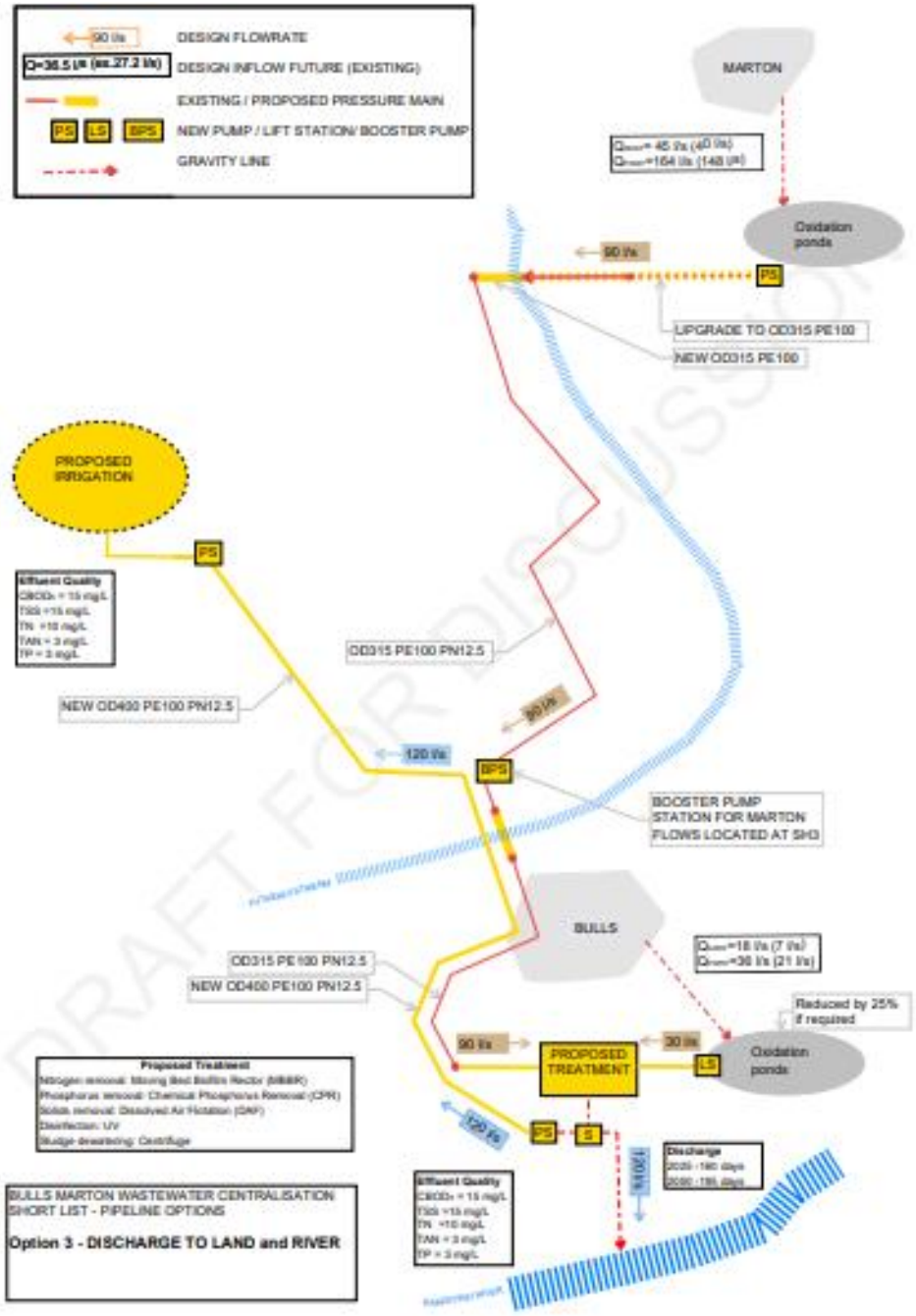


Marton- Bulls Wastewater

Option 3

Discharge to Land + River

“Medium Dilution”



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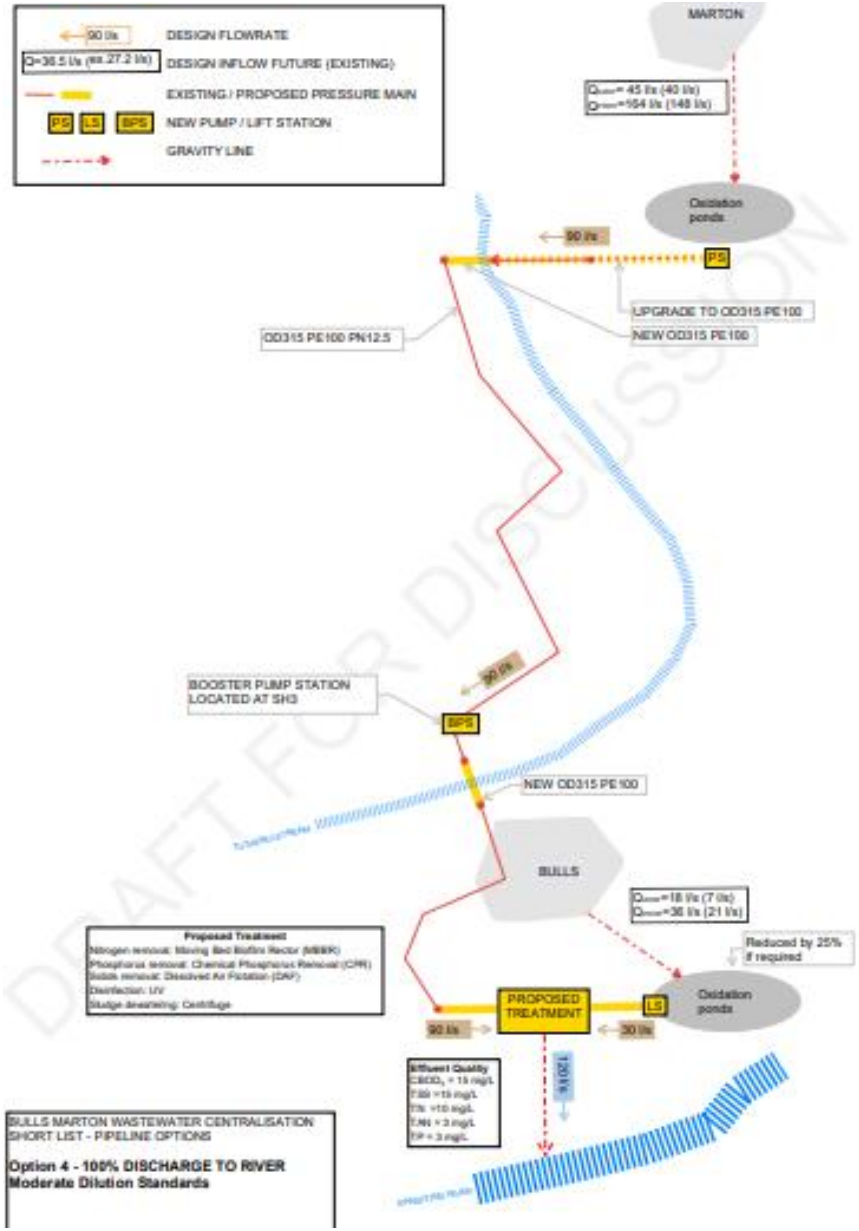
Option 4

Discharge 100% to River

“Medium Dilution”



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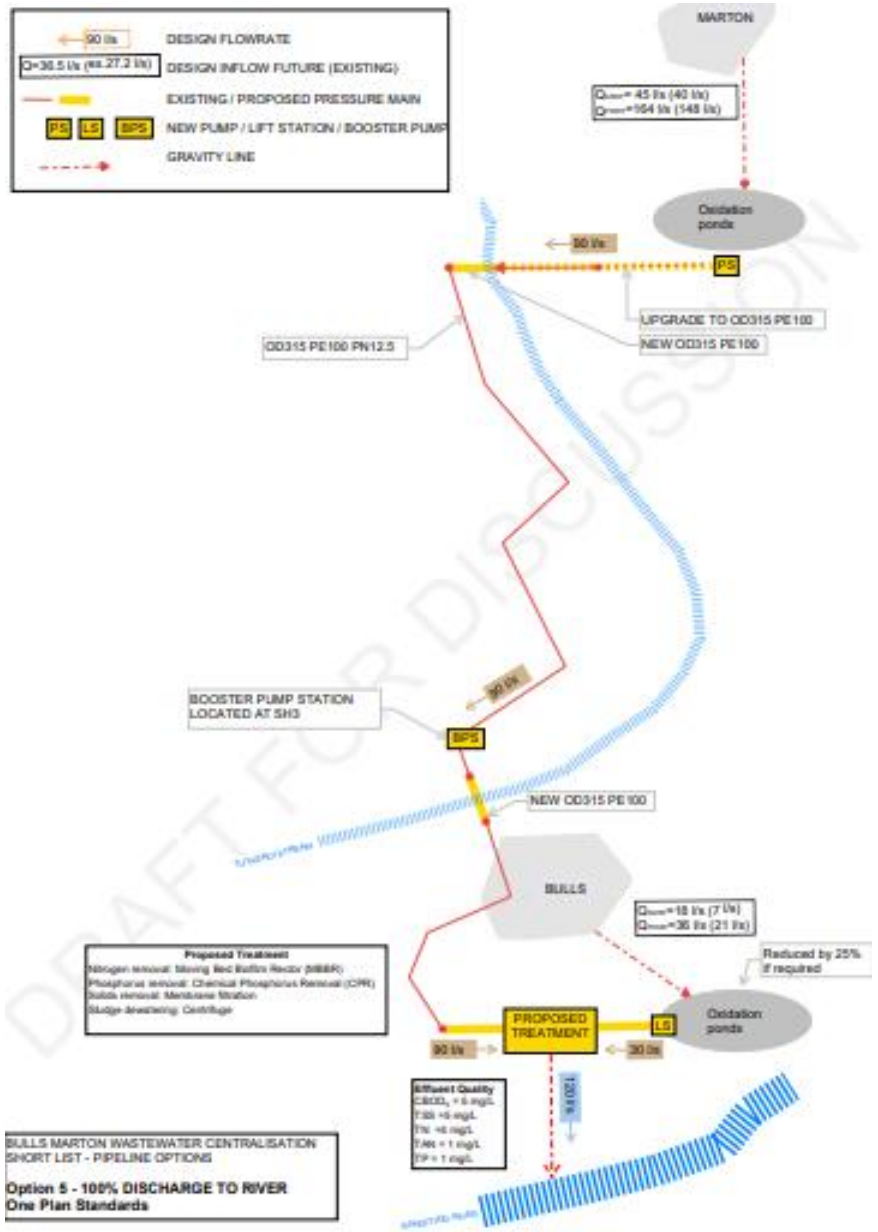
Option 5- comparative, “academic” exercise

Discharge 100% to River

HRC’s One Plan Standards



Marton- Bulls Wastewater

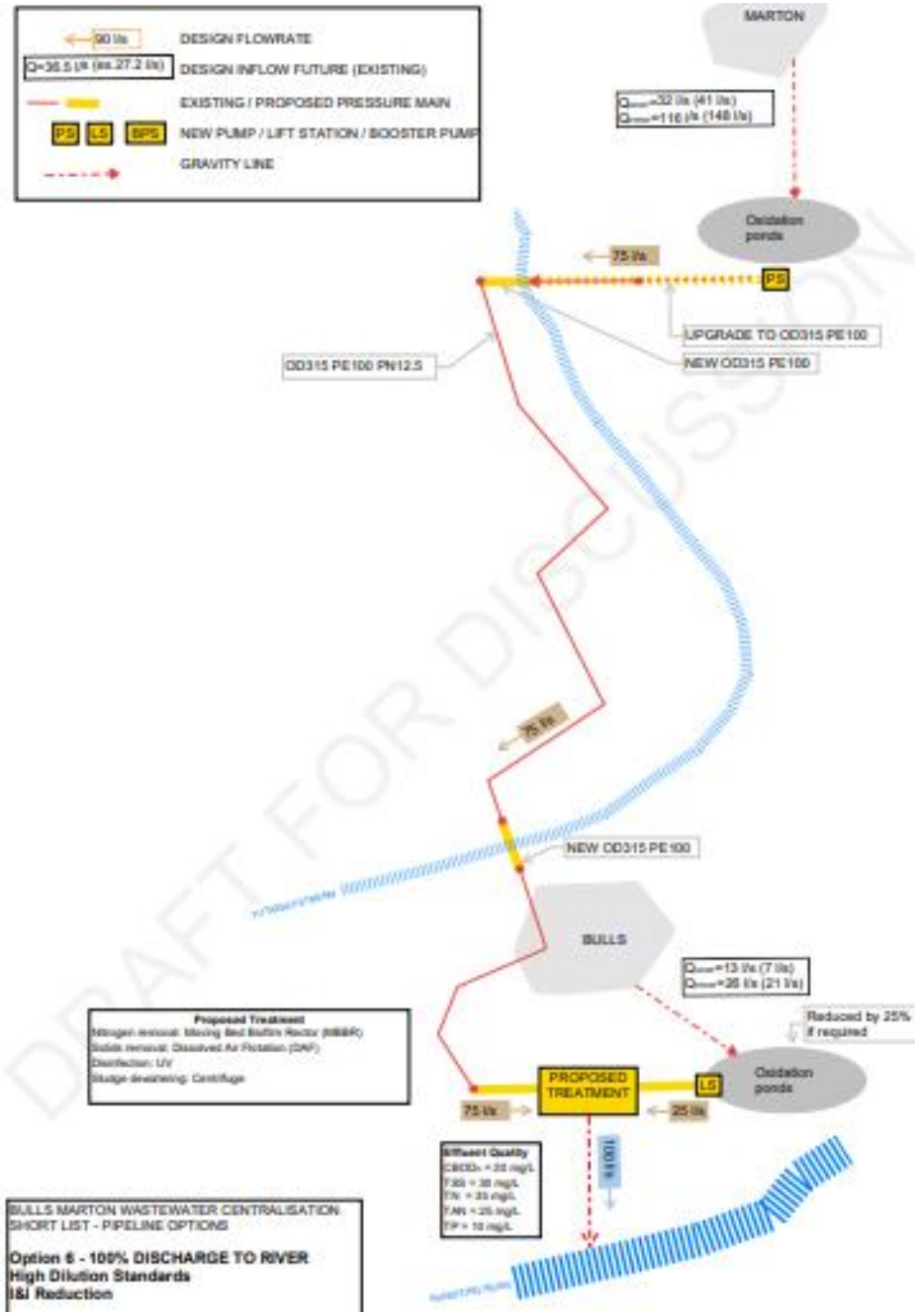
Option 6

Discharge 100% to River

With I/I reduction

“High Dilution”

- **Lower treatment standards**
- **Refurbished Ponds OK ?**



Marton – Bulls WW Project – other issues

- Trade Waste
  - Incorporate ANZCO Manawatu flows
    - Trade waste agreement and charging
    - Iwi favour this option
  - Malteurop, Speirs and Nestle in Marton
    - Pre-treatment ?
    - Formalise trade waste processes
    - CCO task?

Marton – Bulls WW Project – Timeline

- Cost estimates through by end July
- Taumata Arowai finalise Standards mid August
- Sept 8 RDC Tech team Workshop
  - Preferred option identified
- Bring to future A+I Committee Mtg/workshop
- Ratification at Council meeting 26 Sept?
- Lodge Consent by June 30 2026 - uncertain

Marton – Bulls WW Project – Opportunities

- CCO with Palmerston North CC
- Nature Calls Upgrade
- M-B is 10% of Nature Calls
  - Similar timelines
    - TA have said we have a grace period

- Opportunities for savings for RDC community
  - Single construction contract – 2 sites?
  - Sludge/Biosolids handling
  - Partial RDC treatment and transfer ?
    - Cultural issues
  - Suggested discussions with PNCC

Marton-Bulls Wastewater Centralisation

Draft wastewater standards implications

Tonkin+Taylor

River discharge standard:

Parameter	Marton Effluent Quality (March 2024)	Bulls Effluent Quality (March 2024)	Long list design assumptions	Wastewater standard (High dilution) (Rangitikei)	Likely process requirements
BOD5	40-100 mg/L	30-70 mg/L	5 mg/L	20 mg/L	Filtration step required
TSS	50-300 mg/L	100-250 mg/L	5 mg/L	30 mg/L	Filtration step required
Total Nitrogen	20-40 mg/L	15-28 mg/L	4 mg/L	35 mg/L	Denitrification required by reduced size
Total Phosphorus	5-8 mg/L	3-6 mg/L	1 mg/L	10 mg/L	CPR but less chemicals
Ammonia	1-20 mg/L		1 mg/L	25 mg/L	Reduced nitrification stage
E.coli			100 mg/L	32,500 cfu/100mL	

Assuming we don't need more stringent TP and TN requirements due to Periphyton risk

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