

Raglan Wastewater Treatment Plant Discharge Consent Application

- **Background and Investigations**
- **Funding and Costs**
- **Community Communications**
- **Feedback**

29/06/2021 Presented by the Consenting Project Team
(Waikato District Council and Watercare)

BACKGROUND

Key Stakeholders Group Monthly Updates (2020-2021)

2020 Project Objectives keep community healthy; environmental protection;
support kaitiaki; protect visitor experience;
partnership; sustainability; affordability



Marine Discharge

Fresh Water Discharge

Land Discharge

Option	Treatment	Discharge
Option M1	Existing treatment process + tertiary membrane	New harbour outfall
Option M2	Membrane Bioreactor (MBR) and UV disinfection	New harbour outfall
Option F1	MBR and UV disinfection	Freshwater diffuse discharge
Option L2	Existing treatment process + tertiary membrane	Private land discharge and storage
Option L1	Existing treatment process + tertiary membrane	Combined public land discharge (irrigation) and alternative discharge for winter flow
Option L3	Existing treatment process + tertiary membrane	Combined private land discharge and alternative discharge for winter flow
Option L4	MBR and UV disinfection	Combined public land discharge and alternative discharge for winter flow

✗ Deep Bore Injection

INVESTIGATIONS **MARINE DISCHARGE**

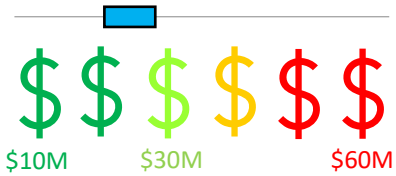
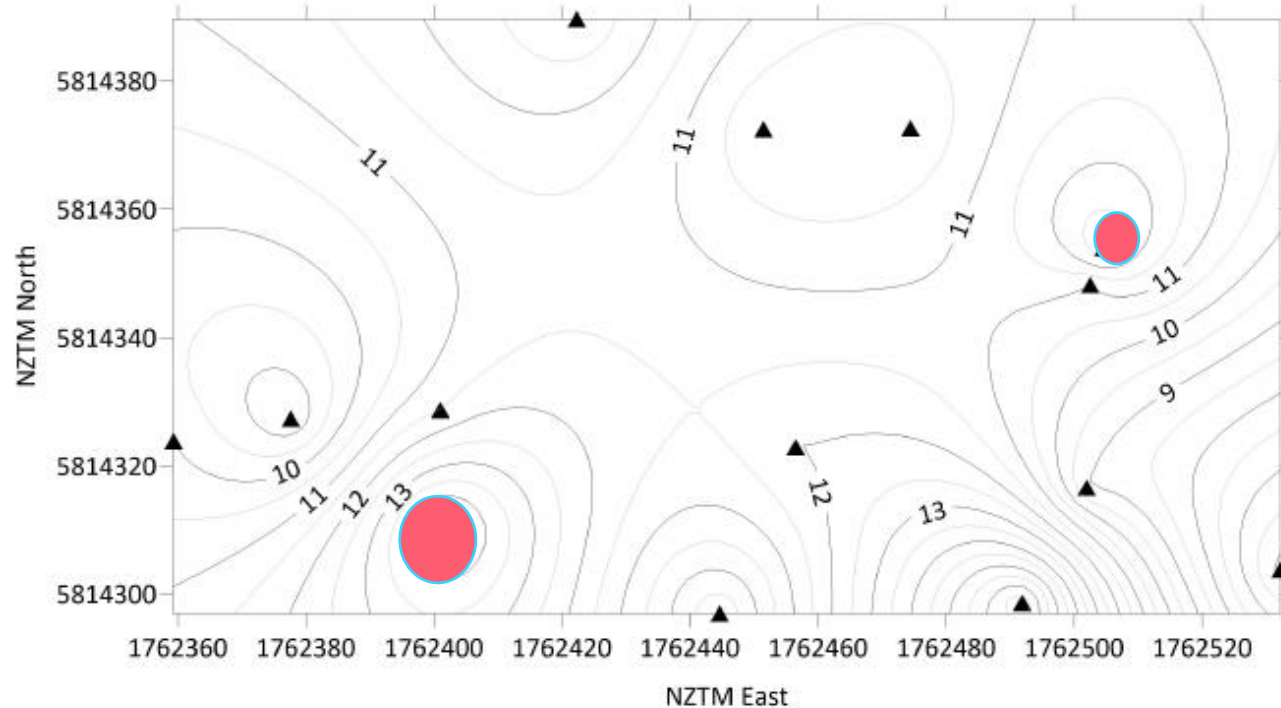
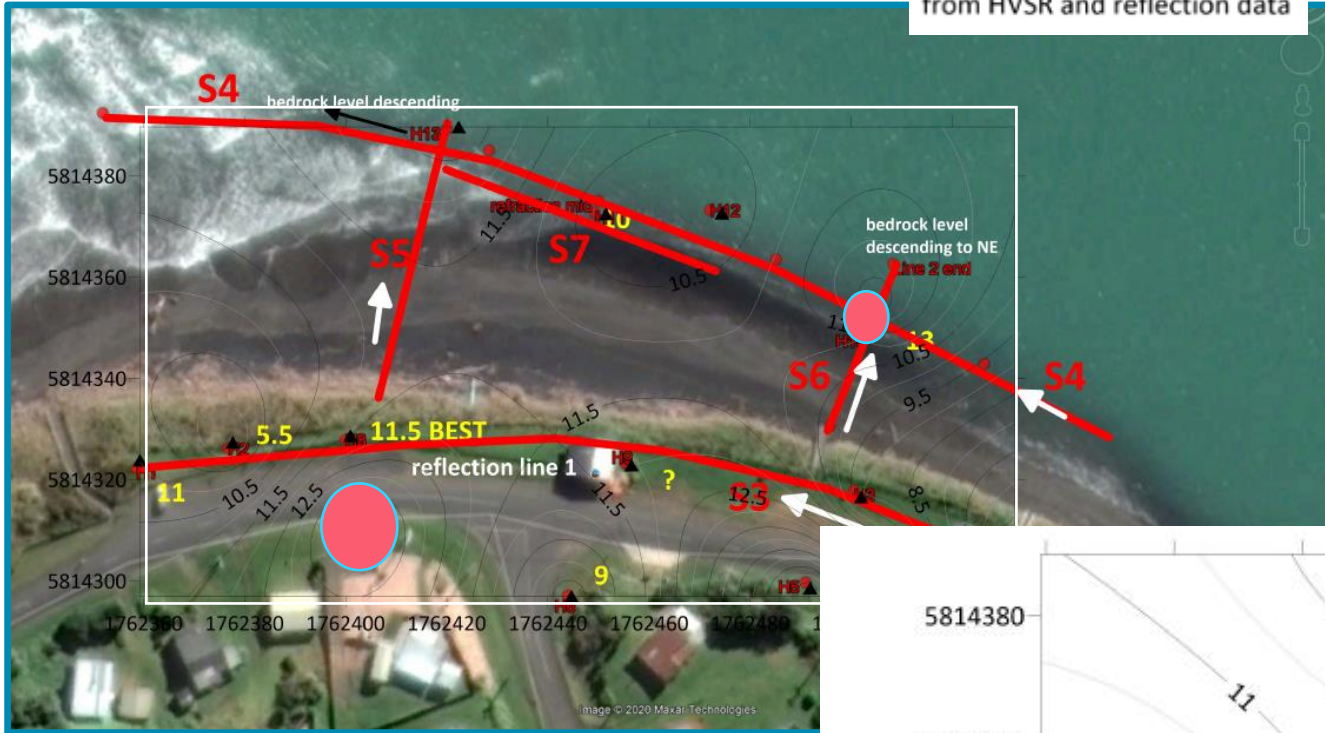


Consented discharge: Up to 2600m³ of treated wastewater per day

2020 Dye Test

INVESTIGATIONS MARINE DISCHARGE

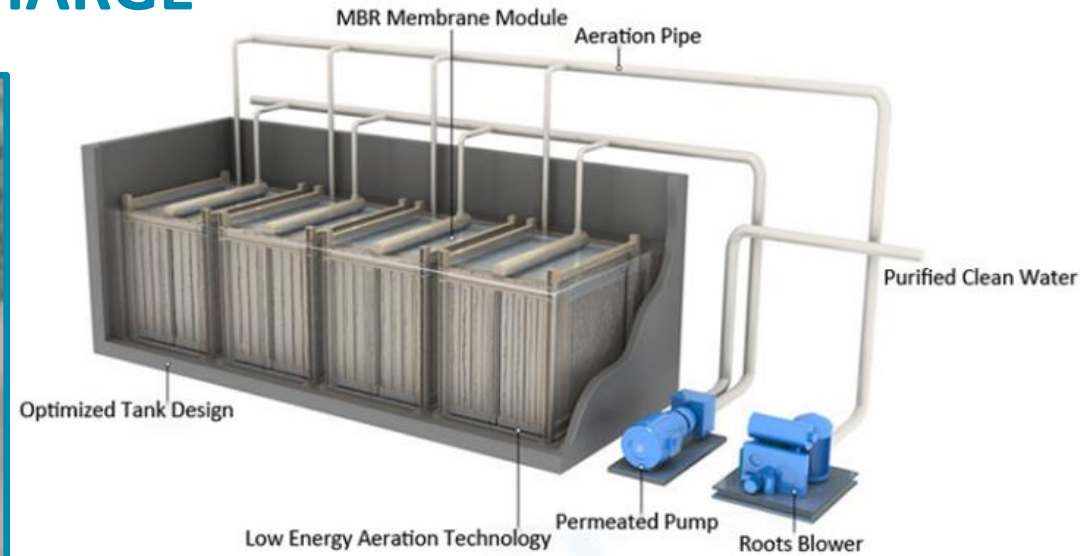
Depth to bedrock interpreted from HVSR and reflection data

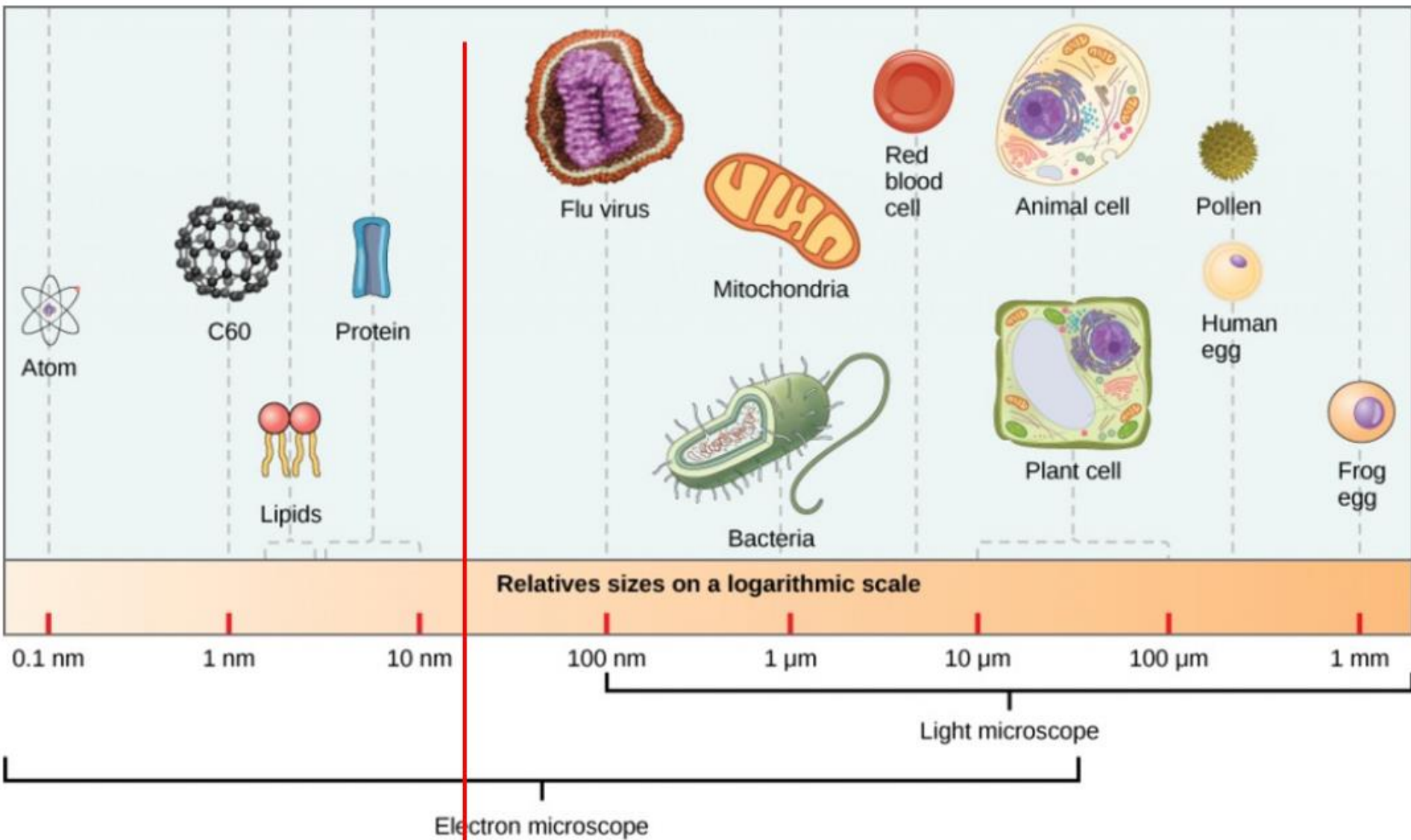


Key Consideration:
New Outfall with diffuser

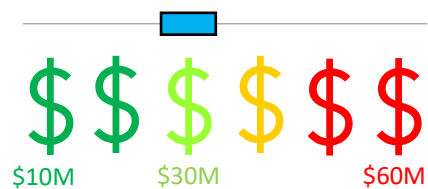
INVESTIGATIONS FRESH WATER DISCHARGE

Membrane Bioreactor (MBR)





MBR/TSS Membrane Effectiveness



Key Consideration: Advanced treatment (incl. nutrient removal) balanced against residence time of plume within the harbor

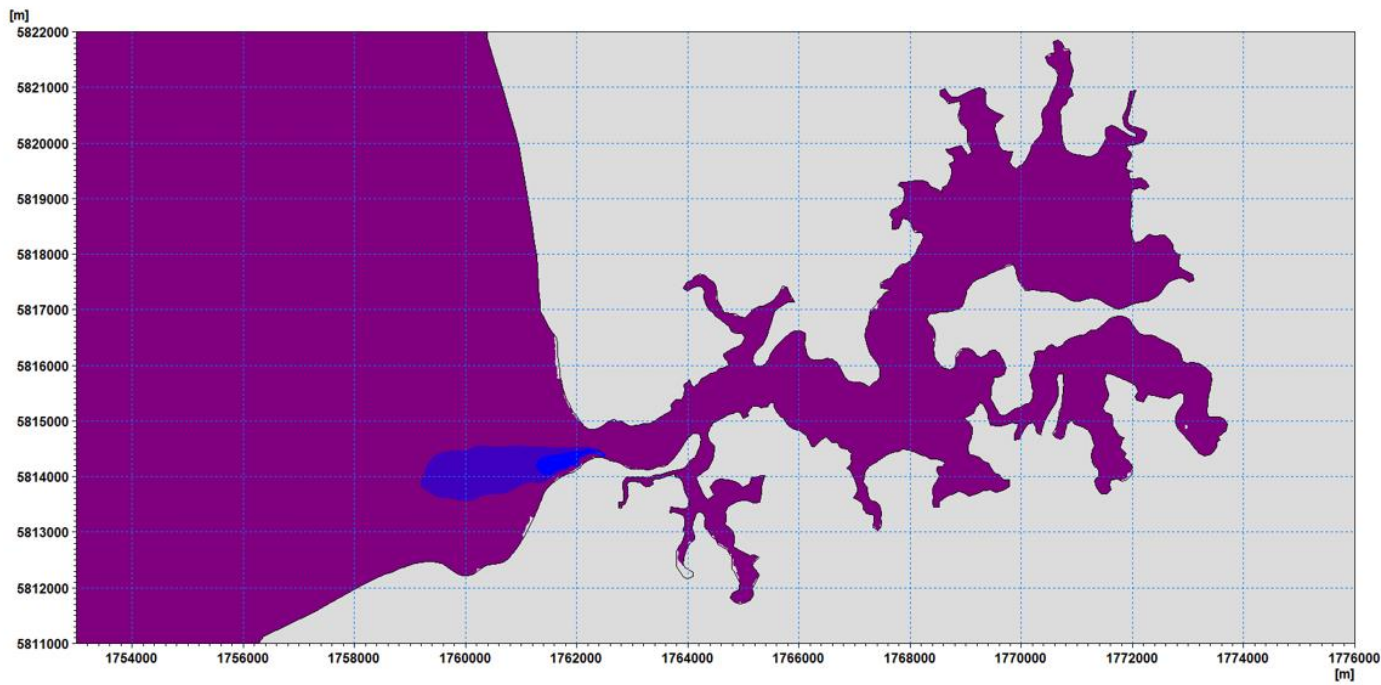


Figure 5-7 Predicted 95th percentile dilution for the January-March period for Scenario I1 (Public Land disposal plus New Outfall 2025 Discharge rate)

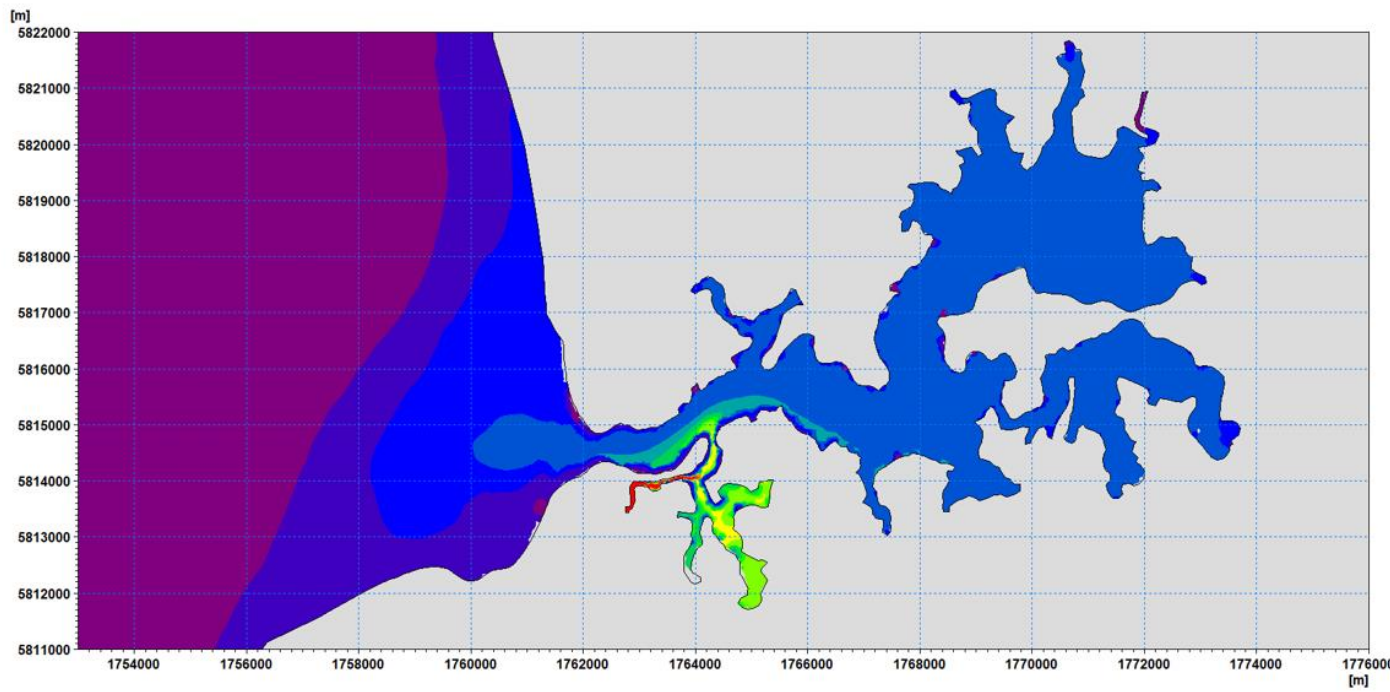
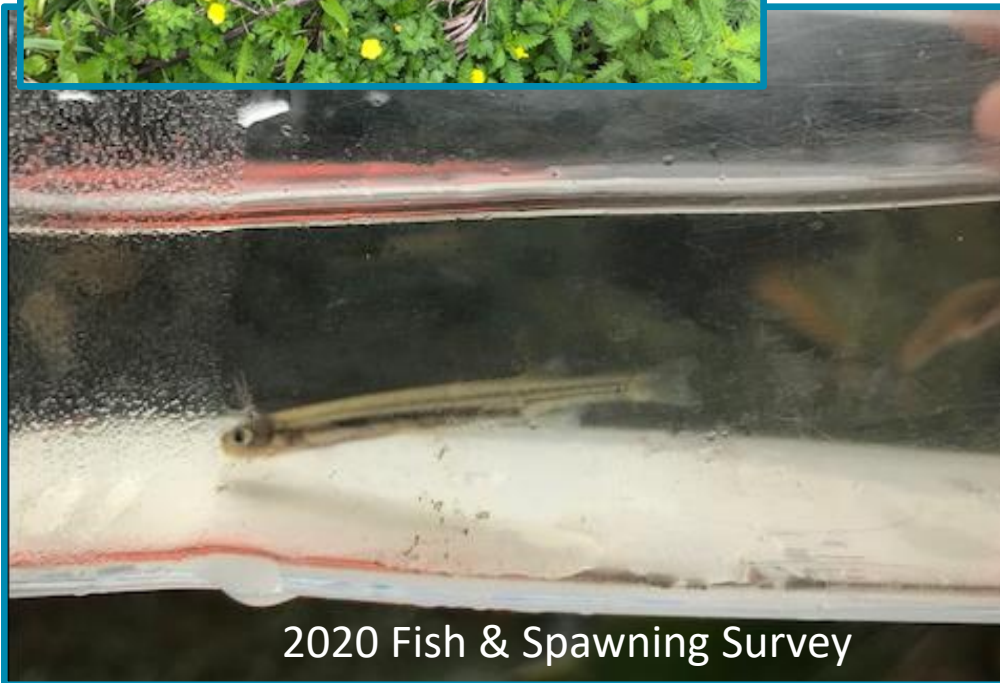


Figure 5-13. Predicted 95th percentile dilution for the January-March period for Scenario F1 (Wainui Stream, 2025 Discharge rate).

INVESTIGATIONS FRESH WATER DISCHARGE



2020 Stream Health Survey



2020 Fish & Spawning Survey



Key Consideration:
Freshwater NPS:
Te Mana o te Wai
(the vital importance
of water)

INVESTIGATIONS LAND DISCHARGE

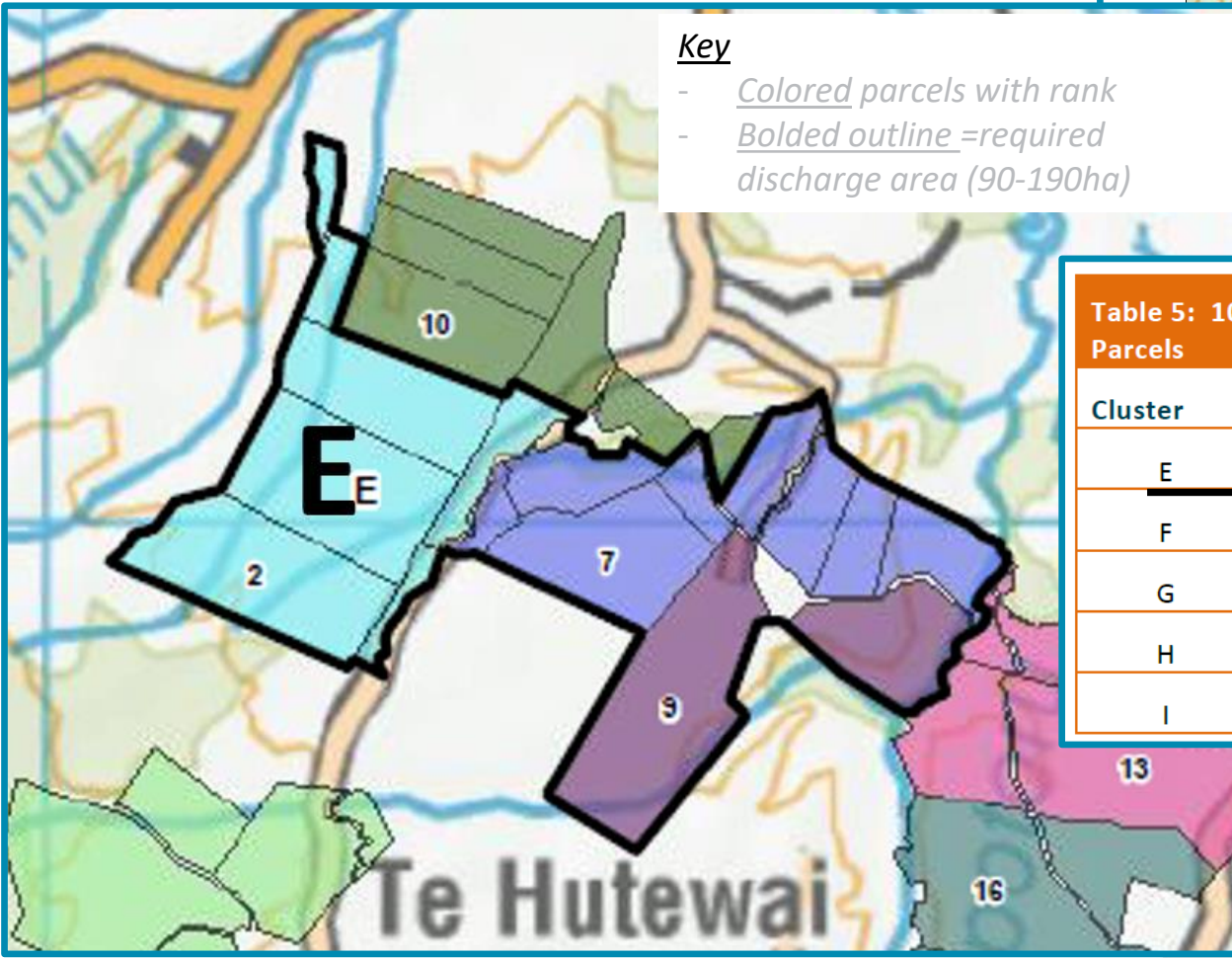
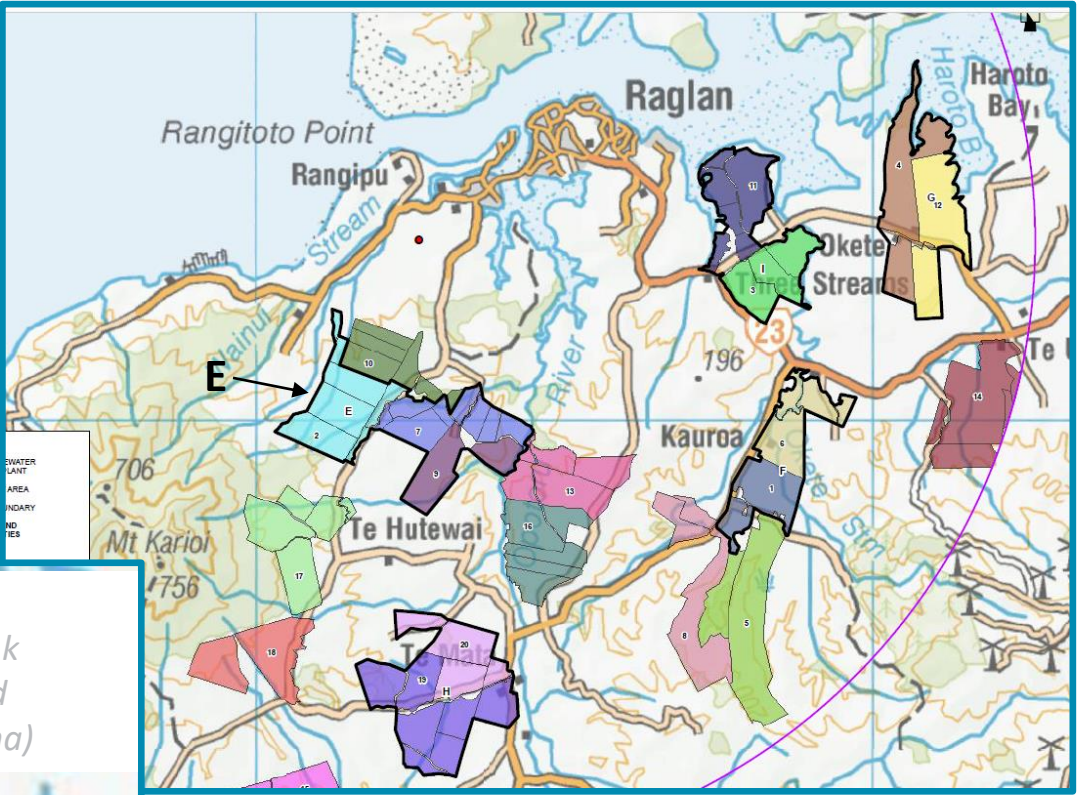
Option	Treatment	Discharge
Option L2	Existing treatment process (UV) + tertiary membrane	100% Private land discharge and storage (dam)
Option L1	Existing treatment process (UV)+ tertiary membrane	Combined public land discharge (irrigation) and alternative discharge for winter flow (<i>point source/high rate to sand</i>)
Option L3	Existing treatment process (UV) + tertiary membrane	Combined private land discharge and alternative discharge for winter flow (<i>point source/high rate to sand</i>)
Option L4	Membrane Bioreactor and UV disinfection	Combined public land discharge and alternative discharge for winter flow (<i>point source/high rate to sand</i>)



INVESTIGATIONS LAND DISCHARGE

(Conceptual Only)

L2: 100% to land with Winter Storage (dams)

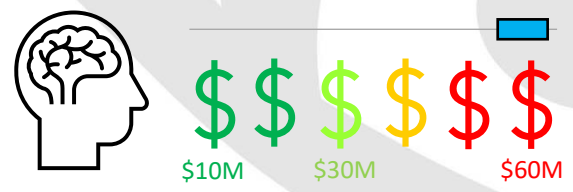


Key

- *Colored parcels with rank*
- *Bolded outline = required discharge area (90-190ha)*

Table 5: 100% Non-Deficit Irrigation Potential Land Treatment Combined Parcels

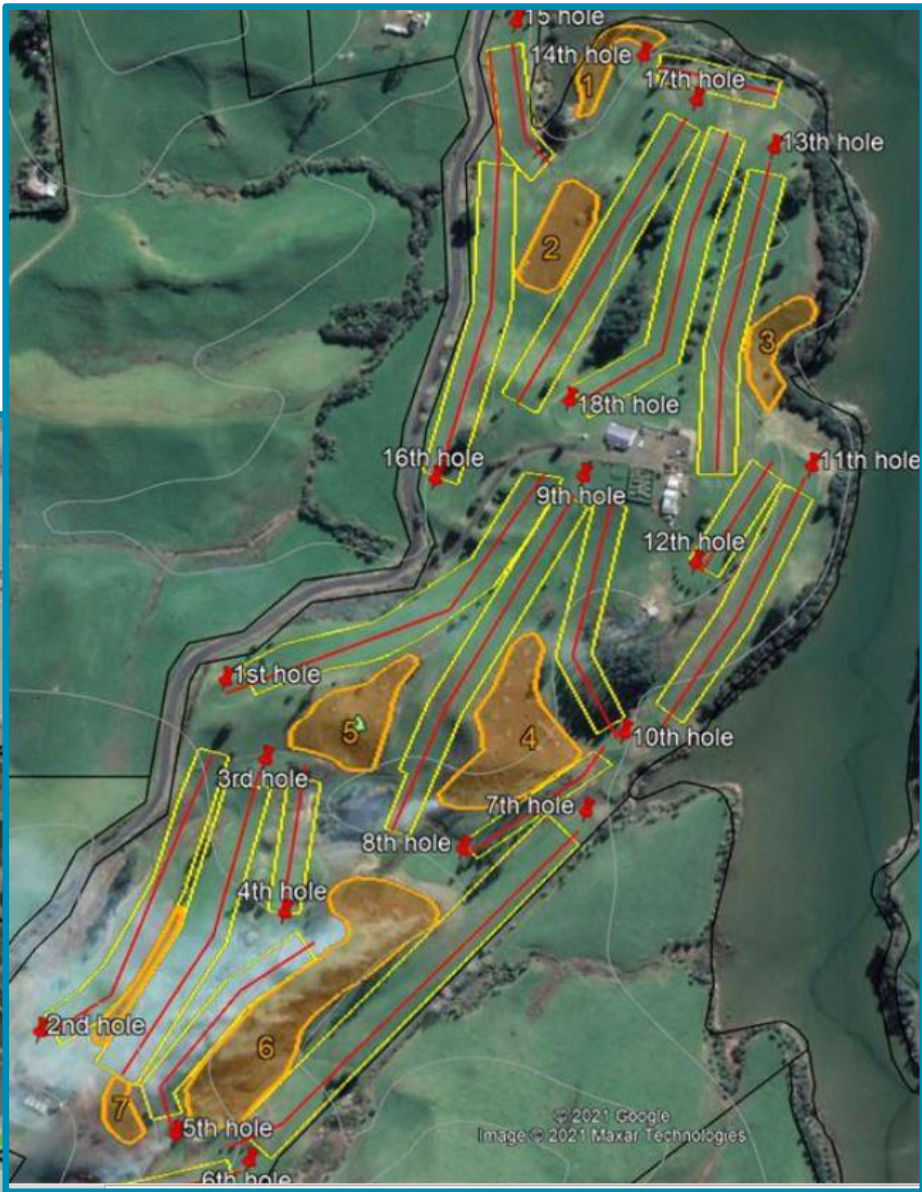
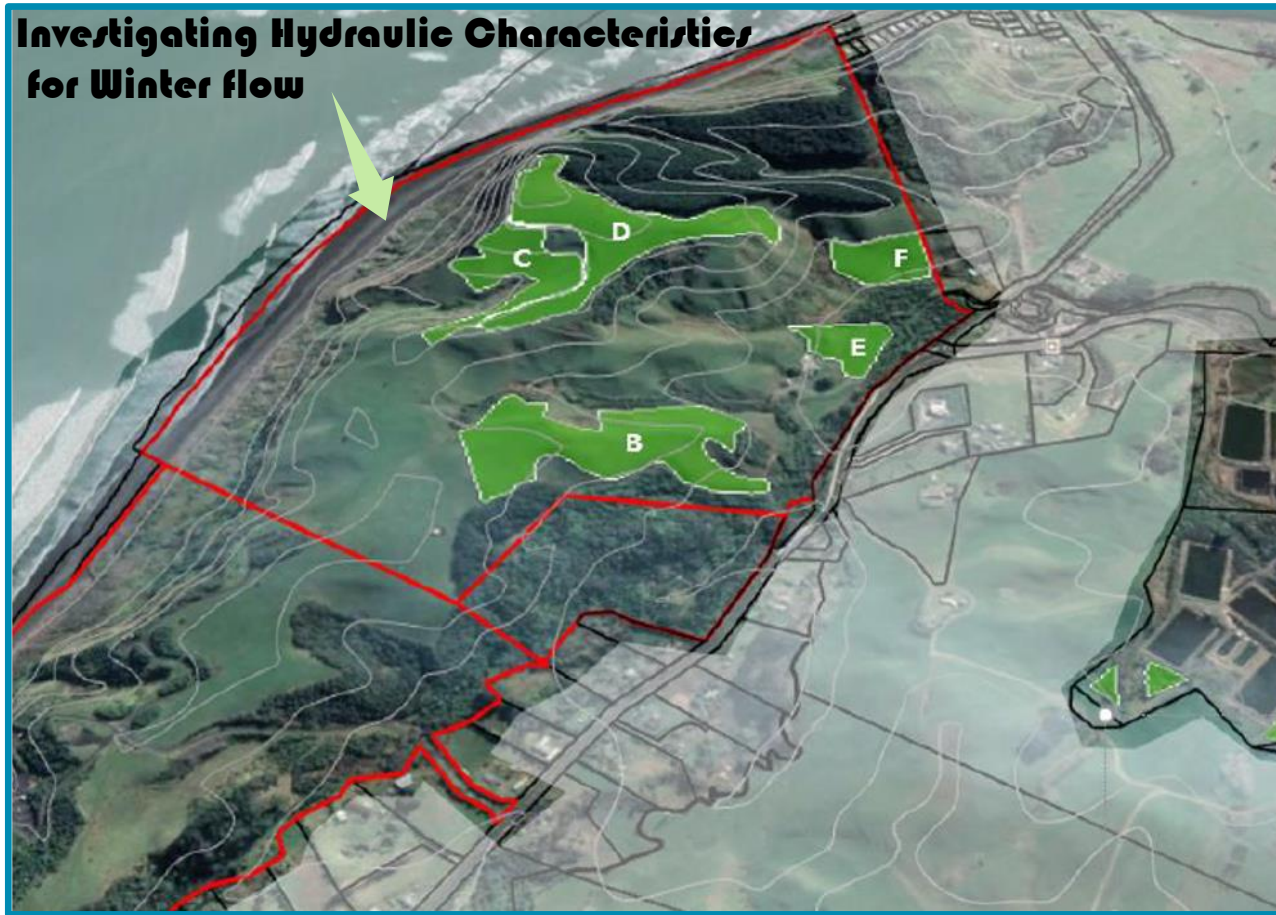
Cluster	WAA Ranking Numbers	Combined Usable Area
E	2, 7, 9	118
F	1, 6	122
G	4, 12	154
H	19, 20	133
I	3, 11	108



INVESTIGATIONS LAND DISCHARGE

(Conceptual Only)

L1: Public land with Alternative Discharge (sandy soils)



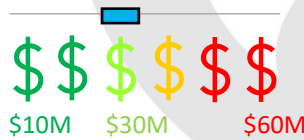
Key Consideration:

Affordability and realistic acquisition (private land)



vs

Effective re-use and achievable change (public land)



Likely Direction (Technical Team Recommendation)

Option	Option Appropriateness (Technical Team scoring)	Hapū (feedback)	Community Board Feedback (some KSH)	Financial (CAPEX +50%/-30%)
MARINE1	55			\$17M
MARINE2	50			\$30M

FRESHWATER 1	30			\$31M
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100% TO LAND (L2)	72	<p>Business case needed by hapū prior to position-forming.</p> <p><i>What is an achievable not-point source option (i.e. allowing customary kaimoana collection that has been prohibited for decades?)</i></p> <p>Existing outlet could be o.k for an interim time with effective conditions working toward alternative discharge for winter flow (i.e. high rate discharge to sands)</p>	<p>Community Board have highlighted that positioning will be in-step with hapū</p>	\$58M	<p>Existing Flow</p> <p>Future Flow</p>
PUBLIC LAND (L1)	61			\$25M	
PRIVATE LAND (L3)	65			\$43M	
MBR & PUBLIC (L4)	58			\$42M	

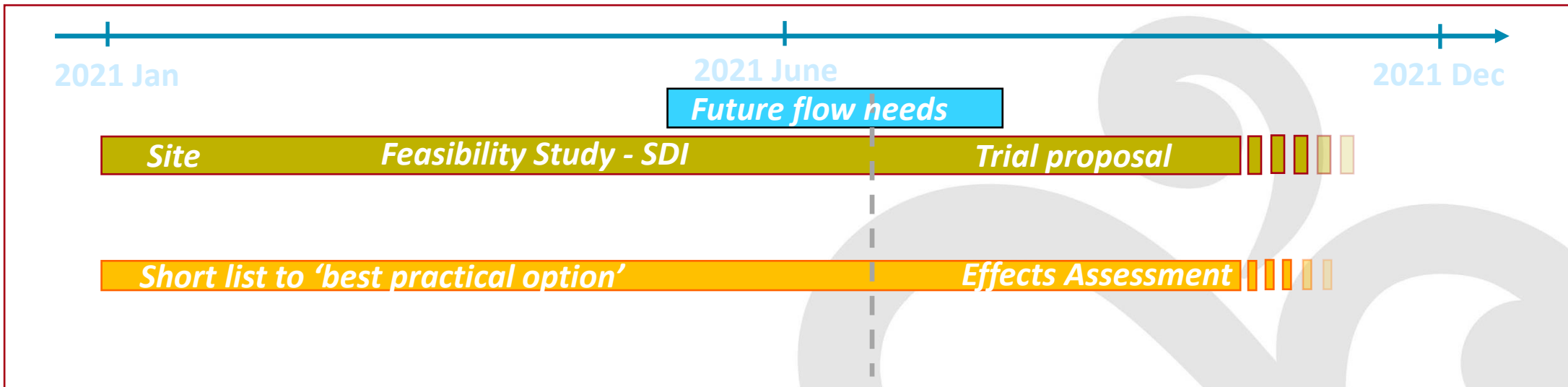
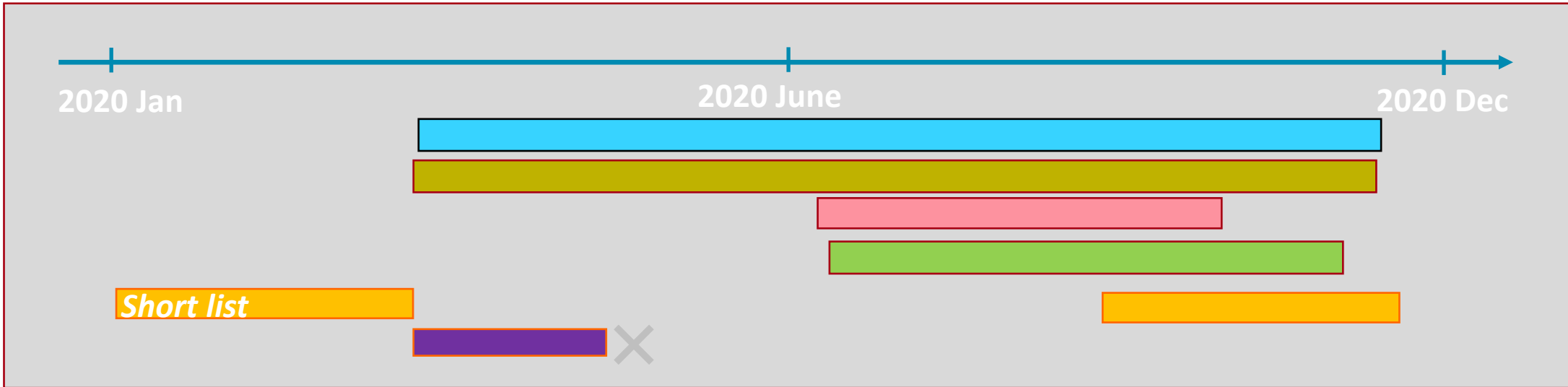
Key Consideration/Status: Challenges with Public Land (ability for co-use/public reception of discharge method)



Timelines (2020- ongoing)

- Land Private
- Land Public
- Marine

- Freshwater
- Option Refinement/Costings/
Practicality check
- Deep Bore Injection



We are here



Key Consideration:
Anticipated lodgment date
WRC expectation

WDC Funding decisions

Raglan wastewater treatment plant upgrades

Draft LTP 2021-31 Budget

2021/22	2022/23	2023/24	2024/25	2025/26	Total (inflated)
510,000	4,935,000	6,873,048	7,196,081	8,781,618	\$ 28,295,747

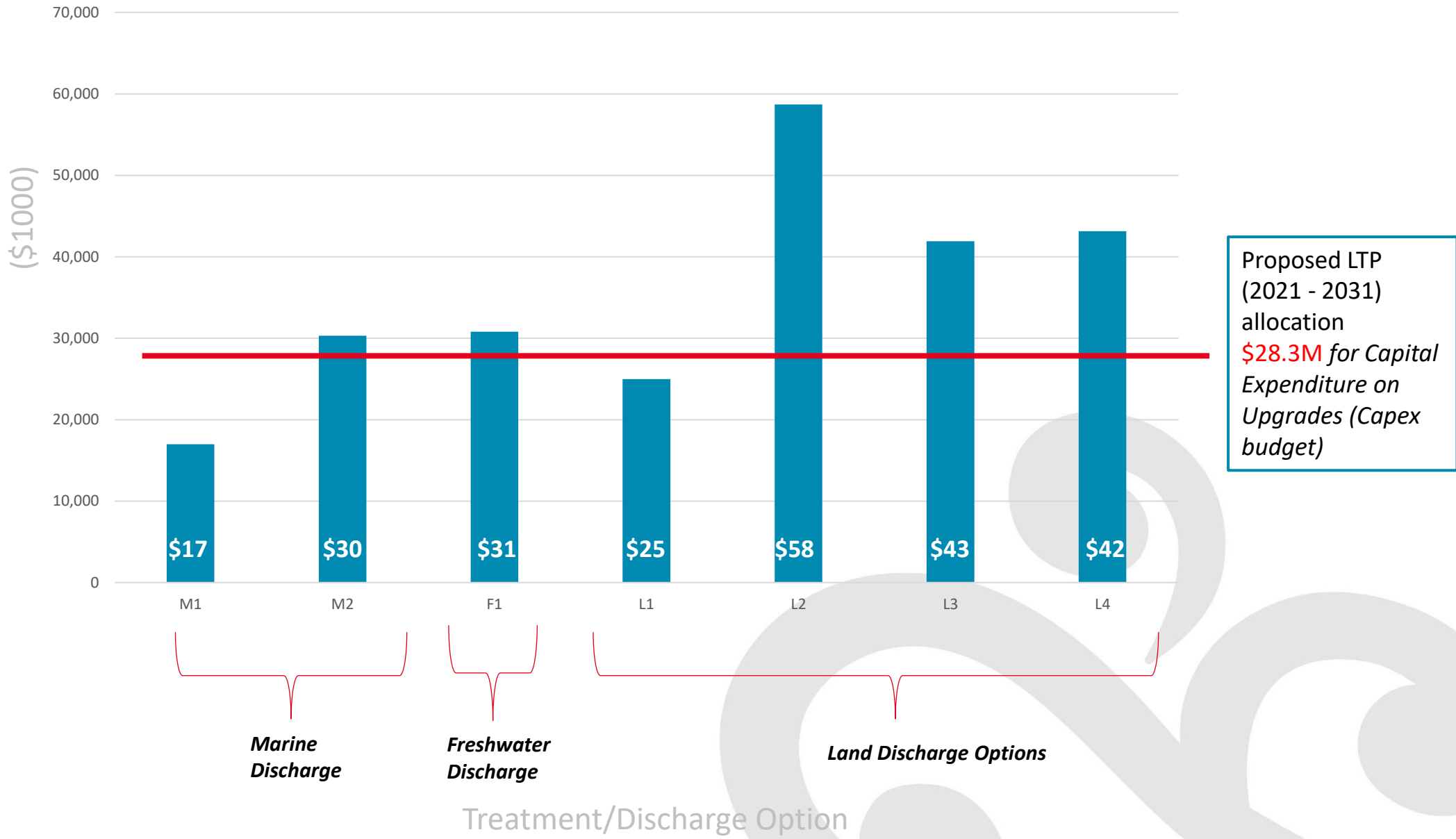


Key Consideration:

- **Targeted Rates**
 - **Wastewater \$1,157 for 2021/22**
- **General Rates**
- **Three Waters Reform and Central Government Funding**

Option	Treatment	Discharge	Capex (+50/-30%)	Annual Opex
Option M1	Existing treatment process + tertiary membrane	New harbour outfall	\$17M	\$0.5M
Option M2	MBR and UV disinfection	New harbour outfall	\$30M	\$1.5M
Option F1	MBR and UV disinfection	Freshwater diffuse discharge	\$31M	\$1.5M
Option L1	Existing treatment process (Aquamats/UV) + tertiary membrane	Combined public land discharge and alternative discharge for winter flow (point source/high rate to sand)	\$25M	\$0.7M
Option L2	Existing treatment process (Aquamats/UV)	Private land discharge and Winter storage	\$58M	\$0.4M
Option L3	Existing treatment process (Aquamats/UV) + tertiary membrane	Combined private land discharge and alternative discharge for winter flow (point source/high rate to sand)	\$43M	\$0.8M
Option L4	MBR and UV disinfection	Combined public land discharge and alternative discharge for winter flow (point source/high rate to sand)	\$42M	\$1.7M

UPGRADE CAPITAL EXPENDITURE COST COMPARISON (+50%/-30%)



Communications for the project

- *Ongoing public hui by zoom*
- *Upcoming drop-in sessions*
- *Media and social media*
- *Dedicated web page*
- *Working together with hapū, stakeholders and community*

Community Feedback and Queries

– Lets discuss

