Doubtless Bay – Water Quantity Update

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What's monitored in Doubtless Bay?

Doubtless Bay monitoring

- 3 Rainfall
- 1 River flow
- 8 Groundwater level (6 groundwater quality sites)

Provides important information for flood management, water quality and water use management

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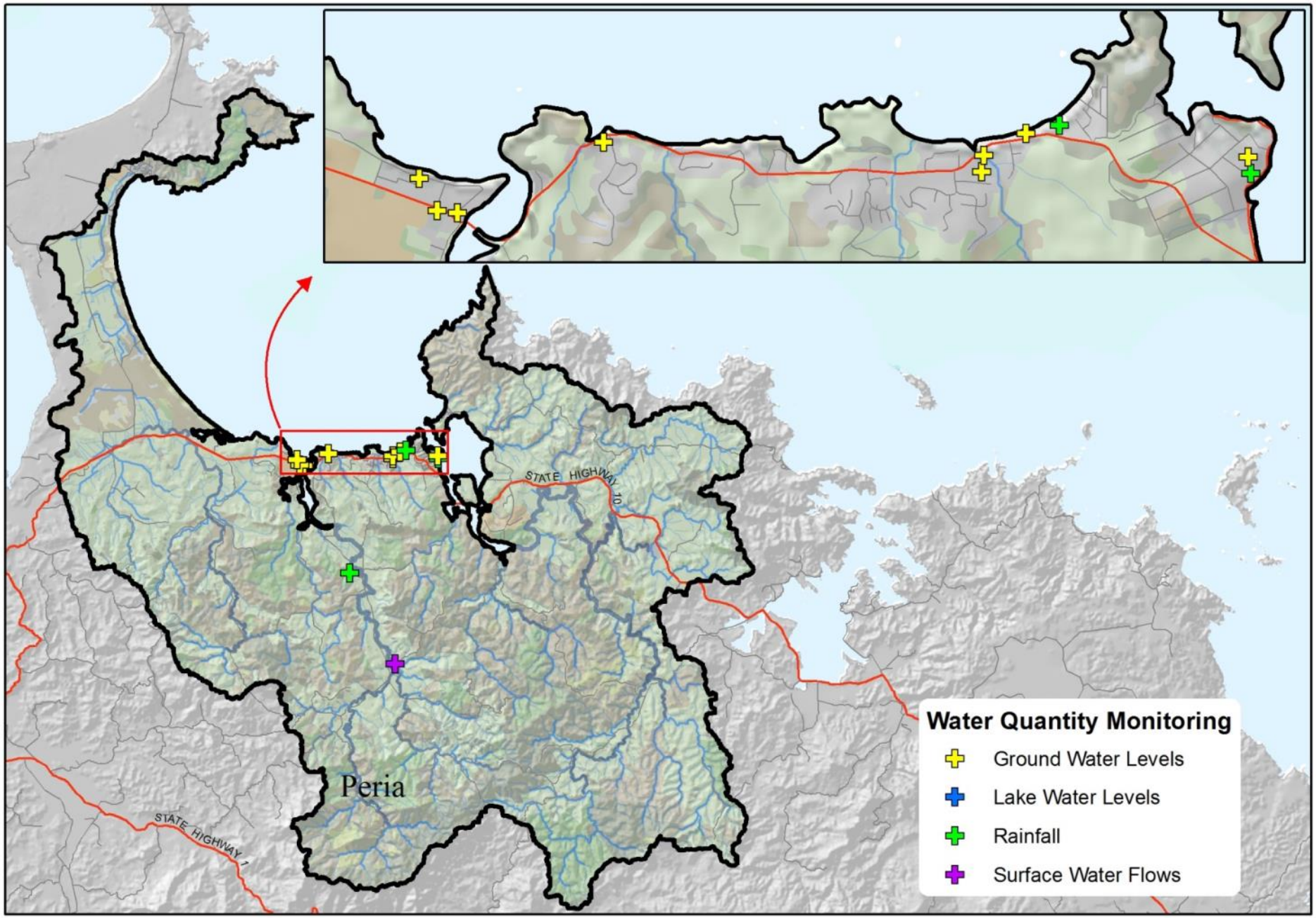
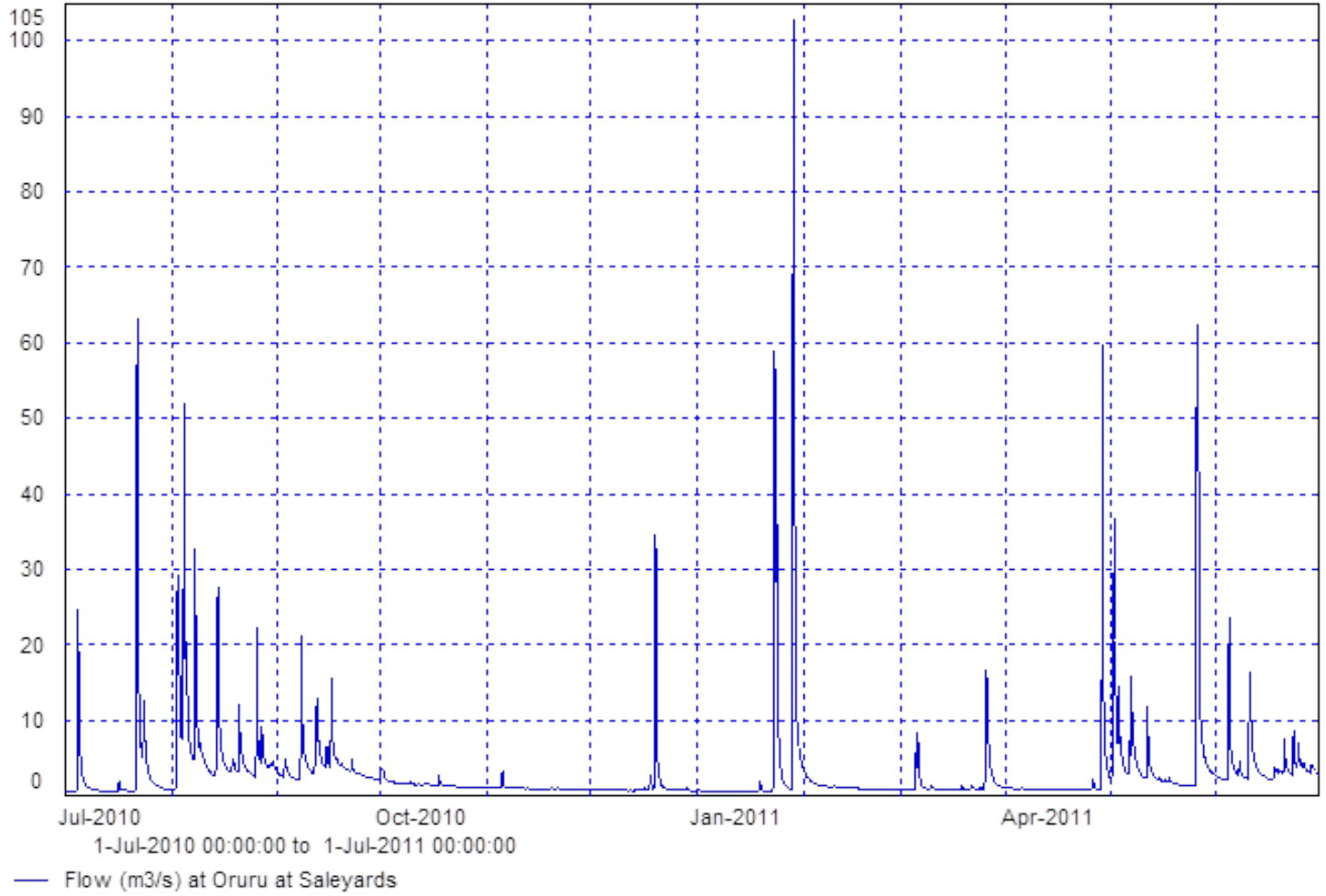
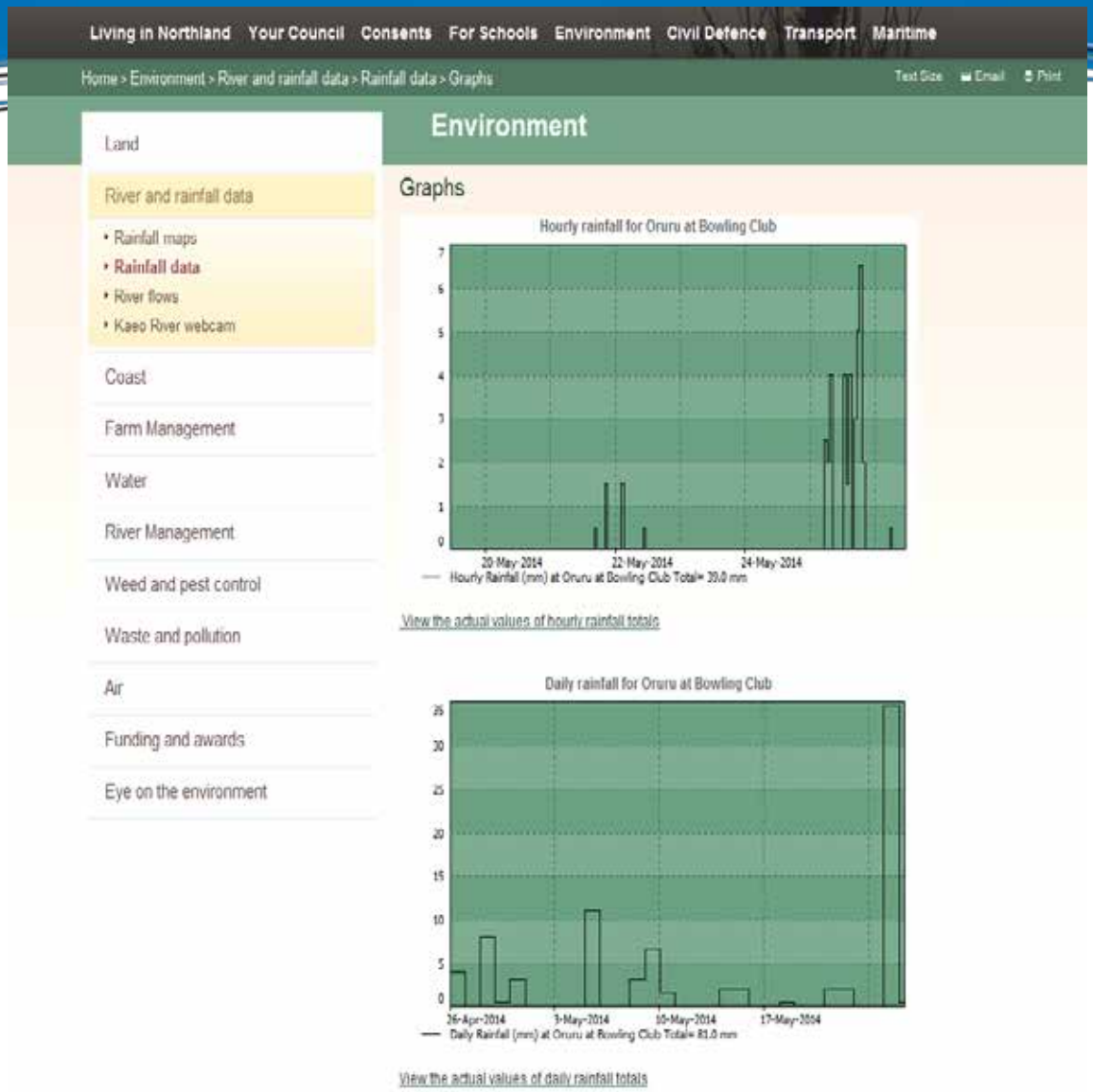

Peria
STATE HIGHWAY 10
STATE HIGHWAY 1
Water Quantity Monitoring
Ground Water Levels
Lake Water Levels
Rainfall
Surface Water Flows

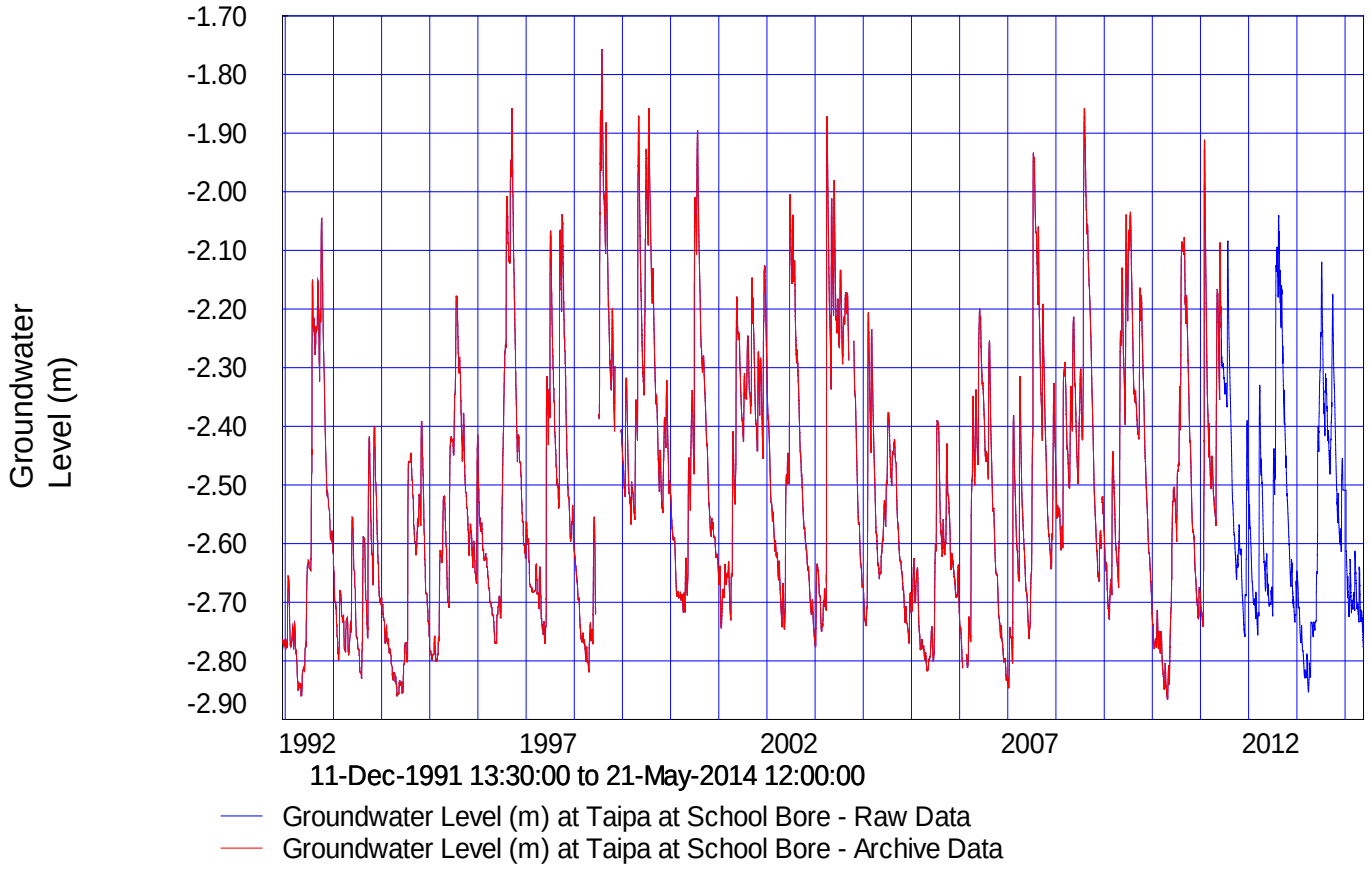
Oruru River Flow



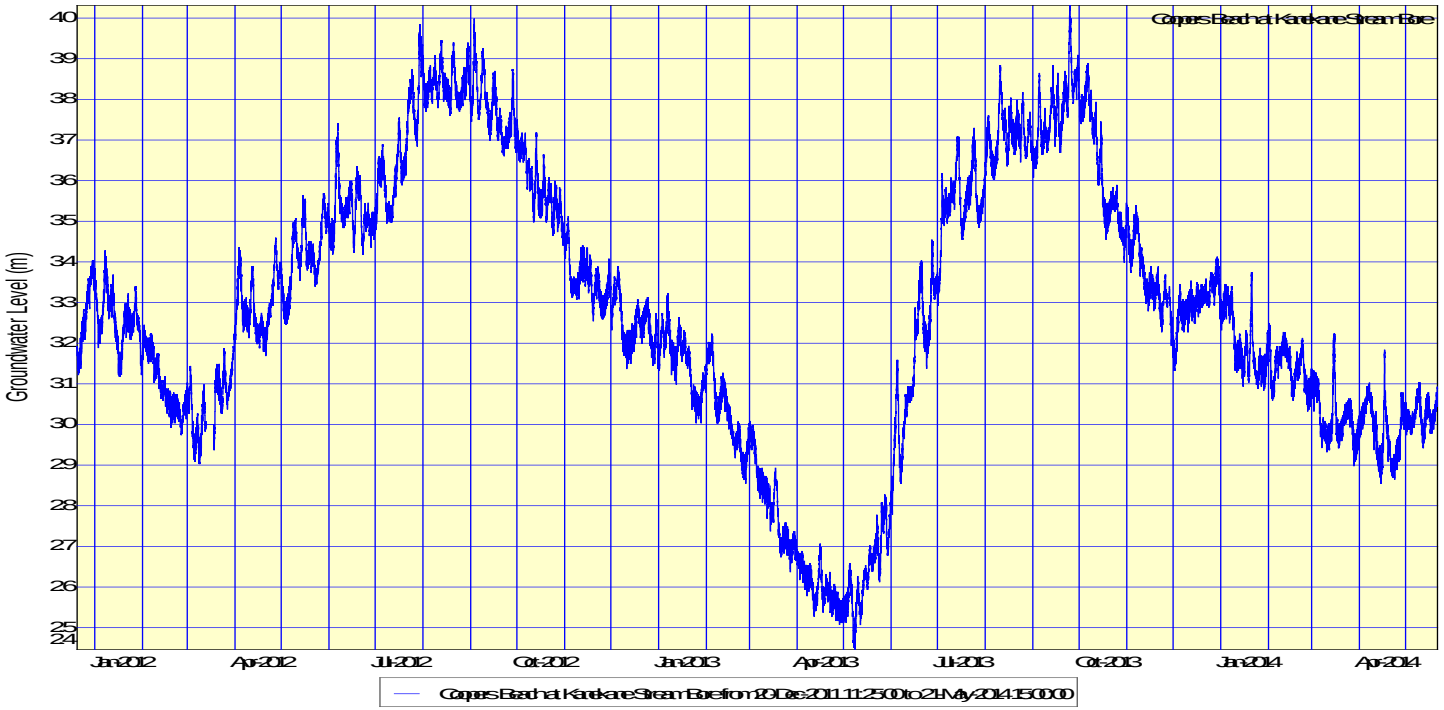
Rainfall at Oruru Bowling Club



Groundwater levels at Taipa Area School



Coopers Beach groundwater levels



Groundwater Quality

Groundwater Quality key indicator of sustainable allocation.

If too much water taken - saline intrusion

Groundwater Quality:

- 6 of the groundwater level sites are monitored for water quality
  - 4 bores - saline indicators every 3 months
  - 2 bores – monitored for compliance

Groundwater Quality - Taipa

- Small shallow coastal aquifer
- Highly sensitive to saline intrusion and land use activities

- Elevated nitrate levels in 2000 have declined. Meet the Drinking Water Standards
- Some bores have occasional elevated bacteria
- No saline intrusion trends

Groundwater Quality – Coopers Beach Cable Bay

Coopers Beach / Cable Bay Aquifer
Fractured basalt, variable quantity and quality across aquifer

Summary report: Preliminary Hydrogeological Investigations - Coopers Beach, Cable Bay & Mangonui Groundwater Resource

- Monitoring indicates seasonal increase in saline indicators but no long term trend
- Some bores have occasional elevated bacteria
- Some bores show elevated Fe and Mn – naturally occurring

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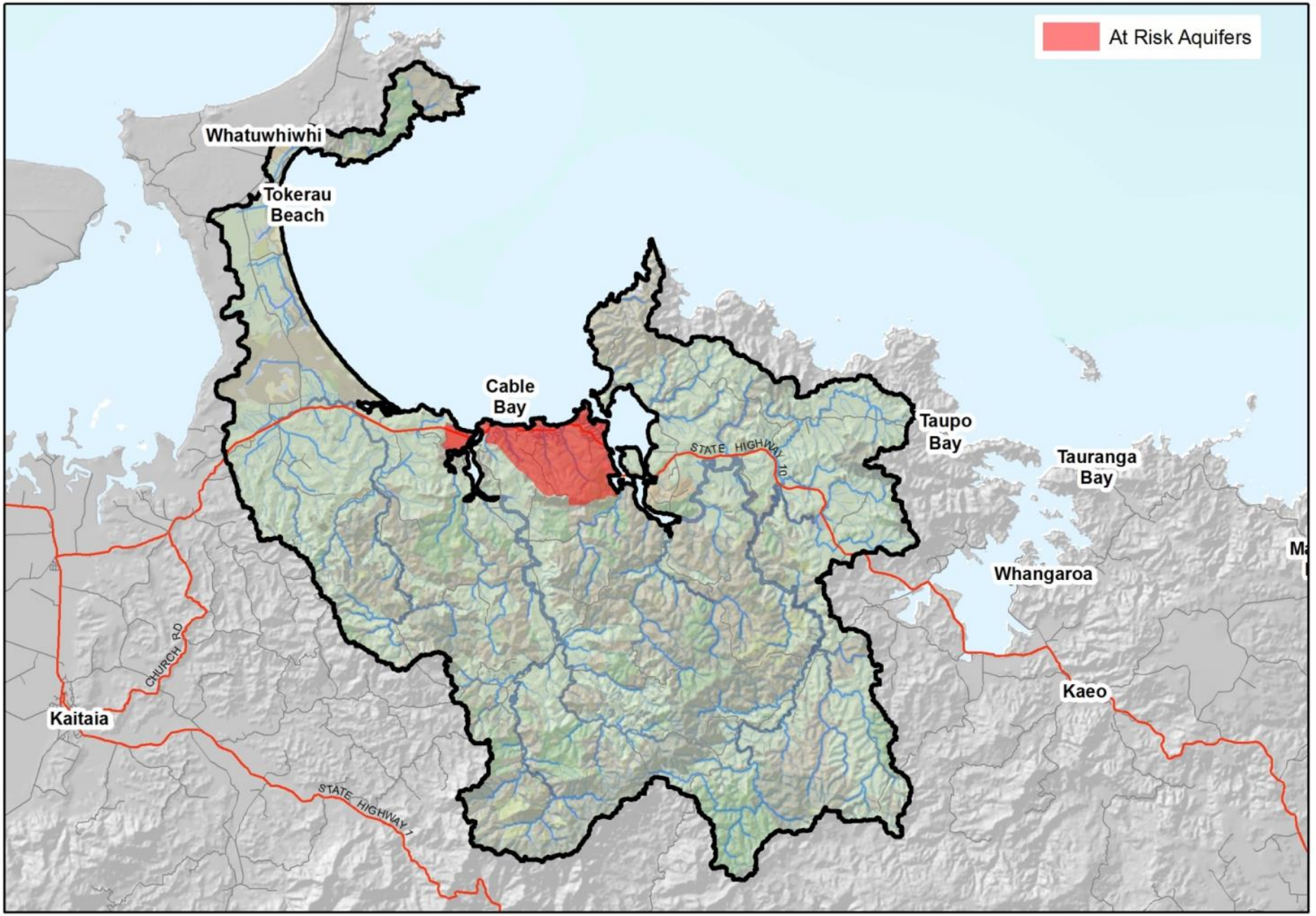
General Pressures

- Two aquifers – ‘at risk’ from saline intrusion
  - Taipa
  - Coopers Beach / Cable Bay
- General water takes


At Risk Aquifers
Whatuwhiwhi
Tokerau Beach
Cable Bay
Taupo Bay
Tauranga Bay
Whangaroa
Kaeo
Kaitaia
CHURCH RD
STATE HIGHWAY 10
STATE HIGHWAY 1

Level of water use

- Water takes permitted in accordance with rules in the Regional Water and Soil Plan
- Permitted to take:
  - outside ‘at risk’ coastal aquifers provided specific criteria met you can take:
    - for reasonable stock drinking and domestic use; and
    - up to 10 m3/day for any use
- Within ‘at risk’ coastal aquifers take up to 1 m3/day for domestic use only

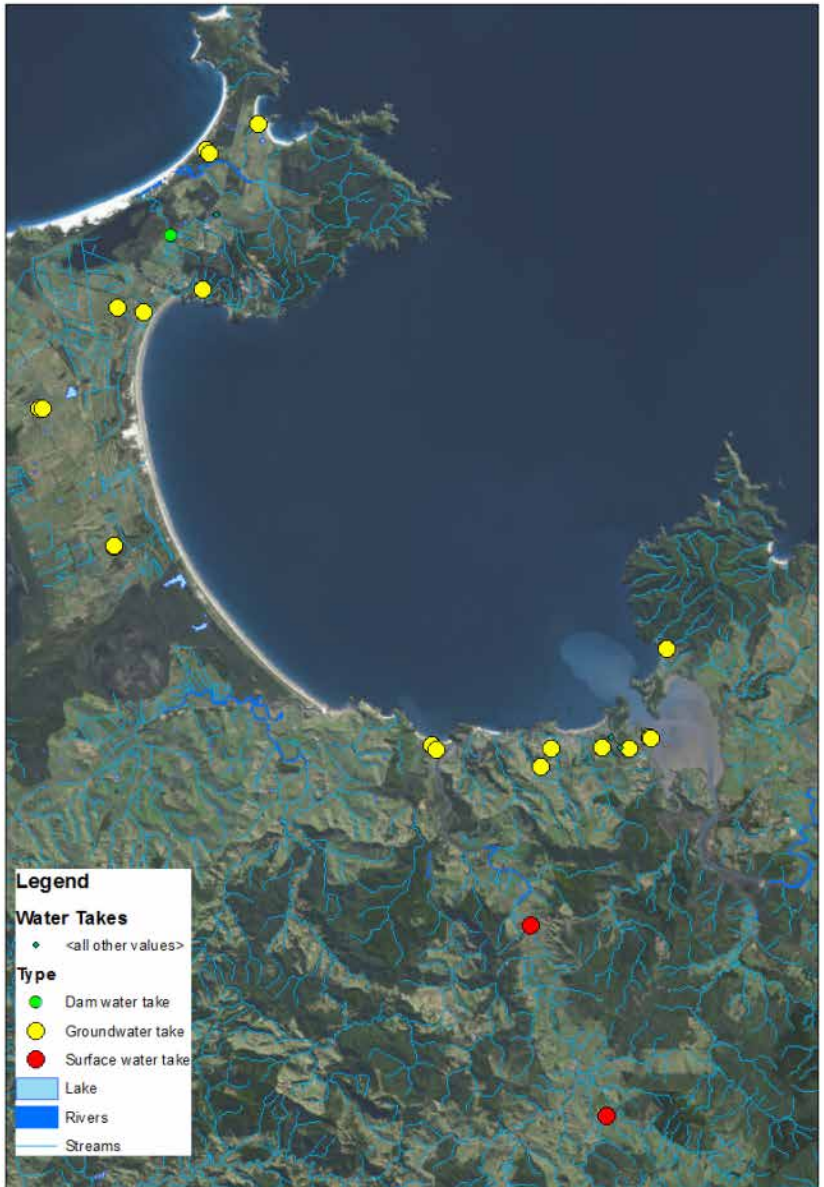
Consented Use

2 surface water takes

- Oruru River
- Total allocation 3050 m^3/day

Groundwater

- Total allocation 3357 m^3/day



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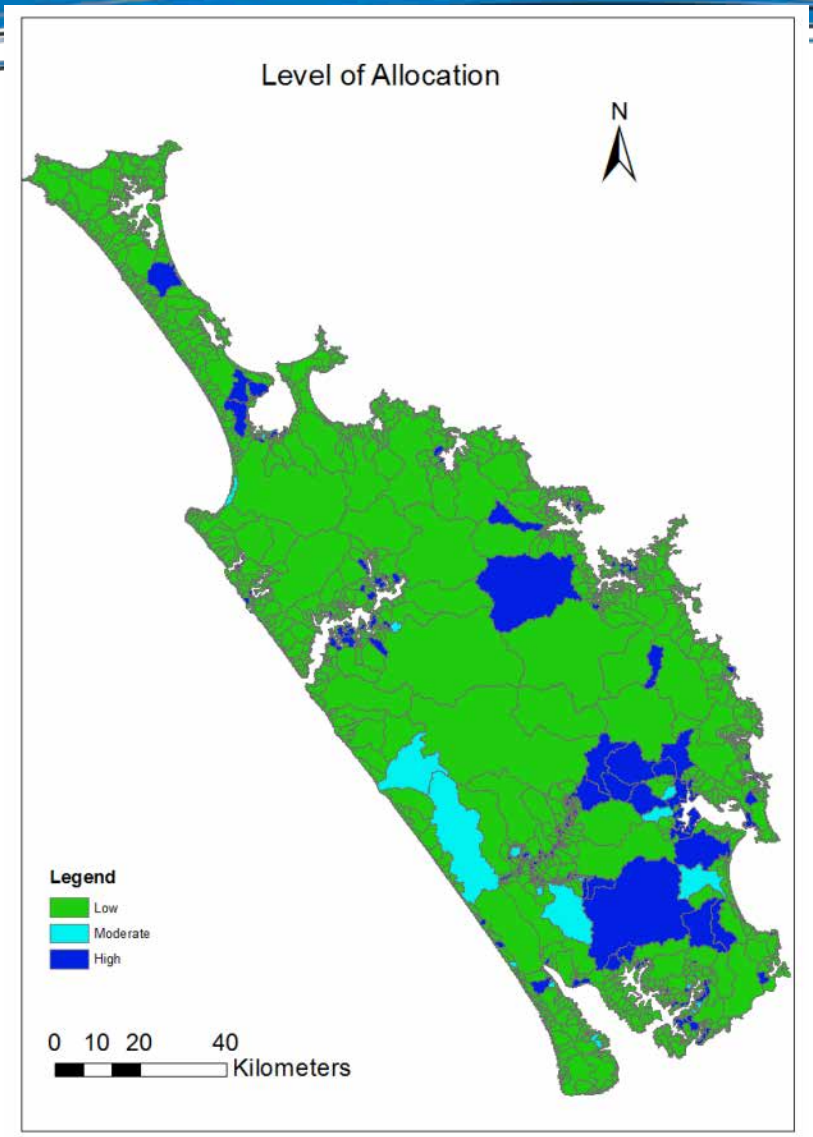
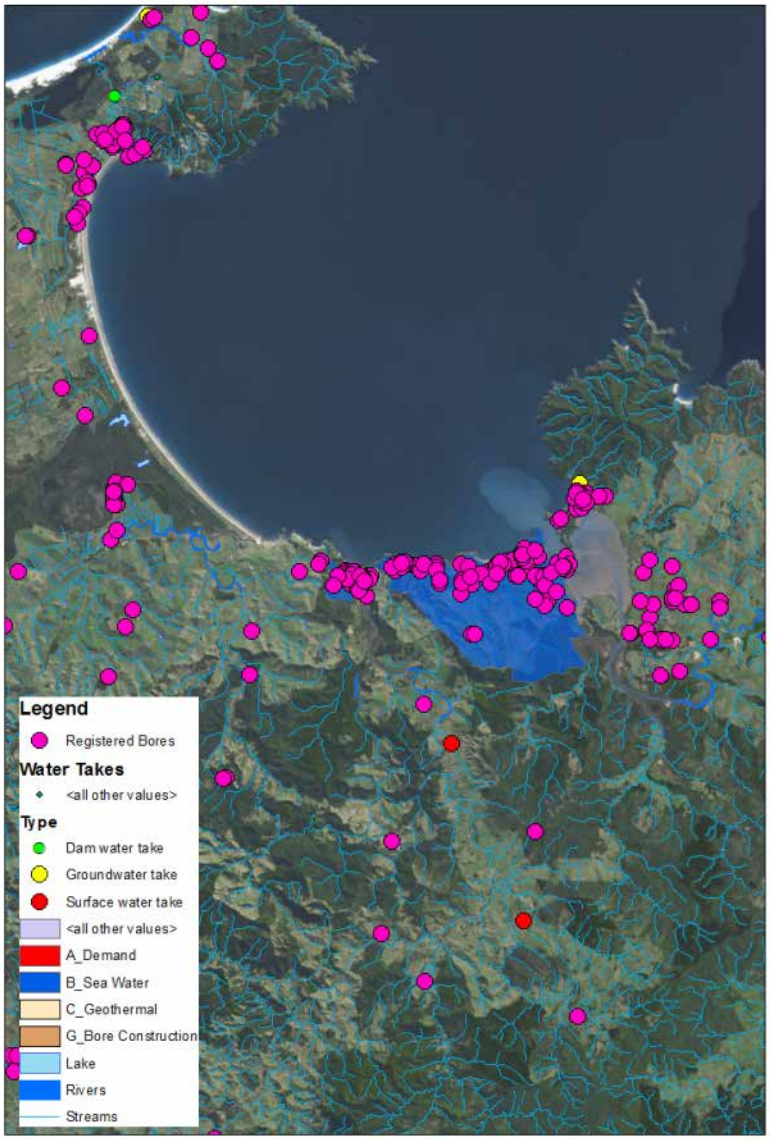
Surface Water Total Allocation



Level of allocation is shown as percentage of default allocation level proposed in the Proposed National Environmental Standard for Ecological Flows

Groundwater Allocation



Groundwater

Taipa Aquifer

- Most conservative estimated sustainable yield 550 m^3/day
- Total estimated allocation 140 m^3/day
  - Consented 80 m^3/day
  - Est. Permitted 60 m^3/day

Coopers Beach / Cable Bay Aquifer

- Most conservative estimated sustainable yield 1,280 m^3/day
- Total estimated allocation 965 m^3/day
  - Consented 875 m^3/day
  - Est. Permitted 90 m^3/day

What's next?

Next key steps include:

- introducing the base information and decision support tools to stakeholder groups
- assisting stakeholders to understand the technical information and potential trade offs
- Integrating with water quality limits

Catchment Group Help?

Next key steps include:

Understanding permitted water use

- Promote registration of takes
- Promote registration of bores

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Thank you

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