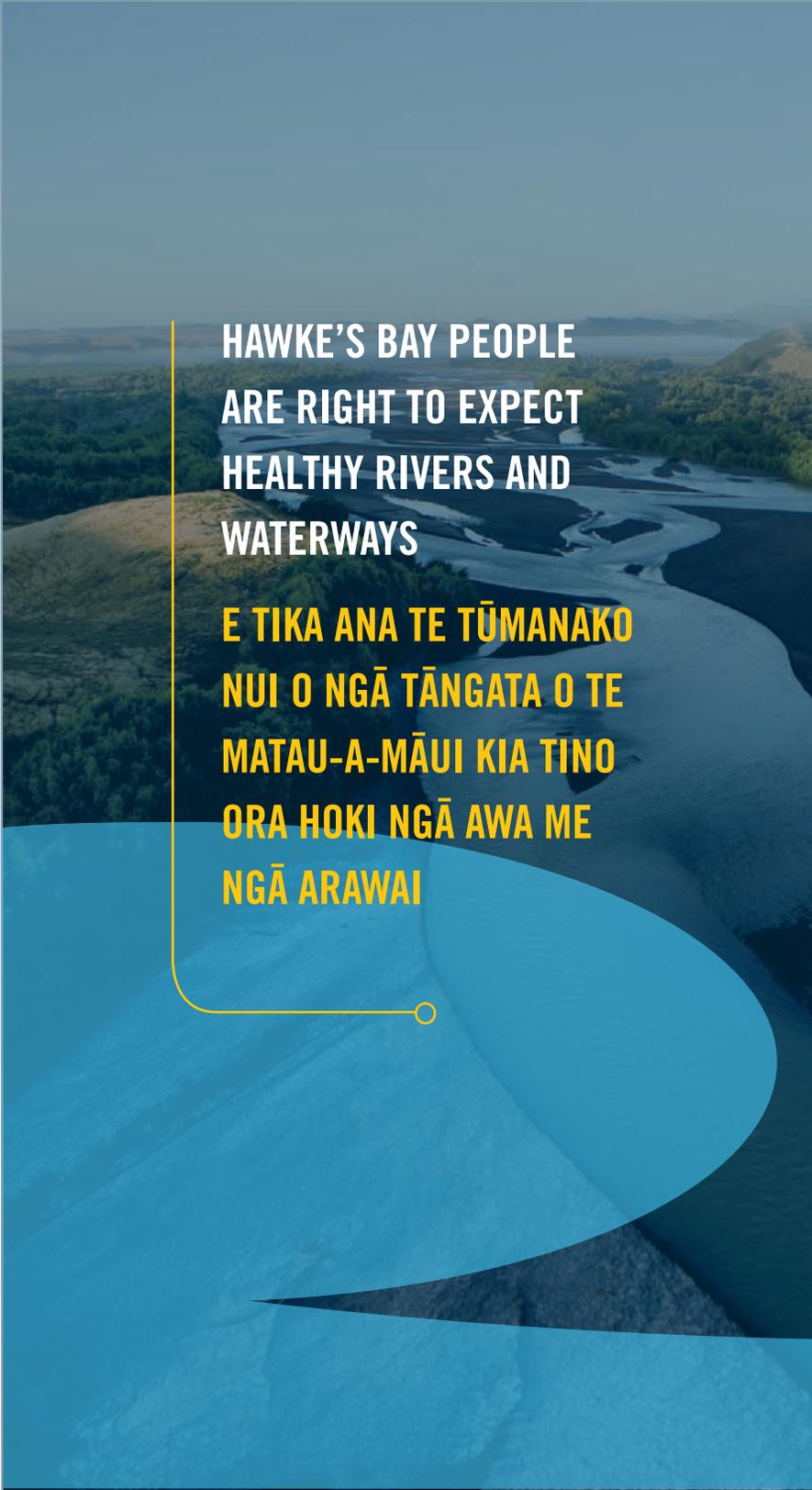


October 2017

THE TANK PLAN

what you need to know about the TANK Plan for the
Tutaekuri, Ahuriri, Ngaruroro and Karamū catchments





**HAWKE'S BAY PEOPLE
ARE RIGHT TO EXPECT
HEALTHY RIVERS AND
WATERWAYS**

**E TIKA ANA TE TŪMANAKO
NUI O NGĀ TĀNGATA O TE
MATAU-A-MĀUI KIA TINO
ORA HOKI NGĀ AWA ME
NGĀ ARAWAI**

Water is a life giving,
life supporting taonga and
the fuel of our region.

Water quality is essential
for healthy aquatic life.

We need to conserve water.
We all have a part to play.

The TANK Plan looks at the effects of land and water use on the Heretaunga Plains, its interconnected waterways and aquifer.

Sediment-rich rivers, urban stormwater, over-allocation of water and clogged, weedy streams are firmly in our sights.

The TANK Group is going to recommend the details of a Plan Change. The Group will set limits and measures to clearly guide consent holders and resource users. Why? To improve the health of the Tutaekuri, Ahuriri estuary, Ngaruroro and Karamū rivers, and their feeder tributaries. Look out for a draft plan in 2018.

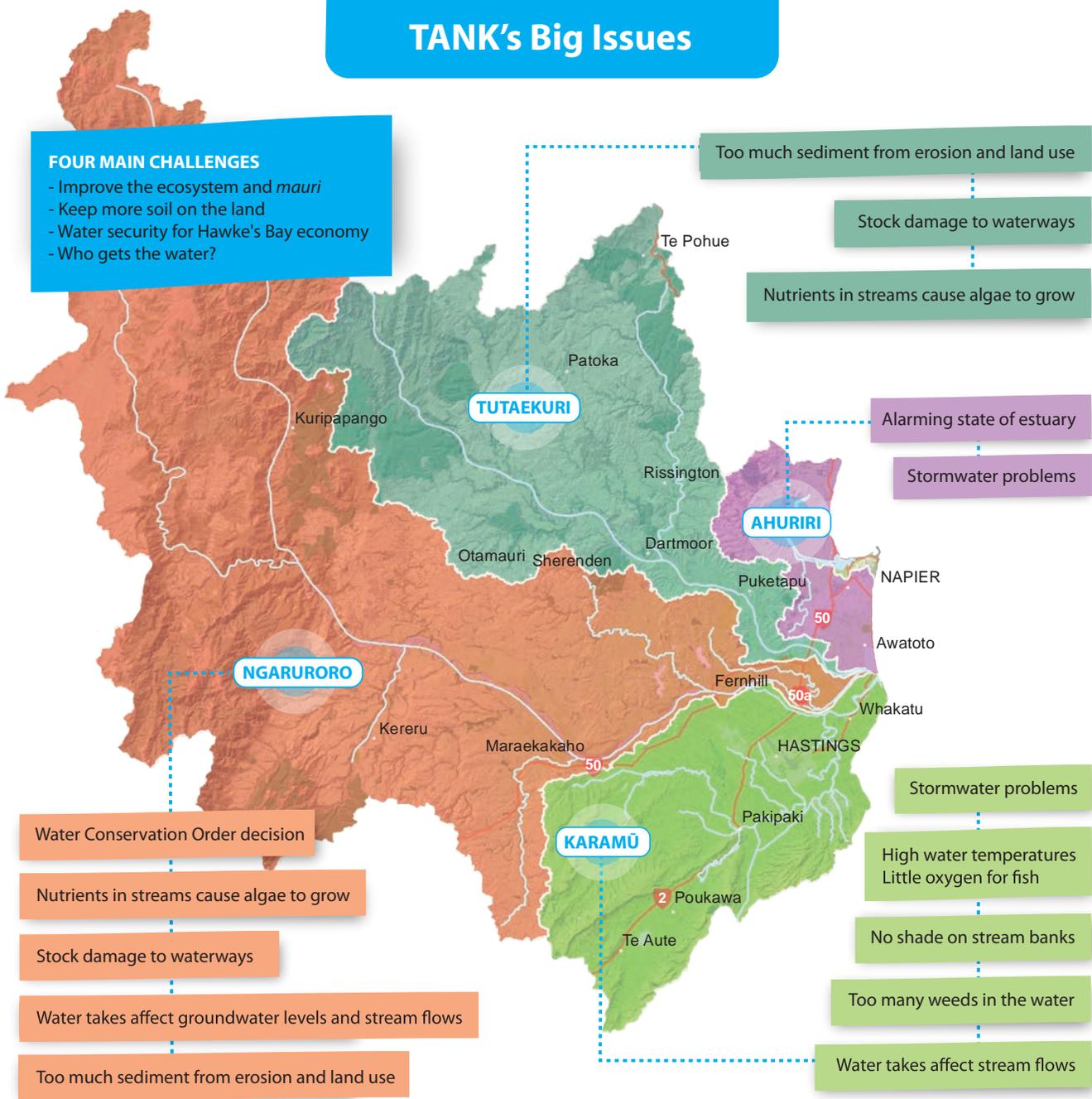
The TANK Group includes 30+ members, representing Tāngata Whenua, primary sector, councils and environmentalists.

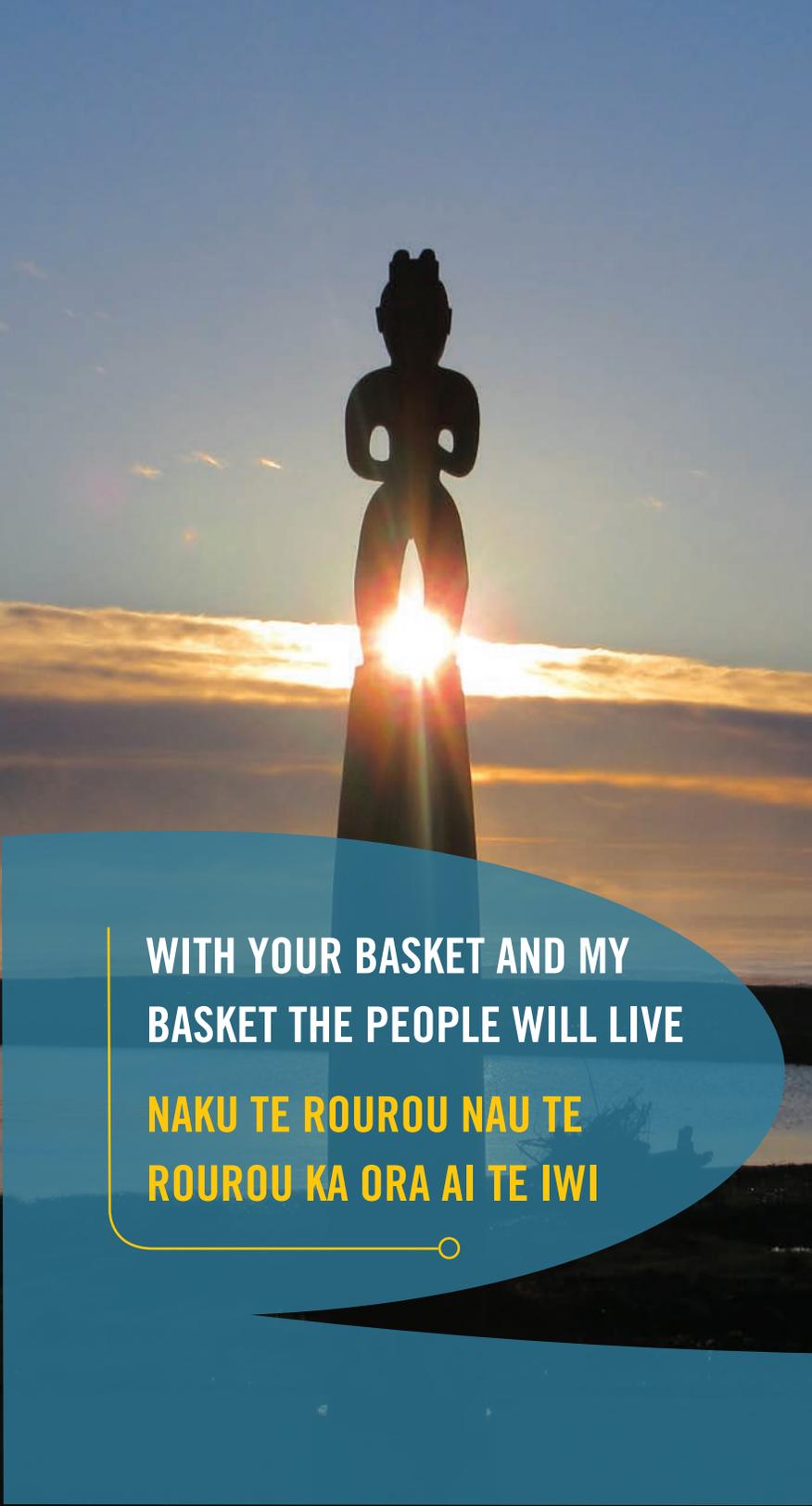
hbrc.govt.nz, search: #tank

TANK's Big Issues

FOUR MAIN CHALLENGES

- Improve the ecosystem and *mauri*
- Keep more soil on the land
- Water security for Hawke's Bay economy
- Who gets the water?



A silhouette of a Māori figure, possibly a warrior or a deity, stands against a sunset sky. The sun is low on the horizon, creating a bright glow behind the figure. The sky is a mix of blue and orange. The figure is positioned in the center-left of the frame.

**WITH YOUR BASKET AND MY
BASKET THE PEOPLE WILL LIVE**

**NAKU TE ROUROU NAU TE
ROUROU KA ORA AI TE IWI**

Progress so far

The TANK Plan is developing out of an extensive science programme. A complex ground and surface water model was built to learn the connections between river flows, groundwater levels, water abstraction and oxygen levels in lowland streams. This has improved the Council's understanding, i.e. of nutrient pathways and concentrations in ground and surface water.

Other studies have helped to tell us how much sediment is lost from land and the measures available to us to limit effects on freshwater and estuary ecosystems.

The TANK Group agreed a set of values to manage water for, expressed in Pakeha and Māori terms. The Group is looking at indicators to show whether the values are being met. They include things like MCI (Macroinvertebrate index - to assess the health of insect populations in the water) algae and macrophytes (water plants), nutrient concentrations (that may affect algal growth) and sediment (which affects water clarity and habitat for aquatic organisms).

The TANK Group will also draw on Matauranga Māori to assess whether social and cultural values are being met.

Smaller working groups are helping the TANK Group to tackle its substantial workload. They focus on storm water, wetland management, an economic assessment and the investigation of water augmentation options, such as off-river water storage.

The TANK Group works with Māori and involves numerous stakeholders in its decision-making process.

What this means

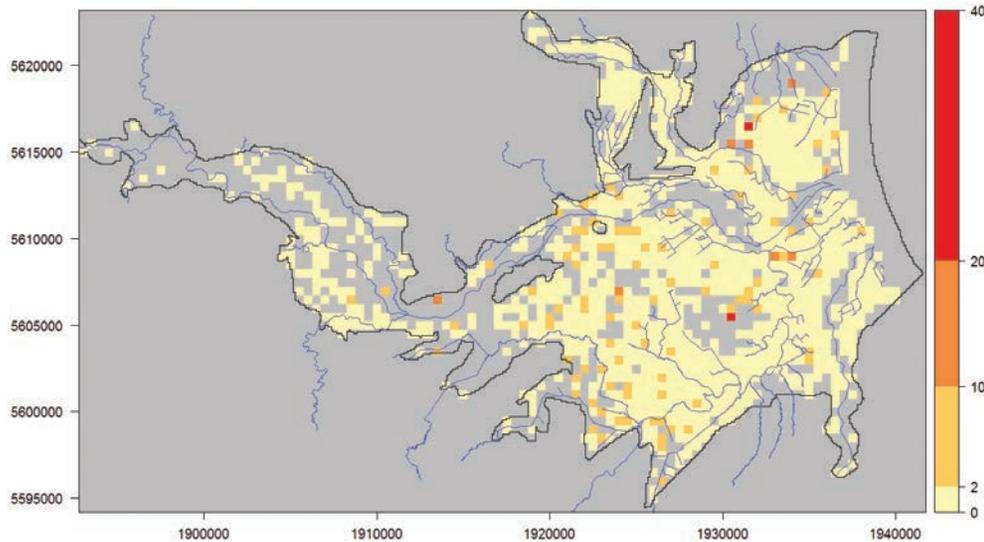
The TANK Plan means we'll have new rules to manage land and water in the TANK area. These rules will include allocation limits and how to manage flows for rivers, which will also affect groundwater users. The Group also favours innovative ways to improve these waterways.

Water quality objectives will be set, including land use and discharge rules. These will affect how people use our rivers or groundwater and manage the land.

Water Conservation Order

The Regional Council supports the TANK Group as the best way to set rules and limits for TANK's catchments. The WCO Special Tribunal is first considering the Ngaruroro upper reaches, then the lower reaches with Clive River once science modelling is complete in 2018.

New science proves our river and groundwater connections



Every coloured pixel shows how much effect pumping has on river flow. Individually their effect is small, but added together they have a significant effect on Ngaruroro River flow. Darker pixels have a bigger effect.

Find out more

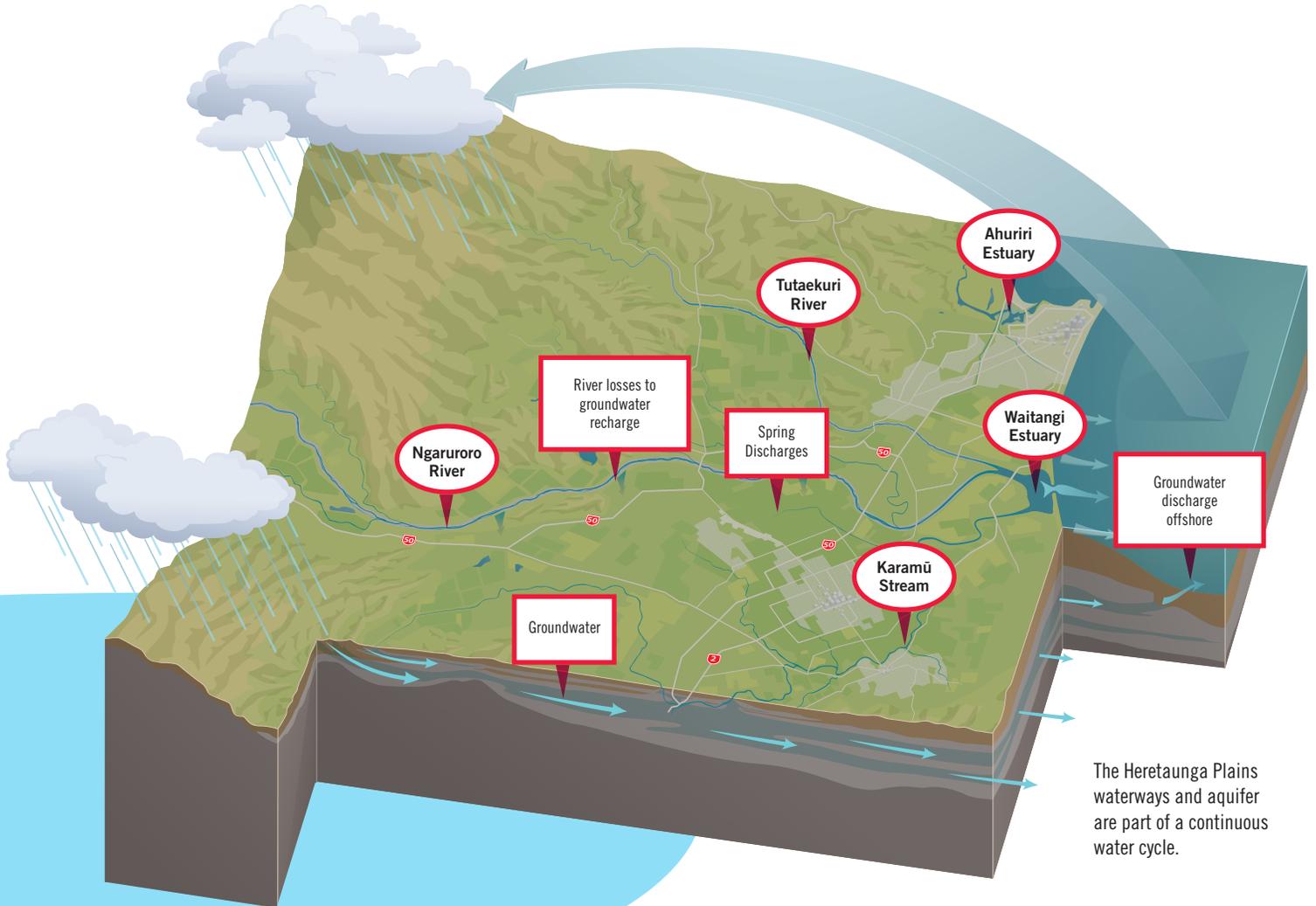
Talk to TANK Group members or contact the organisations they represent. **Contact** Hawke's Bay Regional Council staff, who are helping the TANK Group work through this process.

Check the HBRC website, Facebook or local papers.

Once the TANK Group has made its recommendations through the Regional Planning Committee, HBRC will decide whether to publicly notify the Plan Change - or consult on a draft. The community can also make a submission at that point.

See hbrc.govt.nz, search: #tank
or contact Mary-Anne.Baker@hbrc.govt.nz

TANK WATER QUALITY



TANK WATER QUANTITY

KARAMŪ / CLIVE

PROBLEM

Too many weeds, not enough bugs and insects, low oxygen, high nutrient levels and urban stormwater

THE FIX

- Reduce water weed cover in rivers and feeder streams
- Lower nutrient levels (by 10 - 30% ?)
- Less sediment from land
- Better stormwater management

HOW

- Riparian planting for shade: long-term
- Some mechanical weed control: short-term
- Reduce sediment from cultivated land
- Stock exclusion
- Less nutrients from land
- More study on nutrient sources and pathways

Options

- Industry good practice programmes
- Rules
- Investigations
- Nutrient leaching controls
- Riparian planting

TUTAEKURI / NGARURORO

PROBLEM

Sediment and phosphorus in rivers, the estuary and the coast

THE FIX

10 - 30% less sediment from land

HOW

- Stock exclusion
- Soil conservation programmes
- Planting trees
- Riparian planting

Options

- Farm Plans
- Industry + landowner good practice programmes
- Rules for some land use activities

AHURIRI

PROBLEM

Sediment, nutrients, urban stormwater contaminants and pest organisms

THE FIX

- Better stormwater management
- Fewer contaminants from land
- Improve estuary margins and wetlands
- Fan worm management

HOW

- Collaboration to develop comprehensive estuary management plan
- Stock exclusion, riparian planting and soil conservation measures on private land

Options

- Ahuriri is a higher priority - but the same as for Tutae kuri-Ngaruroro
- Stormwater management

GROUNDWATER SITUATION

- Heretaunga Plains water is very interconnected
- All groundwater takes deplete lowland rivers and streams, i.e. Ngaruroro, Raupare, Karamū

CHALLENGES

- A total water take restriction has very little river flow impact, i.e. no benefit until weeks later
- Recharge must offset total abstraction to prevent long-term depletion of the aquifer
- Aquifers kept at high enough level to protect access for all users
- Meet security of supply standards for abstractor

Options

- Use interventions to maintain river flows and offset depletion effects
- Total allocation limit for abstractors
- Restriction regimes
- Allocation that allows flexibility
- Aquifer recharge from Ngaruroro River

SURFACE WATER SITUATION

- Surface and groundwater takes across the Heretaunga Plains deplete Ngaruroro/ Tutae kuri River flows
- These rivers add groundwater flow to Heretaunga Plains and lowland rivers

CHALLENGES

- Sufficient river flows for a healthy ecosystem, mauri and other core TANK Group values
 - Models like RHYHABSIM help to show the effect - on habitat of different river flow levels in Ngaruroro / Tutae kuri
 - Oxygen levels are key to ecosystem health- and affected by flows in Karamū, Raupare, etc.
- Meet security of supply standards for abstractors

Options

- Total allocation limit for abstractors
- Restriction regimes
- Allocation that allows flexibility
- Water storage and release to maintain flows

