



Healthy Rivers
PLAN FOR CHANGE

Wai Ora
HE RAUTAKI WHAKAPAIPAI



TŪWHARETOA
MĀORI TRUST BOARD



Waipā Catchment issues, drivers, and responses

Causes of sediment

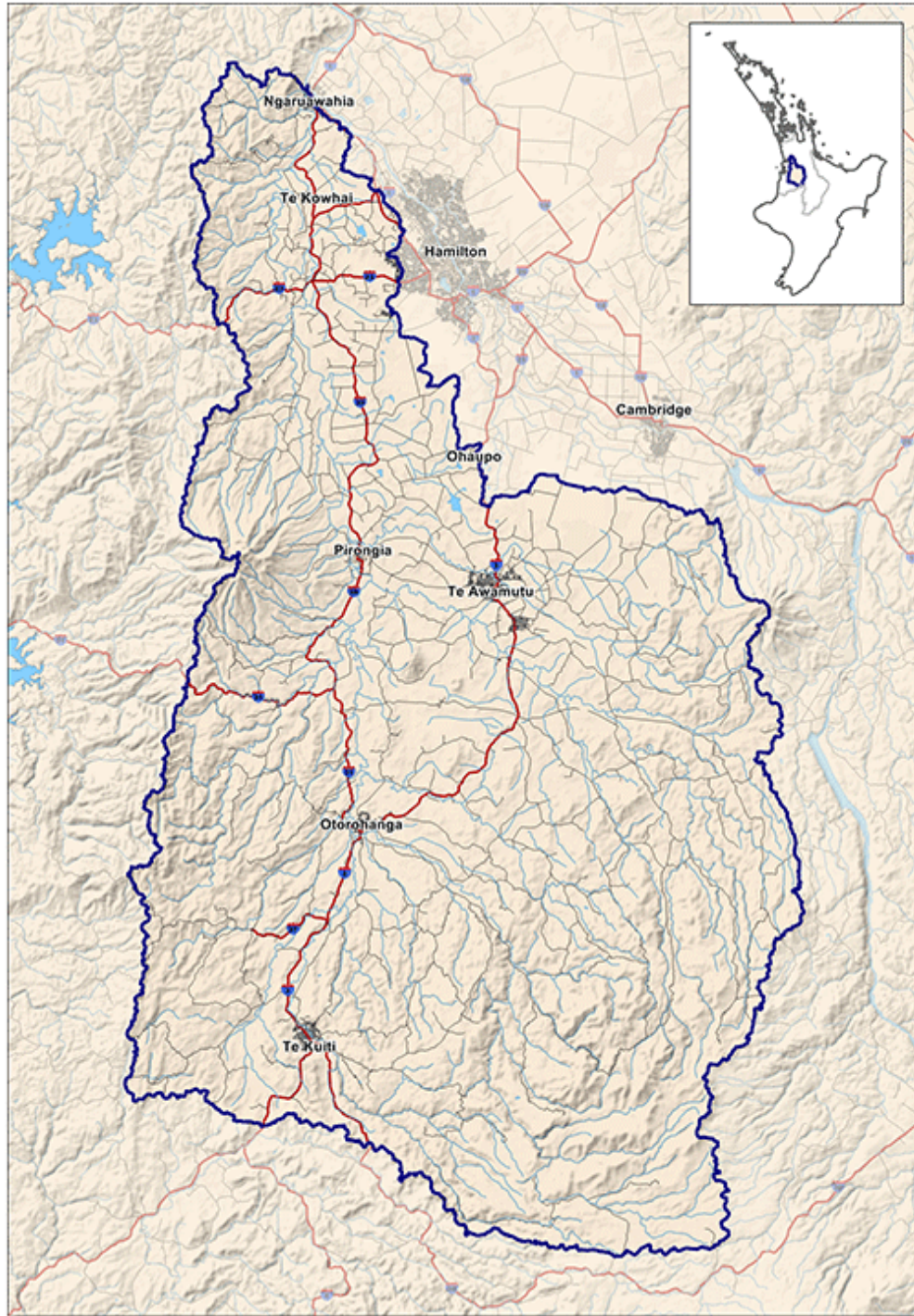
Current and proposed management response

Grant Blackie – Waipā Zone Manager

Presentation to CSG Feb 2015

- 306,569ha, main stem 115km, 4,825km waterways
- Variable geology, greywacke, mudstone, limestone and ash
- Erosion prone soils and high sediment loads
- Mass movement and stream bank erosion are the major sources of sediment

Waipa catchment



Tunawaea Slip



Key Issues for the Waipa Catchment

- Erosion / sedimentation
- Land use change / intensification
- Declining water quality
- Loss of indigenous biodiversity
- Flood management
- People and communities.

Reducing sediment: current approaches

- Regional Plan rules (permitted activities, consents, monitoring and enforcement)
- WRC river management works
- Collaborative stream restoration projects
- Information & Expert advice to farmers
- WRC and industry incentives for voluntary actions in priority areas

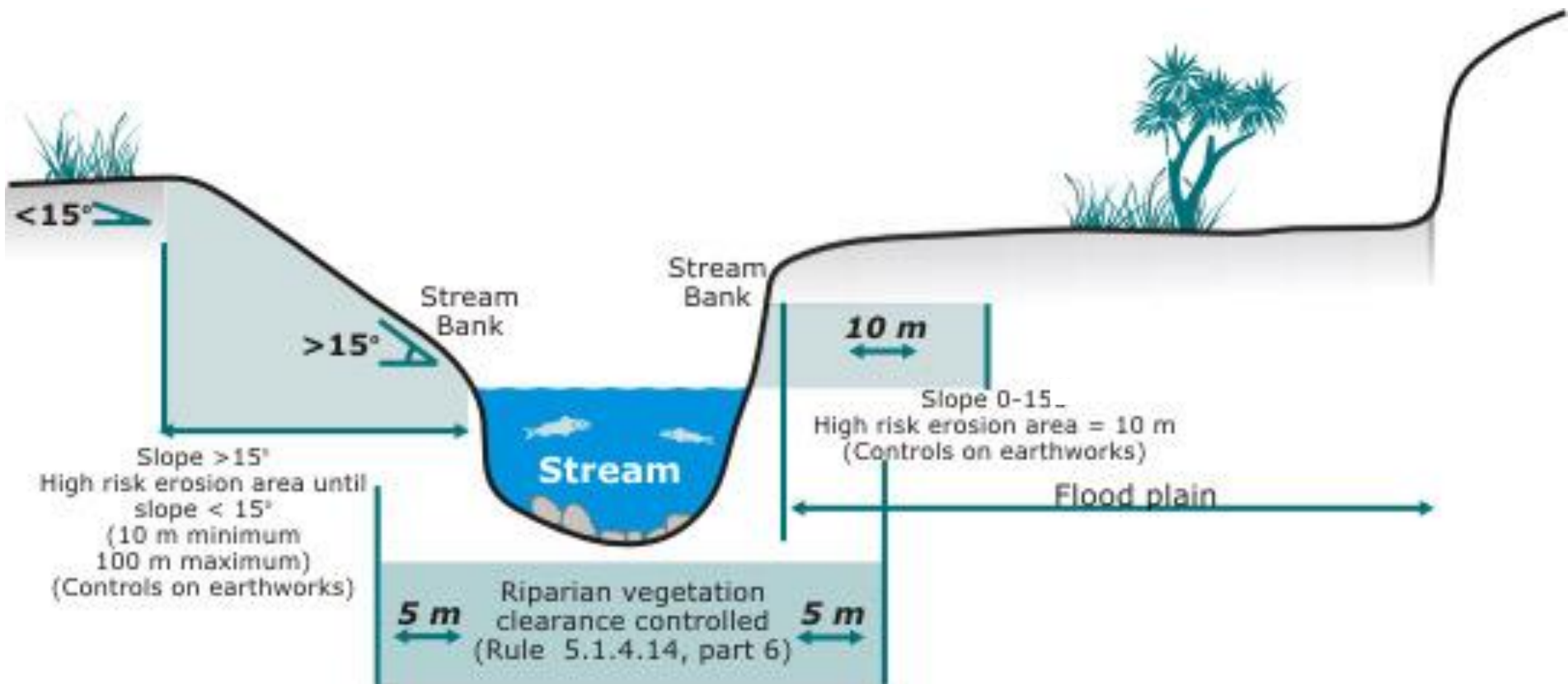
Current WRC Sediment Related Rules

- Earthworks and vegetation clearance
- Cultivation within 2m of a waterbody
- Instream works
- Drainage affecting significant wetland or within 200m of a listed wetland
- Stock exclusion from limited priority waterbodies*
- Permitted activity standards for in-stream works, culverts, bridges, structures etc

Earthworks Rules - “High Risk Erosion Areas”

- steep land (>25 degrees)
- up to 100m from the banks of rivers, lakes and wetlands
- ephemeral watercourses draining >100ha
- cave systems
- sand country/estuary criteria
- floodplains are also a “High Risk Areas”

“High Risk Erosion Areas” Near Water



Consent Triggers

Activities within “High Risk Areas”;

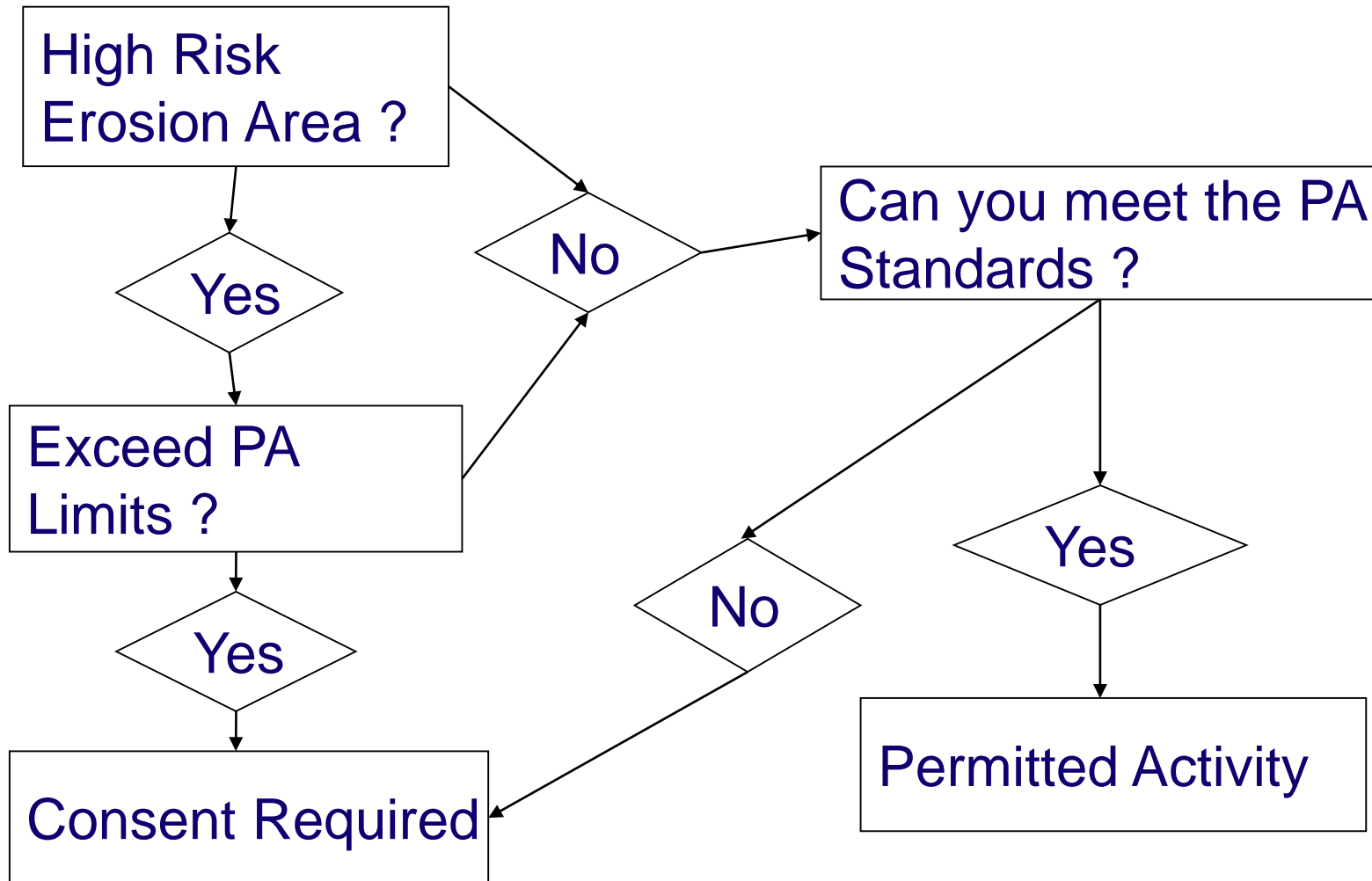
- Roading or tracking > 100m
- Soil disturbance > 2000m² or >250m³
- Cut batters > 3m height over more than 30m
- Stream works and structures
- Earthworks/fill placement in floodplains, wetlands
- **AND** Earthworks that do not meet the Permitted Activity Standards
- Vegetation clearance (riparian, wetlands, steep land)

Permitted Activity Standards

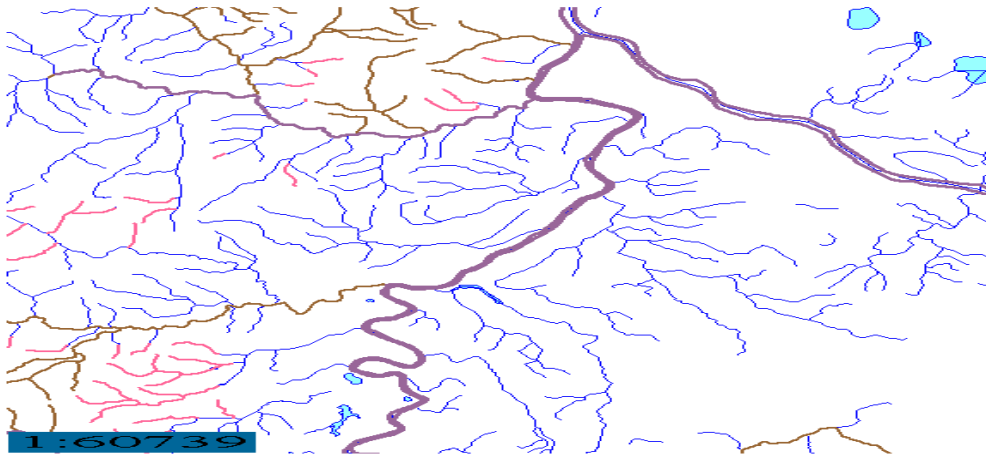
(WRP Rule 5.1.5)

- a. Flooding – no increased effects to neighbouring land
- b. Dust – no objectionable effects beyond the site boundary
- c. Erosion/sediment controls - for all earthworks to avoid the effects of sediment on water bodies and aquatic habitats.
- d. Stormwater discharges must comply with relevant suspended solids standards at all times.
- e. Several others - iwi sites, geothermal areas, fuel storage, vegetation clearance etc

Current Earthworks Rule Framework



Suspended Solids Discharge Standards



- All waters, the discharge shall not exceed 100 gm^{-3} or increase the concentration of suspended solids in the receiving water by more than 10 percent; and either;
 - Waikato Surface Water class 100 gm^{-3}
 - Indigenous Fisheries and Fish Habitat class 80 gm^{-3}
 - Trout Fisheries Spawning Habitat class 25 gm^{-3}
 - Contact Recreation class waters - black disc horizontal visibility greater than 1.6 metres.

Upstream – 4.3 g/m³
suspended solids



Instream Works

Downstream – 1700 g/m³
suspended solids



PA Standard -10% change
(0.43g/m³) Indigenous
Fisheries class (80 g/m³ max)

Permitted Activity Earthworks ?



Works are “nominally”
within the
permitted envelope

Works need to meet
standards similar to
consent requirements





Land Contouring



Waipa Catchment Plan

Developed with co-funding from



Waikato River
Authority

Waikato



REGIONAL COUNCIL

Te Kaunihera ā Rohe o Waikato

Developed collaboratively

Waipa Catchment Committee
Ngati Koroki Kahukura
Ngati Mahanga



RAUKAWA CHARITABLE TRUST
TE POARI MANAAKI O RAUKAWA



Co-funding from



Waipa Catchment Plan

A **20 year plan** to support
the **restoration** and **protection**
of the health and wellbeing of
the **Waipa River**
(and the Waikato River)

Waipa Catchment Plan

- Proactive, prioritised, integrated, voluntary ‘whole of catchment’ approach;
 - goals (7)
 - strategies (45)
 - actions (90)

Implemented collaboratively

In partnership

with Waipa and Waikato river iwi
and catchment stakeholders

Involving

the wider community

Why it's happening



Vulnerability
to erosion

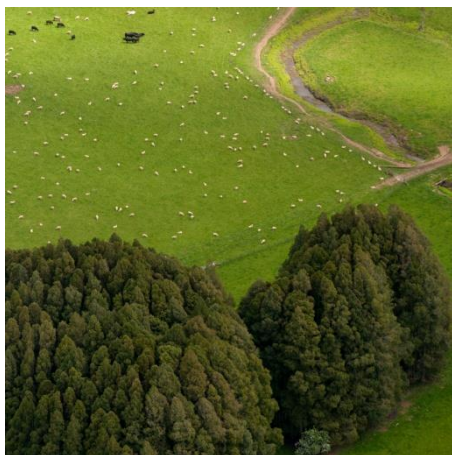


Declining river
water quality



Flood risks

Why it's happening



Loss of
indigenous
biodiversity

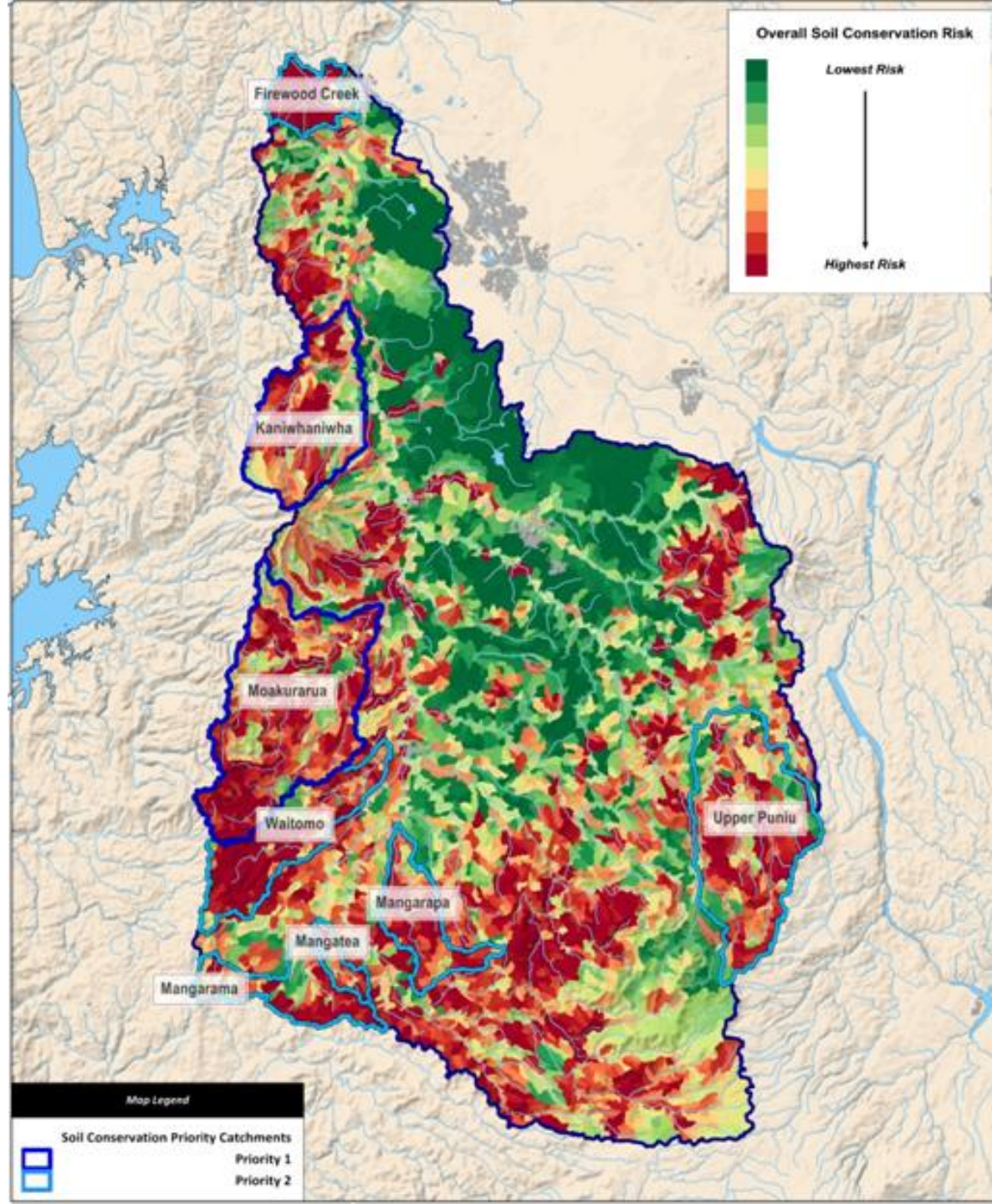


Iwi aspirations
for the river

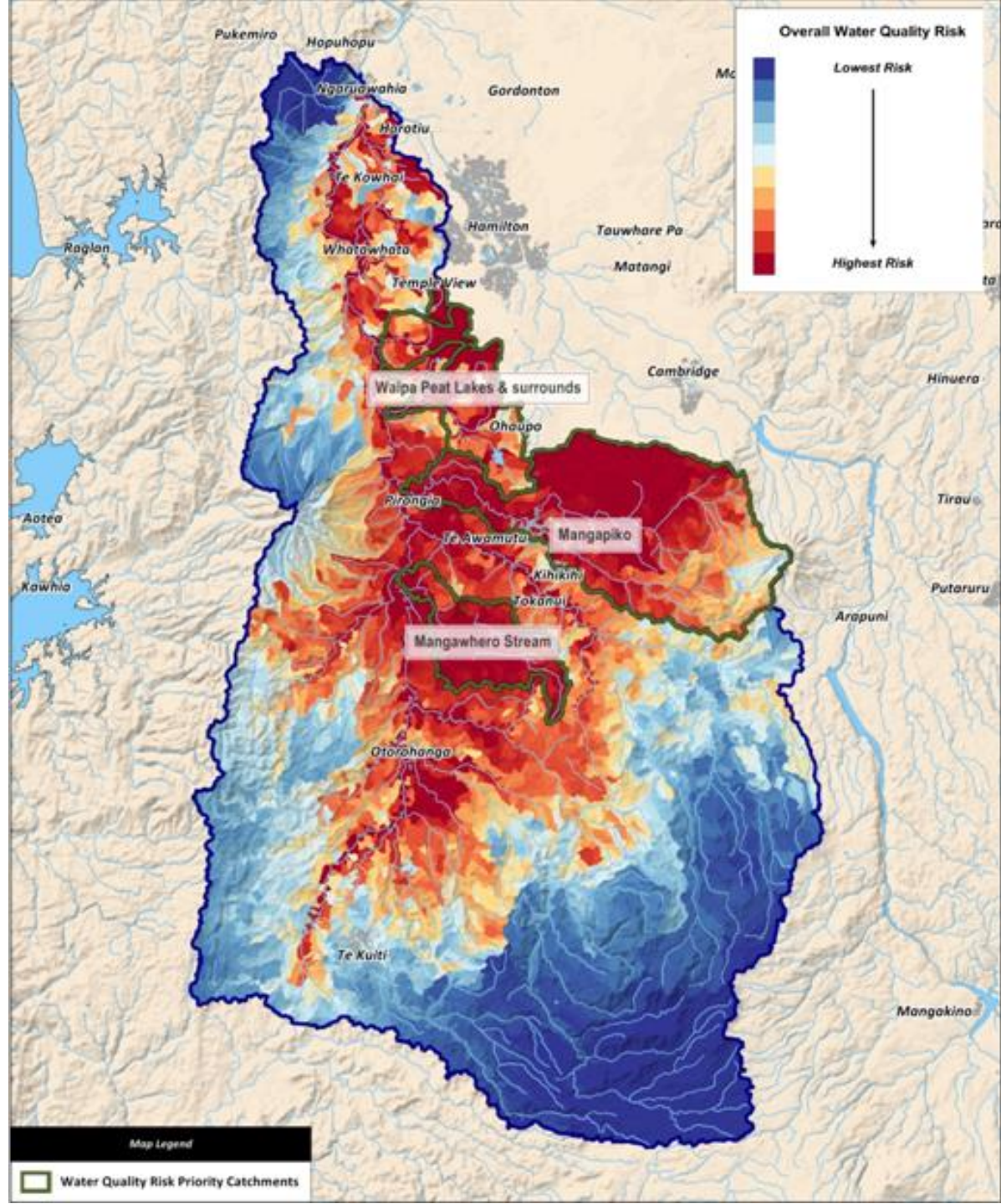


Enhancing current
work programmes
and approaches

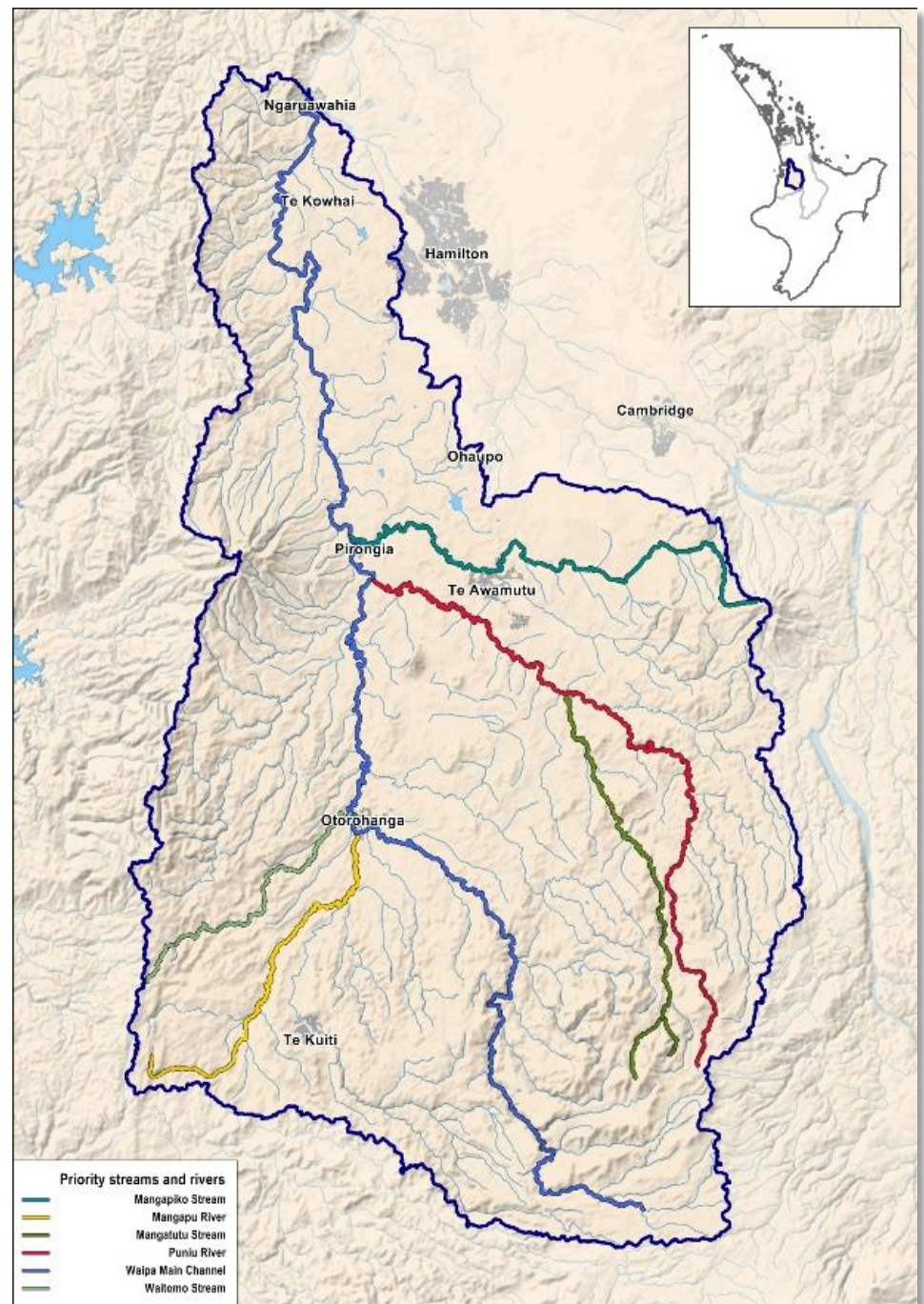
Priority soil conservation areas



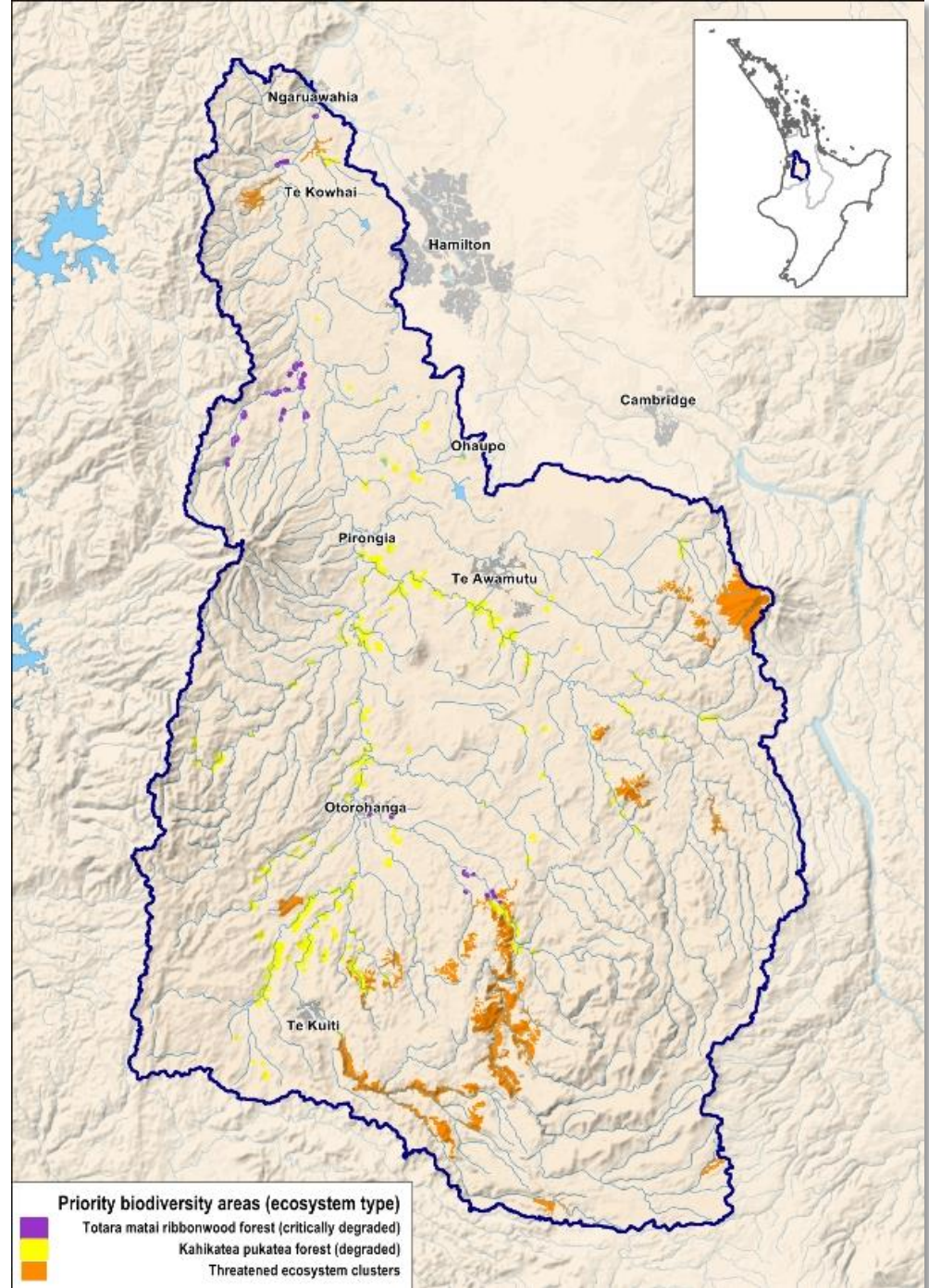
Priority Nutrient areas



Priority streams and rivers for management work



Biodiversity priority areas (ecosystem type)



Typical 'farm plan' work

- River management works
- Planting and fencing to control stream bank erosion
- Land use changes on marginal grazing land
- Protection/enhancement of native vegetation, wetlands, peat lakes
- Organise affordable plant materials
 - Native Plants Scheme
 - Poplar and willow material
- Implementation and follow-up

WRA Funded WRC Lead Projects Commencing 2014/15

Project	Total Project cost	WRA funding approved
Moakurarua River Restoration Project	\$163,575	\$90,650
Waipā Rerenoa - River Restoration Project	\$675,491	\$327,620
Upper Mangatutu Stream Restoration	\$283,010	\$132,663
Implementation of Waipa Catchment Plan soil conservation schemes	\$3,466,100	\$1,000,000
totals	\$4.6M	\$1.55M

Policy Considerations - Some Issues

- How to increase good management practices & level of uptake to improve water quality?
- How accurately can we anticipate changes in land use/intensification ?
- What are the options to incentivise/phase in new requirements?

Critical Contaminant Pathways

- Gully bottoms
 - Trap sediment (phosphorus?) and dung (E.coli ?)
 - Provide opportunity for denitrification
 - May provide for biodiversity
- Historically drained and grazed
- In Future ?
 - Protect/enhance remaining areas (fence and plant)
 - Re-instatement/creation of protected wet/dry gully bottoms as an extensive landscape feature to mitigate the effects of pastoral land use
- Do we know enough about these areas currently?

Critical Contaminant Pathways cont.

- Tracks and raceways, some are poorly sited designed and managed and provide a means by which contaminants are collected and directed towards streams via low crossing points etc = direct discharges = rules?
- Numerous things farmers 'could' do to mitigate land use effects – increased promotion of a 'good practice' approach?

Mandatory 'sediment' requirements ?

- Stock exclusion from water
 - Dairy cows v sheep ?
- 'Protection' of 'all' remaining native vegetation
 - With minor exceptions?
- Protection of remaining wet gully bottoms
 - Severe restrictions on any further drainage ?
- Consent requirements for specified activities
 - (eg earthworks/cultivation/veg clearance etc)
- More stringent permitted activity conditions

Voluntary/Incentives Required ?

- Controlling existing stream bank erosion
- Changes to more appropriate landuses
- Enhancement of biodiversity values
- Re-creation of wetlands/gully bottoms
- Good practice promotion
- Waipa Catchment Plan
 - Priority 1 catchments WRA 35%, WRC 35%, 30% landowner
 - Funding partner = \$\$\$
 - WRC = \$\$ + expertise+ plant materials + info + etc
 - Landowner = \$ + labour/materials + maintenance

'Farm Plan' Approach to Policy Development

- Break down all the activities of interest to their simplest parts
- Analyse which approach, rules, incentives, information etc 'best' deals with each component (collectively or singularly) per contaminant of interest (collectively or singularly)
- Consider how the best option may vary with location and differing current future scenario's
- Consider practical/cost/equity/other considerations

Farm Plan or Single Issue Approach ?

- Farm plan approach – integrated, whole of farm approach dealing with multiple issues simultaneously
 - Eg Sustainable Milk Plans
 - Scope to combine mandatory with voluntary requirements and provide some \$ incentives as a coherent package
 - Tailor made for individual farm, some flexibility but includes specific requirements
- Single issue approach eg Fonterra Water Accord
- Need to consider mechanisms where multiple approaches can work together