

# Channel form and habitat in Te Awarua-o-Porirua Whaitua

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# Channel form & habitat (s5 WIP)

## Why?

1. Physical habitat is one of the three critical components of freshwater ecosystem health... the other two being water quality (s4 WIP) and water quantity/flows (s6 WIP)
2. Contributes to natural character, landscape, visual aesthetics, recreation etc.

# Reminder: Ecosystem health narrative objectives

- Maintain and, where possible, improve the health of periphyton and macroinvertebrate communities in urban streams of the whaitua.
- Improve the health of macroinvertebrate communities in the rural streams.
- Protect high native fish values within the whaitua by improving the health and habitat of native fish communities, particularly in lower reaches and where stream mouths reach the harbour or coast.
- At least maintain (or improve) current level of macroalgae in the harbour (which is not causing a problem).

# Reminder: Eco. health detailed objectives

WMU Group	MCI		Periphyton		Native Fish	
	Now	Objective	Now	Objective	Now	Objective
Coastal catchments	C	C-B	A	A	C	C
Taupo stream and Swamp	C	B	C	B	C	B
Pauatahanui steep rural streams	C-B	A	C	B	B-A	A
Pauatahanui rural streams	C-B	B	C	B+	C	A
Pauatahanui urban streams	C	B	C	C	B	A
Onepoto steep rural streams	C	B	C	B	C?	B
Onepoto rural streams	C	B	C	B	B	A
Onepoto small urban streams	B-A	B	A	A	C	A
Kenepuru stream	C	C-B	C	C	B	B
Porirua stream	C	C+	B	B	C-B	B

# Factors that affect ecosystem health

- Flows (minimums and allocations) – s6 WIP
- Nutrients & sediment – s4 WIP
- Toxicants (copper, zinc, ammonia, nitrate) – s4 WIP

## Now to address in s5 WIP...

- In-stream habitat (bed, banks, channel form)
- Riparian habitat (vegetation, shade)
- Free passage (in the case of fish)
- Spawning areas (fish)

## 5.2 Riparian shading – broad policy

**1. Greater Wellington includes in the PNRP an overarching policy to improve, across the Whaitua, riparian vegetation of streams for erosion and sediment control, bank stabilisation, temperature management (via shading), hydrological flows and control of algae, and to support other ecosystem health, mahinga kai and restoration of habitats.**

# Further info and options for Riparian shading Rec 1

- Endorse existing PRNP policies
- Extend stock exclusion rules eg. to Schedule F1 (currently Category 1 waterbodies only)
- Expand 'Other methods' Sustainable land management practice to include key areas in the Whaitua.

## 5.2 Riparian shading – Non-stat

**2. GW expands its support for extensive, whaitua-wide riparian planting for stream benefits, including through:**

- Priority farm planning design and implementation**
- Increasing funding for riparian planting, as well as improving access to and awareness of the funds**

**3. The streams and locations with highest suitability for riparian planting are prioritised for planting to help achieve the sediment reduction targets and/or ecosystem health objectives.**

**5. Greater Wellington further incentivises and promotes riparian planting, shading and stock exclusion on private land through educational programmes.**

# Further info and options for Riparian shading Rec 2, 3 & 5

- Expand scope/funding of existing programmes:
  - Porirua Lifestyle Sediment Reduction Fund
  - Collaborative Project Contestable Fund
  - Reboot Pauatahanui Vegetation Fund (2006-2015)
- Revise Harbour strategy target dates (currently 2031)
- Complete research to assist determination of location and effective extent of riparian rehabilitation (2016 Target in Harbour Strategy)
- Expand existing educational programmes with residents and students:
  - Best practice example in GW parks
  - Restoration Workshops
  - Work with schools and tertiary institutes

## 5.2 Riparian shading - consenting

**6. Greater Wellington further incentivises and promotes riparian planting through its consenting regime.**

# Further info and options for Riparian shading Rec 6

- Waiver of consent fees (as per Wetland restoration plans )
- Requirement of greenfield development - stream retention and riparian protection

## 5.2 ~~Riparian shading~~ Channel form and physical habitat

4. Greater Wellington and Porirua City Council seek and take opportunities to enhance the natural form and character, ecosystem health and mahinga kai of streams and the harbour across the Whaitua by:

- Investing in riparian planting and shading.
- Reconstructing concrete or channelled reaches to provide physical diversity of banks and bed habitat.
- Reconstructing straightened channels to create natural meander.
- Reconstructing piped or culverted reaches to open daylight channels

# Further info and options for Channel form and physical habitat

- Use fish barrier baseline survey data to inform stream prioritisation and funding

## 5.3 Fish passage

**1. Greater Wellington includes in the PNRP a policy promoting the restoration of streams to achieve the Whaitua ecosystem health objectives.**

# Further info and options for Fish

## passage rec

- Endorse existing PRNP provision:

### **Policy P35: Restoring fish passage**

The passage of indigenous fish and koura shall be restored where this is appropriate for the management and protection of indigenous fish and koura populations.

### And PRNP method:

#### **Method M21: Fish passage**

Wellington Regional Council will support the maintenance and restoration of fish passage in the region by:

- (a) developing and providing information on fish passage, and
- (b) providing training and guidance to landowners and managers, and
- (c) restoring fish passage in priority areas.

- Or expand to identify priority areas in the Whaitua
- Use baseline survey data to prioritise and target for restoration investment

## 5.4 Spawning areas

**1. Greater Wellington and Porirua City Council seek and take opportunities to enhance the natural form and character, ecosystem health and mahinga kai of streams and the harbour across the Whaitua by:**

- Supporting and undertaking the restoration of native fish and inanga spawning habitat**

# Further info and options for spawning area recs

- Identify (map) currently known important spawning areas (already done for inanga)
- Erect information signs in area educating public
- Restrict activities in those areas (compulsory stock exclusion, no motorised or trampling recreation etc?)

## 5.5 Ephemeral streams

1. Endorse or strengthen rules in PNRP around infilling of streams and their headwaters.

- Endorse recommended amendments to the PNRP re. activities in beds of lakes and rivers (P102)

## 5.5 Ephemeral streams

2. Across the Whaitua, Greater Wellington supports and drives improved management of critical source areas, including discouraging stock access through planting in headwaters.

3. Greater Wellington further incentivises and promotes the adoption of farm planning.

# Further info and options for Ephemeral streams recs 2 & 3

- Promotion and adoption of farm planning, including small and medium sized farms
- Farm plans include:
  - Areas identified and managed
  - Identifying erosion prone land
  - Discourage stock access

# Questions?