

Waihī Estuary Catchment



02 Dec 2019

Meeting





Catchment Characteristics

- Very well draining volcanic soils in upper catchment
- Very poor draining gley soil in lower catchment
- Upper catchment is mostly ephemeral
- Surface water begins as springs, often at the head of gullies
- Surface water system channelized and straightened in lower catchment



- Currently Permanent health warning against the collection of shellfish
- 2018 Cyanobacteria bloom observed and health warning issued for contact recreation



Median faecal coliform concentrations at shellfish gathering locations



The ecological health of the Waihī Estuary is considered poor and this decline is continuing.

 1943 – 2011- Seagrass extent in the estuary dropped by almost 80% with a period of stabilisation between 1963 and 1981 followed by a further drop linked to declining water quality with nutrient and sediment levels too high to support seagrass.



Seagrass extents in Waihī Estuary in 1943 (green) and 2011 (purple) overlain on the 1943 aerial photography.

• 2015 – Oxidised nitrogen in Pongakawa Stream at SH2 had increased by around 50% since 1989.



Oxidised nitrogen - Pongakawa Stream SH2

Scale of challenge

For the estuary to reach a moderately healthy state the following reductions are require, as a best estimate of current scientific data:

- *E.coli* reduce by 50%
- Nitrogen reduce by 66%
- Phosphorous reduce by 30%
- Sediment reduce by 14%*

		Total load to Waihī estuary	
		No mitigation	M1 mitigation
Total Nitrogen	Natural	107 t/yr	N/A
	Current	624 t/yr	↓ 11%
	Target	212 t/yr (↓66%)	
Total Phosphorus	Natural	37 t/yr	N/A
	Current	58 t/yr	√9%
	Target	18 (↓30%)	
E.coli	Natural	4.5 x 10 ¹⁴ n/yr	N/A
	Current	1.1 x 10 ¹⁵ n/yr	√13%
	Target	√~50%	
Total Suspended Solids	Natural	3379 t/yr	N/A
	Current	8171 t/yr	√2%
	Target	2014 sedimentation rates (9%)*	

Round Table

What's your connection to the catchment?

What are you currently doing to improve water quality?

What do you see as the opportunities in the catchment?













