Spatial scale for objective setting

WMUs for Te Awarua-o-Porirua

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Committee decisions sought

- Endorse the proposed WMUs
- Endorse proposed freshwater objectives for each of the five new WMU
- Endorse proposed WMU names or suggest alternatives

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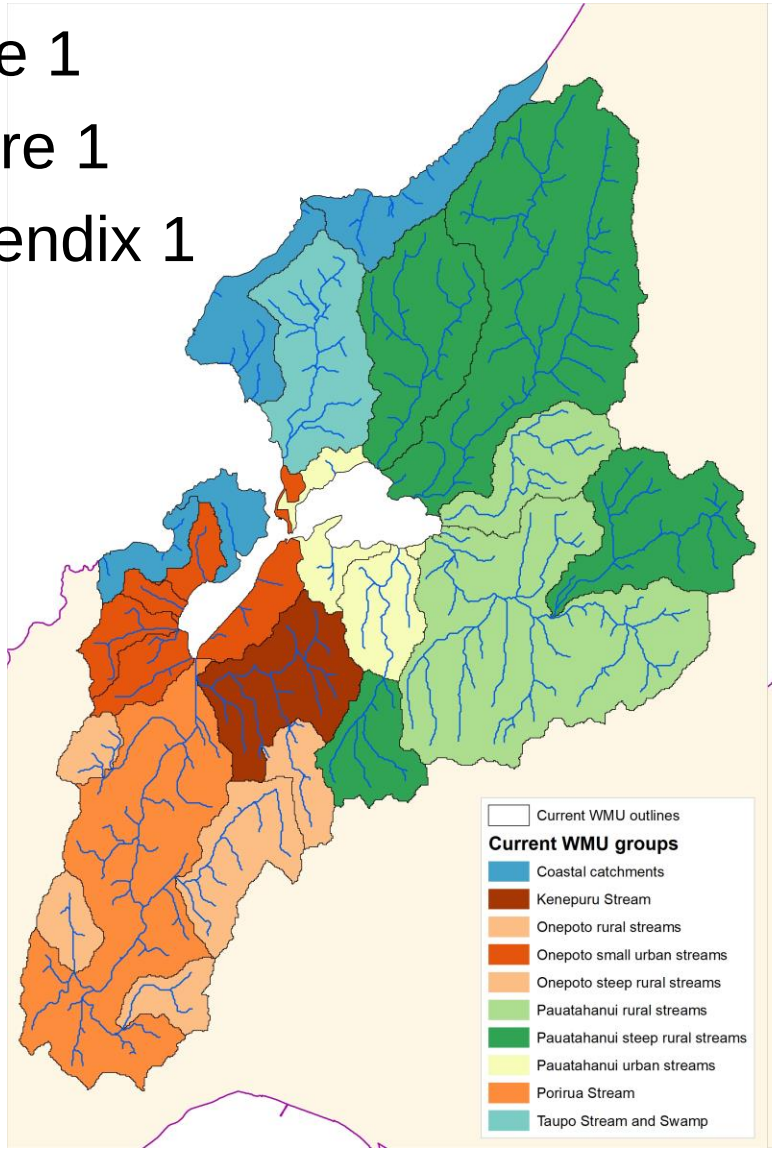
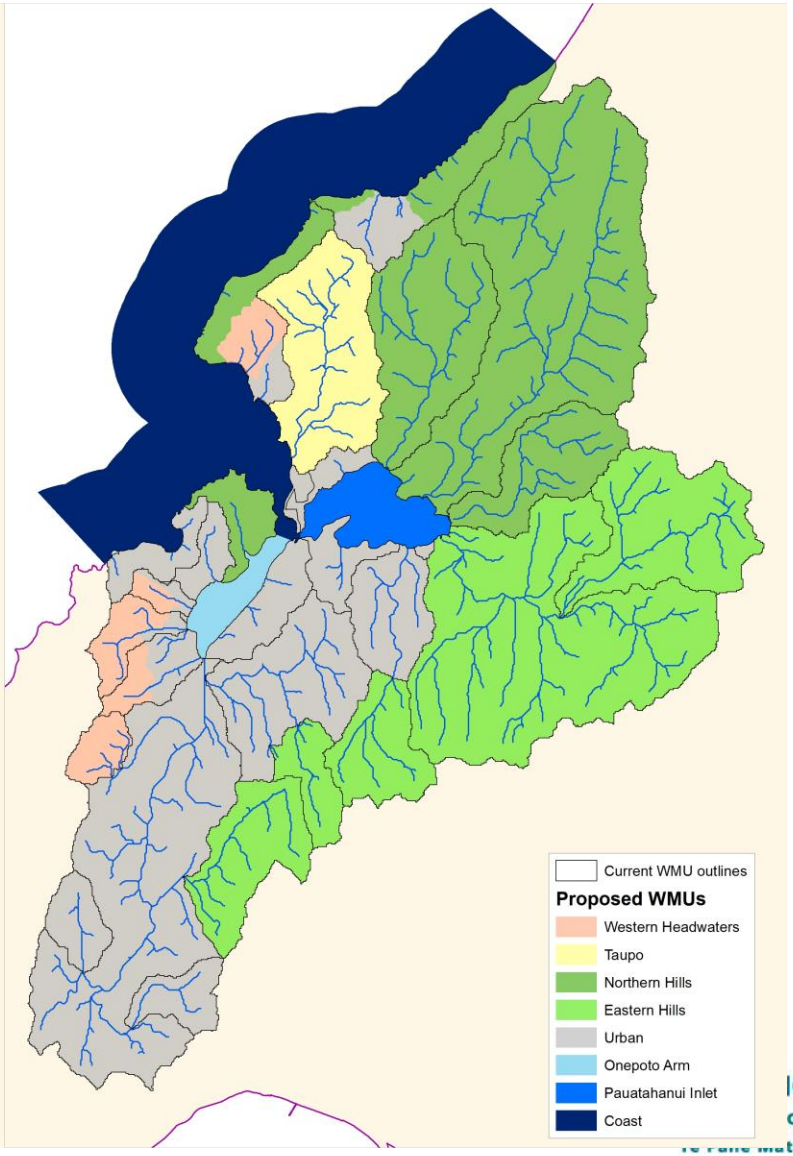
Why simplify?

- Risks in fine level of specificity for objective setting and management recommendations
- Similarities in the values, objectives and predominant land uses
- Recommended policy package and management responses apply equally across all catchments
- Simplicity in administration, implementation and monitoring
- Some changes in objectives as a result

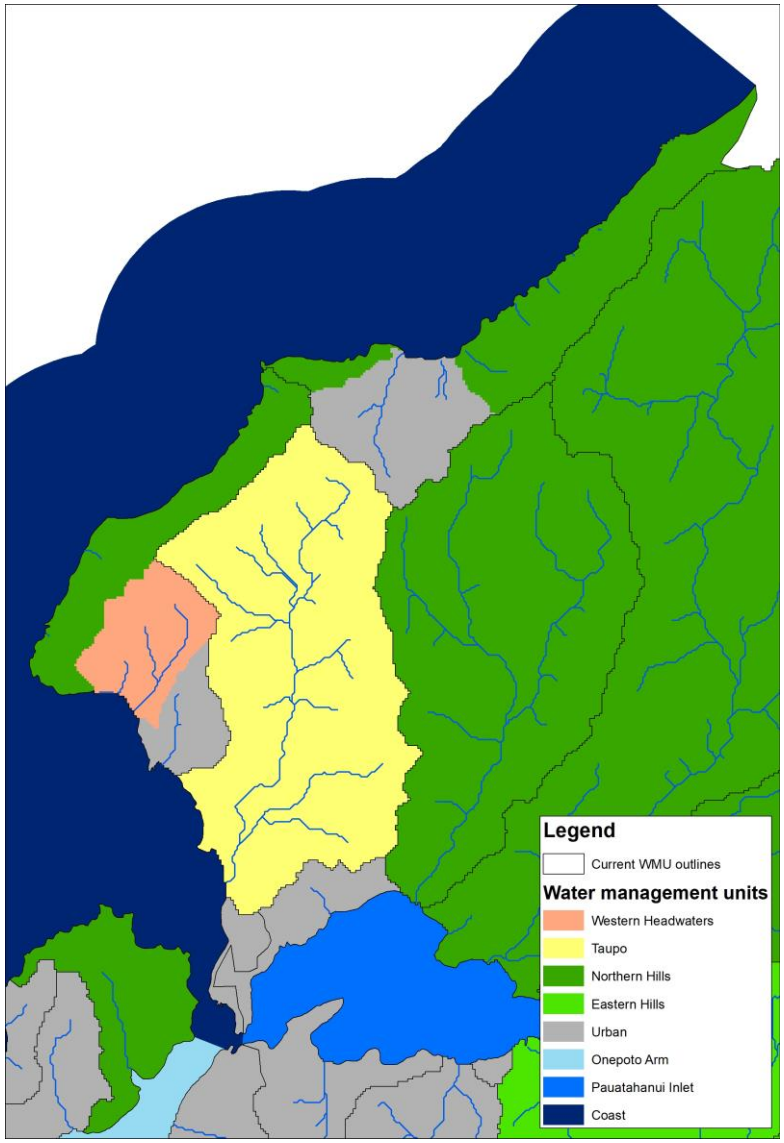
Proposed changes

- Table 1
- Figure 1
- Appendix 1





Hongoeka to Pukerua *and* Pukerua



Hongoeka to Pukerua	Western Headwaters
	Northern Hills
	Urban
Pukerua	Northern Hills
	Urban

Endorse the splitting of sub catchments within the Hongoeka to Pukerua and Pukerua WMUs into the Western headwaters, Northern hills and Urban WMUs

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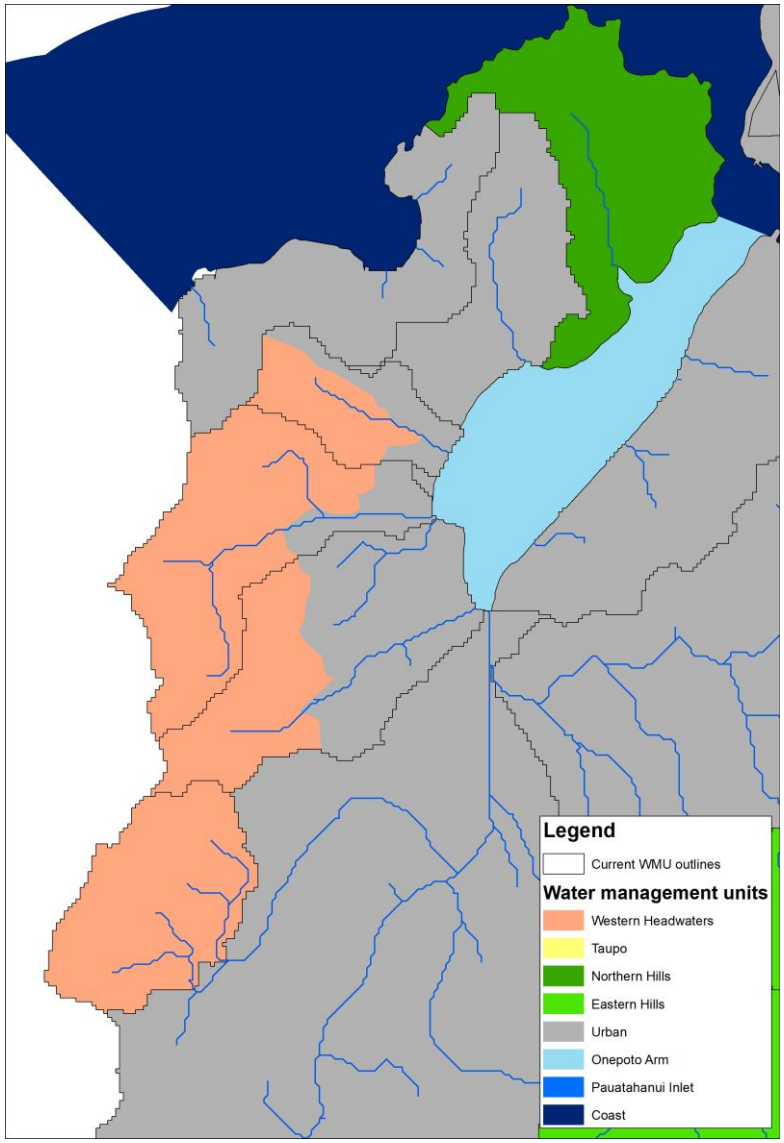
Hukarito *and* Mahinawa Streams



Hukarito Stream	Western Headwaters
	Urban
Mahinawa Stream	Western Headwaters
	Urban

This also includes splitting the headwaters and lower reaches of Tangare, Urukahika and Mitchell Streams

Endorse the splitting of these streams into the Western Headwaters and Urban WMUs

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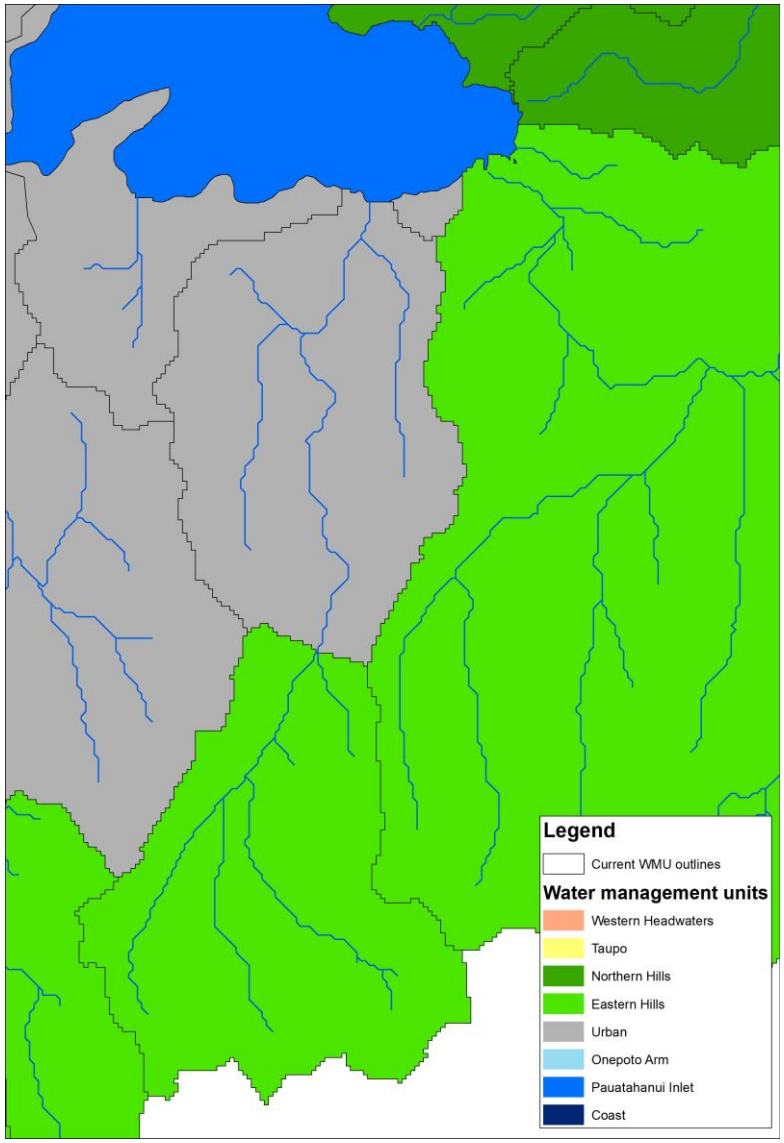
Duck Creek



Upper Duck Creek	Eastern Hills
Lower Duck Creek	Urban

Endorse the inclusion of upper Duck Creek in the Eastern Hills WMU (recommended) or Northern Hills WMU

Endorse the inclusion of lower Duck Creek in the Urban WMU (recommended) or Eastern Hills WMU

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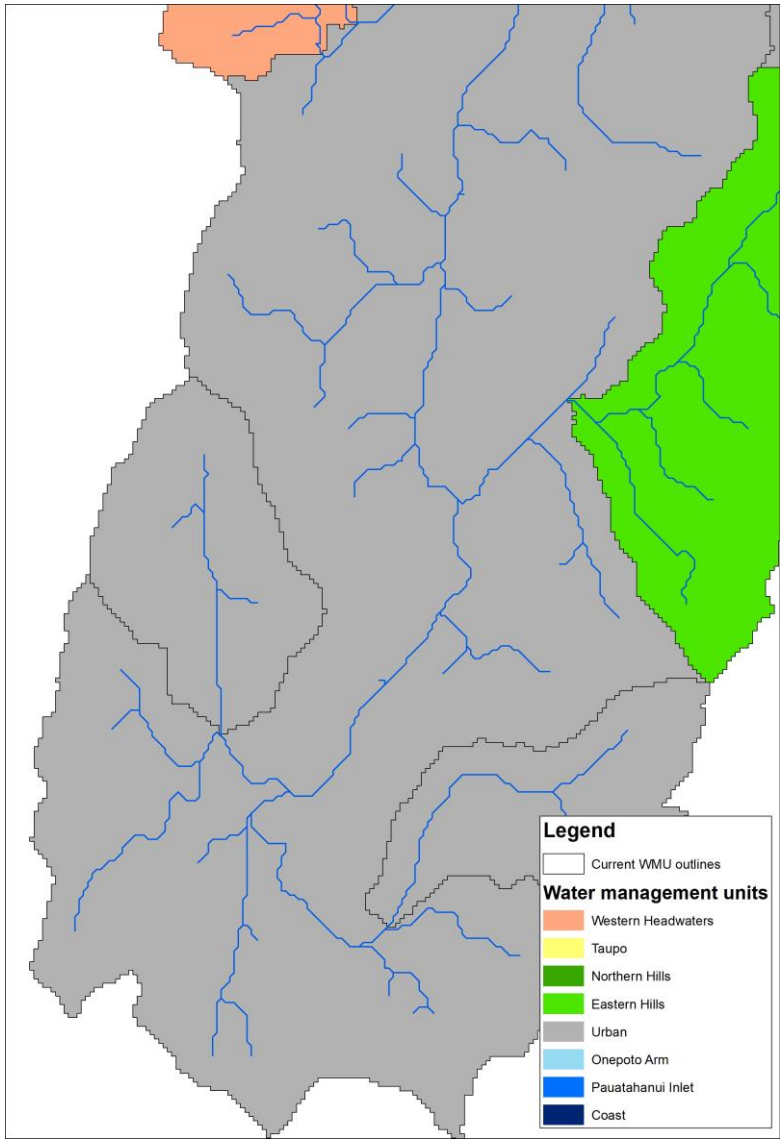
Stebbings



Stebbings Stream	Urban

Endorse the inclusion of Stebbings Valley in the Urban WMU (recommended) or Eastern Hills WMU

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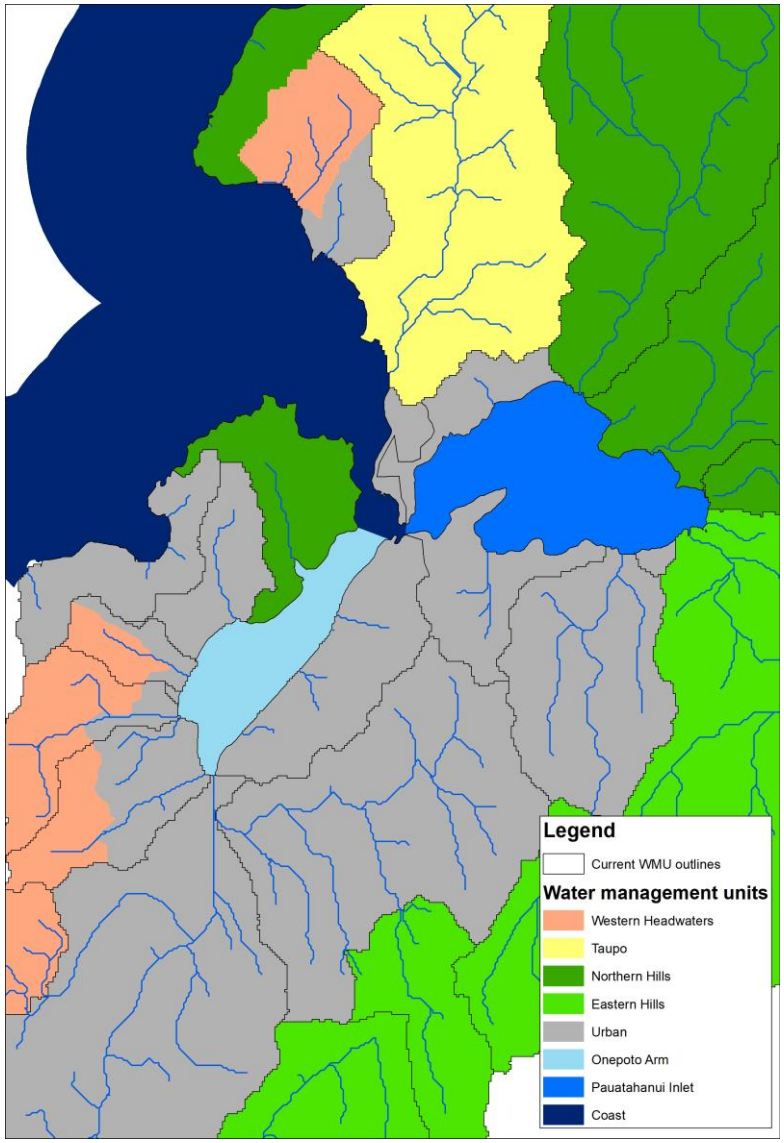
Small urban *and* urban fringe catchments



Pauatahanui fringe streams	Urban
Onepoto Fringe	Urban
Titahi	Urban

Endorse the inclusion of small urban and urban fringe catchments in the Urban WMU

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Ammonia toxicity current state and objectives

Current WMU	Proposed WMU	Ammonia toxicity			
		Current		Proposed	
		Current State	Objective	Current State	Objective
Taupo Stream	Taupo	B	A	A	A
Rangituhi Stream	Western Headwaters	B	A	A	A
Hukarito Stream		C	A		
Mahinawa Stream		B	B		
Hongoeka to Pukerua		B	A		
Pukerua	Northern hills	B	A	A	A
Hongoeka to Pukerua		B	A		
Whitireia		B	A		
Horokiri and Motukaraka		B-A	A		
Kakaho Stream		B	A		
Ration Creek		B	A		
Judgeford Stream	Eastern hills	B	A	A	A
Pauatahanui Stream		B	A		
Takapu Stream		B	B		
Upper Kenepuru		B	A		
Upper Duck Creek		B	A		
Pukerua	Urban	B	A	A median and C max	A median and C max
Pauatahanui fringe streams		C	B		
Lower Duck Creek		B	A		
Belmont Stream		C	C		
Stebbings Stream		B	B		
Onepoto Fringe		C	B		
Hukarito Stream		C	A		
Mahinawa Stream		B	B		
Titahi		C	B		
Kenepuru		C	C		
Porirua		C-A	C-A		

- pH correction to the current state
- Current conditions are an A attribute state, except for peak concentrations in the urban WMU in C
- Update all objectives to maintain current

Endorse the updating of the Ammonia toxicity current state and associated objectives to maintain current state

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Nitrate toxicity current state and objectives

Current WMU	Proposed WMU	Nitrate toxicity			
		Current		Proposed	
		Current State	Objective	Current State	Objective
Taupo Stream	Taupo	B	A	A	A
Rangituhi Stream	Western Headwaters	B	A	A	A
Hukarito Stream		B	B		
Mahinawa Stream		B	B		
Hongoeka to Pukerua		B	A		
Pukerua	Northern hills	B	A	A	A
Hongoeka to Pukerua		B	A		
Whitireia		B	A		
Horokiri and Motukaraka		B-A	A		
Kakaho Stream		B	A		
Ration Creek		B	A		
Judgeford Stream	Eastern hills	B	A	A	A
Pauatahanui Stream		A	A		
Takapu Stream		B	B		
Upper Kenepuru		B	A		
Upper Duck Creek		B	A		
Pukerua	Urban	B	A	A for median & B for 95%	A for median & B for 95%
Pauatahanui fringe streams		A	A		
Lower Duck Creek		B	A		
Belmont Stream		B	B		
Stebbings Stream		C	B		
Onepoto Fringe		A	A		
Hukarito Stream		B	B		
Mahinawa Stream		B	B		
Titahi		A	A		
Kenepuru		B	B		
Porirua		B	B		

- Reviewed monitoring and modelling data
- Peak current conditions likely A attribute state, except for peak concentrations in the urban WMU in B
- Update all objectives to maintain current

Endorse the updating of the Nitrate toxicity current state and associated objectives to maintain current state.

Reconsider the attribute state objective for the Urban WMU.

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Committee decisions sought

- Endorse the proposed WMUs
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Objective timeframes

WMU name	*E. coli*			Ammonia			Nitrate			Dissolved Zinc			Dissolved Copper			Periphyton			MCI			Native fish		
	Current state	Objective	Time frame	Current state	Objective	Time frame*	Current state	Objective	Time frame*	Current state	Objective	Time frame*	Current state	Objective	Time frame*	Current state	Objective	Time frame*	Current state	Objective	Time frame*	Current state	Objective	Time frame *
Taupo	E	B	2040	A	A	M	A	A	M	B-C	A	2040	D-C	B	2040	C	B	2040	C	B	2040	C	B	2040
Western headwaters	A	A	M	A	A	M	A	A	M	A	A	M	A	A	M	A	A	M	A	A	M	C	A	2040
Northern Hills	E	B	2040	A	A	M	A	A	M	A	A	M	A	A	M	C	B	2040	C-B	A	2040	B-A	A	2040
Eastern Hills	E	C	2040	A	A	M	A	A	M	A	A	M	A	A	M	C	B	2040	C-B	B	2040	B	A	2040
Urban	E	C	2040	C	A/C	2040	B	A/B	M	D	C	2040	D	B/C	2040	C-B	B	2040	C	C	M	B/C	B	2040

WMU Name		Enterococci			Total zinc in sediment			Total copper in sediment			Macro algae			Sedimentation rate		Muddiness		Muddiness	
		Current state	Objective	Timeframe	Current state	Objective	Timeframe*	Current state	Objective	Timeframe*	Current state	Objective	Timeframe*	Objective	Timeframe	Objective	Timeframe*	Objective	Timeframe*
Onepoto Arm	Intertidal	D	C	2040	B	B	M	A	A	M	B	B	M	The average sedimentation rate is less than 1mm per year in the Onepoto Arm (assessed as the rolling average over the most recent five years of data)	2040	Sediment mud content does not exceed 20% in the intertidal sediments and should not increase from current state	M	Spatial extent of soft mud shall not exceed 15% of the available intertidal area and no increase in soft mud area from current	M
	Subtidal				C	C	M	B	B	M									
Pauatahanui Arm	Intertidal	D	B	2040	A	A	M	A	A	M	B	B	M	The average sedimentation rate is less than 2mm per year in the Pauatahanui Arm (assessed as the rolling average over the most recent five years of data)	2040	Sediment mud content does not exceed 20% in the intertidal sediments and should not increase from current state	M	Spatial extent of soft mud shall not exceed 15% of the available intertidal area and no increase in soft mud area from current	M
	Subtidal				B	B	M	A	A	M									
Coast		B	B	2040															

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