

Uretara

Sub-Catchment Action Plan 2012



The Uretara Sub-Catchment Action Plan is one of a series about the sub-catchments surrounding Tauranga Harbour. This action plan provides an analysis of the current land management issues, a summary of the available physical resources in the Uretara sub-catchment, and planned action for land and resource use in the sub-catchment.

Published September 2012



Introduction

The Uretara sub-catchment includes the township of Katikati and spreads west of Katikati to the top of the Kaimai Ranges. It is 4100 hectares in area and flows in an easterly direction to Tauranga Harbour. The Uretara sub-catchment is part of the Tauranga ecological district.

The sub-catchment is about 12 km long and four km wide. It includes 171 km of stream margins and 11 km of harbour margin. The primary waterway in the sub-catchment is the Uretara River. There are four named tributary streams (Boyd, McKinney, Quarry and Wharawhara) and numerous unnamed tributaries. The Uretara River and its tributaries are classified as aquatic ecosystem streams.

The most widely spread class of vegetation cover in the sub-catchment is indigenous vegetation (bush) at 38 percent of total area. It is found predominantly in the upper catchment within the Kaimai Ranges. Pastoral land cover is mainly in the middle and lower sub-catchment (37 percent), as is horticultural land cover (17 percent).

Sub-catchment soils are derived from air-fall ash and belong to the Katikati soil series. Soils on the stream flats are recent and consist of fluvial sands, silts, gravels and boulders. The geology of the sub-catchment is derived from Taupo and Tuhua tephra overlying loess and weathered rhyolitic tephra. These soils are versatile with no rooting barrier, however the physical structure is poor and soils are vulnerable to erosion under poor vegetation cover or intensive land-use.



Source: BOPRC, ESRI, i-cubed, USGS, NASA, NOA



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Land management

What is the problem?

Soil has been and continues to be lost from the catchment at moderate to high rates, especially where steep land is subject grazing, or where earthworks are not carefully managed. Bay of Plenty soil sampling sites indicate generally healthy soils, with the exception of high levels of nitrogen on sheep, beef and deer farms, and excessively high levels on dairy farms (which have increased over 300 percent in the last ten years). While positive from a production perspective, high nitrogen levels represent a risk to water quality through leaching and eutrophication.

Soils on kiwifruit orchards have healthy nitrogen levels but very high and increasing levels of phosphorus. While phosphates do not leach in the same way as nitrogen, they still represent a significant risk to water quality if washed into waterways by erosion.

Livestock access to a stream or wetland, or the area immediately around them, degrades water quality by increasing nutrients, faecal matter and sediment in the waterway. Stock access can increase stream bank erosion by stock treading and damaging soil structure, and by eating and degrading vegetation on the stream bank.

Water quality may also be degraded by excess nutrients in streams from fertilisers, farm runoff and urine patch leaching. Sediment can enter waterways from major construction sites (such as subdivision and roading) and forestry at harvest time. These and other pollutants are generally unintentional by-products of activities such as farming and construction.

Water quality monitoring by the Regional Council in 2011 shows the Uretara Stream met the requirements of the Ministry of Health guidelines for swimming but exceeded the median faecal coliform standard of 100 cfu/100ml for stock water supply.

What will we (Bay of Plenty Regional Council) do about it?

- Promote riparian margin fencing to exclude stock and protect water quality.
- Promote and help landowners plant riparian margins to act as filters and help reduce pollutants entering streams through surface runoff.
- Encourage stock stream crossings, such as bridges, to protect streams' water quality.
- Support retirement of steep erodible land.
- Protect existing indigenous biodiversity.
- Protect existing wetlands.
- Work with landowners, other agencies and other sections of Regional Council to ensure consistent land and water quality management.

Current riparian margin fencing protection:

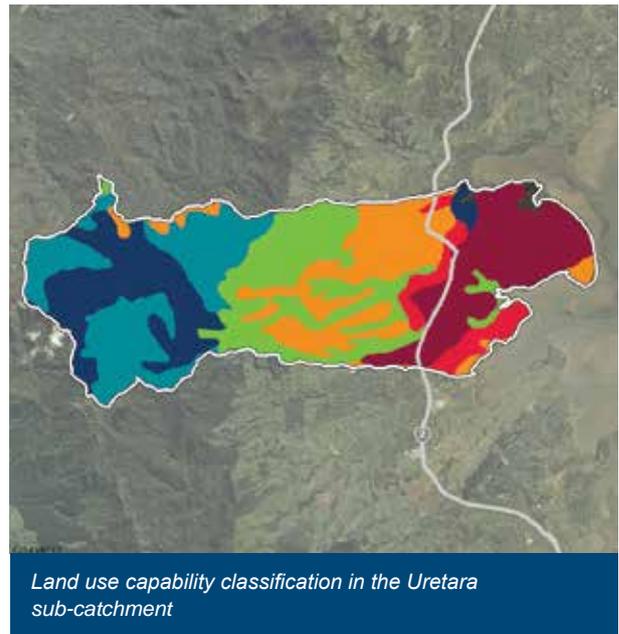
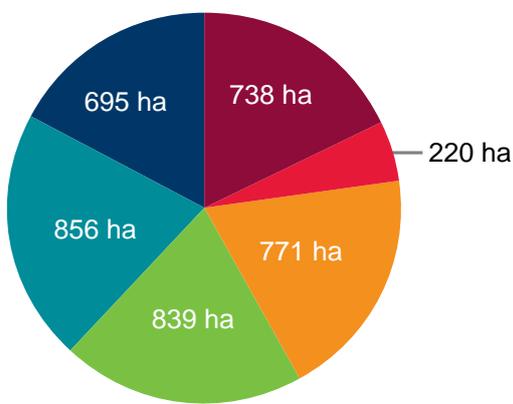


Stock exclusion indicates those stream margins that are fenced off or land that is currently not available for stock grazing, for example, horticulture, forestry, and native bush.

Land use capability classification in the Uretara sub-catchment

Sustainable land use and management is essential to ensure the Bay of Plenty maintains clean waterways, productive soils and indigenous biodiversity. How the land is used and managed can have a direct effect on its potential long-term sustainability.

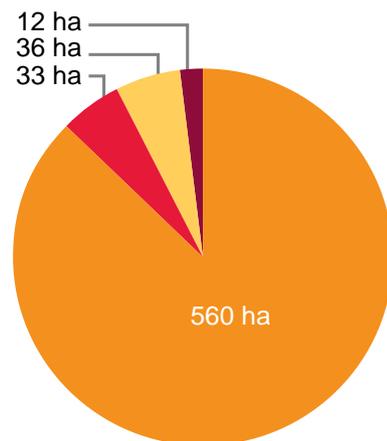
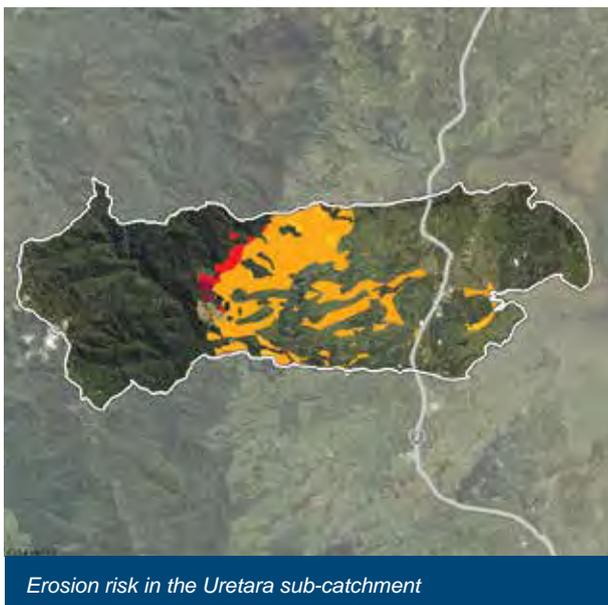
The majority of land in this sub-catchment is Land Use Capability (LUC) Class 6, 7 and 8 - rolling and steep to very steep landscapes. Both LUC Class 6 and 7 lands are in the middle and upper catchment. Highly productive LUC Class 2, 3 and 4 - gentle to rolling lands - are primarily in the mid to lower catchment.



LUC Class	LUC Units	Percent
2	2e 1	18
3	3e 1, 3w 1	5
4	4e 1, 4e 1+6e 2, 4e 9, 4w 1	19
6	6e 2, 6e 2+8e 2, 6e 11	20
7	7e 8	21
8	8e 4, 8e 5, 8w 1	17

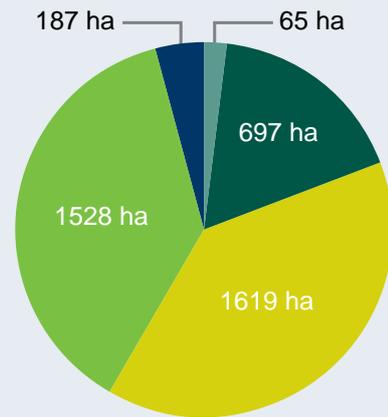
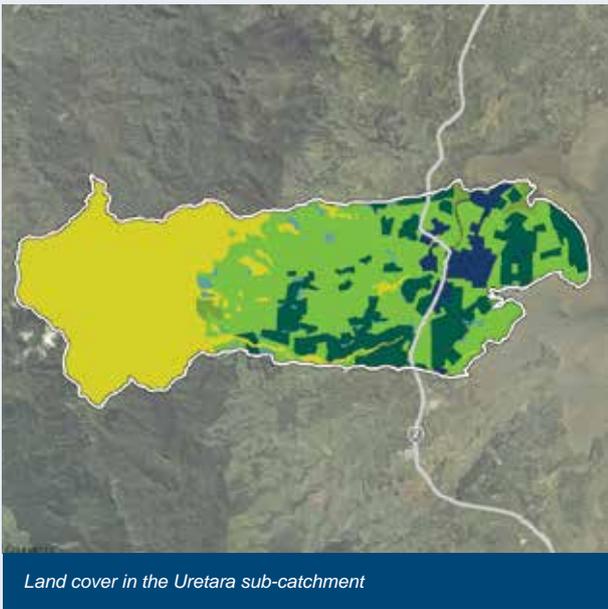
Erosion risk in the Uretara sub-catchment

A high proportion of Land Use Capability Class 6 land in the Uretara sub-catchment is medium-risk, erosion-prone land due to pastoral land use.



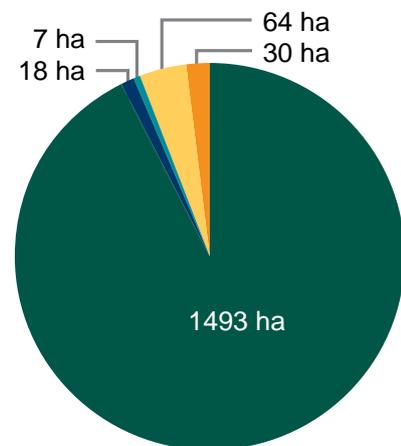
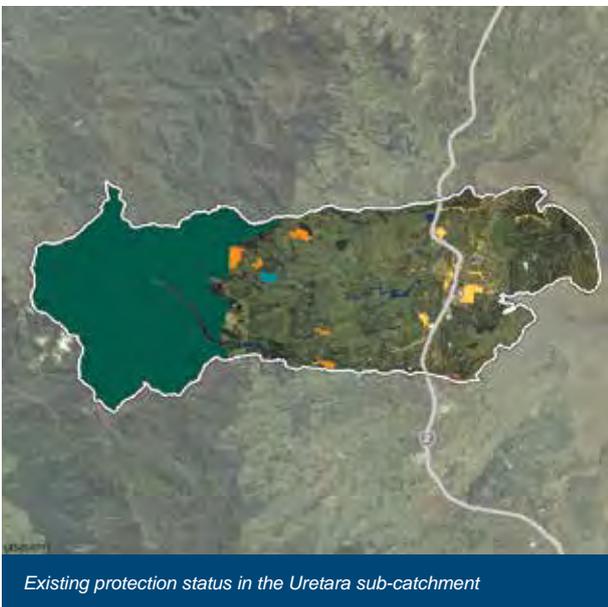
Land Use	Risk	Percent
Pasture	Medium	13
Pasture	High	1
Exotic forest	Medium	1
Exotic forest	High	0.3

Land cover in the Uretara sub-catchment



Vegetation	Percent
Exotic	2
Horticulture	17
Indigenous	39
Pasture	37
Urban	4

Existing protection status in the Uretara sub-catchment



Class	Percent
DOC	36
BOPRC Covenant	0.4
QEII	0.2
District Reserve	2
WBOPDC Covenant	1

Land management survey 2011

Field work

In developing the Uretara Sub-Catchment Action Plan, Bay of Plenty Regional Council undertook field surveys of 27 properties in the catchment area between April and October 2011. The properties surveyed covered 28 percent of the catchment. Priority was given to large properties that had waterways flowing through them or along their boundary. Areas with formal protection were not surveyed as they already had action plans in place. Field work included an assessment of land use, stream margins, erosion features and biodiversity features.

The table summarises the field work:

Land use	<ul style="list-style-type: none">▪ Type and rationale.▪ Land Use Capability classification based on physical resources.
Stream margins	<ul style="list-style-type: none">▪ Protection measures (if any).▪ General condition and upkeep.▪ Estimated length (both protected and unprotected).▪ GPS track of any stream channels not evident in GIS database maps.
Erosion features	<ul style="list-style-type: none">▪ Estimated size and trend direction.▪ Photographs and GPS points (either at feature or where the photo was taken).
Biodiversity features	<ul style="list-style-type: none">▪ Estimated extent of land area covered and the type of vegetation (e.g. native, introduced species).

Land owner feedback

Bay of Plenty Regional Council, NZ Landcare Trust and Department of Conservation held a public meeting with land owners on 5 and 18 July 2011 to gather their concerns, challenges and priorities. The land management issues raised included:

- Sediment management and control
- Water quality status is unknown
- More monitoring needed including water take, water quality, peak flow and point sources
- Pest control and biodiversity threats in the Kaimai range
- Pest plant control in planted areas and on stream banks
- More robust land management regulations, including getting stock out of streams and adjustment to the Riparian and Biodiversity Management Plans
- Education and communication around land issues

Iwi/hapū feedback

“Ngāi Tamawhariua hapū tautoko the efforts of Regional Council to improve the mauri and water quality of rivers within our rohe, and Tauranga Moana in general. In particular, Ngāi Tamawhariua support actions that will restore the health and abundance of traditional kai such as tuna and watercress. We would love to see people heading down to swim in the river as we used to. Clean water to swim and healthy kai stocks are indicators of good stream health from our perspective.”

Actions

The three main land management issues common to the surveyed properties in the Uretara Sub-Catchment areas are set out in the table below. Proposed actions to maintain and improve riparian protection, erosion, unsuitable land use and biodiversity loss within the catchment area are listed along with who is involved to implement the action.

Land management issues and solutions

Actions	Milestones	Who is involved?
<p>Improving riparian protection</p> <ul style="list-style-type: none"> ▪ Work with landowners to apply sustainable land use methods and practices to maintain and/or repair streambanks and to improve water quality. ▪ Remove all stock access to streams; fence remaining 25 km and start planting of riparian margins to eliminate the effects of livestock, polluted water runoff and erosion. ▪ Begin stream margin remedial works such as bank re-contouring, riparian planting and engineering works - using relevant legislation relating to riparian management. ▪ Identify site-specific solutions. 	<p>2.4 km of new riparian fencing per year</p> <p>1 km of riparian planting per year</p>	<ul style="list-style-type: none"> ▪ Bay of Plenty Regional Council ▪ Landowners ▪ Western Bay of Plenty District Council ▪ NZ Landcare Trust working with community care groups
<p>Improve erosion control and appropriate land use practices</p> <ul style="list-style-type: none"> ▪ Apply property level management plans to LUC class 6 & 7 pastoral and forestry land that has been identified as eroding or at risk of eroding. ▪ Promote the need for land use change on LUC class 7 land pastoral land – advocate land retirement, forestry and suitable stock regimes. ▪ Work with landowners to apply soil and water conservation methods and good land management practice to maintain and/or repair landscapes. ▪ Increase the awareness of cattle and deer at high stocking rates on steeper slopes. ▪ Ensure that landowners apply appropriate land management practices. 	<p>42 properties with 'at risk' land have management plans by 2022</p>	<ul style="list-style-type: none"> ▪ Bay of Plenty Regional Council ▪ Landowners ▪ Western Bay of Plenty District Council ▪ Department of Conservation ▪ NZ Landcare Trust working with community care groups
<p>Improve biodiversity protection and enhancement</p> <ul style="list-style-type: none"> ▪ Advocate further covenanted areas within the sub-catchment. ▪ Continue tree planting on private land in native or non-invasive exotic species. ▪ Liaise with Waikato Regional Council and Department of Conservation on coordinating management of the Kaimai Mamaku Range and its catchments as part of the Kaimai Catchments Project. ▪ Work with landowners and community groups to protect identified biodiversity areas in the sub-catchment by establishing native plant populations and controlling nuisance populations of pest plants and animals. 	<p>By 2022 an additional 21 sites are managed for biodiversity protection and enhancement</p>	<ul style="list-style-type: none"> ▪ Bay of Plenty Regional Council ▪ Landowners ▪ Western Bay of Plenty District Council ▪ Department of Conservation ▪ Community Care Groups ▪ NZ Landcare Trust working with community care groups

Monitoring

Uretata catchment action plan key performance indicators (KPI's)

	Key performance indicator	Uretara sub-catchment targets							Total
		Current Year ending 30 June 2012	Year 1*	Year 2*	Year 3*	Year 4*	Year 5*	Years 6*-10	
Soil and water	Km of riparian margins excluded from stock.	70% - 60 km	2.4 km	2.4 km	2.4 km	2.4 km	2.4 km	2.4 km	24 km
	Number of properties 'at risk' for erosion which are managed by a property management plan.	New measure	3	3	3	4	4	5	42
Biodiversity	High Value Ecological Sites on private land that are under active management.	New measure	No identified high value ecological sites	0	0	0	0	0	0
	Number of areas of indigenous forest or wetland being actively managed by the community to protect their biodiversity values.	New measure	1	1	1	1	2	3	21

Note: The progress to achieve the targets will be reported on annually.

*Year 1 ends at 30 June 2013, Year 2 ends at 30 June 2014 etc.

Case study

Alister Harvey is a newcomer to the Katikati area but didn't need too much convincing on the sense of looking after his portion of the Quarry Stream. Both neighbours up and downstream have fenced off their sections of the stream and planted in recent years, doing the same and joining the dots was a no brainer to Alister.

"Aside from getting the cows out of the water, there's a stand of old kahikateas at the bottom end. I've been told they are some of the last natural kahikateas left in the Katikati area. Why wouldn't anyone want to preserve that? "

The project involves fencing a 120m stretch of the stream and planting the banks and floodplain with native trees and sedges. This treatment will improve the stream habitat and water quality by lowering water temperatures through shading, intercepting nutrients and sediment, and stabilising stream banks.



Alister Harvey in front the Quarry Stream with Kahikatea stand in the distance. Fencing has been completed and the site recently sprayed ready for planting.

A key partner in the project is the Uretara Estuary Managers, a non-profit volunteer organisation who have been able to provide invaluable labour and support to Alister and other landowners in the Uretara catchment.

For more information call a Land Resources Administration Officer on 0800 884 880.

