

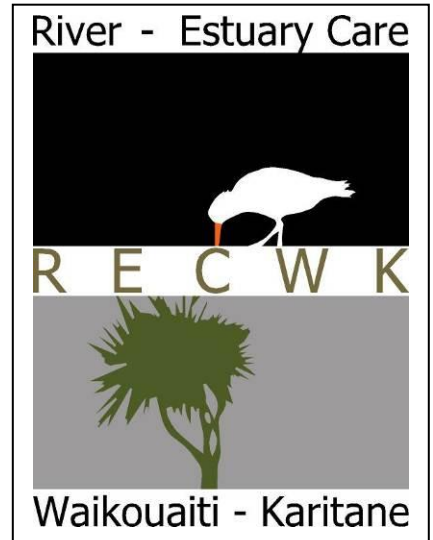
River Estuary Watch

River-Estuary Care: Waikouaiti – Karitane

AUGUST 2017

Sedimentation of waterways

- Morgan Trotter (Fish & Game)



Sediment is a natural and important part of stream environments, but excessive levels can have a negative impact on aquatic ecosystems. Unfortunately, the substrate of some waterways in Otago is experiencing sedimentation that affects stream health and fishery values.

Silt smothers the spaces between cobbles where invertebrates live and can cause a change in the invertebrate community. This can result in a loss of stonefly and mayfly species, and an increase in midges and worms. These tend to be much smaller and have less food value for eels, trout and koura. Deposited fine sediment also has adverse impacts on fish eggs and fish reproduction potential. Excessive amounts of silt smothers developing eggs.

Sediment can bind to and transfer other pollutants such as nutrients, bacteria and chemicals. When the effects of sediment are combined with other stressors such as excessive nutrients and/or flow reduction, the effect on stream health is compounded.

Another concern is the impact of excessive sediment levels on estuary health, which can impact plant and animal communities and result in a general loss of estuarine productivity.

Natural processes, such as scouring of the stream bed during floods, transfer sediment down waterways but unfortunately some human activities are increasing sediment levels beyond what ecosystems can assimilate naturally. Clear felling of forestry, winter cropping and cultivation on hill country with insufficient riparian buffers are particularly high-risk activities.

Soil disturbance on flatter terrain can also result in sediment discharge to waterways if appropriate riparian margins and vegetative buffers in swales are not put in place. Heavy stocking of stream banks can result in soil pugging and erosion, and can also lead to sedimentation of waterways.

Sediment discharges often occur during heavy rainfall events, which are difficult to monitor and often not detected by routine water quality testing. Much of the sediment is only mobilised into the water column during heavy rain and floods, when slugs of sediment progress down ditches and water courses to fill interstitial spaces in river gravels and smother stream beds.

Improvement of land management practices that are high risk in terms of sediment runoff is required to better protect our waterways from sediment pollution. There are encouraging signs with community-driven initiatives such as Pomahaka Watercare, Beyond Orokonui and River-Estuary Care: Waikouaiti-Karitane promoting environmentally-conscious waterway, riparian and land management.

Otago Regional Council has a key role to play and we believe it needs to give greater focus to sediment loss to waterways, particularly with education and also regulatory advice. Landholders should be given a clear steer on what constitutes acceptable mitigation in terms of buffer swales and riparian margins. Innovative mitigation measures such as sediment traps, treatment wetlands and two-stage drainage systems to capture sediment runoff should also be investigated. And we

may need to accept that in steeper hill country sediment loss cannot be captured effectively without exceptional mitigation efforts and therefore this land type is unsuitable for high risk activities such as grazing of winter crops.

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Reply from Otago Regional Council:

We have information that gives good practice advice on sediment management and are happy to share this with you. Please contact one of our liaison specialists on 0800 474 082.



During the July flood



Post flood

Plant on!

- Patti Vanderburg



We had 50 fantastic volunteers join in for a planting day on Saturday, 13 May. There was a lot of energy and perfect weather for this twice-yearly habitat restoration community exercise.

Some of the participants were here for Ki uta ki tai: From the Mountains to the Sea Volunteer Week. This cooperative work with local landowners helps maintain and enhance water quality of the Waikouaiti River.



When we counted up at the end of the day we had planted nearly 1500 native plants along the Waikouaiti River at Orbell's Crossing. This area had been fenced to exclude stock and left a generous riparian zone for planting.

This is a significant historical cultural site for food gathering and our efforts to restore it gives strong support to recognition of this history. It is also close to the area where sea water finds its way on high tides.

The planting is set to improve the biodiversity of the area, reduce erosion and sedimentation of the waterway and enhance whitebait habitat.

We checked on the site after the July floods that brought the river up to about 380 cumecs, and are thrilled to find that the plants, though knocked about by the surging river flow, have survived spectacularly well.

A big thanks to all involved.

If you would like to help with future planting days please contact me vburlg@es.co.nz or 03 465 8113.



Then and Now – Orbells Crossing

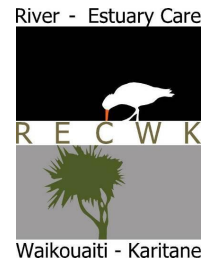


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2017

Do you want to help out?



To become a friend of the River and Estuary Care: Waikouaiti—Karitane	Phone or email Brad – 03 4658334 or brad126@xtra.co.nz
Should you wish to kindly make a donation	<p>Online:</p> <ul style="list-style-type: none"> ▪ Enter our name: Waikouaiti-Karitane Rivercare Group Inc) (this will appear on your statement) ▪ Enter our bank account number 060942 0190792 00 ▪ Enter your name and reason for payment e.g. donation to friend of Waikouaiti-Karitane Rivercare Group (Inc) (this will appear on our statement) <p>or post donation to 1333 Coast Rd Karitane</p>

River-Estuary Care Waikouaiti - Karitane

Active since 1999 – Incorporated in 2001

Coastal Otago Conservation Award for 2005

Objectives

- To restore balance to Papatuanuku (Mother Earth).
- To have a well-informed community about our river and estuary.
- To have our community participating in sustainable resource practices.
- To have a healthy, productive river and estuary ecosystem (fishing, biodiversity, general health).
- To promote an understanding of the inter-relatedness of our river and estuary ecosystem with adjacent ecosystems.

Anyone interested in supporting the above objectives may join!

Would you like to help with a project this year? Then contact

- Newsletter – Hilary Yeoman ph 465 7687
- Revegetation project – contact Andy Barratt ph 021 890 048
- Education, information and advocacy project – contact Patti Vanderburg ph 465 8113
- Birdwatching – contact convener Dave Yeoman ph 0220991202

Produced with assistance from the Otago Regional Council

