



Native fish in the city

OUR CITIES HAVE A MAZE OF WATERWAYS, OFTEN FORGOTTEN, TUCKED AWAY BENEATH WEEDY BANKS, OR BURIED IN CONCRETE PIPES UNDER BUSY STREETS. NATIVE FISH, OUR HIDDEN TREASURES MAY STILL BE SURVIVING – BUT ONLY JUST. READ ON TO FIND OUT WHAT YOU CAN DO TO HELP.

Monitoring water quality in an Auckland stream. Photo: Janet McDonald, Atlas Communications & Media Ltd for Project Twin Streams



Common bully
Photo: Stephen Moore,
Landcare Research

Stressed out city streams

Urban streams are usually in worse condition than rural streams for every water quality measure: clarity, nutrients, temperature, bacteria and heavy metals. This leads to low aquatic species abundance and diversity.

In cities, our fish encounter a bewildering tangle of pipes, culverts, channels and drains with overheated, murky and polluted water. Streams are being lost every day to urban development, particularly small streams high in the catchment. In Auckland 11 km of streams are piped every year.

- Fish living in urban streams are doused with harmful substances washed off our roofs, streets and building sites every time it rains.
- Concrete slurry, paint, food scraps, oil, fuel, mould killer, heavy metals, car cleaners, weed sprays and soil carried in stormwater can poison, burn, blind or suffocate fish.
- Heavy downpours on hard surfaces like roads, roofs, driveways and car parks send large pulses of water down streams, eroding banks, transporting mud, rubbish and sometimes causing sewer overflows.

They're streams – not drains!

In the past we've treated urban streams as drains, straightening them, channelling them and piping them to make them quickly carry away rain and wastewater.



But urban waterways may:

- have significant areas of native riparian or wetland vegetation
- provide habitat for native plants and animals
- provide corridors for birds and insects
- be valuable recreational assets
- soften the urban landscape
- contain heritage sites of historical and cultural importance

Fish images near drains in Hamilton help remind residents about the connection between storm water drains and the city streams – and fish habitats - they are piped into. Photo: Monica Peters, NZLT

Okeover make-over

The Okeover Stream flowing through Canterbury University has had a major make-over. A 60 m stretch was re-vegetated using locally sourced native plant species. Rocks and salvaged old logs were strategically anchored in the stream to increase habitat diversity and slow water flows.

Photo: Duncan Shaw-Brown,
University of Canterbury (2004)



Breathing life back into urban streams

There is an increasing interest in urban stream restoration. Even if you don't live by a stream, there will be a network of underground pipes connecting your home to the closest stream. Some of you may be lucky enough to live beside a stream or river. Either way there is lots that you can do to keep streams healthy.

Avoid these ordinary household products ending up in a stream. Photo: Monica Peters, NZLT



1. Let nothing but rain down the drain

- Take care with chemicals, including water-based paint and detergent, and never tip pollutants down drains, or near streams.
- Disconnect your down pipe if cleaning your roof to prevent chemicals entering stormwater.
- Never tip aquarium plants or fish down the drain, or anywhere near a stream – these can compete with our native fish and aquatic plants.
- Keep the clutter out of the gutter by sweeping up grass clippings and picking up rubbish.



2. Get Involved!

- Plant native sedges and shrubs on the banks and in wet seepage areas to provide shade and food for the fish from fallen leaves and insects.
- Let grass grow tall on the bank edges until your streamside plants are established.
- Remove invasive weeds growing near the stream so they don't spread.
- Pull out any litter from the stream that you can safely reach, but leave stable fallen logs and boulders for fish habitat.
- Join a local stream care group to protect your local waterways.



Pat Williams from the Waterways Ecology Team. Photo: Abby Davidson, NZLT

3. Design for Fish in Mind

- Use grass pavers or cobbles instead of concrete for driveways to allow rain to soak naturally into the ground.
- Install rainwater tanks to harvest water from the roof and reduce the volume of water rushing into our streams. This water can then be used to water the garden.
- Keep streams natural. Dams, weirs, ditches, and diversions can harm fish life and would likely need a council consent.

Other things you can do:

- Immediately report any dead fish, unusually smelly or discoloured water to your regional council.
- Don't let rubbish get into your stream, even cigarettes and dog droppings are dangerous.

Ambitious council-lead projects have turned lifeless stormwater channels...

...into habitats for native fish (and an asset to local residents!) Photos: Boffa Miskell



Want to know more?

Contact your local council for advice on improving water quality and conducting stream restoration. Alternatively, search for the key words in the following websites:

Urban stream pollutants

www.northshorecity.govt.nz
www.waternz.org.nz
www.bethedifference.gw.govt.nz/story2383.cfm

Urban stream restoration

www.niwa.co.nz/ and www.wrc.govt.nz/

Urban stream restoration groups

Oakely Creek, Auckland
www.oakleycreek.org.nz/
 Meola Creek, Auckland
www.meolacreek.org.nz/
 Waitakere Streams, Auckland
www.waitakere.govt.nz/Abtcit/ne/twinstreams.asp
 WaiCare, Auckland
www.waicare.org.nz
 Mangakotukutuku Stream, Hamilton
www.streamcare.org.nz/
 Okeover Stream, Christchurch
<http://nwp.rsnz.org/content/cant.htm>

Fishy factsheets in this series (2010):

- #1 Our freshwater fish
- #1 Ngā ika wai māori
- #2 Stream works for fish
- #3 Fixing your stream edges
- #4 Native fish in the city
- #5 Native fish on the farm
- #6 Caring for our catchments

All factsheets can be downloaded from: www.landcare.org.nz

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