



Title: “Watery Pixelations”

Short Description: Pūrākaunui tidal inlet. A mixture of salt and freshwater.

Photographer: Tim Heath

Where and when: Pūrākaunui, August, 2021

Sustainability: All life depends on water. The presence of that simple H₂O molecule is what sets our ‘Blue Planet’ apart in the solar system and the Universe. Coastal estuaries on the east coast of the South Island are few. Each one is a precious feeding ground for migratory and resident seabirds. The ‘pixelated’ water photograph sparkles. Pūrākaunui tidal inlet is fed by different freshwater streams. It is also adjacent to townships and farmland and collects run off and pollutants from both.

The planet has a fixed amount of water which gets circulated by the ‘Water Cycle’. Climate change is rearranging it’s flows and releasing it from the icecaps and frozen mountain tops and unsustainable land use is leaching nutrients and depositing sediment into the freshwater streams and rivers and the coastal subtidal habitats.

Pollution of water is not just a human health threat, it impacts on biodiversity and ecosystems over large and even remote biomes. For example, masses of micro-particles from degraded plastics are suspended in the oceans, which

reduces light penetration to critical levels in worst affected areas. The particles themselves are toxic to bottom dwelling communities.

Clean water has become a critical issue for sustainability of New Zealand's agricultural landscapes. Removal of woody vegetation that previously stabilised stream and river banks, leaching from fertilisers, and direct pollution by stock are rising concerns for many New Zealanders, and increasingly for overseas consumers of our food and fibre.

People can see water flow and its colour, so it's easy for them to see the connectivity between different parts of catchments and the effects of unsafe land uses. Many of the other ecological connections are less obvious – the dispersal of birds and plants, the wrong trees for that place, the absence of plants and animals that should have been there, and quiet where there should be a noisy nature. Dirty water shows, it sometimes stinks, and we know where it came from. No wonder water quality and quantity is increasingly a *tohu* (indicator, signal) that our land use is not sustainable in a holistic sense.

Photographer's notes: iPhone 6+

Exposure: 1/1600s, f/2.2, 4.15 mm, ISO 32

Digital specs: 2,448 x 2,448 (6MP)

Key words: Water, pollution, flow, climate change, sedimentation, leaching, biodiversity, Tim Heath, Aotearoa, New Zealand, Ecosystems Photography, Sustainability.

Price: \$100 donation. Visit www.ecosystemsphotography/sales for details & to order, or to get a quote if you want a high-quality print.

Donation: The price is entirely made up of a \$100 donation to a sustainability organisation or project of your choice, or otherwise for Fish & Game Otago <https://fishandgame.org.nz/otago/>.

I recommend that the donation goes to *Otago Fish & Game Council* to support their work on protecting and enhancing waterways. This is much more than a hunting and shooting organisation – they do an enormous amount of work behind the scenes to advocate for river care and restoration of riparian habitats.

Image Ref: TH#014 (please use this reference in all orders and correspondence).

Tim Heath

9 December 2021