

Most improved River Awards 2015

Ngarara Stream, Greater Wellington (16.2%) The factors helping this stream are many and diverse. There have been improvements in the way nearby town sewage is treated. During the past decade an older system of using oxidation ponds has been superseded by one of the most advanced sewage treatment processes in New Zealand. Livestock numbers have declined as land use has gradually moved from farming to lifestyle blocks and new urban development. And over the past 15 years a major wetland upstream of the monitoring site has been the subject of intense restoration works involving weed removal and the planting of thousands of seedlings. The area is now subject to a QEII covenant.

Mangapapa Stream, Horizons (13.6%) This stream runs through a rural catchment where dairy farms are common. The catchment is a priority one for the catchment and as a result farmers have been offered free farm plans. All farming in the catchment is now a consented land use activity, and to get a consent farmers must put in place measures to reduce nitrogen leaching below 2012/13 levels. Maintaining minimum flows has been a problem for this stream in the past. However, better management of water off-takes has resulted in more stable flows, which has helped to improve water quality and general river health.

Lucas Creek, Auckland (12.7%) The local Council commissioned extensive erosion control and restoration work on this urban creek in 2008. The work included stream widening and bank shaping, rock riffles, a rain garden, planting 10,000 trees and creating two wetlands. The rain garden and wetlands are designed to remove harmful bacteria and nutrients from water before it enters the stream. Water quality across a range of indicators has improved following the erosion control work. The gradual development of unused land upstream is likely to have helped improve water quality too.

Mimihau Stream, Southland (14.8%) This stream flows through land repeatedly used for exotic forestry. Around a decade ago the forest was harvested and immediately replanted. Reflecting typical patterns within exotic forestry, nitrogen trends have shown significant improvement since the harvest was completed. Nitrogen levels are high immediately post harvest and, with good management, fall sharply in the decades thereafter. Rapidly growing young trees absorb increasing amounts of nitrogen from the soil, meaning less leaches into nearby waterways. When the trees are fully mature and about to be harvested, nitrogen losses are at a minimum and the cycle begins again.

While this stream has the second highest trend reduction in nitrogen in New Zealand it was not eligible for the Supreme Award because of the cyclical nature of the nitrogen improvement captured in the long term data. However this case provides a welcome reminder of the benefits of well-run forests. Over the long term they are a truly sustainable land use, leading to no long term deterioration in water quality in adjacent water ways.

Kaituna Stream, Canterbury (10.0%) Mounting concerns about the downstream estuary contributed to an increased awareness of environmental impacts among individual land-holders in the catchment. A massive 340ha of land was de-stocked and retired in 2008. This

has been complemented by fencing and riparian planting programmes across a number of properties.

Piako River, Waikato (6.8%) This river flows through some of the most intensively farmed land in the country, New Zealand's dairy heartland. Perhaps unsurprisingly, the river is not in great shape. Water quality indicators show it is amongst the worst 25% of like sites. The good news is that it's not as bad as it was ten years ago. Moving away from cow shed oxidation ponds towards on-land effluent discharges has played a big part in the improvement.

Waipawa River, Hawkes Bay (4.2%) This is an upland rural tributary of the Tukituki River. Dairy NZ, Deer Industry New Zealand and Hawkes Bay Regional Council have been working hard with their respective farmers to introduce practices that benefit the river. This farmers have been planting shelterbelts, fencing and revegetating steep gullies, bridging streams to allow cows to cross, planting winter cover crops and building catchment dams. The combination of these, and other, small changes is leading to big results for the Waipawa River.

Mangahuru Stream, Northland (3.9%) This is a busy little stream that begins in a pine forest, flows alongside a Fonterra factory and adjacent farm, traverses other farms and lifestyle blocks, runs alongside town sewage oxidation ponds and finally emerges into a flood plain which is subject to a complex swamp flood control scheme. Upgrades to the sewage treatment have helped turn this stream around. Improved farming practices and stricter enforcement of farm effluent regulations have also helped. The stream's still in pretty poor shape but heading in the right direction.

Nukuhou River, Bay of Plenty (3.4%) Land in this catchment is used in a variety of ways: native and exotic forest, cattle raising, dairy farming and horticulture. Water quality in the river is poor. The good news is that farming practices have been changing for more than a decade and the benefits are starting to show. Bridges and culverts have been introduced to keep stock out of the river, river banks have been fenced and replanted and there have been improvements in the way farm effluent is managed.

Mangaehu River, Taranaki (3.3%) This river flows through one of Taranaki's largest hill country catchments, where dry stock farming and native bush dominate. Many farms in the catchment are part of the Regional council's long running sustainable land management programme. All have received free farm plans, free advice and access to native plants at wholesale prices. Implementation of the farm plans is voluntary but from 2009 further financial assistance has been available for soil conservation works with the help of government funding. The majority of farms in the catchment have undertaken works related to their plans and large areas are benefitting from soil conservation measures.