

Newsletter – Winter 2024



Coordinator's note

Greetings

I hope this newsletter finds you well at the start of a new Envirolink financial year.

The Envirolink fund has a budget this year 0f \$1.8M (ex GST). Nominally \$1.2M is allocated to advice grants and the remaining \$0.6M to Tool projects.

The funding thresholds for the three advice grant classes remain at: Small (\$10K), Medium (\$40K), and Large (up to \$80K). There will be a Tool round closing 7 October 2024. As per previous rounds the tool applications need to being submitted by a SIG. Details on how to apply are available on the website **http://envirolink.govt.nz/**.

Three new tool projects were contracted 1 July 2024.

- 1. Using remote sensing to quantify coastal vegetation cover
- 2. Guidance for standardised forest condition monitoring for regional councils
- 3. Revising target values for soil quality indicators used in SOE reporting

Please contact me if you have any questions.

Bill - (BillDyck@xtra.co.nz)

New tools available

There are 57 resource management tools developed through the Envirolink scheme and available on the website, and more being developed. See <u>https://envirolink.govt.nz/envirolink-tools/</u>

The most recent ones that have been added are: <u>R16-3 Evaluating surrogate technologies for river</u> <u>suspended sediment load monitoring</u>



The "patchy" knowledge base regarding surrogate technologies for river suspended sediment load monitoring, along with some bad experiences (poorquality data derived from previous turbidity sensor deployments), has discouraged investment in updated suspended sediment monitoring programs, including implementation of new technology. NIWA was commissioned by MBIE through the Envirolink scheme to provide guidance on the selection of appropriate surrogate monitoring technologies for robust measurement of the suspended sediment load to support freshwater and coastal management.

<u>R17-2 Species Key – Coastal Taxonomic Resource</u> <u>Tool | NIWA link</u>

R18-1 Guidance on the sustainable management of surplus soil and subsoil - consultation draft



A <u>web-based taxonomic resource tool</u> has been developed to improve the accuracy and consistency in soft sediment estuarine and coastal benthic intertidal and shallow subtidal macroinvertebrate identiHcation across New Zealand.

<u>R17-4 A national quality assurance framework for</u> <u>community-based stream monitoring – Part 2</u>



A national quality assurance (QA) framework is available to support community and catchmentbased monitoring groups to collect freshwater data of a known quality that are 'fit for purpose'. The framework will also help to increase the visibility and use of the data in freshwater management.



The protection of soil quality and contamination of land are integrally related, asfailing to protect soil quality will result in contaminated land. Activities to protect soil quality include raising awareness of activities. When contaminated land is identified, the site is investigated to identify the level of effect to inform remedial or management activities.

R18-4 Enabling flexibility and connectivity in landuse classification for state of the environment soil guality monitoring



Land use is recognised as a critical driver of environmental change, and regional council state of the environment (SOE) soil quality monitoring underpins national reporting on land use. However, there are several recognised inconsistencies in landuse classification, both across councils and over time. This project was undertaken to facilitate consistent land-use classification for SOE monitoring to use regionally and nationally

New reports now available

Several new reports are available on the Envirolink website. There are now approximately 1500 projects most of which have produced reports: <u>https://envirolink.govt.nz/envirolink-reports/</u>

The newer reports include:

2321-HBRC267 Determining background soil concentrations of trace elements across New Zealand



This project revised estimates of background concentrations of naturally occurring trace elements in soils across New Zealand using an extended data set.

2317-MLDC165 Spatial review of the Marlborough District Council raingauge network



Marlborough District Council (MDC) has monitored rainfall since 1963. The network was last reviewed in 2017. The emphasis of the review reported here is the adequacy of the spatial coverage of the region, for the purpose of assessing long term trends and water resources, as well as for flood warning during significant weather events.

2344-WCRC209 Air quality monitoring strategy for Westport

An evaluation was carried out into sources of PM2.5 in Westport and consequently the most appropriate location to measure worst case PM2.5 concentrations. Domestic heating was found to the primary source of daily winter time PM2.5 contributing over 95% of the emissions.

2307-HZLC166 Implementing bioavailability-based toxicity guideline values for Cu and Zn



Water quality guideline values for metals are widely used in Aotearoa New Zealand (NZ) to support management of fresh and marine waters. Since the introduction of the risk-based trigger values in ANZECC & ARMCANZ (2000), copper and zinc toxicity guideline values have been widely used, particularly within the context of monitoring and managing urban waterbodies and stormwater quality.

2230-HBRC264 Orchard burning for disease control and air quality



In Hawke's Bay, outdoor burning is used to dispose of both diseased plant material in orchards and vineyards, and plant material from orchard or vineyard redevelopment, which contributes to air pollution. It is important to find long-term sustainable solutions that are affordable for orchards and do not risk dispersing pathogens. Currently, sustainable alternatives that kill the relevant pathogens are not available at a scale that is required.

2341-NLRC237 Feasibility of biological control of Madagascar ragwort



The feasibility of developing a biological control programme against fireweed, *Senecio madagascariensis* Poir., in New Zealand was assessed by Manaaki Whenua – Landcare Research for Northland Regional Council.

2330-ESRC300 - Marine biosecurity best practice treatment methods



This report overviews different methods to clean fishing gear, boats, and bilge for educational purposes and for the aim of stopping the spread of marine pests throughout Southland, New Zealand. 2331-NLRC236 Implications for regional council SOE monitoring from adopting the NEMS macroinvertebrates protocols analysis of the macroinvertebrate metric scores from paired sampling



The development of the National Environmental Monitoring Standard for macroinvertebrates (NEMS macroinvertebrates) is aimed at improving national consistency in collection, processing and reporting of macroinvertebrate metrics for State of the Environment (SOE) monitoring.

2348-ESRC180 Final Report - Marine education and risk communication literature review for biosecurity best practice, Southland Coastal Marine <u>Area</u>



This report presents a literature review of marine education and communication good practice from New Zealand and overseas, with a particular focus on recreational boat users

2329-ORC004 Spatial prioritisation informing biodiversity management in Otago



The project reviews the priority sites for terrestrial biodiversity identified via Zonation, drawing on specialist knowledge of the Otago region and its ecosystems and taxa to recommend refinements that ensure the network includes sites with high biodiversity values.

2340-ORC006 Potential for regional councils to use GBIF to access and share species occurrence data



Key Recommendation: Regional councils should adopt GBIF as a primary means of preparing, sharing, and accessing publicly available species occurrence data.

2212-TSDC180 extra - Waimea Nitrates Science Review 2024 UPDATE

The review concludes that there is already sufficient science information to adequately inform development of a policy response for managing nitrates on the Waimea Plains.

2212-TSDC180 Modelling of nitrate losses and impacts from Waimea Plains rural land uses



The project models nitrate-nitrogen contaminant losses to groundwater and to the downstream waters of the Waimea Plains.

2409-TSDC190 Sources and drivers of nitrogen inputs t o the Takaka Catchment



Concentrations of nitrate-nitrogen (nitrate-N) have increased over the last 50 years in the Main Spring at Te Waikoropupū Springs. Despite a long history of scientific studies of Te Waikoropupū, there is limited understanding of the sources and transformations of nitrogen within Te Waikoropupū and the wider Tākaka Catchment.

2419-TSDC191 Nature-based solutions for flood management



Figure 2-6: Example of a bioretention basin.

This literature review, independently commissioned by the Ministry of Business, Innovation and Employment (MBIE), was undertaken to inform 21 flood mitigation feasibility studies being undertaken by 15 regional or unitary councils.

2425-NLCC127 Guidance for large wood installations in NZ rivers



The strategic addition of instream woody material can enhance habitat quality, food availability, reproductive opportunities, water quality, flow dynamics, and ecosystem resilience, all of which contribute to higher Fish IBI and MCI scores.

2231-TSDC183 Mean High Water Spring (MHWS) Levels for the Tasman and Golden Bay Coastline



Mean High Water Spring (MHWS) is an important planning demarcation between the coastal marine area (CMA) and land which underpins numerous planning and legislative instruments. There are a variety of methods to calculate MHWS depending on the intended purpose.

2219-HBRC261 Ficopomatus enigmaticus past management initial considerations and information needs, March 2022



Ficopomatus enigmaticus (Fauvel 1928) is an estuarine and brackish-water serpulid polychaete. Its native biogeographic range is not fully understood. However, it is non-indigenous to New Zealand and was first recorded in 1967 when it began to form extensive nuisance growths on coastal infrastructure in upper Whangarei Harbour.

2332-HBRC270 Trend Analysis Of Chlorophyll-A In Hawke's Bay Using Remote-Sensing Data 2018–23



Mean seasonal chlorophyll-a, calculated from MODIS remote-sensing data using a locally validated exponential model, across previous and current time periods.

2301-TSDC184 A Review of the Current and Past Health of Lakes in the Tasman Region and Implications for Ongoing Management and Protection



Ten lakes in the Tasman Region were included in the national Our lakes' health: past, present, future programme, also known as Lakes380 (<u>www.lakes380.com</u>). As part of this programme, water, surface sediment and sediment core samples were collected. The report contains recommendations based on study findings.

2302-TSDC185 Proposal for Lake Monitoring in Tasman District 2022

The over-arching objective of this programme is to assess the state of water quality at-risk lakes and provide data to inform lake water quality remediation where needed in Tasman District.

2304-WCRC205 - Lake Stream Sediment Management Report- FINAL (2)



The aim of this work was to review the condition of Lake Stream catchment and recent changes observed in the catchment using available information provided by West Coast Regional Council and site inspection.

2239-ORC001 Otago Harbour review of existing ecological data



This review identifies data and their location and summaries the key attributes of each dataset. It will help managers access all information that can contribute to environmental decision-making. The review will also give future researchers a reliable baseline for their studies. 2337 NLCC126 Impact of a flood event on the sediment quality and ecology of Delaware Inlet



This report describes the findings of four ecological surveys, and associated sedimentation monitoring, conducted in Delaware (Wakapuaka) Inlet near Nelson since 2019. The report focuses on a comparison of three 'baseline' years (2019-2021) with investigations conducted following a regionally significant flood in August 2022.

2326-NLCC124 eDNA Guidelines and field protocols for lotic systems

This manual is designed to provide comprehensive guidance on using eDNA to characterise aquatic populations and assess the ecological communities of waterways, particularly in Aotearoa-New Zealand.

2334-NLCC125 Review of Nelson City Council's Hydrometric Network

The data from the hydrometric network are indispensable for environmental studies, water resource assessment, flood management, water quality monitoring, climate change studies, watermanagement and planning, and ecological research. In this report, we review the current rainfall,surface water flow and groundwater level monitoring network. 2339-GSDC171 Monitoring of Tūranganui Estuary 2024



A long-term estuary monitoring programme was designed for Gisborne / Tairāwhiti District, and as part of its implementation, GDC commissioned Cawthron to undertake monitoring in Tūranganui Estuary in 2024.

<u>2435-ESRC302 Air quality in Invercargill -</u> <u>assessing the effectiveness of management options</u> <u>to reduce particulate concentrations</u>

In Invercargill, concentrations of PM10 breach the National Environmental Standards (NES) of 50 µgm-3 (24-hour average). This report integrates results from a 2022 air emission inventory including revised household solid fuel burner heating methods and fuels and prepares updated projections based on these data.

And more at Envirolink Reports

Web: http://envirolink.govt.nz/

