



Focus Catchment Map Series

Supporting Locals to Improve Waterway Health



The Focus Catchment Map Series (FCMS) is a science-based publication that presents an accessible overview of the current state of your catchment using national and regional datasets, with additional interpretation of the data to ensure better understanding.

Developed by EOS Ecology as part of the 'Wai Connection – Tatai Ki Te Wai' project, the FCMS supports groups by improving their understanding of their catchment as a whole, highlighting knowledge gaps, identifying key issues, and informing decisions to guide future priorities and interventions for enhancing local waterway health.

We draw from existing publicly available information from national and regional datasets – displaying it in relation to a specific focus catchment area. This information includes a mix of modelled information available at a national level, plus site-specific data collected in the region.

The FCMS:

- » summarises the **past state** of the catchment in terms of **vegetation types**
- » summarises the **present state** of the catchment in terms of **waterway classifications, geology/soil drainage, land cover, protected areas** etc.
- » shows the **location of actual survey data** for **waterway water quality and ecology** (fish and invertebrate data), and summarises this data based on key grouping variables
- » provides **nationally consistent** information.

This information will help you:

- » **better understand** your catchment as a whole
- » **identify** knowledge gaps and explore possible future directions to fill them
- » **identify** what appear to be the key issues or challenges for your catchment
- » **inform** decisions around catchment priorities/interventions that should help with improving the health of your waterways.



Topics Covered in an FCMS

The following topics are currently available for inclusion in FCMS resources (depending on relevance). The resource also provides information about the wider area the catchment sits within. We will happily discuss developing new topic modules if relevant to your catchment.



Factors affecting catchment processes:

- » Climate
- » Topography & flow types
- » Geology
- » Land cover class
- » Braided river systems



Land management aspects:

- » Land cover/vegetation types – past
- » Land cover/vegetation types – present
- » Soil type
- » Soil drainage
- » Threatened environments
- » Protected areas



Water quality data:

- » Suspended sediment – yield
- » Suspended sediment – discharge
- » Suspended sediment – visual clarity
- » Suspended sediment – turbidity
- » Nutrients – nitrate nitrogen (nitrate N)
- » Nutrients – dissolved reactive phosphorus (DRP)
- » Faecal indicator bacteria – *E. coli*



Ecological data:

- » Macroinvertebrates – MCI & QMCI
- » Macroinvertebrates – diversity & common taxa
- » Fish diversity
- » Fish Index of Biotic Integrity (F-IBI)
- » Fish passage & migratory fish
- » Whitebait fish species – distribution & spawning



Connection to the coast:

- » Coastal features – geomorphic classification
- » Suspended sediment – discharge to coast
- » Nutrients – nitrate nitrogen (nitrate N) – discharge to coast
- » Nutrients – dissolved reactive phosphorus (DRP) – discharge to coast
- » Faecal indicator bacteria – Enterococci



Lake Trophic Level Index (TLI):

- » Trophic Level Index (TLI) & TLI water quality attributes

“It has been super easy and enjoyable to work with EOS Ecology as they have developed the Focus Catchment Map Series. Their ability to take a large quantity of information and present it in an easy to access, visually appealing and scientifically accurate way is outstanding. They have developed strong lasting relationships with community and iwi and these along with the map series will evolve into even greater things over time.”

Elaine Moriarty
PRINCIPAL STRATEGY ADVISOR
ENVIRONMENT CANTERBURY, WAITAHA/CANTERBURY

“EOS Ecology has produced incredibly detailed and beautifully designed Focus Catchment Map Series as PDF booklets...the explanatory notes and data on everything from nutrient discharges, macroinvertebrate and fish diversity, to clear, easy to understand infographics on nitrogen cycles and Ki uta ki tai mountains-to-sea a catchment-based approach, are superb.”

Sonny Whitelaw
MANAGER
BRAID

“Wow, these Focus Catchment Maps are a very valuable tool to have. They have already provided our Waingōngoro Awa restoration team with a better picture of our overall catchment and provided a more in-depth understanding of how our catchment has evolved, providing soil, water and ecological data.”

Sharon Walker
PROJECT MANAGER
RESTORATION WAINGŌNGORO AWA, TE MATAU-A-MĀUI/HAWKES BAY

“I am very excited to see the Focus Catchment Map Series (FCMS) pull together so many aspects of river health and connection with the coast in a much more integrated way than has been reported in the past. We have long wanted to achieve something like this off our own bat, but have been limited by staff capacity and budgets. So, in a way it is an ‘answer to my dreams’...The IT expertise and ecological knowledge that EOS Ecology brings to this work is admirable...This is helpful for us as a regional authority to be able to better explain to catchment groups and the public at large how all this information fits together...I would like to see these FCMS rolled out as a region.”

Trevor James
PRINCIPAL SCIENTIST – FRESHWATER & ESTUARINE ECOLOGY
TASMAN DISTRICT COUNCIL, TE TAI O AORERE/TASMAN

“Thank you so much for producing such awesome resources for our catchment groups – can’t wait to print them off! 🙌”

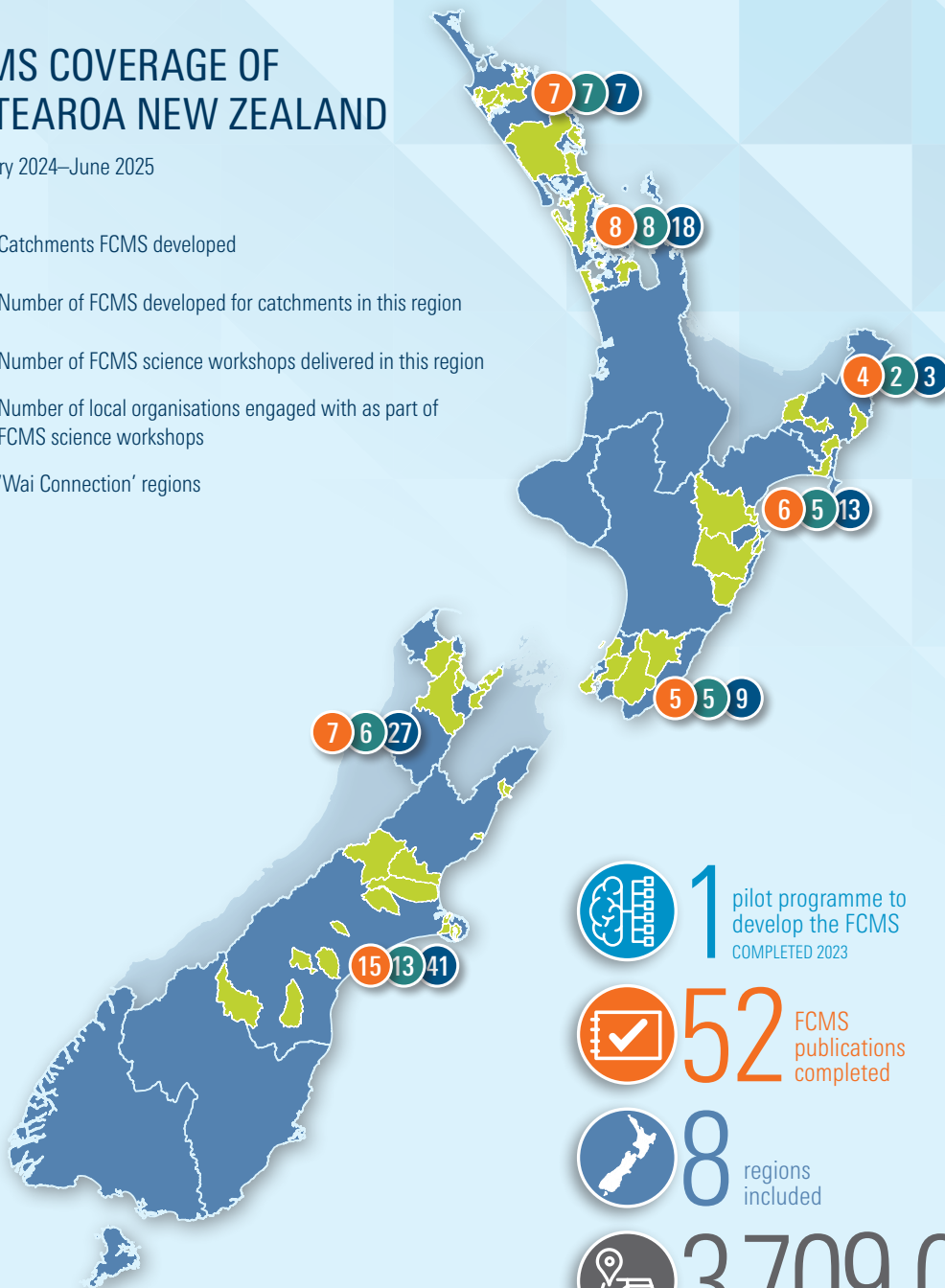
Amy Sadler
CATCHMENT COORDINATOR
‘WAI CONNECTION’, TĀMAKI MAKĀURAU/AUCKLAND

FCMS COVERAGE OF AOTEAROA NEW ZEALAND

February 2024–June 2025

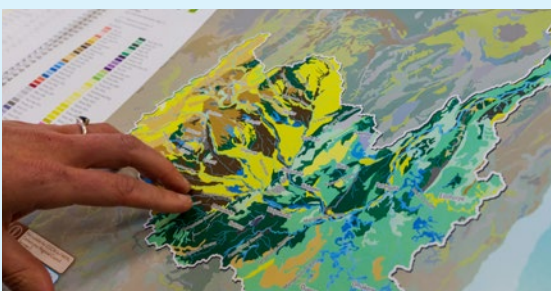


- Catchments FCMS developed
- Number of FCMS developed for catchments in this region
- Number of FCMS science workshops delivered in this region
- Number of local organisations engaged with as part of FCMS science workshops
- 'Wai Connection' regions



Mapping & analysis of 9,228 monitoring sites:

- » 226 LAWA water quality sites
- » 1,408 'Other' water quality sites
- » 198 LAWA MCI/QMCI macroinvertebrate sites
- » 654 'Other' MCI/QMCI macroinvertebrate sites
- » 646 eDNA fish sites (conflated to 620 sites)
- » 6,096 conventional fish survey sites (conflated to 5,669 sites)



1 pilot programme to develop the FCMS
COMPLETED 2023



52 FCMS publications completed



8 regions included



3,709,089 hectares mapped



2,853,211 bits of raw monitoring data processed



9,228 monitoring sites mapped & analysed



150 online national & regional data sources accessed to produce each FCMS



47 FCMS science workshops completed



118 organisations engaged with as part of FCMS science workshops

FCMS Support Services & Resources



A range of supporting services and resources have been developed to help aid the delivery and understanding of the FCMS document:

- » **Science Workshops** – FCMS can be handed over with an in-person or online science workshop hosted by an EOS Ecology scientist. This exponentially enhances a group's understanding of the FCMS content, and what it means for their catchment.
- » **Overview PowerPoint presentation** – an introduction to the FCMS document, including information about what the map series contains, how it was developed, how the document is set up, and how to read the maps.
- » **Default Guideline Value (DGV)s Quick Guide** – explains what they are and how they work.
- » **Visual Clarity Readings Quick Guide** – explains what they are and how they work.
- » **Visual Clarity Interpretation Quick Guide** – explains what it is and how it works.
- » **Frequently Asked Questions (FAQ) Guide** – provides more in-depth answers to commonly asked questions.
- » **Short-form Intro Video** – Principal Scientist from EOS Ecology introducing the FCMS.
- » **Long-form In-depth Video** – Principal Scientist from EOS Ecology talking through the content of an FCMS in-depth, and explaining what it means.
- » **Printing Instructions Guide** – for groups that want to produce a professionally printed version of their PDF.



Explore our FCMS outputs further online at:
www.waiconnection.nz/pages/focus-catchment-resources



To discuss whether an FCMS will help your organisation achieve its catchment management goals, please contact:

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or phone 03 389 0538



Focus Catchment Map Series
Introduction



FUNDED BY:



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PŪTAIAO ME TE WHAKAWHITIWHITI

