



Water quality testing at the Campaspe River



Statewide Annual Report 2024

"Our school motto is Make a Difference and being involved in citizen science projects like this enables our Year Five students to make a difference locally. River Detectives forms an important part of our Maths, History, Geography and Science programs.

Cornish College educator, Melbourne Water area



COMMUNITY
PARTNERSHIP
PROGRAM



North
Central
CMA



Contents

Acknowledgement	2
Program and Statewide Delivery	3
Statewide Statistics and Highlights	4
North Central CMA.....	7
Corangamite CMA.....	13
North East CMA.....	19
Wimmera CMA	25
Melbourne Water.....	31
Testimonials.....	37



Barapa Barapa Traditional Owner Laura Kirby performing a Welcome and Smoking Ceremony at a River Detectives event.

Acknowledgement

The River Detectives program acknowledges the Traditional Owners across the regions on which the program is delivered. We recognise their rich culture and spiritual connection to Country and the contribution and interest of Aboriginal people and organisations in land and natural resource management.

Program delivery

[River Detectives](#) is an engaging environmental education program that connects young people to nature by caring for their local waterway. Students participate in citizen science, learn about the importance of healthy waterways through water quality testing, and the benefits to land, plants, animals and people. Participating schools are provided with equipment, support, training, and teaching resources.

The statewide River Detectives program has been generously sponsored by Agnico Eagle Australia Community Partnership Program in 2024. The sponsorship enables the coordination and delivery of the program across four regions.

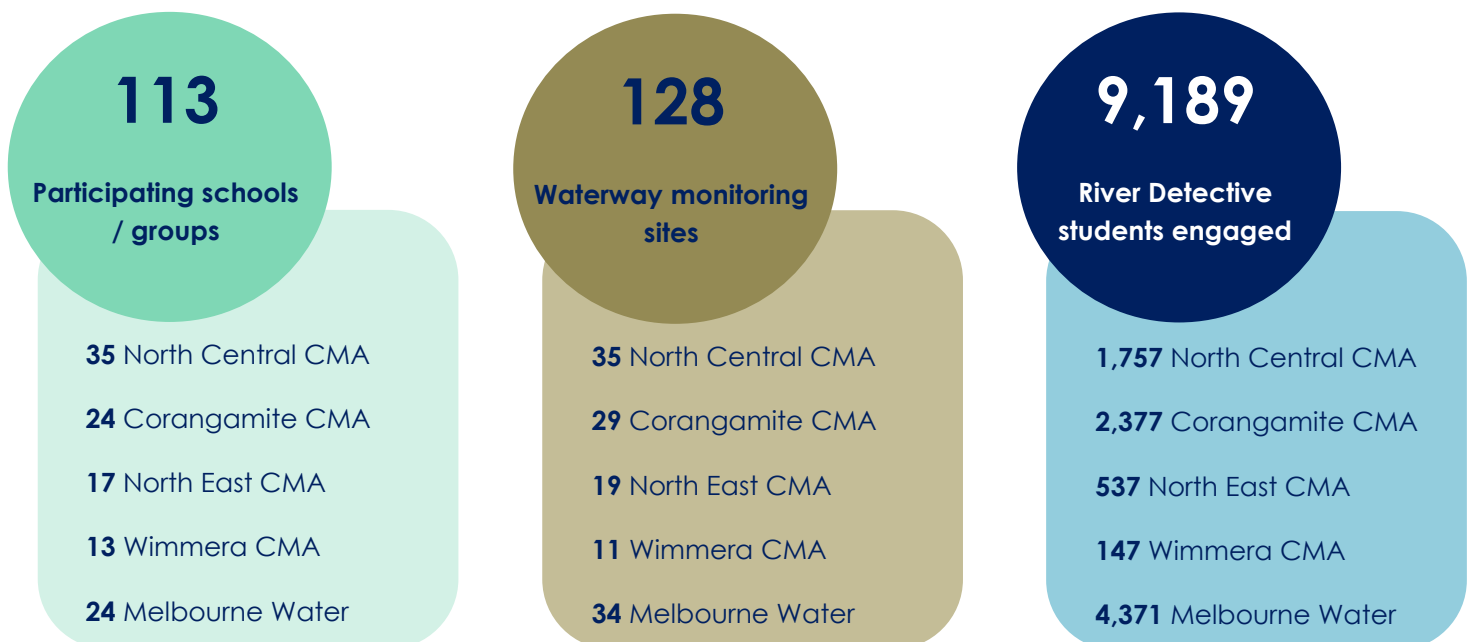
2024 River Detectives delivery partners

- North Central Catchment Management Authority (CMA)
- Corangamite Catchment Management Authority (CMA)
- North East Catchment Management Authority (CMA)
- Wimmera Catchment Management Authority (CMA)
- Melbourne Water*

*Melbourne Water's participation in the program is secured through separate funding.

This report highlights statewide River Detectives program achievements during the 2024 school year. A visual summary can be viewed in this [video](#).

Statewide delivery snapshot



Delivered 38 professional development sessions for educators across our five delivery regions

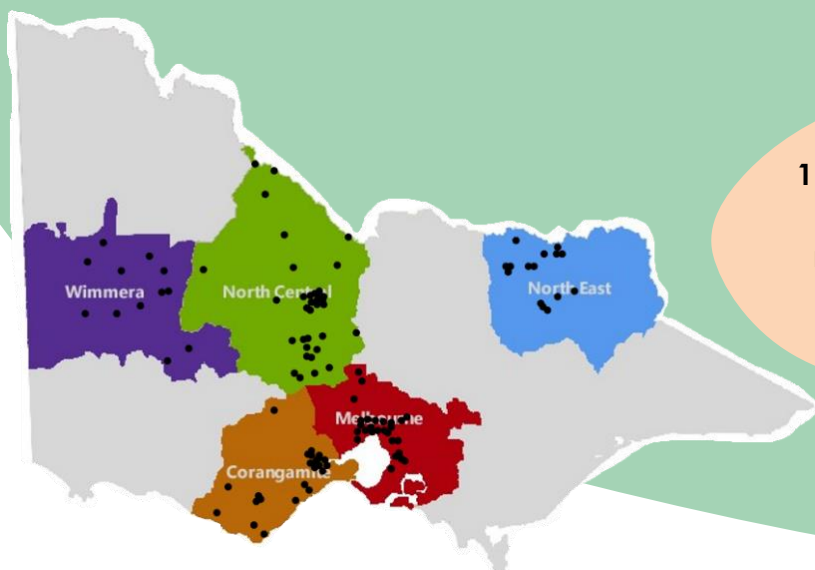
Supported 150 educators to deliver the program in their unique setting

Recorded two Ask the Expert webinars: Dull Dams to Dynamic Dwellings and Climate Change

Delivered 76 incursions to River Detectives schools/groups engaging 2886 students

Statewide statistics

Region	North Central CMA	Corangamite CMA	North East CMA	Wimmera CMA	Melbourne Water
Registered groups	35	24	17	13	24
Active monitoring sites	35	29	19	11	34
Data entries	73	64	21	2	72
Water quality entries	65	56	10	2	57
Waterbug entries	4	6	5	0	10
Habitat assessments	4	2	6	0	5



11 schools opted in to participate in the Pesticide Watch program, collecting monthly water samples for analysis in Deakin University's laboratory for the presence of pesticides.

Location of River Detectives schools in our five delivery regions

Statewide highlights

Terms one and two highlights

Mid-year reporting (view [here](#))

- [Mid-year achievements video](#)
- Recording an Ask the Expert webinar, [Dull Dams to Dynamic Dwellings](#) with ANU's Professor David Lindenmayer
- Successful trial partnering with the ResourceSmart Schools program
- River Detectives schools shining at the [2024 ResourceSmart Schools Awards](#)

Terms three and four highlights

Climate Change Ask-the-Expert webinar

We were joined by author/illustrator and water sector sustainability advisor Meg Humphrys in November. Meg has published two thought-provoking books helping readers gently explore the water cycle, the various forms of water, how we depend on water and how our water resources are changing.

Her most recent book Wave of Change was the focus of this second annual webinar. It finds a beautiful balance in raising awareness of climate change among young people and inspiring hope without overwhelming readers about the challenges ahead.



Cover of Wave of Change picture story book

It was important to our program to offer this webinar.

We acknowledge the trepidation educators feel about approaching the issue of climate change, keen to empower students in an age-appropriate way while maintaining their childhood sense of wonder at the world.

We developed and distributed a [digital reading of Wave of Change](#) to River Detectives schools, encouraging students to submit questions and reflections to be posed to Meg. The webinar was recorded with insightful contributions from Cornish College Grade Five students (Melbourne Water area).

"What inspired you to become an author and to choose to write stories with a water theme?"

Alice, Ava, Alfred and Chloe from Cornish College



Chatting with author and illustrator Meg Humphrys

"The story was lovely. It made me have a mix of feelings. It told true problems that are happening in the world. It really made me think that we should make a difference by doing little things."

Natalia, Cornish College

92

Views

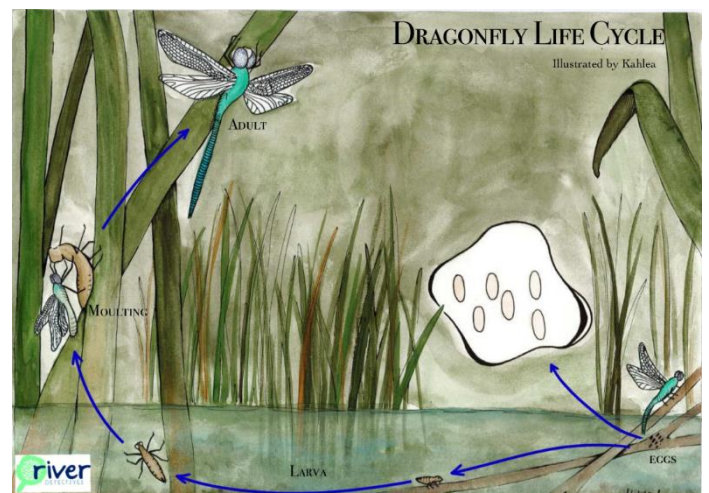
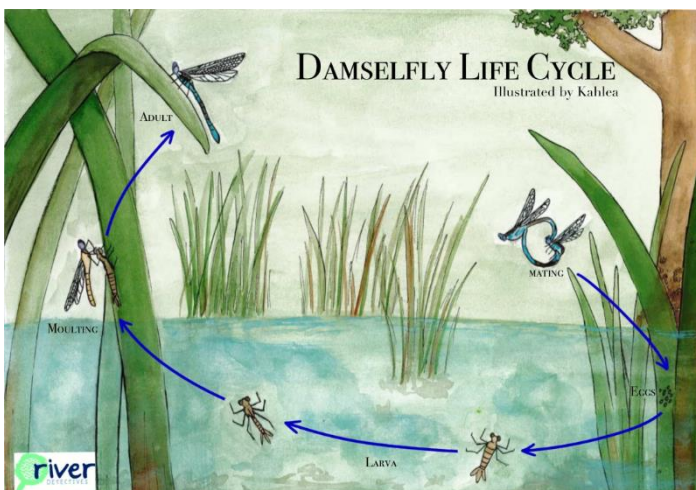
To cater for all age groups participating in the program, we published a [primary](#) and [secondary](#) version of the webinar. The secondary version includes higher level content about the climate change initiatives being implemented in the water industry. Only released in December, both versions already have many views.

New waterbug lifecycle resources

Macroinvertebrate sampling can lead to further investigation into lifecycles, with several species maturing to become flying insects after spending the first part of their life in the water as nymphs/larvae.

To support this learning we engaged Kahlea Spiby, a Wurundjeri Woi Wurrung woman living on Yorta Yorta country. Kahlea participated in a Youth Takeover think tank to create a volunteer recruitment campaign for the North Central CMA. Being a self-taught artist with a background in conservation and ecosystem management we harnessed her strong passion for nature and asked Kahlea to produce five waterbug lifecycle posters illustrating how selected species transform from egg to mature adult.

A3 posters and A5 postcards were developed featuring the dragonfly, damselfly, stonefly, caddisfly and mosquito. The posters will be fantastic teaching and learning tools for schools and the postcards will be used at community engagement events.



North Central CMA

Coordinator Nicole Howie



2024 River Detectives participation

Number of River Detectives schools/groups registered	35
Number of students participating	1,757
Number of teachers/educators being supported	44

2024 River Detectives activity

	Number	Participants
Professional Development sessions for educators	11	52
Coordination of and attendance at state-wide network meetings	5	N/A
Delivery of school incursions	24	767
Additional engagement events	8	473

25

Primary schools

8

Secondary
schools

2

Other settings

Terms one and two highlights

- Showcasing the River Detectives program during the innovative Unplug and Play initiative in May. The [five-part documentary](#) was a hit on social media.
- Presenting at a Bendigo Family Nature Club event on the Campaspe River in February and the Beacon Career's Expo in Moama during May.
- Schools using the River Detectives program to achieve broader sustainability goals such as running Kids Teaching Kids events and gaining grant funding for projects.
- Three north central schools using the River Detectives program to help them win 2024 ResourceSmart Schools awards; Student Action Team of the Year (Chewton PS), Teacher of the Year (Epsom PS) and ResourceSmart School of the Year (Chewton PS).



Terms three and four highlights

Macroinvertebrate Professional Development Sessions

Waterbug sampling is an extremely engaging citizen science activity that complements water quality testing and offers infinite learning opportunities. Upskilling educators is an important ingredient to encourage them to run sampling sessions with their students, utilizing the vast array of resources available on the River Detectives website.



Nicole collects a bug sample at Redesdale



Bendigo Sustainability Festival youth directors at a session

We ran sessions in Kyneton, Castlemaine and Bendigo attended by nineteen educators along with staff from Djandak (Djaara) and three Bendigo Sustainability Festival youth directors who hope to include waterbug sampling as part of the 2025 festival. Educators in the north of our region enjoyed their PD session in conjunction with waterbug school incursions at St Joseph's Primary School Kerang, Mallee District Aboriginal Services youth group and Murrabit PS.

Community events and school field days

Each year during October we take part in a National Water Week event at the Bendigo Library with Coliban Water and the City of Greater Bendigo offering free, family-friendly activities. This year Nicole was joined by North Central CMA fish ecologist Dr Peter Rose, running a waterbug sampling activity in front of the large aquarium featuring endangered wetland-specialist fish.

They stole the show by feeding waterbugs to the fish for a live demonstration of the important role they play in the food chain of a healthy aquatic environment.



Nicole and Peter at the National Water Week event

We supported Chewton Primary School with its ambitious goal to plan a Healthy Waterways Day. On 15 November, 270 Year Three/Four students from neighbouring schools attended their water testing site on Forest Creek to enjoy a variety of waterway activities by guests from River Detectives, Parks Victoria, Nalderun Education Aboriginal Corporation, Coliban Water and ResourceSmart Schools. Chewton students did a great job running activities to immerse participants in water quality testing and waterbug sampling.



Chewton students introduce waterbugs



Chewton students demonstrate water quality testing

Story of Change

Victory Christian College (Bendigo) was chosen as the 2024 subject for its use of River Detectives as a springboard for community action. The school has taken an active role in habitat enhancement works occurring at its Kennington Reservoir test site. Through collaboration with the City of Greater Bendigo and the Victorian Fisheries Authority, the school boosted its Year 9-12 Environmental Science program with practical citizen science, hands-on contributions to local environmental work, invaluable field experience, and networking with local experts to highlight career pathways.

A [written](#) and [video](#) Story of Change was produced.



"Projects such as ours at Kennington Reservoir mean that concepts are not just theoretical. They are practical, important and useful to others beyond themselves. It's nice for students to feel as though they are giving back to the scientific community through their studies."

Ro Rimmer, Victory Christian College educator

After a River Detectives incursion about microplastics, students dissected fish salvaged before the drainage of Kennington Reservoir to assess their digestive tracts for plastics.

School Incursions

Twenty-four River Detective school incursions were delivered during 2024 with 15 occurring in terms three and four. Sessions engaged students and staff in water quality testing, macroinvertebrate sampling, urban stormwater, microplastics and threats to waterways. Some schools enjoyed a rotation of activities thanks to the involvement of Emily Condon, ResourceSmart Schools (RSS) facilitator. A trial partnership with RSS during 2024 has increased our capacity and offered cross promotional opportunities.

Terms three and four incursions

School	Date	Year level	Students
1. Bendigo Senior Secondary College	27/08/2024	VCE Numeracy	15
2. Bendigo Senior Secondary College	04/09/2024	VCE Numeracy	5
3. Woodend Primary School	17/09/2024	4	65
4. Castlemaine Steiner School	18/09/2024	5-8	50
5. Victory Christian College	08/10/2024	11 Env Science	16
6. Crusoe College	09/10/2024	10 Env Science	10
7. Trentham Primary School	14/10/2024	5/6	24
8. St Joseph's PS Kerang	15/10/2024	3/4	40
9. Mallee District Aboriginal Services	15/10/2024	Primary	6
10. Murrabit Primary School	16/10/2024	P-6	32
11. Bullarto Primary School	18/10/2024	P-6	25
12. Lockwood Primary School	28/10/2024	P-6	36
13. East Loddon P-12 College	30/10/2024	5/6	40
14. Camp Hill Primary School	27/11/2024	Prep	40
15. Catherine McAuley College	11/12/2024	7	20
Total			424

Incursions have been tailored to complement each school's learning focus, not just specifically in relation to the River Detectives program but more broadly across a variety of curriculum areas.



Comparing phosphorus levels

Castlemaine Steiner School process all greywater on site with a series of effluent ponds. Aquatic vegetation has been added to boost filtration. At an incursion in September, secondary students compared the water quality of the school wetland with two of the effluent ponds to assess the effectiveness of the filtration system.

The students discovered the wetland was in excellent condition and will facilitate their aims for 2025; observing water birds from a recently built bird hide, conducting frog monitoring and stocking the wetland with endangered native fish.

Students were pleased to find turbidity (water clarity) and phosphorus (nutrients) levels improved with each effluent

pond, proving vegetation is having the desired effect.

Swan Hill's Mallee District Aboriginal Services (MDAS) joined the program this year to engage its youth group in hands on activities to learn about Country. The group enjoyed two incursions during 2024, one in February to learn about wetland birds and a waterbug sampling incursion in October. In between they have used their water quality equipment to monitor the Milloo Street wetlands; a constructed wetland designed to capture the urban runoff from Swan Hill's stormwater system.

Educators noticed the increased engagement of students who loved sharing their knowledge with elders.



Waterbug identification

"The indigenous and Torres Strait Islander community took a big interest in this and would come and ask the youth children information when completing the testing."

Sahra Summerfield, MDAS youth group educator



In the last fortnight of each school year, Catherine McAuley College (Bendigo) run a Community In Action program with Year Seven students to live social justice values and gain practical skills. They worked with Northern Bendigo Landcare Group at Gold Leaf Reserve, Huntly. Twenty students enjoyed a River Detectives waterbug session in the morning and planted aquatic plants in the afternoon. The school has registered to join River Detectives in 2025.

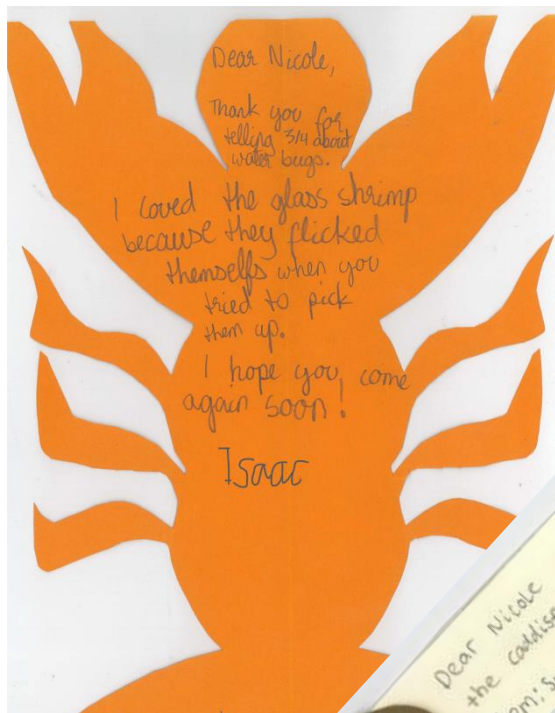
Plans for 2025

- Align schools, where possible, with a priority North Central CMA project:
 - A Healthy Coliban Catchment project
 - RiverScan project
 - Waterways Of The West project
 - Bendigo Creek Citizen Science project
 - Tullaroop Tributaries project
- Offer two tiers of service to meet the needs of new and experienced schools
- Use the offer of experienced River Detectives schools to mentor new schools

Thankyou cards
received from year
3/4 students from St
Joseph's PS Kerang
after their waterbug
incursion



Dear Ni Gobe
We had so much
fun learning about
Caddis flies.
My favourite part
was when I saw a big
caddisfly! It was in a big
bit of bark. Big Hopes and
Dreams from Denika



Corangamite CMA

Coordinator Rebecca McCristal



2024 River Detectives participation

Number of River Detectives schools/groups registered	24*
Number of students participating	2,377*
Number of teachers/educators being supported	44

2024 River Detectives activity

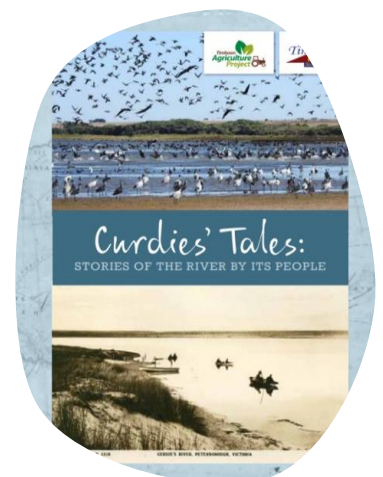
	Number	Participants
Professional Development sessions for educators	5	27
Attendance at state-wide network meetings	3	N/A
Delivery of school incursions	10	273
Additional engagement events	2	112

*Two groups are environmental education providers; Parks Victoria Serendip Sanctuary who host school excursions and School for Student Leadership where schools enjoy a term of residency. 1,097 students were engaged from an additional 18 schools by these two providers.



Terms one and two highlights

- Timboon P-12 College book launch; [Curdies' Tales: Stories of the river by its people.](#)
- Lavers Hill K-12 College aiming to embed the program across the P-10 science curriculum
- St James' Parish School showcasing the River Detectives program in their shortlisted 2024 ResourceSmart Schools award nominations; Curriculum Leadership School of the Year and Community Leadership School of the Year.



Terms three and four highlights

Macroinvertebrate Professional Development Sessions

Two waterbug PD sessions were well attended; held outdoors on the Barongarook Creek at Colac Lions Park and at Lake Wendouree Ballarat. These sessions not only provide a practical session to develop educator confidence in delivering successful waterbug sessions to students but also provide a valuable networking opportunity for teachers to share River Detectives experiences.

Schools were extremely interested in waterbug surveys during Terms three and four. Many requested incursions and some staff took the leap to give the process a try themselves with the help of River Detectives resources and PD support.



Educators at the Colac PD session

Engaging other schools through collaborative events

When possible, the Corangamite CMA River Detectives program enjoys collaborating with other agencies to offer special events to schools that many not currently be registered for the program. This is a great opportunity to promote River Detectives and encourage schools to consider joining in future.



Barwon Water's presentation



Bec works with students to identify bugs

River Detectives and Barwon Water worked closely with 57 Colac Secondary College Year 10 students in September. Barwon Water taught students about the operations of a wastewater treatment plant and the role it plays in waterway health.

Students also learnt about macroinvertebrates as biological indicators as they sorted and identified bugs in sample trays.

Poor weather on the day caused the event to be modified from a field excursion to an incursion at the school. This flexibility was a key feature of the 2024 Corangamite CMA River Detectives program with both waterbug sampling and water quality testing successful in either situation.

"The data collected and knowledge gained will be used for their Common Assessment Task (CAT), allowing them to delve deeper into their studies and understand the river's ecosystem."

Colac Secondary College educator

The River Detectives program worked with Peter Blackburn from Central Highlands Water to celebrate National Water Week at Invermay Primary School (Ballarat) in October. During the morning, 47 Years 2-6 students and six educators rotated between bush activities at the Gong Gong Reservoir. Students and staff enjoyed a guided walk, Peter worked with students to conduct water filtration experiments and Bec involved students in macroinvertebrate sampling. Sorting and identifying waterbugs was a favourite rotation for teachers, students and Central Highlands Water staff.



Supreme concentration and dexterity are used to catch speedy bugs



An adult dragonfly stops by to check on the larvae in traps

"We had a fantastic time exploring The Gong."

Invermay Primary School educator

Story of Change

Covenant College (Geelong) has been involved in the River Detectives program since 2020, integrating it into its broader sustainability curriculum that has been successfully delivered by the college in partnership with Batesford Fyansford Stonehaven (BFS) Landcare for more than a decade. The story is a fine example of the way curriculum and learning outcomes can be enhanced through strong collaborative partnerships with community groups.

Now in its fourth year, Covenant College involve its Year nine students in River Detectives as part of the college's Community Service Program. Students are immersed in the local environment and community action by working closely with BFS Landcare to improve the health of the Moorabool River. This collaboration allows students to make tangible contributions to their local environment while learning valuable skills.

A [written](#) and [video](#) Story of Change was produced to share their journey.



"As a Landcare group we welcome the opportunity to work with the River Detectives program. Our hope is to introduce students to caring for our local waterway environments with weeding and planting. It's also a great way to be involved ourselves as a Landcare group in monitoring the health of our local waterways."

David Cliff, BFS Landcare president

School incursions

Corangamite CMA River Detectives coordinator Bec enjoyed delivering macroinvertebrate sampling incursions during terms three and four. She found the activity was endlessly engaging, flexible, educational and suitable for a broad range of participants. Many River Detectives schools in the region are small and it's common to deliver an incursion to the whole school. Waterbug sampling can be multi-layered in content to meet the needs of all age groups. Sessions can be as simple as an informal observation exercise through to identification, classification and the introduction of food chains, life cycles, land management and the role macroinvertebrates play as biological indicators.

Sessions can be delivered in a classroom setting or in the field. Waterbug studies complement water quality testing, highlighting the impacts of each parameter.

Terms three and four incursions

School	Date	Year level	Students
1. Sienna College Ballarat	27/08/2024	5	12
2. St Brendan's PS Coragulac	11/09/2024	P-6	20
3. Mt Egerton Primary School	19/09/2024	P-6	14
4. Deans Marsh Primary School	10/10/2024	P-6	47
5. Wendouree Primary School	17/10/2024	5	12
6. Freshwater Creek Steiner School	28/10/2024	6	13
7. Timboon P-12 School	07/11/2024	5	80
8. Lavers Hill P-12 College	14/11/2024	3-6	12
Total			210



Collecting a bug sample
at Freshwater Creek Steiner School



Deans Marsh PS students identify collected bugs



Sienna College students learn how to collect a bug sample



Bec presents to Timboon P-12 School students



Wendouree Primary School proudly display its River Detectives sign on the school gate. Students have even made River Detectives badges!

"Thanks for all your help over the year including the incursion you facilitated for us. It was amazing and I learnt so much. It was so great that I did a similar lesson with all the students throughout the school. It was especially exciting for the junior classes when they were studying minibeasts."

Stephen McNeight, Wendouree PS educator



Plans for 2025

- Strengthen existing links between River Detectives schools and Landcare groups
- Continue service agreements with Barwon Water and Central Highlands Water. The Corangamite River Detectives program is a deliverable for both agency agreements within their respective service areas.

North East CMA

Coordinator Blair Yates



2024 River Detectives participation

Number of River Detectives schools/groups registered	17
Number of students participating	537
Number of teachers/educators being supported	22

2024 River Detectives activity

	Number	Participants
Professional Development sessions for educators	5	9
Attendance at state-wide network meetings	3	N/A
Delivery of school incursions	8	244
Additional engagement events	2	200+

Terms one and two highlights

- Blair appointed as the North East CMA River Detectives coordinator
- Blair, along with Rutherglen Primary School students and their teacher Tash Middlin, presented River Detectives to the Murray Darling Basin Authority's 2024 River Reflections Conference at Albury in June. Their presentation was very well received.



Presenting at the MDBA River Reflections Conference

12

Primary schools

2

Secondary school

3

Education providers

Terms three and four highlights

Working with St Francis of Assisi Primary School, Wodonga

North East River Detectives program coordinator Blair attended the school's celebration of St Francis of Assisi Feast Day on 10 October. The day was a celebration of St Francis of Assisi, the patron saint of animals. Students were invited to bring their pets to church for a blessing in the morning. During the remainder of the day, the entire school participated in environmental activities with animals as the focus. Blair guided students through macroinvertebrate sampling to assess the water quality and habitat health of the school dams. He also answered questions about climate change.

River Detectives in the spotlight at the Rutherglen Show

River Detectives played a huge part at Rutherglen Primary School in 2024. Not only did the school do an incredible job presenting to a room of experts at the Murray Darling Basin Authority's River Reflections Conference, but students have been dedicated monitors of water quality, completing testing each month April-December.

Year three and four students enjoyed a river walk excursion along three kilometres of the Murray River in May. They learnt about vegetation in the riparian zone and concluded the event with a river health presentation by North East CMA staff.



The river walk from Grantham's Reserve to Wahgunyah



Rutherglen Primary School's wonderful Show display

To raise awareness of the school's involvement in the River Detectives program and educate the community about river health, students and staff presented a display at the Rutherglen Agricultural Show on October 24. Their amazing work explained several of the water quality tests, highlighted the importance of the Murray River, outlined features of an aquatic habitat and how the community can help to keep our rivers healthy.

Our Culture Our Futures Careers Expo

The Duduroa Dhargal Aboriginal Corporation ran this large cultural event at Ryan's Lagoon Nature Conservation Reserve just east of Wodonga on 20 November.

The event featured representatives from a wide array of agencies; DEECA, Fire Forest Management, MDBA, North East Water, universities, and multiple wildlife organisations.

The event offered a range of fun activities to encourage First Nations youth to consider opportunities in the natural resource management field.

The North East CMA River Detectives program attended with a waterbug display.



Blair chatting with First Nations students at the River Detectives display

Story of Change

Wandiligong Primary School joined the River Detectives program in 2023, adding activities to its Sustainable Wandigong program run by educator Alex Shaw each Friday.

Sustainable Wandigong teaches students about food production and sustainable practices. With the beautiful Morses Creek right on their doorstep, the River Detectives program has added a new dimension to their environmental learning. They have enjoyed waterbug sampling, revegetation work along the banks to create riparian habitat and have really appreciated incursions by Blair (North East CMA) and Aunty Val (Duduroa Dhargal Aboriginal Corporation) to deepen learning with scientific and cultural knowledge.

A [written](#) and [video](#) Story of Change was produced to share their journey.



Students test salinity levels of Morses Creek

School incursions

Blair has thoroughly enjoyed delivering incursions to all age groups throughout the year, from kindergarten students to secondary schools where he thrives on tackling challenging concepts.

Terms three and four incursions

School	Date	Year level	Students
1. Yackandandah Bush Kinder	15/10/2024	Kinder	40
2. Rutherglen High School	16/10/2024	10	23
3. Dederang Primary School	23/10/2024	P-5	26
4. Wandiligong Primary School	25/10/2024	P-6	35
5. Bright P-12 College	21/11/2024	10	10
Total			134



Yackandandah Bush Kinder

The program has strived to see greater involvement from First Nations groups.

Blair immersed young Yackandandah Kindergarten students in hunting for waterbugs whilst playing amongst the puddles of their Bush Kinder site on 15 October.



Aunty Val from Duduroa Dhargal Aboriginal Corporation added valuable cultural perspectives as the wader-clad children hunted for bugs in the creek. Blair heard many reports of children going home and urging their parents to get out and look for bugs with them!

River Detectives collaborated with a novel project offered by Parallel Wilds at Rutherglen High School and Beechworth Secondary School during 2024. Parallel Wilds is an immersive and empowering 3D platform for youth using mind mapping, creative writing and digital photography, virtual reality and gaming technology, 3D and 360° imagery, and sound composition. This innovative convergence of artforms allows youth to express powerful self-identity in the natural world, creating virtual stories as speculative universes on the future of wilderness, set in the year 2050.

Each school was given a site in their local environment and challenged to create a future story. Rutherglen High School's story featured Lake Moodemere and Beechworth Secondary College's story was created at Boyd's Bridge, Gundowring.



Blair at Rutherglen High School

To assist the students in their story planning, Blair visited and provided site-specific information about the flora and fauna of the area and helped them create a vision for the sites into the far future.

Virtual tours created by the students are marvellous examples of art, science, literacy, geography and history combining with technology to produce an incredible learning tool.

You can view The Mirrors of Moodemere by Rutherglen High School [here](#) or Macquaria Australasica by Beechworth Secondary College [here](#).



A scene from The Mirrors of Moodemere



Dederang Primary School cultural event

Dederang Primary School enjoyed a cultural River Detectives incursion on 23 October, with involvement from Duduroa Dhargal Aboriginal Corporation. Students enjoyed First Nation art, studying fauna and learning the process of conducting a habitat assessment.

A similar River Detectives incursion was held at Wandiligong Primary School on 25 October. The River Detectives component of the rotational activities focused on waterbug sampling. This complemented cultural learning during the day.

To complete the year, Year 10 Bright P-12 College students enjoyed a visit from the River Detectives program to explore the topic of climate change on 21 November.

Students had some highly insightful questions about building homes in flood-prone areas, erosion along the Ovens River and so much more.



Wandiligong Primary School cultural learning at a River Detectives incursion

Plans for 2025

- Develop a stronger focus on incursions for secondary schools to deliver content pertinent to their science curriculum
- Foster continued involvement of First Nations groups
- Help schools connect with on-ground projects such as tree planting and promote projects and volunteering opportunities to schools and their students



Traditional dancing at the DDAC event at Ryan's Lagoon

"It was great to see so many school kids taking such a keen interest in opportunities in the natural resource management field. A huge thank-you to all agencies that put so much effort into the day. Without your support this day would not have been the success that it was."

Duduroa Dhargal Aboriginal Corporation

Wimmera CMA

Coordinator Jeanie Clark



2024 River Detectives participation

Number of River Detectives schools/groups registered 13

Number of students participating 147

Number of teachers/educators being supported 16

Activity	Number	Participants
Professional Development sessions for educators	16*	28
Attendance at state-wide network meetings	2	N/A
Delivery of school incursions	17*	251

*To meet the needs of schools, River Detectives visits were offered to schools to serve as both students incursions and educator professional development sessions

Terms one and two highlights

- A boom in River Detectives registrations thanks to a flexible delivery model in the Wimmera CMA region. The new model has less of a focus on citizen science data entry and more on school incursions that double as professional development opportunities for educators
- Goroke P-12 College joining to play a role in addressing local environmental challenges
- Long-term River Detectives school, Jeparit Primary School, continuing to take part



Jeparit Primary School's experienced River Detectives students

10

Primary schools

1

Secondary school

2

Kindergartens

Terms three and four highlights

River Detectives at Nhill Lutheran School

Jeanie Clark is contracted by the Wimmera CMA to deliver the region's River Detectives program part time. Her other role this year was part time educator of the Year 5-6 class at Nhill Lutheran School. This gave Jeanie the opportunity to involve the school in the program, explore activities with her class. It also meant the school benefited greatly from Jeanie's River Detectives passion and experience.



Nhill Lake, a great resource for the school

Jeanie took her class to Nhill Lake on 14 August to take observations and assess the lake's water quality. This excursion tied in with the school's celebration of National Science Week.

The class continued its investigations by identifying waterbugs collected from the lake on 30 October. This activity linked with fauna observations they had been collecting as part of the Aussie Bird Count.

Studies of Nhill Lake were part of an inquiry unit Acting Local.



"The ecosystem at Nhill Lake is healthy because we discovered lots of different waterbugs. Pond snails eat algae and can be eaten by backswimmers, which can be eaten by water boatmen and all can be eaten by dragonfly or damselfly nymphs and all of these can be eaten by the Eurasian Coots. So although the Stream Health Score is a poor 3.9, it supports a healthy food web."

Nhill Lutheran School students

"The environment has four parts; air, land water and living things. All of these are essential to survival. The circular lake has an island on it and pontoon. When we were there the air was warm. The water was a bit salty, not drinkable and very clear. We could see the bottom of the lake! The lake had lots of living things. The River Red Gums and cockatoos were noticeable. I thought the lake looked healthy."

Nhill Lutheran School students

Story of Change

The Wimmera CMA River Detectives had capacity during 2024 to offer early childhood services a water life incursion focusing on waterbugs. This unique opportunity was captured in a story featuring Minyip and Rupanyup kindergartens. A water sample was collected at the Minyip Wetlands to provide an opportunity for children in their three- and four-year-old programs to extend their interest in and knowledge of the smallest creatures in our ecosystem.

A [written](#) and [video](#) Story of Change was produced to share their experience.



Minyip Kinder children proud of their waterbug lifecycle postcards

"The timing for Term Four was very convenient as the children of both services had an intense interest in bugs/insects and this had been a focus of the program at both services for some time. As the wetlands are some distance away from the service, it wasn't feasible for us to visit them in person. The River Detectives program provided us with a very accessible and convenient solution."

Christiana Henke, early childhood educator

School incursions

Terms three and four were a flurry of delivering 12 River Detectives incursions. Sessions focused on water quality, riparian habitat, and water life; covering waterbugs, frogs and fish.

Many schools had received visits in previous years, so Jeanie found it very rewarding to build on the knowledge and experience of educators and students. The lower number of participating schools and flexibility of Wimmera CMA's delivery model also enabled several schools to have multiple visits and encourage further scaffolding of learning.

Jeanie supported educators to follow up on incursions by leaving them with a PowerPoint presentation that summarised the incursion topic provides further information.

"Our session was fantastic and students were highly engaged. The associated PowerPoint presentation was excellent and useful for furthering our study."

Wimmera CMA region River Detectives educator

Terms three and four incursions

School	Date	Year level	Students
1. Nhill Lutheran School	14/08/2024	5-6	12
2. Natimuk Primary School	13/09/2024	5-6	14
3. Jeparit Primary School	11/10/2024	3-6	10
4. Rupanyup Kindergaten	18/10/2024	Kinder	4
5. Minyip Kindergarten	22/10/2024	Kinder	9
6. Nhill Lutheran School	30/10/2024	5-6	11
7. St Mary's PS Warracknabeal	01/11/2024	2-3	17
8. Dimboola Primary School	11/11/2024	1	13
9. Jeparit Primary School	12/11/2024	3-6	10
10. Goroke P-12 College	22/11/2024	7-8	2
11. Natimuk Primary School	22/11/2024	5-6	14
12. Stawell Primary School	03/12/2024	1	18
Total			134



Natimuk Creek with water in spring

Natimuk Primary School's September session built on a Landcare planting earlier in the year to see how the creek habitat had changed.



Students identified parts of the environment by field sketching at Natimuk Creek before completing a habitat survey lead by Jeanie. Natimuk Primary School's November session further extended the learning by assessing what creatures were living in the water.



Assessing habitat along Natimuk Creek

Jeparit Primary School has participated for many years and always monitor waterbugs in spring each year. Year Six students have a good knowledge of most common waterbug species and Jeanie was able to bring in 20 years of waterbug data for students to compare with. The second session for the year focused on fish and frogs and was a direct result of the ongoing learning over the years of students and staff.



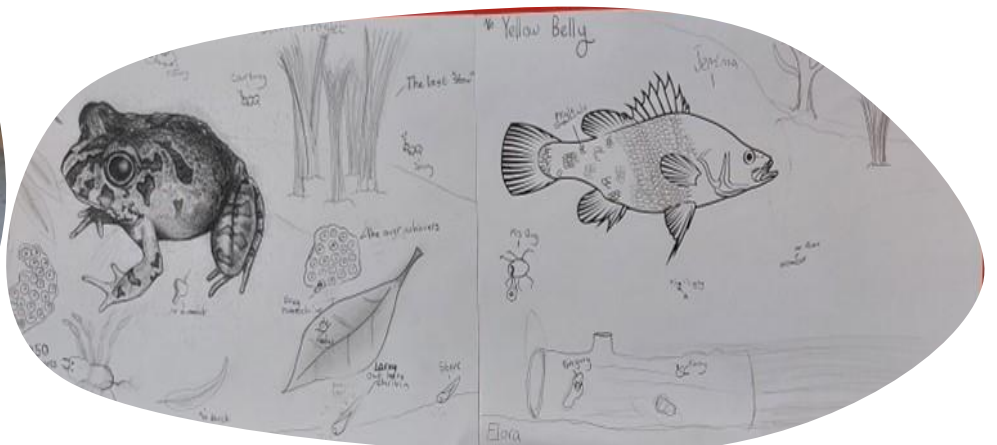
Finding waterbugs to identify them

"We value the program for students' connection to place and to promote responsibility for the environment."

Craig Donahoo, Jeparit PS principal



Jeanie introducing waterbugs from the Wimmera River



Jeanie worked with the only two Year 7-8 students in the environmental science class of Goroke P-12 College in November. During an excursion to Lake Ratzcastle she guided them to assess the water and habitat quality of the water body south of Goroke. Being a small isolated rural school, staff and students really value the opportunity the River Detectives program provides to give access to specialized science equipment and knowledge.

The school faced enormous challenges during 2024 with one third of their staff cohort changing. They were unable to implement the program as originally hoped but have plans to rectify this in 2025.



River Detectives helps rural students access interesting experiences

"Moving into 2025 a River Detectives club will be set up independently of class time with an expectation that students will conduct the water testing three times a term as part of their club activities."

Gabrielle Schultz, Goroke P-12 educator

Plans for 2025

- Cater to the needs of Wimmera region schools by offering themed incursions throughout the year; water quality testing at the beginning of the school year, salinity studies in May, water quality testing for National Science Week in August and macroinvertebrate sampling from September to December.

"One challenging student from my class wrote on my Christmas card; 'I really liked finding water bugs'."

Jeanie Clark, Nhill Lutheran School educator



Melbourne Water

Coordinator Marita Tripp



2024 River Detectives participation

Number of River Detectives schools/groups registered	24*
Number of students participating	4,371*
Number of teachers/educators being supported	84*

Activity	Number	Participants
Attendance at state-wide network meetings	4	N/A
Delivery of school incursions (Greater Western Water)	17*	1,478*

*Greater Western Water is a water corporation delivering River Detectives content as part of their education program. They have delivered incursions with River Detectives content to 17 schools and 1,478 students in 2025.

Terms one and two highlights

- Increased demand for the program with 32 schools registering including three organisations implementing River Detectives content; Healesville Sanctuary, Werribee River Keepers, and Environmental Education for Kids.
- Increased capacity thanks to the partnership with ResourceSmart Schools enabling their facilitators to support River Detectives involvement at two schools.
- Cornish College's work with the Port Phillip EcoCentre to extend their River Detectives learning.
- Students enjoying environmental and cultural learning by the seaside thanks to the passion of Greg Woolford, Engagement Leader for a cluster of catholic primary schools in Melbourne's western suburbs who are involved in the River Detectives program.
- Four schools in the Melbourne Water area using the River Detectives program to nominate in eight categories of the 2024 ResourceSmart Schools awards; Mount Lilydale Mercy College, Overnewton Anglican Community College Keilor, Poowong Consolidated School and Newham Primary School. Mount Lilydale Mercy College won Community Leadership School of the Year and the school's Andrew Feher won Secondary Teacher of the Year.



Terms three and four highlights

Greater Western Water embed River Detectives in their program

Kim Hall is a community engagement officer at Greater Western Water. She is passionate about environmental education. Like many Victorian water corporations, Greater Western Water offers a free education program to schools in their catchment. With many links between urban and natural water cycles, the organisation enjoys being part of the River Detectives program each year and embedding activities into the school incursions they offer.

Through this collaboration they were able to expose an additional 17 schools, 60 classes and 1,478 students in their region to the River Detectives program.

“We were thrilled to have reached as many schools and students as we did in 2024. It’s a very popular program. We have participated for many years now and love it. We would love to continue the relationship and education.”

Kim Hall, Greater Western Water educator

Schools actively collecting citizen-science data

Melbourne Water schools have proven they value the opportunity to collect and contribute data to the River Detectives portal. A high number of entries have been submitted for water quality, macroinvertebrates, and habitat during the year, with a noticeable increase in the second half of the year. This data is publicly available on the [WaterWatch Victoria Data Portal](#).

2025 data entries by Melbourne Water schools

Data entry type	Semester 1	Semester 2
Water Quality	11	57
Macroinvertebrates	2	10
Habitat	1	5
Total	14	72

"This year we added a partnership with the Port Phillip EcoCentre. We are now also completing rubbish audits and shell surveys of our local beach. This beach is directly influenced by the flow of our River Detectives waterway."

Samantha Millar, Cornish College educator



River Detectives students conduct a rubbish audit

At Heathmont College, the citizen-science aspect of the program is highly valued. The school and students benefit from being part of the community and the community sees the school and students caring for and being

involved with the environment. The program is integrated into their curriculum and a part of the students' assessment.

"Students write a report on their findings and submit it for assessment. Prior to going on excursions to the creek, students investigate what makes a fair test, stormwater, pollution and human effects on the local environment."

Marquita Corr, Heathmont College educator

Embedding the program into broader initiatives

At Sirius College's Eastmeadows campus, River Detectives is an invaluable part of the Duke of Edinburgh program for Year Nine and Year Ten students. The school offers the Duke of Edinburgh International Award as an elective for students. The program is designed to help young people develop life skills, find their purpose, and improve their educational and employment prospects.

"River Detectives is an officially recognised water surveillance program that the students respect, and it motivates them to undertake the sampling and testing with scientific rigor."

"It gets our students outdoors, participating in hands-on local environmental science throughout the year that they ordinarily would not have an opportunity to do."

Jamie Astill, Sirius College educator

River Detectives provides the students with meaningful ways to engage in scientific and community service to complete their award.

School incursions

Although Melbourne Water River Detectives coordinator Marita Tripp has not had capacity to deliver school incursions this year, Greater Western Water has included River Detectives content in the school incursions below.

2025 incursions delivered by Greater Western Water

School	Classes	Year level	Students
1. Red Rock Christian College	2	5-6	28
2. Riddells Creek Primary School	3	5-6	75
3. Riddells Creek Primary School	3	3-4	81
4. Kingsville Primary School	3	5	75
5. Arnolds Creek Primary School	8	5-6	200
6. Lakeview Senior College	1	10-12	20
7. Kurunjang Primary School	7	5-6	161
8. St Brendan's Primary School	2	5-6	44
9. Holy Eucharist Primary School	4	3	92
10. Sunbury Primary School	4	3-4	100
11. St Augustine's Primary School Keilor	3	5-6	72
12. Melton South Primary School	5	5	120
13. Braemar College	4	6	100
14. New Gisborne Primary School	3	5	66
15. Sunshine Heights Primary School	1	Sust grp	40
16. St Peter Apostle Primary School	2	4	80
17. St George Precast, Caroline Springs	4	5	100
18. Global Village Learning	1	3-6	24
Total			1478

Many participating schools in the Melbourne Water area are highly experienced River Detectives schools and run their own in-school and off-site activities, often involving partner organisations and community groups.

"Each of our Year Seven science classes have attended a field trip to McNabb's Weir, located on the Maribyrnong River where it passes the base of our Yirramboi Campus.

Overnewton has participated in Melbourne Water's longitudinal citizen science program, River Detectives, for more than seven years. Students conduct habitat surveys, water quality tests, and identify macroinvertebrates."

Overnewton Anglican Community College educator



Students engaged in outdoor learning

"Students studying at Keilor are extremely fortunate to have this waterway ecosystem at their doorstep."

Overnewton Anglican Community College educator

Thanks to the program's partnership with ResourceSmart Schools (RSS), Bass Valley Primary School and Poowong Consolidated School have been able to take part in River Detectives. They liaise closely with their local RSS facilitator, Tammy Logan, who delivers River Detectives content and involves the school in water quality testing.



Monitoring the school wetland

At Bass Valley Primary School, staff have appreciated educating students about the school wetland. Students enjoyed the hands-on nature of the activities and spending time outdoors. River Detectives activities have led to other sustainability and environmental work around the school.

In 2025, the school hopes to continue the work they have started in 2024 and build knowledge of caring for the environment across all year levels. The school has observed the students who participated in River Detectives during the year gain valuable knowledge across different curriculum areas and learning tasks.

"We are so lucky to have this waterway onsite at our school and would love the chance to continue this work along with our RSS partnership."

Tess Marriott-Ennoss, Bass Valley Primary School educator



A River Detectives incursion led by ResourceSmart Schools

At Poowong Consolidated School, Tammy was able to visit the school during October and guide students through macroinvertebrate sampling to determine the health of their local Bass River and help them with actions in the RSS water module.

"We are already talking about when we might be able to do it again! Also, thank you for all the wonderful resources on the River Detectives website. It has made planning this term so enjoyable."

Lauren Dobie, Poowong Consolidated School educator

Testimonials

Quotes from end of year evaluation surveys by teachers statewide

What were your 2024 highlights?

"Our high-flying students really enjoyed the water quality testing. It gave them something outside of the usual primary curriculum and made them feel special."

Scott Walker, Siena Catholic Primary School,
Corangamite CMA region

"The emerging curriculum contained learning outcomes about the indigenous history of the land our school sits on. The River Detectives work added depth to our religious education units and Catholic Social Principle of Care for our Common Home."

Rachel Smith, Emmaus Catholic Primary School, Corangamite CMA region

"Our senior class of Grades 3-6 monitored the water quality and habitat at our local lake once a month. We integrated the Pesticide Watch sampling as an additional component of our water monitoring. This was a highlight experience for our students, who have already asked if they can participate in the program again next year."

Laura Millar, Mount Egerton Primary School, Corangamite CMA region

"Doing River Detectives across multiple year levels in three schools, running three or four activities at each site per visit. It was fun for the kids to learn at the nearby creek. This helped them know their neighborhood and make positive connections to their local waterways."

Greg Woolford, Mother of God / St Theresas / Our Lady's Primary Schools, Melbourne Water area

"This year we added a partnership with the Port Phillip EcoCentre."

Samantha Millar, Cornish College, Melbourne Water area



River Detectives field work at Overnewton Anglican Community College

"Throughout the year many of my students brought water samples in from other water bodies in our area such as Little Lake Charm and Lake Charm, interested in assessing the water quality as they had noticed a difference in the turbidity between the two lakes."

Kirstie English, St Joseph's Primary School
Kerang, North Central CMA region



River Detectives results on the Redesdale community noticeboard

"We worked on improving fish habitat and participated in a community planting day along Bassett Creek, removing weeds and replacing them with native species."

Kyle Murphy, Castlemaine Steiner School,
North Central CMA region

"We conducted regular water samples, uploaded the results and created a community poster to share in a noticeboard each month reporting our findings."

James Addlem, Redesdale Mia Mia Primary
School, North Central CMA region

"The River Detectives program is part of our 3/4 STEM curriculum. Students utilise River Detectives knowledge in different contexts. For example, they worked on a project to showcase our waterways as the lifeblood of the land."

Tash Middlin, Rutherglen Primary School,
North East CMA region

"I love how engaging the program is and that it complements science curriculum outcomes. Last year was the first time I embedded the program into my science biology unit and it worked very successfully."

Katie Pallot, St Patrick's Primary School
Wangaratta, North East CMA region

"Our waterbugs excursion to Lake Ratzcastle."

Gabrielle Schultz, Goroke P-12 College,
Wimmera CMA region

"I believe opportunities for students to experience practical hands-on activities in their local environment is vital to make learning meaningful, to shape students' worldview of being part of something more than just themselves and to understand the impact we have on the world around us."

Ellen Kennedy, Grace Christian College,
North East CMA region