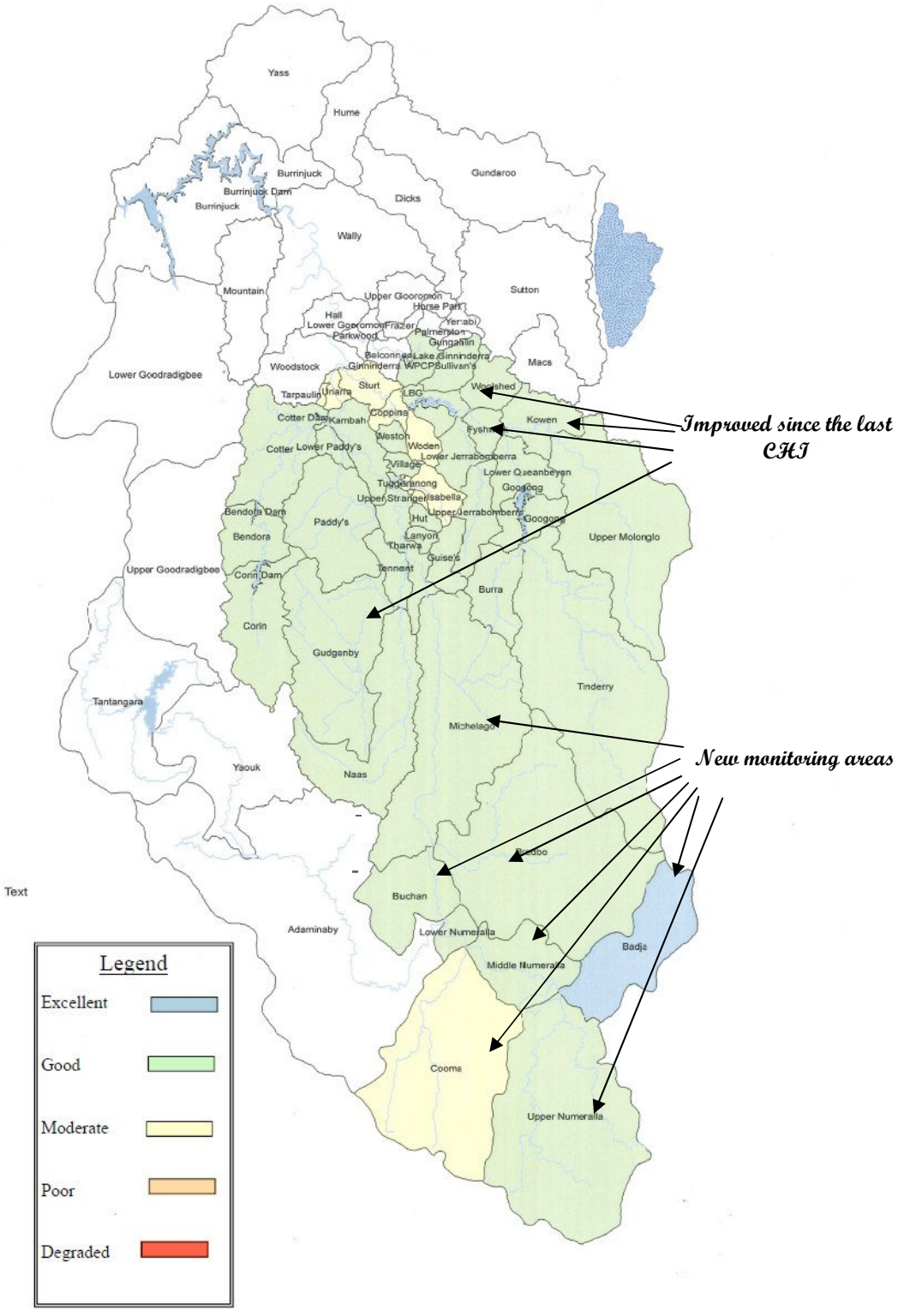
Volume 13 Issue 3
May 2011

WATERWATCH
Upper Murrumbidgee & ACT

Upper Murrumbidgee Waterwatch

Catchment Health Indicators Update January 2011



Questions, comments, or want to be removed from our mailing list click here.

Volume 13 Issue 3
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Water Quality

WATERWATCH
Upper Murrumbidgee & ACT

What do the Catchment Health Indicators Tell Us?

By Tanya Rucosky Noakes

What's the CHIP?
The Catchment Health Indicator Program (CHIP) provides Waterwatch with a strong indicative sense of sub-catchment health. CHIP uses an algorithm that takes in water quality information such as turbidity, nutrients, salinity, and pH, as well as riparian assessments, algae scores, macroinvertebrate and frog surveys and overlays land use patterns.

The CHIP lets the community know if sub-catchments have improved or become less favourable since the last reporting period. They also indicate if a sub-catchment requires follow-up work for one or a group of parameters.

The more data we have, the more robust the CHIP data becomes. The information from volunteers is invaluable, and the more they can tell us, the better.

We have a real opportunity here to add to the CHIP algorithm as well, with landscape function, percent weed cover, ground cover, biodiversity data, and soil indicators.

What's this CHIP telling us?
Having a look at the last CHI map (http://www.act.waterwatch.org.au/Files/Newsletters/october2010.pdf Upper Murrumbidgee Newsletter volume 12 Issue 5 October 2010) the first thing that pops out is how much more territory Upper Murrumbidgee Waterwatch is now covering. Thanks to the hard work of our newest coordinator, Antia Brademann, we now are monitoring Michelago, Bredbo, Buchan, Upper, Lower and Middle Numeralla, Badja and Cooma sub-catchments. This gives us a much better idea what is happening in the upper catchments, which have a huge impact on the ACT region that Upper Murrumbidgee Waterwatch historically has monitored.

The other obvious change is the increasing area coloured green, indicating good catchment health. In the urban sub-catchments of Fyshwick, Kowen and Woolshed there was a general improvement over the last six months. While we would like to take the credit for these improvements, all indications are that the good spring and summer rains are probably the cause. Increased flows lower salinity, and stimulate riparian plant growth. Healthy riparian systems and good ground cover protect our streams from run-off soil and nutrients.

The same effects can be seen in the improvement of the rural sub-catchments of Tennent and Gudgenby. When you get down to it, rivers like water.

It is worthwhile then to note that the areas which consistently score "Fair" are downstream of major urban areas, and highlight that the largest problem in the region continues to be nutrient run-off from small landholder's blocks.

**During this season of 'savage' budgets,
an optimistic thought:**

**technically,
the glass is always
full.**

What's Happening

Waterwatch Fridge Door

(All programs are free and open to the public.)

Seed Collecting Workshop
18 June, 2011
10:00-2:30pm
Numeralla Hall and site visit

Macroinvertebrate Training
28 August, 2011 2pm
Murray's Corner, Paddy's River

Rapid Assessment of Riparian Condition Training
17 September 2011 2pm
TBA

Macroinvertebrate Training

Join faculty from eWater for a macroinvertebrate training afternoon at Paddy's River. Trainers Sue Nichols and Evan Harrison will walk new bug watchers and seasoned old hands through identification and collection techniques.

Sue is a research fellow at the Institute for Applied Ecology, University of Canberra with particular interest in biological assessment of river condition. She has worked extensively on the development of the Australian River Assessment System (AUSRIVAS), which comprises of standardized macroinvertebrate sampling methods, predictive models, and software to assess the biological health of Australian rivers. Her current research focuses on river management to maximize ecological outcomes in a changing environment.

Evan is a postdoctoral researcher at the Institute for Applied Ecology, University of Canberra and manager of the freshwater ecology laboratory. Evan has played a central role in running the Institute's AUSRIVAS training program over the past 3 years. Evan's research has focused on understanding the relationship between physical stream process and ecological responses. He has also been involved in studies investigating the effects of environmental flows on stream ecological condition in the Cotter River.

Bring your own waders and boots if you have them – we have some class sets. As usual., wear warm clothes.
Waterwatch will provide hot drinks and a snack.

Seed Collecting Workshop

Join Greening Australia and Numeralla Landcare for a free seed collecting workshop to learn about how to collect a variety of local native plant seed, followed by a site visit to practice seed collecting methods. (Please note that due to the time of year and seeding times of local plants, the total amount of seed that can be collected on this day will be limited.)
Cost: Free, morning tea & lunch provided
Please RSVP by 15th June to Antia (0429778633)

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News from the Cooma Region

Upper Murrumbidgee Primary School River Workshop

by Antia Brademann and Adrian Wells

Upper primary school students from Michelago, Bredbo and Jerangle schools met in Bredbo to participate in an all-day river workshop on Monday 4 April 2011. This was one of a series of workshops for primary students being conducted in 2010-2011 by the Murray Darling Association on behalf of the Murrumbidgee Catchment Management Authority.

A key feature of this workshop is to try and link students to the new native fish demonstration reach in the Upper Murrumbidgee.

Apart from sharing with each other and natural resource management organisations what they are already doing in their schools, the aim of the workshop was to let the students identify, engage in and have their say on natural management issues in their catchment. The workshop will foster an ongoing involvement in catchment management activities into the future, including a project that the schools may want to undertake in the coming year.

"This is an important way for young people to get their voice heard and for them to take a positive role in their catchment's future," said Adrian Wells, workshop facilitator and Murray Darling Association staff member.

At the Bredbo forum, students met and engaged with a range of natural resource management organisations and projects working in the local region including the Murray-Darling Basin Authority, the Murrumbidgee CMA, Waterwatch, the Native Fish Strategy and the Upper Murrumbidgee Demonstration Reach.

Antia Brademann, Cooma Region Waterwatch Coordinator, said that by visiting the river with people who are working on issues, students will better understand that everyone is part of their catchment and what is going on in it.

"We want every student to understand that each of us has a role to play in looking after it." said Antia.

Mud Marlin Fishing Competition Hooks Numeralla

by Narelle Allen

The seventh annual Mud Marlin Fishing competition was in Numeralla to help lower numbers of carp in our waterways.

Event organiser Brett Jones said, "It has been another successful weekend with everyone who took part having a lot of fun. Unfortunately the weather wasn't on our side, hence the number of fish taken was lower than last year. I would like to thank this years sponsors for once again helping to make this weekend so successful."
This years sponsors were: Murrumbidgee CMA, Alpine Angler, Cooma Monaro Shire Council, Cooma Camping World, Cooma Sports Store, Boller & Co, Braidwood Ground Spraying, Upper Murrumbidgee Waterwatch, Boyce Chartered Accountants, Spic & Span cleaning, Cooma Rural, Numeralla Olives, Trotts Transport and Fran Roberson.

There was a total of 145 fish caught over the weekend with about 300 fingerlings. The total weight for all of the fish caught this year was 163.98kg.

Young Numerellians surveying their catch

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The Vegged Edge

WATERWATCH
Upper Murrumbidgee & ACT

Rusty Water?

Rusty water— you may have seen your river, creek or pond go rusty, from dirty brown to bright orange. It may just be a passing phenomenon, or it may hang around until the next time there is a flushing rain. What is it and why does it happen?

It may be **chemical**. Some water in areas associated with mining or industrial activity will develop a suspension of iron oxide and similar iron, manganese, zinc or aluminium minerals. The Molonglo River at Captains Flat is a good example of chemical 'rusting'.

It may be **bacterial**. This will usually have a distinct sulfur smell, and the mud will be purple-black ooze. There are quite a number of naturally occurring sulfur bacteria that prefer sulfur to oxygen in their metabolic processes. Small or controlled populations of these bacteria are important in distributing sulfur through ecosystems; large concentrations will often result in acid-sulfate soil formation. This can happen in dairy drains and similar boggy spots rich in nutrients.

Rarely the rust is the product of a **water mould**. The water looks as if it is full of clumps of yellow brown or rusty fairy-floss. Water moulds are fungus-like organisms that digest organic matter, and are usually encountered in waterways rich in plant matter. Water moulds are generally harmless, but they are related to the chitrids that invade frogs' skins and waterborne blights like Potato Blight.

Most frequently the rusting is the result of a sudden and dramatic increase in **diatom populations** in that waterway. Diatoms are microscopic plant-like organisms in which the individual cells develop inside a two piece silicon house. Along with aquatic bacteria, diatoms are responsible for the biofilms on submerged structures. That is why the algal fringe on aquatic plants is often variously coloured, not plain green.

Mintweed Rears it's Ugly Head

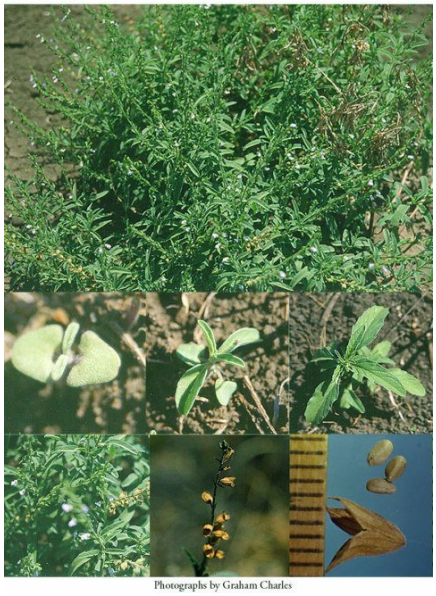
No silver-lining is without a cloud, and this years good rains have gifted us with a fresh crop of weeds that enjoy moist soil. Chief among them, heading north from the Cooma region is mintweed (*salvia reflexa).*

This erect, greyish-green annual with the characteristic mint four sided stems stands about 500 mm tall with pale blue flowers has a minty aroma when crushed.

"Mintweed seed is moved by flood waters and tends to form dense local stands excluding most other species. It likes to take over after denudation due to overgrazing, flooding or cultivation, so it's had a great year around here to get established." said Upper Murrumbidgee Waterwatch Facilitator, Tanya Noakes.

While mintweed has yet to be declared in NSW or the ACT, please contact your local Waterwatch coordinator is you spot it.

Salvia reflexa Hornem.



Photographs by Graham Charles

Upper Murrumbidgee Waterwatch

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What is Waterwatch?

Waterwatch is a national community water quality monitoring program that encourages all Australians to become involved and active in the protection and management of their waterways and catchments.

Who is Waterwatch?

Waterwatch involves local community groups such as Landcare, Park Care and Catchment groups, as well as residents, schools and landowners who regularly monitor the water quality of local creeks, wetlands, lakes and rivers.

Why monitor?

Healthy catchments produce healthy ecosystems with happy fish, frogs, birds, plants, macro-invertebrates and people. Waterwatch aims to create awareness of water quality issues by involving all members of the community and by forming partnerships between the Waterwatch group and water authorities, resources management authorities, business and industry.

First step

If you are interested in improving the health of your waterway and meeting or forming a group of like-minded individuals, you should begin by contacting your local Waterwatch Coordinator.

Making a difference

Water quality information collected throughout a catchment provides a picture of the health of your waterways. Waterwatch groups have initiated many positive, community based conservation activities such as creek restoration, willow removal, removing litter from waterways, eradicating weeds, development of habitats, and reducing the use of pesticides and other pollutants.

Waterwatch is proudly supported by:

ACT Government
Environment and Sustainable Development

ActewAGL

Australian Government

Molonglo Catchment Group

Upper Murrumbidgee Catchment Coordinating Committee UMCCC

Southern ACT Catchment Group Inc

Ginninderra Catchment Group

Volunteers work for free but not for nothing!
Our Vision—
Healthy Waterways

Upper Murrumbidgee Waterwatch is supported by the ACT and Australian

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