



GOULBURN BROKEN WATERWATCH

Catchment Co-ordinator
David Hodgkins
5832 0460
Email: davidh@gvwater.vic.gov.au

Upper catchment Co-ordinator
Jill Breadon
5776 9579
Email: breadon@hdc.com.au

Mid catchment Co-ordinator
Glenda Woods
5797 2417
Email: woodsy@mail.ancc.com.au

Northern Catchment Co-ordinator
Jane Ryan
5832 0461
Email: janer@gvwater.vic.gov.au

Nutrients in Irrigation Drains Project Co-Ordinator
Christopher Guthrie
5831 8961
Email: chris@gbcma.vic.gov.au

GOULBURN BROKEN WATERWATCH

1999 Annual Community Monitoring Report



January 2000



Including:

- Reports on the 3 regional programmes
- Report on 1999 National Water Week
- Names of all monitors for 1999

The Waterwatch Programme

Waterwatch is a water quality monitoring programme, aiming to increase awareness and understanding of water issues in the community.

The data collected by community monitors is contributing to compiling a detailed picture of the condition of our catchment and is being used by catchment water managers.

Technical expertise is developed in the community through the process, so through community action, issues are discussed and projects are developed to achieve results in our catchment.

You can read about some of the community groups and the types of projects they have undertaken in 1998. They have taken on this responsibility to become part of the solution, not just part of the problem.



Table of Contents

Introduction to Goulburn Broken	2
Whole catchment Report	3
Life in a northern town— <i>Northern catchment report</i>	7
Mid & Upper catchment	9
Nutrients in Irrigation Drains Programme	12

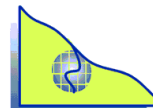
Sponsors

Goulburn Broken Waterwatch could not function without the help of our major sponsors:



Natural
Heritage
Trust

GOULBURN
MURRAY
LANDCARE
NETWORK



Thanks also goes to these organisations that have sponsored and supported our programme this year:



SHEPPARTON SCIENCE &
TECHNOLOGY CENTRE
"A regional focus of
excellence"



Meet the Gang (cont...)



Broken Creek - Ken Lucas

Ken now knows what phosphorus and flows go under his driveway. With collected data indicating flows of 745ML and the equivalent of 27 tonne of superphosphate—so what's new? He reckons that data can't be beaten as the drain capacity is only 750 ML and 2.67 mg/l is pretty high any way - surely things can't get much worse!

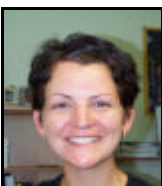
Arcadia - John Kennedy

"All the phosphorus in the drains, rivers and streams does not only come from agricultural land, so don't blame the farmers"



Undera - Tracy & Kim

Thanks goes to Tracy and Kim for monitoring in the Undera area over the last 12 months. They have hung up their rubber boots now, as Tracy has secured a job with the EPA in Wangaratta and Kim is climbing the corporate tomato testing ladder.



Natalie Peric

Natalie just loves monitoring! A competent navigator and driver who works for the Department of Natural Resources in her spare time, has taken over the monitoring from Tracy and Kim in the Undera region.

Floridan Park - Rob Bullock

Keen to continue managing his dairy property professionally, Rob has undertaken to monitor the phosphorus leaving his farm.

Geoff Carland

While Geoff doesn't monitor any drains, he was the muscle power behind the installation of the Nutrient indicator signs that were installed in December 99. Thanks Geoff !

Other areas are keen to monitor but only when we have had some rain and the drains are flowing.



*The Goulburn Broken
catchment in which
Goulburn Broken
Waterwatch operates.*

Funding into the next century

Catchment Co-ordinator—David Hodgkins



Waterwatch has proved to be a very effective way of raising community awareness of water quality issues. Nationally, it is now a \$12 million monitoring programme that identifies sources of water quality problems and encourages community involvement in carrying out actions to improve waterways.

Funding for the Waterwatch programme has come through the Natural Heritage Trust and other local organizations such as Water Authorities.

Our Goulburn Broken program has mainly targeted rural water quality issues such as nutrients and turbidity in our waterways. We mostly work with Landcare Groups and in schools to spread the water quality message.

In the last Federal Budget, over \$50 million was allocated for a **Living Cities Program** to address urban environmental problems. \$11 million of this money has been targeted to address the consequences of stormwater run-off.

The Government has recognised the value of Waterwatch as an education and awareness tool by allocating some of the **Living Cities** money to extend Waterwatch into urban areas. We had already begun to address urban water quality issues through our drain stencilling programs. Over the next year, you can expect Waterwatch to become even more visible in the larger cities and towns where stormwater is an issue.

It is Local Councils who have responsibility for managing urban stormwater. Most have been preparing Stormwater Management Plans to tackle stormwater issues. Waterwatch is well placed to provide the education and awareness component of these plans for the Councils.

Although Local Councils have not been part of the Waterwatch network in the past, this is a great opportunity for Councils to establish links with Waterwatch and share in the Living Cities money allocated to Waterwatch



WACCA the Bunyip launches the urban programme for Goulburn Broken Waterwatch.

Meet the Gang (cont...)

In the central area, long term monitor and Invergordon local, **Doug Brown**, takes samples. I created a result record sheet and on it I made a cryptic reference to the Collingwood Football team. Do you know that ever since then, Doug has been regular with his monitoring?



Monitor Des Mulcahy shows off the latest in community awareness—The Nutrient Monitoring Sign.

Nanneella Timmering - Peter Gibson
"But there is no flow, do I have to take and test a sample?"

Wyuna - Des Mulcahy
A couple of us were concerned for Des's well-being when he disappeared last winter for an extended time. We thought he had taken a wrong road while out on his monthly day and a half monitoring trip. A search party was being considered, when it was suggested he had headed north to a warmer climate. Thanks to Mark Bassett for helping out.

Sites for the Nutrient Monitoring Signs

Location	Site Number
Midland Highway, Stanhope	DRN032
Wigg Rd, Kyabram	DRN054
Store Rd, Nanneella	DRN605
Murray Valley Highway, Wyuna	DRN376
Shepparton - Barmah Rd, Bunbartha	DRN123
Ardmona Drain near cnr of Dugans Rd, North of Mooroopna	DRN151
Drain 13, Waaia - Bearii Rd, Waaia	DRN354
Numurkah - Strathmerton Rd, Katunga	DRN571
Labuan Rd, Yarraweyah	DRN568
Shepp - Katamatite Rd (near store @ Invergordon)	DRN633

Nutrients in Irrigation Drains (NIDs) Programme

NIDs Co-ordinator-Christopher Guthrie

Dry Year

All of our NIDs monitors from around the Shepparton Irrigation Region are to be congratulated at their perseverance and commitment to water quality monitoring. As they all know, and we have to keep telling ourselves, water quality monitoring is a long-term game. Trends and patterns can take years to establish and it is as important in dry years to collect data, as it is in wet years (even though it may be more boring!).



We have had the usual coming and going of monitors this year, but as you will read, there are many stayers in our programme who have been monitoring for over 2 years.

Nutrient Indicator Signs

Many NIDs monitors would have been aware of the discussion about a Nutrient Indicator being designed for installation at various sites around the area. 1999 saw it all happen at last!

Geoff Carland, a member of the Community Monitoring Committee and I picked the two hottest days this season and set about installing the signs. Many thanks to those who assisted us as we tripped around the region.

The sign has a coloured bar with the phosphorus scale up one side and a magnetic arrow which needs to be positioned according to the phosphorus level you measure at that site.

Meet the Gang

Come and meet the network of dedicated monitors across the Shepparton Irrigation Region.

Starting at the top of the catchment, Echuca Village monitor **Helen McKee** reports the Deakin Drain has had low flows and low nutrient contributions this year.

Up in the Katunga & Yarroweyah area our monitor is **Bernie O'Connell**. Does anyone have a paid natural resource management position for this recently married volunteer guy?!



West in the Girgarre Stanhope area, our monitor (when she's in the country!) is **Sister Bernardine Kelly**. Thanks goes to Eleanor Cockroft for filling in for Bernardine while she was tripping around Ireland during our 1999 winter.

1999 National Water Week All aboard the Stormwater Express!

Water Week 1999 offered thousands of Primary School children in the Goulburn Valley the ride of a lifetime as they boarded the Stormwater Express.

Almost three thousand students from 21 primary schools across the region were booked on the special train rides.

An initiative for National Water Week 1999, the project focused on the impact of urban stormwater on our environment.



WACCA and the Stormwater Express in Numurkah.

The Stormwater Express operated for four days, with Member for Shepparton, Don Kilgour, launching the important program at the Shepparton Railway Station on Wednesday the 20th of October.

The train then went around the catchment, visiting children in the region including:

- * students from Nagambie and Murchison schools at Nagambie Railway Station;
- * students from Shepparton, Dookie and Mooroopna schools at Shepparton Railway Stations;
- * students from Cobram, Numurkah and Katunga schools at Cobram and Numurkah Railway Stations;
- * students from Kyabram, Tatura, Merrigum, Mooroopna North, and Undera schools at Tatura and Kyabram Railway Stations.

Before boarding the express, WACCA the Bunyip starred in a half hour show explaining water pollution comes from a great many different sources, including farms, industry, schools businesses, private homes and stormwater. After singing songs about going "Rollin' down the river" and saving WACCA's "Achy Breaky Heart", students were ready to do their bit!

Activity in '99

Showing off the wares

There are variety of promotional opportunities during the year of which Goulburn Broken Waterwatch took advantage. The Melbourne Agricultural Show offered a stall to Landcare Victoria, with interactive Waterwatch sessions from Goulburn Broken Waterwatch a highlight of the week. The Elmore and Stanhope Field Days provided another opportunity to showcase the integrated approach of the Goulburn Broken catchment, with Waterwatch and their macro-invertebrate display sharing the tent with the Goulburn Murray Landcare Network.

We also participated in the 1999 Science Teachers' Association of Victoria Conference held at the Bundoora Campus of La Trobe University. Mid-catchment Co-ordinator, Glenda Woods, initially organised to hold 2 hour long sessions on macro-invertebrates, which was then condensed into a general Waterwatch presentation from Waterwatch Victoria's Scientific Officer, John McCoy and a short macro session from Northern Co-ordinator Jane Ryan.

Waterwatch in cyberspace

Our very own Goulburn Broken Waterwatch site was established this year (www.sheppsc.org.au/water) for monitors and anyone interested to finding out more about local water quality issues. Monitors can check out their own data, and other monitors' data to assess the water quality in their local stream. After a recent re-vamping, we now have plenty of local activities and classroom sessions that teachers can also download and use themselves.

Water Week and Saltwatch participation

National Water Week was a huge success again this year (see page 5) thanks to the participation of these schools: **Cobram Consolidated PS, Dookie PS, Goulburn Valley Grammar School, Gowrie St PS, Guthrie St PS, Katunga PS, Kialla West PS, Haslem St PS (Kyabram), Merrigum PS, Mooroopna North PS, Mooroopna PS, Mooroopna Park PS, Murchison PS, Nagambie PS, Numurkah PS, St Augustine's Kyabram, St Mary's Mooroopna, St Joseph's Cobram, St Joseph's Nagambie, Tatura PS, and Undera PS.**

The regular participants of Saltwatch were given a surprise during Saltwatch week in May, when Waterwatch Co-ordinators helped schools with their activities. Schools undertaking the mapping of their data included **Longwood PS, Strathbogie PS, Toolamba PS, Shepparton East PS, Kialla West PS, Kinglake Middle PS, Kinglake West PS, Flowerdale PS, Yea PS, Sacred Heart PS, Highlands PS, Tallarook PS, Yea HS, Nathalia SC and Orrvale PS.**



WACCA and the Stormwater Express travel to Cobram during Water Week.

Mid & Upper Catchment cont...

Individual Monitors

Welcome on board to the following monitors: - **Judy Reid** (Jacks Creek at Highlands), **Teresa Hendy** (Winter Creek at Strath Creek) **Roger Kirkham** (Murrindindi River at Murrindindi), **Maurice Pawsey** (Acheron River at Taggerty), **Peter Kerr** (Acheron River, Yellow Creek and Little River at Taggerty), Janet Hagen (Hughes Creek at Ruffy) and **Margaret Rae** (Little Steavenson and Acheron River at Buxton). It is terrific that members of the community are willing to become actively involved in the Waterwatch program.



Maurice Pawsey by his monitoring site on the Acheron River



Long term monitor, Lois Brewer showing us how to test for reactive phosphorus

Of course, our regular monitors are continuing 'to get their feet wet' and a special thanks to **Marion Bruere** and **Jim McGlashan** who are each up to their fifth year on the data collection trail. Congratulations to both for their commitment to building up what is very valuable base line data. Marion is monitoring the Yea River at Providence Bridge and Jim is monitoring Murrindindi River.

Schools

Thanks to all the schools I have worked with this past year. I look forward to continuing to do so in 2000, with the aim to get some schools to collect data on a more regular basis than during Saltwatch and Waterwatch weeks



Alexandra SC students learning to use monitoring equipment

Monitoring the Goulburn Broken

New initiatives for 1999

This year we began trials on E.coli testing at various sites on the King Parrot Creek, in June and late August. Unfortunately, it is still at the trial stage and we hope to get operational next year to gain reliable data. It has been an interesting trial period—as long as we all learn from our mistakes!

Finally, another new initiative is to begin event monitoring along the Acheron River, with particular regard to turbidity levels. After a newspaper article in the Alexandra Standard, a number of locals are now into monitoring mode and in early February we will be getting together to plan our attack.

Welcome on board to all new monitors this year and well done to those groups and individuals who are continuing to regularly go out and get their feet wet and collect data. Your efforts are certainly appreciated.

Groups in Mid catchment

Groups continue to monitor and provide meaningful data for the main database at Goulburn Valley Water. **Killingworth East Landcare**, with David Mold leading the way, is building up data on the Goulburn River and a number of its tributaries, including Spring Ck, Native Dog Ck, Home Ck and Running Ck. They have been monitoring for some years now and are still keen.

Yea River Landcare are in their second year of monitoring and are collecting data along the length of the Yea River from Glenburn to the Yea township with Jan Beer, Marty Shaw and others collecting the data.

The Friends of King Parrot Creek are looking out for the King Parrot Creek and are especially concerned about the amount of rubbish that is being dumped at various sites along the creek. To this end, Waterwatch is trailing a simple field test to determine the E. coli levels and has involved Lynne Gunter and Lois Brewer out in the field learning the procedures to follow.



Peter Kerr beside Yellow Creek, one of his three monitoring sites.

Life in a northern town

Northern Co-ordinator - Jane Ryan

Having started as the Waterwatch Co-ordinator for the northern part of the Goulburn Broken catchment during last year, it has taken me a little while to get up to speed on who monitors where, and to be known by the schools in the area. Now that I've been here a while, I have been able to get around most areas in the north and have had great fun with many different schools.



The animals have it

Water beasts seemed to be the most popular session for school visits this year! Finding out what macro-invertebrates mean about water quality is a fun way of bringing water issues into the curriculum. While most sessions were snapshot samples (one-off events), **Numurkah Primary School's** Grade 5 & 6 class chose to make



Students from Numurkah Primary School sampling in the Broken Creek.

water beasts in the Broken Creek as the focus for their monitoring programme. Both **Cobram Secondary College** under Ross Taylor and **Wanganui Park Secondary College** under Dianne Hanna, have had macro-invertebrate sampling as part of their studies.

Schools undertaking field trips to sample macro-invertebrates in their local water body include **St Joseph's Numurkah**, **McGuire College Yr 10 Biology**, **Wanganui Park Secondary College VCE Environmental Science**, **Wilmot Primary School**, **Dhurringile Primary School**, **Guthrie St Primary** and **Gowrie St Primary School English as a Second Language class**.

Discovering your own back yard

Cussen Park is a constructed wetland built to detain Tatura's stormwater, as well as excess drainage water from the region. The Cussen Park Management Committee enlisted Goulburn Broken Waterwatch to help introduce the site to 300 students from **Tatura Primary School** and 250 students from **Sacred Heart, Tatura**.

Activities during these days, included bird watching, site surveys, physical and chemical testing of the water, as well as the obligatory macro-invertebrate session.

The aim in the new year is to interest one of these classes to become a regular monitor of the wetland. Data on turbidity and phosphorus levels will give us a clearer picture of whether Cussen Park is reducing nutrients in the water.

Northern Developments for '99

Shepparton Science & Technology Centre

Through the Department of Education's Scientist in Schools Programme, I have had the opportunity of facilitating several Waterwatch sessions in the Environment Laboratory at the Shepparton Science & Tech. Centre. These sessions have included both macro-invertebrates and physical/chemical testing, as well as general catchment activities. Schools participating in sessions in the Environment Lab include **Congupna Primary School**, **McGuire College Year 9/10 Science & VCE Agriculture and Horticulture classes**.

My involvement in this programme has also given me the opportunity to develop stand-alone educational resources for teachers to run their own sessions in the Environment Lab. This allows the Centre to promote the use of the Lab, while also promoting water issues in the curriculum.

Waterwatch Victoria also ran their Induction Day for new Co-ordinators at the Centre, using the skills of the Goulburn Broken team.

The stalwarts of our programme

Congratulations to another top year of monitoring from our longest serving monitors, **Katamatite Primary School**, **St Mary of the Angels**, **Nathalia** and **Don Harrison** of Katunga.

Katamatite PS Grade 5 & 6 class, with the help of teacher Yvonne Cleary and Principal John Corneliusen, have monitored the Broken Creek, Boosey Creek and the Katamatite Community Drain for 3 years now. The students at this school have been involved in a variety of activities aimed at improving the state of their local waterways, including planting and maintaining the revegetation of stream vegetation on the Boosey Creek, and participation in the 'Sample Switcheroo' programme with Bright Primary School.

Loretta Richardson and the VCE Geography class have monitored the Broken Creek at Nathalia for several years now. The group incorporate water into many of the projects they undertake. Don Harrison has monitored for 2 years and is concerned about and works towards improving the state of the Broken Creek.



Katamatite PS student Damien Pendlebury measures salinity in the Broken Creek.

Northern sponsors for 1999:

- ? Goulburn Valley Water
- ? Goulburn Broken Catchment Management Authority
- ? Goulburn Murray Landcare Network
- ? Shire of Moira
- ? City of Greater Shepparton

Mid & Upper Catchment Report

Mid-catchment Co-ordinator - Glenda Woods, Upper catchment Co-ordinator—Jill Breadon



Life has been even busier this year, my first full year as Mid Goulburn Waterwatch Co-ordinator. Some of the activities I have been involved with include two successful BBQ cum "Meet the monitor" days. The second in November was in the garden of long time monitor Marion Bruere allowing monitors to calibrate their equipment and discuss common issues and concerns.

Saltwatch week in May was hectic with nine schools in my patch taking part. It was pleasing to take Yea High School Junior Waterwatch Club members as my assistants on both days.

Displaying our wares!

I have been promoting Waterwatch to the public with the help of Upper Catchment Co-ordinator Jill Breadon. We were present at Seymour Farming Expo, as well as the Seymour, Alexandra and Yea Shows, where there was great interest in what we had to offer.

In the upper end of the catchment, National Water Week in October meant a focused effort on Turbidity snapshot readings. We helped schools to collect data and enter it on the Internet for all to see! What a great motivational tool.

I spent much time this year working with schools, especially primary students and that remains a real pleasure. Seeing young students get a buzz out of finding a macro-invertebrate that they can name, or actually completing a monitoring test on their own is very rewarding and one of the highlights of the job for me.



Upper catchment Co-ordinator Jill Breadon demonstrating methods of monitoring turbidity at November's "Meet the Monitor" BBQ.



Yea High School Junior Waterwatch Club members at Tallarook Primary School during Saltwatch week