MARY RIVER

CATCHMENT

COORDINATING COMMITTEE

Annual Report 2010

Mary River Catchment Coordinating Committee

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Front cover photo: ***Shade For the Mary tree planting, April 24, 2010, Traveston Crossing, Mary River. Image courtesy of Arkin Mackay - www.stoppress.com.au***

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Mary River Catchment Coordinating Committee Delegates 2009-2010

Interest Sector	Name	Title
Beef/Grazing	Naomi Cooney	
Dairying	Rob Priebe	
Dept Environment and Resource Management	Shanna Rogers	
Dept of Primary Industries	Graeme Elphinstone	
Education	Mark Cridland	
Environment	Tim Thornton	
Fishing	Vince Collis	
Forestry	Ernie Rider	
Gen Community Lower	John Williams	
General Community Upper	Dave Sands	
Horticulture	Jim Buchanan	
Irrigation - unsupplemented	Brian Thomas	**Deputy Chair**
Irrigation - supplemented	Vacant	
Landcare, Lower Mary	Ross Smith	
Landcare, Upper Mary	Phillip Moran	**Chair**
Local Government Lower	Cr Debbie Hawes	
Local Government Middle	Cr Graeme Engeman	
Local Government upper	Cr Russell Green	
Rural Women	Rosemary Burnett	
Small Landholder	Dianne Collier	
Special Member	Nai Nai Bird	
Special Member	Tanzi Smith	
Special Member	Glenda Pickersgill	
Life Member	Margaret Thompson	**Secretary**
Special Member	Angus Hutton	
Sugar	Vacant	
Waterwatch	Ian Mackay	
Western Mary Community	James Hansen	**Treasurer**

MRCCC Staff 2009-2010

Brad Wedlock	Operations Manager
Eva Ford	Catchment Officer Threatened Species
Dale Watson	Catchment Officer
Steve Burgess	Catchment Officer
Debbie Seal	Administration
Leah Johnston	Administrative Assistant
Jenny Whyte	Project Support
Adam Logan	FarmFLOW Officer

Chairman's Report

There will be no Traveston Crossing dam! That ***IS*** the highlight of the last year!

The decision by the then Federal Minister for the Environment, Peter Garrett, was a win for science, our threatened iconic species, and for those people in the Mary Valley [and others] who fought so long and so hard. The variety of people and organisations that came together to achieve this victory is as astounding as it is humbling. I am proud of the role the entire MRCCC and its staff played in the campaign, although we were one of many, all of whom deserve recognition.

One old bloke in particular that I will single out is Steve Burgess. He was an inspiration to us all, and was recognised by being nominated to the Gympie Regional Council as Citizen of the Year.

MRCCC has been heavily involved in the Mary Valley renewal process, and working with our colleagues from the Gympie Regional Council, Sunshine Coast Council, Mary Valley Chamber of Commerce, Mary Valley Inc, Focus Health & Therapy, Save the Mary River Group and the Greater Mary Association we will continue to strive for a balanced outcome for our beloved Mary Valley and the Mary River Catchment.

Whilst the decision to scrap the Traveston Crossing Dam was undoubtedly the highlight, there is still much work to be done. The interbasin transfer of water from Borumba Dam, Lake Macdonald and Baroon Pocket Dam via the Northern Pipeline was approved by the Federal Government and needs to be monitored closely. The Resource Operation Plan for the Mary Basin Water Resource Plan is under consideration and also requires close attention. Recently, exploration for coal in the Munna Creek, Tiaro and the Upper Noosa subcatchments has caused quite a stir. The MRCCC will continue to monitor developments in this regard.

The financial position of the MRCCC is not as rosy as I would like, and the Executive and staff are working very hard on exploring other revenue streams to continue to make the MRCCC a viable, strong voice in the region. I am confident that with the quality of staff in the organisation, and within its Delegates, this will happen. What the MRCCC is experiencing is playing out all over the State. We need to adjust and be dynamic in our approach. I am sure the staff would be well aware of my hope that we will become as self supporting as possible! In my view the era of relying on grants is over. Fortunately we have forged strong partnerships with the likes of Gympie Regional Council, Sunshine Coast Council, DEEDI through the Farm Ready project, and BMRG. We will be working hard to see these relationships flourish.

Our Mary Catchment Public fund is looking healthier, and we especially thank one very generous anonymous donor. For those of you who are not aware these funds are earmarked for a purpose-built Catchment Centre incorporating green design.

The Committee has benefited from the increase in sectors with the inclusion of a Delegate representing "Landholders" involved in MRCCC projects and another representing "Waterwatch" volunteers. Delegates continue to contribute actively to the organisation in a variety of ways, bringing issues and concerns to the table for discussion and action. This year we have had some interesting Guest Speakers attend our meetings, and held two meetings outside of Gympie, both of which were very well attended.

Boulder Creek, May 2010 – MRCCC General Meeting
Graeme Elphinstone facilitates a brainstorming session

I also want to make special mention of the good attendance by Fraser Coast and Gympie Councillors, who I know have many things to do but still make it to most of our meetings...it is appreciated. Peter & Bevly Hughes have also been a great support to the organisation, and their youthful exuberance is appreciated by all at MRCCC.

A special thanks to James Hansen who unfortunately stood down from the role of Treasurer due to time constraints.

Whilst we have lost a dedicated Land for Wildlife officer, the MRCCC organized a program of workshops during 2010 with support from the Gympie Regional Council. The workshops have been very well attended and show the dedication of local landowners in the Mary Valley to continuing their stewardship of the land.

Incentive funds to landowners have reduced significantly in recent years. This is unfortunate, and we would like to see a situation whereby modest incentives can assist landowners carry out environmental repairs. MRCCC has applied under the Federal Government's Caring for our Country program to address Mary River Recovery actions - we are waiting to see if this is successful.

I would also like to place on record my appreciation to the MRCCC Executive...Margaret Thompson, Brian Thomas and James Hanson. To the volunteers who have helped out in so many ways...thank you.

Lastly to the dedicated MRCCC staff, I offer my heartfelt thanks. They are the strength of the organisation. They all go beyond the call of duty, and their professionalism and passion is noted and recognised. Thank-you.

In memory of Gerry Cook – *Ben McMullen, Sunshine Coast Regional Council and Chair of the Lake Macdonald Catchment Care Group*

It is my very great pleasure to write a few words to give some remembrance and celebration to the life of Gerry Cook. Gerry passed away recently at the age of 94. I feel that it is important celebrate Gerry Cook's life, because he was an extraordinary individual, who did extraordinary things and is well and truly deserving of extraordinary recognition. Gerry did many noble and charitable things in his time including fighting for the allies in World War II and reaching the rank of Major in the English Army. Gerry was also an accomplished electrical engineer and a loving husband, father and grandfather.

I knew Gerry best for his work on the conservation and rehabilitation of the Mary River Cod. In the mind of many nature lovers the Mary River Cod is like the Bengal Tiger of the South East Queensland and Mary River regions. It is a large, beautiful, awesome, captivating, charismatic top predator. It is also particularly vulnerable to population decline through over hunting and habitat loss. Some 30 years ago, the Mary River Cod was critically endangered. It was a species on the brink of extinction from habitat loss, over fishing and neglect.

Enter Gerry Cook. Gerry was a man on a mission. He was a man who saw an opportunity to give something back to the sport of fishing, which he loved and also to save this magnificent, majestic, wonderful species from extinction. In short, Gerry took on what would have seemed at the time an unachievable task. Why did he do it you might ask? The answer is simple. Gerry took on this seemingly impossible task for me. He took it on for me and my kids, and for you and your kids. He took it on for our grandchildren, and for their children's grandchildren. He took it on for all of us. Having taken on the task Gerry did not rest. Gerry and his mates worked out of each other's sheds, and cobbled together equipment. They tried and failed, then they tried a little more and failed some more and so on. But over the years of determination and effort, Gerry's work provided the foundation for what we have today. That is a conservation recovery breeding program that is consistently successful and has formed the basis of more than just the recovery of a species on the brink; it has also been the catalyst for a social movement.

The attraction of the Mary River Cod and the passion that blokes like Gerry Cook have brought to its conservation have inspired people from across this beautiful, unique and special landscape to do something to rehabilitate it, and repair it, and to look after it a bit better than we did in the past. I have no doubt in my mind that if it had not been for Gerry Cook and his mates, and all the people that they in turn have inspired, energised and educated to join the cause, that the foundations of the Traveston Crossing Dam would already have been poured and would now be curing in the sun. It is the fire in the belly that Gerry passed on to each of us that I believe ultimately put the flames to the plans to build that dam. If I was asked to describe Gerry to you, I would say that he was a gentleman and a scholar, and just a really lovely guy. To me Gerry was an inspiration. He has shone a light on the path that those of us who would choose to protect and heal this amazing blue planet must walk down together.

Mary River Cod broodstock at the Noosa & District Community Hatchery, Cooroy

It is said that "the tragedy of humanity is not that we fail, but that we give up when we are so close to success". Though Gerry has passed beyond us now, he has left us many successes of which we can be truly thankful. For me, the most profound of which has been determination not to give up on his passion, and in doing so, I think he has shown us the path to grace. It is for this that we should remember and thank him.

Traveston Crossing Dam

Dept of Environment, Water, Heritage and the Arts EPBC Act decision

One of the significant highlights for the year was the Federal Government's decision to not approve the Traveston Crossing Dam under the provisions of the Environment Protection Biodiversity Conservation Act (EPBC Act). The MRCCC worked hard for the previous 3 ½ years to provide both the State Coordinator General and the Federal Environment Minister with the best possible hard evidence and scientific arguments throughout the State and Federal assessment processes.

The final decision, and the legal reasons stated for the decision bore out the arguments provided by the MRCCC and many other submissions and assessments of the project (including the findings of the 2007 Senate Enquiry into the proposal). These are perhaps most clearly stated in the Federal Government Minister's own words in these excerpts from the final decision statement:

"After carefully considering all the information necessary for me to make my final decision, including the recent comments on my proposed decision by the proponent, the Queensland Coordinator-General and the relevant federal ministers, I have concluded that the Traveston Crossing Dam cannot go ahead without unacceptable impacts on matters of national environmental significance."

Glenda Pickersgill at the Shade for Mary tree planting. Image courtesy of Arkin Mackay

"As I stated when I made my proposed decision on this project, all of my decisions under the national environment law are based primarily on science, and the science is very clear about the adverse impacts this project would have on the nationally protected Australian lungfish, Mary River turtle and Mary River cod. In making my decision I also carefully considered relevant economic and social matters. Independent analysis of this proposal casts serious doubt over its economic merits. I also had regard to the significant concerns raised by the communities in the Mary Valley that would be most directly affected by the dam.

Mary Valley Renewal Team

Following the Federal Government decision on the Traveston Crossing Dam proposal, a number of interested groups and regional councils from the Mary Valley and beyond united to form the Mary Valley Renewal Team. The MRCCC has been a major partner in the Mary Valley Renewal Team, with Gympie and Sunshine Coast Regional Councils, Mary Valley Inc., SaveThe MaryRiver, Mary Valley Chamber of Commerce, Greater Mary Association and other community representatives.

Meeting to discuss the future of the Mary Valley, April 2010

The Team coordinated an extensive public consultation process throughout the first half of 2010 to develop a Mary Valley Community and Economic action plan which clearly lays out a community vision for the future of the Mary Valley and the River, and identifies a number of community projects to help achieve this vision. A copy of this plan, data from all the consultations and general information about the Renewal Team can be can be downloaded from MaryValleyRenewal.org

The team is also liaising as closely as possible with government at a local, state and federal level to inform government policies and plans which impact on the future of Mary Valley communities, businesses and the environmental values of the river.

Mary River Recovery Plan

Another quote from the Federal Government decision about Traveston Crossing Dam:

"Throughout the assessment process a range of measures were suggested to better protect the Mary River environment and the threatened species that rely upon it. I believe there are practical measures that should be implemented to protect the species including rehabilitation of riparian corridors, improved cattle fencing around sensitive habitat, and finalisation of a recovery plan for the Australian lungfish. I believe that these are measures that should still be undertaken despite the proposal not proceeding.

I believe that it's critical that both local and state government work together to tackle the threats to these species and secure their future. My department is currently examining the possibility of pursuing a regional recovery plan for the area."

Since this statement was made, MRCCC has been working as closely as possible with the federal and state government departments that are responsible for such a plan, and looking for opportunities to develop, fund and implement such an undertaking. Although it is early days and there is still some uncertainty, there is likely to be some action on this recovery plan over the next year.

MRCCC submitted a Caring for our Country proposal in May 2010 for funding to support "Implementing Mary River recovery actions for threatened aquatic species". If successful, this proposal will assist with the implementation of the Mary River Recovery Plan.

Northern Pipeline Interconnector stage 2 approval (Morayfield to Lake Macdonald, Cooroy)

Stage 2 of the Northern Pipeline Interconnector project (which effectively links water resources in the Mary Catchment into the SEQ urban water grid) was granted federal approval in February 2010. However, a large number of conditions were placed on the approval, limiting the amount of water that could be pumped from the Mary River and Borumba Dam, and the way in which water could be taken from Six Mile Creek and Lake Macdonald.

Most importantly, in their approvals under the State Development Act and the EPBC Act, both the Coordinator-General and the Federal minister nominated DERM to be responsible for implementing riparian habitat and aquatic habitat monitoring programs for the Mary River downstream of the Coles Crossing offtake and Six Mile Creek. These

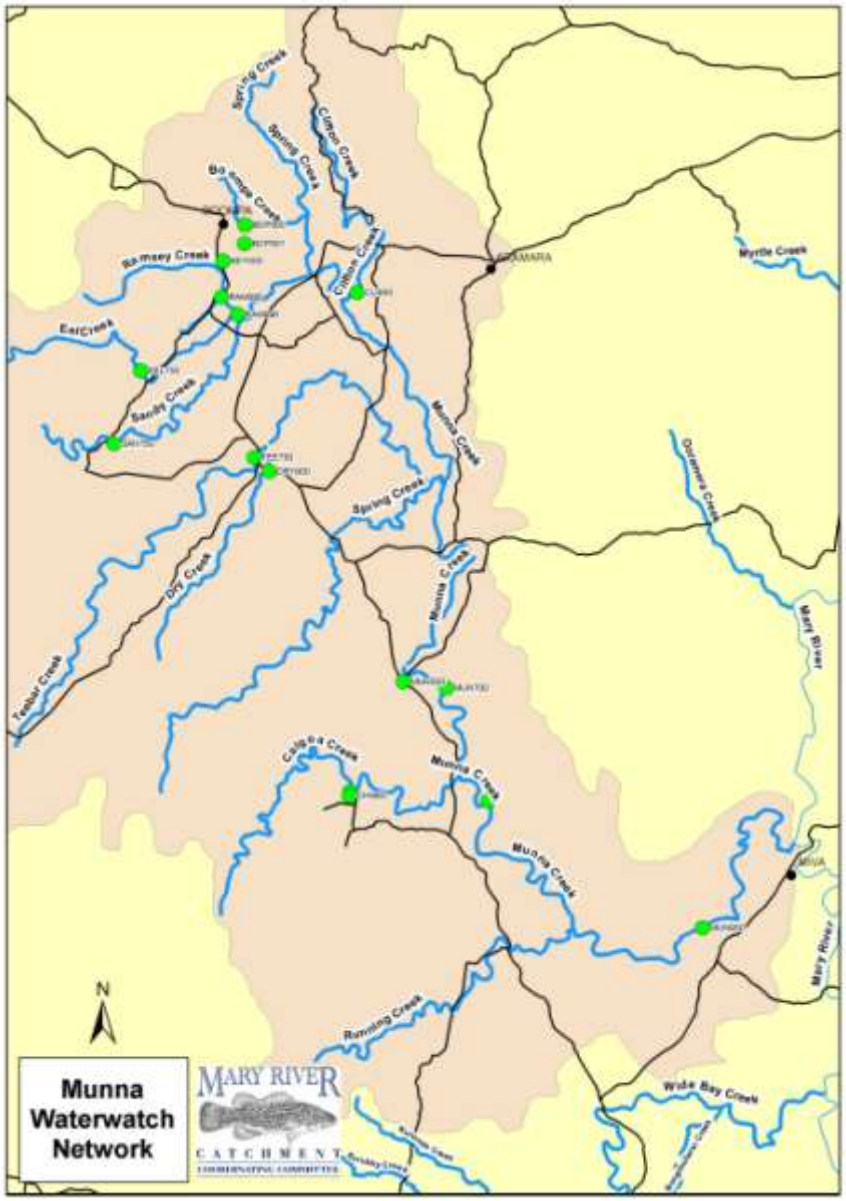
programs must be designed to *"provide credible mechanisms that trigger modification of mitigation measures or suspension of project related activities (including altering the volume and timing of abstraction of water from the Mary River under existing allocations)*

MRCCC anticipates working with DERM to ensure that these approval conditions are put in place in an effective manner. The MRCCC 's current preferred option is that monitoring and response rules are explicitly written into the Resource Operations Plan for the Mary Basin as part of operating licenses for the relevant water infrastructure.

Mary River Waterwatch

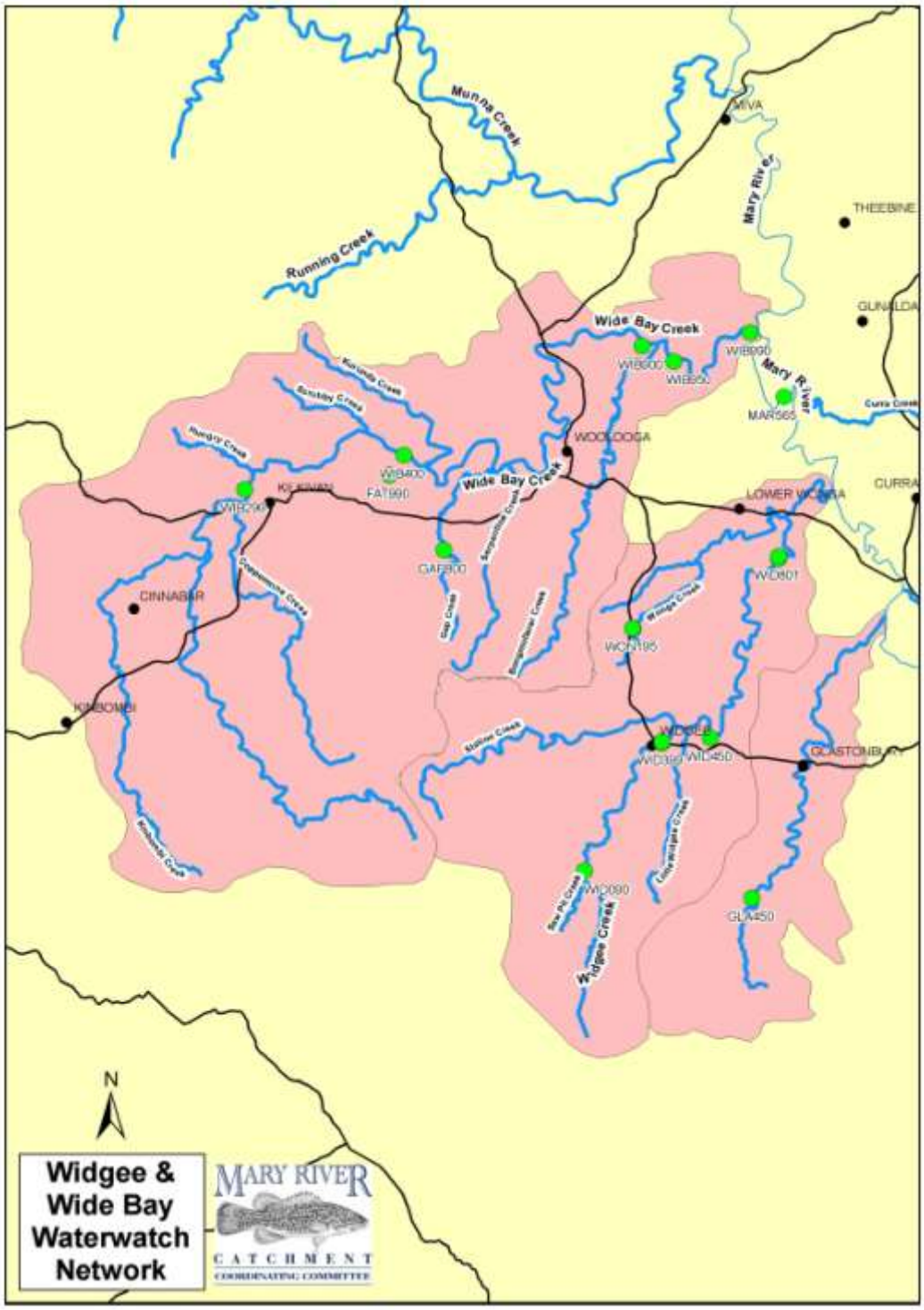
Waterwatch monitoring has continued throughout 2009/10. The efforts of the volunteer Waterwatchers, some of whom have been monitoring for many years now, is to be commended. The volunteers' contribution provides valuable long-term data on which baseline trends can be developed, whilst also detecting what constitutes an unusual observation. For many Waterwatchers, it can be challenging to maintain interest when results at each monitoring visit appear to be unchanging. However, these volunteers provide information from a range of publicly inaccessible sites where data collected contributes to long-term information, which enables development of specific guidelines for a healthy sub-catchment.

This year has seen our creeks flowing in a way that most people would term as 'normal', unlike the extreme dry period from July to Christmas last year. The rainfall during Christmas 2009 was a welcome relief to everybody.



Munna Creek network

After a dry finish to 2009, the Mighty Munna lived up to its name in early 2010, with huge flows (at one stage in March there was more water flowing in Munna Creek at the Marodian gauging station than there was in the Mary River at Miva). Although it wasn't quite enough to flush all the water hyacinth and salvinia out of some of the wetlands on the floodplain, the creeks in the area are looking great after the clean-out of the last couple of good seasons. This is reflected in greatly improved assessments of physical chemical water quality throughout most of the system. Welcome to Brett and Tammy Marsh and Neville Turner who joined the network in 2009, sampling Calgoa and Chinaman's Creeks.



Wide Bay – Widgee Creek network

In early March 2010 Wide Bay Creek, and in particular Fat Hen Creek, received enough rainfall to cut off Rossmore Road for a few days – something that hasn't occurred in 20 years according to locals. In fact the whole of Wide Bay Creek received significant runoff during this time which resulted in a rare bankfull flood event, from at least Kilkivan downstream.

Many thanks to stalwarts Ted Tame and Bryan McMahon, who left the Waterwatch network this year. A belated welcome is also due to Keith and Christine Bagnall, who are sampling in Gap Creek and Dave and Janet Golding and Anette Bambling who are sampling in the Scotchy Pocket/Sexton area on Wide Bay Creek and the Mary River.

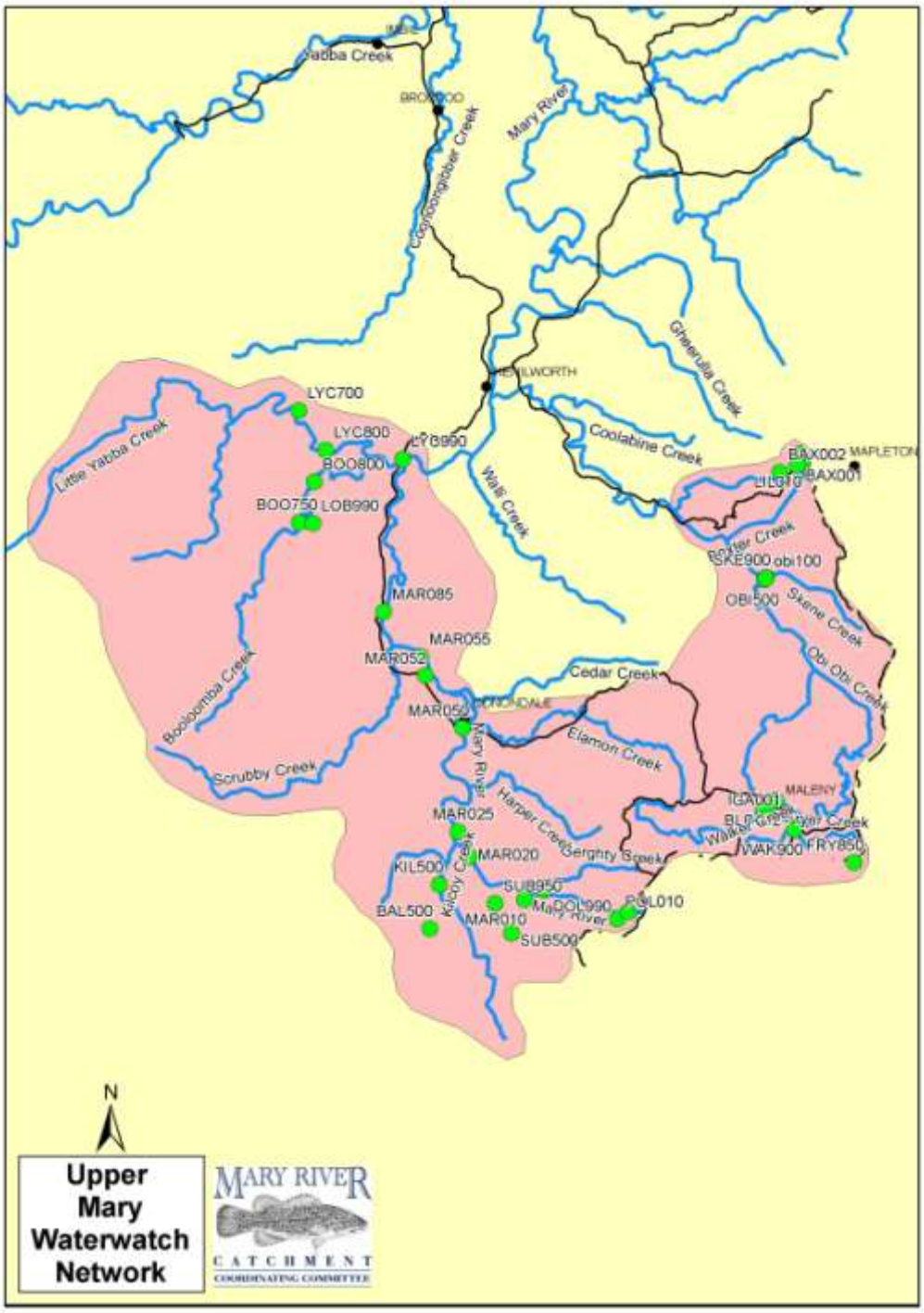
The good season was reflected in improved water quality in creeks throughout the Widgee/Wide Bay network, with many comments from Waterwatchers that Wide Bay creek is looking the best it has been in years. There was even a small window of opportunity to see some wet waterfall scenery at Kimbombi Falls and good flows and wildlife in Wonga Creek.

Analysis of the data is clearly showing that some creeks are consistently more saline than others, and the geographical grouping seems to suggest that it may be related to outflows of saline groundwater from geological structures in the hills to the south of the subcatchment. We had a few unusual pH readings (acidic) in the lower reaches of Wide Bay Creek early in 2010, which were transient, and for which we couldn't find a satisfactory explanation. However, the creek looked to be in good health throughout, so we are just keeping an eye open for any recurrence.

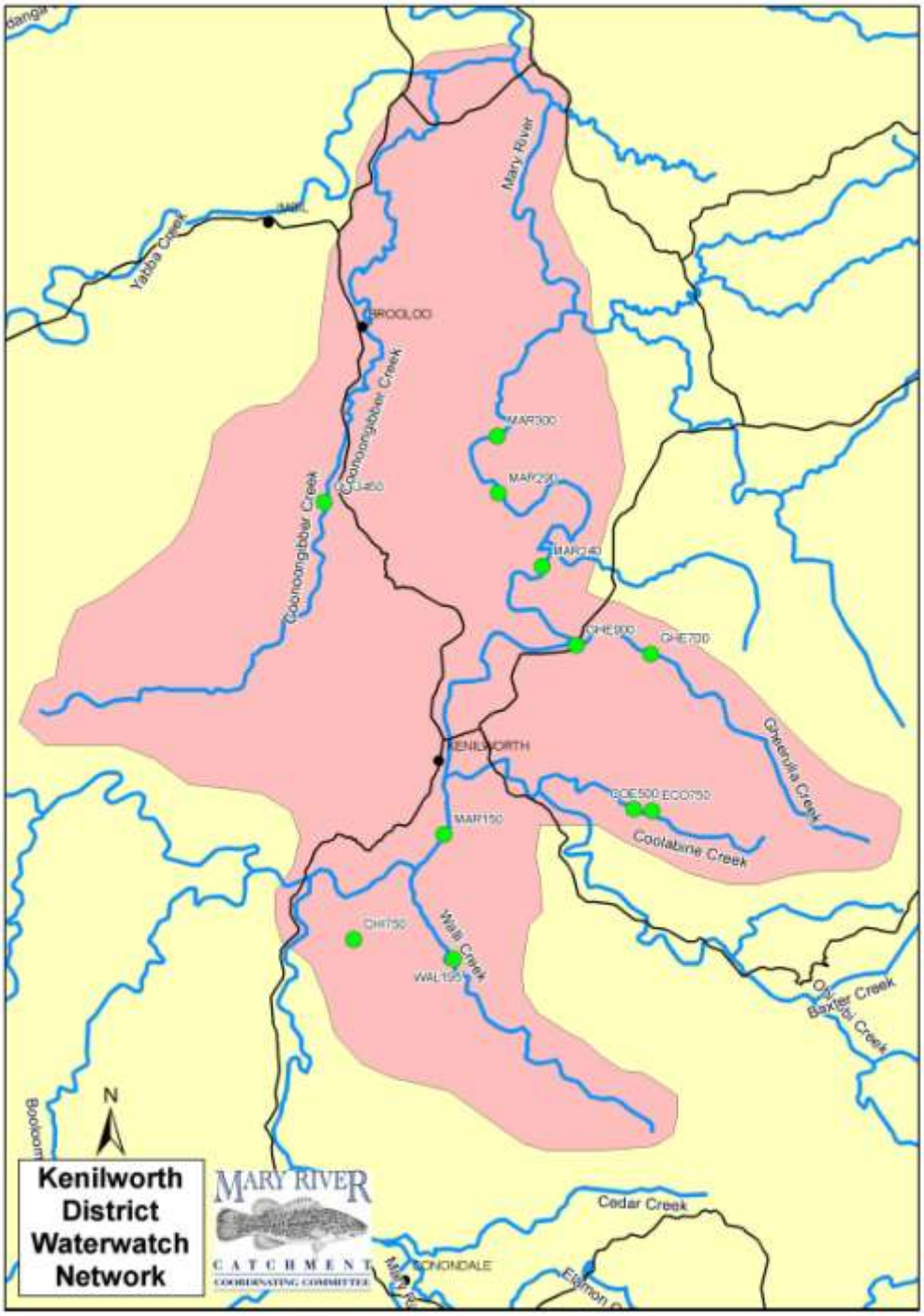
Upper Mary network

The upper Mary River Catchment, like most of the catchment, received good rain in late 2009 and early 2010. Prior to this period of consistent rainfall much of the upper catchment was experiencing very dry conditions, with some of the smaller tributaries ceasing to flow. Several smaller rainfall events during the 2010 winter have ensured the creeks in the upper catchment have continued to flow through this usually drier period.

Due to other commitments, Elke Watson has had to temporarily leave our group of Waterwatch volunteers. We thank her very much for providing a vital link in the transport of the Waterwatch kit, and for collecting crucial Mary River data. We hope Elke can return to the network soon. Also a belated welcome to Kye McDonald who currently has the honor of monitoring the most upstream point of the main trunk of the Mary River in our Waterwatch network, located at the top end of Policemans Spur Road.



The observations section of the Waterwatch datasheet continues to provide us with interesting and valuable data on factors other than water quality. The Queensland Parks and Wildlife Rangers recently spotted what they suspected to be a Mary River Turtle basking on a log at the mouth of Little Yabba Creek. We are seeking to confirm these records with photographic evidence, and will enter data collected into the Wildnet Database, which is used all over QLD to provide vital information on wildlife records. We are excited at having the opportunity to continually contribute to the dataset. Other volunteers have had less luck with wildlife sightings in more urban areas and have recorded "*There is no life here as we know it*". Thanks for the Trekky giggle Barung volunteers! The overall good rainfall this year has been reflected in stable and healthy water quality results in the Upper Catchment.



Kenilworth District network

The Kenilworth and District Waterwatch Network has remained very stable over the past year with the 10 volunteers diligently continuing to test the water in their area each month. Many thanks to those who continue to provide the essential data that is required to confidently assess our waterways. No serious emergence or expansions of new aquatic weeds has occurred, however we have become aware of Dense water weed *Egeria densa* in Coonoon Gibber Creek at the Usher Bridge on Kenilworth-Brooloo Road. This highly invasive weed is found all along Obi Obi Creek from Baroon Pocket Dam and along the Mary River to downstream of Gympie. It was implicated in fish kills in the Kenilworth area during dry times in 2007 due to the very low oxygen levels resulting from plant respiration during the night.

Two new volunteers are about to enter the network to monitor water along Chinaman Creek at Cambroon and Obi Obi Creek at Crossing Number 4 and Houston Bridge. A big welcome to Jason Flynn (who also has extraordinary skills at dealing with Madeira vine!) and to Teresa Cronin (photo on the left of Teresa monitoring Obi Obi Creek) and her daughter who are both relatively new to the area but very interested in water health from an environmental and educational perspective.

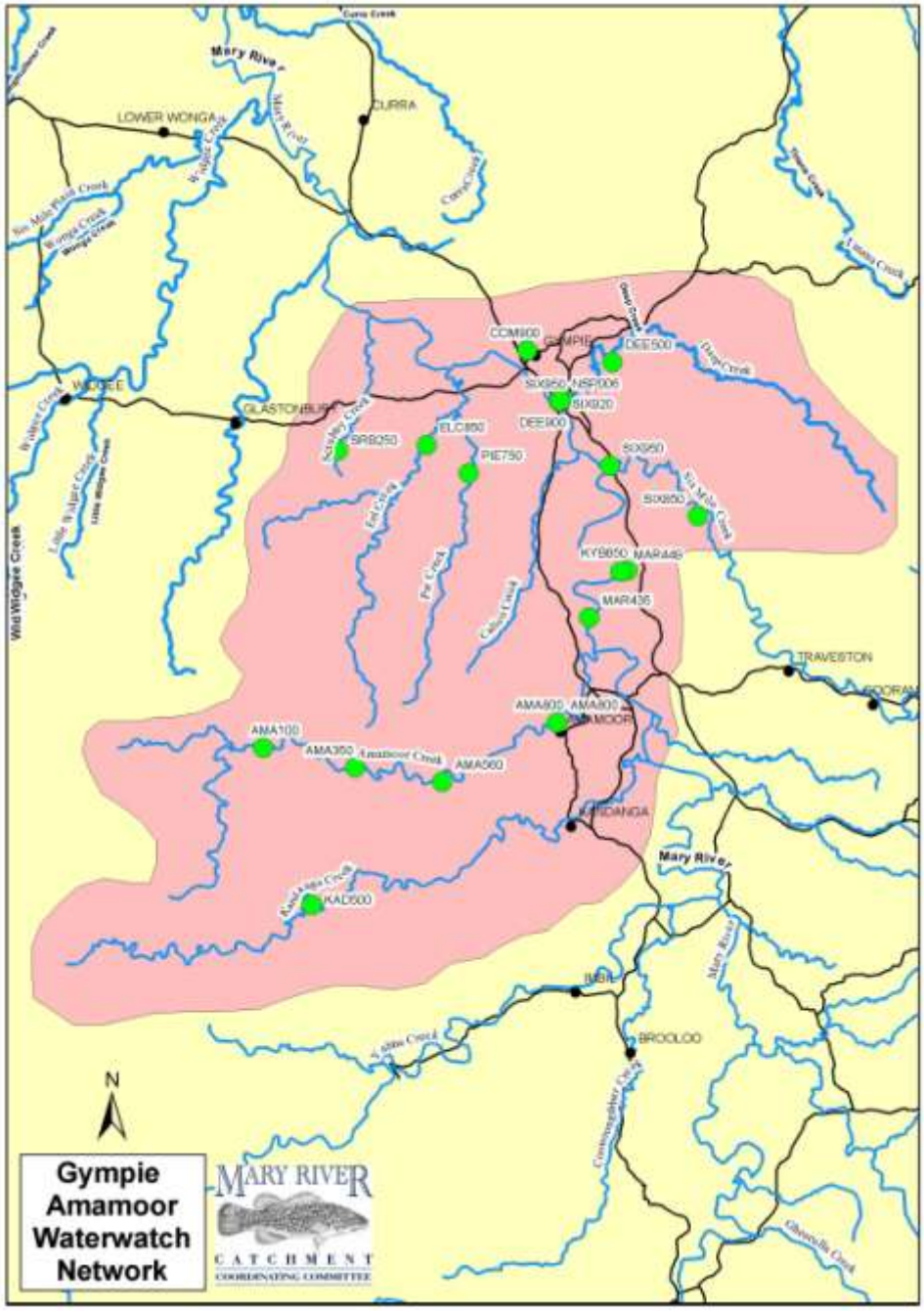
During the past 12 months the network of volunteers monitored the Mary River at five sites in the Kenilworth area: Coonoon Gibber, Gheerulla, Walli, Coolabine and East Coolabine Creeks.

Gympie – Amamoor network

The Gympie-Amamoor Waterwatch network has 17 volunteers monitoring 15 sites on the Mary River and Amamoor, Kybong, Six Mile, Eel, Scrubby, Deep and Kandanga Creeks. The network welcomed Will and Bianca Kingham who have taken up testing upper Amamoor Creek on their property.

These creeks all experienced very low flows during the latter months of 2009 as was common throughout the region. Some systems such as Scrubby Creek showed a trend in the electrical conductivity of the water; rising during the dry period when salts are more concentrated, and lowering when increased flows cause dilution. Sub-catchments such as Scrubby and Eel Creeks seem to have naturally high levels of dissolved salts likely to be attributable to the geology of the hills from which they rise.

Amamoor Creek is looking particularly good when comparing long-term data with the Department of Environment and Resource Management Water Quality Guidelines for lowland streams. Using our report card methodology the five Amamoor Creek sites come up with 'A's and 'B's.



Waterwatch Training Workshops 2009-2010

Waterwatch Network	Workshop Location	Attendees
Munna Creek	Teebar Hall	30
Wide Bay / Widgee	Kilkivan Civic Centre	15
Kenilworth & District	Gheerulla Hall	15
Conondale (Upper Mary)	Conondale School	5
Maleny (Upper Mary)	Maleny Neighbourhood Centre	25
Gympie - Amamoor	Albert Bowls Club	8

School-based Waterwatch activities were also undertaken across the Mary River Catchment during the year. These educational activities deliver water quality, water conservation and aquatic biodiversity lessons to hundreds of students from primary through to tertiary level each year.

Above and right: Steve Burgess and Eva Ford with students at Kidd Bridge Weir. Photos courtesy of Bevly Hughes

Lake Macdonald Catchment Care group

Update on the Cabomba biological control project - Shon Schooler (CSIRO Ecosystem Sciences)

The cabomba biological control project has been progressing slowly over the past year. On the positive side, we have begun the host specificity testing of the weevil, *Hydrotimetes natans*. This requires a number of steps; collecting the weevil from lakes in northern Argentina, obtaining export permits from the Argentinean provincial and federal governing bodies, obtaining import permits from the Australian government, rearing the weevil in an AQIS approved quarantine building, collecting and propagating native species for testing, and carrying out the host specificity tests. The key to this testing is to show that, under the same conditions, the weevil can complete its life cycle on cabomba, while it cannot complete it life cycle on our native aquatic plants. Over the past year we have been able to test the most closely related species to cabomba in Australia, watershield (*Brasenia schreberi*), and found that the weevil did not complete its life cycle on this species while we did get a few weevils through to adulthood on cabomba. This is positive in that it indicates that the weevil is probably sufficiently host specific for release in Australia.

On the negative side, we are having difficulty maintaining a population of the weevils in our quarantine building. While we can rear self-sustaining populations of most terrestrial insects in our quarantine, this aquatic weevil is proving frustratingly difficult. Apparently neither the weevil nor cabomba enjoy our indoor aquaria. In addition, the Argentinean federal government has recently been blocking all permits to export biological material, including those from countries other than Australia. Currently our collaborators in Argentina are trying to work through this problem.

Above: Cabomba infested dam ***Inset: Cabomba flower***

However, we cannot continue the testing until we receive more weevils and we cannot import more weevils until we are granted the permits.

We are also progressing on identification of potential biological control insects from other countries in the native range of cabomba. Researchers at our Mexican Field Lab in Vera Cruz are examining insects that we have collected on previous survey expeditions in order to determine priorities for host specificity testing. We intend to work on these while Argentina develops its biological material export process.

Meanwhile we continue to improve our cabomba rearing methods in our quarantine building and studying the ecology of cabomba in Australia. We are setting up larger aquaria in our quarantine as we have found that cabomba prefers larger tanks with silty substrate. We are also examining the population dynamics of cabomba in three Queensland lakes (Lake Macdonald, Ewen-Maddock Reservoir, and a farm dam near Eumundi). We hope to soon get our problems resolved and continue with the testing.

Noosa Festival of Water 2010

The Noosa Festival of Water is now an annual event which takes place at the Noosa Botanic Gardens and Lake Macdonald coinciding with Sunshine Coast Council's "Green June" program of events. Although the range of activities and entertainment on offer has increased over the years, the boat trips across Lake Macdonald are still by far the most popular activity, providing a rare opportunity for people to traverse the Lake and visit the Hatchery. Martin Fingland from Geckoes Wildlife also puts on an excellent show with his presentation of native animals, this year captivating the audience with his pet wombat, and an array of other species. While Sunshine Coast Regional Council is the major supporter of the Festival, many hundreds of volunteer hours are invested into the Festival each year from a number of community organisations. The Festival provides numerous opportunities to showcase the unique attributes of the Noosa Biosphere and educate local residents about sustainable natural resource management.

Dave Whelan with a young angler at the Take a Kid Fishing Clinic

Living with Threatened Species Project

Sunshine Coast Regional Council Community Partnership program – transitional arrangements

Projects funded under the MRCCC Rivercare program through the Sunshine Coast Regional Council for 2009 was completed in December with 40 project sites on private and council owned land with high priority waterways (Belli/Cedar, Obi Obi, Pinbarren, Walli and Chinaman (Cambroon) Creeks and the Mary River) and/or threatened species habitat. Typical species of significance found on many of the properties are the Giant barred frog (endangered), Cascade treefrog and Tusked frog (both vulnerable), Mary River cod, Mary River turtle (both endangered), Australian lungfish and the Richmond birdwing butterfly (all vulnerable).

Ian and Kathleen weeding at Pickering Bridge

Activities included fencing, control of environmental weeds (Madeira vine, Cat's claw, Camphor laurel, Privet, among others), promotion of regeneration and revegetation in order protect the existing habitat values of a particular stretch of riparian zone and improve habitat quality and expand habitat areas. As time goes on and Rivercare projects continue it is gratifying to gradually see whole lengths of sub-catchments being improved through the involvement of many neighbouring property owners.

Many of the property owners recognise the value of riparian areas on their property for varied reasons such as erosion control, increased biodiversity, improved water quality and for the general betterment of catchment health. The Sunshine Coast Regional Council recognises the value of the sub-catchments in the upper catchment and has actively supported MRCCC over many years to undertake this important work.

During 2010 the Council moved to change the arrangement of funding with catchment and community groups to develop an ongoing partnership arrangement. The Transition Partnership program was implemented in the first half of this year in order to continue the on-ground component of MRCCC business as well as supporting the Waterwatch networks, production of the Codline newsletter and the Noosa Festival of Water held in June this year. We now enter a new era with the Council's Community Partnerships program which continues to support MRCCC's core activities in the council area but also recognise and support our presence in the catchment as 'extension' officers. Part of our role is to engage property owners in the Rivercare program, to assist in the development of property plans and to progress rehabilitation projects on their properties; rewarding and productive for all involved!

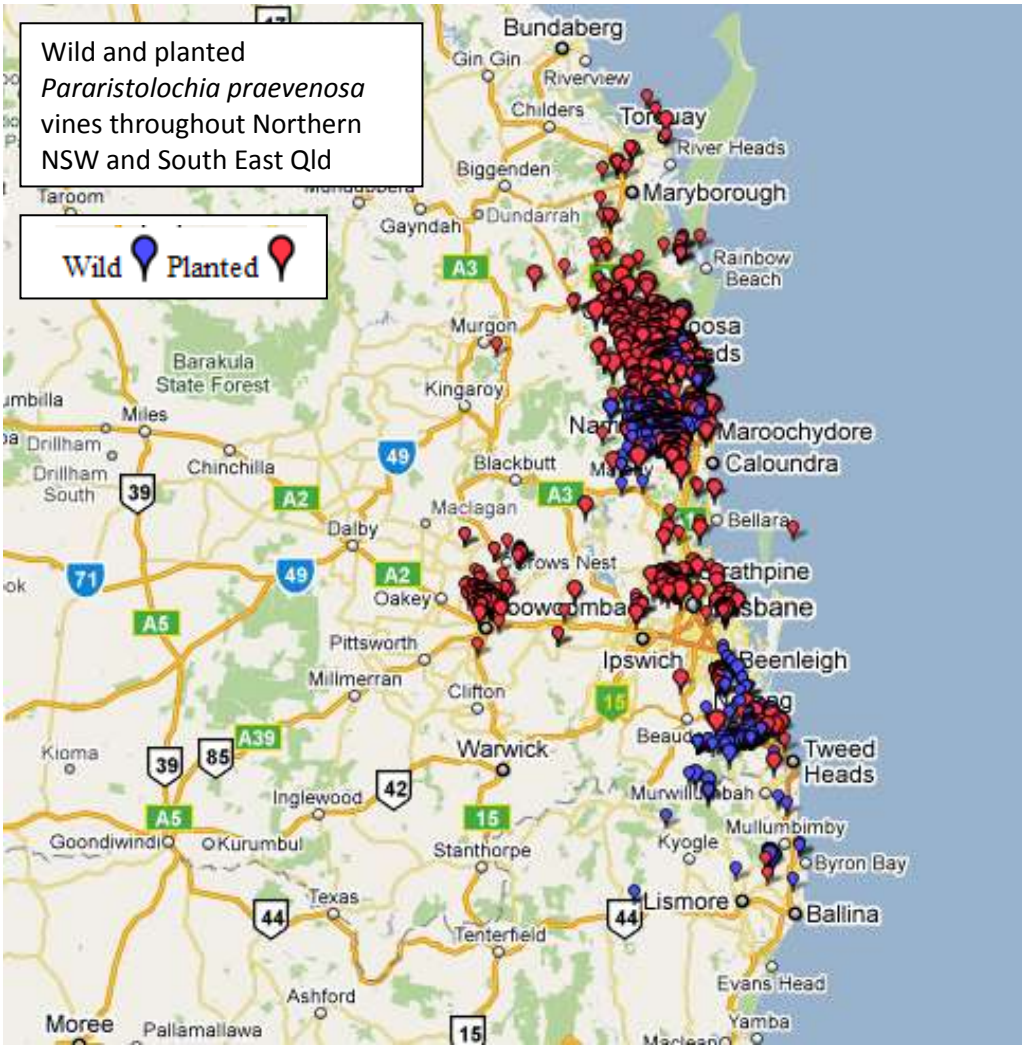
Female Richmond birdwing butterfly on host vine

Richmond Birdwing Butterfly

Most of the activity associated with the Richmond birdwing butterfly over the past 12 months has been in obtaining and distributing the host vine, *Pararistolochia praevenosa*, and in getting our huge pile of records into the Richmond Birdwing Conservation Networks' National database. Kelvin Neilsen has been dealing with the records of vines and butterflies from members of the community that have been piling up over the past several years. Now, when one looks on-line at the RBCN website they can see that we have actually been making an impact in this part of the world (www.richmondbirdwing.org.au). Time will tell if the efforts of many keen property owners to plant and care for their vines will assist this iconic butterfly to return to its former range.

In March this year a birdwing was sighted west of Gympie in the Rossmore area. These rare sightings continue to provide hope that there are in fact surviving populations within the past range of the butterfly north of the Sunshine Coast council area, and that there are likely to be host vines remaining in the wild.

More than likely there are vines in the ranges west of Gympie and even perhaps in the Bauple area. For now however the best we can do is keep providing vines to willing planters. During the past year 740 vines were given away in the Sunshine Coast and Gympie regions within the Mary River catchment thanks to funding from those councils.



Frog surveys

The 2009/2010 frog breeding season was very slow to start due to dry conditions during the latter half of 2009. Seven monitoring sites on Belli, Cedar, Cooroora, Six Mile, Skyring and Coles Creeks were still visited throughout the season regardless of the weather, however frog calling was low until rain came in late December 2009. In summary the following survey results were obtained for the season to June 2010:

- 90 surveys and monitoring visits conducted.
- 50 locations - coastal catchments, Tinana, Three Mile (Gympie), Skyring, Six Mile North Deep, Kinbombi, Gheerulla, Cooroy, Cooroora, Coles, Cedar and Belli Creeks.
- 1602 frog records collected.
- 26 frog species detected.
- 4 threatened frog species detected (*Crinia tinnula* (vulnerable) from the coastal wallum areas, *Litoria pearsoniana* and *Adelotus brevis* (vulnerable) and *Mixophyes iteratus* (endangered) all from freshwater stream habitats).
- 14 microbat species recorded.

Raw data from these surveys is available on the current projects page of the MRCCC's website at www.mrccc.org.au

Stony-Creek Frog - Litoria wilcoxii

Funding for surveys was provided by the Sunshine Coast Regional Council, the World Wide Fund for Nature Threatened Species Network and Caring for our Country Coastcare program. This funding enabled us to continue the valuable survey work in the wallum environments east of Gympie up to Maryborough and to continue exploring new areas in the Mary River catchment. The assistance of many volunteers, both children and adults, and MRCCC staff was most appreciated throughout the season. 18 youth and adults from the Gympie Venturers learnt about their local frogs through a presentation and a survey on Tinana Creek which they so enjoyed that another session and survey is planned for later on this year. Three other threatened species and frog workshops were also held for the Sunshine Coast and Gympie Land for Wildlife property owners.

During the year we were able to install our own copy of WildNet Lite with the assistance from Department of Environment and Resource Management staff. This now allows us to enter our data directly to the WildNet database and Leah has been busy doing just that over the past months. It also means that we can collect and enter important records that filter in from members of the public such as Mary River cod and turtle sightings in the river.

Installed LUNKERs at Belli Crossing 2

LUNKERs themselves are a lot more memorable than the expanded version of the acronym; Large Underwater Neighbourhood Keeper Encompassing Rheotactic salmonids! At first sight these structures, usually submerged, do not show their true form and it is only by seeing them prior to installation that one can understand the value they might offer to waterway fauna (see photo). We have been fortunate to have the support of the Department of Transport and Main Roads (DTMR) to construct, install and monitor two LUNKERs at Belli Creek Crossing Number 2 (now known as Murrays Flat Bridge) for two years. The creek adjacent to the new bridge was modified to accommodate the detour route during construction and the site ended with no riparian vegetation and negligible in-stream habitat values.

The Belli Creek LUNKERs were several months in planning, with technical help from Paul Brown of DPI Victoria and Adam Butcher from DEEDI, both of whom have installed the artificial undercut banks for increased fish habitat.

We however wanted to provide habitat for both the fish and the frogs of Belli Creek, particularly targeting the barred frogs (*Mixophyes iteratus* and *M. fasciolatus*) who flick their eggs out of the water to adhere on the undersides of undercut creek banks. To achieve this we made the opening of the LUNKERs large enough to have the top platform out of the water during ambient summer flows and providing a large enough cavity below the water to entice fish.

LUNKER installation, Belli Creek

Belli Creek has a respectable fish diversity including Purple spotted gudgeon, Firetail gudgeon, Australian smelt, Pacific blue-eye and Crimson-spotted rainbowfish with Mary River cod identified downstream from the site. The project to rehabilitate the bridge site also includes environmental weed control, revegetation and nest box installation (x 15) as well as two years of fish, frog, microbat and mammal monitoring and LUNKER-use monitoring. In two years we envisage that the site will be on the path to recovery and starting to show signs of becoming self-sustaining in the longer-term.

Living with Wildlife Workshop series

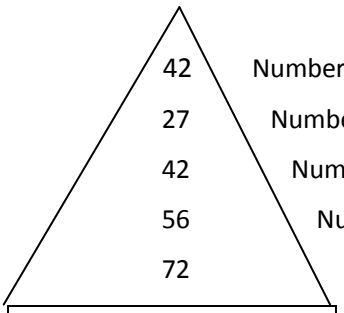
In late 2009, the MRCCC surveyed Gympie participants in the Land for Wildlife program to determine their interests and information needs. With this information in hand, a program of workshops was organized, with support from Gympie Regional Council. These workshops have proven extremely popular, with almost every workshop booked to capacity. The workshops have provided landholders with a diverse selection of information and advice in relation to natural resource management, whilst also providing an opportunity for networking amongst landholders. Thanks again to Peter and Bevly Hughes who helped to promote the workshops in the local media. The full list of workshops and numbers of participants is as follows:

Date	Workshop	Presenter	No. of Participants
27/2/10	Frogs of the Gympie region	Eva Ford	40
13/3/10	Rainforest ID for Trees and shrubs	Marc Russell and Ernie Rider, QPW	35
27/3/10	Small mammals habitat requirements	Martin Fingland, Geckoes Wildlife	42
24/4/10	Bush Regeneration	Marc Russell	30
22/5/10	Native Bees	Dr Tim Heard	50
19/6/10	Vines – natives and weeds	Marc and Mike Webb from council	50
10/7/10	Understorey ID Workshop	Marc Russell and Ernie Rider	40
21/8/09	Recognising Regional Ecosystems	Marc Russell and Ernie Rider	38
11/9/10	Recognising and managing habitat for threatened fauna	Marc Russell	22
9/10/10	Wildlife Photography	Raoul Slater	52
6/11/09	Biodiversity planning	Steve Burgess and Shane Litherland	20 properties
22/01/11	Bush Foods	Marc Russell	Fully booked
6/02/11	Bush Foods	Marc Russell	Places available

Better Catchments - A Snapshot in the Mary Catchment

Delivered as a working partnership between the Mary River Catchment Coordinating Committee, the Gympie District Beef Liaison Group, DPI / DEEDI and funded by the 'Caring for our Country' program. Supporting Partners are: BMRG, Gympie Regional Council and Agribusiness Companies. The project is primarily focused on the following sub-catchment clusters / grazing network hubs: Upper Mary, Western Mary, Mary Valley, Tiaro district, Gympie and district and Cooroy and district.
Primary Objective: To improve catchment health and on-farm sustainability by improving soil health including acidity and salinity, managing soil erosion, developing strategic weed control plans and encouraging the adoption of best land management practices across the Mary River Catchment.
Climate Change Risk Management – these project outputs are being assessed for their impacts, adaptive responses, vulnerability and risks associated with the key climate change variables.
The project has two main components:

1. Healthy Soil Management Plans (HSMP)
2. Property Pest Management Plans (PPMP)



42	Number of landholders implementing practice change (KASA)
27	Number of completed Property Pest Management Plans, including milestones
42	Number of completed Healthy Soil Management Plans, including milestones
56	Number of on-property consultations
72	Landholder EoIs for on-property consultations
26	New landholders engaged
40	Landholders networked – Better Catchments projects (08-09)
65	Landholders networked – SuperGraze projects
98	Landholders networked – Rivercare projects

Landholders Involved	'Better Catchment's priority outputs
21	Lantana PPMPs
5	Giant Rats Tail grass PPMPs
1	Cats Claw Creeper PPMPs
1	Creeping Lantana PPMPs
28	Weed Prioritisation assessments
17	Healthy Soil Management Plans
30	Paddock scale property maps incl Atlas of Australian Soils layer
16	Soil laboratory analysis interpretations
4	Soil health score card assessments including labile carbon
4	Soil acidity management plans
1	Soil salinity management plans
24	Grazing land condition assessments
2	Forage budgeting assessments

Client x Enterprise breakdown	HSMP	PPMP
Commercial/ sub-commercial grazing enterprises	9	3
Part-time grazing enterprises	1	0
Small area grazing landholder enterprises	14	10
Lifestyle grazing enterprises	7	6
Lifestyle landholders (no stock)	1	8
Dairy enterprises	1	0
Horticulture enterprises	7	0
Total	**42**	**27**

Main Roads Highway Construction Monitoring Program

The first year of waterway monitoring activities for Skyring and Coles Creeks is now complete. The monitoring program is providing information to the Queensland Department of Transport and Main Roads that specifically focuses on the impacts to the catchment health of Skyring & Coles Creeks near Federal.

The aim of the monitoring is to detect changes and trends in stream health and aquatic ecosystems (water quality and aquatic faunal condition) before, during and after construction of the Cooroy to Curra (section B) of the Bruce Highway upgrade.

The key objectives of the monitoring program are to:

- Characterise stream health
- Compare stream health data against guidelines
- Identify trends through time
- Identify trends through space
- Evaluate on-ground works

The monitoring program is made up of six major components.

1. Physical & Chemical Water Quality monitoring

Objectives:	**Identify physical chemical water quality condition and monitor changes over time.**
Site Locations	**7 sites on Skyring Creek, 5 on Coles Creek (from upper to lower catchment).**
Equipment:	**TPS 90 FLT & Chlorophyll *a* lab analysis**
Parameters:	**Temp, pH, Dissolved Oxygen, Salinity, Turbidity, Chl *a***
Frequency:	**Monthly**

Results – Phys-chemical water quality monitoring

Site Location	Dissolved Oxygen (%Sat) (guidelines = 85-110%)	Electrical Conductivity (us/cm) (guideline = <580us/cm)	pH (Units) (guideline = 6.5-8)	Temp (ºC) (guidelines = 18-28 C summer & 13-21C winter)	Turbidity (NTU) (guidelines = <50 NTU)
Coles Creek ,Coles Ck Rd (upstream of construction)	33.50	997.00	7.10	22.45	6.00
Coles Creek Carlson Rd (downstream of construction)	20.00	918.00	6.91	19.10	40.00
Skyring Creek, Sankeys Rd (upstream of construction)	63.00	516.00	6.63	18.90	9.50
Skyring Creek, Highway (downstream of construction)	47.00	509.00	7.00	20.80	18.00
50th Percentile (median) values for 12 months of monitoring on Skyring and Coles Creeks (Red values indicate breaches in QLD Water Quality Objective guidelines).					

One year of data for Skyring and Coles Creeks provided a good baseline dataset. During the past 12 months these creeks have experienced droughts, floods and extreme high temperatures during spring. Statistical tests

(Mann Whitney and Kolmogorov-Smirnov) were used to identify differences between phys-chemical water quality parameters on Skyring and Coles Creek.

Dissolved oxygen values on Skyring Creek were shown not to be statistically different; however a downstream site on Coles Creek showed significantly low levels. Sub-catchment trends in salinity (EC) and pH were also identified for Skyring and Coles Creek using these statistical tests. Seasonal variations in all parameters were also observed. The Chlorophyll *a* testing (used as a surrogate for nutrient levels) has shown elevated levels during low flow periods, however after flushing flows the Chl *a* levels drop dramatically.

2. Turbidity Logging

Objectives: .	**Monitor changes in turbidity data over time to assess impact of highway construction.**
Site Locations	**4 sites on Skyring Creek, 3 on Coles Creek.**
Equipment:	**Greenspan Turbidity Loggers & Sensus Ultra Depth Gauges**
Parameters	**Turbidity and Stream Depth.**
Frequency:	**Continuous.**
Methods:	**CRC Catchment Hydrology developed methods.**

Results **-** Summary of turbidity logger data records greater than 50 NTU from August 2009 to August 2010.

Site Name	Site Location	Site Code	Total No Records	Total Records > 50 NTU	Percent of Records > 50 NTU
Upstream of Coles creek realignment (control)	Downstream of Coles Ck Rd	COL475	14243	1930	14%
Downstream of Coles creek realignment (impact)	Downstream of Maguires Ln	COL550	15647	2556	16%
Downstream of construction on Coles Creek (impact)	Downstream of Carlson Rd	COL850	15136	4259	28%
Upstream of Skyring Creek construction (control)	Downstream Andrews Rd	SKY075	14145	160	1%
Upstream of Skyring Creek realignment (both)	Federal School	SKY450	15023	1676	11%
Downstream of Skyring Creek realignment (impact)	Federal Hall	SKY500	14744	2043	13%
Downstream of Skyring Creek construction (impact)	Cochrane Lane - Site office	SKY850	14976	4199	28%

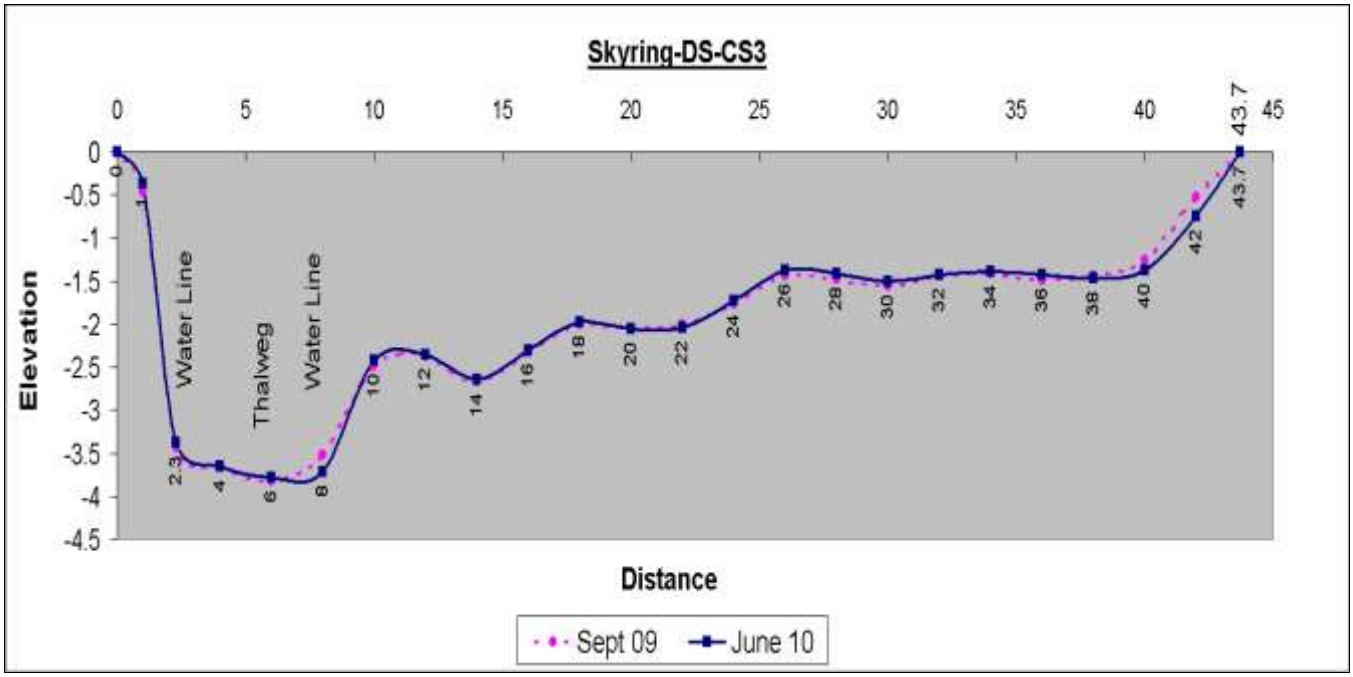
The turbidity loggers have been logging constantly for 12 months since August 2009. Turbidity data from several flood events has been captured. The data from the loggers has been used to produce real time information on the turbidity levels of Skyring and Coles Creeks.

This data has been reported to DTMR on a monthly basis (and immediately after rainfall events). DTMR and DERM have used the data to initiate improvements of sediment control devices and practices on the highway construction site.

3. Channel Habitat Monitoring

Objectives:	To monitor changes in channel habitat characteristics over time to assess impacts of the stream realignment.
Site Locations:	6 sites on Skyring Creek, 6 on Coles Creek (upstream & downstream of stream realignment).
Parameters:	12 cross sections with habitat data at 2m intervals (e.g. substrate, riparian vegetation, fauna habitat, bank overhangs, woody debris, aquatic plants, water levels and velocity).
Frequency:	6 monthly.

Results – Channel habitat monitoring



Example of cross section channel habitat monitoring on Skyring Creek (Pool, bar - Federal Hall).

Channel habitat surveys have been performed twice at each of the sites (late 2009 and mid 2010). These surveys have provided baseline data as they were undertaken before the construction of the stream realignments/diversions.

Overall, very few differences in channel profiles were detected between the two survey dates. The small differences in channel profile observed were attributed to considerable removal of woody debris and leaf-packs from the bed of the stream due to the flood events in early 2010. Instances of localised bank erosion, bed scour and sand deposition were also observed at some sites.

4. Macroinvertebrate Monitoring

Objectives:	**To monitor changes in macroinvertebrate communities over time to assess impacts of the stream realignment.**
Site Locations:	**2 sites on Skyring Creek, 2 on Coles Creek (pool, run, riffle sequence upstream and downstream of stream realignment).**
Parameters:	**Macroinvertebrate species richness & abundance (SIGNAL Score).**
Frequency:	**6 monthly.**
Methods:	**QLD AusRivAS Sampling & Processing Methods.**

Results – Macroinvertebrate monitoring

The aquatic macroinvertebrate monitoring have been performed twice at each of the sites (Sept 2009 and June 2010). Both of the surveys have provided baseline data, as they were undertaken before the construction of the stream realignments had begun. There are few differences between the SIGNAL scores of the Sept 2009 and June 2010 sampling for both Coles and Skyring Creeks upstream and downstream of the realignments.

The downstream Skyring and upstream and downstream Coles Creek sites all exhibit an increase in the Total Family Richness results between the Sept 2009 and June 2010 sampling rounds, however the SIGNAL score drops slightly at all of these sites. This indicates that although more macroinvertebrate families were recorded in June 10, there were a greater number of lower SIGNAL scoring families observed (compared to August 2009). The reason for the increase in number of families (Total Family Richness) is not known at this stage. Further sampling may assist in determining whether the increase is seasonally related, a result of sampling effort or if other factors are involved.

Stream	Site	Sample Data	SIGNAL Score (out of 10)	Total Family Richness Score	PET Family Richness Score
Skyring Creek	Upstream of realignment - Federal School	Sept 2009	4.68	24	7
Skyring Creek	Upstream of realignment - Bruce highway	June 2010	4.56	29	8
Skyring Creek	Downstream of realignment - Federal Hall	Aug 2009	5.84	20	7
Skyring Creek	Downstream of realignment - Federal Hall	June 2010	4.56	23	7
Coles Creek	Upstream of realignment - Coles Ck Rd	Aug 2009	4.85	15	3
Coles Creek	Upstream of realignment - Coles Ck Rd	May 2010	4.25	20	5
Coles Creek	Downstream of realignment – Downstream of Maguires Lane	Aug 2009	4.50	15	2
Coles Creek	Downstream of realignment - Downstream of Maguires Lane	May 2010	4.00	21	3

2009 and 2010 Macroinvertebrate scoring results for Skyring and Coles Creeks.

Waterway	Common Name	Order	Family	Number of Specimens	SIGNAL Sensitivity Grade (out of 10)
Skyring Creek (downstream construction) - June 2010	Mayfly	Ephemeroptera	Leptophlebiidae	114	8
	Stonefly	Plecoptera	Gripopterygidae	2	8
	Caddis fly	Trichoptera	Philopotamidae	7	8
	Water mite	Acarina	Hydracarina	14	6
	Caddis fly	Trichoptera	Hydropsychidae	3	6
	Caddis fly	Trichoptera	Leptoceridae	34	6
	Mayfly	Ephemeroptera	Baetidae	47	5
	Alderflies/Dobsonflies	Megaloptera	Sialidae	3	5
	Dragonfly	Odonata	Gomphidae	2	5
	Dragonfly	Odonata	Hemicorduliidae	2	5
	Whirligig beetle larvae	Coleoptera	Gyrinidae	3	4
	Long arm prawn	Decapoda	Palaemonidae	14	4
	Yabby	Decapoda	Parastacidae	1	4
	Biting midge	Diptera	Ceratopogonidae	1	4
	Free-swim Caddis fly	Trichoptera	Ecnomidae	2	4
	Atyid shrimp	Decapoda	Atyidae	185	3
	Non-biting midges	Diptera	Chironomidae	15	3
	Damselfly	Odonta	Isostictidae	1	3
	Predacious diving beetle	Coeloptera	Dytiscidae	10	2
	Water boatmen	Hemiptera	Corixidae	56	2
	Worms	Oligochaeta		1	2
	Mosquito larvae	Diptera	Culicidae	1	1
	Leech	Rhynchobdellida	Glossiphoniidae	1	1
Coles Creek (downstream construction) - June 2010	Mayfly	Ephemeroptera	Leptophlebiidae	165	8
	Caddis fly	Trichoptera	Calamoceratidae	1	7
	Water mite	Acarina	Hydracarina	8	6
	Caddis fly	Trichoptera	Leptoceridae	103	6
	Dragonfly	Odonata	Gomphidae	4	5
	Whirligig beetle larvae	Coleoptera	Gyrinidae	2	4

Coles Creek (downstream construction) - June 2010 cont'd	Freshwater prawn	Decapoda	Palaemonidae	1	4
	Yabby	Decapoda	Parastacidae	2	4
	Predacious diving beetle	Coeloptera	Dytiscidae	2	3
	Atyid shrimp	Decapoda	Atyidae	92	3
	Non-biting midges	Diptera	Chironomidae	6	3
	Water measurers	Hemiptera	Hydrometridae	1	3
	Small water strider	Hemiptera	Veliidae	1	3
	Damselfly	Odonta	Isostictidae	3	3
	Damselfly	Odonta	Protoneuridae	2	3
	Dragonfly	Odonata	Urothemistidae	2	2.5
	Predacious diving beetle	Coeloptera	Dytiscidae	2	2
	Water boatmen	Hemiptera	Corixidae	36	2
	Flat worm	Tricladida	Dugesiidae	2	2
	Beatle larvae	Coleoptera	Hygrobiidae	1	1.5
	Small strider	Hemiptera	Saldidae	10	1

2010 Macroinvertebrate scoring results for Skyring and Coles Creeks downstream of construction sites.

5. Fish Survey

Objectives:	**To monitor changes in fish communities over time to assess impacts of stream realignment.**
Site Locations	**2 sites on Skyring Creek, 2 on Coles Creek (pool, run, riffle sequence upstream and downstream of stream realignment).**
Equipment:	**Electrofishing equipment.**
Parameters:	**Fish species richness and abundance.**
Frequency:	**6 monthly**
Methods:	**DEEDI Electrofishing methods.**

Results – Fish Survey

The fish surveys have been performed twice at each of the sites (Jan 2010 and June 2010). No surveys were undertaken in 2009 due to the very low stream water levels. Both of the surveys have provided baseline data for the monitoring objective As a general observation, the diversity and abundance of fish species recorded in Skyring and Coles Creeks indicates a healthy aquatic ecosystem. The numbers and types of fish species recorded in these two creeks compares well with other similar sized streams monitored in the Mary River catchment. Some differences in the total abundance of fish species was observed during the surveys, with a decrease in total number from January to June 2010 at Coles Creek, and an increase at Skyring Creek over the same period. A statistical analysis of the differences in fork-lengths of the *Hypseleotris* species (Carp Gudgeon, the most common fish species recorded in the surveys) over time and between the sites was also performed on the survey data. Significant differences in the Carp

Gudgeon fork-lengths were found, however further survey data will be needed in order to determine if this is an appropriate indicator of change.

Fish Species

Site	Species Name	Common Name
Coles Creek	*Ambassis agassizii*	Agassiz's glassfish
	Anguilla reinhardtii	Long-finned eel
	Anguilla australis	Short-finned eel
	Gambusia holbrooki	Mosquito fish
	Hypseleotris sp	Carp gudgeon
	Hypseleotris galii	Fire-tail gudgeon
	Melanotaenia duboulayi	Crimson-spotted rainbowfish
	Mogurnda adspersa	Purple-spotted gudgeon
	Philypnodon sp	Dwarf flathead gudgeon
	Retropinna semoni	Australian smelt
	Tandanus tandanus	Freshwater catfish
Skyring Creek	*Anguilla reinhardtii*	Long-finned eel
	Gambusia holbrooki	Mosquito fish
	Hypseleotris galii	Firetail gudgeon
	Hypseleotris sp	Carp gudgeon
	Melanotaenia duboulayi	Crimson-spotted rainbowfish
	Mogurnda adspersa	Purple-spotted gudgeon
	Philypnodon grandiceps	Flathead gudgeon
	Philypnodon sp	Dwarf flathead gudgeon
	Pseudomugil signifer	Pacific blue-eye
	Retropinna semoni	Australian smelt
	Tandanus tandanus	Freshwater catfish

Fish species recorded during the electrofishing surveys of Skyring Creek in January and June 2010.

6. Frog & Microbat Survey

Objectives:	**Monitor changes in frog and microbat populations over time to assess impacts of stream realignment.**
Site Locations	***:*** **2 x 100m transects on Skyring Creek, 2 x 100m transects on Coles Creek (upstream and downstream of creek realignment) and 4 x 'frog plates' at each end of transect.**
Parameters:	**Frog & microbat species richness, abundance and condition.**
Frequency:	**3 surveys per year (within October to March breeding season)**
Methods:	**Nocturnal transect monitoring (including AnaBat SD1 data) and diurnal 'frog plate' monitoring.**

Results – Frog & Microbat Survey

Three rounds of surveys have been undertaken for each of the monitoring transects (Oct 09, Dec 09 and Jan 10). Ten frog species were recorded from all sites along the transects and in adjacent areas during the surveys. Nine species were detected at Coles Creek and eight species at Skyring Creek. Most species were common to both creek systems except the Graceful treefrog *Litoria gracilenta* and the Great barred frog *Mixophyes fasciolatus* which were detected at Coles Creek and not at Skyring Creek, and the Naked treefrog *Litoria rubella* which was detected at Skyring Creek and not at Coles Creek. Both creeks had reasonable frequency and abundance of the Stony-creek frog and Eastern sedgefrog, both very common species in such habitats.

The vulnerable Tusked frog was found at all sites but not at every visit. The Cane toad, found at all sites, appears to be more common at Skyring Creek than Coles Creek. Frog plates were inspected, however due to the newness of the 'frog plates' and the dryness of the microhabitat beneath, they were not observed to be utilised by frogs. It is not possible to make any comparisons of frog records between sites or over time at this early stage. Microbat species recorded are all within their known distributional range and none are listed as threatened species. Although the bat diversity is good overall, only two of the nine possible species are common to both creek systems.

Site	Date	Tusked frog *Adelotus brevis*	Striped marshfrog *Limnodynastes peronii*	Eastern sedgefrog *Litoria fallax*	Graceful treefrog *Litoria gracilenta*	Emerald-spotted treefrog *Litoria peronii*	Stony-creek frog *Litoria wilcoxii*	Great barred frog *Mixophyes fasciolatus*	Cane toad *Rhinella marina*
Coles Creek Upstream of construction	29/10/09	1		6	4				
	10/12/09			4			1	1	
	28/01/10				1		1		1
Coles Creek Downstream of construction	29/10/09			1					
	28/01/10	2		1			1		1
	23/02/10	2				1			
Skyring Creek Upstream of construction	29/10/09			5			4		1
	10/12/09	1					3		2
	28/01/10			1			14		2
Skyring Creek Downstream of construction	29/10/09		1	5			5		12
	10/12/10	1	1				17		2
	28/01/10						3		2

Frog monitoring data from 2009 and 2010 surveys of Skyring and Coles Creeks.

The monitoring program is scheduled to run for a further two years. The final outcome of the monitoring program will be a comprehensive scientific report on the effects of the stream realignments and highway upgrade on the water quality and habitat values of Skyring and Coles Creeks.

Gympie District FarmFLOW

The last 12 months have seen the FarmFLOW project continue with several Best Practice demonstration sites, field days and development of management guidelines.

The following demonstrations of Best Management Practices were completed:

- Dairy nitrogen trial – In conjunction with Ross Warren , DEEDI, the yield response to different forms of Nitrogen fertiliser on an irrigated pasture as investigated. An attempt at measuring Nitrogen losses through deep drainage was also made. The end result was a similar yield for Entec coated urea compared to standard urea. Entec coated urea was applied at approximately half the rate as standard urea. Similar yields were achieved, showing that there is potential to improve nitrogen utilisation efficiency, reduce fertiliser costs and reduce loss of nitrogen to the environment in this system.
- Pines fertiliser trial –3 different up-front fertiliser rates were looked at, including a slow release treatment. After 4 months there were no significant differences in plant establishment, health or growth. This block will be harvested in the near future, and effect on yield will be monitored.
- Beans Minimum Till. Several growers have been encouraged to implement this practice in the local area with the help of Des Gleeson.
- Macadamias Canopy and Orchard Floor management. The initial demonstration blocks are now almost 12 months old and Smother grass is well established. Sediment run-off traps have shown significant erosion reduction in treated rows.

The following Local Best Management Guidelines were completed.

- Grazing Land Type Sheets for the Gympie District are now complete. Many hours of effort with lots of help from Graeme Elphinstone and Brad Wedlock have resulted in a comprehensive guide to best managing the grazing lands of the region.

Bean minimum till

- "Economic analysis of tillage options for Gympie bean growers" fact sheet completed with input from Jim Page. This fact sheet draws on local data to analyses the economic impact of traditional conventional tillage vs minimum tillage. Minimum tillage works out over $200/ha cheaper.
- Macadamia Canopy and Orchard floor Best Practice Guidelines. A collaborative effort with Zane Nicholls, DEEDI. We drew together the best current research from NSW and combined this with local experience to develop some locally relevant guidelines.

A number of field days have been held including:

- Beans Minimum Till – focussed on the practicalities and economics of changing to a minimum till vegetable growing system in the Gympie District.
- Multi Industry – focussing on soil physical characteristics and how to manage for best soil structure
- Dairy Tropical Pastures day – with Ross Warren, presented results of fertiliser trial.
- Macadamia Orchard Floor management

The FarmFLOW project has also provided support to growers who are implementing new sustainable practices. FarmFLOW is entering its final 6 months, with the project due to end in March 2011. The focus during the upcoming months will be on delivering Farm Ready incentives and training, and using the learnings from local demonstrations of best practice, economic analysis and best practice guidelines developed over the last 2 years.

Policy & project submissions & representations 2010
Mary Basin Water Resource Plan – Resource Operations Plan
Mary River Recovery Plan
Great Sandy Biolinks – conservation assessment framework
Aquatic Conservation Assessment for Mary Catchment (AquaBAMM)
Sunshine Coast Regional Council Waterways Strategy
Gympie Regional Council Environmental Strategy
National Water Commission Community of Practice for Environmental Water Managers
Department of Infrastructure and Planning, Mary Valley
Wide Bay Burnett NRM Plan
Wide Bay Burnett Statutory Plan
Reef Rescue, Grazing

Education / awareness

Organisation / Group	Location	Date
Riversymposium international delegation, catchment tour	Conondale, Kenilworth	Sept 2009
Mary Valley weeds field-walk	Brooloo	October 2009
Catchment Crawl	Conondale - Tiaro	October 2009
Zero-till horticultural field-day	Gympie	October 2009
Rotary Club of Gympie, MRCCC presentation	Gympie	Dec 2009
SEQW catchment familiarisation tour	Conondale – Imbil	Dec 2009
QDO / Irrigators meeting	Gympie	
Soil health field day	Goomboorian	Feb 2010
Lantana splatter gun field day	Kenilworth	Mar 2010
Community of Practice Environmental Water Managers regional conference	Gympie	Apr 2010
Noosa Festival of Water	Lake Macdonald	June 2010
Mary Valley Community & Economic Action Plan launch	Imbil	June 2010
Gympie Field Naturalists water bug field activity & presentation	Gympie	Aug 2010
Greater Mary Association, ROP presentation	Maryborough	Sept 2010
Dept of Infrastructure & Planning delegation, Mary Valley tour	Mary Valley	Aug 2010
International Water Commission, Indonesian delegation catchment tour	Mary Valley	Sept 2010
Queensland Landcare Conference presentations, sustainable grazing & community water quality monitoring presentations	Caloundra	Sept 2010
Noosa Show	Pomona	Sept 2010
Noosa Biosphere community day	Noosa	Sept 2010
Noosa Parks Friday Forum Frog talk	Noosaville	Oct 2010

School visits

School	Location	Date
Jones Hill Primary	Cedar Grove Field Trip	Sept 2009
St Patrick's College	Kidd Bridge Weir	Nov 2009
Tin Can Bay Primary and Secondary	Tin Can Bay	Nov 2009
Gympie South Primary	Kidd Bridge Weir	April 2010
Gympie High School, grazing land condition assessment	Gympie	May 2010
Cooloola Christian College Secondary	Gympie	July 2010
St Patrick's College Secondary	Gympie	Aug 2010
Monkland Primary	Gympie	Aug 2010
Youth Environment Symposium	Kidd Bridge Weir and Pavilion	Sept 2010

Waterwatch Volunteers 2009-2010

Gordon Agnew	Kent Hutton
Keith and Christine Bagnall	Spencer Innes
Susan and John Bailey	Lesley Innes
Mick Bambling	Errol Janke
Anette Bambling	Rob and Kathy Kerle
Malcolm Beresford	Ross Kinbacher
Mark Bews	Iain Lewis
David and Rosemary Burnett	Shane Litherland
Bill Butler and Barry Baxter, QPWS	Ian Mackay
Jason Buckley, Nick's Readymix	Lorne and Ross Maitland
Nina Cox	Brett and Tammy Marsh
Therese Cronin	Kye McDonald
Gillian and Yvonne Crossley	Bryan McMahon
Kathleen and Steve Dennis	Kath Nash
Graeme Draper	Widgee State School
Noo Dye	Cath and Colin Robinson
Graeme and Julie Eales	Kev and Helen Rogers
Bob Fredman	Ted and Coral Tame
Janet and David Golding	Brian Thomas
Eddie Gresham	Neville and Joy Turner
Narelle Hall	Graeme White
Gordon Halliday	Scott Woolbank
James and Cassandra Hansen	Des King and Colleen Ryan
Leslie and Craig Hanson	Scott Poad and Sally Warren
Bob and Lorraine Hood	
Cam and Lisa Hughes	

Notes

Notes

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the Worldwide Fund for Nature,
the Department of Transport and Main Roads,
Powerlink
and landholders throughout the Mary Catchment.

DONATIONS TO THE MARY CATCHMENT PUBLIC FUND ARE TAX DEDUCTIBLE

MARY RIVER

CATCHMENT

COORDINATING COMMITTEE