

## Next-Gen. Weather forecasting to roll out this year!

By Craig Welden

A new forecast service is set to be implemented in Queensland in Spring this year called the Next Generation Forecast and Warning System (NexGenFWS).

The digital forecast system contains highly detailed weather information on grids at 6km spacing. This type of format allows forecasters to concentrate their time and energy on scientific input to the database rather than spend time creating manual text forecasts.

Queensland has had the benefit of other states trialling the program with Victoria launching the pilot program in 2008, followed by other southern states with Western Australia going live in October, 2012. Lessons learnt from almost 5 years of its implementation have been used to provide a more robust program to suit the specific needs of Queensland users.

The NexGenFWS platform works off a set of forecast weather element grids that extend the forecasting out to 7 days for every part of the state. This will be a huge improvement to the rural communities, who will receive the same level of service as the major cities.

Vikash Prasad (BOM Qld) said that the NexGenFWS forecast services will be available to the public through MetEye, a web based visualisation tool expected to replace the current Forecast Explorer used by the other states.



Figure 1 BOM Forecaster using the Next Generation Forecast and Warning System.

## National Burning Project Gets Going

By Gary Featherston, AFAC

The National Burning Project is a joint venture between AFAC and the Forest Fire Management Group (FFMG). It is a ten year undertaking that commenced in 2010. The project consists of eleven sub-projects that are linked to form a framework of coordinated actions to improve the efficiency and effectiveness of prescribed burning in meeting public policy objectives.

Last year, work was completed to compile a science review and a review of current practices. The Bushfire Fuel Classification System compiled a glossary and fuel assessment guide. Also completed were risk management frameworks for two of the major risks, fuel and smoke. These reports are currently being re-designed ready for publication.

Parts of two sub projects have been funded by agency contributions for this year. A best practice guide for operational burning is being prepared by GHD, building on their work done on the review. They are travelling to meet key practitioners and identify good practice. The completion of the guide is planned for October 2013.

The National Bushfire Fuel Classification System is also continuing. CSIRO will be trialling the classification framework as part of a case study in the ACT. The fuels in the ACT are well known, close to the researchers and monitored intensely by field based programs by Parks and Conservation staff. These attributes made it an ideal case study location.

For further information contact Gary Featherston, Manager, Rural and Land Management Group, AFAC on 0428 408 144 or at [gary.featherston@afac.com.au](mailto:gary.featherston@afac.com.au)

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Dr Samantha Lloyd and Craig Welden

### Who are we?

Established in 1998, the South East Queensland Fire and Biodiversity Consortium (SEQFBC) is a network of land managers and stakeholders devoted to providing a coordinated response and best-practice recommendations for fire management, fire ecology and the conservation of biodiversity in the South East Queensland (SEQ) region through education, community engagement and applied research.

### Contact details

All enquires please contact the SEQFBC

Dr Samantha Lloyd

M. 0438 008 668

P. 07 3503 1415

slloyd@seqcatchments.com.au

Craig Welden

M. 0437 726 279

P. 07 3503 1415

cwelden@seqcatchments.com.au

[www.fireandbiodiversity.org.au](http://www.fireandbiodiversity.org.au)

Postal address and deliveries:

SEQ Fire and Biodiversity Consortium

Level 2, 183 North Quay

Brisbane Q 4000

Please note:

Samantha works Monday, Wednesday and Thursday.

Craig currently works Tuesday through to Friday.

## Editorial

Welcome to the 1st edition for the year.

We are pleased to be supported and hosted by SEQ Catchments (SEQC). SEQC provide an enormous support through finance administration and provision of space within their Brisbane Headquarters (their coffee machine gets a workout from me). A special mention for the amount of support that is given to us from SEQC's CEO Mr Simon Warner and Chief Performance Manager Mr Noel Ainsworth.

Again we would like to thank our contributors for their financial support in supporting SEQFBC to provide education representation and research in fire management, fire ecology and biodiversity conservation in SEQ. While our work does focus on SEQ, the resources and research is available freely on our website and is therefore available not only to all Queensland landholders, Local Government, State agency staff and industry groups but also interstate. The website hit history clearly indicates the amount of interest that we generate from within Australia and overseas.

In this issue we highlight the new weather forecasting program that will be implemented across Queensland in October this year; an update from SEQFBC Student Research grant recipient Diana Virkki; the work that Sam and the Roadside Burning Project team achieved with the completed guidelines that can be not only used within SEQ but across Queensland; a review of the landscaping for bushfire publication from CFA Victoria and many more articles.

I hope that you enjoy reading this edition of the SEQFBC newsletter and I welcome any feedback.

Kind Regards

*Craig Welden*

SEQ Fire and Biodiversity Consortium Coordinator

# Runs on the Board

## Snapshot of what we have achieved since November 2012

By Craig Welden

Thanks to our dedicated band of members of whom form the Steering Committee and the Research and Education working groups. Thank you for your time and commitment to SEQFBC business. We are very fortunate to have Chandra Wood, Brisbane City Council, as the new Chair of the Steering Committee. Chandra comes to the role as a long serving member of the Steering Committee and has wealth of experience and knowledge in fire management and policy. Thanks to Dr Tim Robson who chaired the Steering committee for over 7 years. We were very fortunate to have Tim in the role for such a long time and welcome his continual involvement in the Steering Committee.

We have delivered our workshops and talks to over 200 people with talks on fire in the landscape and implication for biodiversity conservation to forums with local government staff. One memorable workshop was with Emu Creek Landcare sitting on drums of foam discussing biodiversity conservation issues with farmers. We were also fortunate recently to be given the opportunity to deliver our fire in the landscape talks to over 130 QFRS's Voluntary Community Educators. Thanks go to QFRS's Acting Superintendent Gary McCormack and Bushfire Safety Officer Peta Miller for the invitation and opportunity to speak to a dedicated bunch of volunteers.

We have received a great amount of positive feedback regarding our completed SEQ Roadside Burning Project: "with regards to the Roadside burning project - This is a major piece of research and analysis of a regulatory issue which provides a reference that will allow us to deal more effectively with Councils. Sam, you have done a splendid job!" - Community representative. Read more about the Roadside burning project on page 6 and 7.

We have progressed well with the collaborative Australian Government's Caring for our Country project with the Nature Conservation Council (NCC) hotspots program, Northern Rivers Fire and Biodiversity Consortium and our host SEQ Catchments, which focusses on restoring habitat for threatened species in the border ranges area. Read more about it on page 5.

The Research working group met in February this year with 16 researchers in attendance. Attendees discussed recent research, the importance of effective communication of science, monitoring fire and drafted ideas for some potential new projects. Keep a look out for the new SEQFBC Fire Research newsletter.

We were fortunate to be part of the QFRS Rural Fire Service Review stakeholder workshop at Kedron Emergency Services Complex in December 2012. Following the workshop we provided Mr Ted Malone MP, Chair of the Review with a detailed submission. Some of the points raised: Recognition of the effort and time spent by the 34,000 plus RFS volunteers in Queensland; the enormous amount of support that is provided to volunteers by the paid staff from the Rural



Figure 2 Fire management workshop with Emu Creek Landcare. Discussing the appropriate siting of 'whoo boys' along a fire trail to minimize erosion.

Operations (RO) team; encouragement of the Regional Inter-Departmental Committees on bushfires; complemented QFRS Rural Operations ability in providing rapid response in wildfire situations. If you would like to see the full submission, please email Craig or Sam.

Our Individual Property Fire Management Planning Kit is currently being reviewed and we have sought external funding for the design and printing costs as well as an associated fact sheet that promotes the workshops that we carry out.

The Education Working Group is meeting in April and will be reviewing two new fact sheets on fire ecology and fire regimes and assessing a draft of the revised Individual Property Fire Management Planning Manual.

Our regular email distributions have evolved into SEQFBC E-news and is posted on a regular basis. The postings have received a lot of positive feedback including the following "it is great to get these "digests" of relevant material; Thanks for the efforts you go to keep us informed." If you would like to receive past copies of the SEQFBC E-news please contact us.

We are continuing our collaboration with our neighbours from across the border in NSW through the NSW NCC Hotspots program and the Northern Rivers Fire and Biodiversity Consortium.

We update and refresh our website on a weekly basis and have now added a "News section" on our home page which highlights new developments in our work. Please check us out at: [www.fireandbiodiversity.org.au](http://www.fireandbiodiversity.org.au)



# Upcoming events

## Bushfire Conference 2013

9th Biennial Bushfire Conference 4-5 June 2013

NSW Teacher's Federation Conference Centre, Surry Hills Sydney

This conference will explore the role holistic fire management can play in making our landscapes and communities more resilient in a changing climate. New scientific research, policy updates and on ground management issues and success stories will be presented. This year we are introducing speed talks - four minute talks intended for people wishing to: introduce a new concept, present some interim results, or share an on ground success story.

More: <http://nccnsw.org.au/programs/2013-bushfire-conference> or [BushfireConf2013@nccnsw.org.au](mailto:BushfireConf2013@nccnsw.org.au)

## Queensland Landcare Conference 2013

24th state Conference 27-29 September 2013 - Warwick

The theme of the conference is healthy habitats ... profitable production and the group expects to attract between 250 and 300 delegates. The program will feature a mix of keynote presentations, hands-on workshops, social functions, field trips and a Junior Landcare component.

More: <http://tinyurl.com/landcare2013> or [catherine@ddrlandcare.org](mailto:catherine@ddrlandcare.org)

## AFAC 13

20th AFAC Conference/10th Bushfire CRC conference. 2-5

September 2013

Melbourne, Australia

Australasia's Premier Emergency Management Conference. The conference theme for 2013 is Shaping Tomorrow Together, reflecting that emergency services will need to work together collaboratively with the community and other partners from the education, health, business and research sectors, and all levels of government, to shape our future.

## The relationship between fire mosaics and reptile communities in southeast Queensland

By Diana Virkki, Griffith University

Diana Virkki from Griffith University is leading research investigating the mechanisms driving faunal responses to fires in SEQ and as part of this research is assessing how reptiles respond to spatio-temporal fire mosaics across the landscape.

The study compared reptile assemblages in dry sclerophyll forests with differing fire mosaic histories in southeast Queensland to determine how reptiles respond to spatio-temporal fire regimes.

Unique spatial fire mosaics were identified at two forests based on: total number of fires, mean fire interval and time-since-fire. Reptile active searches were conducted at five plots within each fire history mosaic unit during two sampling periods.

Results show that reptile abundance, richness and composition were influenced by fires. The best models revealed a negative response to the total number of fires, as well as fire type, where top disposal (forestry management) burns had higher species richness with a different composition to that of wildfire and prescribed burns.

Habitat variables were generally not strongly correlated with reptile parameters. However some fine-scale variables appeared within models alongside fire parameters, where reptile abundance of common species was positively correlated with ground vegetation height, litter cover and log abundance and decay.

The findings demonstrate a stronger relationship with fire as opposed to habitat structure, in contrast to previous work. This suggests that where land managers reduce the fire frequency, this may lead to a higher reptile abundance and diversity.

Diana Virkki is the recipient of the SEQFBC Student Research Grant.

## South Burnett attracts \$1.6 million to protect biodiversity

By Denise Whyte, South Burnett Regional Council

South Burnett Regional Council (SBRC) will receive \$1.6 million over the next 6 years to implement biodiversity and climate change programs across the region. The Australian Government approved the proposal in the first round of Biodiversity Fund grants.

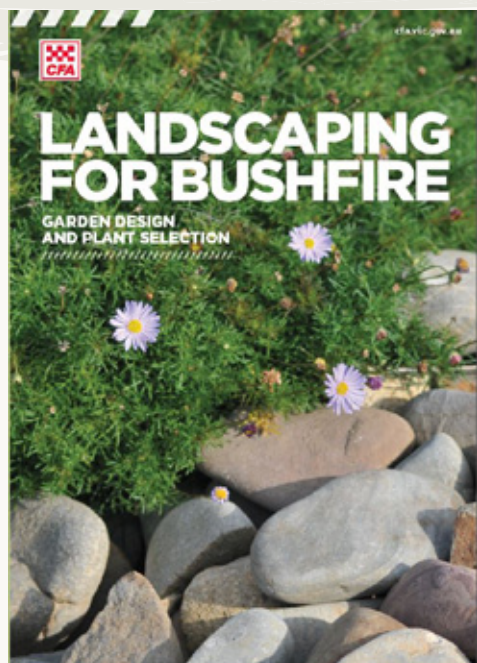
Council are working with University of Queensland to develop a best practice guideline for fire management practices that reduce atmospheric carbon release and depletion of soil carbon content.

The research will form the basis of a recognised carbon credit methodology, providing the opportunity for land managers with similar annual rainfall across northern NSW to southern and central Qld to contribute to global emission reductions. This, in turn would allow landholders to move toward research generated sustainable practices and provide access to apply for carbon credits.

Prescribed burning training will be provided in partnership with CTC employment services to develop skill sets within local government, the rural sector, plantation industries and emergency services.

The project will also further develop and allow greater implementation of the current regional fire management strategy for reserves and roadsides in the SBRC area. The focus will be on target areas containing endangered or fire sensitive species and will enhance current conditions for fuel reduction which include the use of fire and alternative methods such as short term periodic grazing permits for areas that are adversely affected by fire.

Other project activities include the implementation of a region wide biodiversity and climate change strategy that aims to revegetate 200 hectares of urban and village landscapes over the life of the project.



## Landscaping for bushfire

By Owen Gooding, Country Fire Authority Victoria

CFA's Landscaping for bushfire provides guidance for industry professionals on how to design gardens and make appropriate plant selection in high bushfire risk areas. It provides detail about how garden design can be used to minimise the risk of a garden contributing to house loss in a bushfire and is in response to Recommendation 44 from the Victorian Bushfires Royal Commission and has been developed in conjunction with a team of industry experts.

This information can be used when preparing landscape plans for new houses in the bushfire risk areas as well as informing garden design when retrofitting or redesigning existing gardens. Landscaping for bushfire includes information about how to landscape an effective defendable space, characteristics that influence plant flammability, a 'Plant Selection Key' and important advice about garden maintenance.

The Plant Selection Key provided both in the document as well as online, is a tool that provides a consistent method for assessing the flammability of plants.

Although it is true that all plants burn under the right conditions, some burn more readily than others. There is a section in the booklet that outlines the characteristics that affect the flammability of plants. The design principles set out how to ensure an

effective defendable space through location and arrangement of plants and other flammable objects.

Landscaping for bushfire provides detail about what to do within the garden as part of the holistic approach to bushfire preparation. Garden design should not be relied upon in isolation; other bushfire protection measures are also outlined. These include house construction, water supply, access and having a Bushfire Survival Plan.

The publication Landscaping for Bushfire and the online version of the Plant Selection Key can be found on the CFA website [www.cfa.vic.gov.au](http://www.cfa.vic.gov.au).

## Helping landholders improve habitat for endangered species in the border ranges.

By Craig Welden and Dr Samantha Lloyd

SEQFBC and the Nature Conservation Council of NSW (NCC NSW) Hotspots program along with SEQ Catchments and the Northern Rivers Fire and Biodiversity Consortium where successful in their application to the Federal Governments Caring For our Country funding program for the restoration of habitat for nationally threatened species in the border ranges area.

The project has already seen the engagement of landholders and State agencies in the implementation of critical on ground fire management infrastructure to improve habitat restoration for species such as the Eastern BristleBird.

Colin Hastie, SEQ Catchments Community Partnership Manager for the Albert/Logan area, says that this project reflects the years of hard work landholders have already put into protecting these species on their properties in the Scenic Rim area.

"We'll be working with dedicated landholders in these areas on a range of initiatives, including best practice fire management, targeted weed control, and surveys for the Eastern Bristlebird. Our aim is to assist landholders to help restore critical habitat for some of our most iconic species", he said.

The NCC NSW who are part of the Hotspots Fire Project and the Northern Rivers Fire and Biodiversity Consortium, is responsible for the successful funding bid. Working closely with their project partner counterparts, NCC has extensive experience in such projects and the project will provide a great opportunity for cross border habitat restoration and capacity building.

"Conservation and fire management issues don't stop at the border", said Waminda Parker, Hotspots Project Manager for the NCC. "We're looking forward to working with our Queensland partners to deliver this vital project with shared benefits for the whole region", she said.



Figure 3 Onsite meeting with a landholder, bird experts from Queensland Government and Australian Bird Study Association, SEQ Catchments Staff, NCC Ecologist and SEQFBC staff, determining the position for fire infrastructure.





# New guidelines for Roadside Burning in SEQ

By Dr Samantha Lloyd

## Project Background and Stakeholder Consultation

In 2011, in response to community concern and lack of an identified process, SEQ Catchments considered a proposed policy paper on the issue of fuel load management on roadside reserves (Dale, 2011). Specifically, the paper dealt with the issue of private landholders wishing to burn council or state managed roadsides (adjoining their properties), for hazard reduction purposes.

In recognizing that this was a critical community, fire and biodiversity issue, SEQ Catchments asked the SEQ Fire and Biodiversity Consortium to manage the project. The objectives of the project were to:

- (1) Engage with land manager stakeholders to identify the main issues and any existing procedures; and
- (2) Outline existing procedures, how they may be utilised and encourage adoption.

It was also identified that any proposed procedures must align with Queensland Fire and Rescue Service (QFRS) 'Permit to Light Fire' system.

Two major stakeholder consultation workshops were undertaken:

- (1) A land manager workshop, organized by the SEQ Fire and Biodiversity Consortium. It was agreed that the four key issues facing land managers are: (1) biodiversity values; (2) responsibility and funding; (3) insurance; and (4) local laws. This workshop featured a successful program underway at South Burnett Regional Council, called the South Burnett Model.

- (2) A road corridor management workshop, organized by the Upper Brisbane Region Catchment Network (UBRCN). This workshop identified that a successful coordinated agency approach existed in the Toowoomba Regional Council area, the Coordinated Agency Model.

## The South Burnett Model

The process underway at South Burnett Regional Council (SBRC) requires landholders to complete an application form, council assess the application and dependent upon various restrictions (e.g. biodiversity values described below) may grant permission, with a set of strict conditions. The landholder must obtain a valid 'Permit to Light Fire' from the QFRS for their land and SBRC obtain one for the roadside verge. As part of this process, landholders are covered by council's insurance.

SBRC used various mapping resources (e.g. Regional Ecosystem mapping) and ecological burning guidelines to identify areas of potentially high conservation value. This process identified six nationally and state listed species and communities in their region. SBRC then commissioned a study to map these species and communities and they also assessed all roads with a medium to very high fire risk. This information was used to develop a list of roads that do not contain high biodiversity values. These areas have preapproval for fuel load reduction burning for 12 months. All other roads are deemed to contain a high biodiversity value and require assessment by SBRC.

Coordinated Agency Model Flow Chart: Summary of Process

### Application

Private landholders contact their Rural Fire Brigade & request roadside burn.

Rural Fire Brigade request permission to conduct a burn (via regional/brigade priorities or landholder).

QFRS issue a 'Permit to Light Fire', allowing a burn to be conducted.

### Assessment

QPWS assess the Plan for biodiversity priorities (e.g. threatened species & Endangered Ecological Communities).

QFRS assess requests & prepare a Fire Management Plan (the Plan). The Plan is sent to QPWS (biodiversity assessment) & to DTMR (assessment of road safety/traffic control issues).

QFRS send the Plan to Toowoomba RC with 72hrs notice of an intention to burn. Toowoomba RC contact QFRS if there are any issues.

DTMR assess the Plan for road safety/traffic control issues & provide a Traffic Management Plan if needed.

### Enabling Process

DTMR issue an annual permit to QFRS to undertake burning operations within their corridor.

Regional roadside priorities help determine roadside burning works via RIDC.

Toowoomba RC issues an annual permit to QFRS to "Undertake works within the road reserve".

## New guidelines for Roadside Burning in SEQ cont'd

### The Coordinated Agency Model

The Coordinated Agency Model (shown on page 6) for roadside burning was developed through collaboration between key officers from the QFRS, Queensland Parks and Wildlife Service (QPWS), Department of Transport and Main Roads (DTMR) and Toowoomba Regional Council (TRC). Initially officers met through their participation in the Regional Inter-departmental Committee (RIDC) on Bushfire for the QFRS Southwest Region and ongoing interaction saw relationships develop over time.

Requests to conduct a burn are received by the QFRS via local Rural Fire Brigades and/or are assessed as a result of predetermined regional priorities. Importantly, this process allows private landholders to make a request via their Rural Fire Brigades. The Coordinated Agency Model addresses the issue of biodiversity by including QPWS in the assessment phase. It also deals with insurance concerns by having QFRS staff and volunteers conduct burns (see diagram).

This process has only been operating at its present level since September 2011, but in this short time has demonstrated



Figure 4 Roadside hazard reduction burn undertaken by Brisbane City Council, Mt Coot-tha (April 2008)

enormous success. In theory, it can be applied to all local government areas across SEQ, provided key staff can be identified and there is a willingness to work together. It provides an excellent opportunity for local governments to achieve efficient and safe roadside corridor hazard reduction burns, whilst maintaining community trust and biodiversity values.

### Where to from here?

The SEQ Fire and Biodiversity Consortium have provided the project report to all local governments, relevant state agencies, Powerlink Queensland and the SEQC Members Association and are currently liaising with interested councils. The SEQ Fire and Biodiversity Consortium will also be promoting the report through various networks, including RIDCs and Fire Management Groups. It is hoped that this report will encourage land managers to assess their situation and make informed decisions regarding their roadside burning. Interested local government or state agencies are encouraged to contact the SEQ Fire and Biodiversity Consortium.



Figure 5 Inter-agency onsite meeting, prior to roadside hazard reduction burn, as part of the Coordinated Agency Model process (photo courtesy of Julian Selke).

## 2012 Spring Forum held at Laidley

By Craig Welden

The 2012 Spring Forum was well attended by over 60 people from various land management agencies, researchers and property owners.

Dr Luba Volkova from the University of Melbourne and the Bushfire CRC provided insight into the Forest Carbon and Emission management project she is undertaking. Luba's study sites have included two here within South East Queensland (assisted by QPWS). Dr Volkova has developed great relationships with eastern state fire agencies and developed a method to accurately estimate carbon loss in forests.

Dr Patrick Moss of the University of Queensland (UQ) spoke of discoveries on North Stradbroke Island's late quaternary fire and vegetation history. Dr Moss believes that climate has played a key role on vegetation change in the five sites they have been studying. The burning interactions are complex and the evidence has shown that some of the interactions are linked with drought and some with higher rainfall periods. Other talks included those from Felicity Shapland of UQ and Felicity's research into the patterned fens of Fraser Island. Some key discoveries include that the fens are highly resilient to fire as a result of looking at the taxa represented in the mid and late Holocene fire. Dominic Adshead of GHD provided an update on the AFAC National Burning Project.

Out site visit took in the Powerlink Easement at Grandchester and we learnt about the Coordinated Fire Management Project from Dr Greg Leach of SEQ Catchments and Murray Abel of Powerlink Queensland and the research being undertaken by UQ into highly erodible soils and power easements with recommendations for vegetation management including the use of fire.

Our next Forum is on 1st May 2013 – stay tuned.



Figure 6 SEQFBC November 2012 Forum (see page 7). SEQ Catchments Dr Greg Leach and Powerlink Queensland's Murray Abel describe the erosion, fire and coordinated fire management planning within a Powerlink easement at Grandchester.



# Annual Conference for the Ecological Society of Australia 2012

By Dr Samantha Lloyd

The recent ESA conference in Melbourne was a terrific representation of the best ecological research currently in Australia, and in some cases internationally. The theme of the conference was "Ecology: Fundamental Science of the Biosphere" and included a fantastic symposium on fire called "Ecological Fire Management" featuring ten excellent talks. Speakers included the recipient of the SEQFBC Student Research Grant, Diana Virkki, who did a great job sharing with people the importance of her work on the relationship between fire mosaics and reptiles. Other topics included faunal refuges in fire prone landscapes, planned burning, conserving biodiversity in fire-prone landscapes, fauna and fire regimes, fire and invertebrates, fire management and fire intervals. There was a noticeable increase in research on fire and fauna, especially out of Victoria following the tragic Black Saturday fires. The symposium was finished with a lively panel discussion around several fire topics, including the Victorian 5% hazard reduction burning target, fire and climate change, community engagement and fuel estimates.

The fire-related talks were not restricted to the previously mentioned symposium, on Thursday another symposium "Landscape Disturbances and Consequences" included five fire talks on topics such as long term monitoring in the Australia Alps, guidelines for ecological burning, fire risk analysis, refuges in fire and fire in the desert. There was also an excellent symposium on "Linking Indigenous and Western Ecology" that featured many inspiring Traditional Owner projects that utilise fire, including Oliver Costello who manages the "Fire Sticks" project for the NSW Nature Conservation Council. Oliver will be speaking at our May 2013 Forum.

There were also some excellent talks on NRM, long-term research, planning for linear vegetation, the biodiversity impacts of agricultural land use and the genetics of flammability (very interesting).

I was fortunate enough to meet with many of Australia's best fire

ecologists and fire managers, including: Alan York (Melbourne University); Gordon Friend (Victorian Department of Sustainability and the Environment); Grant Wardell-Johnson (Curtin University); David McKenna (SA Department of Environment and Natural Resources); Don Driscoll (ANU); David Keith (University of NSW and the NSW Office of Environment and Heritage); Luke Collins (University of Wollongong); Oliver Costello (Firesticks Project for NSW NCC); Liz Tasker (NSW Office of Environment and Heritage) and Leaside Felderhof (Firescape Science). You can see from the list above there wasn't much time for eating morning teas or lunch! Interestingly, there was a noticeable increase in attendance by land managers and consultants and presentations on NRM and land management, which was also very good to see. A number of these people have also agreed to come and speak at one of the SEQFBC Forums in the future!

There was a meeting of the ESA Fire Ecology Research Chapter on Wednesday evening that provided a great opportunity to talk more with people about what they are doing and issues relevant to the SEQFBC, including Bell-miner Associated Dieback. I also presented a poster on the SEQ Roadside Burning Project on Tuesday night that was very well received and got a lot of attention, especially from land managers and consultants.

In summary, I found that applied ecological research and learning's or outcomes from environmental, restoration and fire projects are welcomed and that ESA provides an opportunity to reach a different audience. I think this is relevant to the SEQFBC when thinking about sharing the outcomes of projects and I will be sure to inform people of future conference locations (2013 will be held in New Zealand, which means I won't be going). I also found it a terrific chance to speak with some of Australia's best fire ecologists and land managers and this one-to-one time is really invaluable. It meant the week was very rushed and full, but I felt it was very worthwhile. It also provided me with many new contacts and people to potentially work with around Australia.

## City of the Gold Coast's Bushfire Management and Monitoring Programs.

By Tony Adkins, Gold Coast City Council.

Fire is a powerful and enduring ecological process that profoundly influences Australian landscapes.

The City of the Gold Coast (CGC) endeavours to minimise bushfire risk on its owned/managed lands through the implementation of bushfire management plans and continued development of the bushfire monitoring program.

The monitoring program will document hazard reduction and ecological outcomes of the burn program and guide scientifically-based management decisions in an adaptive management framework. Monitoring results will be used to assess if management objectives are being met and the program is on track, or conversely, gather information about what may not be working well so that appropriate changes can be made.

A review of established monitoring programs and protocols is being undertaken. These include the SEQFBC (2002) Fire

& Biodiversity Monitoring Manual, The State of Victoria - Department of Sustainability and Environment's (2008) Flora Monitoring Protocols for Planned Burning: a User's Guide, and the FFI (FEAT/FIREMON) monitoring tool developed by the U.S. Forest Service and U.S. National Parks Service.

Results of the review will influence further refinement of CGC's bushfire monitoring protocols. It's envisioned that three separate protocols will be utilised depending on burn context and information needs. These protocols will focus on: 1) fuel load/hazard assessments, 2) efficient assessment of vegetation community composition and structure, and 3) detailed assessment of vegetation community composition and structure for high value conservation areas. These protocols, and a decision support framework that provides guidance for their use, will eventually be packaged into a CGC Bushfire Monitoring Manual.

Tony Adkins, Bushfire & Biodiversity Conservation Officer, Gold Coast City Council & SEQFBC Research Working Group Member.

The South East Queensland Fire and Biodiversity Consortium gratefully acknowledges financial support or significant in kind support from the following organisations:



Opinions expressed by contributors to the SEQ Fire and Biodiversity Consortium newsletter are not necessarily those of the SEQ Fire and Biodiversity Consortium nor any of the supporting agencies.