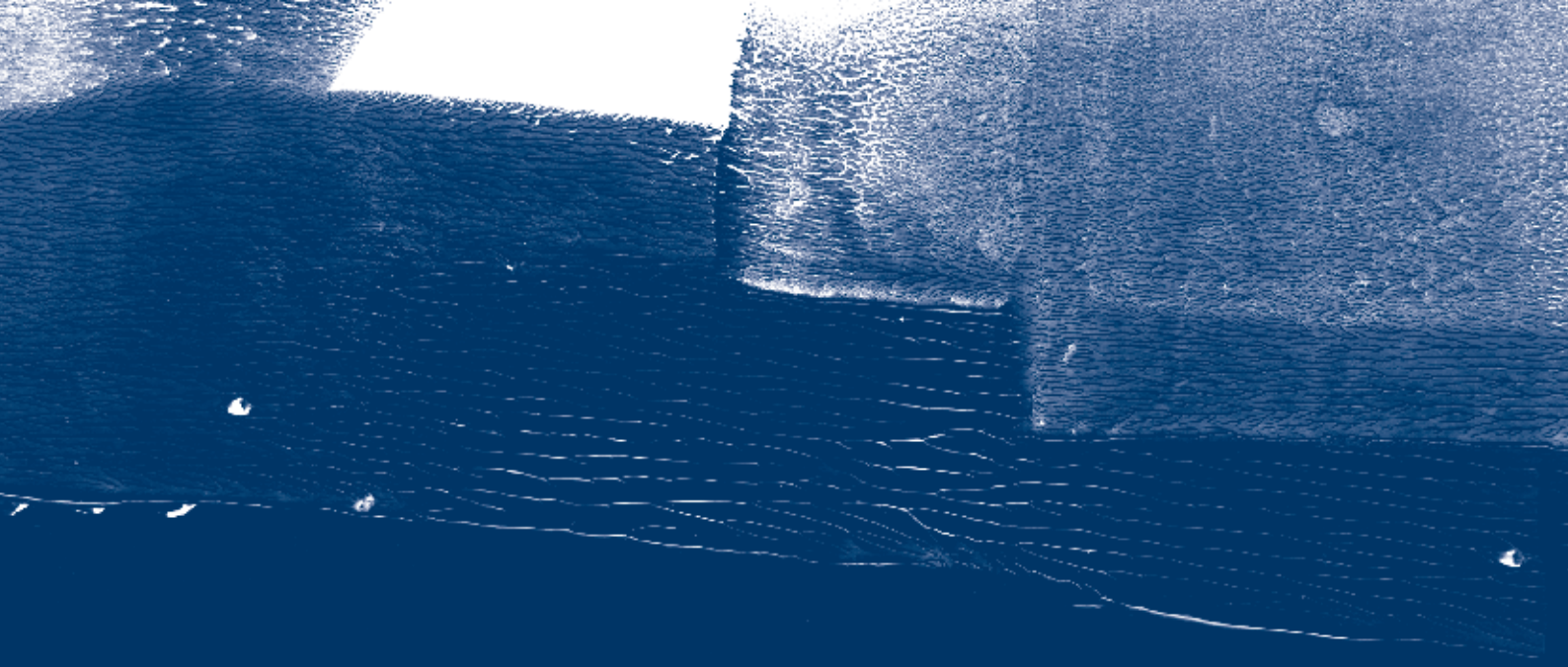

ANNUAL REPORT 2009

- Food Safety Management
- Professional Development
- Disease Control
- Environment Management
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- Environmental Health Journal

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Annual Report 2008-2009

Environmental Health Australia

ABN 58 000 031 998

CONTENTS

Board of Directors

Environmental Health Australia

National President

Dr Jim Smith LFEHA

Jim has been a public health management consultant for twenty years and he has provided services to government, industry and community sectors in the areas of public and environmental health strategic planning and facilitation, policy development, and food safety risk management. Jim's professional background includes: nursing; local and state environmental health service delivery; executive management; university teaching and research; and business.

Jim's research interests are intergovernmental relations in public health, the history and development of the local government public and environmental health role, environmental health education and practice, and food safety policy. Jim has been an active member of EHA for many years and currently chairs the Board's Environmental Health Course Advisory Committee, and is the Editor of *Environmental Health*. In the past he has been President of the Victorian Branch (1998-2002), a Board Director (1999 - 2003), National Vice-President (2000 - 2003), and the Board's Policy and Governance Adviser (2003-06).

Senior Vice President (to Nov 2008)

Joseph Zappavigna MEHA

Joseph Zappavigna completed his Bachelor of Science (Environmental Health) at Curtin University WA in 1992 and in 1997 his Graduate Diploma (Environmental Science) at Murdoch University WA. In his graduating year he was awarded, jointly with a current colleague, the 1992 Harold Salter Award for students showing the highest level of professional potential during the study of environmental health.

Joseph is in his fourteenth year as an Environmental Health Practitioner working in Local Government in Western Australia (City of Perth, Victoria Park and currently at Fremantle).

Between 1992 and 1994 Joseph progressed his EHA membership from Student, to Associate and then to Member status. He has consistently been elected to WA/NT Branch Council since 1998 and during his time on Branch Council has been involved in various committees, including legislation review and food safety. Particularly Joseph's interests are in environmental management and he continues to coordinate the WA/NT Branch Environmental Management Special Interest Group.

In June 2004 Joseph was elected as a Director on the Board of EHA to participate and contribute with the CEO and other Directors in the business and strategic plans of EHA. Joseph urges those Environmental Health Practitioners considering membership of EHA to act now and make their contribution to the worthwhile profession of environmental health.

(since Nov 2008)

Darren Ponton MEHA

Darren Ponton joined as a student member of EHA in 1984, and progressed through Associate to full Membership. He became a State Councillor for a period in the early 1990s, returning in 2004, becoming Branch Vice President in 2005 and President of the WA/NT Branch at its Branch General Meeting in 2006. In November 2008, he was successfully nominated by the WA/NT Branch to the EHA Board as Director, whereupon he stepped down as Branch President and accepted Vice Presidency of the WA/NT Branch.

Darren is currently the Principal Environmental Health Officer at the City of Canning, a challenging region with two industrial areas containing some of the state's largest food manufacturers, as well as a mixed residential population and the environmentally sensitive Canning River Regional Park. He has held this position held since July 2007. Prior to this, he was Environmental Health Co-ordinator at the City of Perth, for twelve of the twenty years he worked at City of Perth. He has been Chairperson of the National FoodSafe® Committee, and former Food Safety Special Interest Group Convenor in WA.

As well as a Degree in Environmental Health, Darren's qualifications include an MBA in Health Services Administration, and Graduate Diplomas in Public Health, Health Administration and Public Sector Management. He is currently completing a Masters in Urban and Regional Planning at Curtin University.

Board of Directors

Environmental Health Australia

Junior Vice President

Fleur Cousins FEHA

Fleur holds a Bachelor of Applied Science (Environmental Health) and Diploma of Management and has been working in the area of Environmental Health for 13 years within local government and is currently employed by Knox City Council in the role of Coordinator Health Services.

Fleur has been actively involved with the Victorian Branch of EHA since 1997 and has held the positions of Associate State Councillor, State Councillor, State Conference committee member and secretary of the Food Safety Special Interest Group, Branch President from August 2003 to August 2005 and she joined the Board of Directors in August 2003.

During her time on the Board, Fleur has held the position of Chair of the Finance Management Committee, Convener of the 2004 National Conference held in Melbourne, Co-convenor of the 2006 National Conference held in Sydney and National Vice President.

Fleur has a real passion for the Environmental Health profession and is committed to enhancing the role of EHA to support Environmental Health Practitioners.

Professor Nancy Cromar MEHA

Professor Nancy Cromar (BSc Hons, PhD, Napier University, Edinburgh) is currently Head of Department and Postgraduate Academic Coordinator in the Department of Environmental Health at Flinders University. Her research focus is on health-related aspects of water quality and risk assessment and management of microbial water quality related issues. Prof. Cromar is the senior editor of the popular Oxford University Press text *Environmental Health in Australia and New Zealand*. She has been Convenor of the *National Short Courses in Environmental Health* since 1996 and an expert member of the Public & Environmental Health Council of SA since 1995. She also chairs the Advisory Board for EHA journal *Environmental Health*.

Prof. Cromar has received an EHA (SA) award for Outstanding Individual Environmental Health Professional of the Year. She currently chairs the International Faculty Forum, which is linked to the International Federation of Environmental Health (IFEH).

Stephen Davidson FEHA

Stephen is the Proprietor of *Food Safety Management Solutions* and has over twenty six (26) years experience in both Government and Private Sectors. He has been an active member of Environmental Health Australia (formerly AIEH) for many years, holding the positions of NSW Vice President, Board Director and National President 2003-2004. He has also held the positions of Director of the International Federation of Environmental Health (IFEH) and member of Restaurant & Catering NSW (Gold Licence Accreditation) Board. In 2006 Stephen was recognised for his dedication and service to EHA and the profession of Environmental Health, with advancement to Fellow membership status.

Stephen's qualifications include Bachelor of Applied Science (Environmental Health), Diploma in Applied Science (Health & Building Surveying), Certificate IV Training & Workplace Assessment and a Diploma in Horticulture. He joined EHA as a member in 1993.

Stephen's background includes Environmental Health Management, International Food Safety Auditing, Training, Lecturing, Horticulture and Business Management. His experience includes food safety auditing throughout Asia Pacific, food safety management at the Sydney 2000 Olympic and Paralympic Games, Sydney Royal Easter Show, Rugby World Cup and major sporting and entertainment activities at Sydney Olympic Park. Stephen has advised State and Federal Government bodies on environmental health matters and represented the profession and EHA on many key committees and working parties.

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Board of Directors

Environmental Health Australia

Ron Fry MEHA

Ron has been an Environmental Health Officer since 1986 and is employed by the Hobart City Council. He joined EHA in 1987 and was elected to the Tasmanian Branch Council in 2003. He holds a Diploma of Applied Science (Environmental Health) awarded by the Institute of TAFE Tasmania in 1996 and a Bachelor of Adult Vocation and Education from the University of Tasmania in 1997.

Ron has gained experience in the profession working with other councils in the greater Hobart area, the North West coast of Tasmania and for a short period with the Department of Health and Human Services in the area of food safety. In 1995 he joined the Institute of TAFE Tasmania where he taught a number of subjects in the current Advanced Diploma of Environmental Health course for eight years. During this time he was awarded a Bachelor of Adult Vocation and Education from the University of Tasmania. He also delivers food handler training to food business operators for the Hobart City Council.

Ron is Senior Vice President of the Tasmanian Branch of EHA.

Dr Thomas Tenkate FEHA

Dr Thomas Tenkate, senior lecturer in environmental health at the QUT School of Public Health since 2003, the Postgraduate Course Coordinator for the public health programs and subject area coordinator for environmental health. Thomas holds a Dr PH in environmental health (specializing in occupational hygiene) from the University of Alabama, Birmingham, USA (1998) and has worked in the environmental health field since 1990, predominantly for Queensland Health (10 years). He is also actively involved with many professional organisations, particularly Environmental Health Australia, holding a number of elected and committee positions at both state and national level.

Thomas is on the advisory board of the *Environmental Health* Journal and is the Book Review Editor. His general areas of interest are: environmental and occupational health and hygiene, human health risks of climate change, food safety, human health risk assessment, communicable diseases, environmental epidemiology, and disaster management. A continuing key research interest is human exposure and health risks from UV radiation.

(to Nov 2008)

Eric Johnson MEHA

Eric qualified as an Environmental Health Officer in 1981 and worked for several years with the Hobart City Council before moving to the State Department of Health and Human Services (DHHS). He joined EHA in the early 80s and is a current Tasmanian Branch Councillor.

Eric's duties with DHHS are centered on formulating and implementing State food policy and legislation and managing the small food safety team. He has significant day-to-day contact with Tasmanian Local Government EHOs on all matters concerning food safety and also represents the State on several national food safety forums including the Implementation Sub Committee.

Board of Directors

Environmental Health Australia

(from Nov 2008 to March 2009)

Jeff McNamara LFEHA

Jeff graduated in 1979 and embarked on a career in local government environmental health, first in suburban Sydney, then in regional Tasmania. His career has spanned operational roles in the day-to-day functions of an EHO, to middle level management, then to senior management as a director of a multi-disciplinary department.

He holds academic qualifications in environmental health, building surveying, human resources, technology management, corporate governance, and business and has actively represented the discipline of environmental health at the local, state and national level throughout his career, being made a Life Fellow in 2005.

His interest in life-long learning has led him to embark on a new career teaching in the tertiary education sector (University of Tasmania and TAFE Tasmania) and corporate governance (Director of a waste management business).

(from Nov 2008)

Kate Oliver AEHA

Kate's qualifications include a Bachelor of Laws and Legal Practice (Hons) and a Bachelor of Behavioural Science. She currently works as a lawyer with Norman Waterhouse in Adelaide, a multi-service law firm that specialises in local government. Kate's practice involves the provision of advice to local government clients on a range of matters including the following:

- governance related issues, including meeting procedures, delegations and authorisations; and
- regulatory matters, including the issuing of notices and the undertaking of prosecution under various pieces of legislation administered by local government.

A large part of Kate's practice consists of advising and representing local government in relation to public and environmental health matters and food matters. She has established herself as a leading practitioner in the environmental health field and is actively involved in the provision of training to Environmental Health Officers across South Australia and has a strong interest in the establishment of best practice initiatives for Environmental Health Officers and local government generally. In particular, Kate has had extensive involvement in the establishment of template instruments of delegation and authorisation for Environmental Health Officers and other officers of local government to assist local government in ensuring the effective and lawful exercise of powers by those officers.

Branch Presidents

Environmental Health Australia

Executive Committee

Jim Smith (Chair)
Joseph Zappavigna
Fleur Cousins
Stephen Davidson

Audit Committee

Stephen Davidson (Chair)
Nancy Cromar
Eric Johnson
Joseph Zappavigna

Workforce and Professional Development & Certification Committee

Jim Smith (Chair)
Nancy Cromar
Thomas Tenkate
Eric Johnson
Bruce Morton

Environmental Health Course Accreditation Sub-Committee

Jim Smith (Chair)
Bruce Morton
Ron Fry
Owen Ashby
Waikay Lau
Thomas Tenkate
Nancy Cromar

Human Resource Working Group

Fleur Cousins (Chair)
Jim Smith
Joseph Zappavigna
Mark Dwyer
Bernadet Ferraro

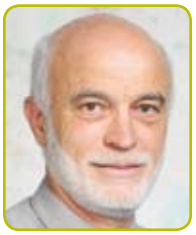
NSW/ACT Branch President

Shannon McKiernan MEHA

Shannon McKiernan has held the position of Coordinator of Environmental Health Practitioners within Gosford City Council since 2006. He has a Bachelor of Science in Australian Environmental Studies from Griffith University, Queensland, and a Bachelor of Health Science – Environmental Health from the Queensland University of Technology, Brisbane. Shannon joined EHA as a student member in 1998 and has continued to be actively involved.

Shannon has held a range of positions at Local Government level including responsibility for conducting projects such as Brisbane City Council's Healthy Brisbane Strategy and Gold Coast City Council's Community Health Plan. He has also worked extensively with State Government in Queensland, most notably his involvement in the implementation of a Health and Social Impact Assessment for the South East Queensland Regional Plan with the Statewide Health Services Planning Unit of Queensland Health.

Shannon has also lectured in the area of social planning for the School of Social Sciences at the University of Queensland prior to moving to Gosford City Council.



Queensland Branch President

Virgil Kelk FEHA

Virgil commenced work with the Queensland Department of Health as a cadet health inspector in January 1971. He has worked with Queensland Health since that time and holds the position of Director of Environmental Health for the Darling Downs Population Health Unit based in Toowoomba. Virgil has responsibility for a wide range of environmental health issues including drugs and poisons, foods, tobacco, communicable diseases and environmental toxicology. While based in Toowoomba, Virgil has responsibility for a mostly rural and remote region that is more than half the size of New South Wales or twice the size of Victoria.

Virgil has a significant interest in food safety, water quality and disaster management. He has been involved in the delivery of the EHA Disaster Management for Public Health Course since its inception in 1997 and was awarded an Excellence Award by EHA (Queensland Branch) for his work in disaster management in 2005. Virgil became a Fellow of EHA in 2002 and has been Branch President for almost four years.

Branch Presidents

Environmental Health Australia

South Australian Branch President

Ian Hawkins MEHA

Ian is a qualified Environmental Health Officer with broad experience in Environmental Health within Local Government in South Australia and the United Kingdom. His substantive position is Manager Environmental Health and General Inspectorate at the City of Port Adelaide Enfield.

In 2006 Ian nominated for SA Branch President, a challenging and rewarding opportunity to participate in the development of best practice Environmental Health in South Australia. He is particularly keen to see Environmental Health Australia develop tools and resources for Environmental Health Professionals to assist the fulfilment of changing roles; raise the standard of practice and recognition of our profession and plan for the future of public and environmental health in our communities.

Tasmanian Branch President

Mark Dwyer MEHA

Mark commenced his public health career in 1978 as a cadet health inspector with the Hobart City Council. Thirty years later he is now the Manager Environmental Health at the same council and continues to find the job exciting, challenging and stimulating. The transformation of local government in Tasmania from a sleeping dinosaur into a vibrant and competitive business over this period has certainly fuelled his enthusiasm to remain an active public health professional at 'the coalface'.

Mark's other professional interests include presiding over EHA Branch activities in Tasmania. Mark believes that there is much to accomplish and achieve for the members and EHOs alike, and it is very gratifying to be working on Branch Council with such a keen, motivated and dedicated group of people who share the same goal. His final career-orientated academic challenge is to study and qualify for the new Bachelor of Environmental Health that will soon be offered at the University of Tasmania. Mark's ambitions at this stage of his career are to maintain good health, a trim waistline, a sense of humour and the current level of enthusiasm for his career and EHA.

Victorian Branch President (to Aug 2008)

Geoff Fraser MEHA

Geoff has 22 years local government environmental health experience across rural and metropolitan Councils, including a role as Director of Planning and Environment during Council amalgamations.

His current role is Business Unit Leader Environmental Health for the diverse municipality of Greater Dandenong and during 7 years has overseen the prosecution of some 200 cases under the Victorian Food and Health Acts and developed a team focused on regulatory compliance. Greater Dandenong has permitted great freedom in developing a team of professionals who are widely respected as having some of Australia's best Environmental Health knowledge.

In addition to the Diploma of Environmental Health, Geoff holds a Bachelor of Business Management and assists EHOs to consider "the business of food". He is always seeking development opportunities for EHOs.

Branch Presidents

Environmental Health Australia

Victorian Branch President (since Aug 2008)

Dr Jim Smith LFEHA

Jim has been a public health management consultant for twenty years and he has provided services to government, industry and community sectors in the areas of public and environmental health strategic planning and facilitation, policy development, and food safety risk management. Jim's professional background includes: nursing; local and state environmental health service delivery; executive management; university teaching and research; and business.

Jim's research interests are intergovernmental relations in public health, the history and development of the local government public and environmental health role, environmental health education and practice, and food safety policy. Jim has been an active member of EHA for many years and currently chairs the Board's Environmental Health Course Advisory Committee, and is the Editor of *Environmental Health*. In the past he has been President of the Victorian Branch (1998-2002), a Board Director (1999-2003), National Vice-President (2000-2003), the Board's Policy and Governance Adviser (2003-2006), and National President.

Western Australian /Northern Territory Branch President (to Nov 2008)

Darren Ponton MEHA

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Darren has held the position of Principal Environmental Health Officer at the City of Canning since July 2007. This is a challenging region with two industrial areas containing some of the state's largest food manufacturers, as well as a mixed residential population and the environmentally sensitive Canning River Regional Park. Prior to this, he was Environmental Health Co-ordinator at the City of Perth, for twelve of the twenty years at City of Perth. He has been Chairperson of the National FoodSafe® Committee, and former Food Safety Special Interest Group Convenor in WA.

As well as a Degree in Environmental Health, Darren's qualifications include an MBA in Health Services Administration, and Graduate Diplomas in Public Health, Health Administration and Public Sector Management. He is currently completing a Masters in Urban and Regional Planning at Curtin University.

Western Australian /Northern Territory Branch President (since Nov 2008)

Joseph Zappavigna MEHA

Joseph Zappavigna completed his Bachelor of Science (Environmental Health) at Curtin University WA in 1992 and in 1997 his Graduate Diploma (Environmental Science) at Murdoch University WA. In his graduating year he was awarded, jointly with a current colleague, the 1992 Harold Salter Award for students showing the highest level of professional potential during the study of environmental health.

Joseph is in his fourteenth year as an Environmental Health Practitioner working in Local Government in Western Australia (City of Perth, Victoria Park and currently at Fremantle).

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In June 2004 Joseph was elected Director on the Board of EHA and participated and contributed alongside the CEO and other Directors in the business and strategic plans of EHA. In November 2008 he stood down from the Board to take up Presidency of the WA/NT Branch and urges those Environmental Health Practitioners considering membership of EHA to act now and make their contribution to the worthwhile profession of environmental health.

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Peter Taylor, General Manager *Adams Pest Control Pty Ltd*

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Management and Staff

Environmental Health Australia

Chief Executive Officer and Company Secretary

Waikay Lau MEHA

Prior to joining EHA Waikay was recruited by Dow Jones to manage the circulation marketing of The Asian Wall Street Journal in Asia-Pacific. Based in Hong Kong his role included the development of regional and country-specific marketing programs as well as establishing partnership agreements with multi-national corporations. Waikay advanced quickly to become The Asian Wall Street Journal's Country Manager for Taiwan where he established and headed the country's business operations. Soon after he was promoted to Regional Circulation Manager overseeing the sales and marketing of the business daily in Greater China; China, Hong Kong and Taiwan. In 1999 Waikay joined WSJ.com (Wall Street Journal Online) as the Marketing & Circulation Director for the Asia-Pacific region, reporting directly to the Dow Jones headquarters in New York. His responsibility included brand building, marketing, promotions, and product sales in over 13 Asia-Pacific countries.

In 2001 Waikay and his family returned to Australia for a quieter life to raise their children.

He is very much involved with his daughter's primary school and is the President of the P&C Committee. Waikay has a BSc Environmental Studies from Griffith University, an MBA in International Management and Cert IV Training and Assessment and enjoys his volunteer work with WWF and the Heart Foundation.

National Finance Officer

Bernadet Ferraro

Executive Officers

Margaret Hind, New South Wales/Australian Capital Territory
Jo Rolls, Queensland
Mina Labaz, South Australia
Bernadet Ferraro, Victoria and Tasmania
Valarie Filevski, Western Australia/Northern Territory

Management and Staff

Environmental Health Australia

Environmental Health **Journal**

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Mr Waikay Lau, CEO, Environmental Health Australia
Dr Jim Smith, Editor-in-Chief
Dr Thomas Tenkate, Director, Environmental Health Australia
Mr Joseph Zappavigna, Vice President, Environmental Health Australia

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Dr Kirstin Ross, Flinders University
Dr Jim Smith, Editor-in-Chief

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Fax: 08 9440 6299
Email: wa@eh.org.au

For a current listing of EHA Directors, management and staff, and current contact details please refer to www.eh.org.au

Corporate Reports

Environmental Health Australia National President

This year received a great impetus coming off the International Congress in May 2008. A major project was undertaken which examined the organisational risks associated with the employment of environmental health professionals in local government. The project was funded by Queensland Health and a consultant was engaged to undertake the project. This project was a particularly important one within the context of local government environmental health workforce and the concerns with shortages and qualifications of environmental staff. The project is important given the trend in legislation around Australia to not specifically recognise environmental health officers but to instead refer to authorised officers.

The Environmental Health Course Accreditation Committee continued its excellent work in reviewing applications for accreditation received from a number of universities. A special moment this year was the accreditation of the first Environmental Health Officer program for Indigenous Australians. It is hoped that the Federal Government will continue to fund Batchelor so it can continue to educate and train Indigenous EHOs who are critical for improvement in environmental health standards in our Indigenous communities.

The Journal published four issues again this year and it was encouraging to see that contributions were received from practitioners in Australia and from our colleagues in India, New Zealand, Indonesia and a number of African countries.

After conducting research into the financial sustainability of the organisation, a report and recommendations were put to the Board to move towards a new business model that would provide the best option for financial sustainability. The essential features of the proposed model are the increase in independence of branches in a financial and membership service sense and, at the same time, freeing the Board from the high level of administrative responsibilities around membership and finances so it can concentrate on developing national initiatives in workforce and professional development. The process to move toward this new model has commenced and members will be advised in the very new future about the details and advantages to moving to the model.

This last year has been a demanding one as there are a number of national environmental health issues and actions requiring the attention of EHA. There is no doubt that at the national level, given the increasing involvement of the Federal Government, it will continue to demand more and more attention of the EHA Board and Branches. With the move to a new business model it is an appropriate time for me to step down and allow a new team to take EHA forward. I take this opportunity to thank my colleagues on the Board for their support, and our CEO Waikay Lau, branches and all the staff for their efforts over the last 12 months.

Jim Smith Dr PH LFEHA
NATIONAL PRESIDENT

Corporate Reports

Environmental Health Australia Chief Executive Officer

In 2008-2009 EHA continued to achieve its mission of strategic importance in bringing the world's best practice in environmental health to the forefront.

EHA continues to be the independent Australian accrediting body in tertiary education for environmental health degree courses. With more than 10 universities in Australia now providing accredited degree courses in Environmental Health, our aim is to continue to support our education partners and to promote the development of environmental health education.

EHA as a Registered Training Organization (RTO) held its inaugural meeting in December 2008 to examine ways in combining our three independent emergency management courses and workshops (Victoria, SA and Qld). The aim is to nationalize this popular workshop into recognized units of competences for all States of Australia. In 2008 the Victorian Branch also received a grant from the Victorian Department of Human Services to develop and implement the registered training course, Food Act Legal Management. Our aim is to continue to improve upon the delivery of all our workshops and seminars by restructuring these courses into registered units of competency.

The status of the Australian environmental health workforce has been a focal point for many state jurisdictions. The Victorian Department of Human Services with the support of enHealth commissioned a study into the roles and responsibilities of EHOs in rural and urban Australia while EHA jointly with Queensland Health undertook a comprehensive study into the organizational risk of employing under-qualified or unqualified EHOs. An organizational risk management resource guide was developed for local government on the assessment of organisational risks associated with the selection of personnel to undertake the range of required local government environmental health services.

Internally, a major milestone has been achieved with EHA completing a comprehensive HR review of its staff.

The EHA National Conference will be held from November 11 - 13, 2009 in Hobart and once again, it promises to be a spectacular event with a line up of top class speakers.

Finally, the beginning of the 2008-2009 financial year coincided with the pinnacle of the 2008-2009 global financial crisis. The effects of this global financial crisis played a significant role in our business operations, dramatically affecting our sponsorship, membership and professional development income streams. Coupled with previously earmarked growth and development of the organisation and the long overdue review of the organisation's HR requirements, the result was a net loss of $283,897. Despite this loss, our focus on membership benefits and services remains paramount, and in this very challenging environment, EHA will continue to evolve and adapt to meet all challenges head on.

Waikay Lau MEHA

CHIEF EXECUTIVE OFFICER & COMPANY SECRETARY

Corporate Reports

Environmental Health Australia Audit Committee

The Audit Committee is an Advisory Committee of the Board of Directors that assists the Directors and EHA Management in fulfilling their responsibilities in relation to accounting and reporting practices, management of risk, maintenance of internal controls, operation of good governance practices and facilitation of sound organisational ethics.

The Committee does not have any management functions or independent authority. The committee operates independently of management and is therefore objective in relation to EHA operations. The committee provides recommendations to the Board and/or the Chief Executive Officer as necessary.

During the reporting period the audit committee continued its review of the business risk management framework in place across EHA, including, but not limited to:

- management of operational events that could prevent the business from achieving its objectives or realising opportunities.
- compliance with legal and regulatory obligations.
- accuracy of financial records and reporting.

The audit committee is satisfied that EHA is effectively monitoring and acting upon its business risks (including compliance and internal controls) to ensure:

- the effective and efficient operation of all significant business processes
- current and emerging key risks are identified and effectively managed; and
- identified breaches of legal compliance and internal control matters are being reported and acted upon (through the company secretary and ultimately to the audit committee).

The audit committee is satisfied with the management of key operational risks facing the business, including the effectiveness of internal controls. The audit committee will continue to review and monitor the implementation of key recommendations and management action plans.

Stephen Davidson FEHA

AUDIT COMMITTEE CHAIR

Corporate Reports

Environmental Health Australia *Environmental Health* Journal Report

Environmental Health has again successfully published four issues during the year. Submissions of manuscripts to the Journal have been consistent, with continuing contributions from international authors from countries including India, The Congo, and Indonesia. A wide range of environmental health topics were covered in each issue with a high proportion of papers on environmental pollution, education and training and sustainability.

Investigations have been undertaken to determine the most cost effective way of producing the Journal as a truly on-line journal and this process is continuing.

A searchable complete electronic copy of all journal issues and papers was developed and forwarded to all EHA members and subscribers this year.

Once again it must be acknowledged that the publication of *Environmental Health* would not be possible without the support provided by our peer reviewers. Their assistance and recommendations have been greatly appreciated. A very special thank you to Heather Gardner (Editor) and to Thomas Tenkate (Book Editor) who have been extremely supportive in ensuring the quality of the Journal.

Dr Jim Smith LFEHA
EDITOR-IN-CHIEF
ENVIRONMENTAL HEALTH JOURNAL

Corporate Reports

EHA Environmental Health Course Accreditation Sub-Committee

The role of the Course Accreditation Subcommittee is, on behalf of the Board, to receive and assess applications for accreditation of university undergraduate and postgraduate courses which aim to provide training to practice as Environmental Health Officers. Applications for accreditation are assessed against EHA's *Environmental Health Course Accreditation Policy*.

As can be seen below, the Committee undertook the following accreditation assessments during 2008-09.

Date of Accreditation	Applicant	Course	Outcome
October 2008	Flinders University	Graduate Diploma in Environmental Health Practice	Accredited
November 2008	University of the Sunshine Coast	Bachelor of Science (Environment & Health)	Conditional accreditation
April 2009	LaTrobe University	Graduate Diploma in Environmental Health	Conditional accreditation
June 2009	Bachelor Institute of Indigenous Tertiary Education	Bachelor of Applied Science (Environmental Health)	Reaccreditation

Courses are accredited for a maximum time period of 5 years and on expiry of this, the Institutions are to apply for re-accreditation of the course. During their accreditation period, institutions are also required to contact EHA when they are planning substantial changes to a course. The course changes will then be assessed in-line with the Course Accreditation Policy. One outcome of the accreditation process for a new course is the awarding of conditional accreditation. Courses receiving conditional accreditation are required to address the issues raised by EHA during the accreditation process, and once these issues have been appropriately addressed, full accreditation is awarded. Once the above courses finalise their accreditation, a total of 9 undergraduate courses and 4 postgraduate courses will be accredited by EHA, with courses in each State and the Northern Territory.

As the Course Accreditation Policy was originally developed in 2004, upcoming work for the accreditation subcommittee (in consultation with the Environmental Health Educators Forum and key stakeholders) is a substantial review of the graduate attributes and abilities and the environmental health literacies to ensure that they are appropriately addressing current and future workforce and practice issues.

Through the Course Accreditation Subcommittee, EHA is also considering the development of a process for accreditation/recognition of the environmental health qualifications of individuals, particularly for practitioners moving to Australia from other countries. This will be an upcoming project for EHA in consultation with key stakeholders and will consider the outcomes of current workforce projects.

I would like to extend a sincere thank you to the members of the Committee; Owen Ashby, Bruce Morton, Ron Fry, Thomas Tenkate, Nancy Cromar, and Waikay Lau.

Dr Jim Smith LFEHA

CHAIR EHA ENVIRONMENTAL HEALTH COURSE ACCREDITATION SUB-COMMITTEE

Corporate Reports

IFEH Asia and Pacific Regional Group

As Asia and Pacific Regional Group Chair of the International Federation of Environmental Health (IFEH) and as a Board Member of IFEH, key activities undertaken this year have been: I attended the IFEH Council Meeting hosted by the Singapore Society of Environmental Health on 18 and 19 July 2009; am engaged with the Council and IFEH Board of Directors (BOD) on a Climate Change and Health policy; assisting with the Sustainable Indicator Project; promoting environmental Health in the Asia Pacific Region and I presented a paper at the Centre for Livable Cities in the Ministry of Environment, Singapore, to promote IFEH. I will hopefully attend the next IFEH BOD meeting in November 2009.

As Chair of the Asia and Pacific Regional Group, I have proposed to IFEH Council that I investigate hosting the IFEH World Congress in Hong Kong in 2014. EHA and other partners will benefit financially from this approach and there was considerable support for Hong Kong as a venue from IFEH Council members. I will be meeting with the Hong Kong group to discuss this proposal further.

We have had good progress in Indonesia when myself and John Gerizim (Asia and Pacific Secretary) from the Singapore Society of Environmental Health (SSEH) were invited as keynote speakers in a Workshop in Jakarta in November 2008 and to the inaugural International Environmental Health Seminar hosted by the newly formed Indonesian Environmental Health Specialists Association (IEHSA) in Surabaya in March 2009.

IEHSA have now joined the IFEH as a full country member and the University of Indonesia is now an associate academic member. There are 15 other Universities teaching Environmental Health across Indonesia that may join, with Airlangga University from Surabaya also joining as a member recently.

I met with Malaysian environmental health members in July and March this year in Kuala Lumpur, while on other University business to Malaysia. Based on the increased activities in Indonesia, the Asia and Pacific Regional Group/IFEH Council has donated AUD $1200 to subsidise IEHSA and SCEH to cover their promotional costs to date. Future activities include the IEHSA hosting its third International meeting in Bogor, Jakarta 9, 10 and 11 October 2009, which we are also attending as keynote speakers.

John Gerizim and I are planning to travel to India, Sri Lanka and Hong Kong in November this year to promote our Asia and Pacific Regional Group and IFEH Activities. Both Sri Lanka and Hong Kong are members while India is not.

I've also made contact with EHOs in Thailand, Vietnam and Manilla, with this work being continued by John Gerizim, of SSEH. Environmental Health is quite strong across the Region particularly due to intense interest in Climate Change issues, so now is the best time to promote our profession and support local EHOs.

We are encouraging as many members as possible, especially from developing countries, to attend the IFEH 11th World Congress 2010 in Canada.

Dr Peter J Davey FEHA

CHAIR ASIA AND PACIFIC REGIONAL GROUP IFEH AND BOD IFEH

Financial Statements

Directors' Report

Your directors present their report together with the financial statements of the company for the financial year ended 30th June 2009.

PRINCIPAL ACTIVITIES AND SIGNIFICANT CHANGES IN NATURE OF ACTIVITIES

The principal activities of the company during the financial year were to promote and encourage the interest and practice of environmental health, to disseminate knowledge regarding environmental health and to uphold the status and protect the interest of those persons entitled under law to occupy the position of environmental health officer.

There were no significant changes in the nature of the company's principal activities during the financial year.

OPERATING RESULTS AND REVIEW OF OPERATIONS FOR THE YEAR

Operating revenue for the year amounting to $1,218,250 (2008 $1,294,880) resulted in a surplus/(loss) of ($283,897) (2008 $91,385).

DIVIDENDS

No dividends have been paid or declared since the commencement of the financial period and the directors do not recommend the payment of a dividend in respect of the year ended 30th June 2009.

AFTER BALANCE DAY EVENTS

Subsequent to the end of the financial year, the Directors have assessed the ongoing viability of the company in its current structure. Action has been taken to segregate the organization into a National body with individual state entities. Consequently, all assets and liabilities of the company will be rolled into new entities and the current company is unlikely to continue beyond the next financial year.

FUTURE DEVELOPMENTS

Likely developments in the operations of the company and the expected results of those operations in future financial years have not been included in this report as the inclusion of such information is likely to result in unreasonable prejudice to the company, other than the matters reported in After Balance Day events.

DIRECTORS

The names of the directors in office at any time during or since the end of the year are:

Fleur Cousins, Nancy Cromar, Steve Davidson, Ron Fry, Eric Johnson (resigned 17/11/2008), Jim Smith, Thomas Tenkate, Darren Ponton (appointed 17/11/2008), Jeff McNamara (appointed 17/11/2008, resigned 9/03/2009), Kate Oliver (appointed 17/11/2008) and Joe Zappavigna (resigned 17/11/2008).

Directors have been in office since the start of the 2008 – 2009 financial year unless otherwise stated.

Financial Statements

Directors' Report (continued)

MEETINGS OF DIRECTORS

During the financial year, four (4) meetings of directors were held. Attendances by each director during the year were as follows:

	Number Eligible to Attend	*Number Attended*
Fleur Cousins	4	4
Nancy Cromar	4	2
Steve Davidson	4	3
Ron Fry	4	3
Eric Johnston	1	1
Jim Smith	4	4
Thomas Tenkate	4	4
Joe Zappavigna	1	1
Kate Oliver	3	3
Jeff McNamara	2	2
Darren Ponton	3	3

As the company is limited by guarantee, no shares are issued and hence none are held by directors.

INDEMNIFYING OFFICERS OR AUDITOR

No indemnities have been given or insurance premiums paid, during or since the end of the financial year, for any person who is or has been an officer or auditor of the company.

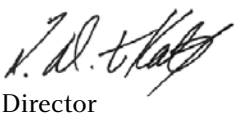
DIRECTORS' BENEFIT

During or since the financial year, other than as annual honorariums as disclosed in the Income Statement, no director of the company has received or become entitled to receive a benefit because of a contract that the director or a firm of which the director is a member or an entity in which the director has a substantial financial interest made with the company or an entity that the company controlled, or a body corporate that was related to the company, when the contract was made or when the director received, or became entitled to receive, the benefit.

AUDITOR'S INDEPENDENCE DECLARATION

The auditor's independence declaration for the year ended 30th June 2009 has been received and can be found on the page following the Directors' Report.

Signed in accordance with a resolution of the Board of Directors:



Director

Dated this Second day of November 2009

Financial Statements

Environmental Health Australia

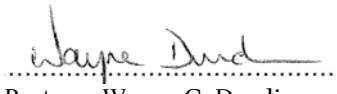
AUDITOR'S INDEPENDENCE DECLARATION UNDER SECTION 307C OF THE CORPORATIONS ACT 2001 TO THE DIRECTORS OF ENVIRONMENTAL HEALTH AUSTRALIA LIMITED

I declare that, to the best of my knowledge and belief, during the year ended 30th June 2008 there have been:

(i) no contraventions of the auditor independence requirements as set out in the *Corporations Act 2001* in relation to the audit; and

(ii) no contraventions of any applicable code of professional conduct in relation to the audit.

E. F. McPHAIL AND PARTNERS



Partner: Wayne C. Durdin

Dated 2nd November 2009

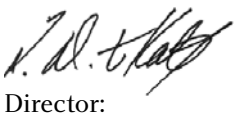
38 Ellingworth Parade, Box Hill, Victoria, 3128

DIRECTORS' DECLARATION

The directors of the company declare that:

1. the financial statements and notes, as set out in this report, are in accordance with the Corporations Act 2001 and
   (a) comply with Accounting Standards; and
   (b) give a true and fair view of the financial position as at 30th June 2009 and of the performance for the year ended on that date of the company;
2. the Chief Executive Officer and National Finance Officer have each declared that:
   (a) the financial records of the company for the financial year have been properly maintained in accordance with Section 286 of the Corporations Act 2001;
   (b) the financial statements and notes for the financial year comply with the Accounting Standards; and
   (c) the financial statements and notes for the financial year give a true and fair view;
3. in the directors' opinion there are reasonable grounds to believe that the company will be able to meet any obligations and liabilities as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.



Director:

Dated this Second day of November 2009

Financial Statements

Environmental Health Australia

INCOME STATEMENT FOR THE YEAR ENDED 30TH JUNE 2009

	Note	2009 $	2008 $
Revenue	2	1,293,918	1,369,654
Staffing costs		(452,117)	(343,585)
Occupancy costs		(34,350)	(35,027)
Administrative costs		(490,174)	(430,778)
Conferences, seminars and workshop costs		(559,377)	(378,012)
Cost of goods sold	3(a)	(34,588)	(80,920)
Depreciation and amortisation		(7,209)	(9,947)
Profit before income tax expense		**(283,897)**	**91,385**
Income tax expense	4	–	–
Net profit		**($283,897)**	**$91,385**

BALANCE SHEET AS AT 30TH JUNE 2009

	Note	2009 $	2008 $
CURRENT ASSETS			
Cash and cash equivalents	6	347,644	397,991
Trade & other receivables	7	100,014	284,414
Inventories	8	24,250	20,578
Other current assets	9	10,059	17,286
TOTAL CURRENT ASSETS		**481,967**	**720,269**
NON-CURRENT ASSETS			
Trade & other receivables		–	–
Financial assets	10	12,623	13,742
Property, plant and equipment	11	81,930	85,914
TOTAL NON-CURRENT ASSETS		**94,553**	**99,656**
TOTAL ASSETS		**576,520**	**819,925**
CURRENT LIABILITIES			
Trade & other payables	12	130,813	135,833
Unearned revenue		180,480	173,650
Provision for redundancy		28,158	–
TOTAL CURRENT LIABILITIES		**339,451**	**309,483**
NON-CURRENT LIABILITIES			
Long-term provisions	13	53,327	41,209
TOTAL NON-CURRENT LIABILITIES		**53,327**	**41,209**
TOTAL LIABILITIES		**392,778**	**350,692**
NET ASSETS		**$183,742**	**$469,233**
EQUITY			
Asset revaluation reserves		40,000	40,000
Retained earnings	14	147,168	431,065
Financial asset revaluation reserve		(3,426)	(1,832)
TOTAL EQUITY		**$183,742**	**$469,233**

The accompanying notes form part of these financial statements.

Financial Statements

Environmental Health Australia

STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 30TH JUNE 2009

	Retained Earnings	Asset Revaluation Reserve	Financial Asset Revaluation Reserve
Balance as at 1st July 2007	$339,680	$40,000	$1,062
Profit attributable to members	91,385	–	–
Revaluation increment	–	–	(2,894)
Balance at 30th June 2008	**431,065**	**40,000**	**(1,832)**
Profit/(loss) attributable to members	(283,897)	–	–
Revaluation increment	–	–	(1,594)
Balance at 30th June 2009	**$147,168**	**$40,000**	**$(3,426)**

CASH FLOW STATEMENT FOR THE YEAR ENDED 30TH JUNE 2009

	Note	2009 $	2008 $
CASH FLOW FROM OPERATING ACTIVITIES			
Receipts from members and others		1,458,240	1,124,750
Interest received		20,078	24,093
Payments to suppliers and employees		(1,525,440)	(1,162,100)
Net cash provided by/(used in) operating activities	**18**	**(47,122)**	**13,257**
CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant & equipment		(3,225)	(5,096)
Net cash provided by/(used in) investing activities		**(3,225)**	**(5,096)**
Net increase/(decrease) in cash held		(50,347)	(18,353)
Cash at beginning of year		397,991	416,344
Cash at end of year	**6**	**$347,644)**	**$397,991**

The accompanying notes form part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

This financial report includes the financial statements and notes of Environmental Health Australia Limited as an individual entity.

1. STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Preparation

The financial report is a general purpose financial report that has been prepared in accordance with Australian Accounting Standards, Australian Accounting Interpretations, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001

Australian Accounting Standards set out accounting policies that the AASB has concluded would result in a financial report containing relevant and reliable information about transactions, events and conditions. Compliance with Australian Accounting Standards ensures that the financial statements and notes also comply with International Financial Reporting Standards. Material accounting policies adopted in the preparation of this financial report are presented below and have been consistently applied unless otherwise stated.

The financial report has been prepared on an accruals basis and is based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities.

(a) Income Tax

The company is not liable for taxation on items of member income and expenditure which are not subject to tax consistent with the doctrine of mutuality.

The company adopts the liability method of tax-effect accounting whereby the income tax expense shown in the statement of financial performance is based on the operating surplus before income tax adjusted for any permanent differences. The adoption of this policy normally results in the existence of a deferred income tax liability or a future income tax benefit.

In addition, future income tax benefits relating to timing differences have not been included in the financial report because realisation of those benefits is not virtually certain. The value of future income tax benefits not brought to account relating to timing differences has not been quantified as the value of the future benefit is dependent upon the proportion of future non-member activities undertaken by the company.

(b) Inventories

Inventories are measured at the lower of cost and net realisable value.

(c) Property, Plant and Equipment

Each class of property, plant and equipment is carried at cost or fair value as indicated less, where applicable, any accumulated depreciation and impairment losses.

The assets carrying amount is written down immediately to its recoverable amount, if the assets carrying amount is greater than its recoverable amount.

Depreciation

The depreciable amount of all fixed assets, but excluding freehold land, is depreciated on a straight line basis over their useful lives to the company commencing from the time the asset is held ready for use.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

The depreciation rates and methods used for each class of depreciable assets are:

Class of Fixed Asset	Depreciation Rate	Depreciation Method
Office Premises	2.5%	Straight Line
Office Equipment	11% to 40%	Diminishing & Straight Line
Leased Office Equipment	33%	Straight Line

(d) Cash & Cash Equivalents

Cash and cash equivalents include cash on hand and at call deposits with banks or financial institutions, and other short-term highly liquid investments with original maturities of three months or less.

(e) Employee Benefits

Provision is made for the company's liability for employee benefits arising from services rendered by employees to balance date. Employee benefits that are expected to be settled within one year have been measured at the amounts expected to be paid when the liability is settled. Employee benefits payable later than one year have been measured at the present value of the estimated future cash outflows to be made for those benefits.

(f) Revenue and Other Income

Revenue from membership fees is recognised progressively over the period to which the membership relates. Membership fees are levied on a financial year basis. The portion of membership fees received that relates to the following financial year is brought to account at balance date as membership fees received in advance (unearned revenue liability).

Conference and seminars income are recognised as income and expenditure when the event is held. Any income received and expenditure incurred prior to the holding of the event are brought to account as income in advance (unearned revenue liability) and prepayments (other current assets) respectively.

Grant income is brought to account as income in the year in which the grant is received or receivable to the extent of the expenditure which occurred during the year towards the purpose of the grant. Unexpended grant monies for grant income received or receivable during the year, including interest thereon where required under terms of the grant, are carried forward as unexpended grants (unearned revenue liability).

Sales and other revenue is measured at the fair value of the consideration or contributions received or receivable and is recognised when the related goods or services have been provided and the income earned.

All revenue is stated net of the amount of goods and services tax (GST).

(g) Leases

Lease payments for operating leases, where substantially all the risks and benefits remain with the lessor, are charged as expenses in the periods in which they are incurred.

(h) Financial Instruments

Recognition and Initial Measurement

Financial instruments are initially measured at fair value plus transaction costs, except where the instrument is classified at fair value through profit or loss, in which case transaction costs are expensed to profit or loss immediately.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

Fair Value
Fair value is determined based on current bid prices for all quoted investments. Valuation techniques are applied to determine the fair value for all unlisted securities, including recent arm's length transactions, reference to similar instruments and option pricing models.

Impairment
At each reporting date, the company assesses whether there is objective evidence that a financial instrument has been impaired. In the case of available-for-sale financial instruments, a prolonged decline in the value of the instrument is considered to determine whether an impairment has arisen. Impairment losses are recognised in the income statement.

(i) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office. In these circumstances, the GST is recognised as part of the cost of acquisition of the asset or as part of an item of the expense. Receivables and payables in the Balance Sheet are shown inclusive of GST.

(j) Impairment of Assets

At each reporting date, the company reviews the carrying values of its tangible and intangible assets to determine whether there is any indication that those assets have been impaired. If such an indication exists, the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, is compared to the asset's carrying value. Any excess of the asset's carrying value over its recoverable amount is expensed to the income statement.

Where it is not possible to estimate the recoverable amount of an individual asset, the company estimates the recoverable amount of the cash-generating unit to which the asset belongs.

(k) Comparative Figures

When required by Accounting Standards, comparative figures have been adjusted to conform to changes in presentation for the current financial year.

(l) Provisions

Provisions are recognised when the company has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured.

(m) Critical Accounting Estimates and Judgments

The directors evaluate estimates and judgments incorporated into the financial report based on historical knowledge and best available current information. Estimates assume a reasonable expectation of future events and are based on current trends and economic data, obtained both externally and within the company.

Key estimates – Impairment
The company assesses impairment at each reporting date by evaluating conditions specific to the company that may be indicative of impairment triggers. Recoverable amounts of relevant assets are reassessed using value-in-use calculations which incorporate various key assumptions.

(n) New Accounting Standards for Application in Future Periods

The AASB has issued new, revised and amended standards and interpretations that have mandatory application dates for future reporting periods. The company has decided against early adoption of these standards which are likely to have minimal impact on the company.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

	2009 $	2008 $
2. REVENUE		
Operating Activities:		
Sales revenue	90,421	151,539
Annual subscriptions and fees	267,696	264,480
Grant income	166,248	92,000
Conferences and seminars	693,885	786,861
	1,218,250	1,294,880
Non-Operating Activities:		
Interest received	20,078	24,093
Distributions received	475	1,340
Rent Received	19,083	14,711
Other	36,032	34,630
	75,668	74,774
TOTAL REVENUE	**$1,293,918**	**$1,369,654**
3. PROFIT FOR THE YEAR		
(a) Expenses		
Cost of Sales	34,588	80,921
(b) Significant revenues and expenses		
The following significant revenue and expense items are relevant in explaining the financial performance:		
Conference and seminar activities:		
– revenue	693,885	785,320
– expenditure	(559,377)	(378,012)
Contribution to operating profit	**$134,508**	**$407,308**

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

	2009 $	2008 $
4. INCOME TAX EXPENSE		
Prima facie tax on profit from ordinary activities before income tax at 30% (2008: 30%)	–	27,415
Add/(Subtract) tax effect of:		
– Member expenses not deductible	–	177,424
– Other non-deductible expenditure items	–	15,028
– Member income not assessable	–	(191,466)
– Other deductible expenditure items	–	(2,984)
– Prior year tax losses brought to account	–	(25,417)
Income tax expense attributable to operating result	–	–
5. AUDITOR'S REMUNERATION		
Remuneration of the auditor for:		
– Auditing or reviewing the financial report	10,817	9,038
– Acquittals and workers' compensation	–	1,625
– Preparation of annual financial report	2,000	2,000
– Taxation services	800	800
	$13,617	$13,463
6. CASH & CASH EQUIVALENTS		
Cash at bank and in hand	172,182	98,031
Short term bank deposits	175,462	299,960
	$347,644	$397,991)
7. TRADE & OTHER RECEIVABLES		
CURRENT		
Trade receivables	103,873	288,273
Provision for impairment of receivables	(3859)	(3,859)
	$100,014	$284,414
8. INVENTORIES		
CURRENT		
At Cost		
Merchandise held for resale	$24,250	$20,578
9. OTHER ASSETS		
CURRENT		
Conference prepayments	–	–
Prepayments	10,059	17,286
	$10,059	$17,286

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

	2009 $	2008 $
10. FINANCIAL ASSETS		
Unlisted investments at fair value	$12,623	$13,742
11. PROPERTY, PLANT AND EQUIPMENT		
Office premises – at deemed cost (Note 12b)	100,000)	100,000
Less: Accumulated depreciation	(25,000)	(22,500)
	75,000	77,500
Plant & equipment – at cost	68,130	74,861
Less: Accumulated depreciation	(61,200)	(66,447)
	6,930	8,414
Total property, plant and equipment	**$81,930**	**$85,914**

(a) Movements in Carrying Amounts
Movement in the carrying amounts for each class of property, plant and equipment between the beginning and the end of the current financial year.

	2009 Office Premises	2009 Plant Equipment	2009 TOTAL
Balance at beginning of year	77,500	8,414	85,914
Additions	–	3,225	3,225
Disposals/write-offs	–	–	–
Depreciation expense	(2,500)	(4,709)	(7,209)
Carrying amount at the end of the year	**$75,000**	**$6,930**	**$81,930**

(b) Office Premises Valuation
A directors' valuation of office premises was undertaken as at 2nd May 2007. The valuation was based on the market value of similar office premises within the area. The valuation has been disclosed for information purposes only. Office premises continue to be recognised in the financial report at deemed cost. The directors' valuation as at 2nd May 2007 was $175,000 GST inclusive.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

	2009 $	2008 $
12. TRADE & OTHER PAYABLES		
CURRENT		
Unsecured Liabilities:		
Trade payables	28,028	39,282
Sundry payables & accrued expenses	22,147	29,572
Employee benefits	80,638	66,979
	$130,813	$135,833

13. PROVISIONS	Long-Term Employee Benefits	
Opening balance at 1st July 2008	41,209	31,482
Additional provisions raised during the year	12,118	9,727
Amounts used	–	–
Balance at 30th June 2009	$53,327	$41,209
Analysis of total provisions:		
Current	53,327	33,721
Non-current	–	7,488
Total Provisions	**$53,327**	**$41,209**

14. RETAINED EARNINGS		
Retained profit at the beginning of the year	431,065	339,680
Net profit/(deficit) attributable to members	(283,897)	91,385
Retained profit at the end of the financial year	**$147,168**	**$431,065**

15. COMPANY DETAILS

The registered office and principal place of business of the company is:

Local Government House
Level 1, 25 Evelyn Street
Newstead Brisbane QLD 4006

Members' guarantee

The company is limited by guarantee. Every member undertakes to contribute to the assets of the company in the event of it being wound up while a member or within one year after ceasing to be a member, for payments of the debts and liabilities of the company and of the costs, charges and expenses of winding up and for adjustment of the rights of contributories among themselves, such amount as may be required, not exceeding $2.10.

16. SEGMENT REPORTING

The company operates predominately in one business where it promotes and encourages the interest and practice of environmental health and operates with branches in each capital city of Australia.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

	2009 $	2008 $
17. KEY MANAGEMENT PERSONNEL COMPENSATION		
Total compensation to directors	$40,000	$40,000
18. CASH FLOW INFORMATION		
(a) Reconciliation of cash flow from operations with profit after income tax		
Profit/(loss) after income tax	(283,897)	91,385
Non-cash flows in profit:		
- Depreciation/asset write-offs	7,209	9,947
- Diminution of investments	(1,594)	(2,894)
Changes in assets and liabilities:		
- Trade & other receivables current	184,400	(155,380)
- Inventories	(3,672)	11,264
- Other current assets	7,227	55,138
- Trade & other receivables non-current	–	–
- Financial assets	1,119	1,554
- Payables	(5,020)	31,434
- Employee entitlements	40,276	9,727
- Unearned revenue	6,830	(65,432)
	$(47,122)	**$(13,257)**

(b) Credit standby arrangements & loan facilities

The company has credit card facilities of $5,000. This may be terminated at any time at the option of the provider. At 30th June 2009, none of this facility was used. Interest rates are variable.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 30 JUNE 2009

19. FINANCIAL INSTRUMENTS

(a) Financial risk management

The company's financial assets consist of deposits with banks, short-term investments, accounts receivable and payable, and leases.

(b) Interest rate risk

The company's exposure to interest rate risk, which is the risk that a financial instrument's value will fluctuate as a result of changes in market interest rates and the effective weighted average interest rates on the financial assets and financial liabilities, is as follows:

	Weighted Average Effective Interest Rate		2009	2008
	2009 %	2008 %	$	$
Financial assets:				
– Variable rate cash deposits	5.40	5.86	336,444	278,601
– Fixed rate deposits maturing within one year	5.40	6.14	10,000	117,904
– Trade & other receivables (non-interest bearing)	n/a	n/a	100,014	284,414
– Other financial assets – unit trust (non-interest bearing)	n/a	n/a	12,623	13,742
Total financial assets:			$459,081	$694,661
Financial liabilities:				
– Trade & other payables (non-interest bearing)	n/a	n/a	130,813	135,833
Total financial liabilities			$130,813	$135,833

(c) Net fair values

The net fair value of financial assets and liabilities shown in the statement of financial position and the notes thereto have been valued at market value as at balance date.

Financial Statements

Environmental Health Australia

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF ENVIRONMENTAL HEALTH AUSTRALIA LIMITED

Report on the Financial Report

We have audited the accompanying financial report of Environmental Health Australia Limited, which comprises the balance sheet as at 30th June 2009, and the income statement, statement of changes in equity and cash flow statement for the year ended on that date, a summary of significant accounting policies and other explanatory notes and the directors' declaration of the company at the year's end or from time to time during the financial year.

Directors' Responsibility for the Financial Report

The directors of the company are responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the *Corporations Act 2001*. This responsibility includes establishing and maintaining internal control relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances. In Note 1, the directors also state, in accordance with Accounting Standard AASB 101: Presentation of Financial Statements, that compliance with the Australian equivalents to International Financial Reporting Standards (IFRS) ensures that the financial report, comprising the financial statements and notes, complies with IFRS.

Auditor's Responsibility

Our responsibility is to express an opinion on the financial report based on our audit.

We conducted our audit in accordance with Australian Auditing Standards. These Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

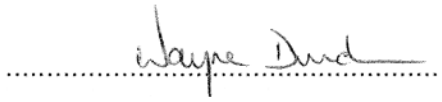
In conducting our audit, we have complied with the independence requirements of the *Corporations Act 2001*. We confirm that the independence declaration required by the *Corporations Act 2001*, provided to the directors of Environmental Health Australia Limited on 2nd November 2009 would be in the same terms if provided to the directors as at the date of this auditor's report.

Auditor's Opinion

In our opinion:

(a) the financial report of Environmental Health Australia Limited is in accordance with the *Corporations Act 2001*, including:
   (i) giving a true and fair view of the company's financial position as at 30th June 2009 and of its performance for the year ended on that date; and
   (ii) complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Corporations Regulations 2001;

(b) the financial report also complies with International Financial Reporting Standards as disclosed in Note 1.



Name of Firm: E. F. McPhail and Partners
Name of Partner: Wayne C. Durdin
Address: 38 Ellingworth Parade, Box Hill, Victoria, 3128
Dated this 2nd day of November 2009

Awards and Membership Advancements

Environmental Health Australia

New South Wales/Australian Capital Territory Branch Awards

2008 Student Award

Carla Dzendolet – OTEN – TAFE NSW

Membership Advancement to Fellow

Don Buckley

Queensland Branch Excellence Awards

Environmental Health Professional of the Year

Sponsored by: Transpacific Industries Pty Ltd

Peter Stevens (Brisbane City Council)

Young Environmental Health Professional of the Year

Sponsored by: Woolworths

Jody Clouten (Sunshine Coast Regional Council)

Nyasha Musiyiwa (Brisbane City Council) – Highly Commended

President's Award 2008

Tudor Tanase (Hinchinbrook Shire Council)

Sheils Barra (Cook Shire Council) – Highly Commended

Queensland Branch Student Awards

EHA Prize – Griffith University

Calvin Marais

EHA Prize – Queensland University of Technology

Helen Stephens

Tasmanian Branch Awards

2008 Gold Medal Award for the Most Outstanding Student

David Bradford

South Australian Branch Awards

Department of Health Excellence in Leadership Award

Eastern Health Authority

Norman Waterhouse Excellence in Environmental Health Management Award

City of Onkaparinga Environmental Health Team

Royal Society of Health prize for student attaining highest grade in ENVH3005, Integrating Environmental Health Research & Project Management

Tanja Funnell and Deepti Sethi

Victorian Branch Awards

TGO Jordan Memorial Award

Daniel Wressell

Keith W Magee Award

Emily Taylor

Leadership and Strategic Planning

Leanne Johnson

Victorian Branch Advancements

Membership advancement to Fellow

Mark Hoyne

Callum Morrison

Western Australian/Northern Territory Branch Awards

Harold Salter Award for 2009

Josephine Tuohy

Gold Medal Award for 2009

Kim Frost

Professional Excellence Award

Mark Bishop

Branch 'Certificates of Appreciation' 2008-2009

Presented to several Members and Supporters of EHA

Branch Reports

New South Wales/Australian Capital Territory Branch

The NSW/ACT Branch has had an exciting and successful year. This year brought new challenges to the role of an EHO as the emerging Climate Change debate continued and food safety and planning reforms began to take shape in NSW. The Branch was there to provide support and a voice for all NSW/ ACT Environmental Health Practitioners to ensure we had a say in the direction our profession was heading.

The NSW/ ACT Branch Council has an exciting blend of experience and diversity which has seen them continue to achieve significant outcomes this financial year.

NSW/ACT Branch Council for 2008-09

Shannon McKiernan	– Branch President
Ian Goldthorpe	– Branch Councillor
Graham Burgess	– Branch Councillor
Brian Jones	– Branch Councillor
Paul Reynolds	– Branch Councillor
Jeff Lee	– Branch Councillor

The Branch worked from its Business Plan for 2008-09. This document gave Branch Council and its members a clear direction as to actions and priorities for the financial year. Priority areas for the Branch in this financial year were on emerging issues such as Climate Change and continued advocacy and delivering professional development opportunities in the fields of food safety and public health as well as the reintroduction of the annual Branch Conference.

The NSW/ ACT Branch Conference was held in October on the Mid North Coast of NSW at Opal Cove Resort, Coffs Harbour. The Conference attracted more than 70 delegates over two days from across NSW and ACT. To see the members support an initiative held in a regional setting was tremendous. The theme of the conference was "Environmental Health – A Pathway to Change" which allowed delegates to hear about the current challenges facing the profession and consider how to respond and take control of the future. The conference showcased initiatives and presented new plans to adapt the changes being placed on the profession. Keynote speakers at the conference included:

- Dr Michael J Brennan, Director, Teroma Pty Ltd – *Climate Change and Public Health – Changes, Solutions and Expectations*
- Mr Phillip Bird, Manager Local Government Unit, NSW Food Authority – *Food Regulation Partnership Pathway to Change*
- Dr Jim Smith, EHA National President – *IFEH Overview, Summary of Charter*

A highlight of the conference was having the honour to award a former state president and tireless advocate for Environmental Health Practitioners, Don Buckley, with EHA Fellow status at the Conference Dinner.

The NSW/ACT Branch continued to deliver a series of training initiatives that proved to be fantastic professional development opportunities for members, covering a range of topical environmental health issues. The variety of training opportunities delivered really demonstrated the broad scope of issues that the modern environmental health officer needs to be equipped to deal with.

Programs delivered throughout the year included

- 3 day Food Surveillance School supported by the NSW Food Authority,
- 2 day Public Health School supported by NSW Health,
- A series of 2 day Noise Investigation courses in response to membership feedback
- Complaint Investigation and professional development workshops that focused on techniques for maintaining high levels of personal and professional productivity in the modern work environment.

The NSW/ACT Branch continued to represent the interests of environmental health professionals on a range of committees with state agencies. One of the most significant has been representation on the Food Regulation Forum Board, which oversees the development and implementation of the Food Regulation Partnership in conjunction with the NSW Food Authority. This partnership is shepherding in a new era of regulation of food safety standards in NSW and EHA is more than happy with the identification of local government as a key player in safeguarding the health of the community. This partnership has required intensive training and assistance for all environmental health professionals, and the Branch is working hard to position itself to play a major role in the delivery of this service though programs such as Food Surveillance School.

The NSW/ACT Branch incorporates our colleagues over the border. Environmental Health within the Australian Capital Territory is managed by the Health Protection Service with Branch Councillor Brian Jones Manager of Environmental Health Operations. The Public Health Act 1997 and the Food Act 2001 provides for licensing, monitoring and enforcement of public health. The acts allow for regulation of factors that may impact upon public health including food safety, cooling towers and warm water systems, safety of drinking and recreation water.

Branch Reports

New South Wales/Australian Capital Territory Branch (continued)

A Branch Council initiative taken this year is to give scholarships for two Student Members/ Trainees to attend each of the major training schools during the coming year. The first two recipients, Jera Kubitzky and Mitchell Hibbens will attend the Food Surveillance School in September 2009. Student Member numbers have increased considerably following the Board decision to grant free annual membership to eligible Students and we encourage student member involvement in Branch activities.

NSW/ACT Branch Council welcomes all members who have joined during the year and invites your participation. We also say farewell and thank you to a number of members who have retired from the workforce after holding membership of EHA (formerly AIEH) for most, if not all, of their working lives and made an enormous contribution to their professional body and their profession

Shannon McKiernan MEHA
NSW/ACT Branch President

Branch Reports

Queensland Branch

The Queensland Branch has had a very successful year given the challenging financial environment in which we have had to operate. Overall Branch membership has remained strong reflecting the current level of confidence in both the Queensland Branch and the national organization. The Queensland Branch Conference, our 69th, was held on the Sunshine Coast in May this year and attracted a wide variety of presentations by noted speakers. Membership attendance was outstanding considering the financial constraints on most employer organizations and the timing, which was in the middle of the Pandemic H1N1 (2009) outbreak. A Noise Workshop was also conducted over two days following the Branch Conference and was well attended. For the fifth year running, the 'Environmental Health Excellence Awards' were presented during the conference.

This year has also presented some unique challenges to Environmental Health Officers in Queensland. Environmental Health Officers (EHOs) located within Queensland Health Population Health Units played an important role in the H1N1 Pandemic (2009) by undertaking contact tracing and border control activities working alongside Public Health Medical Officers and Nurses. A number of these EHOs took on additional roles within the command and control structures set up in those Units. In my case, I was Sector Commander for Southern Population Health Services which covers Population Health Units at the Gold Coast, Brisbane South, Ipswich, Logan, Toowoomba and Charleville; I was also Site Commander at the Darling Downs Population Health Unit as well as continuing to do my regular day time job of Director of Environmental Health. We were required to transform our Units into Health Emergency Operation Centres (known affectionately as HEOCs) and operate under an Incident Management Team or IMT structure.

Prior to this porcine related pandemic, we had a major disease epidemic in our own backyard – I refer to Dengue Fever. This year has seen Far North Queensland record the largest epidemic of dengue in 50 years. Over 1000 cases have been reported and while the worst of it is now over for this season, there are concerns that this summer could see a repeat of the outbreak. Unfortunately, one death was recorded as a direct result of this disease outbreak.

Once again Environmental Health Officers from all over the State, both from Local and State Government, were asked to provide support to the Tropical Population Health Unit to control the spread of the dengue. For those who understand the clinical relevance of dengue hemorrhagic fever, all four serotypes of dengue were present at the same time in North Queensland producing a potentially deadly mix to the respective communities. This response lasted many months and the fight to control local mosquito breeding and transmission of dengue is an ongoing battle. What this outbreak has clearly demonstrated again is the capacity of Environmental Health Officers to adapt to the local challenges and respond in a professional and effective manner. The North Queensland climate during this summer certainly presented some unique hurdles for staff to deal with and I can personally vouch for that having worked for two weeks in Cairns assisting with the dengue response.

Not content with sending us disease transmission challenges, Mother Nature continues to roll out a series of natural disasters, some of which just happen to occur at the same time as the disease outbreaks. The near misses with cyclones along the Queensland coast and the short lived return to a more normal weather pattern produced a number of localised flood events and wild storms to add some variety to our chaotic lives.

The storm Super Cell that went through the western suburbs of Brisbane created a myriad of environmental health problems including lengthy power outages affecting homes and businesses; asbestos handling, removal and disposal; mountains of green waste and building materials to dispose of; maintenance of a safe reticulated water supply and the provision of appropriate emergency housing. Some of the worst affected homes have still not been reinstated while some that were repaired were again damaged following another rain event. And what a rain event it was. Emergency services were put on full alert, emergency operation centres stood up and once again a range of public health issues surfaced to satisfy the most demanding EHO.

Australia is a land of many contrasts. We regularly move swiftly from flooding rains to prolonged droughts. I would like to acknowledge the outstanding work performed by our Victorian environmental health colleagues after the devastating fires earlier this year. Our hearts went out to you and the communities affected by the worst fires we have seen in many years. I can only begin to imagine the impact that it has had and applaud your resilience in managing the changing climate of work expectations and public opinion that continues today.

Branch Council continues to meet regularly through a combination of teleconferences and a number of face to face meetings each year. Our branch councillors come from a variety of locations throughout Queensland and work for Local Governments, Queensland Health, a University, and private enterprise. As mentioned previously, Branch membership remains strong and once again this year, we have exceeded our budget goals.

Members serving on Branch Council during the year were:

Virgil Kelk	– Branch President
Grant Steen	– Vice President
David McNicoll	– Vice President
Belinda Davies	– Branch Councillor
Jim Edwards	– Branch Councillor
Paul Endres	– Branch Councillor
Sarah Shuttlewood	– Branch Councillor
David Hancock	– Branch Councillor
Amanda Hutchings	– Branch Councillor

Branch Reports

Queensland Branch (continued)

Peter McKee	– Branch Councillor
Bruce Morton	– Branch Councillor
Sofie Sandberg	– Branch Councillor
Vince Stephens	– Branch Councillor
Thomas Tenkate	– Branch Councillor
Chris Vakas	– Branch Councillor

Conferences and Training

- Delivery of the 69th Annual Branch Conference in May 2009
- Delivery of the popular Disaster Management for Public Health course 2008
- Delivery of two Noise Management Workshops and a Contemporary Food Safety Training Course
- Delivery of Food Auditor Training

Special Interest Group Reports

SIG Convenors continue to provide valuable input into legislation development and review, as well as monitoring emerging issues and trends. Last year, Queensland Branch Council identified the need for EHA to review the functionality of the SIGs and how they align with other States and the National Board's vision. While some work has been undertaken in relation to this matter, there is a need to complete this task in the coming year.

Regional Group Reports

EHA members throughout Queensland actively participate in their local regional groups. These groups meet on a regular basis enabling members to network, share experiences and undertake professional development at their local level. I would like to again express my sincere appreciation to all regional group convenors and secretaries for the valuable contribution they continue to make to EHA.

Professional Tools/ Products and Services

Queensland Branch Council continues to support the marketing and supply of a range of EHA professional tools, products and services. There is a potential for the current range of products to be reviewed and expanded to ensure they remain attractive and relevant to members. This should be undertaken at the National level with input from all Branches. Queensland Branch Council is currently exploring a range of options to link our training courses to University approved courses thereby enhancing their profile and overall value to members.

Virgil Kelk FEHA
Queensland Branch President

Branch Reports

Queensland Branch (continued)

Special Interest Group Reports

Professional Development (Marketing & Communication) – QEH Special Interest Group

QEH is the newsletter of EHA Queensland Branch, published quarterly and distributed to members in electronic format.

The objectives of the QEH are –

- To advocate for the Environmental Health profession throughout Queensland.
- To increase the knowledge and skills of members in environmental health professional practice.
- To provide a platform for EHA (Qld) Executive to circulate advice to members on EHA policy and Branch Council initiatives.
- To identify and communicate key issues to members on all matters relating to the profession.
- To promote Queensland Branch conferences, events and awards.
- To raise members' awareness of EHA Branch Council and Regional Group activities.
- To function as an information and promotion resource to members, providing a forum for exchange of information and member networking.
- To provide an entry-level opportunity for members to submit relevant professional articles for publication.
- To promote continuing professional development opportunities to members.
- To maintain EHA professional standards and corporate branding requirements.

These objectives are achieved utilising a number of strategies. QEH sets out to inform the membership with topical information on policies, activities and initiatives of the National Board as required, Queensland Branch Council, the Branch Executive as necessary, Queensland Regional Groups, and individual Queensland members and invited contributors, as appropriate.

Content of QEH is largely dependent on input from Members, with each of the regional groups taking notional responsibility for generating articles for one nominated edition annually. In addition, the final publication of the calendar year seeks to include appropriate pieces by EH students of Queensland tertiary institutions.

Standing articles for each edition are a Queensland Branch President's message to Queensland members, editorial comment on environmental health in Queensland, member profiles, and regular updates on Branch Council activities through a column 'Behind The Scenes'.

QEH also attempts to keep members well briefed on specific areas of interest such as local government, food safety and environmental protection with regular contributions from LGAQ's EH Policy Advisor, as well as relevant state government agencies. It also provides widespread feedback on specific issues raised by individual members or regional group meetings, and web links to topical sites.

Editions this year have included the entire 'alphabet' of topics – from amalgamations, branch council updates, climate change, dengue, events calendars, food safety, group meetings, health promotions, immunisation, job opportunities, keeping abreast of legislation, links to websites, membership upgrades, natural disasters, overseas deployments, profiles of members/branch councillors, quality of water in rainwater tanks, recruitment and retention, skin penetration, training courses, updating contact details, vacant EH positions - through to waste management initiatives, Xmas greetings, and zoonosis.

Queensland Branch Council is currently considering a draft Policy Statement and Action Plan for the QEH SIG.

Grant Steen FEHA and Melissa McKeown MEHA
Professional Development (Marketing & Communication) – QEH Special Interest Group Co-Convenors

Food Safety Special Interest Group

While all parts of the Food Act have now commenced, much uncertainty still exists in the minds of EHA Members in relation to the definition of food safety supervisors, and the approval process associated with food safety programs and food safety auditors. The EHA wrote to the Minister for Health seeking support for a widening of the definition of catering (as it applies to businesses requiring food safety programs) to better protect public health, and to address the shortage of approved food safety auditors in Queensland by recognising the unique qualities that EHOs possess. Unfortunately the Minister was not receptive to our suggestions.

In a further attempt to influence state food policy, the EHA participated in the review of the Food Act at the end of 2008 and while comments were taken onboard it may be some time before meaningful improvements are made to simplify compliance for both industry and EHOs.

In the latter part of 08/09, EHA as part of a wider Queensland Health / local government food safety working group, developed a set of resources for local government in managing the Food Safety Program approval and auditing process. It is this information in particular that local government has been waiting for to ensure the consistent approval and auditing of Food Safety Programs in Queensland.

In its pursuit to provide more services to its members, EHA held its second annual Contemporary Food Safety Training Course for EHOs in October 2008. The 2 day course (modified following feedback from the 2007 course) brought together a range of experts from the fields of food policy, food law and enforcement and microbiology and provided a useful introduction to food safety for graduates and a refresher for more experienced EHOs. The course, which was fully booked and attended by EHOs from around the State, was very well received.

Finally, I'd like to take this opportunity to thank the Food SIG membership and in particular the Food SIG Committee for their support and assistance over the past 12 months and remind members that the Food SIG is a resource to be used by members for their and the profession's benefit – if you have a question ask, if you can provide assistance, please offer.

Dieter Jurgeneit MEHA
Food Safety Special Interest Group Convenor

Communicable Diseases / Immunisation Special Interest Group

1) Communicable Diseases:

The main activity for 2009 has been the response to H1N1 'Human Swine Flu'. Initial cases of H1N1 were reported in Mexico, on April 6 in the town of La Gloria, where an unknown number of people were infected.

By April 24, the WHO announced that there were around 800 suspected cases of H1N1 officially recorded in Mexico, which included 60 deaths suspected to be associated with H1N1. It was then that health authorities around the world were placed on alert because the official death rate of the infection was unknown and based on the above figures, it was tracking at about 7.5%.

Fortunately, reliable surveillance data from multiple countries revealed over time that the H1N1 death rate was tracking at a rate closer to around 0.6% which is similar to the seasonal influenza death rate of around 0.7%. In the meantime though, Australia was well into implementing the Pandemic Influenza Response Plans which were recently developed as part of the government response to the H5N1 'Avian Influenza' threat which commenced in 2004.

In Queensland, the H1N1 outbreak commenced in May, peaked in the 4th week of July and minimal numbers were being recorded by the 2nd week of September. As of 14 September, Queensland had recorded a total of 17526 confirmed cases, although actual infection rates would be higher due to persons with symptoms not presenting to their GP.

Broad comments from the outbreak response include:

- Protection of the vulnerable population was the most significant positive public health outcome of the response.
- The response certainly slowed the spread of H1N1 and almost certainly reduced the economic impact of a more sudden spike in illness.
- Such a large scale 'real life' outbreak provided an excellent opportunity to test the Pandemic Influenza Response Plans and provided for areas to be identified for ongoing improvement.
- The spread of a highly communicable disease in the community is unstoppable unless 'aggressive containment strategies' are used in the first 24 to 48 hours.
- In relation to H1N1, where the death rate was 0.6%, 'aggressive containment strategies' wouldn't have been politically or economically beneficial. However when managing a 'High Death Rate Disease' (HDRD) possibly like a more communicable form of H5N1, where the death rate is 60% in healthy individuals, then 'aggressive containment strategies' would be required to preserve significant loss of human life and to limit significant economic impact.

Key area identified for improvement:

- In the context of a possible future HDRD, the above experience raises the question: What 'death rate' should be set as being the trigger for initiating 'aggressive containment strategies' within Australia's National Disease Management Plans? Determining a 'trigger death rate', for implementing 'aggressive containment strategies', is regarded as a priority issue for the future of pandemic planning in Australia.

2) Immunisation:

Due to the resignation of Don Deutscher as the Immunisation Co-Convenor of the EHA IMM/CD SIG, we are currently requesting expressions of interest from members who would like to contribute to this position. Please contact Jo Rolls if you are interested in contributing or to obtain further information on this role.

Paul Clancy MEHA
Immunisation/Communicable Diseases Special Interest Group Convenor

Branch Reports

Queensland (continued)

Queensland Regional Group Reports

North Queensland Regional Group

The Northern Group held two conferences, Ingham November 2008 and Magnetic Island June 2009, both of which were well attended by members, sponsors and guests.

The November conference hosted by Hinchinbrook Council and opened by Mayor Pino Giandomenico covered topics from the Mackay floods to strategies for retaining EHOs. The long standing Northern Group tradition of holding an awards ceremony continued with Judd Owen taking out the Chandler Challenge. Tudor Tanase won Best Presentation for his work on reducing public health risks and the Kevin Armstrong Memorial Trophy was awarded to Ian Kuhl for his tall tales during a session of 'yarns' at the conference dinner.

The June conference hosted by Townsville City Council at Magnetic Island and opened by Mayor Les Tyrell boasted a very comprehensive agenda and a high standard of presentations. The topics ranged from food safety policy to clandestine drug labs. John Piispanen took out the award for Best Presentation for his discussion on the Dengue Incident Management Framework. The Kevin Armstrong Memorial Trophy was won by Geoff Wilson and Dave Gould for their stunning display of golfing prowess on the fairways and greens of the Magnetic Island Golf Course.

The Northern Group members thank all sponsors for their attendance and valued contribution to the success of each conference, in particular Hinchinbrook Council (November) and Townsville City Council (June), MacDonald Johnston, Serve-Safe, ASP Software, Woolworths, CSR, Pacific Biologics and Golder Associates.

Rob Smith and I thank all members, sponsors and guests who attended, presented and organised to deliver very successful conferences.

Matthew McCarthy MEHA

North Queensland Regional Group Secretary/Treasurer

Darling Downs/South West Regional Group

The Darling Downs/South West regional group has had another busy year and held three meetings this financial year. The meetings were held at Toowoomba, Oakey and the Gold Coast.

The first meeting of the financial year was sponsored by Darling Downs Population Health Unit and was held at Toowoomba Regional Council in September 2008. This meeting covered a number of interesting topics including case studies and updates on new legislation. It was great to see a number of state departments represented at the meeting providing information to our regional group.

The second meeting was hosted by Toowoomba Regional Council – Oakey Service Centre in December 2008. At this meeting, a 'Soapbox' was held to promote discussion within the group regarding issues/challenges during 2008 and to provide a review of environmental health work that had been conducted in our area. A social dinner, sponsored by JJ Richards, to celebrate the end of the year, was held in association with this meeting. This social event was a great success and hopefully will become an annual event.

For the last meeting of the financial year, the DD/SW EHA group had a combined meeting with SEQ EHA group held at Broadbeach Surf Club. It was great to have a number of SEQ group members attend the meeting. We would like to thank Joe Casabella and the rest of the SEQ EHA group for their assistance with this meeting. At this meeting, Vince Stephens stood down from his role as chair for the group. Vince has made a large contribution to the group especially in the last three years in his role as chair and his efforts have been appreciated by the group.

The DD/SW members thank all sponsors for their attendance and contribution to the success of our meetings, in particular, Darling Downs Population Health Unit, Toowoomba Regional Council, JJ Richards, drumMUSTER and Divine Possibilities.

Vince and myself would like to thank all members, sponsors and guests who attended, presented and helped organise these meetings. We look forward to the meetings to be held in the coming year.

Amanda Hutchings MEHA

Darling Downs/South West Regional Group Secretary/Treasurer

Branch Reports

South Australian Branch

2008-2009 has been a busy, diverse and interesting year. Members have tackled our first influenza pandemic in 40 years, putting business continuity plans to the test and challenging our capacity to provide immunisation services.

Food safety and public access to food business inspection results has focused attention on EHOs, local government and our profession like no other topic since food safety became a local government responsibility. Matters such as resourcing, prioritisation of food regulation, consistency of enforcement activities and the skills and qualifications of Environmental Health Officers have had to be addressed. It has provided an opportunity for members to focus on food safety, consider the effectiveness of the Food Act 2001, and lobby for change. In particular, deficiencies in inspection fees which limit funding of food regulation, the failure of 'notification' to capture current food business details or enable effective use of information for innovative approaches to food safety.

Branch Council endorsed the establishment of a subcommittee to explore and respond to articles concerning Naming & Shaming on behalf of EHA (SA Branch). The purpose of the subcommittee is to further develop our policy position and prepare appropriate responses to the media, DH and LGA as necessary to achieve the best outcome for EHOs and food safety in SA. The two key areas for response have been the publication of successful prosecutions under the Food Act, an initiative of the current Labour Government and the impact of the Ombudsman's FOI determination that Councils must release the names of food businesses not complying with improvement notices or subject to prohibition orders.

South Australian members are well placed to confidently promote a consistent approach to food regulation and enforcement utilising the tools prepared by the SA Branch. In particular AFSA, our model Food Inspection Procedure, Enforcement Policy and forum for addressing inconsistencies and developing EHOs - the Food SIG.

Thanks to the initiative of John Darzanos, Australia's first Environmental Health Managers Forum has been established. Its purpose is to provide leadership and support for Environmental Health Managers and Supervisors representing Local Government and other agencies involved with and undertaking work in the field of Environmental Health, Public Health and Environment Protection.

Our Knowledge Base for Environmental Health Officers continues to be updated with new content thanks to input from members and the coordination of our project officer, Melinda Coleshill.

The South Australian Branch provided submissions on the following:

- Public & Environmental Health (Legionella) Regulations
- Environmental Health Indicators project
- Local Government's role in the event of Pandemic Influenza
- Proposed National Centre for Local Government Excellence
- Proposed amendments to Primary Produce (Food Safety Schemes) (Dairy Industry) Regulations
- Proposed South Australian Residential Development Code
- South Australia's draft Safe Water Bill

The South Australian Branch has representatives on the following:

- Public & Environmental Health Council
- Public Environmental Heath Act Review Committee
- DH Environmental Health Indicators project
- DH Emergency Management Planning Committee
- DH working party to develop insanitary condition (hoarding) guidelines
- DH Bi-monthly (Food) meetings
- Food Act MOU Work Plan – Working party
- State Pandemic Influenza Working Group
- LGMA Presidents Forum
- Flinders University Professional Advisory Committee
- Flinders University post graduate degree accreditation panel
- Meat Hygiene Advisory Committee
- Dairy Authority Advisory Committee
- EPA/LGA sub-Committee
- enHealth Workforce Project

The South Australian Branch coordinated the following training during this reporting period:

- Clandestine Drug Lab Seminar
- Food Act Enforcement Seminar
- Workshop – Responding to SA Health's discussion paper 'Development of Local Government Environmental Health Indicators'
- Evaporation Transpiration Absorption (ETA) Onsite Wastewater Training Day
- 31st Branch Conference – Putting Environmental Health Through The Mill

Branch Reports

South Australian Branch (continued)

Conference report

The 31st Branch Conference was held at the Hahndorf Old Mill with over 100 delegates attending. The theme of the conference, Putting Environmental Health through the Mill, Local Actions with Global Impacts, invited distinguished guest speakers and prominent professionals in the field to focus on a wide range of issues affecting environmental health now and into the future. Keynote speakers included the Honorable John Hill MP, Senator Sarah Hanson-Young and Ms Vickie Chapman MP. Delegates were also privileged to be addressed by Professor Mark Daniel, who discussed the influences of the social and built environment on obesity and cardio metabolic diseases, providing plenty of food for thought. A strong theme of the conference was the evolution of the role of the Environmental Health professional. Dr Chris Lease, SA Health, provided an update on Environmental Health Indicators and how they may be used to expand traditional Environmental Health roles. Dr Nancy Cromar, Flinders University, discussed the development of a strategic plan for Environmental Health education and research in South Australia.

EHOs were encouraged to expand their horizons in health promotion opportunities with Nicole Moore speaking about the City of Onkaparinga's School Program Healthy Body Art for Young People. Steve Parker and Tess Byrnes from the Noarlunga Health Village followed with discussion about health promotion initiatives both here and overseas. Monica Nitschke, Scientific Services in Public Health, delivered an interesting and informative presentation on the effects of heat waves on public health in light of the changing climates. Presentations on the more traditional areas of Environmental Health including food safety, communicable disease control, public health case studies, water reuse and alternative water supplies were also well received during the three days.

Ian Hawkins MEHA
South Australian Branch President

Special Interest Group Reports

Food Safety Special Interest Group

This year the Food Safety Special Interest Group (SIG) meetings were well attended and supported by members. The membership group consists of city and regional Environmental Health Officers (EHOs) and State Government (SA Health) representatives. Craig Nicks moved from his role as Secretary to Co-Convenor due to Jeremy Draper moving interstate. Jeremy's contribution to the profession is well recognised and we extend our thanks and best wishes.

This year the concept of 'Show and Tell' was introduced to the agenda to provide an opportunity for EHOs to present issues to the group. This promotes the sharing of information and experiences as well as encouraging consistency and there were new issues and various challenges such as:

Food Safety Auditing

Over 50 EHOs completed training and are now approved food safety auditors. The SIG was used as a forum to discuss the implementation of auditing and other issues such as:

- Audit fee structures,
- Audit reports and classifying non-conformances,
- Demonstrating compliance in various areas such as cleaning and sanitising, Listeria management and record keeping,
- Second round audits and closing out previous non-conformances.

As part of SA Health's commitment to provide auditors with ongoing training and development, an Auditors' Forum was recently held. The forum was well attended by SIG members and matters discussed on the day included the above issues.

Presentations – Guest Speakers/Show & Tell

Presentations this year included the proposed Drinking Water Act from SA Health, food safety training opportunities from TAFE, Surface Swabbing Project and Sushi issues from local government EHOs. SA Health also provided updates on a Salmonella outbreak investigation, fresh noodle survey, melamine food recall and egg safety.

Working Groups

Small working groups were formed to address key food safety issues. The primary aim was to expand members' knowledge and promote consistency amongst EHOs. Groups are currently working on egg and meat sales at farm gate and farmers markets, and sushi processing.

Contributions/Submissions

The SIG made a contribution to the following:

- Environmental Health Australia SA Branch Knowledge Base Project
- Proposed Drinking Water Bill Submission
- LGA Food Safety Audit Fee Guidelines
- Food Act Information System Review
- Food Act Memorandum of Understanding Review
- Food Industry Bulletins prepared by SA Health

Combined SIG Meetings

This year two combined meetings were scheduled to entice rural EHO attendance. SIG meetings were held on the same day at the same location to provide members with the opportunity to attend different SIGs. Members responded positively to this initiative. Food SIG Convenors also gave a presentation to Environmental Health University students to promote SIGs and EHA membership.

SA Food Handler Update (SAFHU)

SAFHU is a printed educational resource prepared by an editorial team and distributed to more than 9,500 food businesses by over 30 Councils. A variety of food safety issues are covered including compliance with legislative requirements.

Other issues that have been discussed at the SIG and will challenge the group next year include:

- Naming and Shaming, Scores on Doors
- Improving consistency when interpreting and enforcing legislation
- Food safety training for targeted businesses
- Egg and meat sales at farmers markets

Elle Clarke MEHA and Craig Nicks MEHA
Food Safety Special Interest Group Co-Convenors

Disease Control/Emergency Management Special Interest Group

Recently Courtney Krake and Rebecca Dyson stepped down as co-convenor and secretary (respectively) of the Disease Control / Emergency Management Special Interest Group (SIG). SIG members wish to thank Rebecca and Courtney for their hard work and contribution to the SIG and the profession over the past year. SIG members and Environmental Health Australia (EHA) South Australia branch council also thank Jamie Tann for taking up the position of co-convenor and Adrian Hill the position as secretary.

The financial year 2008-2009 was another busy year with many of the objectives either being completed or nearing completion due to the contribution and dedication of its members. The SIG currently has 42 registered members, which we hope to expand further in the next financial year. Members include previous Environmental Health Officers (EHOs) who have taken up roles in other stakeholder organisations. This contributes to good working relationships and understanding between the agencies as we address the many new challenges EHOs face, for example, in reference to the H1N1 Pandemic and the review the new Public Health Bill.

At the beginning of each year the organising committee (Convenors and Secretary) aim to set objectives for the new year, in line with Branch Council's Business objectives. This year new objectives were not set as there were complex items carried over from last year and many new challenges being taken up from our day to day duties. This year's challenges include:

- Contribution by the SIG members in the development of the following for the Knowledge Base project:
  - a) PEH Act Section 15 Notices / Warrant procedures
  - b) PEH Act Section 17, 18 and 20 in the management of problems including offensive activities, discharge of wastes in a public place and keeping private thoroughfares clean and free of refuse.
  - c) Site visits and inspections
- Providing feedback and comments on the development of the new Legionella Regulations;
- Working with Department of Health to develop a Legionella workshop, which will focus on Cooling Towers and Warm Water Systems. This is due to be presented in September 2009;
- Representation and providing feedback to the Department of Health on the Pandemic influenza working party;
- Representation and providing comments to the Department of Health's Insanitary Conditions and Hoarding Guidelines Subgroup;
- Strengthening the relationship between the Housing Improvement Branch, Housing SA and SA Health;
- Extending partnerships with the SES in relation to Emergency Zone Committees;
- Establishment of a Clandestine Drug Lab working party to lobby and address issues relating to Local Governments' role in the cleaning of such premises.

SIG meetings included "Show and Tell" on Obtaining Warrants and Break and Enters, how one large council dealt with the new Legionella regulation requirements, a presentation from the State Recovery Office and the role of the Public and Environmental Health Council.

A significant challenge for the group into 2009 -2010 will be the interpretation and contribution to the development of the new Public Health Bill to ensure that the new legislation will support Environmental Health Practitioners' current practices and provide a platform for professional growth and development and support positive impacts on Public Health and the Environment

Jamie Tann MEHA and Adrian Hill MEHA
Disease Control/Emergency Management Special Interest Group Co-Convenor and Secretary

Branch Reports

South Australian Branch (continued)

Climate Change Special Interest Group

The Climate Change SIG is a relatively new special interest group that had been inactive and was reformed in 2009 with Kaye Arnold as Convenor and Kim Pearson as Secretary. During the first meeting of the Climate Change SIG it was decided that the group needed terms of reference for guidance. The terms of reference decided upon are as follows:

- To promote the health and wellbeing of the community through the identification and mitigation of the health effects of climate change.
- Provide professional environmental health information and tools for Environmental Health Officers to manage and educate Council and the community on climate change health related strategies.
- Identify emerging issues.
- Establish partnerships with other stakeholders.
- Work with other Environmental Health SIGs, where there are common links and share information.

At the initial meeting of the Climate Change SIG members took part in a brainstorming session in which the group looked at the links between climate change and Environmental Health. At the subsequent meetings issues discussed included:

- Whether Climate Change fact sheets should be included on SA Health website
- Whether Climate Change information should be included on knowledge base website.
- Follow up with interstate Climate Change SIGs to see what sort of things they are doing.
- Long term vision of developing a Climate Change Manual.

Given the relatively short time the SIG has been operational it is expected that other issues will arise in the future.

Kim Pearson MEHA
Climate Change Special Interest Group Secretary

Branch Reports

Tasmanian Branch

Branch Council continues to provide positive momentum and direction for all the Environmental Health Practitioners around the state. There remains a strong commitment amongst the Branch Councillors to continue to work towards addressing workforce and workplace issues of concern.
I would like to name our Branch Council members and acknowledge the fantastic efforts they have made to the profession throughout the year :

Ron Fry	– Senior Vice President & Director
Eric Johnson	– Vice President
Abyilene Dobson	– Branch Councillor
Doug Doherty	– Branch Councillor
James Doherty	– Branch Councillor
Carmel Miller	– Branch Councillor
Jacob Farran	– Branch Councillor

During the year we farewelled Alison Duniam from participation on Branch Council – she needed to focus more of her time and efforts on raising her young family. Carmel Miller was more than happy to come on board as Alison's replacement.

Below is a summary of Branch Council's activities throughout the year on behalf of members and other Environmental Health Practitioners:

- Organised and conducted three (3) statewide environmental health seminars;
- Organised and conducted a statewide annual environmental health conference;
- Issued a public media release on the keynote speaker on pandemic influenza for the annual branch conference;
- Attended and participated in a University of Tasmania careers information day;
- Representation on the Statewide Immunisation Reference Group (SIRG);
- Representation on the Tasmanian Food Safety Forum;
- Organised and conducted nine (9) Branch Council meetings;
- Drafted and issued two (2) comprehensive statewide newsletters;
- Organised a student BBQ for students currently enrolled in the new bachelor degree course at the University of Tasmania;
- Attended the annual Polytechnic graduation ceremony and presented the EHA certificate and industry prize to best student graduate of 2008;
- Donated $250 for the industry prize for the best student graduate of 2008; and
- Established a National Conference organising committee.

Bachelor of Health Science (Environmental Health) University of Tasmania

The new degree is currently in its second year at the School of Human Life Sciences, University of Tasmania (Launceston Campus) with ten students enrolled, four of whom have traineeships with local councils. The course continues to grow in strength and appeal.

Over the past few months several significant and exciting developments have occurred. The first is the creation of an Environmental Health lecturing position funded jointly between the Department Health & Human Services (DHHS) and University of Tasmania. The position will involve co-ordination, development and teaching into the degree undergraduate program along with implementation of the environmental health practicum to ensure that graduates are ready for work. The position will also involve report writing and contributions to work undertaken by DHHS.

The second development is that the degree is currently being considered for Commonwealth Register of Institutions and Courses to Overseas Students (CRICOS) registration which allows this degree to be available to international students.

Enquiries for 2010 have been strong with some mature age enquirers currently undertaking preliminary programs such as academic writing skills and bridging physics and chemistry units to ensure they are ready to succeed in the course.

Conferences and Training

Another program of environmental health seminars was organised and conducted at The Grange function centre in Campbell Town. Three seminars were held and the range of topics presented included an enHealth workshop, a pesticide migration screening tool, an update of the Environmental Hazards Unit in the new degree course, an Environmental Management System Online Interactive Audit Tool demonstration, overview of Food Safety Standard 3.3.1, DHHS statewide issues, draft noise nuisance assessment matrix, Local Government Association of Tasmania staffing and skills level overview, public swimming pools maintenance and quality standard techniques and the establishment of influenza pandemic flu clinics.

The annual branch conference was held at Cradle Mountain in the central highlands of Tasmania and continued to set the benchmark as the most popular event on the Tasmanian environmental health calendar. The conference theme, *A Healthier Future – Finding A Way Forward*, certainly met expectations especially in the isolated Tasmanian wilderness. Overall the range of topics and presenters, the eco-environmental technical tour to Dove Lake, the evening social activities and roaring open fires, the visit to the Tassie devil park, the conference dinner, the presentation of industry awards to King Island and Kingborough Councils, the venue and unique location and, of course, the delegates that made the long trek to Cradle Mountain contributed to another memorable and enjoyable conference.

Branch Reports

Tasmanian Branch (continued)

35th EHA National Conference

Hobart Tasmania: 11 - 13 November 2009

The National Conference organising committee is comprised of the following motivated and enthusiastic members –

- Branch Council members
- Stuart Heggie (DHHS)
- Megan Whalley (West Tamar Council)
- Melissa Bailey (Latrobe Council)

The National Conference theme is *Towards Sustainability – Time To Deliver*. The conference speakers and social programs are all but complete and include an extensive variety of presenters from around the country, a choice of technical tours and a climate change technical workshop. Notable amongst presenters are the following keynote speakers:

- Emeritus Professor Ian Lowe AO.
- Walker Smith – Director of the Office of Global Affairs & Policy, Environmental Protection Agency (EPA), USA.
- Dr Roscoe Taylor – Director of Public Health, Tasmania.

Check all the program details on the EHA website. All potential delegates are encouraged to fly and/or drive down to Tasmania not just to participate in this exciting national conference but to also take some extra time to slow down and see more of Australia's truly unique and wilderness state – Tasmania.

Mark Dwyer MEHA
Tasmanian Branch President

Branch Reports

Victorian Branch

In the last twelve months environmental health in Victoria has been dominated firstly by the acute response to the fires in February and then the community support effort required for the recovery stage which is still continuing. On top of this disaster the Government announced the new Public Health & Wellbeing Act 2009 which replaces the current Health Act 1958, and also there will be extensive amendments to the Food Act 1984 following a review of food safety administration in Victoria. The new legislation introduces a range of new mechanisms that need to be used by EHOs in the administration of the legislative provisions. The fires and substantial legislative changes have had an inevitable effect on the operations of the Branch however we still managed to participate in the Herald Sun career expos, conduct a special members day forum and planning day for the Special Interest Groups, participate in meetings with the Department of Human Services around the new legislation including the establishment of two working parties to concentrate on specific accommodation issues and their legislation. Planning for the emergency management course for next year, in high demand as would be expected, is well advanced and 30 participants will attend the program which is similar to this year's numbers.

Despite the substantial impact of fire and legislation the Branch will deliver on its budget and, importantly, our membership continues to grow reflecting our relevance to practitioners. This is the result of the active Branch Council, Special Interest Groups and Regional Groups and the dedication of all involved with them. The Annual Conference held in Nillumbik in November 2008 was extremely successful and the proposed Professional Development Symposium (replacing the Branch Annual Conference) 2009 will be held in Bendigo at Latrobe University and also promises to be a most successful event.

The year coming will be extremely busy because of the legislative changes coming into effect in 2010, fortunately most of the existing branch councillors will continue on and provide a solid core of leadership to steer the EHA Victoria ship through the changes and ensure that practitioners' voices and concerns are accounted for in the implementation process. In October at our Symposium I step down from the Branch Presidency and I take this opportunity to thank my branch councillors for their support, loyalty and hard work in difficult circumstances, and on behalf of the Branch Council I thank my colleagues leading the SIGs and Regional Groups, and our Executive Officer Bernadet Ferraro for all your work and effort. I would like to acknowledge and thank my colleague Fleur Cousins for once again volunteering her services.

Dr Jim Smith LFEHA
Victorian Branch President

Special Interest Group Reports

Food Safety Special Interest Group

Over the past 12 months, the Food SIG has welcomed new members and now represents a good cross section of key stakeholders within the food regulating system including Local Government, Department of Health, Dairy Food Safe Victoria, legal practitioners, the training sector, analysts and private industry.

As part of the action plan, adopted by Branch Council, the SIG has continued to review and develop the Food Safety Management Guidelines, by drafting an enforcement protocol that has been presented to Branch Council for comment. To assist practitioners, the SIG is currently developing a Powerpoint training tool to educate people on the principles of food safety when operating at events.

The SIG has continued to provide input to and representation on a range of state committees and working groups including:

- Representation on the Food Safety Council
- Representation on the DHS/MAV Food Safety Project
- Participation in a project reference group to review DHS' resources

With a strong relationship with the Department of Health (DHS) Food Safety and Regulatory Unit the SIG has been able to represent EHA on a variety of working groups associated with the amendments to the Food Act including:

- Online training program, a web based program for food handlers
- Food Sampling Database, a state based program that will develop a new food sampling framework that improves risk management and coordination of state-wide sampling
- FSP template review, accommodating all the Food Act changes including the classification system.

The SIG has also been able to provide guidance on behalf of EHA to NATA who is currently developing the one day course 'Effective sampling techniques for EHPs' that focuses on food and water sampling techniques.

Together with responding to both member's and EHA requests, the SIG has experienced an extremely busy year. I would like to take this opportunity to thank all SIG members and EHA members who have contributed to the various activities conducted over the last 12 months as we now prepare ourselves for another exciting year of food safety.

Leanne Johnson MEHA
Food Special Interest Group Co-Convenor

Emergency Management Special Interest Group

For most members of the EMSIG, 2009 has been a very difficult period to commit to the EMSIG due to the impact of the "Black Saturday Fires" in February. These fires impacted on a number of members whose municipalities or organisations were affected or involved in responding to the fires. The unexpected workload resulting from these fires and in the case of affected municipalities to the ongoing Recovery process which may take years to respond to, has and will make it very difficult for relevant members to commit to the EMSIG.

In addition to the fires a number of SIG members were involved in responding to the outbreak of Swine Flu which compounded an already very difficult period.

In light of the above the commitment of all EMSIG members, the 2009 course was successfully completed.

The EMSIG had a number of focuses in the last financial year which included :

- Development and facilitation of the 2009 course.
- Participation in interagency Emergency Management Committees.
- Development and presentation of emergency management education to Environmental Health students at Swinburne University.
- Development (with relevant agencies) of protocols for EHOs entering CFA and the DSE staging areas during a fire.
- Maintaining accreditation status by reviewing topics, program and tabletop exercise, course notes and liaising with relevant emergency management organisations and agencies.

The EMSIG continued its development and facilitation of the nationally accredited Emergency Management Course, which was held at Emergency Management Australia Mt Macedon from 26 to 31 July. A full complement of participants (thirty) attended comprising municipal EHOs from Victoria, interstate (Western Australia, New South Wales), the Department of Human Services and the Australian Defence Forces (RAAF).

To ensure the success of the course, a minimum of six SIG members were in attendance each day as either a syndicate assessor, syndicate leader or as a program manager.

The SIG has continued its ongoing role of presenting at Swinburne University. The presentations involve providing an overview of public health emergency management to first year students in May, and further presentations to second year students in October, which are assessed items of their course. The presentations cover the areas of Prevention, Preparedness, Response and Recovery as they relate to emergencies.

The EMSIG would like to thank the Department of Human Services and Kernow Environmental Services (Terry Old) for their ongoing financial support of the course. The emergency management course would not be the success it is without the support of the Victorian Branch Council, and in particular, the work and commitment of the SIG members.

Kirsten Jenkins MEHA
Emergency Management Special Interest Group Convenor

Public Health and Wellbeing Special Interest Group

The Public Health and Wellbeing SIG has had a busy year. The introduction of the new Public Health and Wellbeing Act 2008 ("the Act") and the updated Health Regulations in 2010 provide new challenges for all Environmental Health Professionals.

In early 2009 the SIG developed an action plan outlining the major issues surrounding the introduction and implementation of the new Act and Regulations. The SIG will aim to provide support to EHA members on these issues by developing a number of working tools, policies and best-practice procedures.

The major issues and actions identified in the 2009/10 action plan are:

- Developing assessment tools and supporting policies for prescribed premises including colonic irrigation and rooming houses;
- Developing policies and best-practice procedures for the revised nuisance provisions in the Act;
- Developing policies and best-practice procedures for the introduction of search warrants to Act; and
- Providing comment and advice on the revised Health Regulations (Released late September 2009).

The SIG has been working on developing assessment tools and supporting policies for prescribed premises for some time now. With the introduction of the new Act and Regulations, the SIG aims to further develop the assessment tools and launch them in 2010. The assessment tools will include Hairdressers and Beauty Therapists, Swimming Pools and Spas, Skin Penetration Premises, Prescribed Accommodation, Caravan Parks and Movable Dwellings, Colonic Irrigation and Rooming Houses.

The development of these tools and policies has been stalled by the late release of the Health Regulations. This document was released in September 2009 and the SIG is working hard to provide comment shortly. We are all looking forward to developing and producing a range of practice policies and guidelines which will be supported with professional tools and products that serve the needs of all EHA members.

In April 2009 with help from Ingrid Makowski, the SIG provided comment on the Review of the Residential Tenancies (Caravan Parks & Moveable Dwellings Registration and Standards) Regulations 1999. These comments and suggestions were well received. The SIG would like to thank Ingrid for her assistance and support with developing this EHA position.

I would like to take this opportunity to thank all SIG members for their hard work and dedication in 2009 and to extend a warm welcome to our newer members who responded to our article in the 2009 winter edition of Healthline News. The next 12 months will be very challenging for all of us. I look forward to working with you all next year and into the future.

Kristy Taig MEHA
Public Health and Wellbeing Special Interest Group Co-Convenor

Environmental Management Special Interest Group

Branch Council resolved to replace the Environment Special Interest Group with the Environmental Management SIG to better reflect the scope of policy positions that the EHA could focus on in relation to Environmental Management issues.

One of the first tasks of the SIG was to write to the Minister for Environment and Climate Change, the Hon. Gavin Jennings, MLC, on the release of the Code of Practice - Onsite Wastewater Management without proper consultation with relevant stakeholders and in particular Environmental Health Practitioners.

The result of this action was partly positive as it prompted a review of the new Code by the EPA and the inclusion of EHA and other stakeholders in its revision. The Code is currently being amended to a 3rd version, which will be available as a draft for review by EHA members.

SIG members have also worked closely with the Water Unit at EPA in an effort to strengthen the partnership between EHA and EPA in relation to a collaborative approach to Onsite Wastewater Management policy.

In December 2008 some of the Environmental Management SIG members attended a SIG planning day, which laid the foundations of a new Action Plan for the SIG. The new Action Plan, which was adopted by the SIG in June 2009, has a number of strategic objectives. These objectives focus on the importance of the advocacy role of the SIG in relation to environmental management.

Ray Christy MEHA
Environmental Management Special Interest Group Co-Convenor

Branch Reports

Victorian Branch (continued)

Regional Group Reports

North Eastern Regional Group

The Hume Region situated in North East Victoria experienced a challenging 2008-2009. The region was fraught with fires, flu pandemic and a fantastic snow season which made for a very busy time for Environmental Health Officers in the region, particularly for officers in the fire affected shires of Murrindindi, Mansfield, Alpine, Mitchell and Indigo. Despite these events we continued to hold regular quarterly meetings discussing a broad range of issues. The group found the meetings important to debrief on the major events that had occurred around the region, and lend each other their support, ideas and experiences.

It was great to see the overwhelming support and assistance that other Environmental Health Officers from the region and surrounding regions gave to help out fire affected areas. The regions are now faced with rebuilding and the challenge is to continue assistance into the coming months and years.

Benalla hosted the Onsite Wastewater Management Conference in October 2008, which was very informative and a great opportunity for rural and metropolitan councils to discuss their issues surrounding wastewater and greywater and learn from the experts.

One of the group's frustrations and a regular topic at meetings was the relationship between Local Government and the EPA. A representative from the EPA recently attended one of our meetings and after some robust discussions we are now working together to achieve positive outcomes.

Ski Resorts of Falls Creek, Buffalo, Hotham, Lake Mountain, Mt Stirling and Mt Buller all fall within the responsibility of Councils in the Hume Region. Most of these resort areas are described as a "nightmare" to the Environmental Health Officers dealing with them as current arrangements for these Alpine Resorts are not ideal and pose a potential public health disaster. The new Public Health and Wellbeing Act places the responsibility of Alpine Resorts under the control of the nearest municipality which will impact on some councils who do not have the resources.

Councils in the Hume Region have found it difficult recruiting environmental health staff, positions are regularly advertised and not readily filled which impacts on service levels.

I wish to thank all members of the EHA Hume Region for their participation and support during 08/09. I would particularly like to thank Leanne Wells (REHO) for all her support and hard work over the years. Leanne has taken up a position with DofH in the Drinking Water Unit and we wish her all the best.

Suzanne Walker MEHA
North Eastern Regional Group Secretary

Central Highlands Regional Group

The Central Highlands Regional Group has had another successful year meeting quarterly, including 2 meetings combined with the North Western Group. In February we joined with the North Western Group to farewell Bruce Pollard on the eve of his latest attempt at retiring.

At the other end of the career spectrum Kate Bertoncini from Ballarat won the award for the Best Performing final year Student at Latrobe University Environmental Health Course - well done Kate.

Given the number of Councils in our catchment and the small numbers of EHPs employed, we get a good turn up and try to spread the meetings over the region to spread the travel burden.

Our relationship with the regional office of the Department of Health continues to prosper and the group is grateful to Tom, Stephen and Christelle for their support. Faye Paloukos, from Moorabool spent some time with DoH assisting Councils to write their Flu Pandemic Plans. Thanks Faye for your hard work.

Maddocks presented a talk on the Food Act and Stephen Gilligan from the Plumbing Industry Commission spoke about their role and how we can support each other. We have also had support from the Food Analysts and EPA and their contribution is much appreciated.

Because members are mostly from small workplaces, often sole operators, the exchange of ideas around our specific issues is always a valuable part of the meeting and of mutual benefit.

We look forward to the new year of operation with confidence that our group provides a supportive forum for us all.

Alex Serrurier FEHA
Central Highlands Regional Group Chair

Branch Reports

Victorian Branch (continued)

Northwest Regional Group

The North West Region continued to hold quarterly meetings. Meeting venues were varied and included St. Arnaud, Swan Hill, Echuca and Kerang. The Swan Hill and St Arnaud meetings were combined with the Central Highlands Regional Group.

Meetings were generally well attended with a good representation of all shires within the region. Discussions at the meeting included changes to the Food Act and the introduction of the Health and Wellbeing Act, bushfire recovery, heatwave strategy, Pandemic plans, staff movements, waste water, immunisation, complaints, food safety and the upcoming Symposium.

The following organisations/departments had guest speakers attend meetings to discuss issues of relevance to the regions Councils.

- The Plumbing Industry Commission – updates to the Plumbing Code that affect waste water irrigation systems.
- Maddocks Public Health and Wellbeing Act – Presentation on how changes to the Act would impact on Environmental Health Officers.
- DHS- Topics covered included Bushfires, swine flu, pandemic planning, arbovirus, Food Act and Health Act changes, DHS/EHA Food legal course, Emergency Management Course, Drinking water guidelines.

Many thanks to all involved both in hosting and participating in the meetings. The opportunity for members to share experience, advice and resources is invaluable. I look forward to continuing be part of a supportive, professional group when we meet in 2009/10.

Tracey Watson MEHA
Northwest Regional Group Secretary

Northwest EHO Network

The Northwest EHO Network had a pleasing year, with good attendance and support at meetings as well as being responsible for organising the Victorian Conference which was held on 17 and 18 November in Eltham. There has been some productive networking by EHOs as well as an opportunity for EHOs to exchange information and ideas. Meetings were held at the City of Banyule, Hume and Darebin.

Guest Speakers were invited to make a presentation at each meeting on a selected topic and they included;

- Leanne Johnson who was working on secondment at the Food Unit, DHS gave an update on proposed Drinking Water Guidelines for Commercial and Residential Premises on Private Water Supplies, the Food Atlas, Food Act Review and Food Sampling Update.
- Allen Peacock from Energy Safe Victoria presented on the new gas safety legislation and how it applies to events.
- Ralph Mertins Team Leader from the City of Whittlesea and Warren Brooker Manager of Building Services at the City of Darebin spoke on bushfire recovery that affected the Whittlesea and Nillumbik municipalities.
- Dr Kylie Warner from DTS Laboratories spoke on Food Allergens.

A regular update from REHOs has been included at each meeting and updates from EHOs who belong to the various SIGs. Thanks to EHOs for their support and attendance at meetings and we look forward to another busy and successful year.

Angela Minglis MEHA
Northwest EHO Network Secretary

Branch Reports

Victorian Branch (continued)

Barwon Southwest Regional Group

The Barwon South West Regional Group has covered a broad spectrum of topical environmental health related issues over the past year.

At our meetings we have been fortunate to be able to bring together a diverse group of people who have imparted their knowledge and expertise. The knowledge that has been shared has undoubtedly helped us to become more informed and aware of our obligations.

A key part of the regional meetings is the guest speaker, with the following being a brief selection of the presentations provided:

- Philip Hunter, Consumer Affairs Victoria. This talk focused on how Consumer Affairs can work alongside environmental health practitioners in the area of residential tenancy disputes and complaints.
- Marg Leutton, Local Government Liaison Officer, Glenelg Hopkins Catchment Management Authority. Marg provided us with a general overview of the role of the catchment authority with particular attention on wastewater and its proximity to catchments.
- Stewart Anderson, Manager Environment and Community, Safety Colac Otway Shire. A windswept presentation took place on the edge of Lake Colac in Mid August. The complex management regime involving numerous stakeholders which highlighted the importance of round table discussions.

There have been obvious challenges that have faced us this year; however, the support and turnout to the meetings has been consistently high. In addition to this I would sincerely like to thank the attendees, the organizers and guest speakers who have allocated their time and effort in ensuring all of this happens.

I look forward to seeing you at our next regional meeting; I heard on the grapevine the catering is going to be pretty good!

James McDonald MEHA
Barwon South West Regional Group Secretary

Gippsland Regional Group

It has been a very busy year for the Gippsland Regional Group with a number of major events taking place in the area. In amongst these events were quarterly meetings, which provided an excellent opportunity for informal debriefs.

Arguably the most memorable of the events was the devastating bushfires of January/February. No municipality in Gippsland was left unaffected by the magnitude of this disaster – both directly and indirectly. The camaraderie among members of the profession was inspiring. Much appreciation is extended to those Health Officers (both within and external to Gippsland) who volunteered their time and energy to those municipalities that were hit hardest by the fires. Their efforts had a significantly positive impact on the response and recovery work that followed.

There were a number of events of note that attracted the attention of Food Vendors from all over the country. Radio station Triple J held their One Night Stand Concert in Sale, which was very well attended. Another such event was the Gippsland Emergency Relief Concert held in Latrobe City. This attracted people in excess of seventeen thousand and was considered a great success.

There has been some EHOs leave the region, and there have been a few positions filled, including a new REHO. Guest speakers at the Regional Meeting included representatives from the Plumbing Industry Commission, Environmental Services Group SGS, OMIC, and EnergySafe.

The Gippsland Immunisation Reference Group (GIRG) has discussed a wide range of topics over the past year, from Immunisation Awareness Month to Mass Vaccination. The group's endeavour for a consistent approach to the issues surrounding immunisation is an effective means of promoting vaccination to the public.

There are strong relationships being forged between the municipalities in an effort to produce municipal pandemic plans that are consistent across the region. These plans will assist in a united effort to address the threat posed by pandemic illness to the population of Gippsland.

I believe that all members have found an energy in working together that would not have been found, if not for the strong relationships that exist in the Gippsland area. We are looking forward to the challenges and triumphs that the next year is bound to bring.

Elizabeth Garlick
Gippsland Regional Group Secretary

Branch Reports

Western Australia/Northern Territory Branch

2008-2009 showed that the WA/NT Branch of EHA had a good level of participation by the Branch Council and its membership in a range of business areas. Thanks again to Immediate Past President Darren Ponton for his recent term as Branch President which finished in November 2008 when he became a Director of EHA. Thanks also to the Branch Council for their support and actions at various levels within the Branch over the past year.

In May 2009 Valarie Filevski achieved a full year of service for EHA WA/NT Branch and has enjoyed her role and approach to member services. I look forward to working with Valarie in the years ahead.

Branch Council meets monthly via teleconference to accommodate the wide distribution of the members on Branch Council from WA and NT. The new Branch Council was formed at the Branch General Meeting held in the morning of day two at the 63rd Branch Conference in April 2009. We saw an experienced and long serving member depart on extended leave, Phil Swain, and congratulate him on his long service to the Branch and the Environmental Health profession and wish him well for the future. Branch Council maintained a good mix of competent individuals and warmly welcomes some new Councillors to take up the mantle. The Branch Council operated for the period (May 2008 – April 2009) between Branch General Meetings with the following people:

Joseph Zappavigna	– Branch President (City of Fremantle)
Darren Ponton	– Vice President and Director (City of Canning)
Toni Hannelly	– Branch Councillor (Curtin University)
Colin Dent	– Branch Councillor (Shire of Capel)
Ross Wells	– Branch Councillor (City of Gosnells)
Peter Stevens	– Branch Councillor (Shire of York)
Sarah Curnow	– Branch Councillor (Pilbara Public Health Unit)
Kelly Fewster	– Branch Councillor (new – WA Shire of East Kimberley)
Justin Strange	– Branch Councillor (new – WA Shire of Mundaring)
Kirstin Ross	– Branch Councillor (new – NT Batchelor University)

Branch Council wants to continue the tradition of appointing two student representatives (Non-Voting) to the Branch Council, to be elected from the student body at Curtin University of Technology. We are keen to see the continued involvement and increased liaison that the student representatives bring to the Branch Council. In forthcoming Branch Councils, I would like to see members who are EH Managers in Local Government or State Government fill any future vacancies that might arise as they inevitably do. Personally I believe that I have only one or two years of service left in me before I retire from Branch Council.

Activities

In early September 2008, EHA presented the Professional Excellence Award to Mark Bishop for his contribution to food safety management, environmental health leadership and economic analysis of environmental health interventions. At the same time the City of Swan EH Team was awarded a Certificate of Appreciation for their support of Mark's professional contribution. Mark was recognised by Standards Australia as winner of a business process redesign award. The Professional Excellence Award is presented to a member who performed a service, project or research which esteems him/her in the profession, above what would be normally expected of his/her position.

Later in September 2008, EHA members participated in the Premier's Physical Activity Taskforce 'Open Space' facilitation workshop at Technology Park to raise key topics and contribute to discussions around priorities for the Physical Activity Taskforce, working in collaboration with Local Governments and other sectors to get our communities physically active. The Physical Activity Taskforce Strategic Plan and Implementation Plan is the key document in use and can be found at http://www.beactive.wa.gov.au/aboutus_what.asp as well as the Walk WA Strategy found at http://www.beactive.wa.gov.au/whatswalkwa.asp and the Local Government Strategy found at http://www.beactive.wa.gov.au/localgov.asp with many other resources at www.beactive.wa.gov.au.

The Entertainment Precinct Forum was held at Central TAFE, East Perth in November 2008. The forum presented a case for nominating a progressive noise management framework for entertainment venue noise typically impacting on inner city residences in CBD and town centres where licensed venues predominate. Frank Henry from Brisbane City Council and author of the Fortitude Valley Music Harmony Plan, led a forum of WA industry representatives in working out how WA entertainment precincts can work in harmony with increasing residential densities in inner city areas, whilst maintaining the vibrancy and cultural attractiveness of these areas. Representatives from local and state governments, planning agencies, cultural and arts and the entertainment industry stated their views on harmonising noise and planning legislation to allow residential development in entertainment precincts and what needs to be done in relation to current community attitudes, changes to noise laws, changes to town planning policies and liquor licensing controls. The seminar content was valid for urban and regional city centres.

EHA participated in a number of Metropolitan Food Monitoring Group meetings during 2008-2009. EHA Branch Councillors attended as many Regional Group meetings as possible or presented reports of EHA activity to those meetings.

Branch Reports

Western Australia/Northern Territory Branch (continued)

EHA also participated in the Australian Council on Smoking and Health (ACOSH) Council meetings in 2008-2009 where smoking prevention strategies are discussed. The Council saw the WA private member's bill introduced to amend the Tobacco Products Control Act to include various smoking prohibitions as the main item of business.

At the Perth Convention & Exhibition Centre in February 2009, EHA participated in the Preventative Health Taskforce consultations for the national discussion paper "Australia: the healthiest country by 2020". Also in February 2009, EHA members attended and participated in the enHealth annual roadshow at Grace Vaughan House to familiarise EHPs with evidence-based practices, to improve awareness and knowledge of the National EH Strategy and support workforce development of EHPs.

EHA attended the first birthday celebrations in early March 2009 of the Public Health Advocacy Institute of WA at Curtin University Health Research Campus, Shenton Park. Then in late March 2009 PHAIWA had the public health open forum immediately before the EHA Branch Conference.

In early April 2009, EHA held its 63rd Branch Conference 'Redesigning Environmental Health' for two days at Esplanade Hotel, Fremantle. A number of post-conference workshops were also well attended.

Sadly in early May 2009, EHA branch members attended the funeral of former long serving Executive Officer Joyce Sunderland.

Later in May 2009, EHA attended the UWA Centre for Water Research consultation to consider strategies on reconnecting the community with the main coastal river systems in the Perth catchment basin.

The last EHA event held in 2008-2009 by the WA/NT Branch was in mid June 2009 at the Canning River Ecocentre presenting the topic of Clandestine Drug Laboratory Seminar for EHPs. This was well attended and presented by a number of key stakeholders, including Department of Environment and Conservation, WA Police, the Chemistry Centre of WA, ToxFree industrial cleaning company, McLeods Lawyers and Local Government officers.

Thanks again to all those who have assisted EHA WA/NT Branch to remain the premier EH organisation relevant to EHPs and I look forward to your continued support and membership in future years

Joseph Zappavigna MEHA
WA/NT Branch President

AFSA

Australian **food safety** assessment

AFSA and the **EHA** Food Safety Standard of Practice were launched in September 2003. Developed by the Food Management Working Group – SA Branch, these tools have been developed to promote accountability and consistency in the monitoring of food safety standards by Environmental Health Practitioners.

Should you wish to investigate the possibility of using our professional tool "Australian Food Safety Assessment Pads" for the inspection of food premises, please go to our website:**www.eh.org.au** and click on ***Professional Tools*** then **AFSA** or alternatively the direct link is: **http://afsa.eh.org.au**

There you will find all the information required by clicking on the standard of practice and downloading it, an example of the inspection sheets is also shown on page 7 of the document. This product is available as a Generic Pad, Designer Pad (with your organisational logo) or in an Electronic format.

While **AFSA** has become well established as an **EHA** professional practice resource, there is scope for growth and, in keeping with the goal of accountability and consistency of practice amongst the profession; non-users are encouraged to consider the benefits that **AFSA** can bring to their workplace

AFSA and the **EHA** Food Safety Standard of Practice assist EHPs and agencies by providing:

- Policies and technical guidance
- A food safety assessment tool
- A method for establishing assessment frequency

Available as hardcopy with or without your Company Logo or PDSA

CONTACT: Mina Labaz
Executive Officer, Environmental Health Australia SA Branch
Box 168, Unley SA, 5061
Tel/Fax: 08 8271 9885
www.eh.org.au/index.php (click on professional tools)

EHA

ENVIRONMENTAL HEALTH AUSTRALIA

AFSA - A fresh approach to **food safety**

Other Activities

Australian Food Safety Assessment (AFSA)

AFSA and complementary Food Safety Standard of Practice were launched in September 2003. Developed by the Food Management Working Group, these tools promote accountability and consistency in the monitoring of food safety standards by Environmental Health Practitioners.

To use our professional tool "Australian Food Safety Assessment Pads" for the inspection of food premises, visit http://afsa.eh.org.au/.

AFSA is available as a Generic Pad, Designer Pad (with your organisational logo) or in an electronic format.

AFSA is well established as an EHA professional practice resource and National sales have increased during 2008-09. There is scope for further growth and, in keeping with the goal of accountability and consistency of practice amongst the profession; non-users are encouraged to consider the benefits that AFSA can bring to their workplace. Mina Labaz, Executive Officer (SA Branch) welcomes your queries about AFSA, Designer AFSA and eAFSA, phone (08) 8271 9885, email mina.labaz@eh.org.au

Ian Hawkins MEHA
Chairperson, Food Management Working Group

Other Activities

FoodSafe®

In 2006 the AIEH marked 10 years, 10 thousand sales, and over $1 million in revenue for FoodSafe®!

FoodSafe® was developed by EHA (formerly AIEH) in 1996 and underwent a revision in 2003 to align with the national Food Safety Standards. FoodSafe® PLUS is the 'second step' for food businesses already holding FoodSafe® certification and who now want to develop their own food safety program to manage their food safety risks.

FoodSafe® PLUS applies the principles of hazard analysis critical control point (HACCP) to guide the food business through the FoodSafe® PLUS Manual to develop their own Quality Policy Statement. Both FoodSafe® and FoodSafe® PLUS are unique in the marketplace, as they are competitively priced and allow the business to implement the program at their own pace, with the assistance of EHPs.

FoodSafe® is an in-house training program that brings basic food hygiene information directly to food handlers. Once the food handlers have undergone basic food safety training and demonstrated that they have implemented the food safety practices, an Environmental Health Officer recognises this achievement by awarding the FoodSafe® Certificate and window sticker.

Demand for the Foodsafe® DVD which now includes a menu format and additional material, such as the 'Welcome to FoodSafe®' presentation in English, and six (6) Asian languages, was sufficiently high for the EHA to sell the DVDs separately to existing customers to replace the old VCDs and VHS cassettes.

In 2008, the EHA Board accepted a report from the CEO and FoodSafe® Committee to develop an on-line learning version of the FoodSafe® program. Larger industries, such as facility management companies and child-care chains, now demand this on-line format for their geographically dispersed food handling staff. The on-line learning website is operational and active.

Overall performance of FoodSafe® in 2008-2009 indicated that it suffered the same fate as the international economy and budgeted sales were not reached! I am happy to report that a small profit was garnered from a range of sales in the last year. EHA looks forward to stronger sales in the coming year and further promotion is encouraged.

The FoodSafe® Committee advocates the 'FoodSafe® Aware' program which is designed to acknowledge businesses that support the food industry and train staff in food safety to the level required in FoodSafe®. So far requests have come from commercial cleaning and pest control companies servicing the food industry, showing that recognition and knowledge of the FoodSafe® logo is widespread in the industry. The release of 'FoodSafe® Aware' is awaiting development of a licensing arrangement for corporate customers, related to the on-line learning system.

Darren Ponton MEHA
Chair, FoodSafe® Committee

Other Activities

I'M ALERT Online

Local Governments can make an annual subscription to I'M ALERT Food Safety Online Training and have the program linked to their Council website. The training pages are co-badged with EHA and Local Government logos as are all print-outs from within the program (e.g. temperature recording sheets, cleaning schedules, certificate of training etc).

New subscribers are provided with co-badged marketing materials including flyer and print media template to assist with marketing the program to their food businesses. Food handlers visit their Council website and follow the links to conduct the food safety training free of charge, as many times as they wish. Feedback such as the following testimonial has been very positive, *"I found the I'M ALERT Online Food Safety Program very useful as a refresher for myself and now put all our staff through the program. Since introducing this training, we have found a significant improvement in food handling procedures."* Perisher Ski Resort – NSW.

Environmental Health Australia is the exclusive marketing and distribution agent, receiving royalties on sales of the product, believing it to be a very reasonably priced tool affording Local Government and Organisations the opportunity to offer inexpensive training to all food business proprietors and food handlers in their jurisdiction.

Waikay Lau MEHA
Chief Executive Officer

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Meeting HACCP Guidelines

testo Pty Ltd

HACCP makes an important contribution to the protection of the consumer's health throughout food production, processing, transport, storage and point of sale.

Testo manufactures a wide range of certified and effective instruments for meeting HACCP standards.

For infrared temperature measurement, testo offers the *830-T1* and the *826-T3*. The *830-T1* is a fast infrared thermometer with one point laser sighting and 10:1 optics in an ergonomic pistol design. It has an adjustable Emissivity Factor (between 0.2 and 1.0), fast reading and displays the current and hold values.

The testo *826-T3* offers a quick non-contact and core temperature measurement in the one instrument. The surface temperature is measured with infrared, while the measuring tip on the penetration side is used to determine the core temperature.

For core temperature checks testo offer the *106*, *105*, and the cost effective testo *926* instruments. The testo *106* thermometer has a thin, robust measuring tip, well suited for fast core temperature monitoring in areas such as gastronomy, catering, large kitchens and supermarkets.

The testo *105* is a more robust instrument with interchangeable measurement tips such as the frozen food "corkscrew" tip and is better suited for use in refrigerated storerooms.

The fast-action, efficient temperature measuring instrument testo *926*, has the option of a TopSafe protection case which renders it insensitive to dirt, therefore making it the ideal partner for large-scale kitchens, hotels, restaurants or the food industry. There are also a wide range of probes available, making it highly flexible.

Temperature is not the only parameter important for meeting HACCP requirements. pH plays a vital role in food safety, and testo has a range of HACCP certified pH instruments for every manufacturer's needs.

For more information on meeting HACCP guidelines, or testo instruments please visit their website: www.testo.com.au.

Food Safety: Temperature data analysis and the HACCP system

John Robson and Roli Varma
Robson Laboratories, Australian Capital Territory

In the food service industry, rethermalisation units provide a costeffective method of preparing meals having both hot and cold food items. These two compartment units are able to maintain cold meals at cool room temperatures on one side and the other to reheat previously cooked food to an acceptable temperature in approximately 50 minutes. The application of these units has proved successful where large quantities of food are served.

The findings of a recent study (National Risk Validation Project, Ref: Food & Safety Hygiene, November 2002) assessed highrisk food businesses as being consistently linked with food-borne illness outbreaks. The three most frequently occurring hazards related to:

- Faulty temperature control
- Contamination via inadequate handling, such as poor hygiene, and
- Contaminated raw material.

As a consequence of these findings the Australian and New Zealand Food Regulation Ministerial Council (ANZFRMC) has made the implementation of food safety programs mandatory in the high-risk food sectors. Compliance with these program requirements is to commence two years after amendments to the Food Standards Code being gazetted.

These amendments were gazetted on 5 October 2006 as The Australia New Zealand Foods Standards Code – Amendment No. 88 – 2006, Standard 3.3.1, Food Safety Programs for Food Service to Vulnerable Persons. Implementation of the Hazard Analysis Critical Control Point (HACCP) system as a means of establishing food safety is regarded as being essential in situations where potentially hazardous food is served to vulnerable populations such as in hospitals and nursing homes.

A Critical Control Point in a system or process is "a step at which a control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level".

One of the most important Critical Control Points related to food management is temperature. Therefore, verification of acceptable temperature control of food, delivered to vulnerable populations, is extremely important to facilitate compliance with the new food standards and food safety management systems. The effectiveness of HACCP food safety systems is assessed during the Auditing and Accreditation process.

Examples of typical questions asked during the auditing are:

- Have the Critical Control Points for each significant hazard been identified and transferred to the Hazard Audit Table?
- Have Critical Limits been established for each preventative measure?
- Have monitoring procedures been developed for each preventative measure?
- Is the frequency of monitoring sufficient to provide a high level of assurance that the process is under control?
- Are monitoring records kept and reviewed by the appropriate personnel?

The HACCP system was developed in 1996 and is preferred by food safety professionals around the world. It is widely viewed as critical to food safety, as it helps prevent food contamination, by identifying potentially unsafe links in the food processing chain. It is a system that manages the risk associated with food safety aspects of production.

This system is based on seven principles identified in the Codex Guidelines for the Application of Hazard System adopted by the 20th Session of the Joint Food and Agricultural Organisation and World Health Organization Codex Alimentarius Commission 1993. It involves:

- Examining and analysing every stage of a food-related operation to identify and assess hazards;
- Determining the 'Critical Control Points' at which action is required to control the identified hazards;
- Establishing the Critical Limits that must be met at, and procedures to monitor, each critical control point;
- Establishing corrective procedures when a deviation is identified by monitoring; and
- Documentation of the HACCP system and verification procedures to establish that processes are working correctly, i.e., an approach to process quality control and food safety use in the food industry.

During a HACCP audit, an auditor might ask questions on particular aspects of your control system and its application. Auditors will be primarily looking to see that systems conform to the Codex requirements (Codex Alimentarius Commission, 1996: Annex 1 to Appendix II – ALINORM 97/13, pp. 66-76), in the application of the principles and the following of developmental steps. Compliance documentation will be necessary.

During 2003 and 2004, work was undertaken within the Food Services Department of Canberra Hospital to assess the potential to simplify the presentation of the data generated by temperature loggers monitoring their kitchen rethermalisation units. A software program was developed to simplify and enhance the presentation of the collected data. Originally, 2-3 hours were required to process, present and analyse

Food Safety: Temperature data analysis (continued)

the data. Our program has reduced this time to less than 10 minutes. A prototype of the software program was installed in 2004.

Due to the application's success, the Food Services Department of Canberra Hospital has confirmed the long-term implementation of the software application to generate the required food safety Management Reports.

With the increasing importance of computer technology and its application in the field of Quality Control, our initial assessment of this innovative software highlighted significant time and associated cost savings. As well as this reduced labour cost, the software also provides the essential time-history temperature information, which fulfils the requirements of the recently introduced mandatory food safety programs.

A unique feature of the software is that it produces an exception report, indicating potential non-compliances (See Figure 1). An additional feature of the software is archiving of raw data on a nightly basis, so that where reports have indicated a concern, the data may be reviewed to reveal precise trends in temperature change. Further, during power failures, the battery within the data logger permits the continuation of temperature records and data storage for more than a day, ensuring valuable data are not lost.

This particular monitoring system completed its first calibration compliance testing in January 2006.

See Tables & Graph next page…

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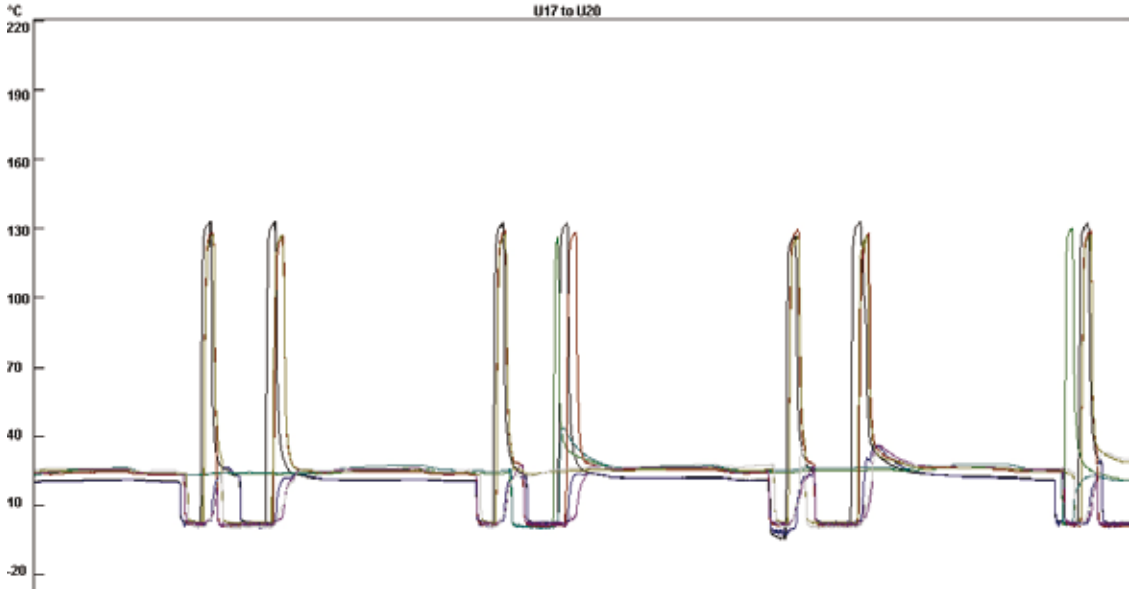
Food Safety: Temperature data analysis (continued)

Figure 1: Top - Raw Data at 2-minute intervals, Middle – Previous presentation of data requiring individual graph analysis, Bottom – Software Application providing exception report.

Raw data - down loaded from temperature logger

Date	U17 Hot °C	U17 Cold °C	U18 Hot °C	U18 Cold °C	U19 Hot °C	U19 Cold °C	U20 Hot °C	U20 Cold °C
21/11/2006 16:37:37	91.9	2.4	130.6	2.0	1.8	-0.7	26.0	27.0
21/11/2006 16:39:37	102.8	2.7	130.8	1.5	1.5	-0.6	26.0	27.0
21/11/2006 16:41:37	106.9	1.8	130.9	1.6	1.9	-0.7	26.0	27.0
21/11/2006 16:43:37	113.9	2.1	131.2	1.5	1.8	-0.3	26.0	27.0
21/11/2006 16:45:37	120.6	2.6	131.4	1.5	2.0	-0.4	26.1	27.0
21/11/2006 16:47:37	127.5	2.1	131.4	1.2	2.1	-0.3	26.1	27.0
21/11/2006 16:49:37	128.5	2.0	131.5	1.6	2.1	-0.3	26.1	27.0
21/11/2006 16:51:37	129.1	2.5	131.4	1.6	2.4	-0.1	26.0	27.0
21/11/2006 16:53:37	129.8	2.8	131.5	1.8	2.2	0.1	26.0	27.0
21/11/2006 16:55:37	130.5	2.1	131.5	1.8	1.9	0.3	26.0	27.1
21/11/2006 16:57:37	131.2	2.4	129.5	2.0	1.8	0.6	26.0	27.1
21/11/2006 16:59:37	131.8	2.5	125.2	1.6	1.7	0.6	26.0	27.0
21/11/2006 17:01:37	132.1	2.4	121.0	1.4	1.5	0.7	26.0	27.0
21/11/2006 17:03:37	132.3	2.5	101.6	1.7	1.6	0.6	26.0	27.0

Graphed raw data - Individual graph analysis required



Section of management exception report - analysis (automated)

Management Report - Page 2 of 2

DINNER: Data Logging Records - 21/11/2006

Temp Range	HOT	0 to 4 (-20ms)	0 to 4(start)	69 to 110	117 to 129	123 to 130	124 to 132	119 to 132(end)
Temp Range	COLD	0 to 4(-20ms)	0 to 4(start)	0 to 4	0 to 4	0 to 4	0 to 4	0 to 4(end)
52046	Unit	16:10	16:30	16:40	16:50	17:00	17:10	17:20
DEL - 4	Hot17	2.3	2.3	103.0	128.5	131.8	133.2	133.5
	Cold17	2.1	2.5	2.6	3.2	3.3	3.8	3.2
		15:45	16:05	16:15	16:25	16:35	16:45	16:55
9G - 5	Hot18	0.8	1.7	114.4	127.6	130.2	131.4	131.5
	Cold18	1.4	1.5	1.5	2.2	2.8	3.7	3.1
		16:45	17:05	17:15	17:25	17:35	17:45	17:55
6E - 1	Hot19	2.0	1.7	70.5	120.7	125.7	127.4	127.9
	Cold19	2.5	1.6	2.7	3.1	3.8	3.6	4.2
		16:40	17:00	17:10	17:20	17:30	17:40	17:50m
13B-2	Hot20	26.2	26.1	26.1	26.02	26.0.	26.0	226.0
	Cold20	27.1	27.1	27.1	27.1	27.1	27.0	27.0

Troubled Waters: Climate change raises the bar on Australian water reform

Too many Australians still pin their hopes on the mantra "When the rains come again..." – rather than recognising the reality in their rain gauges, dams, rivers and bores, a major new report finds.

The National Water Commission has warned that we must go faster and further in changing the way we use and care for our precious water resources.

Australian Water Reform 2009 – the Commission's second major review of the state of Australia's water management – finds that Australia is failing to meet the challenge of emerging water scarcity.

This two-yearly assessment is a regular report on progress under the National Water Initiative – the agreement by Australian governments to make our water use more efficient, secure and sustainable. The report details significant and heartening progress towards water reform in many areas – but concludes that, overall, reform has been too slow and fragmentary to keep pace with the changing climate scenario.

On the positive side, there has been some progress in the past two years, in knowing how much water we have, in understanding how to manage it wisely, and in the emergence of an efficient water market. However, in many places water is still seriously overallocated and overused. As a result, the Australian landscape is not getting its fair share of water, and many of our environmental assets are in a critical state.

Water planning

Water planning holds the key to Australia's water future. It involves understanding how much water we have and how it can be best shared between the economy, the community and the environment. Australia's states and territories have committed to completing 195 water plans. So far, they have only completed 112 plans. Only 22 new plans have been introduced in the last two years.

This situation is critically inadequate. We need a renewed sense of urgency about rolling out good quality water plans by local authorities.

Also many water plans are weak when it comes to the social and environmental uses of water. There is, in particular, a need to ensure enough water is returned to the environment to protect the Australian landscape and its iconic places.

The Commission is concerned that many plans fail to properly take account of likely future drying in the climate. There is a lack of openness about telling the community what changes in water availability really mean, especially when it comes to how water plans will deal with trade-offs between competing uses. There is also a failure to engage Indigenous people in water planning.

One resource

Progress in mapping the links between surface and groundwater and building them into plans has been slow. Although knowledge of Australian groundwater resources is patchy and often poor, there are clear signs in some areas that they are being emptied faster than nature can replenish them. The drying climate will make this worse.

In view of this, the Commission says that all groundwater should be regarded as connected to surface water, unless there is good scientific evidence to the contrary. The report also recommends that all bores should be from now on be licensed and metered, with priority for those systems known to be heavily-exploited.

Ending over-use

Overallocation and overuse continue to bedevil efforts to put water management on a planned and sustainable footing. As a result, native ecosystems are dying, surface and groundwater water quality and supplies are declining and irrigation industries and their communities are struggling, Unfortunately, there remains a fundamental lack of agreement as to what overallocation and overuse mean – and this is sapping confidence in Australia's ability to manage its water well.

The Commission sees as a serious problem the fact that in many places where water is overallocated, the community has not been informed – and needs to be, so they can be returned to sustainable levels. For this reason, the Commission has urged the Council of Australian Governments to speed up its development of guidelines for environmentally sustainable extraction, to bring greater certainty both to irrigators and the Australian landscape.

A thirsty landscape

Without water even the drought-hardy Australian landscape dies – and many of its iconic places are now at great risk. Widespread and prolonged drought has resulted in critical environmental degradation in the Murray-Darling Basin. While the ideal of giving a share of water to the environment is honoured in most water plans, its practical implementation often lags far behind. Indeed, many plans still lack tools for making good decisions about where, when and how much to water.

According to the Commission, all water jurisdictions should state clearly the environmental outcomes they aim to achieve, and how their water use will achieve them. In times of extreme scarcity, any decision to take water away from the environment must be publicly explained and justified.

The Commission strongly supports buybacks, large and small, to augment environmental water and is critical of state barriers to water trade that undermine this. It wants environmental water to be registered and reported in a consistent national fashion, and a

Troubled Waters: Climate change raises the bar (continued)

national scientific approach to list the ecosystems most in need of watering.

Trading water

The water market remains the centrepiece of national water reform. However, Australian Water Reform 2009 finds that the 4 per cent limit on water being traded out of certain irrigation areas in a year has "impeded the use of buyback programs, unfairly and arbitrarily penalised willing sellers...distorted patterns of water trade...inhibited structural change and complicated interstate collaboration".

Adjusting to change

Structural adjustment is pivotal to water reform. The Commission urges that all artificial barriers, impediments and subsidies that interfere with this process must be removed, as they only protract the pain and delay the arrival of a truly sustainable water system and viable regional economies. This will allow users to make their own best decisions about whether and when to buy or sell water.

The unavoidable fact for Australia's irrigation industry is that there will probably be a lot less water available in future for irrigated agriculture. It is vital for irrigators to know what they are facing, so they can make plans accordingly.

Conclusion

While there have been significant improvements to methods for determining and monitoring environmental assets, further work is needed to more clearly link environmental water requirements to water planning objectives. In general, water plans need to better incorporate climate change, interception activities and surface-groundwater connectivity.

The Murray-Darling Basin Plan provides an historic opportunity to put in place systematic and transparent processes to identify environmental outcomes and prioritise water to meet those outcomes in the MDB.

Further and faster reform is also essential if we are to give Australia's rivers and wetlands their fair share.

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Aerated Wastewater Treatment Systems: Do they treat wastewater to the EPA Victoria approved standard?

Tyrone Marini
Ballarat City Council

The Ballarat City Council has had increasing interest from the community in regard to reusing on-site secondary treated effluent for surface irrigation, particularly on their gardens. This interest has increased over recent times due to the drought and current water restrictions.

This paper examines the performance of aerated on-site wastewater treatment systems (AWTS), which are approved by the Environment Protection Authority Victoria (EPA Victoria) to dispose of the treated effluent on the surface. Due to environmental and public health concerns, the Ballarat City Council does not permit any wastewater effluent to be disposed of via surface irrigation.

The effluent from 14 AWTS and one sand filter located in the Ballarat municipality were sampled over a two-week period for compliance with the Environment Protection Authority Victoria effluent quality standards for secondary treated onsite sewage. The water quality parameters tested for this research were biochemical oxygen demand (BOD) and suspended solids (SS). The samples were collected over five days from 31 July 2007 to 8 August 2007.

The results of the survey indicated that of the 15 systems sampled, four complied with the EPA Victoria effluent standard for both BOD and SS equating to a 73% failure rate. This result supports the Council's position on surface irrigation of treated effluent. The results highlight the need for further investigation into the performance of AWTS including the owner's knowledge of AWTS and their maintenance requirements.

The Ballarat City Council's Environmental Health Unit has been receiving increasing interest and pressure from the local community for alternative reuse options for their onsite sewage effluent. This pressure has been exacerbated by the current drought and water restrictions. From 1 November 2006, the Ballarat water supply systems moved to the highest level of water restrictions, Stage 4, which restricted all outside garden water use (Caldwell 2006). Ballarat's water supply is at an all time low, with a current capacity as at 16 October 2007 of 11.9% (Central Highlands Water 2007).

These restrictions have provided an impetus for the local community to explore alternative water sources to sustain their gardens.

According to Ballarat's Environmental Health Officer, most enquiries have centred on surface disposal of onsite sewage effluent directly to the garden (P. Garry, November 2007, Ballarat City Council, Pers. Comm.).

The only effluent quality that has been approved by EPA Victoria for surface disposal is secondary treated effluent. There are a range of secondary treatment systems on the market and these include aerated on-site wastewater treatment systems (AWTSs) and sand filters (EPA Victoria 2003a). However, it is Ballarat City Council policy not to permit any treated sewage (domestic wastewater contaminated by faeces or urine) to be disposed of by this method and it requires that all treated wastewater is to be disposed of below ground (W. Swards, November 2007, Ballarat City Council, Pers. Comm.).

The manufacturers of AWTSs specifically market their product as being designed as safe and environmentally friendly, however, Council as the permitting authority needs to be sure that these systems are able to meet the design performance requirements in normal operating or field conditions.

Aim of the Research Project

The project aim was to measure the performance of a random sample of onsite aerated wastewater treatment systems in the Ballarat municipality to ascertain whether the quality of treated effluent complied with the EPA Victoria effluent standards.

Methodology

Participants for the project were selected by extending a written invitation to all owners of AWTS contained within the Council permit data base. The data base revealed that a total of 85 permits had been issued for AWTS, however, for seven of these systems the types and models were unknown due to incomplete records and were not included in the survey.

An owner of a sand filter system was also invited by mistake, however, it was decided to include the owner of this system in the project as, according to the EPA Victoria's Septic Tanks Code of Practice (2003a), sand filters systems have the ability to treat wastewater to the same standard as that for BODs (BOD5 is the actual parameter as the test is conducted over 5 days) and SS, as an AWTS. Table 1 provides the water quality standard for AWTS effluent required for sub-surface irrigation (EPA Victoria 2002).

Table 1: Secondary treated effluent quality for sub-surface irrigation

Parameter	Criteria
For all discharges	
BOD_5	<20mg/L
SS	<30mg/L

The letter of invitation to AWTS owners was themed around environmental sustainability focusing on what the results of the project could provide in terms of reuse options for residents' wastewater (i.e. a valuable all-year round resource for their garden). In addition, the invitation stated that the residents would be provided with a free copy of the effluent quality testing results and explanation to facilitate understanding and interest. To simplify the response process, all the residents had to do was tick the response sheet provided stating whether they did, or did not, wish to

Aerated Wastewater Treatment Systems: (continued)

participate in the project and provide their contact details. A reply paid envelope was provided.

The participants were informed that no additional personal information would be required, nor would any information that could identify any household be passed on to any third party.

Of the 78 letters sent, 38 responses were received which equated to a 51% response rate. Of the 38 respondents 28 indicated a willingness to participate and have their AWTS surveyed, however, due to resource constraints the first 15 only of these respondents were selected for participation in the survey. The 15 chosen participants were all contacted by telephone to arrange a mutually convenient time for collection of the survey sample.

The survey effluent samples were collected in accordance with the *Guidelines for Aerated On-Site Wastewater Treatment Systems* (EPA Victoria 2002) and *A Guide to the Sampling and Analysis of Waters, Wastewaters, Soils and Wastes* (EPA Victoria 2000). Effluent samples were collected from mid to late morning on five days between 31 July 2007 and 8 August 2007, from each of the AWTS's final discharge chamber. Polyethylene bottles were used to collect samples for Biochemical Oxygen Demand (BOD) (1000mL container) and suspended solids (SS) (500mL container). As no properties discharged effluent directly to the surface E. coli and chlorine residual were not tested. Table 2 provides the list of the types or models of AWTS that were sampled in the survey.

Table 2: Types of AWTS included in the survey

System/Model	Certificate of Approval Number
Envirosep SP2000	057/98
Enviro-Cycle	31/92
OzziKleen	78/01
Sandfilter	1.2/03
Septech 2000	026/99
Taylex Clearwater 80	15/82

Personal protective equipment such as plastic disposable gloves, anti-bacterial soap, masks (conforming to Australian Standard AS 1715) to prevent inhalation of dusts and aerosols, eye protection and appropriate outer clothing were used (EPA Victoria 2000). After collection the samples were immediately placed in an esky with ice and sealed to maintain a temperature of between 1˚C and 4˚C, and transported within 24 hours to the laboratory (EPA Victoria 2000). The samples were analysed by a National Association of Testing Authority (NATA) registered laboratory.

Results

Biochemical Oxygen Demand

The results for BOD for all systems are outlined in Figure 1. These results revealed that 7 out of the 15 systems, or 47%, that complied with the EPA Victoria effluent standard of <20 mg/L. Both the OzziKleen and the sand filter systems met the EPA Victoria effluent standards for BOD. Fifty percent of the Envirosep SP2000 and the Septech 2000 systems met the effluent standards. The Envirosep SP2000 had a mean age of 4.8 years and the Septech 2000 was considerably older with a 10 year mean age.

The oldest systems tested were the Taylex Clearwater 80s with a mean system age of 14.3 years. Only one Enviro-Cycle was sampled and it had the lowest age of 1 year, however, this system did not meet the EPA Victoria BOD effluent standard. The next youngest system sampled was the sand filter (not an AWTS) and met the BOD standard. Table 3 outlines the BOD result by type of system and age.

The results for SS for all systems are outlined in Figure 2. These results were similar to those for BOD in that 47% of systems sampled met the effluent standard of <30 mg/L. The OzziKleen and sand filter systems both met the standard but the Taylex Clearwater 80 did not meet the standard. The highest results were for one Envirosep SP2000 (470 mg/L) and two Taylex Clearwater 80 systems (400 mg/L and 5000 mg/L respectively). The reading of 5000 mg/L was checked with the laboratory.

The Envirosep SP2000 and Taylex Clearwater 80 models did not meet the standard. The most

Table 3: Compliance rate for systems surveyed for BOD and mean system age

Biochemcial Oxygen Demand						
	Enviro Sep SP2000 (x6)	Enviro-Cycle (x1)	OzziKleen (x2)	Sandfilter (x1)	Septech 2000 (x2)	Taylex Clearwater 80 (x3)
Pass	50%	0%	100%	100%	50%	0%
Fail	50%	100%	0%	0%	50%	100%
System Mean Age (yrs)	4.8	1	2.5	1.5	10	14.3

Aerated Wastewater Treatment Systems: (continued)

Figure 1: Biochemical Oxygen Demand

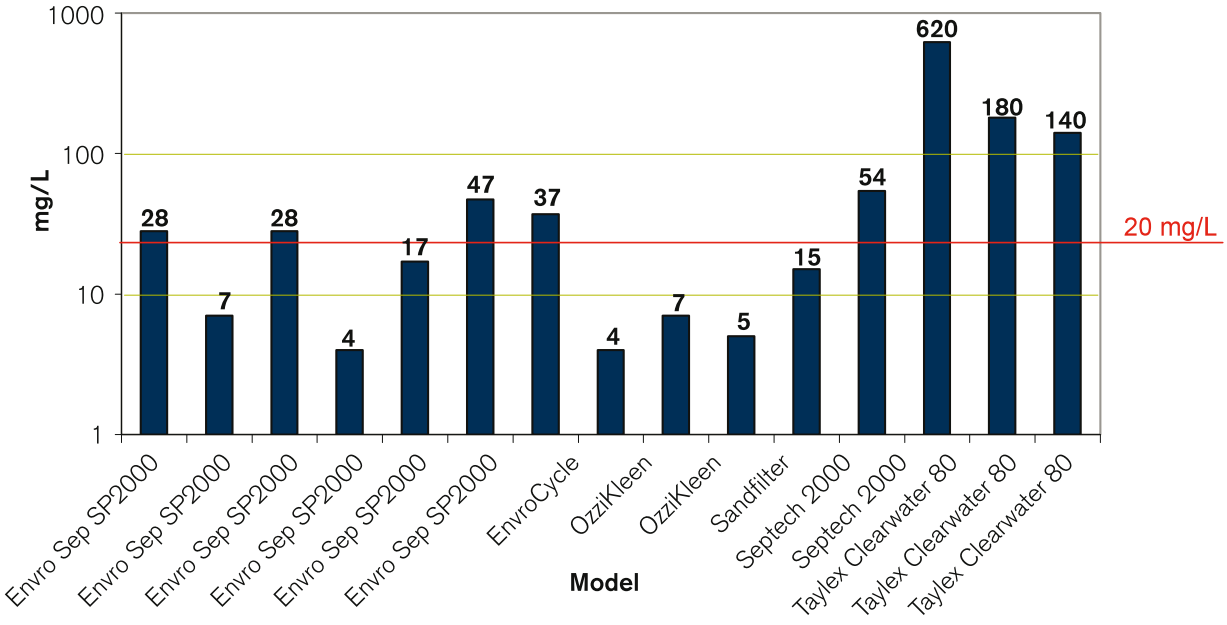


Figure 2: Suspended Solids

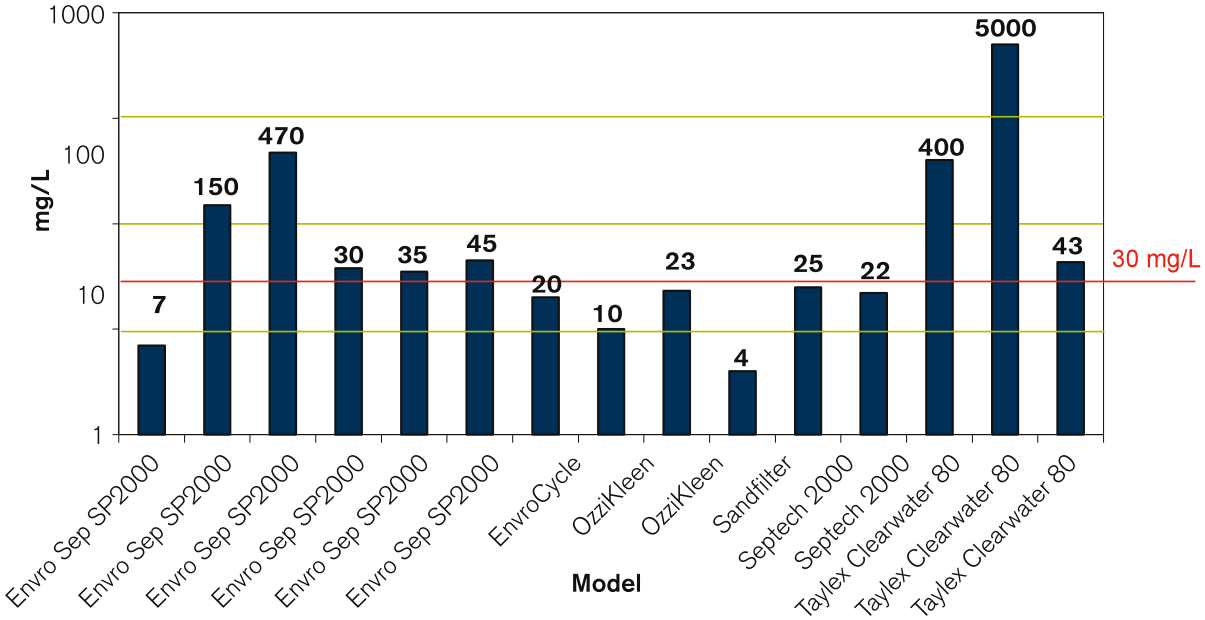


Table 4: Compliance rate for systems surveyed for suspended solids and mean system age

Suspended Solids						
	Enviro Sep SP2000 (x6)	Enviro-Cycle (x1)	OzziKleen (x2)	Sandfilter (x1)	Septech 2000 (x2)	Taylex Clearwater 80 (x3)
Pass	17%	100%	100%	100%	100%	0%
Fail	83%	0%	0%	0%	0%	100%
System Mean Age (yrs)	4.8	1	2.5	1.5	10	14.3

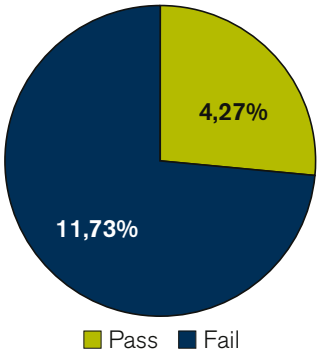
Aerated Wastewater Treatment Systems: (continued)

consistently performing were the OzziKleen and the sand filter systems which met both parameters (BOD5 and SS). It is interesting to note that both the OzziKleen and the Sandfilter systems had the lowest mean age after the Enviro- Cycle. Table 4 provides the compliance rate for the models tested for suspended solids.

Overall System Performance

Figure 3 outlines the overall performance in terms of system compliance with the EPA Victoria effluent standards for both BOD and SS. Note that if one system did not meet one of the parameters for BOD5 or SS, then it was deemed to have not met the standard overall. This shows that four (27%) systems met both standards, and the 11 remaining systems (73%) did not meet the effluent standard for onsite secondary treated wastewater.

Figure 3: Overall System Performance

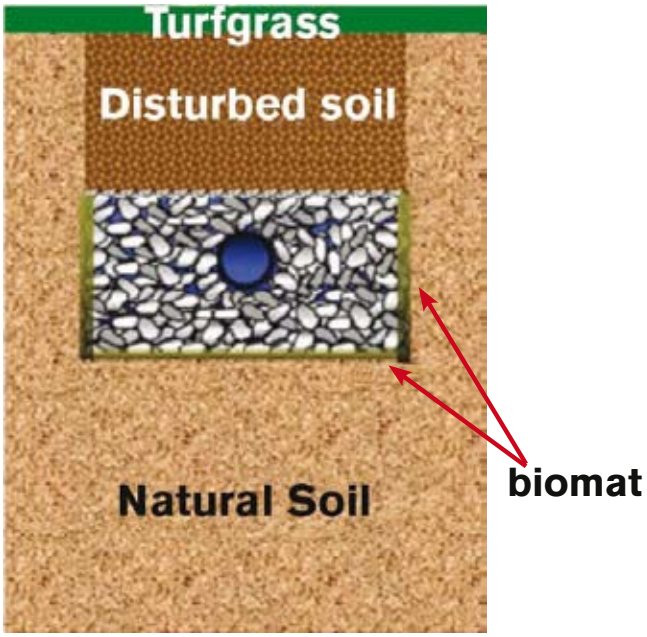


Household wastewater contains a mixture of chemicals, organic matter and other impurities. The organic matter composed of carbon consists of the digested and undigested food as well as microorganisms (Lee, Jones & Turco 2006). For aerobic micro-organisms to break down the organic matter they need to consume oxygen. Biochemical Oxygen Demand (BOD5) is a measure of the amount of oxygen that micro-organisms use as they consume organic compounds in a litre of wastewater over a five day period (Lee, Jones & Turco 2006). Lee et al. (2006) concluded that the higher the amount of BOD5 in sewage effluent, the greater the risk of the onsite system failing because high BOD5 is an indication of a high amount of organic matter in the effluent. After the wastewater is treated in the AWTS, the effluent is disposed of below ground, via a trench system (in Ballarat) where it is further treated by the bacteria in the soil. Problems occur when excess organic loading rates (above the approved standard of 20mg/L BOD and 30mg/L SS) reach the trench system, disturbing the bacterial equilibrium at the biomat-soil interface in the trench (Figure 4).

The biomat is also composed of suspended solids and the by-product of microbial activity (e.g. polysaccharide residues) (Beal, Gardner & Menzies 1997). If the biomat thickens, it reduces the infiltration rate of effluent reaching the soil and subsequently the effluent can backflow to the source or exfiltrate on to the surface (Lee, Jones & Turco 2006).

The cross-sectional view of a gravel soil absorption field trench (Figure 4), similar to those installed in Ballarat, shows the location of a thick layer of microorganisms, commonly called a biomat, which forms at the soil-trench interface to feed on the organic matter that flows out of the onsite wastewater treatment plant (Lee, Jones & Turco 2006).

Figure 4: Trench cross section showing biomat



The overall results of the survey samples for BOD5 and SS for the 15 AWTSs currently operating in Ballarat reveal that 73% did not meet EPA Victoria effluent standards. This highlights an increased risk to the environment and public health due to possible trench system failure.

The life span for a trench system is between 15-20 years after which, a replacement disposal area will be required, as the soil will have reached its capacity to treat and absorb the effluent (Campelltown City Council 2007). Therefore, any treated effluent that exceeds the BOD5 and SS standard, will greatly reduce the life span of the receiving trench system. This highlights the imperative for a protected designated alternative effluent disposal area, especially for properties with area constraints.

The State Environment Protection Policy (Waters of Victoria) (2003b) states that onsite sewage effluent must be able to be contained within property boundaries. In addition, the EPA Victoria Septic Tanks Code of Practice (2003a) stipulates that the disposal area (trench system) must be protected from soil compaction. This would increase the land burden from these failing systems. Failing onsite wastewater

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Aerated Wastewater Treatment Systems: (continued)

systems that impact on neighbouring properties will increase the risk to the environment and public health. It was not expected that of the 15 systems sampled the majority would not meet EPA Victoria effluent standards.

While the Taylex Clearwater 80 systems did not meet the effluent standards it should be noted that they were the oldest operating systems with a mean age of 14.3 years. According to the manufacturer of these systems they have been superseded by the Clearwater 90. The majority of other systems sampled had a mean age of less than 4.8 years.

Constraints encountered in this project had to do with scheduling the systems owners due to the two-week period allowed for sampling. In addition, because the letters that were sent out did not have a due date in terms of confirming participation in the project, letters were still being returned after all samples had been taken. This was a missed opportunity, which could have allowed for a more targeted approach in terms of system relevance to the project. For example, systems could have been targeted for sampling in areas containing environmentally sensitive areas or habitats such as waterways.

It is interesting that the BOD5 and SS loads leaving some of the AWTS were excessive. However, because of the small sample size, care should be taken when analysing the results and generalising for all AWTS operating in Ballarat, as many factors go into a properly functioning septic system. These factors include monitoring what is going into the system in terms of household chemicals, hydraulic loading of the system and most importantly, the maintenance schedule or routine. These considerations were outside the scope of this research project.

Conclusion

It is difficult to draw concrete conclusions because of the small sample size, but the results do highlight the need for more research if Ballarat City Council were to change its policy to allow surface disposal of AWTS effluent. Considering the high number of septic tank systems operating in Ballarat it appears that a conservative approach is justified. Though the pressure from the community will only increase as the drought continues, as will their environmental awareness and concern regarding treated effluent reuse options.

Acknowledgments

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Environmental Governance Requires New Information Management Tools

Jim Rowe
SRA Information Technology

Over the past two years, organisations whose activities generate significant environmental impacts have been required to increase their focus on understanding, managing and reporting on those impacts, well beyond what has been expected in earlier times. The two broad areas that have become most urgent across the country in recent times are greenhouse gas emissions (and associated energy consumption) in the form of the National Greenhouse and Energy Reporting System; and water, for which the Bureau of Meteorology is undertaking to build an Australian Water Resources Information System which will require inputs from various large stakeholders in the future.

This hasn't meant, however, that previous monitoring and reporting requirements that companies were engaged in (for example National Pollutant Inventory (NPI) reporting and various State-based requirements) have been lessened as a result. Additionally, corporations are seeing benefits in reporting on and publishing (both internally and externally) the results of their environmental performance to a range of stakeholders.

One outcome for companies is that more resourcing and effort is required to conform to the range of management and reporting requirements. The older piecemeal approaches to obtaining the required reporting data and managing the production of reports is no longer adequate at the corporate level. In fact, given that some of the new reporting requirements may influence company finances directly in the form of the Carbon Pollution Reduction Scheme and an associated Emissions Trading Scheme, a robust linkage between environmental monitoring systems and core financial systems is necessary.

An enterprise-level view of all corporate environmental impact information has become necessary. In order to achieve this, the information management toolset needs to move away from isolated and ad-hoc systems servicing a workgroup or team and move into the realm of core systems servicing the enterprise. By doing this, environmental data and hence reporting can be aggregated from the facility level up to the divisional and corporate levels while at the same time allowing 'drill-down' again to the facility or site level or even the individual sample point.

In implementing any enterprise level system, a comprehensive process of data and requirements gathering and documenting must take place under a defined project governance regime and with experienced project management. There is also a requirement for staff training on the system and of course adequate ongoing support after implementation. Excellent post-implementation support is key to a successful implementation, with ongoing training for new staff, regular face to face feedback from system users and regular updates and enhancements to the system all playing a part in ensuring maximum benefit to the company from the system.

Company boards and senior management will increasingly task Chief Information Officers with finding a solution to their environmental reporting and information management requirements. In larger organisations, this process is already well under way.

The days of keeping environmental monitoring data in isolated pockets throughout the organisation, stored in spreadsheets and small databases that are inaccessible to all but one or two staff and in the case of spreadsheets easily lost, are gone. Data will need to be auditable and retained for the long term. Systems for managing an organisation's environmental impact are beginning to be recognised as core systems and will be given a much higher profile within the organisation in the near future.

Skilling for a sustainable future

Government Skills Australia (GSA) is the national Industry Skills Council for Government and Community Safety and represents the Vocational Education and Training (VET) and workforce interests of Local Government.

GSA is pleased that Environmental Health Australia's National President Dr Jim Smith has accepted an invitation to be Chair of the Steering Committee to oversee a continuous improvement project for the Local Government Training Package in 2009. Planned improvements to the Training Package include:

- Incorporation of the Diploma of Local Government (Environmental Health and Building Assessment) which is currently an accredited short course in NSW;
- Revision of regulatory services qualifications at the Certificate III, IV and Diploma levels;
- Identification of units of competency relevant to elected council members in the key areas of finance and budgets; legislative frameworks; planning including land use planning; and governance.

Current initiatives that GSA and EHA are focused on include:

- Recognition of the role of Environmental Health Technicians and provision of a career path within the Local Government Training Package;
- Discussions relating to articulation between the VET sector and the higher education sector for the environmental health industry; and
- Promoting work experience and on-the-job training within the local government sector.

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- Green Building Fund helps owners of existing commercial office buildings to reduce greenhouse gas emissions, by retro-fitting and retro-commissioning the building to improve its energy efficiency. Grants of up to $500,000 are available for up to 50% of project costs.
- The $1.3 billion Green Car Innovation Fund will provide assistance over ten years for research and development and early stage commercialisation of Australian technologies that will reduce greenhouse gas emissions and/or fuel consumption of passenger motor vehicles.
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Renewable energy: Powering the future

Fiona Waterhouse
Spectrum Renewable Energy (Australasia) Pty Ltd

"Biogas technology" is a generic term for the technologies associated with the anaerobic digestion of organic wastes (food waste, animal waste sewage etc) to produce methane gas and an organic sludge (a recyclable by product).

Biogas technology is widely acknowledged as the best way to treat wet organic waste however, it has not been widely deployed in Australia.

There are a handful of local biogas success stories including Berrybank Piggery in Victoria which installed a biogas plant in 1989. The system generates electricity from biogas, conserves and recycles water and sells the plant sludge as fertiliser. The plant cost $2m, paid back in six years and continues to generate $435,000 per year in benefits for its owners.

There have been several important reviews of the technology carried out in Australia by the Business Council for Sustainable Energy, NSW Sustainable Energy Development Authority (SEDA) Clean Energy Council and the Rural Industries Research and Development Corporation, these have all concluded that the low cost of fossil fuel based energy in Australia has, in the past made it difficult for these technologies to compete.

We think the landscape is now changing dramatically in all six areas where biogas technology can provide practical, well proven, affordable solutions:

- reducing the costs and risks of carbon emissions
- meeting increased demand for reliable, continuous locally generated renewable energy
- reducing waste costs and risks
- improving waste water reuse
- improving water quality
- supporting a mainstream shift to less chemical intensive farming methods

Biogas technology, when applied by experienced specialist engineers, presents few issues with technical risks controlled by good design, quality assurance and project management.

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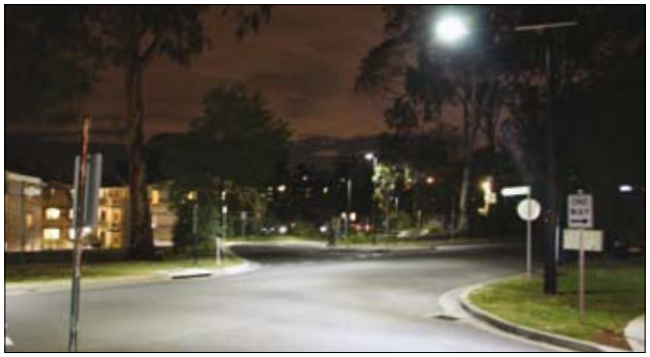
eLUX STREET – Anglican Retirement Villages, Diocese of Sydney Castle Hill. Main intersection during the day.



eLUX STREET – Anglican Retirement Villages, Diocese of Sydney Castle Hill. Main intersection at night.

eLUX STREET eLUX SHELTA eLUX FLASH eLUX UP eLUX NAV eLUX BOLLARD

Solar Streetscapes (SSS) has just released their eLUX series LED street and public lighting systems which capture everything the LED revolution has claimed.

SSS believes Australia's streets are ready to take on the right LED technologies. They offer DC powered luminaries for solar powered street lighting systems, which are totally stand alone and carbon free. The range also includes AC mains powered luminaries for street lighting systems with existing infrastructure, which will reduce carbon emissions and energy usage by 60%.

SSS offer a turn key solution, manufacturing all products to form a complete system and engineered to a variety of world wide environmental factors. The eLUX series is functional and robust with architecturally designed poles and fittings. It has been engineered for maximum light output, light spread and life expectancy.

Solar Streetscapes have taken a fresh look at LED Lighting and their much anticipated eLUX streetscape lighting systems will be released towards the end of 2009.

EHA's Yearbook Editor, David Walsh caught up with Nathan Giblett, Managing Director of SSS to discuss their latest series release…

David Walsh – So why an LED street light?

It is now their time – they simply work with the right design. They produce the equivalent light output compared to sodium or mercury vapour but with 60% less power consumption. This makes them perfect for reducing energy in city streets or eliminating electricity all together and going solar. They also cover "P" and "V" categories for AS/NZS 1158 lighting categories.

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LED revolution delivers on public area lighting (continued)

David Walsh – What do you see as the most important factor when utilising LED technologies into roadway lighting and the public domain?

The photometric data is the first requirement. Their curves need to give a uniform asymmetrical spread to maximise spacing. The second is notably the thermal environment of the LEDs.

Our systems are designed to be installed in the most extreme environments. There are currently some of our solar eLUX street lights in the Middle East being tested on a freeway. Temperature wise, the Middle East is about extreme as you can get. We utilise Cree and Stanley LEDs with a patented lens to distribute light evenly and direct, giving motorists and pedestrians better line of sight. Our light is based on 555nm which is the most perfect light for the human eye.

David Walsh – The eLUX series sounds great with zero carbon, what products are about to be released?

The eLUX series includes:

eLUX STREET – Is a solar and mains powered street lighting system which comes in 20, 40, 60 and 80 watt versions for solar and a variety of mains powered lighting ranging from 20-400watts.

eLUX UP – Is a solar powered up lighting system designed for special structures, street features and monuments.

eLUX SHELTA – Is a solar powered shelter lighting system used for all types of shelters, including transport terminals, recreational and community park areas, military as well as advertisement bill boards.

eLUX FLASH – Is a solar powered warning system used for pedestrians, roads and traffic, waterway and railway authorities.

eLUX BOLLARD – Is a high powered Solar bollard lighting system, for community pathways and gardens.

eLUX NAV – Coming soon!

David Walsh – What advantages do the SOLAR eLUX series offer?

- Little to zero carbon
- Over 80 lumens per watt, perfect photometric curves and data, high CRI
- 4-5 days autonomy (eLUX SOLAR)
- Architecturally designed street fittings and poles to enhance city and town streetscapes
- Minimum 50,000 hours life expectancy
- No mains electrical cabling required (eLUX SOLAR)

David Walsh – What happens when its raining? Do the lights stop running?

They are designed with 4-5 days autonomy for the middle of winter, this means the lights will run for 4-5 days with no sunlight on them at all. On overcast days the sun still charges the batteries. It is rare that they run out of power with this design.

David Walsh – Your MAINS eLUX street light, where does this fit in with SSS?

When infrastructure is already in place or solar access is being blocked by city buildings, our MAINS eLUX series can be utilised saving up to 60% on energy costs and carbon emissions.

David Walsh – SSS have designed and manufactured the eLUX lighting systems including the street poles, what advantage does this hold?

SSS have developed all products for a turnkey solution. We are making going GREEN easy, stylish and functional. Our product range is being distributed around the world and our distributor base has been well trained for the eLUX series release. Solar Streetscapes is Australian owned, they export worldwide and manufacture to any requirements. Providing our suppliers with all that's required from start to finish, ensures the end consumer has a quality product which will last.

eLUX SHELTA SOLAR – Dual 3 watt lighting system

eLUX SHELTA SOLAR – Dual 3 watt lighting system

eLUX UP SOLAR – 8Watt solar lighting system

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What's that odour?

CETEC Professional Scientific Solutions

Most people are familiar with the "new" car smell or the "new or renovated" building odour. This situation arises due to the release of chemicals (emissions) from various materials. Over time the emissions will decline, but never reduce to zero. While the odour may only be a nuisance to most occupants, consideration should be given to toxicological effects that may also arise.

Less commonly considered are the effects of chemical emissions from everyday products, despite the increased likelihood of contact. CETEC has encountered situations such as:

- Forklift drivers becoming "light-headed" during the unloading of a shipping container containing imported footwear. The footwear, manufactured using various glues and varnishes, emitted volatile chemicals over time and this accumulated in the container during transit;
- Workers suffering headaches during the unpacking of boxed items and in the subsequent assembly of the item. This was caused by the volatile organic compounds released by the printing inks. The fumes built up in the item wrapping and packing box; and
- A complaint of irritation arising from exposure to a textile-based object. The object was stored for a period of time, in the immediate vicinity of cleaning activities. This eventually led to the textile component of the object absorbing the cleaning chemicals. Later when the object was used, there was the resultant irritation incident as the now absorbed chemicals were re-released.

While characterising pollutants in the indoor air is important, just as critical, is the assessment of the potential sources of the pollution. CETEC uses a number of approaches to determine the chemical contaminants in indoor air, whether they be formaldehyde, volatile organic compounds, semi-volatile organic compounds or other chemicals.

Environmental chambers offer a standard way in which to evaluate the chemicals emitted from a material or product under controlled conditions. The identification of the chemicals through methods such as Gas Chromatography Mass Spectrometry (GCMS) can allow the assignment of potential material source to an indoor air environmental health effect.

Remediating the effects of chemical emissions from materials and products can involve either a source removal approach and/or ventilation strategy.

So the next time you wonder 'what's that smell?' consider the potential toxicological effects of the source and remember CETEC can provide services to better understand the source of the odour and its control.

Established in 1987, CETEC provide professional scientific solutions with a major focus on Indoor Environment Quality for occupant health, wellbeing and productivity.

Air Quality and its impact on Health: Focus on particulate matter

Lidia Morawska
International Laboratory for Air Quality and Health, Queensland University of Technology

Inadequate air quality and the inhalation of airborne pollutants pose many risks to human health and wellbeing, and are listed among the top environmental risks worldwide. The importance of outdoor air quality was recognised in the 1950s and indoor air quality emerged as an issue some time later and was soon recognised as having an equal, if not greater importance than outdoor air quality. Identification of ambient air pollution as a health hazard was followed by steps, undertaken by a broad range of national and international professional and government organisations, aimed at reduction or elimination of the hazard. However, the process of achieving better air quality is still in progress.

The last 10 years or so have seen an unprecedented increase in the interest in, and attention to, airborne particles, with a special focus on their finer size fractions, including ultrafine (< 0.1um) and their subset, nano particles (< 0.05 um). This paper discusses the current status of scientific knowledge on the links between air quality and health, with a particular focus on airborne particulate matter, and the directions taken by national and international bodies to improve air quality.

Air Quality and Health

It has been well known for centuries that certain natural processes, as well as human activities, result in air pollution. For example, air pollution in Rome in the first century AD has been described as: "... a noisome brown haze would be hanging low over the city's streets, capable of dulling their majestic polish and sparkle. Charcoal smoke from household kitchens, baker's ovens, blacksmiths' furnaces, funeral pyres and clouds of dust kicked up by shuffling pedestrians..." (Perrottet 2002).

Nowadays the air which we breathe contains a complex cocktail of pollutants including: particulate matter; gaseous pollutants such as nitrogen oxides (NOx); carbon monoxide (CO); sulphur dioxide (SO2); ozone (O3) and carbon dioxide (CO2); volatile and semivolatile organic compounds; and inorganic trace elements (Pb, V, Br).

Airborne particulate matter is a complex mixture of particles, ranging in size over five orders of magnitude, from molecular dimensions to the sizes that are distinguishable with the naked eye. For many decades, ambient particulate matter has been monitored in terms of mass concentration, currently defined as PM10 and PM2.5 (mass concentration of particles with aerodynamic diameters of < 10um and < 2.5um, respectively).

The health effects of airborne pollutants range from irritative effects on skin and mucous membranes of the eyes, nose and throat, to other effects on respiratory, reproductive, cardiovascular, cardiopulmonary, immune and sensory nervous systems, as well as causing allergic reactions, cancer and even death. Some pollutants cause specific health effects. For example, the effects of exposure to carbon monoxide range from fatigue to death (CO combines with haemoglobin and reduces transport of oxygen to the tissues); nitrogen oxide is a trigger for asthma attacks and long term effects on the respiratory system; lead leads to mental retardation; ozone can cause eye irritation, damage to sensitive tissue and the exacerbation of asthmatic symptoms; and radon has been linked to increased risk of lung cancer (World Health Organization [WHO] 2000).

It has been common knowledge for a long time that the inhalation of certain pollutants leads to a deterioration in health, however, it was only in the 1950s that a full appreciation of the hazards related to air pollution emerged, following serious episodes of air pollution in London and in several industrial cities of the US, which were retrospectively linked to significant increases in mortality (WHO 2000). Regulations were then put in place, as the first step on the way towards the process of modern air pollution prevention and control.

While there have been significant improvements in air quality, with respect to some pollutants and countries, there are still for example two million premature deaths per year which are attributable to urban outdoor air pollution, as well as indoor pollution from the burning of solid fuels (WHO 2002), and the number of deaths attributed to vehicle generated air pollution is actually higher than those that can be attributed to road accidents (Seethaler et al. 2003).

Indoor Versus Outdoor Air Quality

It is outdoor air quality which has predominantly been linked to human ill health. Large databases on outdoor pollutants have been used for prospective and retrospective epidemiological studies, which showed a clear link between outdoor pollution and health, despite the fact that most people spend the majority of their time indoors. In relation to particulate matter, it was established that there is a linear relationship between outdoor mass concentration – PM2.5 and PM10 – and health (Pope & Dockery 2006), again despite the fact that we are generally inside 90% of time or more. This leads to the question: is the 10% of time spent outside so important? The answer is in outdoor particulate matter which penetrates indoors, providing continuous indoor background pollution.

Some of the particles will deposit on indoor surfaces, and as a result, the ratio of indoor to outdoor concentration will be below one, however, for naturally ventilated buildings the ratio would usually be above 0.5 (Morawska & He 2003). In other words, in the absence

Air Quality and its impact on Health: (continued)

of any indoor sources, indoor air will still contain 50-100% of the particulate matter found outdoors.

Airborne Particulate Matter

The last 10 years or so have seen an unprecedented increase in the interest in, and attention to, airborne particles, with a special focus on their finer size fractions. A clear turning point for this interest was the publication of findings from the Harvard epidemiological studies, pointing out a more distinct correlation between health effects and exposure to fine particles (smaller then 2.5 um) than to coarse particles (Dockery et al. 1993).

This finding led to the introduction in the USA in 1997 of a standard for PM2.5. However, it is now considered that even smaller particles, those in the submicrometre or even ultrafine (< 0.1 um) ranges, should be targeted by control measures, as they are associated with even higher risks than the larger particles (WHO 2002). In addition to ultrafine particles, their subset, nano particles (< 0.05 um), has also been widely discussed in the last few years. Both of these terms constitute a somewhat arbitrary classification of particles in terms of their size, indicating the significant role of this physical characteristic on particle fate in the air. It should be kept in mind, however, that the divisions between ultrafine and larger particles, similar to the other divisions between different particle size classes, are also somewhat arbitrary.

On the one hand, there are no rigid boundaries created by nature between these size classes, but on the other hand, all natural sources (as opposed to laboratory generators) generate particles with a certain range of diameters, polydisperse particles, therefore, there is no sharp boundary delineating the contribution of particles from a given particle source.

These small particles (ultrafine and nano particles) are generated mainly from combustion, gas to particle conversion, nucleation processes or photochemical processes, with some of them being primary (emitted directly by the source) and some being secondary in nature (formed in the air from the precursors emitted by the source/s). Particles generated from anthropogenic activities are mainly primary and secondary combustion products, with 89% of the ultrafine and 65% of the nano particulate matter emitted in the urban environment originating from vehicle combustion.

Since the mass of these particles is very small, they are generally measured in terms of number concentration. Because of the small mass of the particles, PM2.5 or PM10 measurements provide very little or no information on particle number concentration.

Particle concentration levels in clean environments, meaning those which are not influenced by human activities, are usually in the order of a few hundred particles per cm^3. In urban environments, background particle number concentrations range from a few thousand to about 20 thousand particles per cm^3 (e.g. Harrison et al. 1999; Thomas & Morawska 2002).

Background concentrations mean the concentrations measured at monitoring stations, which are not influenced by a nearby emission source. Near roads and in the tunnels, vehicular traffic constitutes the most significant urban source of particle number, and particle number concentrations can be 10 times higher or more, and can reach or exceed levels of 105 particles per cm^3 (Morawska et al. 2003). This is in contrast to PM10 and PM2.5 mass concentrations, which have been shown to be no more than 25-30% above background level on major roads, calculated as the difference between the maximum on the road and the background levels (Morawska & Salthammer 2003).

A practical implication from these findings is that the exposure to airborne particles, in terms of their number concentration, is significantly increased within the first 100 meters from the road, compared to the urban average exposure levels, and decreases to the urban background level usually at distances greater than 300 meters from the road. On this basis, it is reasonable to assume that people living and working in close proximity to an urban arterial road are likely to be exposed to levels of ultrafine and submicrometer particles beyond that which could be considered 'normal' ambient levels, but only to somewhat elevated levels of PM10 and PM2.5.

Particles and Health: A Special Challenge

Health effects due to inhalation of particles: PM10 and PM2.5

The relationship between airborne particle mass concentration (PM10 and PM2.5) and health outcomes has been extensively investigated through epidemiological research (e.g. Dominici 2002; Katsouyanni et al. 2001; Pope 2000; Pope & Dockery 2006; Samet et al. 2000).

It has been shown that the most significant health end points due to inhalation of particulate matter include: decreased lung function, increased respiratory symptoms, increased chronic obstructive pulmonary disease, increased cardiovascular and cardiopulmonary diseases and increased mortality.

A recent literature review of the state of knowledge in relation to particle mass concentrations demonstrated: that the complexity of the mechanisms by which inhalation of particulate matter causes health effects are better understood; that there is no threshold in response; that the response is linear; and that it is similar over different geographic settings (Pope & Dockery 2006). The review also concluded that, in

Air Quality and its impact on Health: (continued)

general, the susceptibility depends on the specific end point, the level of exposure, and the lengths of exposure. In particular, those with chronic cardiopulmonary disease/asthma/influenza are affected by short term/ moderate exposures, while long term/repeated exposure results in an increased risk of mortality in a broad based cohort of adults and children.

Health effects due to inhalation of particles: ultrafine particles

The potential hazards from the inhalation of ultrafine particles by humans are very different from those from the inhalation of larger particles, since they are inhaled into much deeper regions of the lung and they are not readily removed from the airstream of inhaled air in the upper parts of the respiratory tract. When deposited in the small containments of the alveoli region, diffusional deposition of the particles on the epithelium becomes an efficient physical mechanism. Alveolar deposition of 0.05 um particles is about 40%, compared to about 10% for 0.7 um particles (Maynard 2000).

If these particles are charged, they pose an added risk to human health, since inhaled charged particles have a five to six-fold increased probability of lung deposition than uncharged particles of the same size (Cohen & Xiong 1998). The nanoparticles deposited in this oxygen/blood exchange region can penetrate into the blood stream very quickly and efficiently. All of the studies conducted thus far demonstrate that the primary determinant of the effect of ultrafine particles is their number and their surface area, not the weight of the particles present (Morawska et al. 2003). This means that the traditional use of particulate matter weight measures is inappropriate when evaluating the likely biological effects of ultrafine particulates.

It should, however, be kept in mind that it is not only the size by which ultrafine and nanoparticles differ from larger particles, but there are also substantial differences in particle chemical properties, and thus in the toxicological and carcinogenic effects they cause.

As shown by recent literature reviews (Morawska et al. 2003; Morawska et al. 2007), there have been only a relatively small number of epidemiological studies conducted thus far. A total of only five international epidemiological studies on ultrafine particles have been conducted since 2003 (eight were conducted prior to this time).

The current state of knowledge on the health effects of ultrafine particles can be summarised by saying that the array of epidemiological studies conducted so far does suggest that exposure to ultrafine particles is associated with respiratory and cardiovascular effects, which holds true despite considerable gaps in knowledge and some inconsistencies found between different studies. While both fine and ultrafine particles appear to affect health outcomes, such as respiratory and cardiovascular morbidity and mortality, they appear to do so independently of each other.

Fine particles show more immediate effects, while ultrafine particles show more delayed effects on mortality. However, at present, the database is too limited (both in terms of number of studies and number of subjects) and geographically restricted, to allow clear conclusions on the mode of action or generalisation to other settings.

Further studies are currently under way but more studies in other settings need to be initiated to improve our understanding of ultrafine particles and health outcomes. The reviews showed that there are several significant deficiencies of the epidemiological studies conducted thus far, which can be summarised as follows:

- First, all studies drew on data from central monitoring stations to estimate the levels of ultrafine particles that participants in the study would have been exposed to. It is now understood that in most cases, this did not accurately represent real exposure levels and that monitoring of ultrafine particles must be done at the location where the exposure occurs. As explained above, exposure to particle number concentrations in the proximity to a road for example, can be up to 10 times higher than away from the road.
- Second, the background concentrations of ultrafine particles in the various cities investigated were not sufficiently different to allow conclusions to be drawn across the studies.

Some of the reasons for these deficiencies include:

- a lack of scientific understanding of the nature and dynamics of ultrafine particles at the time of the studies
- limited instrumental methods or capability to monitor adequately exposure to ultrafine particles
- the absence of an interdisciplinary approach

Ultrafine Particles: Future Directions

Given that there is a poor correlation between ultrafine particles (measured by number) and fine particle mass, observed statistical independence (in the multiple regression models) is of significance. Further, given that fine and ultrafine particles often originate from common sources, have different dynamics of particle formation and accumulation and also display different observed lead-lag relationships between exposure and observed health responses, it is currently difficult to make strong inferences about independent effects, based on the epidemiological evidence provided so

Air Quality and its impact on Health: (continued)

far. Better-targeted studies in other settings should be initiated to improve understanding of ultrafine particles and health outcomes. The World Health Organization (WHO 2005) has recently stated that: *While there is considerable toxicological evidence of potential detrimental effects of ultrafine particles on human health, the existing body of epidemiological evidence is insufficient to conclude on exposure/response relationship to ultrafine particles. Therefore, no recommendations can be provided as to guideline concentrations of these particles at this point (WHO 2005).*

In the absence of recommendations and quantitative knowledge on nanoparticles in the urban environment, governments are unable to act proactively and are often forced to take ad hoc steps in response to increasing pressure from the community.

In summary, the magnitude of the impact of ultrafine and nanoparticles on human health and the environment has still not been fully quantified, nor is it fully understood, and the first step in this direction is to develop an in depth understanding of particle concentrations, characteristics, time trends and spatial distribution in clean and anthropogenic modified environments. This knowledge would, in turn, lead to an understanding of the potential impacts of the particles on the environment and the implications on human epidemiology. It could also be used as a basis for setting any future emission and air quality standards based on particle number.

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Man-eating one-arm waste truck? Or ... simply good truck hygiene

ASP Software

While the picture here looks like a truck swallowing its cleaner, this is from Townsville where they've recently had lots of flooding from un-seasonally heavy rains, so all efforts are made to improve truck hygiene while reducing any ponding-water and minimise risk of attracting "the big mozzie" during a dengue virus outbreak in this tropical area.

ASPsoftware has recently been working with Townsville's Waste Services (TWS) department to help balance driver workloads (another source of 'health risk' for overworked drivers and trucks). After merging two neighbouring cities residential collection areas, TWS engaged ASP to help by computerising their yellow-highlighted paper-map route-plans and gather onboard data to facilitate a fairer distribution of workload amongst runs in any day of service area.

The solution involved innovative use of councils cadastral map data linked to data from new onboard GPS devices that could also automatically capture each side-lift arm movement. The solution ASP developed was able to count the actual lifts against potential properties in any marked out run area boundaries on the map as well as compare the potential distance in these areas with that actually travelled (both inside run boundaries and in transit to and from the depot or tip).

The next step once raw data started to emerge showing large workload discrepancies, was to have the computer split the day of service area for multiple trucks into smaller parcels of bins so that software system could recommend where to move or re-partition individual truck route boundaries within a selected day of service area, to come up with a more even workload.

While this is not rocket science to a mapping guru, in layman's terms it does involve calculating how long it's likely to take to do a street side section based on an expected average travel speed and allowing a set number of seconds per lift stop point. The idea is that different streets have different densities of residents (no pun intended) so to do a reasonable balancing job of time and distance factors for different population density areas the computer can do the math in a few minutes. Add to this some factors such as when the truck is likely to be full (assuming an average bin volume or weight) and the computer can project where best to break and go to the nearest tip.

In a normal residential collection cycle, each day-of-service area may move the trucks further away from the depot and further or closer to different disposal points. Test-driving suggested changes will then bring-back any unexpected actual time-of-day traffic or terrain variations. This gives you feedback on how close the projected balancing factors were to the real life run time and lift counts. For good measure, time allowances were added for driver fatigue rests and lunch breaks as well as that hygienic truck wash at end of day.

The end objective: less stress and wear and tear on drivers and trucks, from automated data capture and a clearer picture of presentation rates that in-turn will lead to encouraging more recycling

The Question of Waste

Mandalay Technologies

As populations grow, the nature of waste generation in society evolves. Our understanding of the impact of people on the environment has also broadened, resulting in a change in focus on how and why we manage waste. This change in focus is leading to significant changes in the way Australians look to manage the waste they produce.

Waste management historically evolved from a need to protect public health. These early attempts to manage waste relied on the movement of waste material. Today, waste management is taking more of an environmental focus and is starting to consider resource management and the system flows of materials.

The need for capturing auditable waste data throughout Australia is becoming a high priority for both local governments and private industry operating Waste Management and Resource Recovery facilities. The legislative requirements to capture, record and analyse waste data have become a core business for both local government and private industry alike, escalated by the impending introduction of the Carbon Pollution Reduction Scheme (CPRS) and National Greenhouse and Energy Gas Reporting System (NGERS).

The overwhelming pressures that are being placed on waste management facility owners to provide auditable data range from carbon footprint analysis, Environmental Protection Agency (EPA) annual reporting, operational and capital budget review to assessment for NGERS triggers for registration with the Department of Climate Change.

The best practice concept of 'Towards Zero Waste' aims to reduce waste to landfill. Regulatory bodies are seeking to see waste as a 'resource', a heterogeneous source of commodity types, rather than a homogenous mass of material. Data gathered from reporting systems can enable business units to support business cases for improved best practice options.

The investigation and analysis of improved waste management practices will rely purely upon the integrity of the data capture records. Data supports new innovative low emissions technologies, sustainable procurement of products and services, and energy saving projects, particularly in the areas of budget preparation and review.

Core data will also enable waste facilities network reviews to be performed, and waste management and cost minimisation strategies to be developed. When the 'problem' is understood through measurement and quantified data, the solution can be better qualified and scoped.

With the introduction of levies and taxes on waste in various parts of Australia, landfills are required to ensure all waste data is captured for State Government auditing purposes. Accounting for waste as a raw material entering and being processed on sites is of significant importance in site operations, demanding management and auditability of this information.

System automation can assist in tracking not just transactions entering and leaving sites, but also movements within the site and reporting of the stock control movements as they affect stockpiles of product and the processing of these products. All movements in, out and between operations require auditable transaction management and reporting that allows for the verification of the validity of these transactions to within an accepted tolerance limit.

Mandalay has taken the lead in data capture systems for the waste industry, servicing both the government and private sectors, to provide simple integrated tools that identify the movement of waste materials, in, out and within and between sites. The end result is that verifiable reporting of these transactions can be facilitated easily and consolidated for waste management review and compliance reporting.

Mandalay has placed such importance on these activities because compliance authorities have encouraged waste facility owners to diversify operations to incorporate greater resource recovery, re-use and recycling activities as part of site management. The resulting operations are widely accepted as being more environmentally sustainable, and in many cases, profitable.

Heat Exchangers: Save energy, the environment and money

Teralba Industries

In the face of ever-increasing energy costs, many Australian and New Zealand manufacturers and service providers are utilising the Australian made Dimpleflo Modular Heat Exchangers to recover energy from any warm or hot product or effluent.

Industries, including laundries, wool scourers, abattoirs, dye houses etc that have hot wastewater, are extracting some of the energy from this effluent through Dimpleflo Heat Exchangers.

The beauty of the Dimpleflo system are proven maintenance free, even when hot waste products may in surge chunks, particles or sludge. Hot sludge, wastewater is passed through inner dimpled surface of the Dimpleflo cooling from 60˚C-30˚C whilst boiler feed water is preheated in the jacket of the Heat Exchanger from 20˚C-50˚C.

This significant energy recover can be used wherever a hot product or waste is cooled. If this heat has previously been allowed to dissipate to atmosphere then wash down water used for wash down showers etc, is basically heated for free. No energy, no greenhouse gases and minimal cost.

It is opportune to define some of the features which distinguish 'Dimpleflo' and 'Dimplestream' tubular heat exchangers:

- Designed and manufactured in Australia.
- Flexibility in heat transfer design to meet specific dimensional or functional requirements.
- Unique Dimple profiled Monotube enables a self-draining, high efficiency heat exchanger that is virtually unblockable.
- Dimple Profile to promote a highly turbulent flow and thus maximize heat transfer coefficients.
- Can be constructed using corrosion-resistant alloys such as 2205 Duplex and Titanium.
- Short lead times.
- Requires minimal maintenance.

For further information on how Dimpleflo Heat Exchangers can reduce your energy bill and help the environment, please contact Teralba Industries.

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- Each ventshaft database sheet shall include – Location, Condition Report, Digital Photos (2 of) of the ventshaft.
- The reports and photos, shall be placed on Microsoft Excel Spreadsheet, for all areas in the Shire Council Area, for effective asset management.
- All ventshaft data sheets with digital photographs will be collated and bound in catchment folders for easy review and shall be placed on CD-ROM, for your convenience.

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