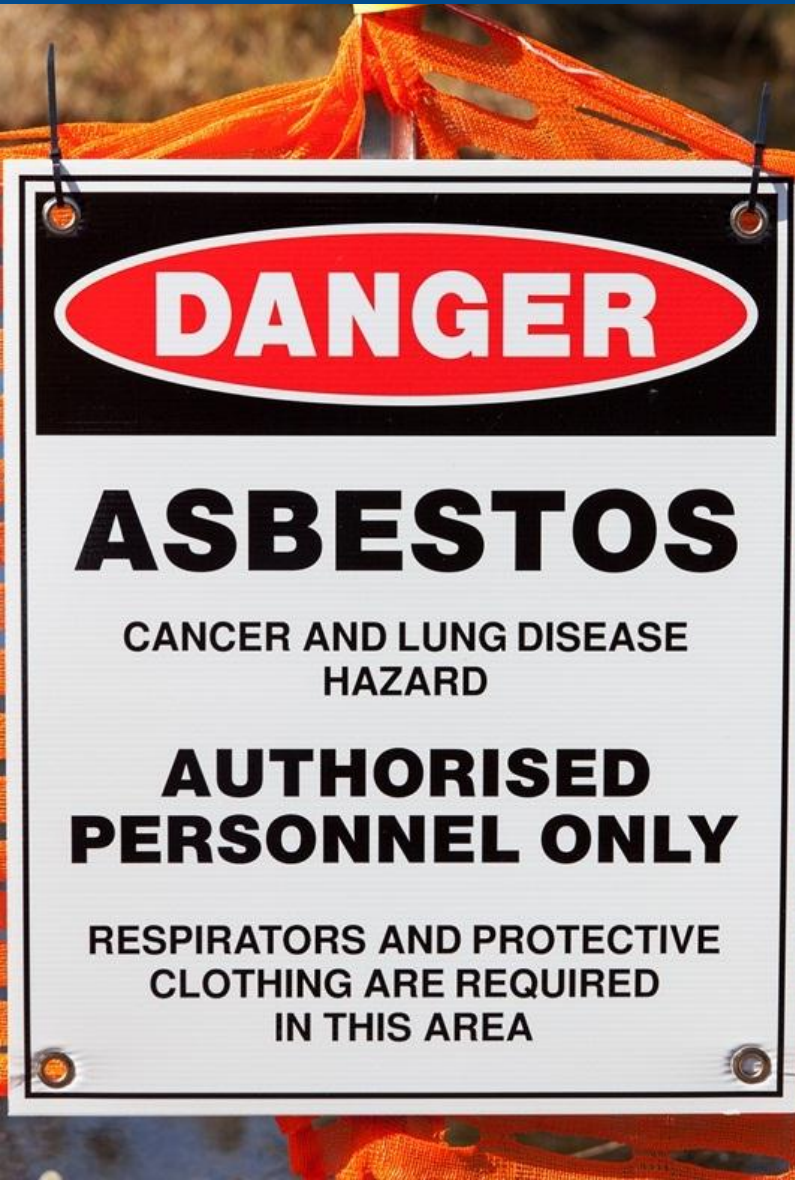


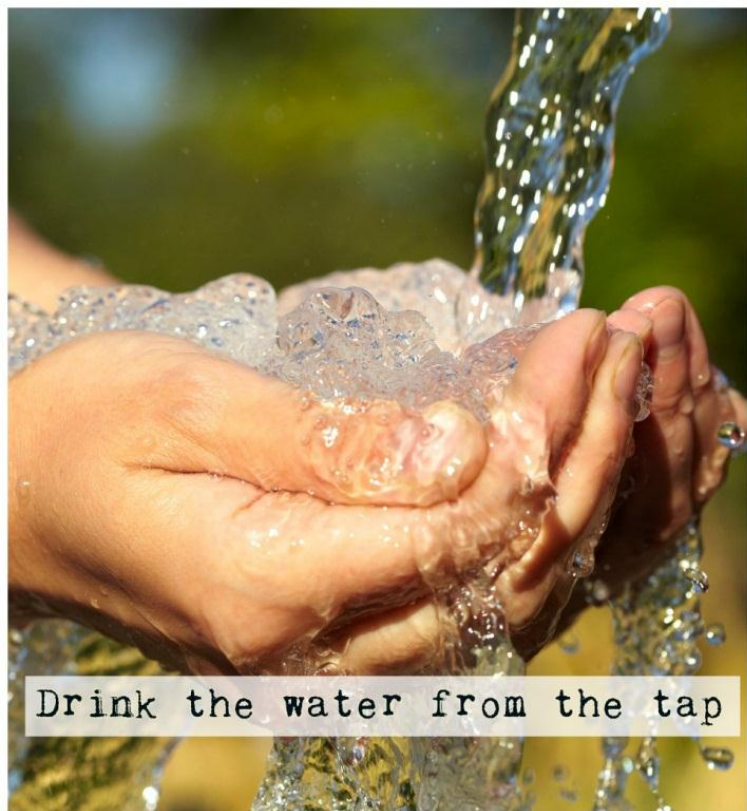
Yearbook

July 2014 to June 2015



How do we know Western Australia has good
environmental health standards?

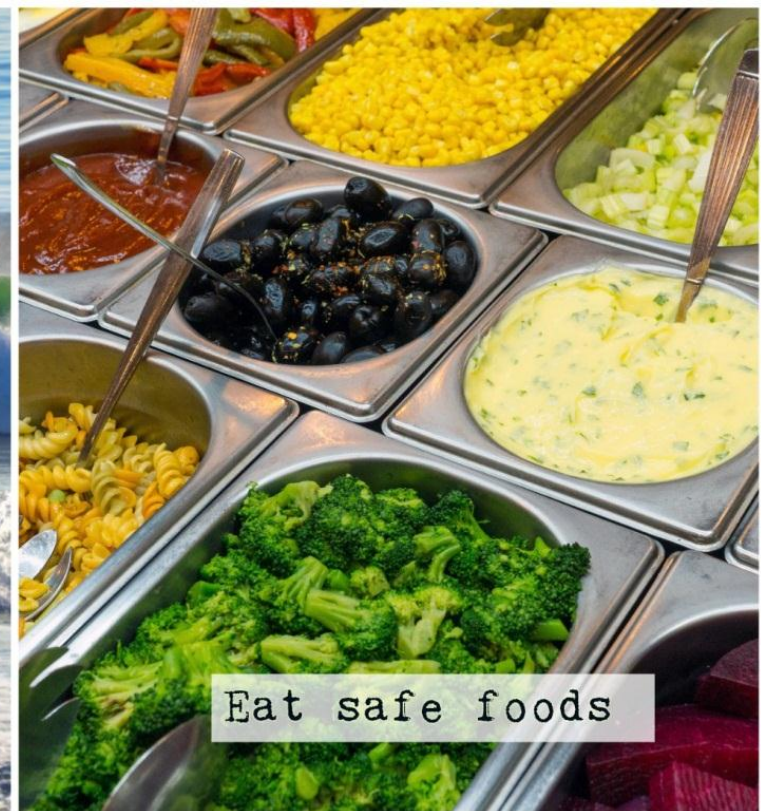
Because you can be confident that you can...



Drink the water from the tap



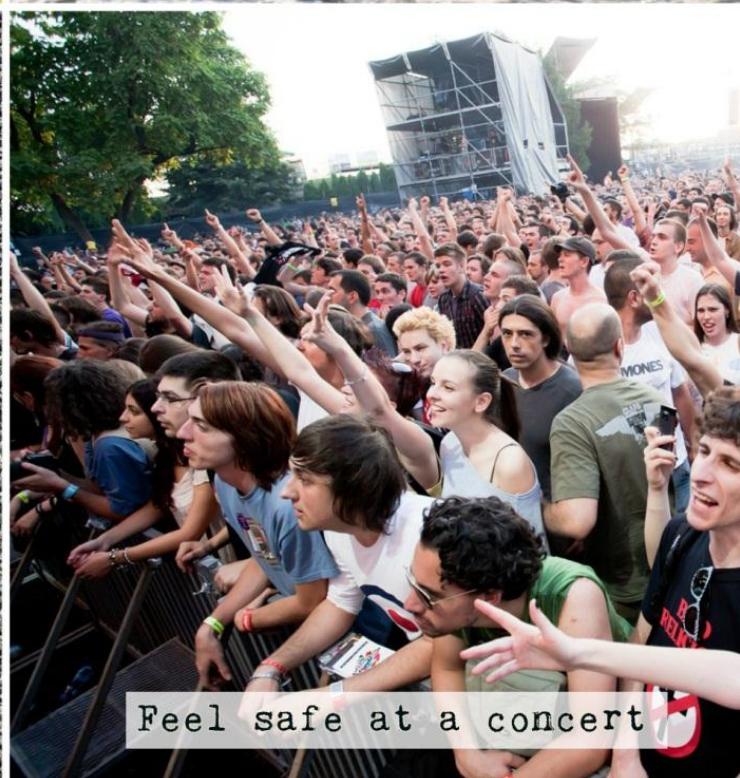
Surf clean waves



Eat safe foods



Breathe fresh air



Feel safe at a concert



Raise a healthy family

Environmental Health is one of those areas that we tend to take for granted because we live in a country with such great environmental health standards.

Living in Western Australia means we can be confident knowing that the Environmental Health Directorate, in partnership with local government, is working diligently behind the scenes to ensure such high standards are maintained.

Our job is to continue to make it easy to be healthy in WA.

This Yearbook is our way of showcasing what the Environmental Health Directorate has achieved in environmental health over the past year.

If you would like further information on any of these projects please email ehinfo@health.wa.gov.au



Our purpose

To lead in the management of environmental health risks

Our vision

Healthy people in a healthy environment

Our values

Cooperation | Fairness | Excellence | Integrity | Leadership



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OPERATING STRUCTURE

Our team has six core operational areas.

The Environmental Health Directorate (the EHD) is within the Public Health Division (PHD) of the Department of Health of Western Australia. The Public Health Division is led by the Assistant Director General of Public Health, Professor Tarun Weeramanthri.

The Environmental Health Directorate, led by Jim Dodds, is one of nine Directorates / Offices operating within the Public Health Division structure.

The Environmental Health Directorate has six operational areas:

1. Environmental Health Hazards Unit (EHHU)
2. Food Unit
3. Radiation Health Unit
4. Science and Policy Unit (SPU)
5. System Support and Licensing Unit (previously the Business Unit) and the
6. Water Unit.

Our functions

PROMOTE HEALTH: we enable people to increase control over, and to improve their health.

PREVENT DISEASE: we promote activities that avoid the occurrence of diseases.

MANAGE RISKS: we identify, assess and prioritise risks to health, and then apply resources to minimise, monitor and control them.

PROTECT HEALTH: we minimise the risk of adverse consequences to health that are created by environmental hazards.

MANAGE KNOWLEDGE: we generate, capture, organise and adapt knowledge and make it accessible and usable in different formats for different people.

MAKE HEALTH POLICY: we provide people with tools for change and action that set the parameters and quality within which they should carry out their work.

BUILD CAPACITY OF OTHERS: we enhance the abilities of people and organisations to perform their own health promotion, prevention, protection and risk management activities.

DEVELOP OUR OWN HEALTH PROFESSIONALS: we enable our own health professionals to acquire and develop skills and knowledge for personal development and career advancement - and to ensure that quality standards for service delivery can be met.

ENABLING LEGISLATION

We are responsible for administering a wide range of Acts and Regulations. These include:

Health Act 1911

Environmental Health Hazards

Health (Air-handling and Water Systems) Regulations 1994
Health (Asbestos) Regulations 1992
Health Act (Carbon Monoxide) Regulations 1975
Health (Garden Soil) Regulations 1998
Health (Poultry Manure) Regulations 2001
Hairdressing Establishment Regulations 1972
Health (Skin Penetration Procedure) Regulations 1998
Health (Offensive Trade Fees) Regulations 1976
Piggeries Regulations 1952
Health (Construction Work) Regulations 1973
Construction Camp Regulations
Health Act (Laundries and Bathrooms) Regulations
Health (Aquatic Facilities) Regulations 2007
Health (Public Buildings) Regulations 1992
Health (Rottnest Island) By-laws 1989
Fly Eradication Regulations
Health (Pesticides) Regulations 2011
Health (Prescribed Insect Pests) Regulations 1991
Health Act (Local Authorities Sewerage Undertakings) Model By-laws – Series “A”
Registration, Enforcement and Discharge of Local Authority Charges on Land Regulations

Food

Food Act 2008
Food Regulations 2009

Water

Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974
Health (Temporary Sanitary Conveniences) Regulations 1997
Health Act (Underground Water Supply) Regulations 1959

Radiation Health

Nuclear Waste Storage and Transportation (Prohibition) Act 1999

Radiation Health as secretariat to the Radiological Council

Radiation Safety Act 1975
Radiation Safety (General) Regulations 1983
Radiation Safety (Qualifications) Regulations 1980
Radiation Safety (Transport of Radioactive Substances) Regulations 2002

Science and Policy





Tobacco Products Control Amendment Act 2009
Tobacco Products Control Act 2006
Tobacco Products Control Regulations 2006









All legislation is available to download on the State Law Publisher website www.slp.wa.gov.au

SCORECARD 2014 - 2015

We made a commitment to complete numerous projects during the financial year. Our progress is highlighted below.

Did we achieve what we set out to do during the past financial year?

-  Project completed – we achieved our goal.
-  Satisfactory result – project progressed to a satisfactory level but not finalised.
-  Project not started.
-  Project put on hold – work postponed due to a redirection of resources or other unanticipated commitments.

Score	Operational priority
Environmental Health Hazards Unit	
	1. Develop a final report on adventure and obstacle races and activities that identifies risks, medical services required and provides appropriate management guidance.
	2. Develop and publish a Guideline and Operational Directive on <i>Legionella</i> management in hospitals.
	3. Develop a factsheet on <i>Psittacosis</i> for publication on the Department of Health and Public Health websites.
	4. Update the Department of Health event guidelines (sections medical, general, toilets) for publication on Department of Health and Public Health websites.
	5. Complete Phase II of the Environmental Health Atlas. (Expect a phase III for 2015-2016).
	6. Review outcomes of a survey of public awareness of mosquito-borne disease risks and draft a new communications plan and tools based on survey outcomes.
	7. Develop Department of Health policy on mosquito impacts related to land-use planning and location (# cases, frequency, and proximity to wetland) and assign risk to localities to integrate into online repository (Landgate).
	8. Review Regulations 88, 89 and 3 of the Health (Pesticides) Regulations 2011 and amend as required.



	9. Develop appropriate approvals process and draft written authorisation for drum recycling, including PeAC consideration of Department of Environment and Regulation report on taking control of drum recycling.
	10. Review training for soil fumigation to meet needs of end users and ensure that public and worker health is protected.
	11. Develop Methyl Tertiary Butyl Ether guideline for circulation and publication on Department of Health and Public Health websites.
	12. Develop proposal paper to Science Needs Committee (shared by the Department of Mines and Petroleum) for funding to develop threshold of no toxicological concern (TNTC) for water chemicals. Engage a toxicological consultant to develop the TNTC.
	13. Develop and finalise the Memorandum of Understanding with Department of Mines and Petroleum to allow Department of Health to assess processes and chemical criteria of fracking proposals.
	14. Develop and promote Guidance Note on assessment and management of fire damaged asbestos.
	15. Develop and promote Guidance Note on assessing the condition and health risks associated with asbestos containing materials.
	16. Produce information and guidance for the public on hazardous metals including mercury and lead for publication on the Department of Health and Public Health websites.
	17. Develop a written guideline and notification and assessment process for lead exposure.
	18. Review all current factsheets on pesticides and update information on Department of Health and Public Health websites as necessary.
	19. Research and develop guidance information on Multiple Chemical Sensitivity for publication on Public Health and Department of Health websites.
	20. Review and complete sulfometuron drinking water guideline.
	21. Review existing international guidelines on vanadium in drinking water and develop Department of Health guideline.
	22. Publish outcomes of investigations into a locally-acquired case of dengue fever in a peer-reviewed journal



	23. Formalise a national exotic mosquito response protocol through National Arbovirus and Malaria Advisory Committee (NAMAC) with input from key agencies and implement recommendations at Perth Airport
	24. Complete a feasibility study of the use of a helicopter to apply larvicides for mosquito control in the Swan and Canning Rivers catchment
	25. Review existing resources and develop standard responses to routine stakeholder enquiries about common Environmental Health Hazard issues (e.g. mould, fire-damaged asbestos, public events, clan labs, personal services)
	26. Administer Year 2 (2014-15) of Funding Initiative for Mosquito Management in Western Australia funding, including advertising awarding and funding of competitive research grants and grants to Local Government.
	27. Completion of Health Risk Assessment of fracking in WA.

Food Unit

	1. Refine and streamline assessment, auditing, compliance and reporting processes for the administration of the Primary Production and Processing Standards of the Australia New Zealand Food Standards Code across food industries including eggs, dairy, meat, poultry, sprouts and bivalve molluscs. Adopt a State based approach for the consistent implementation of the Standard, consistent with national objectives.
	2. Commence the review of the Food Act 2008 (the Food Act) and the Food Regulation 2009 as required by section 146 of the Food Act.
	3. Review the “Food borne illness in Australia annual incidence CIRCA document 2010” when released to determine any impacts and identify opportunities for possible intervention in WA.
	4. Review and evaluate the WA Food Regulation: WA Health Regulatory Food Safety Auditor Approval Process Policy and WA Food Regulation: Department of Health Management of Food Safety Auditor Policy to determine their efficacy and report recommendations on operational improvements for WA.
	5. Communicate the outcomes of the Compliance and Enforcement Policy review to stakeholders
	6. Undertake analysis of the Food Unit sampling program data to assist in evaluating the relevance and cost effectiveness of the current program and risk assessment activities, and make recommendations on sampling plan priorities.
	7. Draft and implement an incident response framework relating to biotoxins in WA seafood that encourages a cooperative approach across industry sectors and government on a regional and state-wide basis.



Radiation Health Unit

	1. Review, identify and amend reporting format for the Radiation Environmental Analysis Service to include the additional information requirements of Health Corporate Network.
	2. Choose two of the Radiation Health Unit incident specific guidelines and conduct a desktop exercise on each to evaluate the appropriateness of the guidelines and identify any gaps in training and equipment for the two specific scenarios.
	3. Review Safety Report Series No. 79, Managing Regulatory Body Competence, published in December 2013 by the International Atomic Energy Agency, and tailor the existing training program for Radiation Health Unit staff to align with the objectives of this publication.
	4. Investigate calibration methods for Industrial Radiography 200 kVp x-rays by collecting field-site x-ray spectra and evaluating these against ISO spectra.

Science and Policy Unit

	1. Scope out the requirements for conducting the fourth “Environmental Health Needs Survey for Remote Aboriginal Communities” in a minimum of 200 communities by the end of the financial year.
	2. Develop a home hygiene kit resource for wider application in remote community locations which identifies and educates on the maintenance of appropriate health hardware in the home.
	3. Evaluate and report on the burden of Environmental Health caused conditions in the remote Aboriginal communities of Dampier Peninsula, Wiluna and Mid-west to identify evidence based planning and service delivery.
	4. Review and evaluate twenty three Aboriginal EH contracts against Department of Health procurement requirements, and identify areas to minimise administrative burdens associated with the contracts.
	5. Prepare a business case to HIN to support the investment of resources allocated to the EH database project to support better management and sharing of EH surveillance data.
	6. Work with the Food Unit to streamline the management of food related data by implementing an improved system of data capture, as well as incorporate automated data analysis tools for improved reporting.
	7. Draft a scoping tool for “industrial estates and public health considerations” to enable developers to better understand public health impacts and improve information submitted for new industrial estates as part of the development assessment process.
	8. Conduct emergency management training courses in the Mid-west and Southern Goldfields local governments to support the development of knowledge and skills for responding to environmental health emergencies.
	9. Review the constitution of the Environmental Health Professional Review Board and prepare a report with recommendations to the Executive Director of Public Health for future service prerequisite provisions of the board.



	10. Represent WA's position on a proposed document to be published by enHealth, relating to a national Emergency Response Plan for Communicable Disease and Environmental Health Threats/Events of National Significance. The draft Plan will be available later in 2014 and published during the 13/14 reporting period.
	11. Mentor Environmental Health Directorate project officers who want to analyse existing Environmental Health data and prepare articles for publication. This is part of the strategy to improve the national/international awareness of the Environmental Health Directorate's management of environmental health issues relevant to WA.
	12. Evaluate the effectiveness of the 2014 controlled purchase operations for tobacco retailer's compliance with the Tobacco Regulations and report on strategies to support future compliance concerns.
	13. Finalise and distribute the tobacco training package for retailers and enforcement agencies to aid with compliance and enforcement of the Tobacco Regulations.
	14. Review and reprint of Tobacco Infringement Books"
	15. Develop and release a Toolkit for local governments to assist in the management of people living with hoarding and domestic squalor.
System Support and Licensing Unit	
	1. Commence distributing quarterly internal business unit news letters to raise staff awareness of services and the need for adherence to Department of Health policies and procedures.
	2. Commence recording incoming topic based calls received at reception and provide quarterly reports to the level 8 managers with a view to identifying Environmental Health areas that may require additional Frequently Asked Questions information to be made available for the public, or require additional staff to assist taking phone calls.
	3. Scope and report on the feasibility of the Australia Post online payments option for licensing and registration.
	4. Identify and train other BU staff to upskill licensing and registration services knowledge across the Environmental Health Directorate.
	5. Conduct an audit of mobile phones and data packs issued across the Environmental Health Directorate with a view to rationalising the use of these services.
	6. Assist Science and Policy Unit with the development of approved Aboriginal health community 5 year contract documents.



Water Unit

- | | |
|--|---|
| | 1. Identify all sewage schemes operated by local government and determine their gazettal status. |
| | 2. Undertake site visits in conjunction with relevant local government authorities/other agencies to determine health risk factors and water quality monitoring requirements for primary contact recreation activities in dams that have been made available for public recreation. |
| | 3. Renew/update all existing Memoranda of Understanding for Drinking Water between the Department and licensed water service providers and execute a new one for a new service provider. |

Cross-Unit Collaboration Projects

- | | |
|--|---|
| | 1. Develop and publish a discussion document and draft guideline on how to assess the health risk from Mould in domestic and public buildings and how to remediate mould affected spaces. |
| | 2. Complete a desktop audit of environmental health risks, roles and responsibilities in correctional institutions to ensure that procedures and practices comply with an appropriate standard of environmental health. |
| | 3. Draft new Body Art and Personal Appearances Guideline based on last year's public consultation. (expect phase III to take place in 2015-2016 to Upgrade Code of Practice) |
| | 4. Review Health legislation in consultation with Building Commission to identify that which requires amendment, or transferring to Building Legislation, including scoping cost and amount of work required. |
| | 5. Finalise drafting instructions to complete the review of the Health Asbestos Regulations. |
| | 6. Develop and implement a new 3-5 year contract with University of Western Australia and PathWest for provision of State-wide arbovirus surveillance and research. |
| | 7. Develop electronic forms and online processing pathway for Pesticide Control licensing and business registration as part of Business Unit development of online and electronic licensing and payments. |
| | 8. Expand the functionality and reporting capabilities of the Pesticides data base. |
| | 9. Undertake health risk assessment of tattoo ink, effect of laser removal and report on composition of tattoo ink and safety. |
| | 10. Undertake literature review of existing indoor air quality policy and regulations and report on recommended amendments. |
| | 11. Prepared public information and awareness material for Asbestos Week 2014 and promote in collaboration with Communications Directorate. |
| | 12. Undertake a review of mosquito production, mosquito management and infrastructure of wastewater management systems in the north-west of WA. |

MAJOR ACHIEVEMENTS

We had a productive year and a few of our major achievements are outlined below.

Public Health Bill introduced to WA Parliament

The Science and Policy Unit played a pivotal role in coordinating the introduction of the *Public Health Bill 2014* into Parliament on the 26th November 2014 after years in development. The Bill is a major public health initiative and regulatory reform project for Western Australia, which proposes to replace the existing *Health Act 1911*, now over 100 years old. A significant amount of work is required to support the Bill into the future.

State-wide wastewater management workshops

The Water Unit completed one of its greatest projects which involved running educational workshops on current wastewater management practices across WA including Perth, Busselton, Broome and Albany.

“Back to Basics” course for Food Act authorised officers

The Food Unit delivered a two-day course for Food Act authorised officers as part of Australian Food Safety Week in 2014. Staff presented on a series of food regulatory and food safety management topics, which was well received from attendees.

Environmental Health (EH) Atlas mobile phone application released

The Environmental Health Hazards Unit released the trial EH Atlas which includes a new mobile phone application for iOS and Android devices from which data can be uploaded to a centralised online storage database, greatly streamlining mosquito surveillance data collection by EHOs. While the initial project incorporates tools for recording data for mosquito managers, future development will enable data collection for other areas of environmental health.

Managing the ban on commercial sun beds

Following the Minister for Health’s announcement to ban commercial sun beds in WA, the Radiation Health Unit has been busy organising the logistics of implementing the ban.

What we did



LEGISLATION, GUIDELINES AND PUBLICATIONS

Our role is to ensure interventions, such as regulations and guidelines, are in place to prevent disease and illness arising from environmental exposures and other environmental health impacts.

Public Health Bill introduced to Parliament

By Kelly Crossley and Bree Abbott

The [Public Health Bill 2014](#) (the Bill) was introduced into WA Parliament on the 26th November 2014. The Bill is a major public health initiative and regulatory reform project for WA, and proposes to replace the existing [Health Act 1911](#), now over 100 years old.

The Bill is supported by the [Public Health \(Consequential Provisions\) Bill 2014](#), which provides for amendments to the *Health Act 1911* and a range of other Acts as a consequence of the Bills passage.

To coincide with the Bills introduction we implemented actions from the supporting Communication Strategy, including:

- Hosting numerous seminars across WA
- Releasing an online [Youtube video \(3 minutes\)](#) and [recorded presentation \(26 minutes\)](#) promoting the Bills and
- Developing consumer factsheets

A significant amount of work is required to support the Bills into the future if and when they are proclaimed.

Hoarding toolkit By Kelly Crossley

In partnership with multiple agencies, we coordinated the development of the:

- [Hoarding and severe domestic squalor guideline for WA](#) and the
- [Hoarding and severe domestic squalor guideline: A toolkit for Local Government](#)

to support Environmental Health Officers (EHOs) and others involved in the management of hoarding and severe domestic squalor.

There is increasing recognition that this public health issue is having a severe impact on the individuals involved, their families and any children or dependents, including animals, in their home. It can also impact neighbours and the surrounding community and requires significant resources from local government and other service providers.

Asbestos fire guidance By John Howell and David Peckitt

The release and risk from asbestos fibre resulting from a burnt asbestos building can be a difficult management problem, especially from large bushfires. This is because asbestos cement sheeting will shatter explosively when subject to fire, contaminating the building footprint and adjacent areas as well as downwind areas due to settlement

of friable asbestos from the smoke plume. To address these health issues we released the [Guidance Note on the Management of Fire Damaged Asbestos](#) and associated Brochure. The Asbestos fire guidance notes are the first of its type in Australia.



Figure 1 Asbestos contamination following the 2011 Margaret River bushfires

Revising the Asbestos Regulations By John Howell and David Peckitt

The *Health (Asbestos) Regulations 1992* (the Regulations) were created primarily to prevent the new use or reuse of asbestos and to protect the public from asbestos exposure. Unfortunately the Regulations are now dated, which is of considerable concern because the incidence of the invariably lethal asbestos disease mesothelioma continues to increase amongst members of the public, especially in do-it-yourself home renovators. Consequently we are undertaking a major revision of the Regulations.

A Draft Code of Practice and Draft Memorandum of Understanding with WorkSafe will support the revised Regulations. Both documents were released for a 10 week public consultation and a workshop was held to address emerging technical and management issues.

It is planned that the bulk of the revision and development work will be done in the 2015-2016 year but finalisation and promulgation will await the adoption in Western Australia of the Public Health Bill, as well as the national Model Workplace Health and Safety legislation in relation to asbestos.

Pesticides regulations review By Geoff Harcombe

Since the *Health (Pesticides) Regulations 2011* have been in operation, concerns have been raised by Local Government and the pest management industry related to signage on vehicle and public spaces required under sections 88 and 89. In particular, there has been confusion about what signage is required and when and where it is to be applied.



Figure 2 An example of signage required under the pesticide regulations

Sections 88 and 89 are designed to enable the public to avoid an area or a vehicle applying a pesticide in a public place including a verge or park.

The regulations will be updated to ensure that the intent of the regulations is clear and concise to avoid further misinterpretation. Amendments are expected by the end of the 2015.

New clan lab brochure released By John Howell

As part of our ongoing work to manage clan labs, we worked with Western Australian Police to publish the [clandestine drug laboratories brochure](#) to support local government and the public to identify, and clean-up a house that may have been used as a clan lab. The brochure has been disseminated across WA.

Clandestine drug laboratories ('clan labs') are sites where illegal drugs are manufactured in secret, usually with improvised equipment, chemicals and methods. Extensive work has occurred over the past few years to manage the increasing risks, in partnership with local Governments, WA Police, ChemCentre, Department of Environment Regulation and Department of Housing.



Figure 3 The new Clandestine drug laboratories brochure available on the Healthy WA website.

Review of the drinking water sampling procedures By Sara Gilbertson

'Flaming' is a standard tap disinfection method when drinking water samples are taken. Nozzles and the tap area are sterilised using butane or propane burners. However, this can present a problem with plastic taps, and concerns were raised about safety risks and using such open flames during total fire bans.

To address this concern we revised the [Standard Drinking Water Sampling Procedure – microbiological](#) factsheet to provide more assistance on 'Disinfection where flaming is not possible'. Advice on swabs, sprays and dips using sodium hypochlorite, ethanol and isopropal is included. Positive feedback has been received on the new format.

Floatation tanks fact sheet By Sara Gilbertson

With the increasing popularity of floatation tanks, we developed an online [fact sheet](#) outlining health considerations.

Floatation tanks reduce sources of external stimulation allowing users to float seemingly weightless in an extremely buoyant salt water solution. The use of floatation tanks is being promoted to assist with deep relaxation.

Floatation is not recommended for persons who suffer from medical conditions, such as epilepsy and low blood pressure. In addition persons who have open sores or temporary illnesses such as contagious diseases should not "float", for up to two weeks after their symptoms have cleared.



Figure 4 Floatation tank

Managing mould guidelines By Peter Franklin

The EHD receives numerous calls concerning mould in homes and public buildings. Although we currently have a fact sheet addressing mould issues, it only provides basic information.

To address this we drafted “Guidelines for managing mould and dampness in buildings”. The guideline covers the assessment (identification and evaluation), remediation and ongoing prevention of mould and dampness, as well as the identification and reparation of the causes of the problem. The draft guidelines have undergone a review by external stakeholders and are expected to be finalised by late 2015.



Figure 5 Mould damaged building

Communicating food allergen information

By Catrina McStay

A significant amount of work has been undertaken to provide support to enforcement agencies and food businesses on allergen declarations, with the release of a range of [Communicating allergen information](#) resources including:

- [The Food Act 2008 \(WA\) - guideline for allergen declarations by food businesses:](#)
- [Food Act 2008 \(WA\) tool for local government: understanding allergen declarations: p](#)
- [Authorised officer allergen declaration checklist:](#)
- [Food allergen declarations information for food businesses:](#)
- [Food allergy: creating safer food choices](#)

The resources provide information on allergen declaration requirements for food businesses and enforcement agencies and present a practical and consistent compliance and enforcement approach.

Sensitised individuals rely on allergen declaration information provided to make decisions on what food is safe for them to purchase and eat.

The resources were



Figure 6 Catrina McStay from the Food Unit launching the release of the new food allergy resources

launched during the 68th 2014 Environmental Health WA State Conference and the Australian Institute of Food Science and Technology Allergen Workshop.

The resources were also disseminated to the Australasian Society of Clinical Immunology and Allergy, Allergy and Anaphylaxis Australia, and the Environmental Health Association, and the Allergen Bureau.

Imported food labelling fact sheet

By Rebecca Delsar

A "[Food labelling for food importers fact sheet](#)" was developed to address inconsistencies with labelling of imported food. The document is based on the Australia New Zealand Food Standards Code and is designed to help food importers ensure that imported food to WA complies with food legislative requirements.

Guidance on the primary production and processing standard for eggs and egg products

By Scott Whiddon

In response to a number of enquiries relating to Standard 4.2.5 *Primary Production and Processing Standard for Eggs and Egg Products* (the Standard) of the Australia New Zealand Food Standards Code, and in particular the requirement for individual eggs to be stamped, the Food Unit developed the [Primary Production and Processing Standard for Eggs and Egg Products fact sheet](#) to assist the egg industry and local government enforcement agencies.

The Food Unit has also developed and is managing a centralised register of 'unique identifiers' (egg stamps). The information contained in the centralised register can be utilised to effectively and efficiently perform a trace-back of implicated

eggs and/or egg products in a suspected food-borne disease outbreak investigation.

Both resources will support the consistent implementation of the Standard.

Commenced the food legislation review

By John Hardy

The review of the *Food Act 2008* (WA) (the Act) and *Food Regulations 2009* (WA) (the Food Regulations), made under Section 146 of the Food Act has commenced. The review is required every 5 years of operation, and aims to:

- Examine and report on the operation and effectiveness of the Act and Food Regulations and make recommendations on amendments that may be required
- Consider measures that will strengthen existing legislation in order to ensure the objects of the Act as set out in Section 3 are met.

This year work commenced on developing stakeholder communications, reforming the Food Alliance Working Group to advise on enforcement agency issues, completing a review on other jurisdiction food legislation, and developing a [webpage](#) for the project.

The coming year will include releasing a discussion paper, delivering state-wide presentations, and preparation of a review report incorporating information on the effectiveness of the Act and Regulations for submission to the Director General of the Department of Health for consideration by the Minister for Health.

Managing health risks of solaria

In September 2008 regulations were introduced under the Radiation Safety Act requiring the registration of commercial premises for the possession and operation of sun-tanning units. During the 2013-14 financial year several jurisdictions began announcing bans on commercial use of sun-tanning with many taking effect 1 January 2015.

In April 2015 the Minister for Health announced that commercial sun beds will be banned from 1 January 2016.

The Radiation Health Unit has been busy organising the logistics of implementing the ban.



Figure 7 The EHD has the responsibility of managing the ban of commercial sun beds across WA.

State's Mosquito Control Advisory Committee

The State's Mosquito Control Advisory Committee (MCAC), for which the EHD provides the secretariat support, assessed 14 applications for funding for research projects directed at improving capacity for health-driven mosquito management in WA.

This research funding has been made available under the Government's Funding Initiative for Mosquito Management. The Mosquito Control Advisory Committee recommended awarding of over \$150,000 shared across several applicants for projects that will be undertaken in 2015-16.

COMMUNITY STUDIES AND INVESTIGATIONS

It is important that we continuously monitor environmental health impacts across the state. We do this by contributing to studies, surveys and investigating potential community health concerns.

Recycling of used pesticide drums By Willow Warren and Krys Gregory

Concerns have been raised about pesticide drum recycling including used chemical drums. Although progress has been made by environmental agencies to address the storage of used chemical containers, better coordination between government agencies is needed.

The DER has responsibilities for trade waste which captures drum recycling. However, there is also a requirement under the Health (Pesticides) Regulations which requires businesses recycling pesticide containers to seek a permit from the Executive Director Public Health. This duplication of



Figure 8 Willow Warren, Scientific Officer, inspecting the storage of drum recycling containers

functions has caused confusion for businesses.

Our officers completed inspections of drum recycling businesses and found significant differences in the level of compliance.

This issue has been reported to the Pesticides Advisory Committee (PeAC) which has now approached the DER to assume responsibility for the disposal of used pesticides drums and associated residues.

Review of local government sewage schemes By Julie Phelps

The *Health Act 1911* permits local governments to construct or have vested in them, sewers, drain and sewerage schemes, and establishes the process for receiving the Governor's approval. To determine the exact number of schemes across WA, we undertook a review to identify all sewage schemes operated by local government and to clarify their gazettal status. This involved examining numerous DOH archived files and electronic *Government Gazettes*. It was concluded that there are currently 12 'gazetted 'full' sewage schemes and 10 gazetted Septic Tank Effluent Disposal Schemes. It was also found that there are a number of towns with shared effluent disposal arrangements of an undetermined, or clearly no, approval status. As such systems are of concern, and may have associated risks, staff will be examining these further. Local governments wishing to obtain copies of the details found on their schemes are

welcome to contact the Water Unit. A big thanks goes to Records staff who assisted with the review.

Summer Naegleria species spikes By Anne-Marie Laddie

During the first two months of 2015 there was a doubling in the number of Naegleria species detections in aquatic facilities. The presence of any species of Naegleria indicate a breakdown of the disinfection system, and require the closure of the facility until remedial action has been taken and the Naegleria species identified. Fortunately no Naegleria fowleri (the organism which causes amoebic meningitis) was detected.

However, further investigation identified a common theme involving regular maintenance staff being on leave. From this experience aquatic facility operators have been encouraged to ensure that more attention is given to the training of casual and replacement pool staff.

Inflatable water slides By Anne-Marie Laddie

The summer period saw an increase in the number of commercially operated inflatable water slides around the State. Due to their transient nature, a number of issues needed to be addressed at every new site, including wind



Figure 9 Inflatable water slide installed in the City of Perth in November 2014

speed, slope, anchorage, the nature of the water source, disinfection procedures and wastewater disposal. We are currently developing new Guidelines for this type of aquatic facility and Local Government officers are encouraged to check that each slide has been registered with Work Safe.

Waterslide accident investigation By Anne-Marie Laddie

Officers had to investigate an accident where a child fell from a fixed, open, water slide. The incident was assessed with regard to the *Code of Practice for the Design, Construction, Operation, Management & Maintenance of Aquatic Facilities*. While the slide had been certified as structurally sound, it appeared that there may have been variations from the manufacturers operating instructions. It was noted that rubber mats were removed from the ride, and stricter measures were taken to prevent tandem riding. Discussions were held with similar water slide operators, to ensure that correct operational procedures were being followed. One key outcome from this incident was to ensure that manufacturers operating instructions are followed.

Northampton lead update By Lindsay Gillam

The Northampton Lead Tailings Project was commenced by the State Government to address the issue of historical lead tailings distributed randomly throughout the Northampton town site. The project was based on residents volunteering to have independent sampling of their premises conducted in order to determine the presence, or otherwise, of lead tailings. Take-up of the offer was excellent with approximately 90% of property owners participating in the project.

Where elevated levels of lead tailings were detected, and potentially able to impact on the resident/s, visits were

conducted by senior health department officers to offer free blood lead testing at the local hospital, to identify to the resident the affected portions of their property, and to encourage them to clean their homes. Over 75 personal visits were conducted, however a disappointing number of only 25 persons undertook blood testing. Of these, two were considered slightly elevated but still not sufficient to create any significant health risk. Advice from departmental medical officers was provided to these residents. Further information is available at www.lands.wa.gov.au/northampton

Burden of EH caused conditions in remote Aboriginal communities By Robert Mullane

To improve the delivery of environmental health services to remote Aboriginal communities we identified the need to develop closer links between the EHD and regional and remote primary health care providers (WA Country Health Service (WACHS) and Aboriginal Medical Services).

WACHS records all patient illnesses and diseases that are presented to their clinics. The raw data is showing that 35-60% of ill people attending clinics are presenting with environmental health related illnesses and diseases.

The EHD, and contractors who are funded to provide EH services to the regional communities, now have access to the community clinic patient data identifying numbers of people attending and the reported reasons for presentation.

This information is being used to better inform the planning and targeted delivery of environmental health services to affected Aboriginal communities. The data will, in the next round of contract procurement, be also used as a performance indicator for individual contract and overall program performance.

Fremantle ship fire response By Jared Koutsoukos

Following a fire aboard the 'Ocean Drover' freight ship in October 2014, docked at Fremantle Port, our on-call Duty Officer (OCDO) was required to provide an update on any health risks associated with air pollution. Advice received from the EHD's Toxicologist confirmed the likely air pollutants (particulates and cyanides). Advice was also sought from the Department of Environment (DER), Pollution Response Unit (PRU) regarding air quality monitoring and the predicted extent of the plume, and the wind speed and direction.

The OCDO also contacted the Department of Fire and Emergency Services to confirm relevant information and the necessity for any media updates for health advice.

Hydrogen cyanide was detected well below guideline exposure levels throughout the day, however particulates posed more of a problem, reaching levels of concern up to 250m from fire. The critical area was determined to be up to 200 to 500m from the site of the fire.

Crew on board the ship, and people from businesses adjacent to the fire were affected by smoke inhalation and taken, or self-presented to Fremantle Hospital for assessment. All businesses within 250m evacuated the area for the day, which included people who complained of ear, nose and throat health issues.

The afternoon South Westerly wind pushed the thick white smoke plume in a direction towards Port Beach (~ 2km away), where it dissipated. Warning signs were erected around the Port to advise people to keep their windows up. It was determined that health media advice as provided was sufficient. The fire burned from approximately 8am to 10pm.

PROJECTS, PROGRAMS AND OTHER INITIATIVES

Our team leads or contributes to numerous projects and programs that are conducted locally and nationally to advance awareness and knowledge of environmental health.

Controlled purchase operations

By Bruce Hawkins

Controlled purchase operations (CPO) are conducted in accordance with the provisions of the *Tobacco Products Control Act 2006*. Retail stores suspected of selling cigarettes to minors on one or more occasions are targeted. A boy and a girl aged under 18 years are recruited to make attempts to purchase cigarettes from these targeted stores.

A CPO was conducted in the Perth metropolitan area over a two week period during September and October 2014. This was the second CPO conducted in 2014. In summary:

- 98 retail stores were visited and cigarettes were purchased from 44 of them.
- 38 \$1000 infringement notices were issued to the sellers of the cigarettes.



Figure 6 The CPO was conducted at a variety of retail stores that sell tobacco including large food chains.

- 6 Written warnings were issued to individuals who sold cigarettes.
- Of the stores that sold cigarettes:
 - 30% were Supermarkets
 - 20% were Takeaway/Deli stores
 - 19% were Newsagency/Lotto Kiosk operators
 - 16% were Service Stations
 - 10% were Convenience stores and
 - 5% were Other types of stores
- The age of the persons who sold cigarettes to a minor included:
 - 32% of sellers were aged 18-25 years and
 - 27% were aged 30-39 years.

Home hygiene kit for remote communities

By Robert Mullane

A draft 'Healthy Home Resource' kit has been produced, designed to help aboriginal people improve living conditions in and around the home.

Feedback has been received from three regional Aboriginal Environmental Health Forums, including the Goldfield's, Kimberley and Pilbara, and will be presented to the Midwest forum later in the year. Comments so far have been positive.

The resource will be used by environmental health and other health or housing related staff to engage with people living in regional and remote Aboriginal communities to help improve the living conditions.

The Healthy Home Resource is one of a number of publications that are being developed by the EHD in response to requests for such resources from various WA based health related agencies.

Once all Forum member agencies and communities have had an opportunity to review and comment on the draft resource a final product will be produced and distributed.

Tobacco training package review By Bruce Hawkins

A review of the tobacco training material for use by retail stores selling tobacco products was undertaken, driven by the findings from the “2014 Controlled Purchase Operations” and the Retailer Compliance Survey 2013.

An online [Retail Training package](#) was developed for retail outlets. As part of the review the training package is now being printed into a hard copy booklet which will be mailed to all retail tobacco licence holders.

As a result of this review the “[Preventing the sale of tobacco products to children – What you Must know](#)” document was updated to give greater emphasis on the importance of staff not selling tobacco to minors by asking for a person’s ID or their age.



Figure 7 The new "Tobacco retail training package"

Electronic cigarette toxicity By Dr Peter Franklin

The EHD commissioned a study on the respiratory effects of electronic cigarettes (e-cigarettes), due to the limited research into potential health effects. Proponents of e-cigarettes suggest they provide an opportunity to hasten the end of tobacco cigarettes, while others caution the rapid uptake of e-cigarettes based on a lack of knowledge of their long-term safety.

Understanding the health effects of this product before it causes problems is important and animal studies provide a way to investigate, in a short period, the potential effects of chronic exposure.

Animal (mice) exposures to e-cigarette vapour and conventional tobacco smoke were undertaken by researchers at the Telethon Kids Institute. Mice were exposed daily from the age of 4 to 12 weeks; a period that roughly covers the period from early adolescence to adulthood. Both e-cigarette vapour exposures, particularly vapour based on vegetable glycol as the excipient, and tobacco smoke exposure significantly impaired a range of lung function parameters. This study is the first to show that chronic exposure to e-cigarette vapour is not harmless to the lungs, and results in significant impairments in lung function in mice. The results of the study will be published by the end of the year.

Shisha and the law By Bruce Hawkins

Over the last 12 months shisha has emerged as an issue, with the sale and supply of shisha, plus where it can be smoked, generating an increasing number of inquiries.

To address this concern the “[Shisha and the law](#)” fact sheet was created. The factsheet provides information for proprietors of businesses to:

- understand the licensing requirements for selling or supplying shisha and;
- advise them on their responsibilities and obligations if they are contemplating allowing customers to smoke at their premises.

Compliance officers are pro-actively speaking to prospective licence holders, inspecting their premises and providing copies of the [Factsheet](#). If you do not have a retail tobacco licence and you are found selling or supplying shisha, you could be fined \$1,000, the shisha could be seized or you could be taken to court. Court fines are up to \$10,000 as a person or \$40,000 as a company.



Figure 8 Shisha has emerged as an issue in WA.

Future planning strategy By Bree Abbott

On behalf of the Public Health Division, our team took a lead role in coordinating the development of a strategic plan for the Division. The plan was developed in partnership with staff across all nine Directorates, and reflects the collective ideas on how the Division will work together to make the most effective changes for staff and Western Australians. The process involved engaging as many staff as possible and included activities such as a:

1. Discovery Workshops
2. Appreciative Inquiry questionnaire
3. Recruiting a Change Team to help spread the word on the planning process
4. Wargame workshop

These activities resulted in some inspiring and innovative ideas, and the plan was delivered to staff in August 2014.

Linking bio-analytical tools to human health

By Richard Theobald

In February the Manager of the Water Unit was invited by the Australian Water Recycling Centre of Excellence to attend the 1st Workshop on *Linking Bio-analytical Tools to Human Health* with researchers and regulators from around the world. The purpose of the workshop was to determine the current state of knowledge associated with the use of bio-analytical tools for use in water quality assessment. This work is of particular interest to the EHD as bio-analytical tools may provide an extremely sensitive method of detecting ultra-low concentrations of chemicals in drinking and recycled water. While the EHD already has a sophisticated drinking water and recycled water chemical monitoring and compliance program bio-analytical tools is potentially the way of the future.

Supporting asbestos awareness week

By Pierina Otness

National Asbestos Awareness Week was held from the 24 to 29 November 2014. To support the program the EHD implemented a number of promotional activities, specifically targeting home renovators.

A media campaign for the week included a special feature article and advertisement printed in the Sunday Times Home Magazine, as well as a general press release to community newspapers and other media outlets. Articles appeared in print media and information was released through the Healthy WA website and facebook and twitter pages.

The highlight of the week was a full day seminar held with 90 professionals in environmental health and contaminated sites health risk assessment attending. The seminar included speakers and discussion panel members from the Department of Environment Regulation, WorkSafe WA and the Asbestos Diseases Society of WA.



Figure 9 Senior Scientific Officer, David Peckitt, presented on the technical issues of asbestos management during Asbestos Awareness Week.

Environmental Health Professional Review Board review

By Lindsay Gillam

Our staff undertake the role of Secretariat and Chair of the [EH Professional Review Board](#) (the Board). The Board remained very active during the year, assessing the qualifications and background of overseas applicants wishing to obtain work as an EHO in WA. Although the job market for EHOs has declined, a high number of immigrants continue to seek the necessary endorsement of the Executive Director to apply for positions throughout the State.

The Board semi-formalised its role in providing a representative on the national Accreditation Panel of the Professional Association, Environmental Health Australia, which assesses and accredits all undergraduate and post graduate courses at tertiary institutions across Australia. The



Figure 10 The Healthy WA website includes up to date asbestos management information www.healthywa.wa.gov.au

Accreditation Panel assessed five Eastern State-based courses and one local WA course. Negotiations are continuing with two of the universities with the assessment process considered quite rigorous by university staff. Further overdue assessments are now due on several additional universities, with the anticipated work load to remain high.

A significant and complex review of the Constitution for the Board was recently completed, with a draft now being assessed by Board members. The Constitution was in urgent need of updating, although the imminent adoption of the Public Health Bill presently before Parliament is expected to have some influence over the Board's activities.

Review of auditing framework By John Hardy

A review and evaluation of the WA Regulatory Food Safety Auditing Framework (the framework) was initiated, which consists of Part 8 of the *Food Act 2008* and the administrative policies, procedures and documents that are in place to ensure its effective administration. The framework deals with the management of the regulatory food safety audit process, including how the DOH manages consistency in and the integrity of regulatory food safety auditing performed by approved regulatory food safety auditors.

The framework has been in operation for almost four years and feedback indicates that changes are required to improve administration. These changes will benefit all stakeholders including the general public, food businesses, food safety auditors, local governments and the DOH.

A conformity assessment of the framework was also undertaken against the "Australian Standard 17024:2013 - General requirements for bodies operating certification of persons", which identified potential operational improvements. Consultation has commenced with the

development of a stakeholder survey and the reinvigoration of the WA Food Safety Auditing Framework Consultative Committee.

Communicate the outcomes of the compliance and enforcement policy review to stakeholders

By Rebecca Delsar

A review of the *Food Act 2008* [Compliance and Enforcement Policy](#) and the [Compliance and Enforcement Guideline for Enforcement Agencies](#) was initiated, with the revised document published online. The documents provide a framework to assist local governments to develop their own Food Act compliance and enforcement policy, and were communicated to stakeholders via a workshop presentation, newsletters and emails.

Evaluating the Food Unit sampling program

By Kim Unwin

A review of the Food Unit sampling program was initiated to determine whether the current monitoring activities conducted by the Food Unit meet the necessary legislative requirements and the mission of the DOH for providing safe and suitable food in Western Australia.

Phase 1 provided a preliminary assessment of the sampling program to identify the specific activities needed to inform the recommendations required for an adequate monitoring and verification program by the DOH.

Outcomes of the preliminary assessment indicated that some food businesses were not conducting monitoring activities or did not have verification activities by the DOH, whilst some food businesses had more than one monitoring or verification activity in place. It was identified that further detailed information was required to establish which food businesses

needed to implement monitoring and verification activities and which food businesses did not require monitoring activities by the DOH.

The recommendations of Phase 1 of this project outline the specific activities required to be undertaken. It was recommended that this project undertakes the next steps:

Phase 2 – Review the food sampling activities

Phase 3 – Review the auditing and assessment activities

Phase 4 – Conduct a cost analysis of the current monitoring activities borne by DOH

Phase 5 – Finalise the report and make recommendations

Submissions By Catrina McStay

The Food Unit has a role to provide input into the national food regulatory system, including submissions on applications and proposals to change the Australia New Zealand Food Standards Code and input into the development of policy guidelines. During 2014/15 the Food Unit made submissions on a number of topics including health claims – formulated supplementary sports foods and electrolyte drinks, food labelling review recommendation 17L per serving declaration in the nutrition information panel, voluntary addition of vitamin D to breakfast cereals.

De-proclaimed dam sanitary inspection project

By Jared Koutsoukos

The DOH continued to implement its assessment of de-proclaimed recreational dams in the South West. The most recent assessment undertaken included the Wellington Dam in the Shire of Collie. This follows a previous assessment undertaken at Harvey Dam in the Shire of Harvey.

The assessment involved a site visit in conjunction with the Shire of Collie EHO and a thorough sanitary assessment of potential faecal bacterial sources that may influence the water quality of the site. A recommended monitoring program has been prepared, which focusses on microbial (bacteria & amoeba), and phytoplankton/algae water quality monitoring.

An additional assessment was also undertaken along the Collie River at Honeymoon Pool. This site will also be included as part of an ongoing water quality monitoring program.

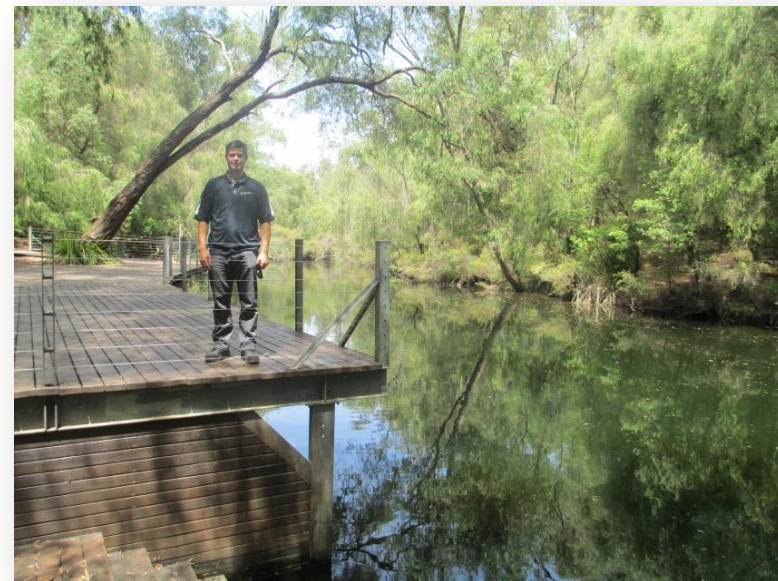


Figure 11 Senior Scientific Officer, Jared Koutsoukos, at Honeymoon Pool, Collie River

Food Unit database By Zachary Alach

Work has been undertaken to provide the Food Unit with a database that merges all current programs and work areas into a single application. There is significant variation in the many topic areas of the Food Unit providing interesting challenges.

The Western Australian Shellfish Quality Assurance Program (WASQAP) is a current food monitoring program that includes microbiological monitoring, chemical monitoring, phytoplankton monitoring and biotoxin monitoring. This program has been used as a prototype to demonstrate how the database should be able to change its resolution parameters in a simple interface to provide the user with the ability to request data from the system as required.

The database is in the next stage of development with the Meat, Dairy, Hospital food and the industry food monitoring data currently being loaded from these individual legacy databases. Other programs in the database that have been used in various live testing environments include: Project management, Food Safety Inbox,

Local government indicators By Zachary Alach

The EHD, in partnership with participating metropolitan local governments, initiated a project to develop key performance indicators (KPIs) for environmental health.

Local Government's were requested to complete a survey and report on environmental health indicators (EHIs) across common health issues and risk management areas. The findings have been published in the "Local Government indicators report", which is divided into eleven topic groups:

1. General
2. Food safety

3. Water safety
4. Air quality
5. Noise
6. Built environment
7. Contaminated land
8. Waste management
9. Vectors and pests,
10. Communicable disease control, and
11. Tobacco control.

Future reports may introduce new sections as required.

The KPIs have been selected to provide an evidence base which can support the allocation of resources and the development of policy in specific health risk areas. This report is also of importance in developing an understanding of baseline monitoring levels for the various health risk management areas within WA.

This baseline level of monitoring may be considered in future editions of this report to gauge the level of change in time across some of the health areas that have been identified.

Service level agreements By Cherine Glasson

Over the past 12 months there have been significant changes in the "Business Unit" with a name change to the System Support and Licensing Unit (SSLU) and the implementation of Service Level Agreements (SLA) between SSLU and the five technical units.

It is hoped once the SLA's are adopted by the EHD it will define and clarify the scope of services provided by the SSLU and encourage initiative within the SSLU to improve efficiencies and effectiveness of current service processes.

Development of real-time mobile data collection and management tools for the enhancement of mosquito management

By Peter Neville, Piers Higgs, Andrew Jardine, Anthony Jones and Ben Khoo

The EHD initiated and funded a \$100 000 project with Gaia Resources to develop an Environmental Health Atlas for LOCAL GOVERNMENT, which aims to facilitate a coordinated approach to mosquito management across WA. The Atlas includes a mobile application for iOS and Android devices from which data can be uploaded to a centralised online storage database, greatly streamlining mosquito surveillance data collection by EHOs. While the initial project incorporates tools for recording data for mosquito managers, future development will enable data collection for other areas of environmental health.

A pre-release demonstration version was available to download from Apple iTunes and Google Play Store to encourage testing and feedback. The final product is

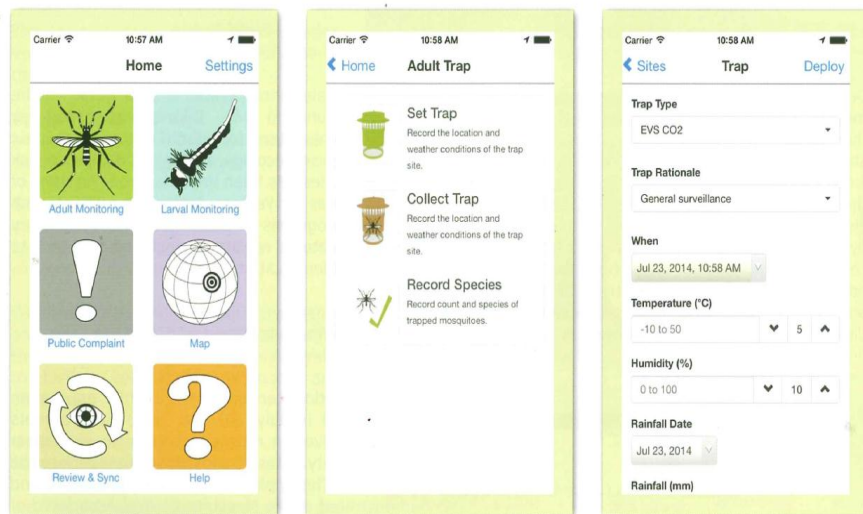


Figure 12 The iOS and Android interface for the new EH Atlas.

expected to be released before the end of 2015.

This is a fantastic initiative for WA, and is likely to be useful tool for other Australian States and Territories.

Mosquito Control Association of Australia Conference 2014

EHD staff played a critical role in organising the 11th Biennial Mosquito Control Association of Australia Conference held in Mandurah during September 2014. A lot of organisation went into the three day event, with 130 delegates attending from around Australia, including government, defence, medical and educational institutions.

The conference included field trips to local wetlands in the Peel Inlet, including a look at the rehabilitated Creery Wetlands by staff from the City of Mandurah's mosquito management team who showed delegates the problems associated with managing populations of the southern salt marsh mosquito.

The EHD's management of mosquito control across WA was recognised for being well coordinated, with local government programs getting significant assistance and support from the WA DOH and Research Institutions. WA is seen as taking a lead role in the management of mosquitoes and mosquito-borne disease.

PUBLISHED RESEARCH

It is important that we share knowledge locally, nationally and internationally. We do this by encouraging staff to submit project outcomes to environmental health related journals, enabling other health professionals to benefit from our research. This year a number of articles were published.

[A Review of On-Site Wastewater Treatment Systems in Western Australia from 1997 to 2011](#)

Maria_Gunady, Natalia Shishkina, Henry Tan, and Clemencia Rodriguez, *Journal of Environmental and Public Health* Vol. 2015, Article ID 716957, 12 pages

Abstract:

Onsite wastewater treatment systems (OWTS) are widely used in unsewered areas of WA. Common systems include conventional septic tanks, aerobic treatment units and composting toilets. Concerns have been raised about underperforming and failing systems. Possible contributing issues include inadequate installation and maintenance, insufficient local government resources or inadequate standards, procedures and guidelines. The authors reviewed installations and failures of OWTS in WA, and provided recommendations on management strategies and institutional arrangements.

Validation of Alkaline Disinfection for Recycled Water Schemes

A.L. Tilbury*, D. Deere, C. Rodriguez, F. Vorster, N.J. Fox, M. Marunczyn, B.B. Piper, Validation of Alkaline Disinfection for Recycled Water Schemes. *Proceedings 10th International Alumina Quality Workshop* April 2015 (p 251- 62). Perth, Western Australia

Abstract:

The Department of Health assessment process for recycled water schemes includes documents with a focus on residential and municipal water users and conventional

treatment methods. An industrial firm's recycled water scheme uses an alkaline disinfection process not covered by these. The firm undertook caustic microbial inactivation and log reduction studies with reference to the relevant guidelines. Margins of safety between alkaline disinfection and health requirements were examined.

Alternative Water in Western Australia

Gareth Evans, Rachael Miller and Clemencia Rodriguez, Alternative Water in Western Australia. *Proceedings 1st Australia Water Association National Operations Conference* October 2014 Cairns, Queensland.

Abstract:

Large quantities of potable water are consumed for non-potable sources (e.g. irrigation). If these uses are supplied with alternative water, scheme water consumption should reduce. This would potentially avoid the use of multiple local sources for supply and defer upgrades to the Water Corporation's Great Southern pipeline scheme. A case study is presented.

[Ross River virus risk associated with dispersal of *Aedes \(Ochlerotatus\) camptorhynchus* \(Thomson\) from breeding habitat into surrounding residential areas: Muddy Lakes, Western Australia.](#)

Jardine, A., Neville, P.J., Dent, C., Webster, C. and Lindsay, M.D.A. (2014) *American Journal of Tropical Medicine and Hygiene*, 91 (1): 101-108.

Abstract:

Rapid population growth in Western Australia has resulted in increased development of land for residential housing, and new developments are often proposed close to water because of intrinsic aesthetic values. However, this placement may place future residents at risk of mosquito-borne disease, of which Ross River virus (RRV) disease is the most common in Australia. Mosquito dispersal data were combined with a spatial analysis of human RRV cases to show that mosquitoes dispersed readily from larval habitat into surrounding low- and high-density residential areas and that residents living within 2 km of mosquito breeding habitat had a significantly higher rate of RRV disease. This finding highlights the importance of planning authorities in state and local governments to consider the implications of mosquito-borne disease risks when assessing residential development applications.

[The seroprevalence and factors associated with Ross River virus infection in Western Grey Kangaroos \(*Macropus fuliginosus*\) in Western Australia. Vector-Borne and Zoonotic Diseases](#)

Abbey Potter, Cheryl A. Johansen, Simon A. Reid, Stan Fenwick and Michael D.A. Lindsay (2014), 14 (10): 740-745.

Abstract:

A serosurvey was undertaken in 15 locations in the midwest to southwest of Western Australia (WA) to investigate the seroprevalence of Ross River virus (RRV) neutralizing antibodies and factors associated with infection in western grey kangaroos (*Macropus fuliginosus*). The estimated seroprevalence in 2632 kangaroo samples, using a serum neutralization test, was 43.9% (95% CI 42.0, 45.8). Location was significantly associated with seroprevalence ($p < 0.001$). There was a strong positive correlation between

seroprevalence and the average log-transformed neutralizing antibody titer ($r = 0.98$, $p < 0.001$). The seroprevalence among adult kangaroos was significantly higher than in subadult kangaroos ($p < 0.05$). No significant association was observed between seroprevalence and the sex of kangaroos ($p > 0.05$). The results of this study indicate that kangaroos in WA are regularly infected with RRV and may be involved in the maintenance and transmission of RRV.

[Ross River virus infection surveillance in the Greater Perth Metropolitan area – has there been an increase in cases in the winter months?](#)

Linda A Selvey, Jenny A Donnelly, Michael D Lindsay, Sudha Pottumarthy Boddu, Victoria C D'Abrera, David W Smith (2014) *Communicable Diseases Intelligence*; 38(2):E115–E122.

Abstract:

An increase in off-season (June to September) Ross River virus (RRV) notifications from the greater Perth metropolitan area was observed from 2006 to 2009. We investigated the increase to determine whether it is likely to have reflected a true increase in off-season cases. A single positive RRV IgM test result is sufficient for RRV notification but where follow-up testing was performed, the positive predictive value of an IgM test where IgG was negative was very low in the off-season and also in the season when using the only commercially available test kit. The increase in off-season notifications was not associated with an increase in off-season testing. Some Perth laboratories use more stringent notification criteria than the nationally agreed RRV case definition, and the geographical distribution of samples tested varies between laboratories. Our findings make a strong case to change the nationally agreed case definition for RRV to not accept a single IgM positive test result as laboratory definitive evidence where the IgG is negative. Our

study also identified a range of challenges in interpreting changes in seasonal patterns and geographical distribution of RRV. Any such observed changes should be investigated through further data analysis and/or mosquito trapping and testing in order to assess validity.

[Rainfall and sentinel chicken seroconversions predict human cases of Murray Valley encephalitis in the north of Western Australia](#)

Linda A Selvey, Cheryl A Johansen, Annette K Broom, Catarina Antao, Michael D Lindsay, John S Mackenzie and David W Smith (2014).. *BMC Infectious Diseases*,14, 672.

Abstract:

Murray Valley encephalitis virus (MVEV) is a flavivirus that occurs in Australia and New Guinea. While clinical cases are uncommon, MVEV can cause severe encephalitis with high mortality. Sentinel chicken surveillance is used at many sites around Australia to provide an early warning system for risk of human infection in areas that have low population density and geographical remoteness. MVEV in Western Australia occurs in areas of low population density and geographical remoteness, resulting in logistical challenges with surveillance systems and few human cases. While epidemiological data has suggested an association between rainfall and MVEV activity in outbreak years, it has not been quantified, and the association between rainfall and sporadic cases is less clear. In this study we analysed 22 years of sentinel chicken and human case data from Western Australia in order to evaluate the effectiveness of sentinel chicken surveillance for MVEV and assess the association between rainfall and MVEV activity.

[Proximity to Mosquito Breeding Habitat and Ross River Virus Risk in the Peel Region of Western Australia. Vector-Borne and Zoonotic Diseases](#)

Andrew Jardine, Peter J Neville, Michael DA Lindsay (2015); 15: 141-146.

Abstract:

It is intuitive that vector-borne disease exposure risk is related to proximity to sources of vector breeding, but this aspect rarely receives empirical testing. The population of Western Australia (WA) is increasing rapidly, with many new residential developments proposed in close proximity to mosquito breeding habitat. However, potential mosquito-borne disease risks for future residents are given little consideration by planning authorities. The Peel region is one of the fastest growing regions in WA and regularly experiences a large number of cases of the mosquito-borne Ross River virus (RRV) disease with epidemics occurring in the region every few years. A spatial analysis of RRV disease data in the Peel region was undertaken to determine the risk associated with proximity to a mosquito breeding habitat. Geographic Information Systems (GIS) software was used to create buffers between 1 and 6 km from the breeding habitat. The number of cases per 1000 dwellings in each buffer was calculated between 2002/03 to 2011/12 for years with >100 cases across all buffers (n=5) in addition to the cumulative rate over the entire period in each buffer. Residents living within 1 km of a mosquito breeding habitat had a significantly higher rate of RRV disease compared to the background rate across the Peel region in all individual years investigated. The cumulative data over the 10-year study period showed that residents in the 1- and 2-km buffers had a significantly higher rate, whereas those living between 3 and 6 km away did not. This study demonstrates an increased mosquito-borne disease risk associated with

living in close proximity to a mosquito breeding habitat in a rapidly expanding region of WA and highlights the importance of considering mosquito-borne disease risks when planning authorities assess new residential development applications. Known mosquito breeding wetlands should be incorporated into land use planning scheme maps to ensure that they are accurately delineated and the implications are considered when planning decisions are made.

First reported case of transfusion-transmitted Ross River virus infection

Veronica C Hoad, David J Speers, Anthony J Keller, Gary K Dowse, Clive R Seed, Michael D A Lindsay, Helen M Faddy and Joanne Pink (2015). *Medical Journal of Australia*, 202 (5): 267-269.

Abstract:

We describe the first documented case of Ross River virus (RRV) infection transmitted by blood transfusion. The recipient had a clinically compatible illness, and RRV infection was confirmed by serological tests. The implicated donation was positive for RRV RNA. We discuss the risk to blood recipients and the implications for blood donation in Australia.

AWARDS AND RECOGNITION

It is always satisfying when the hard work of our staff is recognised by others.

Recognition continues for WA Asbestos work

By John Howell

John Howell, Senior Scientific Officer, has been recognised for his expertise in asbestos contamination and remediation, and was sponsored by the Australian Land and Groundwater Association to travel to New Zealand to present a series of asbestos workshops and meetings in Auckland, Wellington and Christchurch during May.

WorkSafe New Zealand recently recommended the use of the *National Environment Protection (Assessment of Site Contamination) Measure Guideline*, which was based on the *WA Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites*. John played a pivotal role in the development of both of these pioneering documents.

To assist with the implementation of the Guidelines in New Zealand John gave 14 presentations.

Following the destruction of the 2010 and 2011 Christchurch earthquakes NZ have progressed from building demolition to the site clean-phase and the Guidelines will have an important role in ensuring this is done properly.

ASSESSING, REMEDIATING AND MANAGING ASBESTOS-CONTAMINATED SITES

WorkSafe recommends the *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (WA guideline).

This guideline was produced by the Western Australian Department of Health (DOH). It helps employers, principals and people in the control of the workplace take all practicable steps to manage safety when assessing, remediating and managing asbestos-contaminated sites.

Figure 13 Extract from the NZ WorkSafe Guidelines acknowledging the WA guidelines as best practice for managing asbestos contamination.

COMPLIANCE ACTIVITIES

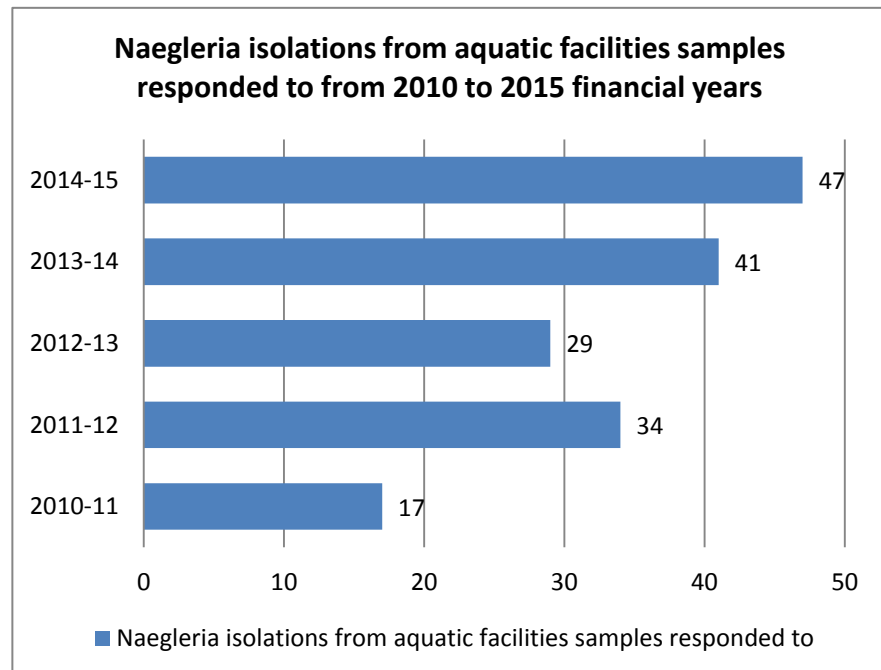
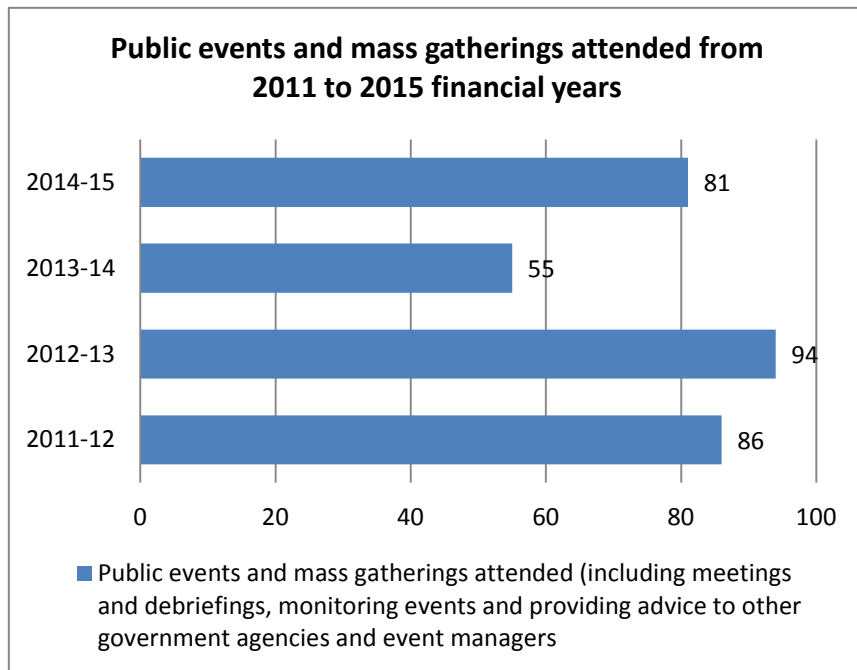
A large part of our work relates to enforcing legislative compliance requirements, which includes licensing, registration, approvals, permits, notification and assessment services for a range of activities. Various processes are in place, including auditing and compliance requirements to monitor industry risks against appropriate health legislation.

A snapshot of some of our compliance obligations during the 2014-15 financial year is outlined below. Many areas have also been compared with previous years workload.

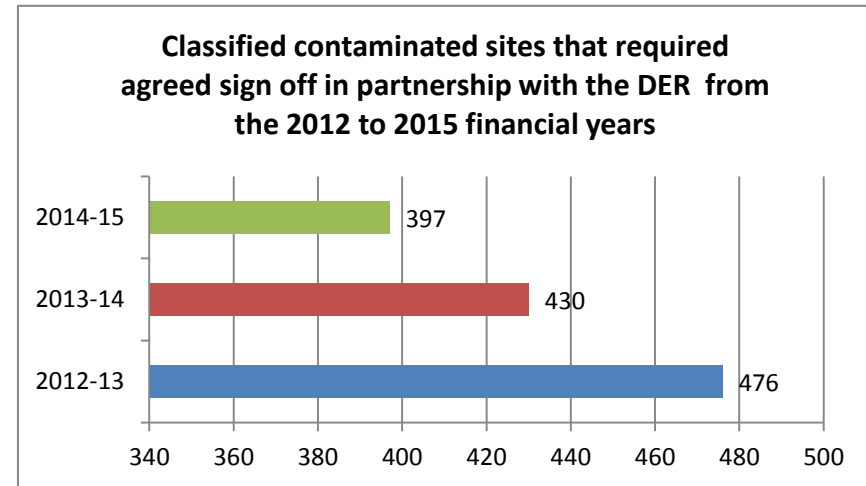
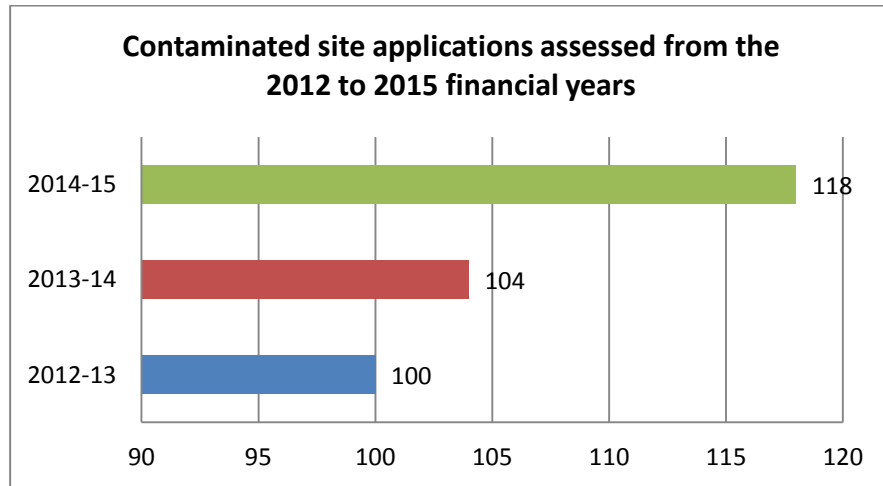
Environmental Health Hazards Unit

The EHHU manages a variety of health risks on behalf of the State, from contaminated sites, asbestos handling, public buildings and mass gathering events, and skin penetration such as tattooing and body piercing issues.

The following charts provides a summary of some of the areas monitored and managed by the team.



Contaminated sites



Perth Stadium contaminated site inspection

The Perth Stadium is located in Burswood, over-looking the Swan River, on a site that was previously used as a golf course and prior to that as a rubbish tip. Areas near the River often contain naturally occurring acid sulfate soils. The developers of the stadium are using new technology to prevent vapour intrusion from these two sources.

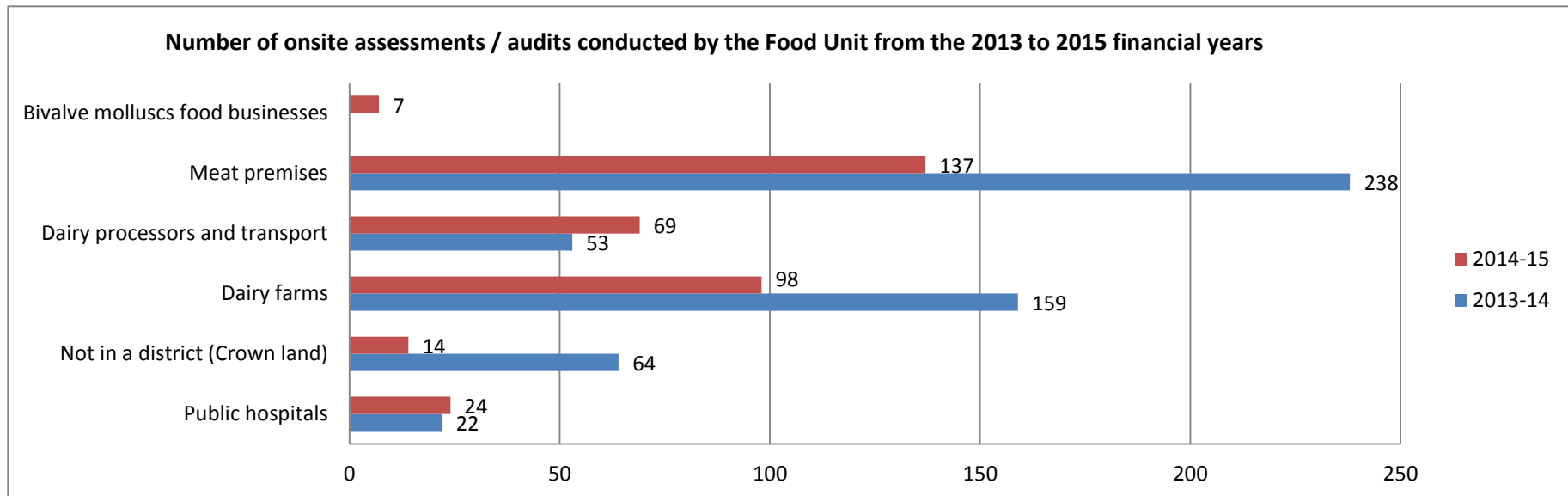
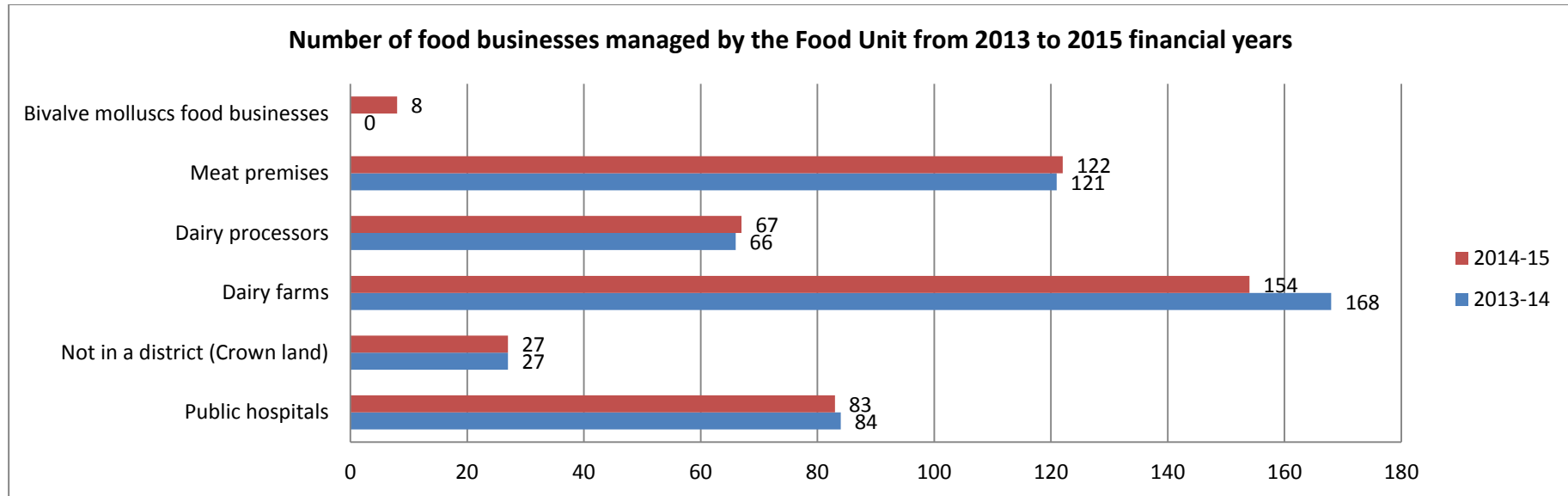
Officers from Environmental Health and Environment Regulation inspected the site during the laying of the foundations of the building to observe the *in situ* membrane to reduce vapours entering the new building.

Photos: The following photos show EHD toxicology staff Rita Tan, Pierina Otness, Willow Warren and Lindy Neild meeting with the Environmental Manager Chrissie Harwood from the Department of Treasury, who explained how contaminated sites issues were being managed for the Perth Stadium

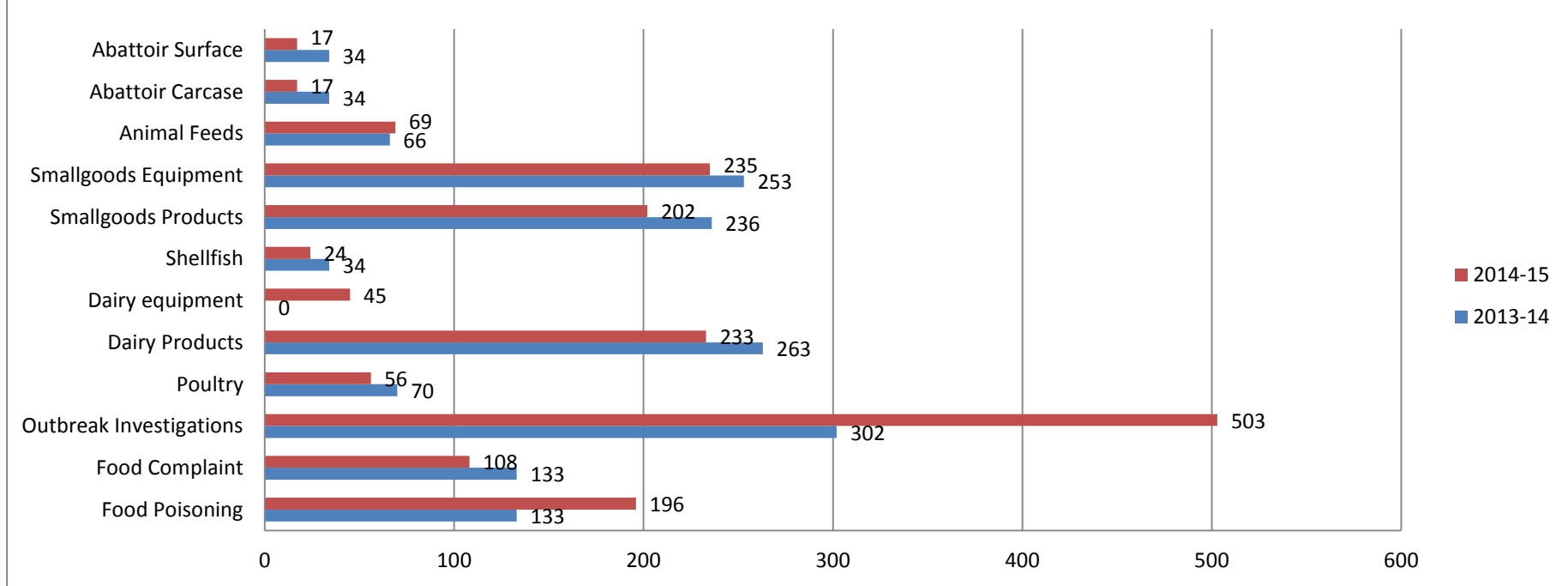


Food Unit

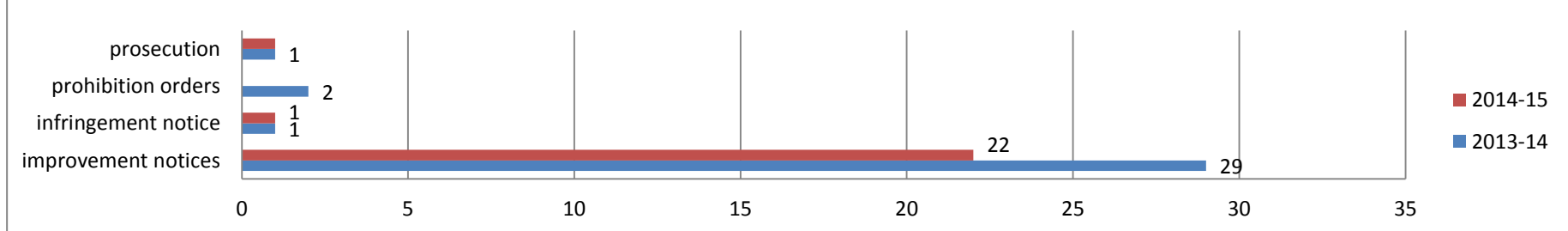
The Food Unit is responsible for enforcing the *Food Act 2008* and *Food Regulation 2009* to select food businesses in WA. This role includes assessments and taking enforcement action.



Number and type of food monitoring samples collected from the 2013 to 2015 financial years



Type and number of enforcement action issued to food businesses managed by the Food Unit from the 2013 to 2015 financial years

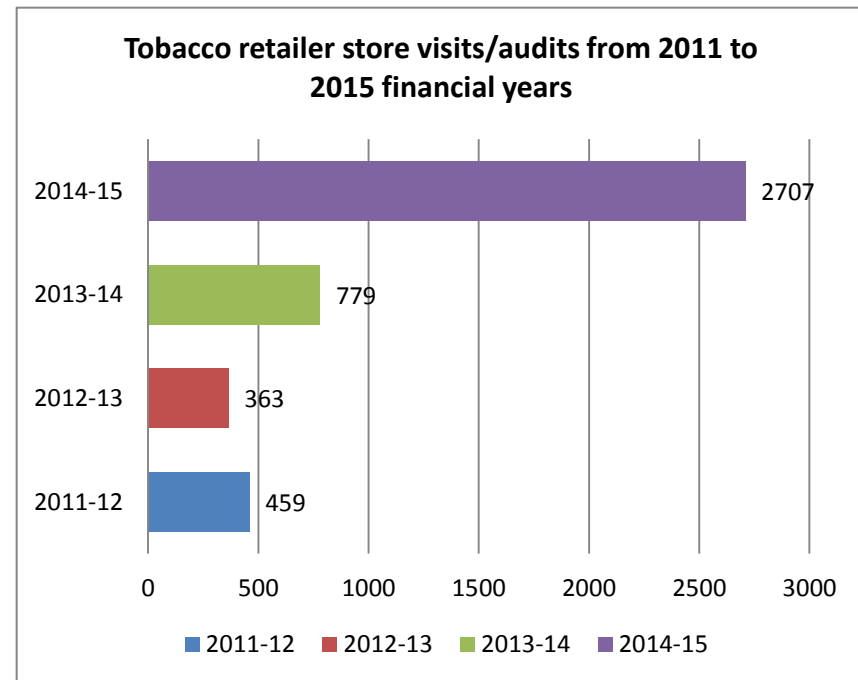
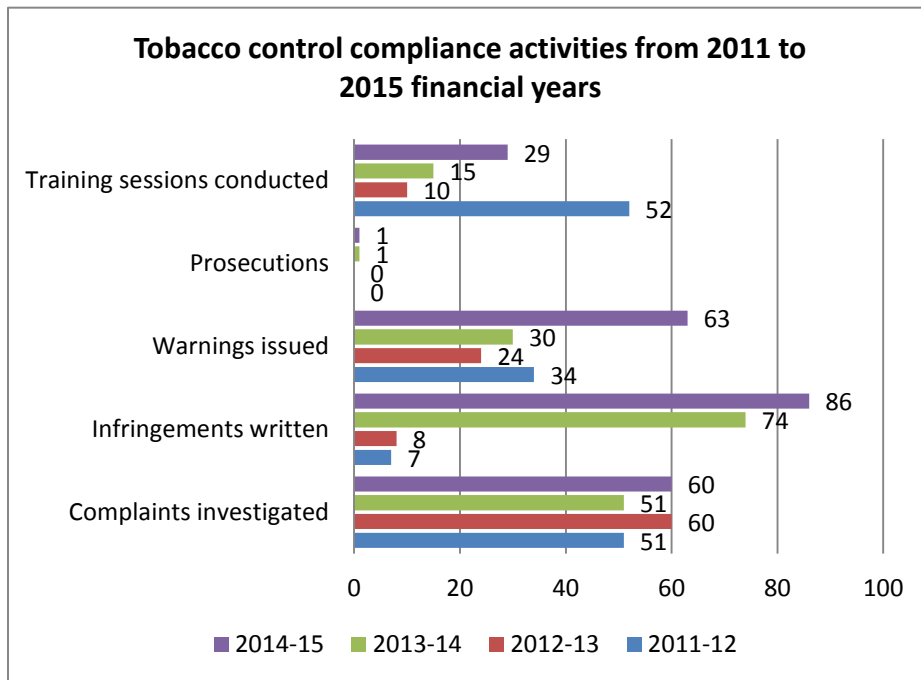


Radiation Health Unit

The Radiation Health Unit is required to report annually on behalf of the Radiological Council. To minimise duplication of reporting, please refer to the [Radiological Council's Annual Report](#) for an overview of the activities undertaken by the Radiological Council and the administrative support provided by the Radiation Health Unit.

Science and Policy Unit

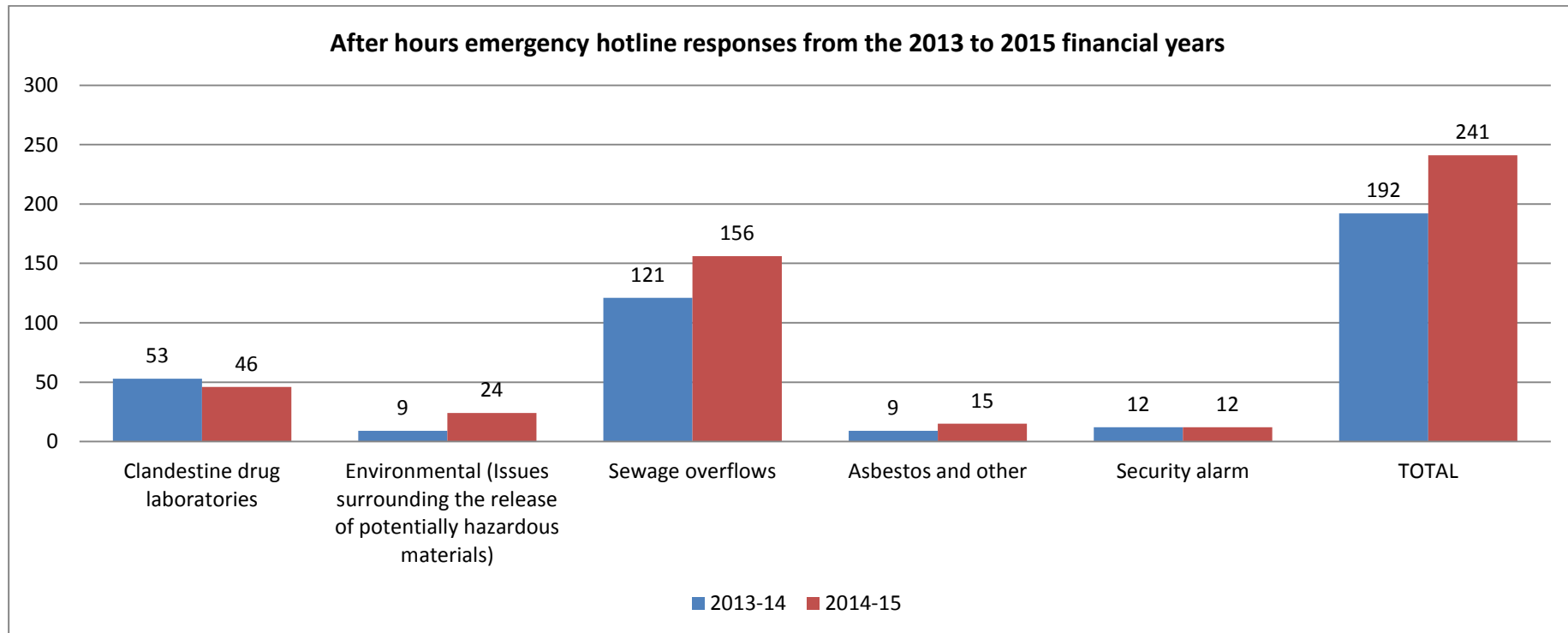
The Science and Policy Unit administers the *Tobacco Products Control Act 2006* which includes conducting State-wide audit and compliance programs which involves store visits to educate retail tobacco license holders. Staff also investigate complaints into matters such as sales of tobacco products to minors and carries out a range of enforcement activities including Controlled Purchase Operations.



Emergency Response Team

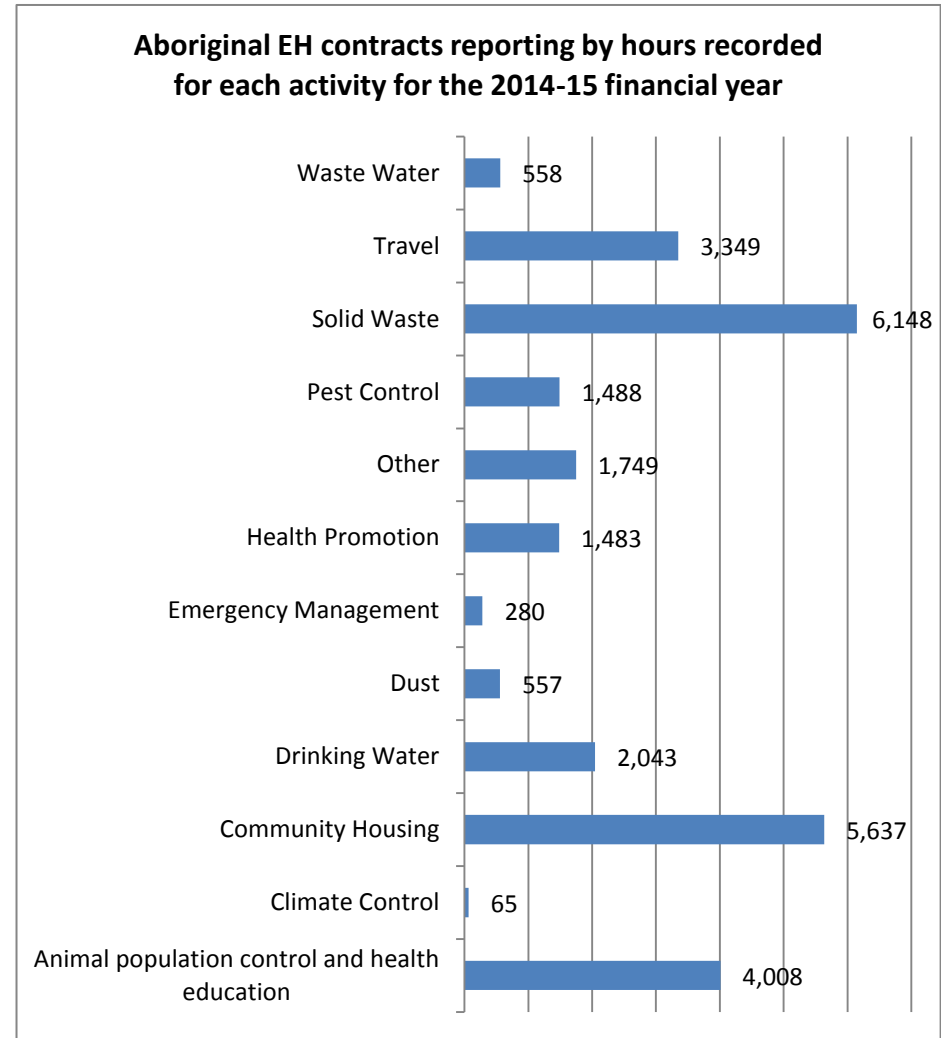
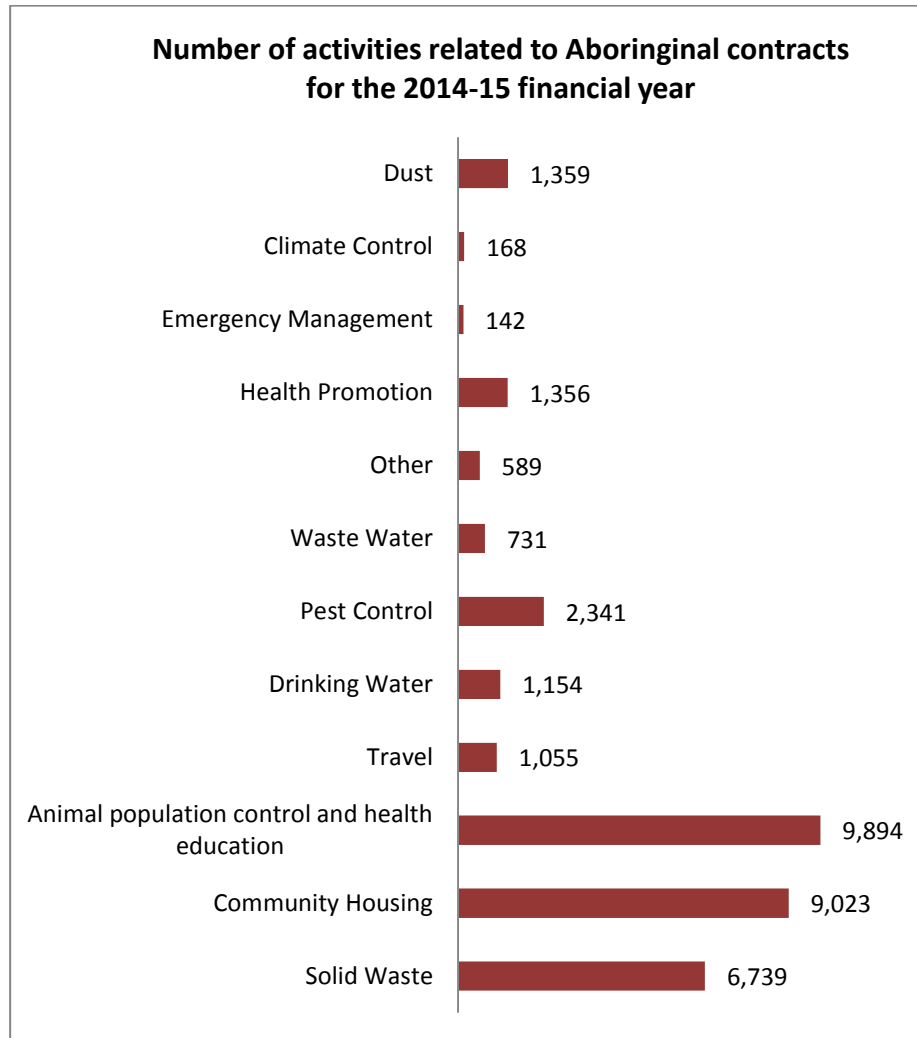
The EHD funds seven oncall duty officers to be available (on rotation) during after-hours and weekends to manage state wide environmental health queries and emergency management events received by the DOH. This role involves liaising with local government and numerous state agencies. The graph below sets out the types of notifications received and responded to by the EHD for the financial years 2013-14 (total 192), and 2014-15 (total 241).

The term “*Environmental*” includes callouts (usually to the Department of Fire and Emergency Services HQ at Cockburn Central) following release of potentially hazardous agents, including fire plumes, pesticide misapplications, vehicle accidents which result in release of hazardous materials etc. Attendance is requested at Cockburn within a 45 minute timeframe.



Aboriginal Environmental Health contracts

We fund non-government organisations to provide a range of environmental health services to remote Aboriginal communities. The tenacity of many of our regional environmental health practitioners is admirable as they continue to close the gap on services in remote settings.

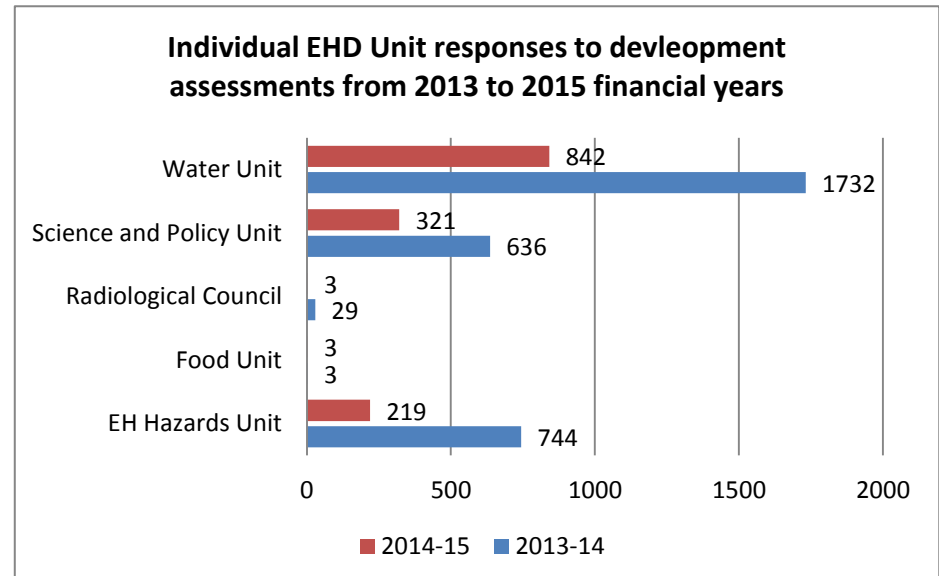
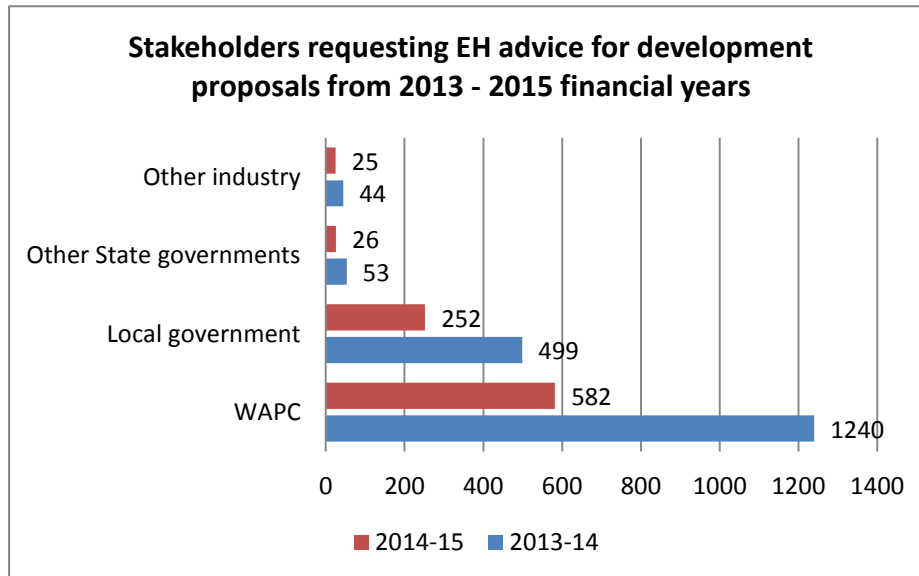
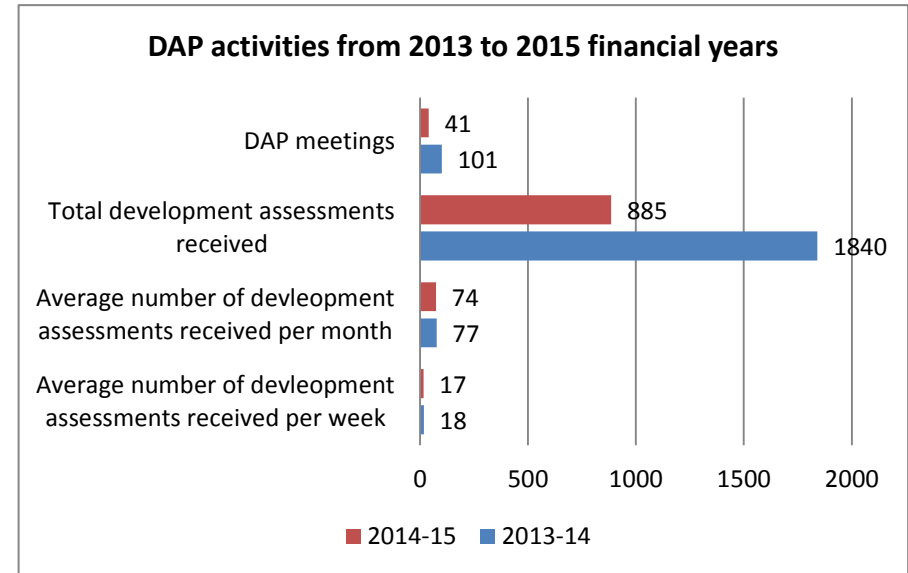


Development Assessment Panel (DAP)

A large part of the EHD's work involves reviewing a range of proposals such as:

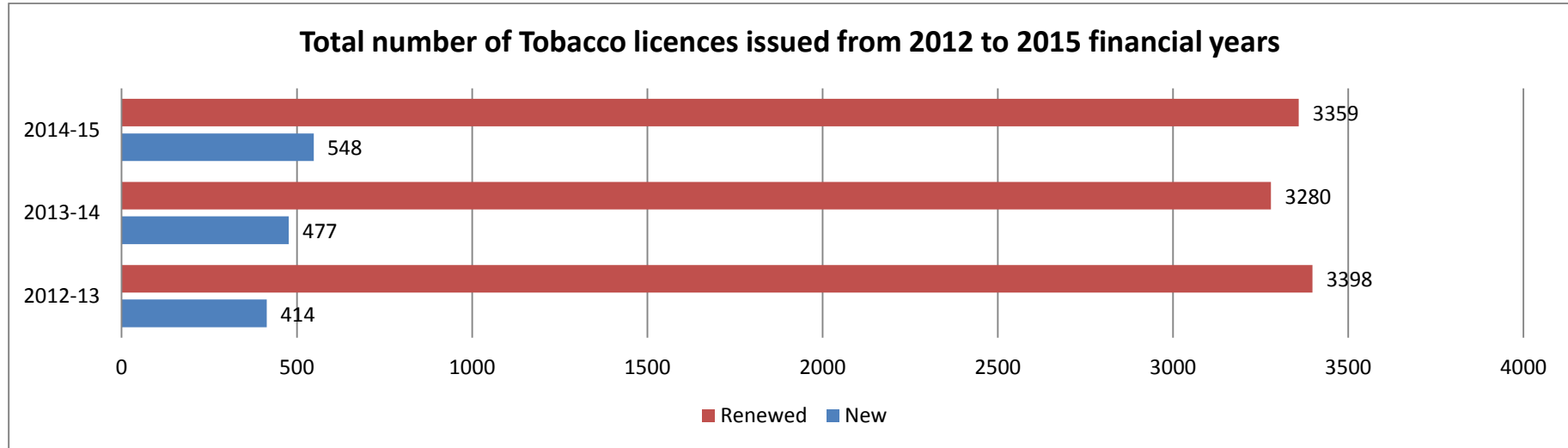
- development applications (e.g. new mine sites, wastewater applications)
- local government projects and
- state wide strategic planning documents.

The Science and Policy Unit coordinates regular Development Assessment Panel (known as DAP) meetings to ensure a coordinated approach is taken to reviewing and responding to the large volume of DAP proposals requiring health input. This ensures that experts from a range of disciplines can provide health advice to relevant projects. It also enables the EHD to get a better handle of the incoming workload, and implement processes to respond in a timely fashion.



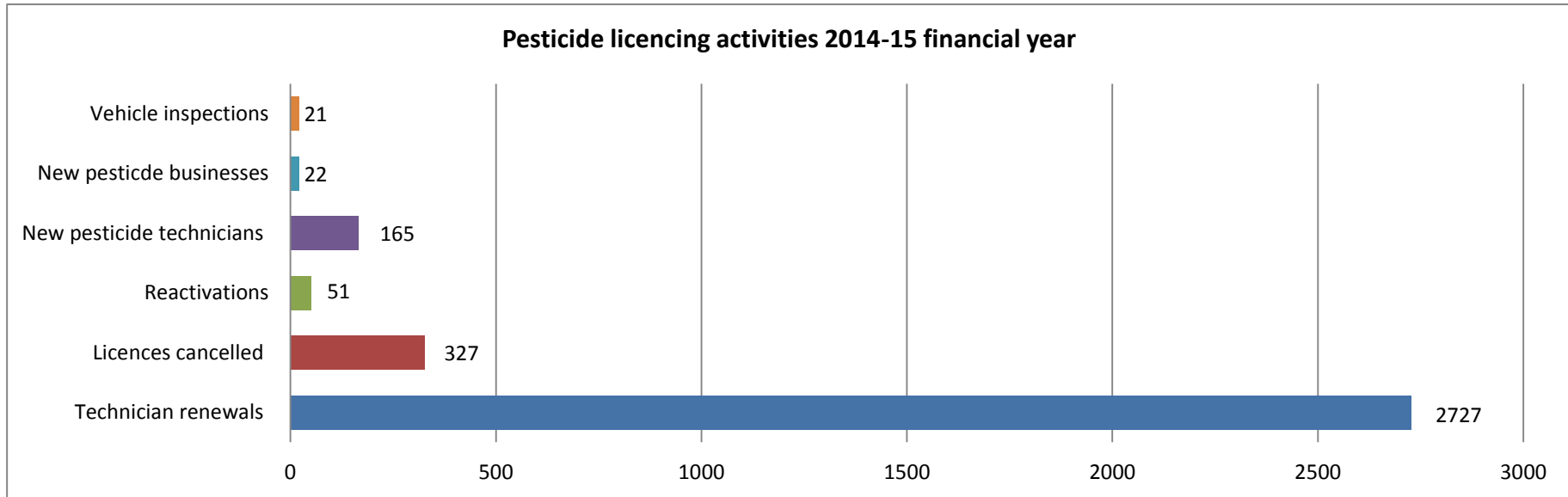
System Support and Licensing Unit

The System Support and Licensing Unit coordinates the administration functions associated with issuing licences and registrations on behalf of the Environmental Health Hazards and Science and Policy Units. Compliance checks are undertaken in conjunction with Unit experts prior to issuing.



Licensing staff were also responsible for the realignments of tobacco licences to a common expiry date for a number of franchisees to help to streamline administration of licencing processes.

The licensing team are also working towards establishing over the counter payment services with Australia Post so that licence holders can pay and lodge their renewal forms at any Australia Post outlet. Currently we are awaiting a decision from ICT Governance for IT support to enhance the current tobacco licensing database so that the Australia Post contract can proceed.



As part of the requirements under the *Health (Pesticide Safety) Regulations 2011* vehicles used in the application of pesticides must be inspected and approved for use.

SSLU manage the process. An application is logged by a pest business and a 4 digit registration number is issued to the client. Once SSLU have received the application the client is advised by e-mail of the registration number and requirements of vehicle setup (e.g.) business name plus registration number and equipment. The client arranges a day for the inspection. SSLU officers review the vehicle against a standardised vehicle inspection check list to ensure compliance with the Regulations.

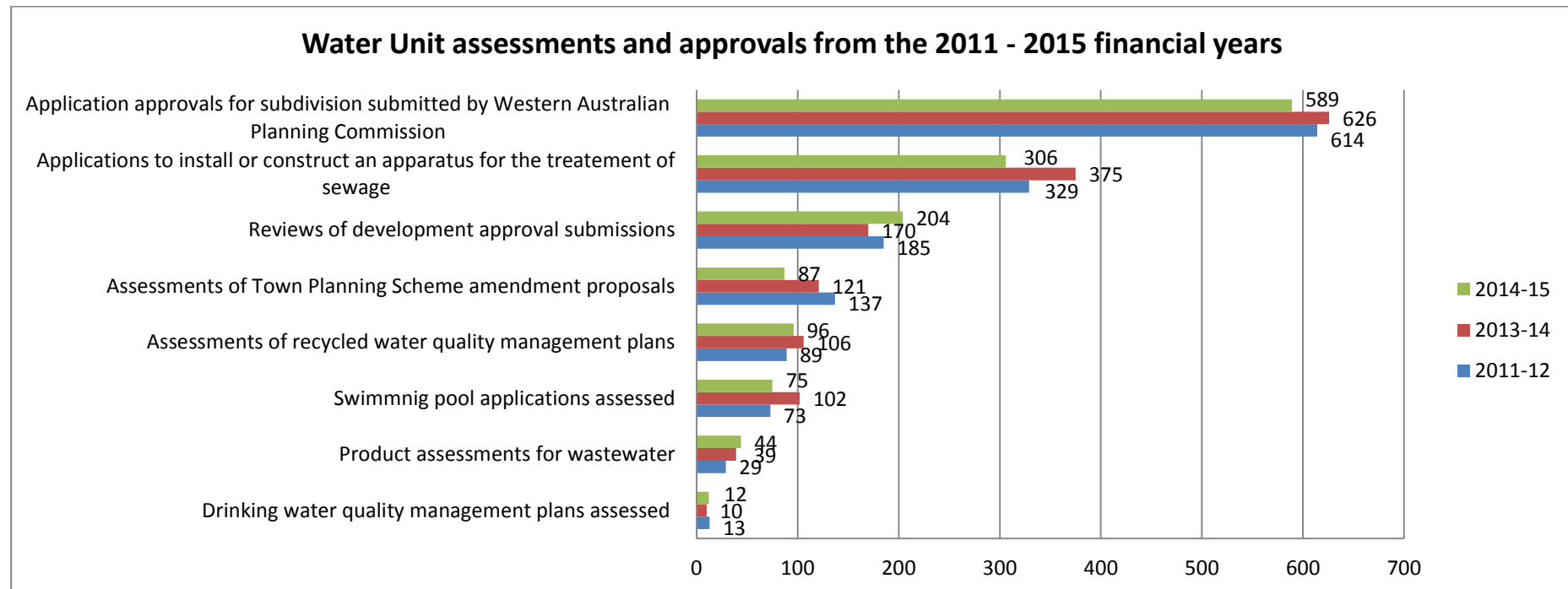


Figure 14 Vehicles are checked for their compliance with the Pesticide Regulations.

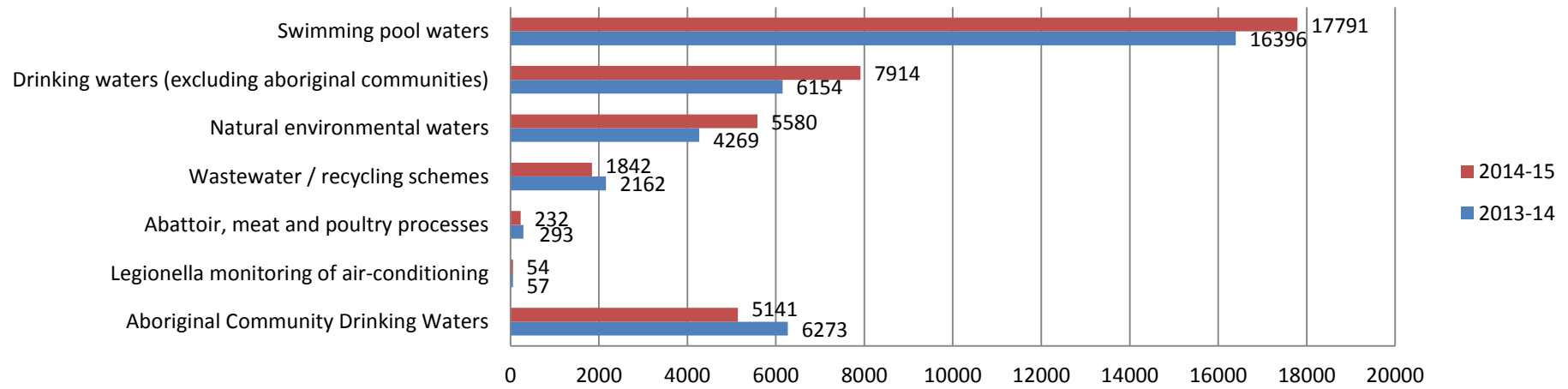
Water Unit

The Water Unit's role includes ensuring sources of water do not pose a health risk to the people of WA, from drinking water, recreational water and even wastewater. Staff work closely with local government, as well as agencies such as the Water Corporation, WAPC and the DER, who share this responsibility. A substantial amount of health assessment and approval processes are undertaken by the Unit, outlined in the following charts.

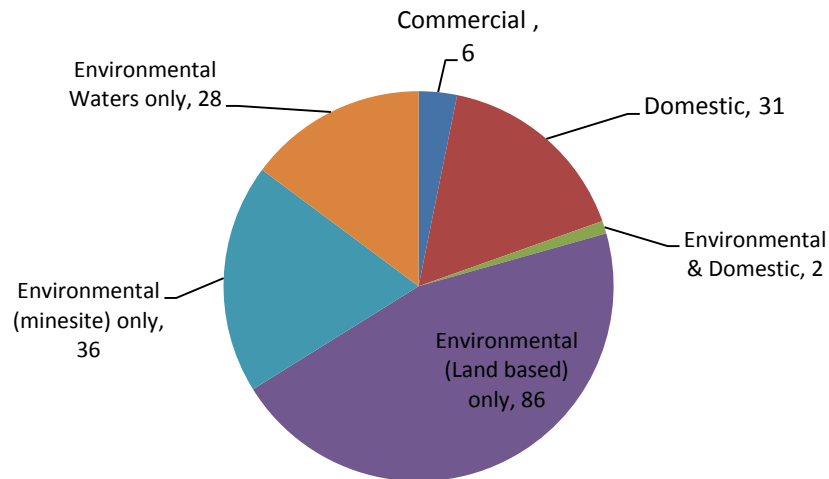
Water Unit staff examined over 306 applications for onsite wastewater treatment and disposal systems this financial year. Even with the reported fluctuations in the mining industry (a strong work load source with transient exploration camps, permanent mine sites and housing needs), assessments and requests for information have still been fairly steady. Officers have reviewed a variety of developments with a range of systems. These included national park composting toilets, recreational camps for community groups, wineries/breweries and also fly-in-fly-out accommodation villages larger than many small country towns. Key issues have been ensuring that proponents submit reliable data on which to base their expected wastewater flow volumes, and that the products installed are designs approved for use in WA.



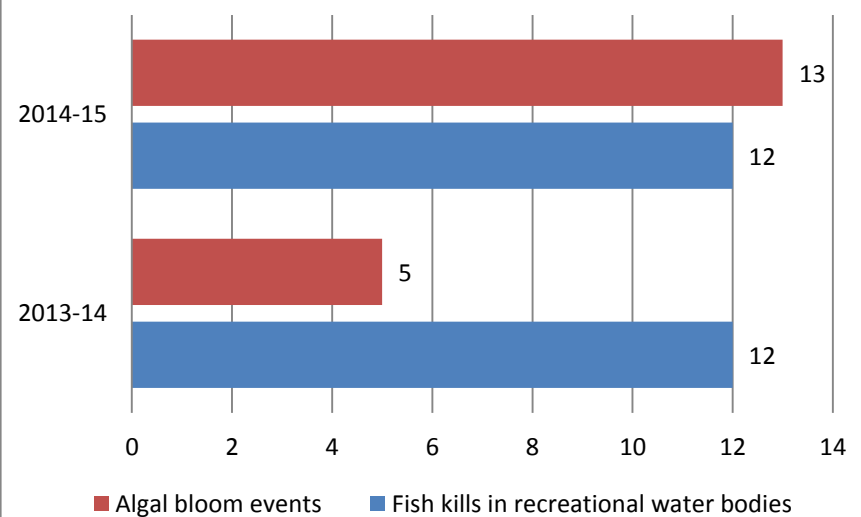
Number and type of water monitoring samples collected from the 2013 to 2015 financial years



Type and number of wastewater overflow events



Number of health responses to fish kills and algal bloom events from 2014 to 2015 financial years



Environmental waters monitoring program

The EHD, in partnership with many Local Governments, and some other stakeholders, collect water samples to test for bacteria, and assess the health of a number of popular waterways used for swimming, diving, surfing and skiing in WA. The program aims to:

- make sure the water is safe to swim in and recreate
- classify water bodies to help you decide where you want to swim
- issue warnings during pollution events
- identify bacterial pollution sources
- look for long-term bacterial trends.

The following charts provide a summary of water samples (minus some bore water and private dam samples) collected in the metropolitan area and regional WA as part of the environmental waters program between May 2014 and May 2015.

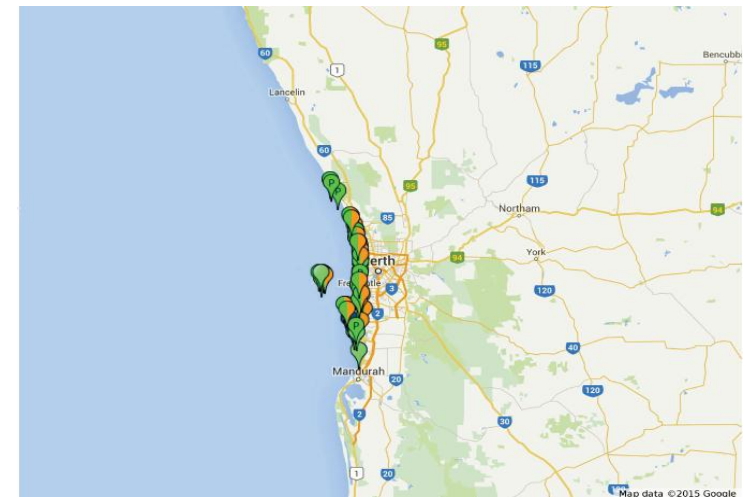
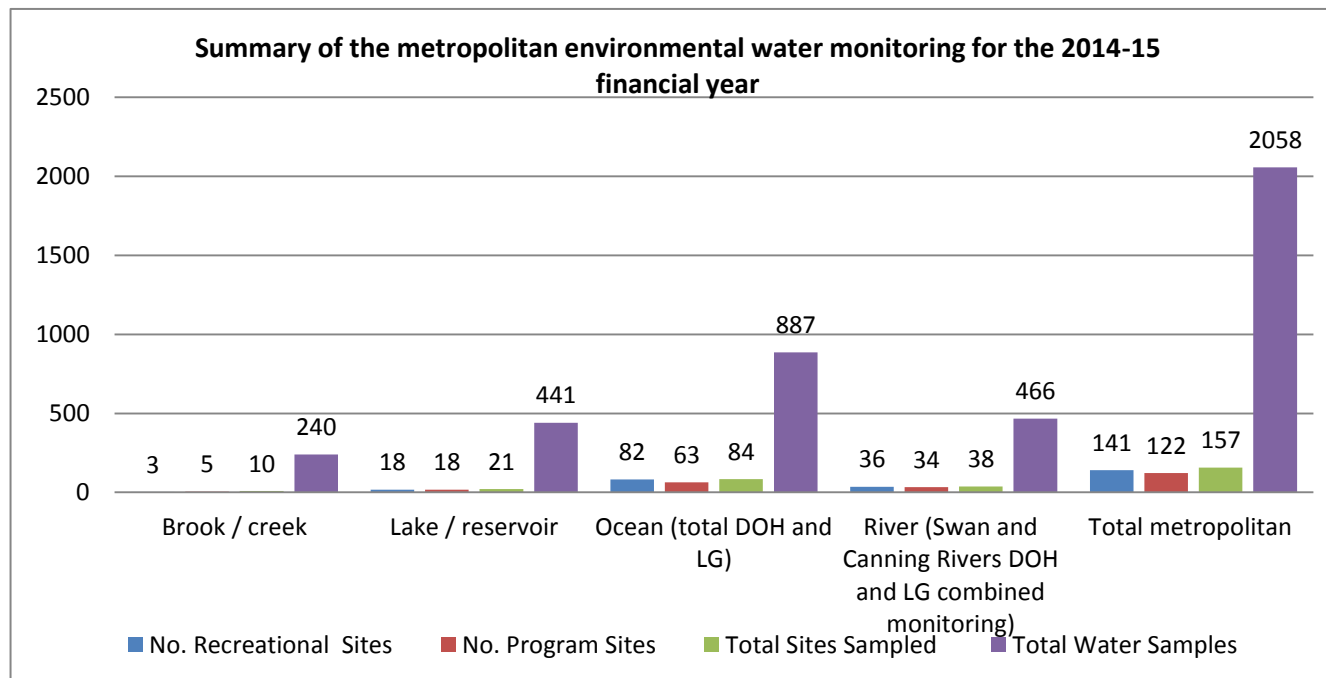


Figure 15 An example interactive map outlining the location of bacterial water monitoring locations along the Perth coastline and their risk classification. Available on the [Healthy WA website](#).

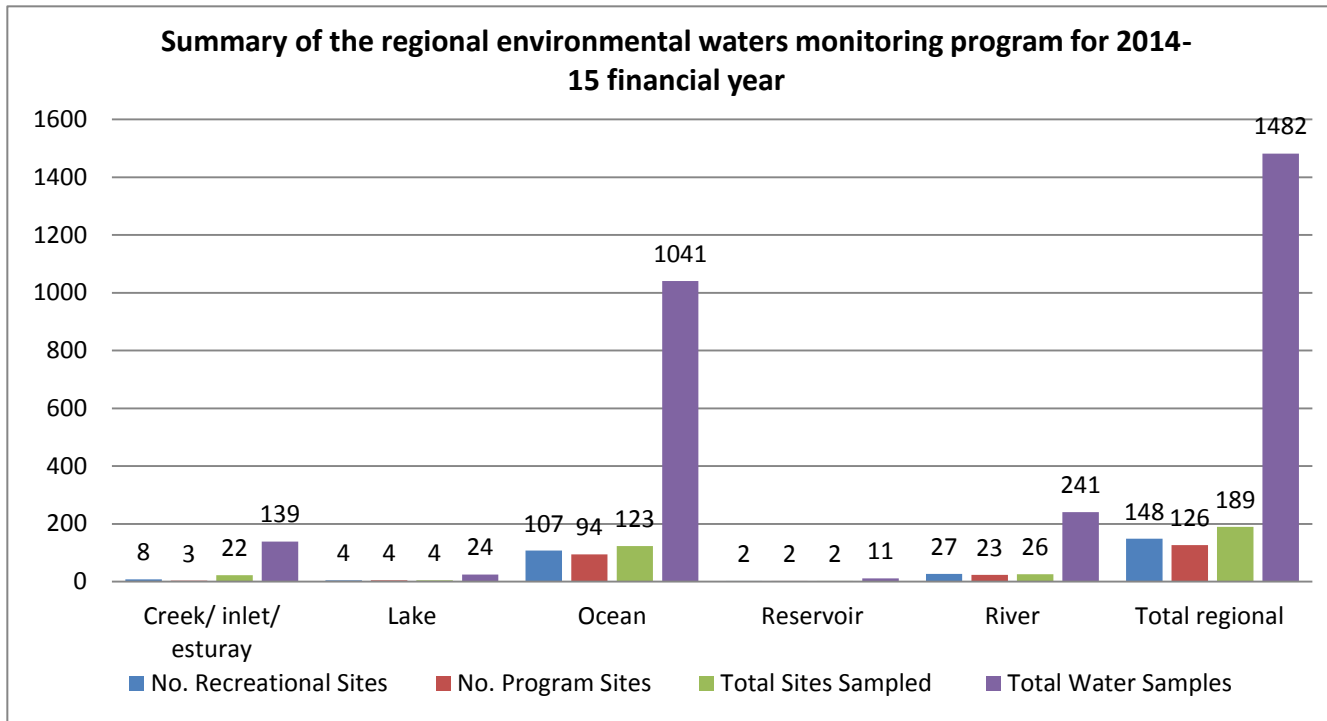


No. Recreational Sites = Number of Recreational Sites where water samples have been collected.

No. Program Sites = Number of Official Bacterial Water Quality Monitoring Program Sites where water samples have been collected.

Total Sites Sampled = The number of sites where water samples have been collected.

Total Water Samples = The total number of water samples collected for a water body by the monitoring agency.



No. Recreational Sites = Number of Recreational Sites where water samples have been collected.

No. Program Sites = Number of Official Bacterial Water Quality Monitoring Program Sites where water samples have been collected.

Total Sites Sampled = The number of sites where water samples have been collected.

Total Water Samples = The total number of water samples collected for a water body by the monitoring agency.

The data collected as part of the environmental monitoring program is compared to the National Health and Medical Research Council (NHMRC) 2008, Guidelines for Managing Risks in Recreational Water. Based on the information, a beach grade can be assigned to the water site, so a water user can have a better understanding of the bacterial water quality at a given site and make a more informed decision about where and when to go swimming.

The most recent published summaries and beach grade classifications for the DOH program is available on the [Healthy WA website](#).

COMMITTEE REPRESENTATION

Our staff are represented on committees throughout Australia, helping to steer the agenda of numerous environmental health issues relevant to WA. Below is a small selection of some of these committees.

Implementation Subcommittee for Food Regulation

By Stan Goodchild

The Implementation Subcommittee for Food Regulation (ISFR) is a national group established by the Food Regulation Standing Committee and has the primary task of developing and overseeing consistent bi-national approaches to implementation and compliance with the Australia New Zealand food regulation system.

Our Food Unit Manager Mr Stan Goodchild is the Department of Health representative and also Deputy Chair of ISFR.

Issues considered by ISFR during 2014-15 included the ISFR Communication Plan, Food Labelling Monitoring and Enforcement Framework, Revised National Food Incident Response Protocol, Food Safety Management, Implementation and Enforcement of Nutrition, Health and Related Claims Matters and Allergen Incident and Investigation Protocol.

ISFR Nutrition, Health and Related Claims Working Group

By Stan Goodchild

The ISFR Nutrition, Health and Related Claims Working Group is a national group established to develop industry guidance material, develop implementation and guidance

material and develop a monitoring and review framework for the implementation of Standard 1.2.7.

During 2014-15 the Working Group completed:-

- industry guidance material titled *Getting your claims right: A guide to complying with the Nutrition, Health and Related Claims Standard of the Australia New Zealand Food Standards Code*, incorporating checklists and templates
- implementation and enforcement material titled *Health claims and enforcement – how regulators will enforce the nutrition and health claims standard and*,
- commenced for a comprehensive survey on nutrition, health and related claims to be undertaken in 2016

Radiation Health committee representation

Authorised officers of the Council participate in a range of activities with various other government agencies and industry groups. In addition, staff of the Radiation Health Unit routinely consults with stakeholders to provide advice in relation to the Radiation Safety Act.

Some of the groups that the Unit participates in/consults to are listed below

- Western Australia Visiting Ships Panel (Nuclear) (WA VSPN)

The Unit is on the WA VSPN and provides the State Radiation Officer and mobile monitoring teams under the Port Safety Scheme for nuclear powered warship visits.

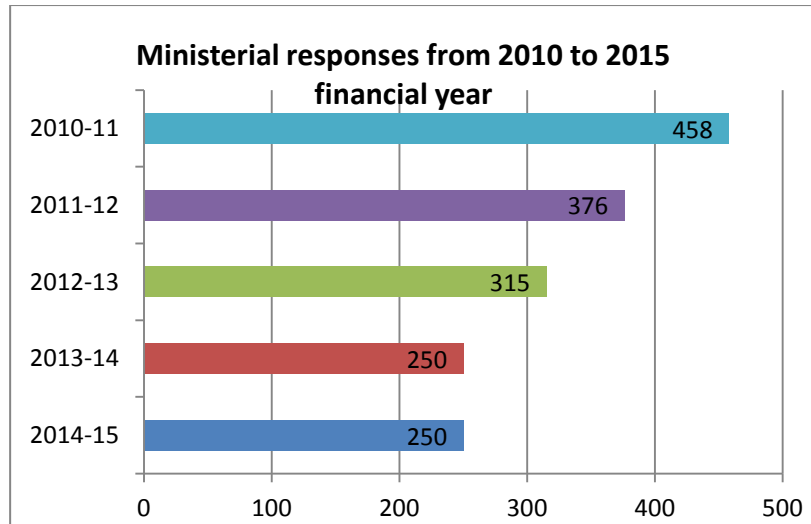
- Radiation Health Committee (RHC)
The Radiation Health Committee meets three times a year with an authorised officer of the Radiological Council as the nominated representative for Western Australia. Staff members of Radiation Health also participate on working groups that report to the RHC.
- Chemical, Biological, Radiological and Nuclear training
The Unit provides lectures on basic radiation physics at least once a year with regards to CBRN training.
- Radiation Liaison Committee (RLC)
The RLC was established under the Memorandum of Understanding between the Department of Mines and Petroleum and the Radiological Council.
- X-ray Operators Course
The Unit provides staff members to participate in the lectures and to supervise and mark exams.

Communication



Ministerials

We assisted the Minister for Health in responding to **250** written community environmental health concerns

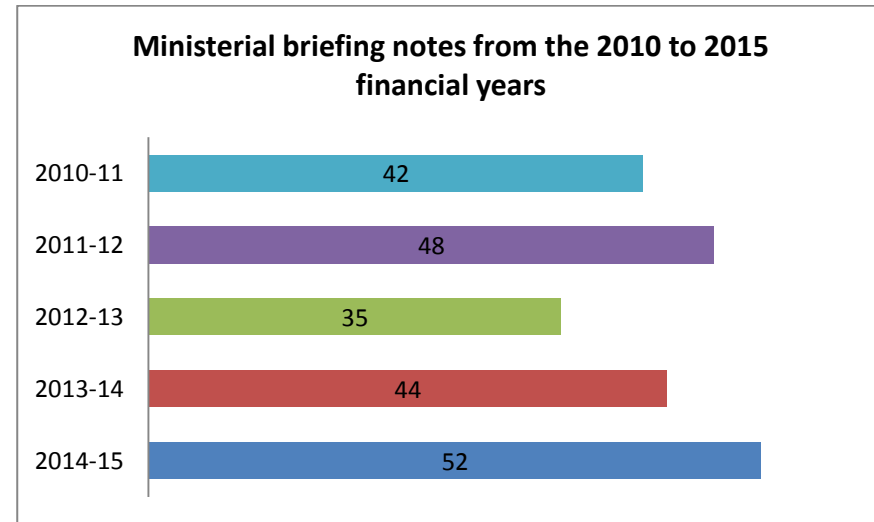


The most common topics requiring a response are outlined below.

Unit	Ministerial topic of most public concern
Food Unit	Labelling
Water Unit	fluoride
EHHU	various
Radiation	Solaria
SPU	Tobacco sales enquiries

Ministerial briefing notes

As part of the parliamentary process, we provided **52** briefings to the Minister for Health when requested to update on topical environmental health issues. This was **8** more than the previous year.



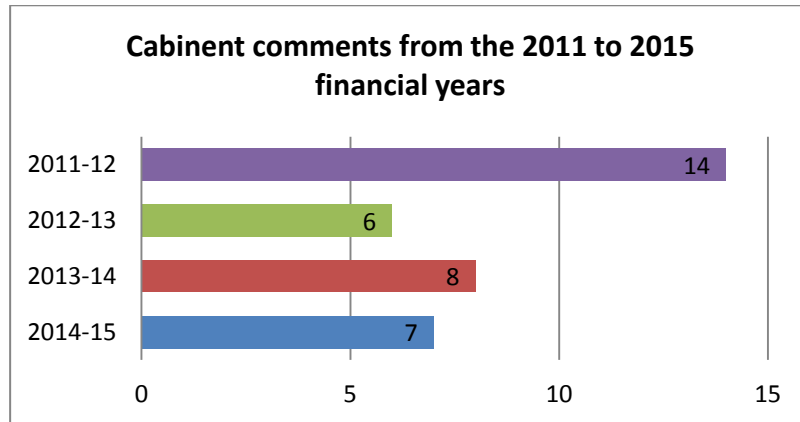
Contentious issue briefing notes

We provided **9** contentious issue briefing notes to the Minister for Health in regards to:

- The Health Star Rating System
- Hydraulic Fracturing Health Risk Assessment
- Public Health Bill 2014
- Electronic Cigarettes
- Proposed Ban on Commercial Solariums in WA
- Exotic Mosquitoes at Perth International Airport
- Fluoridation of Drinking Water and
- Port Hedland Health Risk Assessment.

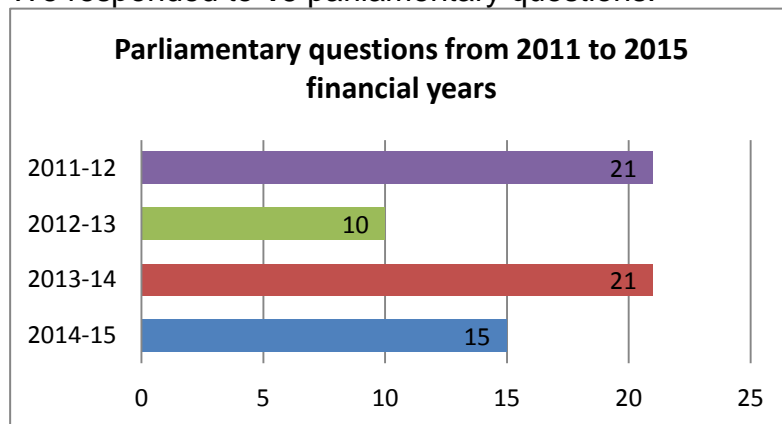
Cabinet comments

We responded to **7** urgent cabinet comments.



Parliamentary questions

We responded to **15** parliamentary questions.



Supplementary information questions

We responded to **1** supplementary information question.

Media releases/interviews

We issued **17** media releases across the state to advise or remind the community of potential public health risks for which extra vigilance was required.

Media release topics

1. Major mosquito control conference comes to WA
2. Warm weather brings Shellfish warning
3. Mosquito Borne disease risk
4. RRV disease risk
5. Australian food safety week
6. Mosquito control Community information sessions
7. Be 'Asbestos aware' during maintenance and renovations
8. Be Food safe and stay well
9. Western Australians advised to prepare for hot days ahead
10. Pool owners warned of disease risk
11. Health warning over smoke haze
12. Caution advised after sewage overflow in the Canning River
13. MVE virus detection prompts warning for the Kimberley
14. Shellfish health warning for the Murray River, Pinjarra and the Peel Harvey Estuary
15. Have your say on mosquito control in online survey
16. Renewed warning for the Kimberley to protect against mosquito bites
17. Kunjin virus warning for Pilbara region

Health promotion and professional development

SA Rural's Stewardship Training Course for Market Gardeners using the fumigant Telone and Rural InLine

By Geoff Harcombe and Krys Gregory

In early 2014 the Department of Food and Agriculture expressed concerns over the use of soil fumigants by market gardeners in particular strawberry growers. Their concerns were based on the lack of training associated with the use of these hazardous soil fumigants. Many of the strawberry growers are Vietnamese with limited English and their preferred fumigant was Telone.

Officers assisted the manufacturer, SA Rural to develop a Stewardship training package for Telone (C-35 & C-60) & Rural InLine. The package consists of English and Vietnamese posters, PowerPoint presentation, video and (English only) technical manual. The assessment consisted of a theory and practical component where students must pass both elements to complete the training.

To date three classes have been held with 55 students successfully completed the course. Two classes were held in Wangara and another at Ti Produce Trading Bullsbook. The courses were conducted by SA Rural, Duratec (supplier) with the assistant of PN ChemFert Supplier as the translator. Regional courses in Carnarvon have been planned in July 2015 with the support of the Carnarvon Growers Association.

This has been a successful partnership between chemical suppliers, industry and government, a model that has the potential to deliver a successful outcome nationally.

Pesticide Safety Courses

By Geoff Harcombe and Krys Gregory

Four Pesticide Safety Courses were delivered for Local Government Employees in Merredin, Geraldton and Three Springs during 2014/15.

The courses covered basic information on the safe use and handling of pesticides and the hazards associated with misuse. The aim of the training was to increase participant's awareness for the need to carefully select the right pesticides for the job and its likely impact on human health and the environment.

Feedback has confirmed the relevance of the course content and appreciation for the information delivered.



Figure 16 Pesticide delegates trying on face respirators as part of the course

Some feedback received included "Ignorance was bliss, it was an informative session I learned a lot" and "Very helpful/friendly/interactive environment".



Figure 16 The pesticide safety courses included demonstrations on how to wear the right safety gear

Promoting the Hoarding Toolkit By Kelly Crossley

An officer presented on the Hoarding and Squalor Guideline and progress of the Hoarding Working Group to the Legal Aid's Summer Series.

The Summer Series seminars are delivered to legal aid lawyers and their colleagues from community legal centres. They were interested in the work in this area as they are experiencing an increase in the number of the requests for legal assistance related to this issue.

Tobacco control training By Bruce Hawkins

The Tobacco Control Branch conducts training sessions about the role, powers and functions specified persons have under the Tobacco Products Control Act 2006. This includes WA Police Officers, EHOs and Rangers in Local Authorities

and Compliance Officers in the Department of Transport. 15 training sessions were conducted during the year.

Woodsmoke presentations By Dr Peter Franklin

Peter has presented on both the health effects of woodsmoke and current health legislation regarding woodsmoke at DER Burnwise workshops (for local governments). He also gave the keynote address on 'Woodsmoke and health' at the DER Burnwise launch at the EHA conference in August 2014

Public Health Bill seminars By Kelly Crossley

To support the introduction of the Public Health Bill 2014 into Parliament numerous seminars were held across WA to update stakeholders on the content of Bill including Northam, Broome, Mandurah and Busselton. Seminars were well received and there continues to be overwhelming support for the Bill.



Figure 178 At least ten presentations have been held across WA updating stakeholders on the new Public Health Bill 2014

Back to basics By Rebecca Delsar

The Food Unit delivered a “Back to Basics” course for Food Act authorised officers in November 2014 as part of Australian Food Safety Week. The course was designed to give an overview of food safety management and food regulation in Western Australia.

A series of presentations were delivered by officers from the Food Unit and OzFoodNet, including: the food regulatory system, food legislation compliance and enforcement, labelling, food recall, manufacturing food, pathogens, food safety standards and outbreak investigation.

Feedback was positive with attendees rating the course as highly relevant, and 97% would recommend the course to others.



Figure 18 The back to basics workshop was a sell-out.

Environmental Health WA State Conference

By Catrina McStay

The 68th 2014 Environmental Health WA State Conference was held in Perth in October 2014. A presentation provided by the Food Unit (Catrina McStay) covered challenges and opportunities of communicating allergen information, and provided a platform for the launch of a suite of communicating allergen resources information. Provision and dissemination of this information contributes to the key role of the Food Unit of protecting public health, as rigorous allergen declarations is an essential risk management for food allergic individuals.

Challenges and opportunities of communicating allergen information By Catrina McStay

The Food Unit has a role to provide input and leadership in issues of major public health significance such as risk management of food allergy. Within this role, the Food Unit (Catrina McStay) participated in a national consultation on the future direction of precautionary allergen labelling (PAL) held at the Royal Children’s Hospital, Melbourne on 14 November 2014.

This roundtable brought together a diverse range of sectors including medicine, industry, government, research and the community. This consultation commenced a national dialogue on this important labelling issue, and provided the opportunity to share current knowledge, discuss strengths and weaknesses of current PAL approach, and identify opportunities for the application of the PAL and research priorities for the future.

Seminar on crowd risks By Sid Brodie and Jaala Downes

The EHD was lucky enough to have Prof. Dr. G. Keith Still, Professor of Crowd Science, Manchester Metropolitan University, United Kingdom, travel to WA to conduct a seminar on crowd risk issues.

Professor Keith Still has taught the principles and applications of crowd risk analysis and crowd safety for the last 15 years at the UK Cabinet Office Emergency Planning and at various Universities and client sites around the world.

WA plays host to a large number of mass gathering events such as concerts, sporting events and festivals, across the State, and it is essential these events are held without putting the public at risk of harm.

The seminar was aimed at anyone involved with planning, approval and administration of events and looked at Risk Analysis and Risk Mapping and provided an insight into DIM-ICE, RAMP analysis which is likely to be important for future event approvals. The seminar also discussed the potential for delegates to attending a future 3 days Crowd Risk Analysis Workshop. Having more people in the events industry and local governments trained and skilled in crowd risks is a huge bonus for the people of WA.

Wastewater management workshops By Natalia

Shishkina, Alan Richard and Henry Tan

The Water Unit completed one of its greatest projects which involved running educational workshops on current wastewater management practices in WA. The workshops were held across WA including Perth, Busselton, Broome and Albany.

Further workshops in other areas of the Unit will be planned for the coming year. The feedback from participants has been very positive and has also been a fruitful source of ideas. It is hoped that these regional workshops can continue so that the Water Unit can continue to partner with Local Government's EHOs and industry, both in setting regulatory priorities and sharing information on the best practice in wastewater management. The 'stars of the show' have been Henry Tan and Alan Richard who, despite their full-time work commitments and all that goes with it, are passionate about this topic and are willing to catalyse a change by sharing their knowledge and experiences with EHO and industry colleagues.



Figure 20 Scientific Officer, Alan Richards, facilitating regional training sessions for wastewater management



Figure 19 Wastewater management workshops were well received across WA.

Central Wheatbelt Health and Building Group Meeting

By Mark Fallows

The Food Unit attended the Central Wheatbelt Health & Building Group Meeting in York on 27 March 2015. Topics discussed included recent food safety initiatives and incidents as well as the review of the Food Act 2008 and WA Auditing Framework.

Saudi Food and Drug Authority presentation

By Mark Fallows

The Food Unit was invited by the Australian of College and Training to present information to a delegation of colleagues from the Saudi Food and Drug Authority. The presentation provided the opportunity for representatives to share

innovations in each country. The presentation was well received.

Asbestos Master Class at Ecoforum 2014

By John Howell

John Howell from the Environmental Health Hazards Unit gave a keynote presentation in the Asbestos Master class at Ecoforum 2014 at the Gold Coast in October.

The EHD was requested to do this because its publication Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2014 was adopted for national usage in 2013 and is planned to be the basis of New Zealand guidance from 2015.

The presentation was well received and has triggered a number of requests for similar presentations. John and Jackie Wright of Enrisk also gave a presentation on clandestine drug laboratory residues as potential emerging contaminants.

Tobacco training

By the Tobacco Control Branch

The Tobacco Control Branch conducted a range of training courses for stakeholders involved in tobacco control. This included 6 training session at the WA Police (WAPOL) Academy for new police recruits, 23 training sessions for EHO's at Local Government Associations throughout WA as well as compliance officers in the Department of Transport.

Our staff

GRACE VAUGHAN HOUSE



Photo: Public Health Division staff based at Grace Vaughan House, Shenton Park, who participated in Loud Shirt Day.

OUR STAFF

We do everything possible to support staff training, professional development and career progression.

Occupational Health and Safety By Lindsay Gillam

The commitment to OHS in our workplace remains undiminished. During the year we had three 'incidents' formally reported. Although one involved a vehicle accident, there were thankfully no serious consequences. Our local sub-committee continues to meet on an ad-hoc basis; however our representatives regularly attend meetings in our head office.

A major highlight for the year was two of our OHS representatives producing drafts of two significant policy documents, "*Working Alone*" and "*Driving in Remote Areas*". Both documents were well received and are expected to be adopted across the Department of Health in the coming year.

A further highlight was the provision of free health checks for all our Grace Vaughan staff from the Roaming Education and Community Health group (REACH) based at the Central Institute of Technology. Take-up of the offer was good, with 41 officers completing on-the-spot checks for blood pressure, cholesterol, blood glucose levels and assessment of other accepted health indicators. The checks will continue to be offered annually and are increasing in popularity with consultations not intrusive in any way, but with an acceptable level of personal sensitivity assured. Staff were also offered the free Flu vaccine.

Open space technology workshop By Bree Abbott

An Open Space Technology workshop, facilitated by Professor Sandy Gordon, was held in July 2014 to identify areas within the EHD that staff would like to change. All staff were invited to participate in the session. There was no agenda set for the day; it was up to staff to create the agenda based on changes they wanted to see. This was a really fun and engaging day with eighteen ideas generated including discussion surrounding:

- Mentoring
- Performance and training
- Evaluation and communication
- Research and evidence

A 'Book of Proceedings' was provided and the top two priorities were identified for immediate action. Staff were invited to participate in the project groups based on their area of interest.



Figure 21 Sandy Gordon facilitated the Open Space Technology session.



Figure 20 All EHD staff were invited to attend the workshop.

Performance reviews By Danielle Kidd

Following the Open Space Technology workshop (mentioned in the previous story) one of the top priority areas was performance and training. Performance reviews and training opportunities were not being consistently managed across the units and staff wanted clearer designations of work and priorities. To implement these changes the EHD performance review process was reviewed. Following consultation, a new review process has been implemented where all staff are required to prepare for and have a performance review before the end of June each year. The timing will allow for clear assignation of projects for the following financial year and assist in each unit's performance.

Mentoring By Rebecca Delsar

Another project identified from the Open Space Technology workshop was staff mentoring. A project team was established to look at how EHD could develop a mentoring program to assist staff to develop new or high-level skills, provide opportunities for staff to be involved with projects and programs outside or alongside their core duties, assist with career planning and opportunities, facilitate succession planning and covering periods of leave more effectively within EHD, and assist staff in developing relationships with contacts and colleagues who may provide assistance in specific areas of interest. A pilot mentoring program was developed and will be trialled in 2015/16.

World Café By Bree Abbott

We hosted another World Café during May to provide staff with the opportunity to get together as one team and review the variety of projects each Unit proposed for the upcoming

financial year 2015-16. The friendly and relaxed setting allows staff to provide input and learn more about the projects from across the EHD.

Feedback received from the event is submitted to management who have the opportunity to amend project lists based on the ideas generated.

Realise 2 – helping identify strengths across the EHD By Bree Abbott

A number of staff were offered the opportunity to attend a workshop that helps individuals and teams identify their strengths and untapped potential.

Professor Sandy Gordon facilitated the session and included a focus on a strengths-based approach to work/team-work. Prof. Gordon is accredited in delivering the Realise2 strengths assessment and development tool.

Attendees were required to take a 20 minute online strengths identification tool used to unlock the potential of individuals, teams and organisations around the world - and provide users with a comprehensive profile.

Through 180 questions, 60 strengths are accurately assessed according to the three dimensions of Energy, Performance and Use, with each user receiving their unique, personalised Profile, revealing their realised strengths, learned behaviours, weaknesses and unrealised strengths.

As part of the workshop staff learnt what it really meant to work to their strengths. Team profiles were created using individual surveys – for example, everyone from the Water Unit completing a survey were included in an overall Water Unit team report. This helped to identify individual strengths against the team.

Positive feedback was received from staff who found the day to be extremely informative.

Attendance at the International Conference on Asbestos By David Peckitt

The Office of Asbestos Safety and Eradication Agency (ASEA), held its 1st International Conference – on Asbestos Awareness and Management on 16-18 November 2014 at the Crown Casino Complex Melbourne. Dave Peckitt, Senior Scientific Officer attended the conference and gave a presentation on DIY risks of asbestos exposure and management measures.

Presentations and interactive sessions discussed current issues/challenges and practical solutions to addressing Australia's asbestos legacy. International speakers highlighted the continued and increased level of mining and use of asbestos in countries such as Russia, Indonesia, India and international efforts to increase awareness, conduct research and lobby governments to ban mining and use.

Mr Peckitt said “a very interesting presentation was given on ‘Mr Fluffy’ asbestos home insulation contamination and ACT /NSW governments’ programs to address the clean up and remediation of over 1,000 homes in ACT alone”.

“Another interesting display was the ‘Betty’ mobile home designed to demonstrate where asbestos may be found in the home. This van is being used to promote asbestos awareness in rural communities of NSW”.

Science Meets Parliament By Mary Aerts

Mary Aerts attended the 15th annual *Science Meets Parliament* run by Science and Technology Australia in Canberra on the 24th and 25th of March 2015, as one of two

people chosen to represent ARPS (Australasian Radiation Protection Society). This forum brought approximately 200 working scientists across Australia together for two days of professional development and networking aimed at improving communication of science to the media, policymakers and parliamentarians.

Australian Clinical Dosimetry Service (ACDS) Stakeholder Engagement Group Workshop

By Leif Dahlskog

Leif Dahlskog attended the Australian Clinical Dosimetry Service (ACDS) Stakeholder Engagement Group (SEG) Workshop in Melbourne during March 2015. The ACDS is a voluntary national auditing service for radiotherapy centres in the public and private sector that provides a three level audit program of radiotherapy. A further workshop for the SEG is planned for Nov 2015.

Australasian College of Physical Scientists and Engineers in Medicine Summer School

By Julie Blanchard -

Julie Blanchard attended the Australasian College of Physical Scientists and Engineers in Medicine Summer School in Melbourne in November 2014. The Summer School which is primarily aimed at Diagnostic Imaging and Radiation Oncology Medical Physicists included seminars and discussion groups on medical radiation protection with internationally-renowned radiation professionals. The programme incorporated problem-based learning exercises and practicals including structural shielding design and survey of radiotherapy bunkers as well as a HDR (high dose rate) Brachytherapy emergency simulation with patient actors.

Master of Science (Medical Physics) By Fiona Doyle

Fiona Doyle undertook postgraduate studies to further her professional and technical competence in medical physics and radiation protection, taking leave to undertake her studies full time at the University of Surrey in England. This MSc is an internationally renowned medical physics course which covered the modern applications of physics to medicine for both ionising and non-ionising radiation. Fiona found the course to be a welcome challenge that increased her understanding of many aspects of medical physics and further encouraged the development of knowledge and skills that are transferrable to her work at Radiation Health. It was an exciting and rewarding opportunity.

Complete a Diploma in Crowd Science

By Sid Brodie and Jaala Downes

Sid Brodie attended a Crowd Risk Analysis course conducted by Prof. Dr. G. Keith Still (FIMA, FICPEM, SFIIRSM) from the Manchester Metropolitan University in the United Kingdom. The course was incredibly valuable in providing tools and verification of many of the procedures applicable to public events. Professor Still took up Sid's invitation to come to Perth where he met with the design team of Perth Stadium, conducted a half day seminar at Grace Vaughan House as well as his 3 day Crowd Risk Analysis Course.

The half day seminar was attended by 80 delegates from across the event industry and the workshop was attended by 30 representatives from government agencies and the event industry who are actively involved in public events.

For those attending the workshop there was an opportunity to obtain a Diploma in Crowd Science. Sid was the first in

WA to attain this qualification and the opportunity has been taken up by Jaala Downes from the EHD, and most of the workshop attendees. This shows the level of commitment to safety across the industry.

This has been a great initiative for improving the management, knowledge and skills of crowd management events in WA. Additional courses are planned for 2016 and an innovative E-learning initiative is about to be released.

National Environmental Health Australia Conference in Adelaide By Jaala Downes

In October 2014, Jaala Downes was invited to present at the National Environmental Health Australia (EHA) Conference at Adelaide Oval on the great work the EHD has been doing in the field of personal services and body art.

She was asked to present on the direction the body art legislation was heading in WA; which is moving away from prescriptive and restrictive legislation, and towards risk-based legislation, which would allow for innovation within the industry whilst allowing EHOs to regulate more effectively.

The presentation was incredibly well received, with the conference delegates' voting it "*the most valuable to daily duties as an EHO*".

Fundraising for charities of our choice

Once again the EHD organised a number of fundraising events throughout the year following our monthly Director's update. Each Unit chooses a charity of their choice, put on a delicious morning tea and organise fundraising activities. We have a generous team who have donated a substantial amount of money to numerous charities. Some of these include:

- Bright Blue fund
- The Black Dog Institute
- Surf Life Saving Association of Australia
- Loud shirt day

Dedicated bootcampers

Staff are provided the opportunity to participate in daily bootcamp, costing as little as \$10 per session. Willow Warren has played a pivotal role in helping to organise the program over the past few years, in partnership with trained personal trainers. A big thank you to Willow for her hard work and dedication in keeping the program running! It is appreciated more than you will ever know.

Bootcampers are lucky enough to have access to a beautiful grassed area to run around in, making it the perfect space to keep fit and active.

This year the group put on a farewell breakfast for one of the personal trainers, Jacqui Brookes, and welcomed back Luke Kimber who was ready to crack the whip once again.



Figure 24 Some of our regular bootcampers enjoying breakfast after an early morning session (all photos on this page)



FUTURE



FUTURE PRIORITIES 2015 - 2016

Every April each Unit is required to meet as a group and take the time to plan their schedule of projects for the coming financial year. Projects aim to enhance our services and improve the management of environmental health across WA. This year we plan to do the following:

Environmental Health Hazards Unit

1. Prepare and deliver a stakeholder forum on contemporary asbestos issues during National Asbestos Awareness Week 2015
2. Develop a community fact sheet on lead for Northampton.
3. Finalise Code of Practice, Memorandum of Understanding with WorkSafe and 2 highest priority guidance documents for Health (Asbestos) Regulations review.
4. Scope, consult on and define management approach to landfill gases impacting on residential subdivisions.
5. Complete first year of PSC88 (use of pesticides in drinking water catchments) review.
6. Stewardship of public health aspects of fibrous minerals associated with Pilbara mining projects.
7. Draft, consult on and release model pesticide use notification plan for local governments.
8. Implement measures to address outcomes of Office of Audit General audit of Management of Pesticides in WA.
9. Develop a Standard Operating Procedure on assessing applications and issuing pest management technician licences and pest management business registrations.
10. Develop a template for applying for a fumigation site approval and risk assessment.
11. Review and adapt South Australian/enHealth guidelines on management of Legionella in healthcare warm water systems to a WA guideline and Operational Directive.
12. Provide support to the Health Compliance Perth Stadium Year 2 of 4 project.
13. Complete a desktop audit of environmental health risks, roles and responsibilities in correctional institutions to ensure that procedures and practices comply with an appropriate standard of environmental health.
14. Develop guidelines for inflatable devices associated with water.
15. Administer Year 3 (2015-16) of Funding Initiatives for mosquito management of Western Australia funding, including advertising awarding and funding of competitive research grants and grants to local government.
16. Implement mosquito-borne disease communications plan and tools developed in 2014-15, and develop new digital resources.

17. Prepare for and hold a full (week-long) mosquito management training course for Local Government EHOs and other stakeholders, in September 2015.
18. Develop national exotic mosquito response protocol with the Commonwealth Department of Health and Agriculture, through National Arbovirus and Malaria Advisory Committee working group.

Food Unit

1. Provide guidance to local governments on recently introduced Primary Production and Processing standards for eggs, poultry and sprouts.
2. Raise awareness of food safety, nutrition and food regulation topics during Australian Food Safety Week 2015 (9-13 November).
3. Consult with stakeholders on the reviews of the *Food Act 2008* and the Regulatory Food Safety Auditing Framework.
4. Engage with local governments to address administrative and compliance challenges relating to food safety at public events including the consideration of a central state-wide register of temporary and mobile food businesses.
5. Engage with local governments to address administrative and compliance challenges relating to food safety in residential environments.
6. Coordinate a survey of biotoxins in WA shellfish, analyse data to determine the level of risk and enhance the Marine Biotoxin Monitoring and Management Plan.
7. Develop guidance materials for local governments and the food industry to support the Emergency Order provisions of the *Food Act 2008*.
8. Review of the Food Unit Sampling Activities to make recommendations for updating the sampling program.

Radiation Health Unit

1. Review a minimum of 50% of standard licence and registration conditions for the Radiological Council and identify required updates in referenced documents and legislation.
2. Investigate the implementation of a Western Australia-wide 100 point identity check for all category 1, category 2 and category 3 security enhanced source licence holders.
3. Review the appropriateness of the existing tests contained within the major digital radiographic equipment compliance testing workbook and revise where appropriate to incorporate current international best practice for use by industry.

4. Implement the decision to ban all commercial solarium operations in Western Australia by 1 January 2016 and implement the agreed financial assistance package. (This project will be completed with the assistance of the Science and Policy Unit).

Science and Policy Unit

1. Draft a scoping tool for public health considerations of planned industrial estates to enable developers to better understand public health impacts and improve information submitted for new industrial estates as part of the development assessment process.
2. Ensure the safety of the Northampton population through the safe removal, transport and disposal of lead tailings in partnership with government stakeholders.
3. Complete a review of the constitution of the WA EHO professional review board and prepare a ministerial submission to give the committee a statutory status.
4. Prepare a report outlining options on how to strengthen the links between the DOH and local government on emergency management issues.
5. Investigate a process that ensures the EHD records system is capable of managing the increase in electronic paperless submissions and report recommendations for implementing a suitable system.
6. Research and report on existence of environmental health conditions relating to siting of buildings housing vulnerable populations (e.g. day-care centres, schools, aged care homes), with the aim to develop a position statement for WA.
7. Review existing national and international Children's Environmental Health Policy and Frameworks to determine their effectiveness in protecting children from environmental hazards.
8. Evaluate data collect from the Environmental Health Needs Surveys conducted between 1997 and 2008 to determine the significance to the Department of Health aboriginal environmental health program and influence across government, and report findings.
9. Draft supporting documentation identified for stages 1 to 3 of the Public Health Bill Implementation Plan 2015-16, including guidance notes, forms and templates.
10. Coordinate the drafting of WA State Public Health Plan in partnership with the Public Health Division.
11. Develop a guidance document to support local government public health planning in accordance with the Plan for the Future process adopted in the *Local Government Act 1995*.
12. Develop and trial an inter-agency policy for supporting and responding to Hoarding and Squalor cases in WA, in partnership with a cross-agency team.

13. Develop an Aboriginal EH Service Provider Tool Kit with appropriate resources to provide mentoring support information for the Aboriginal environmental health program and make available on the Public Health website.
14. Conduct a compliance Survey of up to 100 retail stores to see if they are selling tobacco products to underage children.

System Support and Licensing Unit

1. Establish a system to capture and maintain all EHD contracts. (excluding commercial/community grants and AEH service agreements).
2. Establish a vehicle logging system for EHD Pool Vehicles.
3. Commence migration of hard copy Tobacco and Pesticide Licensing files onto TRIM for security purposes and electronic access to records.
4. Establish over the counter payment services for tobacco and pesticide licenses with Australia Post.
5. Implement barcode software for outgoing licensing mail as a pilot project before extending to other branches of EHD.
6. Undertake market research to identify suitable data base platforms with the potential to service all licensing areas.
7. Implement SSLU Service Level Agreements within the EHD.

Water Unit

1. Extend the fluoridation of community water supplies in Western Australia
2. Review all forms of microbiological water sampling programs undertaken by local government with the aim to update the site code system, sampling technique and interpretation of results.
3. Finalise the *Code of Practice for Onsite Wastewater Management* (the Code).
4. Develop the Cyanobacteria and Harmful Algal Bloom Protocol (CHAB) for Western Australia
5. Develop *Guidelines for the Safe Disposal and/or Reuse of Trade Wastes*.

Cross-unit projects

1. Implement the decision to ban all commercial solarium operations in Western Australia by 1 January 2016 and implement the agreed financial assistance package. (This project will be completed with the assistance of the Science and Policy Unit).
2. Establish a mentoring strategy for new and existing EH staff to support professional development, knowledge sharing, career planning, succession planning and to enhance working relationships across the EHD.
3. Undertake a literature review on indoor air quality and update existing EHD indoor air quality resources.
4. Design and create a Development Assessment Panel (Approvals) electronic submission database & associated processes.
5. Complete a desktop audit of environmental health risks, roles and responsibilities in correctional institutions to ensure that procedures and practices comply with an appropriate standard of environmental health.
6. Finalise, scope and prioritise work required for the Built Environment legislation amendments required under Public Health Bill or as a result of transferring to Building Legislation
7. Progress a transfer of construction of aquatic facilities from AF COP to Building Commission and with certification through Local Governments or private sector.
8. Undertake a review of mosquito production, mosquito management and infrastructure of wastewater management systems in the north-west of WA. (Expect this project to span to 2015-2017).
9. Complete Phase III of the Environmental Health Atlas.
10. Identify computer systems development to enhance EHD Information Management.

PERFORMANCE



FINANCIAL

FINANCIAL PERFORMANCE

It is important that we use the states resources wisely to effectively manage environmental health services for the people of Western Australia. Below is an overview of our financial performance during 2014-15.

Expenditure breakdown

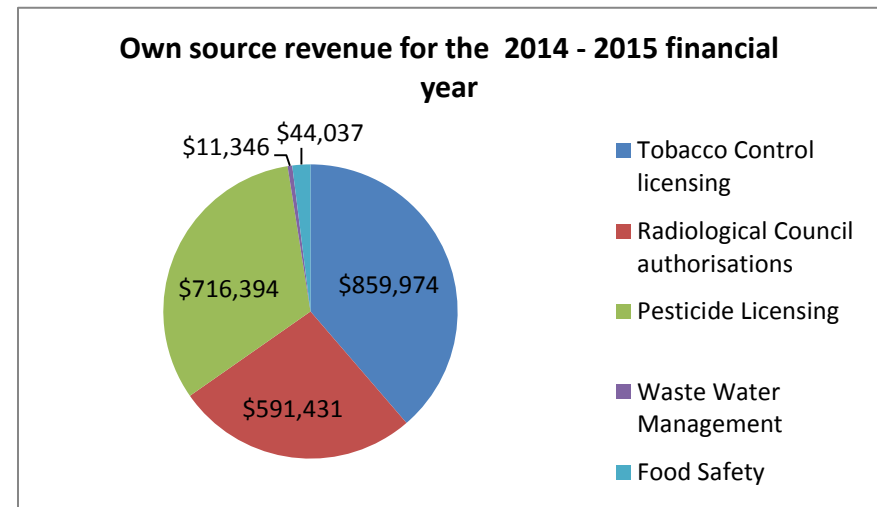
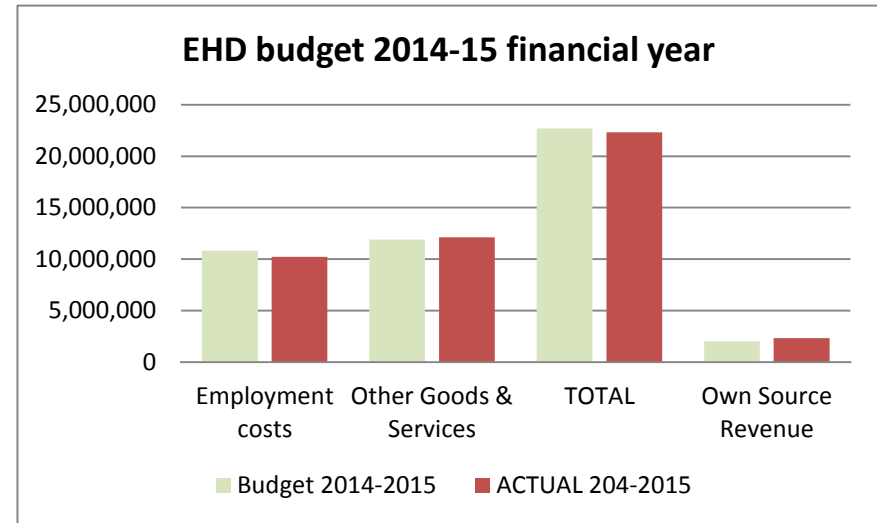
The total expenditure for 2014-2015 was **\$22.32 million** which came in under the budget allocation of \$22.70 million.

The EHD's major areas of expenditure are employee costs and Other Goods and Services (OG&S).

The employee expenditure has grown in accordance with salary increases allowed for the Public Service and General Officers General Agreement. Included in OG&S expenditure are operational expenses and Grace Vaughan House (GVH) building maintenance.

Own sourced revenue breakdown

The total of our own source funding was **\$2,223,182**. This income is mostly associated with the licensing and registration activities required under legislation. Money generated from our own source revenue is invested in managing the programs including undertaking routine inspections and complaints investigations, health promotion, administrative requirements and employment costs.

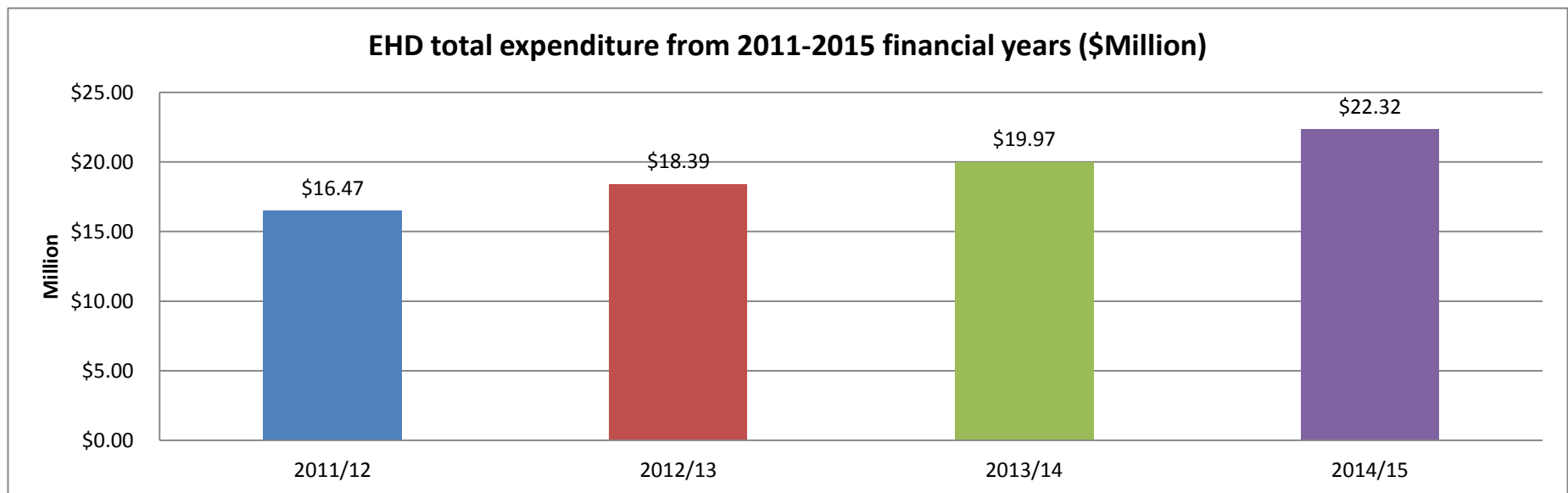
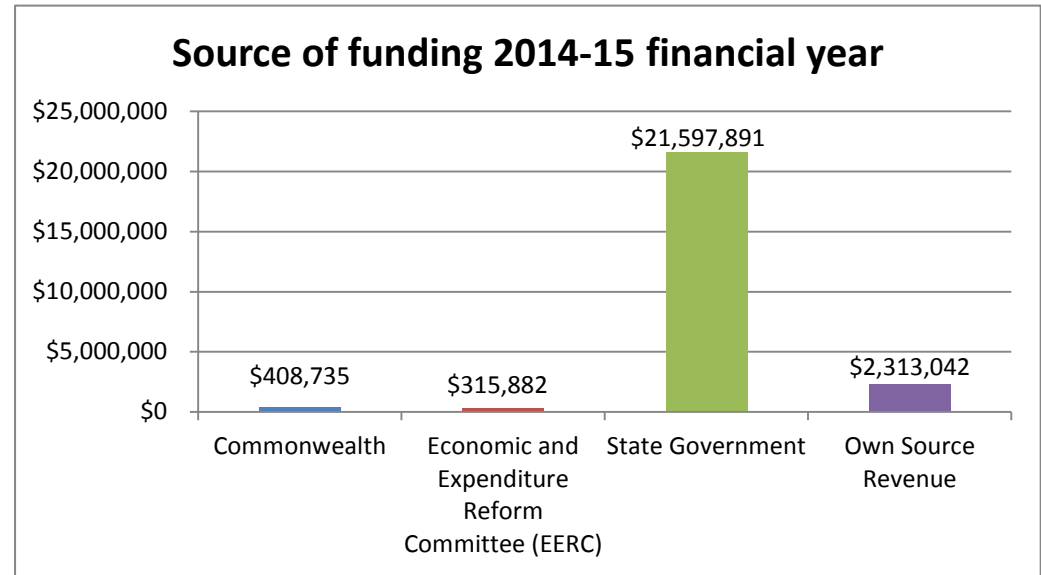


Where our funding came from

The funding for the operations of EHD came from different sources including the:

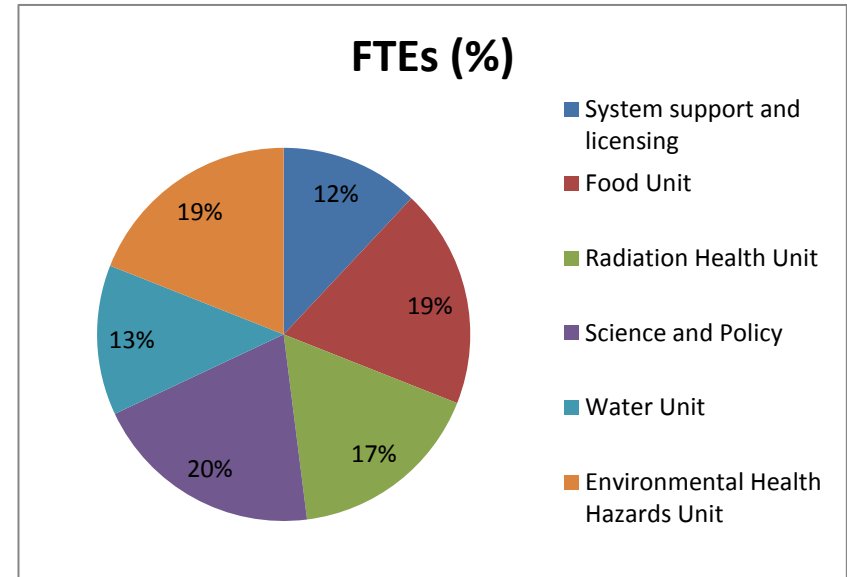
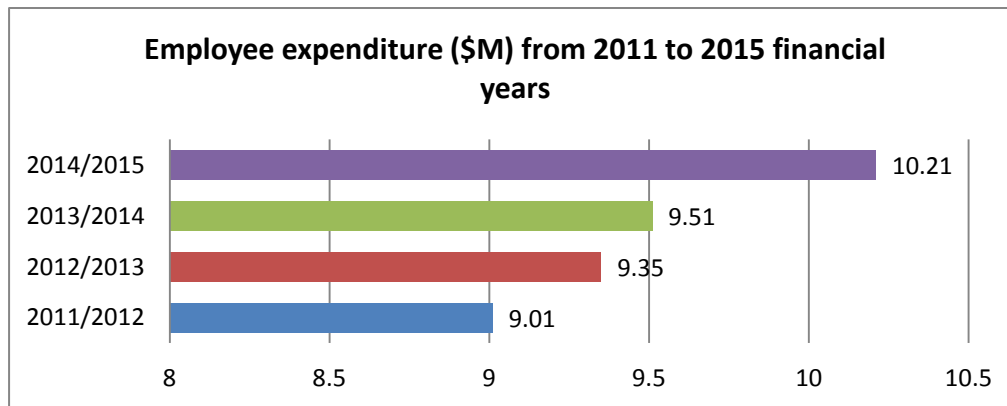
- Commonwealth
- Economic and Expenditure Reform Committee
- State Government and
- Own Source Revenue.

The WA State Government funded around \$21.5 million and the Commonwealth Government contributed \$408,735.



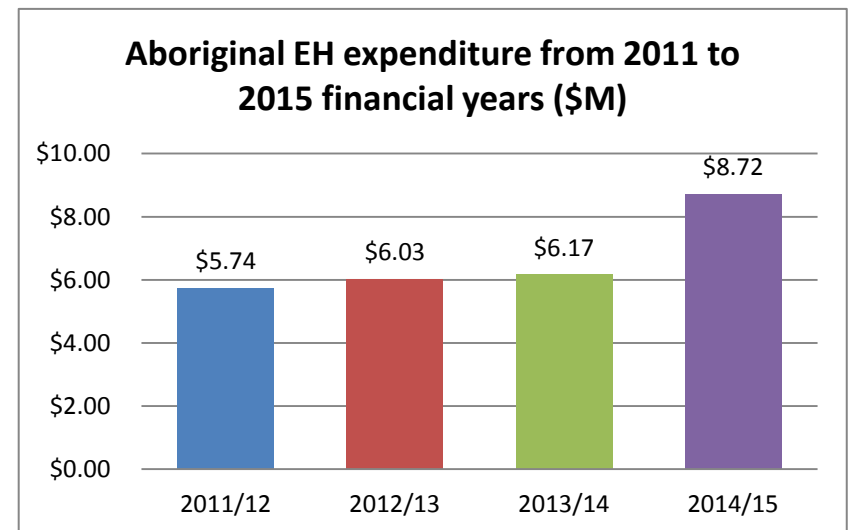
Workforce distribution / employee expenditure

In 2014/2015, the EHD had **96 Full Time Equivalents (FTEs)** staff members and spent **\$10.21 million** on salaries.



Aboriginal Environmental Health Expenditure

The management of Aboriginal Environmental Health programs across WA is a significant amount of our annual budget. Funding is allocated to various organisations across the State that are contracted to help provide Environmental Health Services that improve living conditions in Aboriginal communities.



Financial overview

We funded a number significant of programs that aim to improve environmental health services across WA. Below is a highlight of some of the programs we funded during the 2014-2015 financial year.

- **\$8.72 million** to various organisations for the provision of Environmental Health Services in Aboriginal communities.
- **\$1.80 million** for testing of food and water samples through PathWest.
- **\$1.24 million** on mosquito control programs to manage mosquito borne disease impacts.
- **\$555,237** for helicopter larviciding to control mosquito breeding.
- **\$100,000** to develop a web based WA mosquito atlas.
- **\$48,360** on community survey to determine the use of repellents against mosquito in WA.
- **\$150,000** to the University of Western Australia to fund a PhD scholarship for a joint research project on mosquitoes.
- **\$231,118** for the implementation of food surveillance surveys to estimate the levels of pesticide residues in fruit and vegetables produced and sold on the domestic market.
- **\$102,200** on Front of Pack labelling project as WA contribution.

Glossary

CDCD	Communicable Disease Control Directorate
DER	Department of Environment Regulation (previously Department of Environment and Conservation)
DOH	Department of Health
DMP	Department of Mines and Petroleum
EHD	Environmental Health Directorate
EHP	Environmental Health Practitioners
EHO	Environmental Health Officer
LG	Local Government
PHD	Public Health Division

Acknowledgements

The completion of this yearbook would not happen without the dedication of our staff.

A big thank you goes out to the entire team for contributing information to include within the yearbook.

In particular, we would like to thank the Yearbook Team for helping to coordinate the collation of information across the EHD.

Members include:

- Bree Abbott, Science and Policy Unit
- Willow Warren, Environmental Health Hazards Unit
- Rebecca Delsar, Food Unit
- Julie Phelps, Water Unit
- Cherine Glasson, System Support and Licensing Unit
- Jacob Brookes, Radiation Health Unit
- Lindsay Gillam, Science and Policy Unit