



Government of **Western Australia**  
Department of **Health**

# **Environmental Health Directorate Yearbook**

**July 2015 – June 2016**



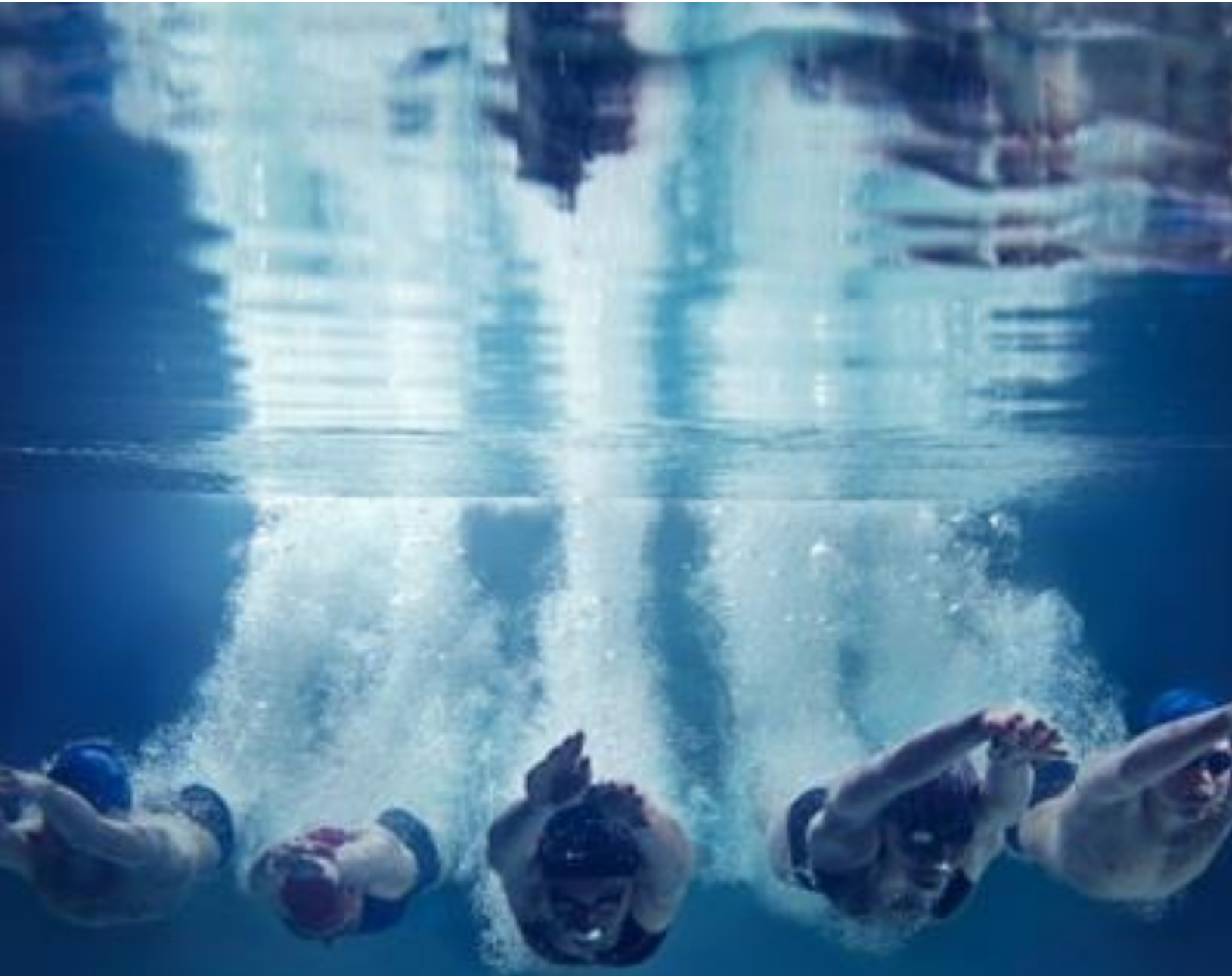
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**This yearbook outlines the activities of the Environmental Health Directorate, Public Health Division, of the Department of Health of Western Australia for the 2015 – 2016 financial year.**



## **Our purpose**

**To lead in the management of environmental health risks**

## **Our vision**

**Healthy people in a healthy environment**

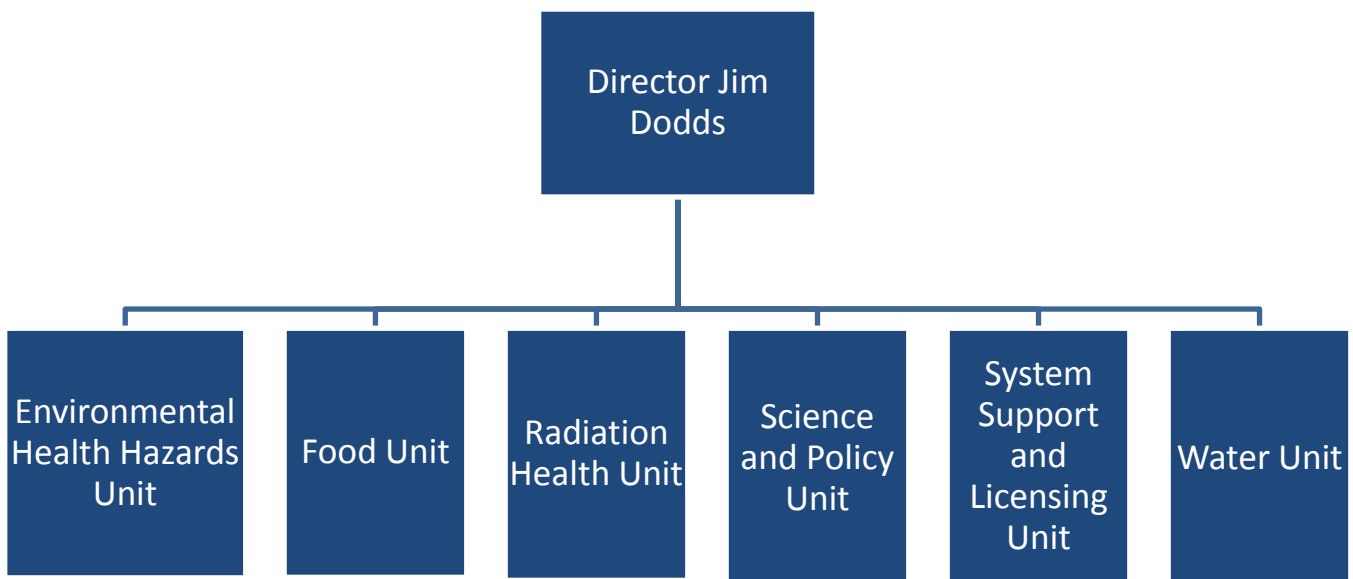
## **Our values**

**Cooperation| Fairness| Excellence| Integrity| Leadership**

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

The structure that was in place during the 2015 – 2016 period is outlined below.



## **We administer a wide range of Acts, regulations, by-laws and Codes of Practice, including:**

*Public Health Act 2016*

*Health Act 1911*

### **Environmental Health Hazards**

*Health (Air-handling and Water Systems) Regulations 1994*

*Health (Asbestos) Regulations 1992*

*Health (Cloth Materials) Regulation 1985*

*Health Act (Carbon Monoxide) Regulations 1975*

*Health (Garden Soil) Regulations 1998*

*Hairdressing Establishment Regulations 1972*

*Health (Skin Penetration Procedure) Regulations 1998*

*Health (Offensive Trades Fees) Regulations 1976*

*Piggeries Regulations 1952*

*Health (Construction Work) Regulations 1973*

*Construction Camp Regulations*

*Health Act (Laundries and Bathrooms) Regulations*

*Health (Public Buildings) Regulations 1992*

*Health (Rottnest Island) By-laws 1989*

*Fly Eradication Regulations*

*Health (Pesticides) Regulations 2011*

*Health (Prescribed Insect Pests) Regulations 1991*

*Registration, Enforcement and Discharge of Local Authority Charges on Land Regulations*

*Health (Notification of Lead Poisoning) Regulations 1985*

*Health (Section 112(2) Prohibition) Regulations 2006*

### **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*

*Health (Aquatic Facilities) Regulations 2007*

*Health Act (Local Authorities Sewerage Undertakings)*

*Model By-laws – Series “A”*

*Fluoridation of Public Water Supplies Act 1966*

### **Radiation Health**

*Nuclear Waste Storage and Transportation (Prohibition) Act 1999*

### **Radiation Health as secretariat to the Radiological Council**

*Radiation Safety (General) Regulations 1983*

*Radiation Safety (Qualifications) Regulations 1980*

*Radiation Safety Act 1975*

*Radiation Safety (Transport of Radioactive Substances) Regulations 2002*

### **Science and Policy**

*Tobacco Products Control Act 2006*

*Tobacco Products Control Regulations 2006*

It has been a year of change for not only the Environmental Health Directorate but for the management of public health across WA.

Some of our major achievements for the past year included:

### New Public Health Act 2016

- Our team coordinated the drafting and passage of the *Public Health Act 2016* through WA Parliament. WA is now on its way to having modern, flexible and proactive legislation for managing public health risks.

### Launch of Fight the Bite campaign

- We launched *Fight the Bite*, a dynamic and visually effective communication campaign that partners with and empowers Local Governments to increase awareness of mosquitoes and mosquito-borne disease in Western Australia.

### Crowd control workshop

- In association with the City of Perth and e-Response Crowd Training we arranged for a 3 day Risk Analysis Workshop conducted by experienced international crowd management experts. The course aimed to improve awareness of crowd control issues to ensure the increasing number of concerts, festivals and outdoor events continue to be safe for Western Australians.

### Environmental Health Atlas launched





- After a number of trials, we launched the Environmental Health Atlas, a new electronic program designed to make mosquito management and surveillance easier for local governments. The program includes the use of mobile phone applications for collecting data in the field.

















### Coordinating an undeclared food allergen investigation

- A whole of government investigation was undertaken following two reported cases of anaphylactic reactions association with the consumption of coconut milk products containing undeclared dairy.






















**We made a commitment to completing a number of projects by the end of the financial year.**




















**Did we achieve what we set out to do?**

-  Project completed – we achieved our goal
-  Satisfactory result – progressed but not finalised
-  Project not started
-  No longer an immediate priority. Project to be addressed in upcoming year.

Score	Environmental Health Hazards Unit operational priorities
	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.
	19. Revision of enHealth Clandestine Drug Public Health Risk Statement
<b>Score</b>	<b>Food Unit operational priorities</b>
	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 <i>Food Act 2008</i> 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 <i>Food Act 2008</i> .
	8. Review of the Food Unit Sampling Activities to make recommendations for updating the sampling program.
<b>Score</b>	<b>Radiation Health Unit operational priorities</b>
	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).
<b>Score</b>	<b>Science and Policy Unit operational priorities</b>
	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. Draft a guidance document to support local government public health planning in accordance with the Plan for the Future process adopted in the <i>Local Government Act 1995</i> .
	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.
<b>Score</b>	<b>System Support and Licensing Unit operational priorities</b>
	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.
<b>Score</b>	<b>Water Unit operational priorities</b>
	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 <i>Code of Practice for Onsite Wastewater Management</i> (the Code).
	4. Develop the Cyanobacteria and Harmful Algal Bloom Protocol (CHAB) for Western Australia
	5. Develop guidelines for inflatable devices associated with water.

# What we did



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. The past year we had a number of successes.

## **Public Health Act 2016 received royal assent**

By Kelly Crossley and Bree Abbott

The [Public Health Act 2016](#) (the Act), together with the supporting [Public Health \(Consequential Provisions\) Act 2016](#) received Royal Assent on the 25th July 2016.

Our Directorate coordinated the drafting of the Acts, attended sittings in Parliament and advocated the need for both Acts over the past 10 years. These Acts facilitate a comprehensive reform of public health regulation in WA and are a substantial step towards preventing illness and better protecting and promoting the health of all Western Australians.

A significant amount of work is now required to transition to the new regulatory framework.

## **Asbestos regulation revision**

By John Howell

The revision of the *Health (Asbestos) Regulations 1992* has resulted in the preparation of Draft Regulations, Draft Code of Practice and Draft Memorandum of Understanding with WorkSafe. These will be updated and finalised as part of the implementation of the new *Public Health Act 2016*.

## **New asbestos cement fences guidance**

By John Howell

This [Guidance Note on Asbestos Cement Fences](#) was published, providing advice on the identification and management of cement sheet fences made with asbestos-containing materials in residential settings. It is primarily for use by Environmental Health Officers (EHOs) as well as the public.

## **Identifying asbestos-containing material guidance**

By John Howell

A [Guidance note on the identification of asbestos containing material](#) was published to assist the public and EHOs to identify any asbestos products in a residential setting.

## **Asbestos regulators fact sheet**

By John Howell

The [asbestos regulators and information sources fact sheet](#) was published to help industry, the public and local government to identify and be able to contact the agency most relevant to the particular type of asbestos issue that they may be concerned about.



## **Food Act performance report published**

By Aaron Lim

We compiled the data for the 2014-15 *Food Act 2008* Report which summarises the performance of *Food Act 2008* (WA) functions by Local Government and the Directorate, food surveillance, auditing, compliance and enforcement, administration and food safety education. The report will be published on the [Department's website](#).

## **Food Act review underway**

By John Hardy

In partnership with the Food Alliance Working Group, a discussion paper on the review of the *Food Act 2008* was completed.



The discussion paper will be released for stakeholder comment in the coming financial year, and the Directorate will host State-wide presentations to support the review process.

### **Regulatory food safety auditing under review** By John Hardy

A survey of stakeholders regarding the [Regulatory Food Safety Auditing Framework](#) was completed and a report on the results of the survey has been drafted.

A number of recommendations to improve the framework have been identified and will be communicated in the coming financial year.

### **Low risk recycled water schemes audit tool developed**

By Clemencia Rodriguez and Alan Richard

To support industry and EHOs, the Water Unit in cooperation with the Water Corporation developed an [Internal Audit Check List](#) and [Audit Score Guide](#) for low risk recycled water schemes.

The Water Unit is keen to support local governments with the implementation of their first audit to assist with establishing background scores for the existing recycled water schemes and to train EHOs in the use of the tool.

### **New mould guidelines** By Jaala Downes

After numerous queries and requests from industry and EHOs, the Directorate published the [Guidelines for Managing Mould and Dampness Related Public Health Risks in Buildings](#). The document provides guidance for the identification, evaluation, remediation and prevention of mould growth and/or dampness problems in indoor environments.

Mould has been recognised as a key indoor biological pollutant that may cause adverse health effects to building occupants. The number of complaints about mould also appears to be increasing each year.

### **Hairdressing regulation review**

By Bree Abbott and Jaala Downes

A review was undertaken on the regulation of the hairdressing industry with the aim to repeal the *Hairdressing Regulations 1972* and replace this with an industry guide. Based on feedback received, the repeal of the regulations has been placed on hold until stage 5 of the implementation of the *Public Health Act 2016* comes into effect. This will ensure that a future industry guide will be supported by the ‘general duty’ powers under the new Act, which enables enforcement action to be taken for any public health risks potentially arising from hairdressing salons.

### **Self-service food displays**

By Scott Whiddon

Driven predominately by the larger supermarket chains, industry innovation has seen the development and implementation of new market concepts such as self-service food displays. Commonly termed “Naked Foods” are simply foods for sale in non-traditional display units. In response to an increase in queries, the Food Unit developed the [Self-Service Food Display Fact Sheet](#), to provide guidance to Food Act enforcement agencies when determining the suitability of ‘naked food’ display units.

### **Review of the offensive trades fees**

By Kelly Crossley

The Directorate consulted with local governments on the proposed repeal of the *Health (Offensive Trades Fees) Regulations 1976*. The repeal regulations would allow local governments to determine their own fees for the registration of offensive trades by making a local law under the Health Act.

32 local governments responded and of those responses, 15 supported the repeal and 16 did not support the repeal of the Regulations and one stated “no comment”. The most commonly cited reason for not supporting the proposal was the resources

required to make a local law. Based on the feedback the Directorate is postponing the repeal until stage 5 of implementation of the *Public Health Act 2016*.

## Lead poisoning notification reforms

By Kelly Crossley

The Directorate is progressing amendments to the *Health (Notification of Lead Poisoning) Regulations 1985*, which proposes the notification where a person has a blood lead level greater than 5 micrograms per decilitre. These changes are in accordance the [National Health and Medical Research Council \(NHMRC\) Lead Working Committee](#), represented by our Principal Toxicologist, who recently undertook a comprehensive review of the evidence on the health effects of lead and how these health risks can be minimised, and subsequently released new national guidelines.

## Reviewing duplications under the building regulations

By Kelly Crossley

The Department of Finance undertook a regulatory mapping project titled '[Making it Easier to Start a Restaurant in Western Australia](#)'. The project examined the regulatory barriers to starting a restaurant in WA and made a series of recommendations to reduce the burden of compliance for small business owners. The Directorate was required to provide information to support recommendation 3 of the report which stated, "Department of Health to reduce duplication by repealing provisions in the Health (Public Buildings) Regulations 1992 that are already covered in the Building Code of Australia". The recommended amendments are currently being assessed by the Regulatory Gatekeeping Unit before they can be progressed.

## Amendment to carcass branding

By Stan Goodchild

Amendments to the *Food Regulation 2009* were gazetted on 11 August which allows

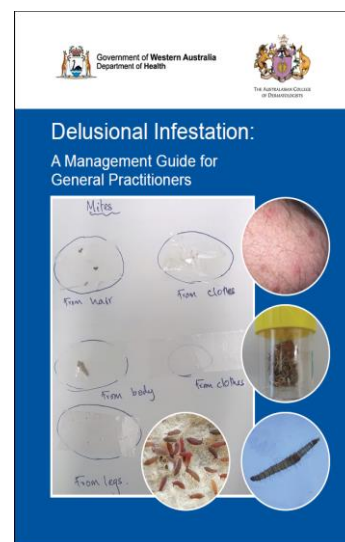
the movement of carcasses from an abattoir to a boning room without the application of a health brand provided the carcasses are processing into consumer products. Such carcasses only require the application of a tag or tags, depending on the species, that identifies the name of the processing abattoir and the date of production for traceability purposes. In all other situations such as where carcasses are sold directly to retail outlets, the application of health brands on carcasses is still required.

## Delusional infestation guide published

By Dr Peter Neville

We worked with a range of stakeholders (including the Australasian College of Dermatologists, and the Departments of Agriculture and Food, Agriculture and Water Resources, and the WA Museum) to produce a [Management Guide for General Practitioners on Delusional Infestation \(DI\)](#). The booklet is designed to assist general practitioners to diagnose and manage patients with [delusional infestations](#).

Our Medical Entomology team provide identification services for any invertebrates found or collected by GP's or pathology laboratories. All findings are reported back to the GP or pathology centres where the possibility of DI can be brought to the GP's attention. The GP can then support the patient in obtaining psychiatric treatment.



Delusional Infestation Management Guide for General Practitioner

# Community studies and investigations

It's important that we continuously monitor environmental health impacts across the state. This is achieved by contributing to studies, surveys and investigating real and perceived community health concerns.

## Remediation of large asbestos-contaminated sites made easier

By Lindy Neild

Along with officers from Contaminated Sites at the Department of Environment Regulation, our Toxicology officers observed a field demonstration of the new ECO Rake at Stoneridge Quarry, Postans.

The site visit involved reviewing remediation of a contaminated site impacted by asbestos containing material that has been distributed across 10 hectares for compliance with the [Guidelines for the Assessment, Remediation and Management of Asbestos-](#)

### [Contaminated Sites in Western Australia.](#)

The final validation of successful remediation requires the top 10 centimetres of soil to be raked to ensure the surface is free of all visible Asbestos Cement Material (ACM) fragments with a diameter greater than seven millimetres. To speed up the process, Scott Construction and Development Pty Ltd designed the ECO Rake that is installed on the bucket of a Front-End Loader. By automating the raking using a large rake, site remediation and validation can be completed more quickly with minimal impacts to health and safety impacts of employees.



Officers from Toxicology [Environmental Health Hazards Unit] (Right-left: Rita Tan, Pierina Otness, Dr Martin Matisons, Lindy Neild) visited Stoneridge Quarry, Postans on 5 August to view a field demonstration of the ECO Rake.



## Elizabeth Quay algal bloom

By Jared Koutsoukos

We were involved in a multi-government agency Senior Officers Environmental Working Group, that oversaw water quality and other environmental health aspects associated with the construction of Elizabeth Quay.

During the Quay construction, a silt-curtain was used to reduce turbidity and other potential water quality impacts on the broader Perth Waters river area. Unfortunately, in November 2015 a cyanobacterial bloom of '*Synechocystis spp.*' developed within the inlet, which delayed the curtain removal.

A Technical Working Group was activated, to determine response measures based upon the potential health and environmental risks. The Directorate provided health advice in relation to species/concentration levels, media statements and also determined when the curtain could be lifted.

This risk assessment and response

continued until early January 2016, when the cyanobacteria subsided to a level which the silt curtain could be removed. At this time the Directorate issued precautionary advice to the community regarding water contact activities.

## Cockburn Sound fish kill

By Jared Koutsoukos

The Directorate was notified of a fish kill at Kwinana Beach, resulting in wide-spread fish deaths (~ 2000) throughout Cockburn Sound.

The fish deaths caused significant concern and frustration amongst the community, industry and government. Commercial mussel harvesting was halted for a fortnight and a WA Swimming event in Cockburn Sound was cancelled.

The Directorate participated in a multi-agency investigation and response into the fish deaths, which was coordinated by the Department of Fisheries. Substantial State and Local Government resources were allocated to the investigation into potential



Algal bloom in Elizabeth Quay. Photo courtesy of Department of Parks and Wildlife



sources of contaminants, and the testing of water and fish species. It was eventually determined that the likely cause of the fish kill event was an algal diatom bloom of the genus *Chaetoceros*.

Staff provided health advice, and assisted in the preparation of media releases regarding the safety of recreational swimming, fishing and other activities. Staff also coordinated the bacterial water quality monitoring of coastal beaches with local government EHOs in the Cities of Cockburn, Kwinana and Rockingham and also on Garden Island.



Image courtesy of the West Australian 3 Dec 2015

## Assessment of Yarloop asbestos contamination

By John Howell and David Peckitt

Our staff provided public health advice and assistance to other government agencies and community members following the bushfire that devastated the township of Yarloop and surrounding areas in early January 2016.

Of particular concern was contamination of some burnt and adjacent properties by asbestos cement sheeting which can shatter when burnt and disperse debris which is brittle or friable and prone to releasing dangerous asbestos fibres.

The Directorate's nationally recognised [Guidance note on the management of fire damaged asbestos](#) proved to be particularly useful during the event.

A large proportion of the buildings destroyed in Yarloop are likely to contain asbestos and the major program of debris removal and rebuilding will manage asbestos contamination based on the Guidance Note.

As only about half of properties in Yarloop were destroyed, the owners of the intact properties have been keen to return but this was made difficult due to the possible presence of asbestos contamination from adjacent burnt buildings.



Dave Peckitt, checking roof contamination



Yarloop Town hall

To help clarify the situation, Departmental officers escorted by a Shire of Harvey EHO, conducted a survey of the unburnt Yarloop properties for asbestos contamination. Procedures and a plan were developed specifically for this purpose and the 55 properties considered most likely to be contaminated (of the 150 unburnt total) were assessed. Of these only 16 were considered contaminated.

We prepared a survey report which made recommendations about the remediation of the affected unburnt properties and their reoccupation.

## Tobacco compliance on the rise

By Diane D'Silva

Tobacco control staff published the '[Tobacco Compliance Survey 2015](#)' which is used to measure retailers' compliance with the *Tobacco Control Act 2006* by determining the proportion of retailers who are willing to sell cigarettes to children.

While the 2015 results show very positive improvements in levels of compliance, several new priority areas for future education and targeting have been identified to help further improve retailers' compliance with the Act.

## Tobacco Control Branch Compliance





## Representing health on a Port Hedland Taskforce

By Mirella Goetzmann

Senior officers from the Directorate are key members on a Taskforce reporting to the Premier, which has been convened to manage the dust and noise issues in Port Hedland. The Taskforce is chaired by the Department of State Development and includes representatives from the minerals resource industry.

The role of the Taskforce is to provide a comprehensive and integrated dust and noise management framework that supports the responsible and sustained development of Port Hedland for its residents, the Port and its users. In the past 12 months, officers have been involved in assessing the potential for dust to impact on public health in both Port and South Hedland, and reporting to the Taskforce on those findings.

## Managing the ban on sun tanning units

By John Perrett and Radiation Health

In line with the Government's decision to ban the commercial use of sun tanning units, we coordinated the voluntary surrender of machines. The Directorate was responsible for arranging the removal and disposal of 55 machines and compensation in the order of \$285,000 paid to the affected owners.

The overwhelming majority of the commercial units were located within the



Tanning unit being disposed of as part of the ban

Perth metropolitan area with only four in regional centres. The continued use of sun tanning units by commercial operators will incur a penalty under the *Radiation Safety Act 1975*. An amendment to the Radiation Safety (General) Regulations was gazetted, which states: “*The prohibition on the commercial use of sun tanning units is to commence on 1 January 2016.*”

## Coconut milk recall

By John Coles

In January 2014 there was a recall of a coconut drink due to the presence of an undeclared allergen (milk). A further recall of another coconut milk-based drink occurred in August 2015; both products were imported. These recalls, in addition to a death and a case here in WA of anaphylaxis, prompted further action by State and Territory authorities across Australia to investigate other similar coconut drinks on sale.

The Food Unit in liaising with FSANZ, other jurisdictions, and the Commonwealth's Department of Agriculture and Water Resources gathered intelligence, enabling the identification of possible importers of coconut milk products to then co-ordinate a response for WA, with the assistance of local governments.

Further testing by WA and other State and Territory authorities detected undeclared milk in coconut powder, resulting in further recalls. Recalls were initiated by food businesses located in four states - WA, NSW, VIC and QLD. In total, 27 recalls of food products were associated with undeclared milk allergens in coconut/coconut milk foods, and not declared on the label.

## Salmonella outbreaks in eggs

By John Coles

The Food Unit investigated food businesses implicated in a community-wide outbreak of [Salmonella Typhimurium](#). The investigations indicated that the handling and processing of eggs and egg-based products as a

causative factor (i.e. the cooking method used for eggs within a specific food business), rather than being associated with an egg brand's distribution network.

The Food Unit is now working with Local Government to ensure egg food businesses comply with relevant legislative requirements, and that they have processes and practices in place to control Salmonella Typhimurium on farm and in production.

## **Biotoxin survey of shellfish in WA**

**By Tracey Stamp**

In 2014 the Department commissioned Curtin University Centre of Excellence for Science, Seafood and Health (CESSH) to review the Tasmanian paralytic shellfish toxin (PST) event and SafeFish recommendations to determine an interim risk management approach for WA. The report concluded that there is a low putative biotoxin risk in WA's commercially harvested areas, however the report acknowledged that there was insufficient biotoxin data to inform a detailed risk analysis.

As a result, the Food Unit initiated a biotoxin study in collaboration with the shellfish industry that involved routine monitoring for biotoxins in mussels and oysters. Following the survey and recent scientific evidence it

was concluded that there must be routine monthly testing for biotoxins in commercial bivalve mollusc (e.g. oyster and mussel) harvesting areas. Additionally, the survey enabled the current [Marine Biotoxin Monitoring and Management Plan](#) to be reviewed and updated accordingly.

## **Hepatitis A contamination in frozen berries** By John Coles

Between October 2015 and early January 2016, several acquired cases of hepatitis A were confirmed in WA. All cases had eaten a variety of different frozen berry types, from a number of brands during their incubation period.

The Bi-National Food Safety Network worked with the Food Standards Australia New Zealand (FSANZ), State and Territory jurisdictions, the Commonwealth Department of Agriculture and Water Resources to determine the source of contamination.

The Food Unit worked in partnership with eight local governments within the metropolitan area to investigate the WA importers of frozen berries to determine the source of the imported berries and whether they were connected with the early 2015 outbreak in Australia.



Mussel lines in Cockburn Sound where samples were collected as part of the biotoxin study



## Raw and fermented foods

By Enita Ostojic

The consumption of raw and fermented food is becoming increasingly popular worldwide. They are both marketed as a 'power house', foods, providing a high level of antioxidants and probiotics. Apart from being associated with ambiguous health claims, in some cases, these products have been linked to different food recalls due to the presence of Salmonella and Listeria.

In addition to raw, unprocessed food consumption, an emerging trend is fermented food, marketed as 'preserved tradition'. Apart from preserving 'tradition', sometimes what also can be preserved in these types of foods is Clostridium botulinum, which may grow and produce a harmful neurotoxin. The Food Unit and enforcement agencies are keeping a watchful eye on the sale and production of these foods across WA.

## Fruit and vegetable pesticide residue survey

By Kim Unwin

The Department published the "[Monitoring Agricultural Chemical Residue Levels in Fresh Fruit and Vegetables](#)" report which details the outcomes of fruit and vegetable surveys conducted in 2009, 2011, 2013 and 2015. The surveys have shown minimal risk from agricultural chemical residues in our local produce. As part of Government and industry efforts to safeguard agriculture produce within WA, the Directorate monitors chemical residues in fresh fruit and vegetables as part of various other food surveys conducted under the [Western Australian Food Monitoring Program](#).

As part of the study, monitoring was conducted with the assistance of EHOs at 57 local government authorities and industry bodies, who conduct sampling and investigation activities.



Government of Western Australia  
Department of Health

WESTERN AUSTRALIAN FOOD MONITORING PROGRAM

## Monitoring Agricultural Chemical Residue Levels in Fresh Fruit and Vegetables

This report provides the summary of results of surveys conducted in 2009, 2011, 2013 and 2015.



Updated 18 February 2016

[health.wa.gov.au](http://health.wa.gov.au)

# 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 issues.

## Fight the bite campaign launch

By Abbey Potter

*Fight the Bite* is a dynamic and visually effective communication campaign that partners with and empowers Local Governments to increase awareness of mosquitoes and mosquito-borne disease in Western Australia. The key health messages of the campaign encourage individuals to cover up in long sleeved clothing, apply an effective repellent and clean up potential mosquito breeding sites around the home and holiday accommodation.

The campaign was launched by the (then) Minister for Health Dr Kim Hames in the Peel region in September 2015 and by the Department of Health and Shire of Broome in the Kimberley region in February 2016. Over 20 additional LGAs are working with

campaign and raise awareness of mosquitoes and mosquito-borne disease in Western Australia.



Photo: The Medical Entomology team welcoming guests to the launch. Above photo: Dr Mike Lindsay Managing Scientist and the Hon. Dr Kim Hames MLA Minister for Health at the launch of the *Fight the Bite* campaign.



# ★ FIGHT *the* BITE ★



**PROTECT  
YOURSELF**

*against*

**DISEASE-CARRYING  
MOSQUITOES**



★ **COVER UP. REPEL. CLEAN UP.** ★



**WEAR LONG,  
LOOSE-FITTING,  
CLOTHING.**



**USE INSECT  
REPELLENT.**



**REMOVE THE  
WATER THEY  
BREED IN.**

Mosquitoes can spread serious and potentially deadly diseases.  
For more information contact the Department of Health visit:

[www.healthywa.wa.gov.au](http://www.healthywa.wa.gov.au) / **FIGHTTHEBITE**



Government of Western Australia  
Department of Health

This is an initiative of the Government of South Australia. This brochure has been reprinted with permission from SA Health.



## **Destruction of seized tobacco property**

**By Paul Iriks**

As part of our responsibilities under the Tobacco Products Control Act, staff conveyed a large quantity of seized and purchased tobacco products to Suez Environment in Welshpool to be destroyed.

The haul of contraband included cigarettes which had been purchased in controlled surveys and controlled purchase operations over the past few years. A large amount of seized chewing tobacco was also included. A total of 43 kilograms of seized products was incinerated at the Welshpool premises.

At the same time, 57 kilograms of seized electronic cigarettes (which are illegal to sell in Western Australia) were destroyed.

## **New Brockway Road lab**

**By Amber Douglas**

A new Medical Entomology lab was established at the Directorate's Brockway Road site. The lab is now the base for the State's mosquito and arbovirus surveillance program. It will also be used for research projects to assist local government with health-driven mosquito management programs in high risk areas of Western Australia.

The lab is equipped with ultra-cold (-80°) freezers to allow storage and testing of mosquito samples, including mosquitoes infected with viruses such as Ross River virus.



New Lab at the Brockway Road site, Mt Claremont.

## **Launching the mosquito monitoring app**

**By Andrew Jardine**

We launched the [Atlas of Environmental Health](#), a new electronic program designed to make mosquito management and surveillance easier for local governments.

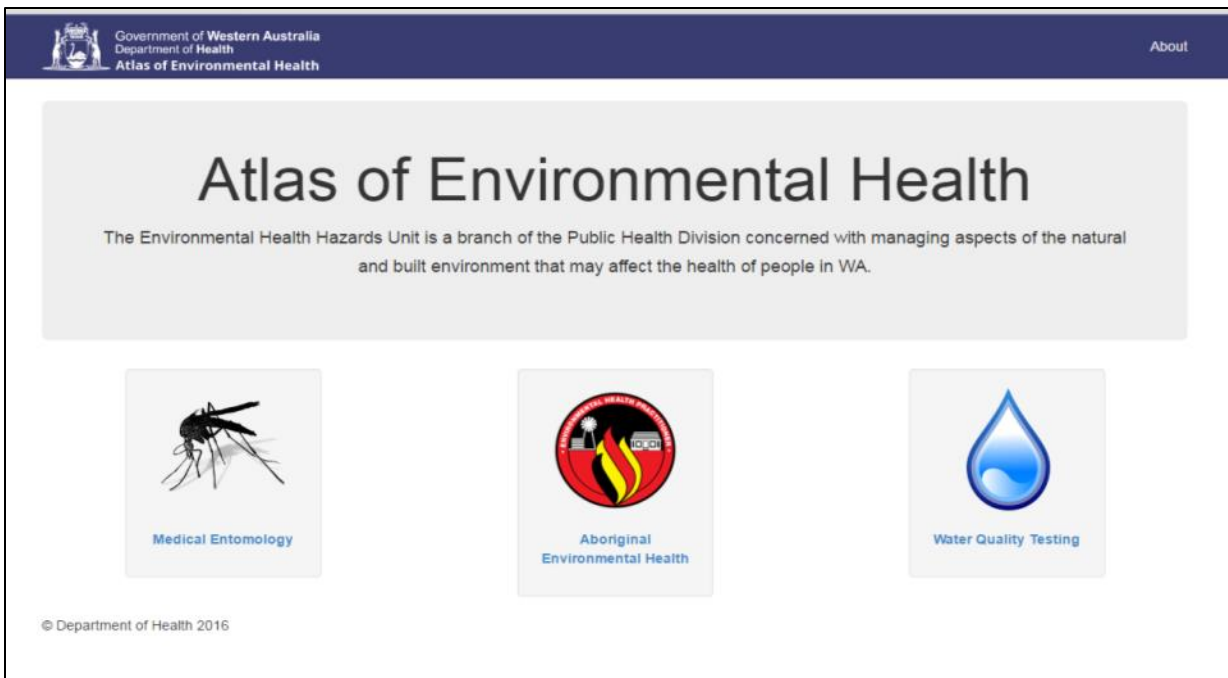
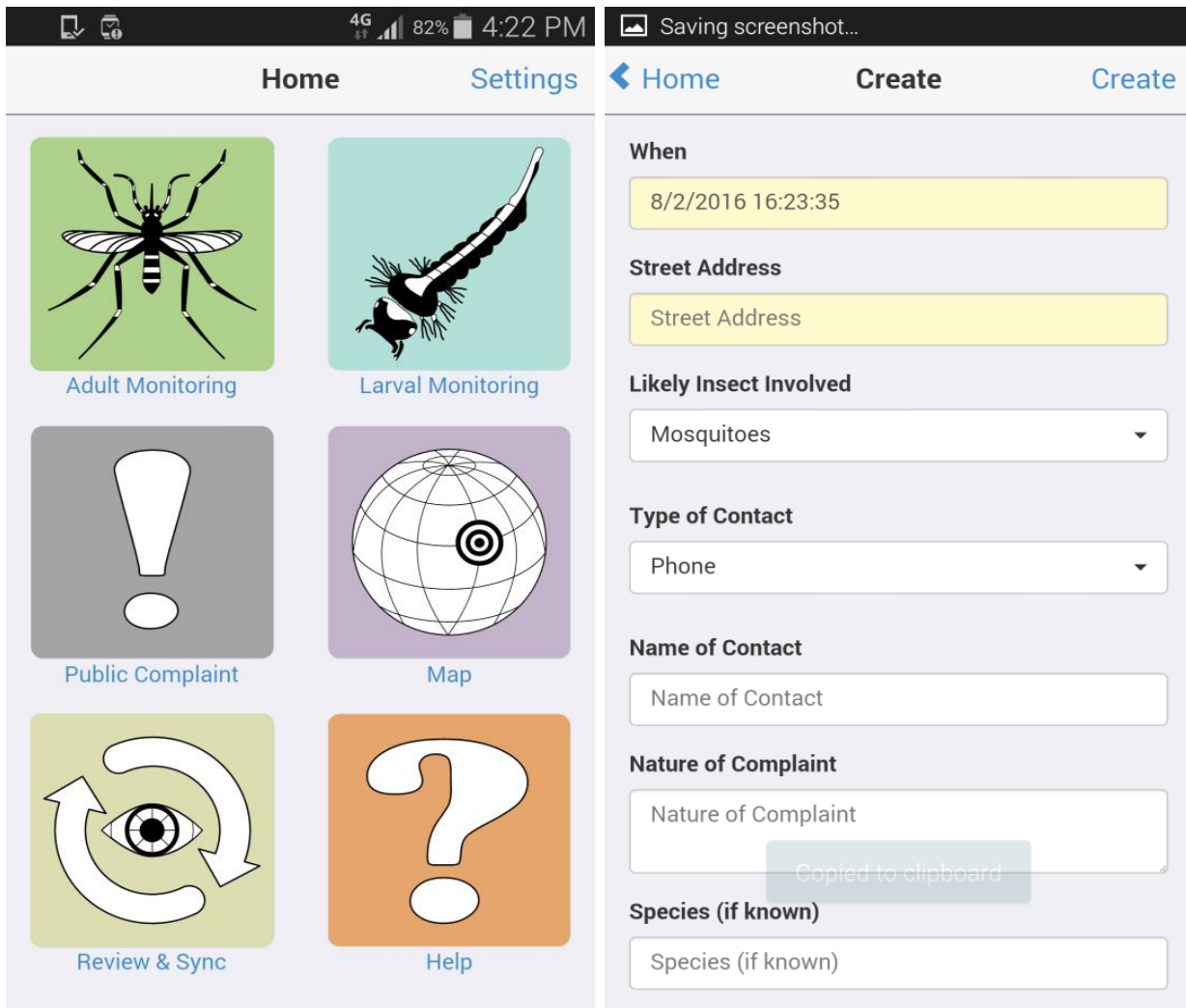
The Atlas has three components including:

- The [Atlas of Environmental Health website](#) which has data entry forms, reports and a field guide,
- The [mobile tool](#), for remote offline data entry, and
- The web based [help manuals](#).

The mobile app allows EHOs to undertake adult and larval mosquito monitoring (as well as to lodge public complaints) in the field, even when out of mobile reception. The whole app is designed to be a useful addition to the EHO's day, where they can lodge records from field sites. It has been developed in such a way that one EHO can set the traps in the evening, synchronise the mobile tool, and another EHO can synchronise the next morning, and then go and collect the deployed traps afterwards.

The web site component replicates the forms in the mobile tool and allows for on-line entry of the same data. In addition, we've added a field guide into the web site so that there is a solid reference base for the EHOs to use to learn more about the mosquitoes in their area.

This project has been a collaboration between the Medical Entomology team, Gaia Resources and Local Governments officers across Western Australia.



## Mobile food vans database

By Aaron Lim

Food Unit staff have been working closely with local government and industry representatives to address administrative and compliance challenges relating to the management of temporary and mobile food vans. Such businesses, by their nature, trade in many different locations including markets, festivals and concerts. This can make it difficult for local governments to administer the Food Act.

The Food Unit is exploring the development of a centralised database that will streamline food safety management for temporary and mobile food businesses. Such a register could enable local governments to quickly access administrative and compliance information relating to temporary and mobile food businesses.

## Aboriginal Environmental Health database

By Robert Mullane

The Aboriginal Environmental Health Database went live on the newly launched [Environmental Health Atlas website](#). The online database is used to record activities associated with service agreements funded by the Directorate. This enables our team to get an understanding of the wide range of services that are being delivered to communities. Additional modules will be added to include the ability to create management reports enabling staff and organisations to see how much work has been done and in which areas of environmental health.

## Decision made on emergency plumbing repairs

By Jenny Logan

The Directorate worked with the Department of Commerce to resolve issues surrounding

long needed amendments to the Plumbers Licensing and Plumbing Standards Regulation 2000 to allow qualified environmental health workers to carry out specified emergency plumbing work in remote Aboriginal communities.

A [decision paper](#) outlined the need for the reforms, and the Minister for Commerce has since given approval for amendments to be made.

## Aboriginal environmental health training Broker Project

By Jenny Logan

In response to the challenges around providing training and professional development opportunities for our wide-spread workforce, the Directorate has recently entered into a partnership with [Bega Garnbirringu Health Service](#) (BGHS) and provided a grant to establish a pilot State-wide Aboriginal Environmental Health Training Broker service.

We asked BGHS to establish and trial a Training Broker service to support our existing environmental health workforce to help ensure that they can obtain local training and education that addresses their needs for relevant skills and knowledge so they can carry out their important work.

The Broker project will provide a coordinated State-wide approach to ensure that all contracted environmental health agencies and their environmental health staff have the same opportunity to obtain the necessary work related skills – both accredited and skills based non-accredited training. Community members and other health staff will be able to access the training being provided. A Steering Committee will be put in place to help guide the Broker project.



Communication and professional development of the environmental health workforce and industry is a big part of our work. We make sure we get involved in every opportunity to promote good environmental health practices.

## Mosquito management course

By Andrew Jardine

Medical Entomology recently organised two Mosquito Management Courses for Local Government and other mosquito management professionals. The biennial five day live in Mandurah Mosquito Management Course was held from 21-25 September 2015 and was attended by 54 Environmental Health Officers, private consultants, military personnel and State Government employees from across Australia and New Zealand.

A second three day regional short course was hosted by the City of Albany from 24-26

February 2016 and focused on mosquito management issues in the Great Southern region. Both courses covered theoretical and practical components of mosquito management and provided participants with the knowledge and skills to implement a mosquito management program in their own jurisdictions.

Participants gained hands-on experience during demonstrations on surveillance and control equipment, and field site visits to collect mosquito larvae and adults. The collected specimens were then used during sessions on mosquito identification.



Mosquito management course held in Mandurah



Mosquito identification sessions hosted in Albany.



## Water workshops By Sara Gilbertson

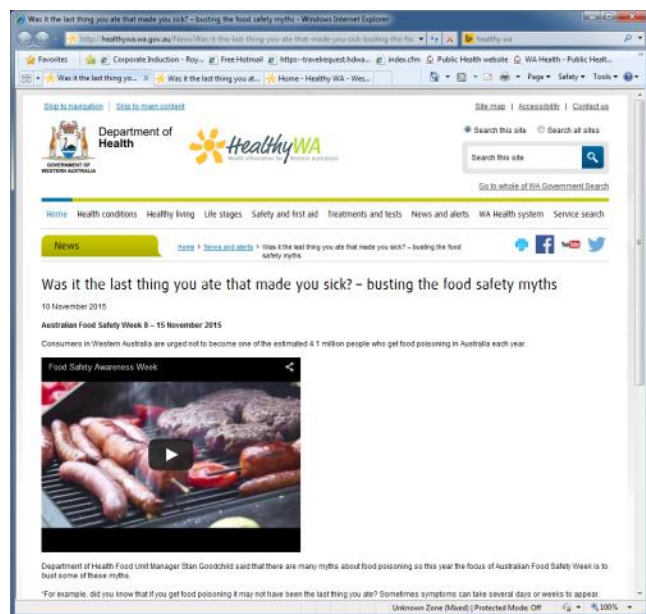
Water Unit staff ran one day training sessions for EHOs based in the South West (Busselton), Great Southern (Albany) and Peel (Mandurah) areas, as well as the metropolitan area.

Sessions were tailored to the interests of particular regions. Topics covered included drinking water, environmental waters, aquatic facilities, recycled water, wastewater management and the site code system. We were very pleased to be able to discuss water issues with 70 EHOs, representing 39 local governments across WA.

## Food safety week 2015

By Tracey Stamp and Aaron Lim

The Food Unit hosted a series of seminars on the *Food Act 2008* (the Food Act) aimed at



authorised officers, food industry and public health groups as part of Food Safety Week during 8 to 15 November 2015.

Regional seminars included information on labelling, the review of the Food Act and the regulatory food safety auditing framework.

The seminar on Food Labelling was presented by a Food Standards Australia New Zealand expert and was well received by all delegates. Australian Food Safety Week is an annual nationwide food safety education campaign. The theme this year was '*Did you know? (busting the food safety myths)*'.

The Food Unit also promoted food safety and dispelled some of the food safety myths through media releases, radio interviews and [videos](#).

## Asbestos Awareness Week 2015

By John Howell

The Directorate had a busy and productive Asbestos Awareness Week. Instead of repeating the successful asbestos seminar for EHOs held previously, we hosted public





information seminars in conjunction with the City of Stirling, supported by the Cities of Bayswater and Vincent, WorkSafe, the Cancer Council and Asbestos Diseases Society.

This included presentations on asbestos risk, identification, management and local asbestos issues, followed by a panel question and answer sessions, and one-on-one discussions at organisation booths.



Dr Peter Franklin talks about the importance of asbestos awareness in the community.

## Asbestos review workshop

By John Howell

As part of the review of the *Health (Asbestos) Regulations 1992*, and a proposed Code of Practice, we organised a workshop involving Local Government EHOs and other interest groups.

The workshop provided the opportunity to discuss the content and issues related to the Code and regulatory approach being taken. That input plus comment from a program for public comment was used to update the associated regulatory documents.

## Fireworks and pyrotechnics

By Jaala Downes

One of several guest presenters at our regular Outdoor Festivals Forum in October 2015 was Mr Iain Dainty, Manager of Dangerous Goods from the Department of

Mines and Petroleum (DMP). Mr Dainty provided an excellent overview of fireworks and pyrotechnics at events.

The DMP has a small team managing fireworks, able to attend around 40 displays each year. This means that EHOs are required to be the 'boots on the ground' for the remaining 140 displays around WA.

## Integrating occupational hygiene skills into environmental health issues

By Lindy Nield and Pierina Otness

Toxicology Officers attended the 33<sup>rd</sup> Annual Conference and Exhibition of Australian Institute of Occupational Hygienists (AIOH). The Conference was held at the Crown Perth Convention Centre from 5 to 9 December 2015.

Pierina Otness, presented a paper entitled '*Opportunities for Integration of Occupational Hygiene Skills to Assess and Manage Public Health Risks*'. Pierina provided an outline of how occupational hygienists can enhance public and environmental health risk assessments through application of their distinctive skills and experience in understanding potential for health impacts



Left to right: Lindy Nield and Pierina Otness from our Toxicology Unit.



from well-designed exposure monitoring and assessment.

Lindy Neild and Pierina also co-authored a presentation entitled '*Applying guidelines to protect health and manage community concerns. It's a balancing act!*'

## Tjuntjuntjara dog health course

By Claire Comrie

We hosted a dog health course in Tjuntjuntjara, one of the most remote Aboriginal communities in Australia. It is located in the Great Victoria Desert (inside the nature reserve), over 700 kilometres east of Kalgoorlie. There are over 120 people living in Tjuntjuntjara and they have a very close and meaningful relationship with their dogs.

Twelve participants attended from Tjuntjuntjara, Warburton and Kalgoorlie attending, along with Professor Ian Robertson from Murdoch University.

Participants learnt about the internal and external parasites that affect dog health, including zoonotic diseases (those that transfer from dogs to humans), the correct application of anti-parasitic medications, birth control measures for dogs, and the humane euthanasia of sick, aggressive or unwanted dogs. The participants also learn how to correctly restrain dogs and administer the drugs in a manner safe for both the dog and



Pila Nguru people have a significant spiritual link to their dogs.

environmental health worker.

The focus of community education will now pivot to reducing the overall number of dogs, as they are living longer and healthier lives.

## International Asbestos Awareness and Management Conference 2015

By Dave Peckitt

The Office of Asbestos Safety and Eradication Agency (ASEA) held its second international asbestos conference in Brisbane on 22 to 24 November 2015. Dave Peckitt from our team attended.

The theme for the conference was *best practice and international leadership in managing risks and preventing exposure to asbestos*. Over 360 delegates 'converged' on the Brisbane Convention and Exhibition Centre to hear international key note speakers and local experts talk about asbestos from various perspectives.

Topics included global burden of asbestos, looking at the 'third wave', asbestos management in UK, eradicating Mr Fluffy from Canberra homes, threat of asbestos imports, asbestos identification, best practice case studies and managing asbestos following natural disasters.



Dave Peckitt attended the international asbestos conference

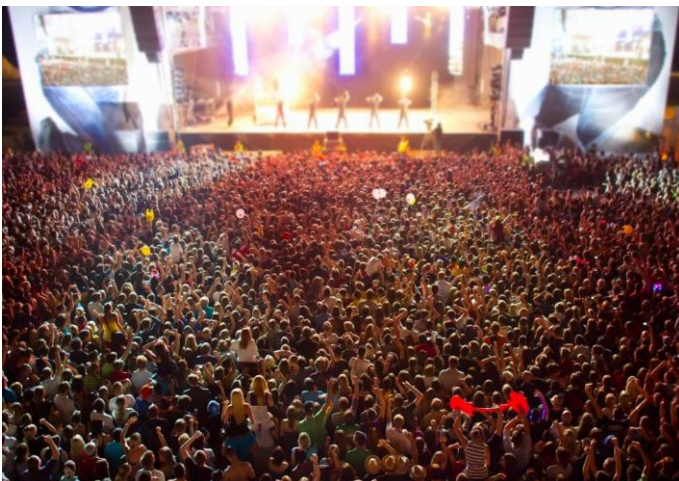
## Crowd science and risk analysis workshop

By Jaala Downes

In association with the City of Perth and e Response Crowd Training we arranged for a 3 day Risk Analysis Workshop to be conducted by experienced international crowd management experts Andy Hollinson, Robbie Naish and Jim Fidler.

The course aimed to improve awareness of how individuals and crowds react, and behave, in places of public assembly and explore the application of modelling techniques and tools to enhance public safety.

During the course delegates were taken through their own site/case related issues and by the end of the three day workshop were able to manage and plan for crowd safety at large scale events. They were also able to explore the safety implications for designing and managing such spaces using appropriate modelling tools and will be able to apply risk management techniques to develop of a robust crowd management plan.



## Stage barrier workshop

By Jaala Downes

We hosted a stage barrier workshop in partnership with Jim Fidler of Secure Events and Assets, and e-response training, related to issues associated with crowd barriers. Stage barriers are a critical part of concert and festival events.

The course addressed concerns about how and where barriers have been deployed and managed in WA.

## Egg and salmonella workshop

By John Coles

The Food Unit supported the University of Adelaide to provide a one day pilot workshop with the aim to initiate discussion between the egg industry and regulatory authorities on achievable *Salmonella* intervention strategies.

The workshop discussed the findings of:

- *Salmonella* shedding on cage and free range farms at various stages of laying
- Egg washing and survival of various *Salmonella* serovars on egg shell and egg internal contents of washed and unwashed eggs
- Effects of egg shell quality on trans shell *Salmonella* penetration at various temperatures
- Invasive ability of multiple *Salmonella* serovars isolated from the egg industry and their genomic comparison
- Vertical transmission of *Salmonella* Typhimurium in laying hens
- Dealing with *Salmonella* on egg farms

## Trachoma education and training at Warakurna

By Jennie Logan and Robert Mullane

Our Perth based Aboriginal environmental health team, along with nurses from Goldfields Population Health and EHOs from

the City of Kalgoorlie travelled to Warakurna in the Ngaanyatjarra Lands to provide training to locally based Aboriginal Environmental Health Practitioners and other Health Service staff on trachoma prevention, immunization and Vaccine Care and other environmental health subjects such as household hygiene and healthy living practices



The team of health professionals who participated in the Trachoma education training

## Mobile food vendor workshop

By Aaron Lim

As part of a project managing temporary and mobile food businesses and food prepared in residential environments, the Food Unit organised two consultation sessions for all *Food Act 2008* authorised officers on the 4<sup>th</sup> and 16<sup>th</sup> of May 2016.

The main focus of the consultation sessions was to review guidance materials and approved forms relating to Part 9 – Registration of the *Food Act 2008*, and review the Risk Profiling Guideline to assist authorised officers to assess applications.

Feedback from the two consultation sessions identified that authorised officers were able to reach in-principle agreement on moving towards a more consistent model of working, including the implementation of a state wide register for temporary and mobile food businesses. The Food Unit will continue to

drive the project on consistency in managing temporary and mobile food businesses and food prepared in residential environments.

## WA Mobile Food Vendor Association Meeting

By Aaron Lim

The Food Unit in partnership with local government representatives met with the WA Mobile Food Vendor Association (WMFVA), a newly formed industry group, to discuss a range of issues affecting the growing mobile food industry. The meeting operated as a discussion forum to enable open communication across the three stakeholder groups. Feedback was positive and several outcomes are being addressed which will involve future collaboration between all parties.

## International Sustainable Water Management Conference

By Richard Theobald

Mr Richard Theobald, Manager of the Water Unit, and Dr Clemencia Rodriguez of the Water Unit presented at the *International Sustainable Water Management Conference*, held in Perth.

The meeting discussed new and innovative methods of freshwater and wastewater management for human settlements, including treatment and reuse. Richard discussed how sustained governance improved health related outcomes in remote aboriginal communities. Clemencia spoke on the Department's regulatory approach for reliable and safe urban water supply through the Perth Groundwater Replenishment Scheme. Clemencia noted that conference presentations are a valuable way of engaging with industry.



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 Survey of Knowledge, Attitudes, and Practices in Relation to Mosquitoes and Mosquito-Borne Disease in Western Australia](#)**

**Potter A, Jardine A, Neville PJ. 2016. *Frontiers in Public Health*. 4:32.**

On average, more than 1,000 individuals will acquire a mosquito-borne disease in Western Australia (WA) each year. Knowledge, attitudes, and practices (KAP) in relation to mosquitoes and mosquito-borne disease have not yet been investigated within Australia. A randomized telephone survey of 2,500 households across 12 regions in WA was undertaken between February and May 2014. The aim of the survey was to obtain baseline KAP data surrounding mosquitoes and mosquito-borne diseases in different regions of WA, across a range of age groups and between males and females. The results of this survey indicate that the majority of respondents are aware of the potential for mosquitoes in WA to transmit Ross River virus, while awareness of other endemic mosquito-borne diseases remains limited. Common misconceptions exist in relation to exotic mosquito-borne diseases, with respondents incorrectly identifying malaria and dengue as endemic diseases in WA. The survey also highlighted a range of important issues, such as limited awareness of the potential for backyard breeding in domestic containers, occupational exposure to mosquitoes in regions with a large employment base in the mining and resources sector, increased exposure to mosquitoes as a result of participation in outdoor recreational activities in the north of the State, and reduced

awareness of mosquito-borne disease in individuals aged 18-34 years. The results of this study will be used to inform the development of a new communication strategy by the Department of Health, to further raise awareness of mosquito-borne disease in WA.

**[Investigation of the First Case of Dengue Virus Infection Acquired in Western Australia in Seven Decades: Evidence of Importation of Infected Mosquitoes?](#)**

**Lindsay MDA, Jardine A, Giele C, Armstrong P, McCarthy S, Whittle A, Pal N, Lyttle H, Harrington S, Nicholson J, Smith D. 2015. *PLOS Neglected Tropical Diseases*. 9(9):e0004114.**

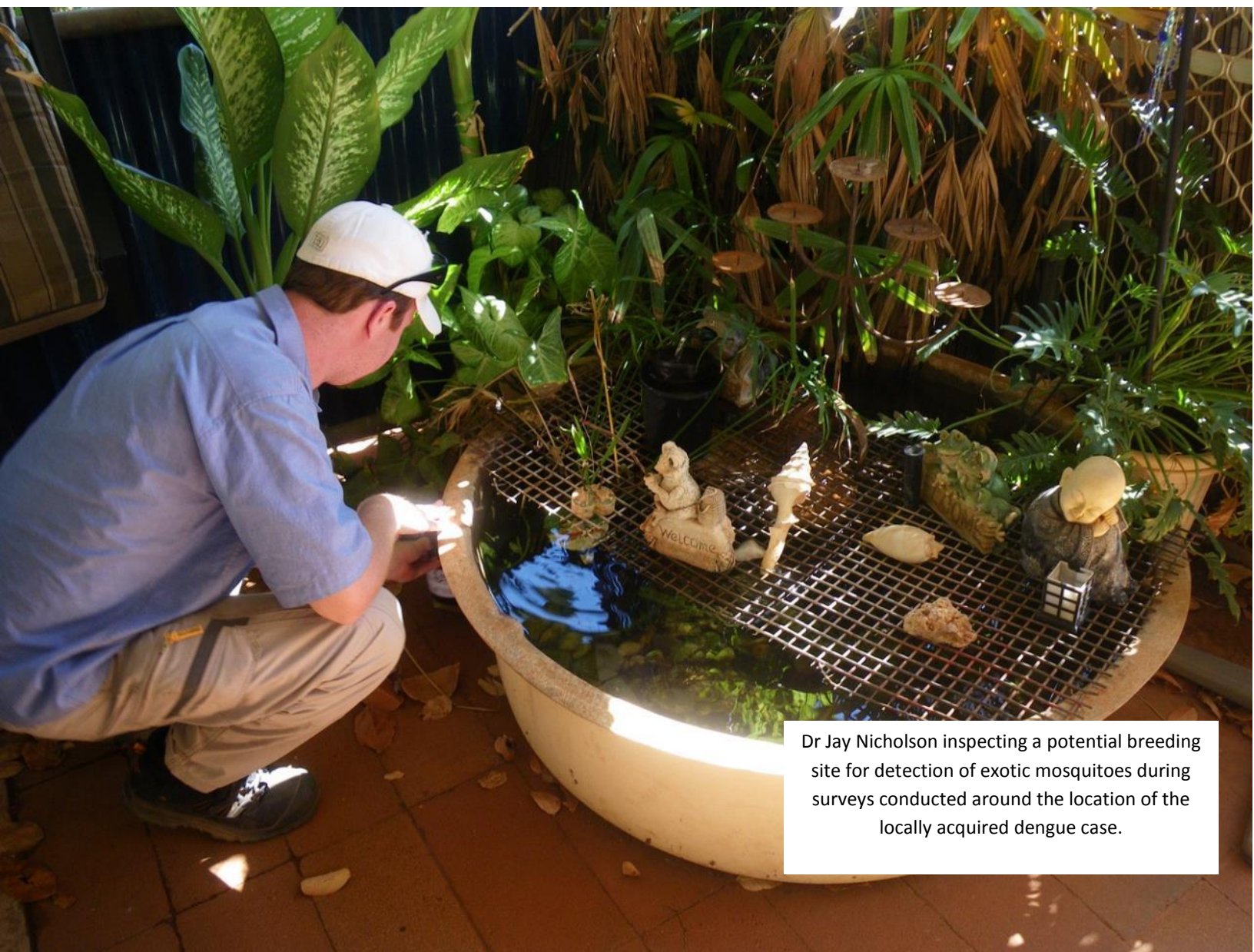
In October 2013, a locally-acquired case of dengue virus (DENV) infection was reported in Western Australia (WA) where local dengue transmission has not occurred for over 70 years. Laboratory testing confirmed recent DENV infection and the case demonstrated a clinically compatible illness. The infection was most likely acquired in the Pilbara region in the northwest of WA. Follow up investigations did not detect any other locally-acquired dengue cases or any known dengue vector species in the local region, despite intensive adult and larval mosquito surveillance, both immediately after the case was notified in October 2013 and after the start of the wet season in January 2014. The mechanism of infection with DENV in this case cannot be confirmed. However, it most likely followed a bite from a single infected mosquito vector that was transiently introduced into the Pilbara region but failed to establish a local breeding population. This case highlights the public

health importance of maintaining surveillance efforts to ensure that any incursions of dengue vectors into WA are promptly identified and do not become established, particularly given the large numbers of viraemic dengue fever cases imported into WA by travellers returning from dengue-endemic regions

### [Review of the Regulatory Requirements for the Maintenance of Aerobic Treatment Units and Greywater Treatment Systems in Western Australia](#)

Water Unit staff Natalia Shishkina, Richard Theobald, Clemencia Rodriguez and, former employee, Tessa McGrath, released a paper after a review of the maintenance

requirements for aerated systems producing secondary level treated effluent. The review and industry survey was completed to identify current gaps and to assist in the development of the planned *Code of Practice for Onsite Sewage Management*. Their research found that although the current guidelines are generally satisfactory, there are a number of areas which could be improved. The paper, including recommendations for industry and regulators, has been published in the *Journal of Water Resources and Protection*, an open access peer review paper.



Dr Jay Nicholson inspecting a potential breeding site for detection of exotic mosquitoes during surveys conducted around the location of the locally acquired dengue case.



## [Public Concern about the Sale of High-Caffeine Drinks to Children 12 Years or Younger: An Australian Regulatory Perspective](#)

Christina Mary Pollard, Catrina Lisa McStay, and Xingqiong Meng, *BioMed Research International*, vol. 2015, Article ID 707149, 8 pages, 2015.  
[doi:10.1155/2015/707149](https://doi.org/10.1155/2015/707149)

**Background:** Dietary exposure to high caffeine is a health risk for children. Governments are considering measures to restrict the sale of formulated caffeinated beverages (FCB) to children. **Objectives.** To investigate community concern about sales of high-caffeine drinks to children among Western Australian adults and describe Australian and New Zealand regulatory processes regarding FCB. **Methods.** Data from the 2009 and 2012 Department of Health's Nutrition Monitoring Survey Series of 2,832 Western Australians aged 18–64 years was pooled with descriptive and ordinal logistic regression analysis performed. Current regulatory processes for FCB are reported. **Results.** Most (85%) participants were concerned about the sale of high-caffeine drinks to children; 77.4% were very concerned in 2012 compared to 66.5% in 2009,  $p < .008$ . Females and those living with children had higher concern (odds ratio (OR) 2.11; 95% confidence interval (CI) 1.44–3.10; OR 2.16; 95% CI 1.51–3.09, resp.,  $p < .001$ ). Concern increased with each year of age (OR 1.04; 95% CI 1.02, 1.05,  $p < .001$ ). **Conclusions.** Community concern regarding sale of high-caffeine energy drinks to children is high and increasing. Being female and living with children were associated with greater concern. These findings support the Australian and New Zealand regulatory controls of FCB,

including labelling, promotion, and advertising to children.

## **Effect of Rainfall Events on the Microbial Quality of Recreational Water in the Swan and Canning Rivers in Western Australia**

Maria Gunady\*, Jared Koutsoukos and Richard Theobald

**Abstract:** Rainfall events of 5mm and more have strongly been associated with elevated microbial levels in various sampling sites along the Swan and Canning rivers, Western Australia (WA) during five consecutive bathing seasons of November 2010 to April 2015. Elevated microbial levels in recreational water bodies may impose a health risk to bathers when water is ingested; respiratory, ear, eye, and skin infections can also be acquired from direct water contact activities such as swimming. In WA, compliance of water quality in recreational waters is primarily assessed according to microbial water quality assessment categories (MACs) based on the 95th percentile of enterococci counts with the use of Enterotester Template™. Results indicate that the number of enterococci in the water rises along with increasing volumes of rainfall. Enterococci levels between 201 to 500 MPN/100 ml are associated with rainfall ranging from 3 to 21 mm, enterococci values between 501 to 700 MPN/100 ml are associated with rainfall ranging from 9.4mm to 30mm, and elevated enterococci levels over 700 MPN/100 ml are associated with rainfall ranging from 12 to 35 mm. Elevated levels of enterococci in recreational water, result in the shift of MACs, to at least one category lower for most sites, and two categories lower to a few sites.

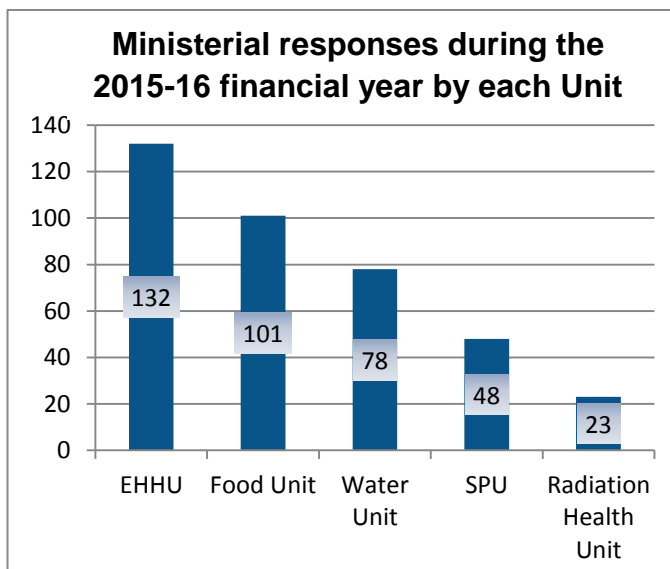


A large part of our work relates to enforcing legislative compliance requirements, which includes licensing, registration, approvals, permits, notification and assessment services for a range of activities. Various processes are in place, including auditing and compliance requirements to monitor industry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

A snapshot of some of our compliance obligations during the 2014-15 financial year is outlined below.

## Ministerials

We assisted the Minister for Health in responding to **382** written community environmental health concerns. This was 132 more responses than the previous year.



The most common topics requiring a response are outlined below.

Unit	Ministerial topics of most public concern
<b>Environmental Health Hazards</b>	Asbestos, air quality, noise and pollution
<b>Food Unit</b>	Food labelling
<b>Water Unit</b>	Fluoridation
<b>Science and Policy Unit</b>	Smoking laws
<b>Radiation Health Unit</b>	Solaria

## Ministerial briefing notes

As part of the parliamentary process, we provided **47** briefings to the Minister for Health when requested to update on topical environmental health issues. This was **5** less than the previous year.

## Contentious issues briefing notes

As part of the parliamentary process, we provided **39** contentious issue briefings to the Minister for Health when requested to update on topical environmental health issues. This was **30 more** than the previous year.

Common topics included:

1. Cloud 9 Smoke shop and accessories
2. Port Hedland Health Risk Assessment
3. Fluoridation of Drinking Water
4. Hydraulic Fracturing Health Risk Assessment
5. Public Health Bill 2014
6. Response to detections of exotic mosquitoes at Perth Airport
7. Electronic Cigarettes
8. Perfluorinated Chemicals
9. Extension of fluoridation of drinking water to six regional communities
10. Draft Government Sewerage Policy
11. WA Ban on Commercial Solaria
12. Elizabeth Quay Water Spray Park

## Cabinet comments

We responded to **6** urgent cabinet comments.

## Parliamentary questions

We responded to **26** parliamentary questions.

## Supplementary information questions

We responded to **2** supplementary information question.

## Freedom of information

We provided information for **11** freedom of information requests.

## Other useful stats

- **41** briefing notes to the Assistant Director General
- **44** letters drafted for Assistant Director General's signature
- **39** briefing notes to the Director General
- **35** letters drafted for Director General's signature
- **5** budget estimate briefings to the Minister for Health
- Director signed off on approx. **214** letters. This does not include mail merges to Local Government and comments to Development Assessment Panel (DAP) applications

## Media releases / interviews

We issued **13** media releases across the state to advise or remind the community of potential public health risks for which extra vigilance was required. These included:

1. Another one bites the dust in mosquito fight - 25/09/2015
2. Coconut milk, coconut juice drinks and coconut powder products recalled due to presence of undeclared dairy allergen - 28/10/2015
3. Amoebic Meningitis warning - 10/11/2015

4. Algal bloom warning for Wellstead Estuary in Bremer Bay - 08/12/2015
5. Be food safe, stay well this Christmas - 17/12/2015
6. Pool owners warned of disease rise - 21/12/2015
7. Stay safe and look after each other at summer events - 30/12/2015
8. Temporary closure of BHP Billiton Water Park - 22/02/2016
9. Clean bill of health for local produce - 14/03/2016
10. Mosquito-borne disease warning for the Kimberley region - 24/03/2016
11. Algal bloom warning for Upper Swan Estuary; All-clear for Kent St Weir and Canning River - 01/04/2016
12. All clear for the Upper Swan Estuary - 15/04/2016
13. Survey reveals fewer tobacco retailers are selling to minors - 05/05/2016

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 to monitor industry risks against appropriate health legislation.

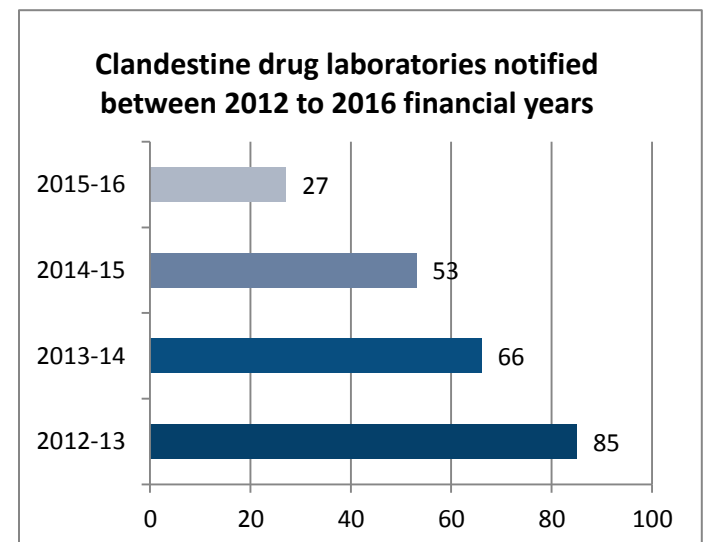
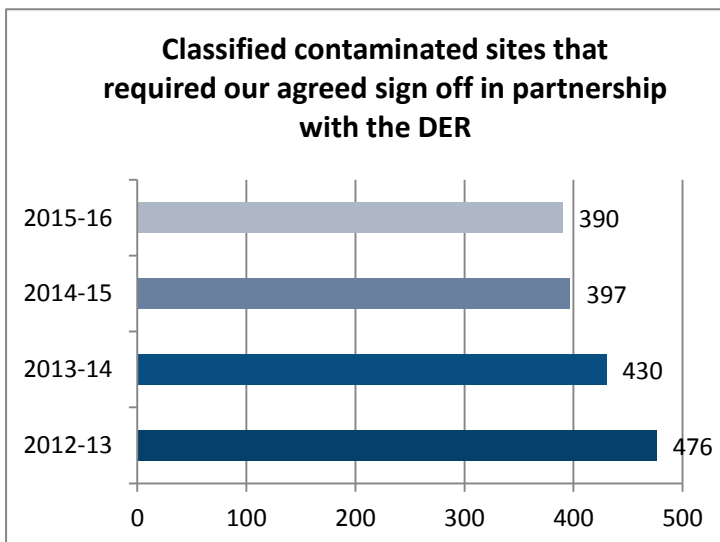
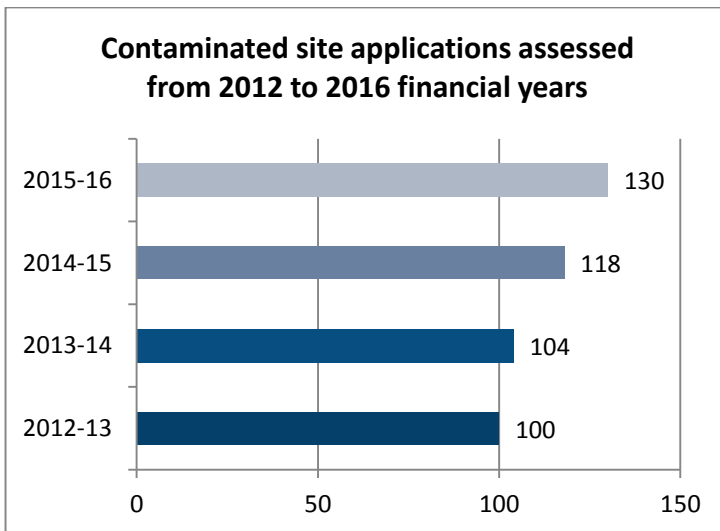
A snapshot of some of our compliance obligations during the financial year is outlined below.

## Environmental Health Hazards

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

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

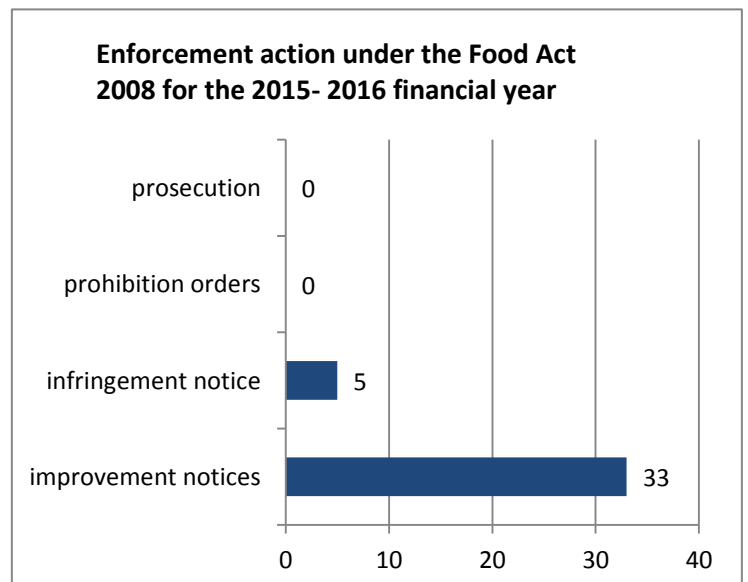
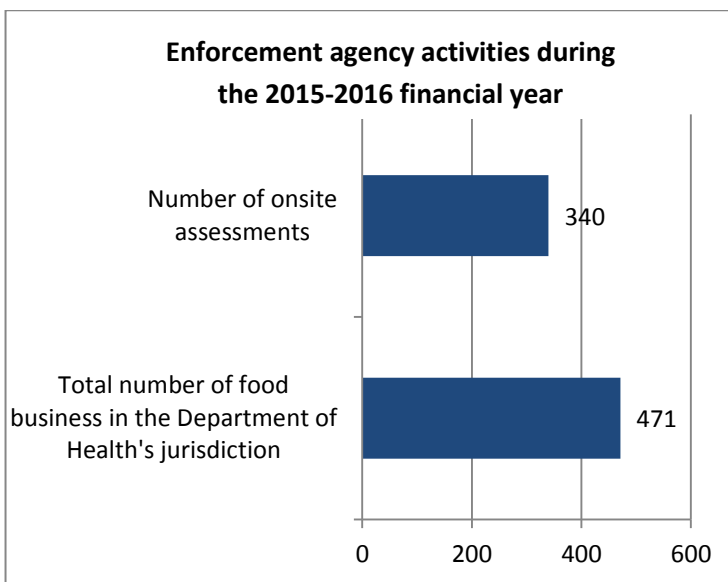
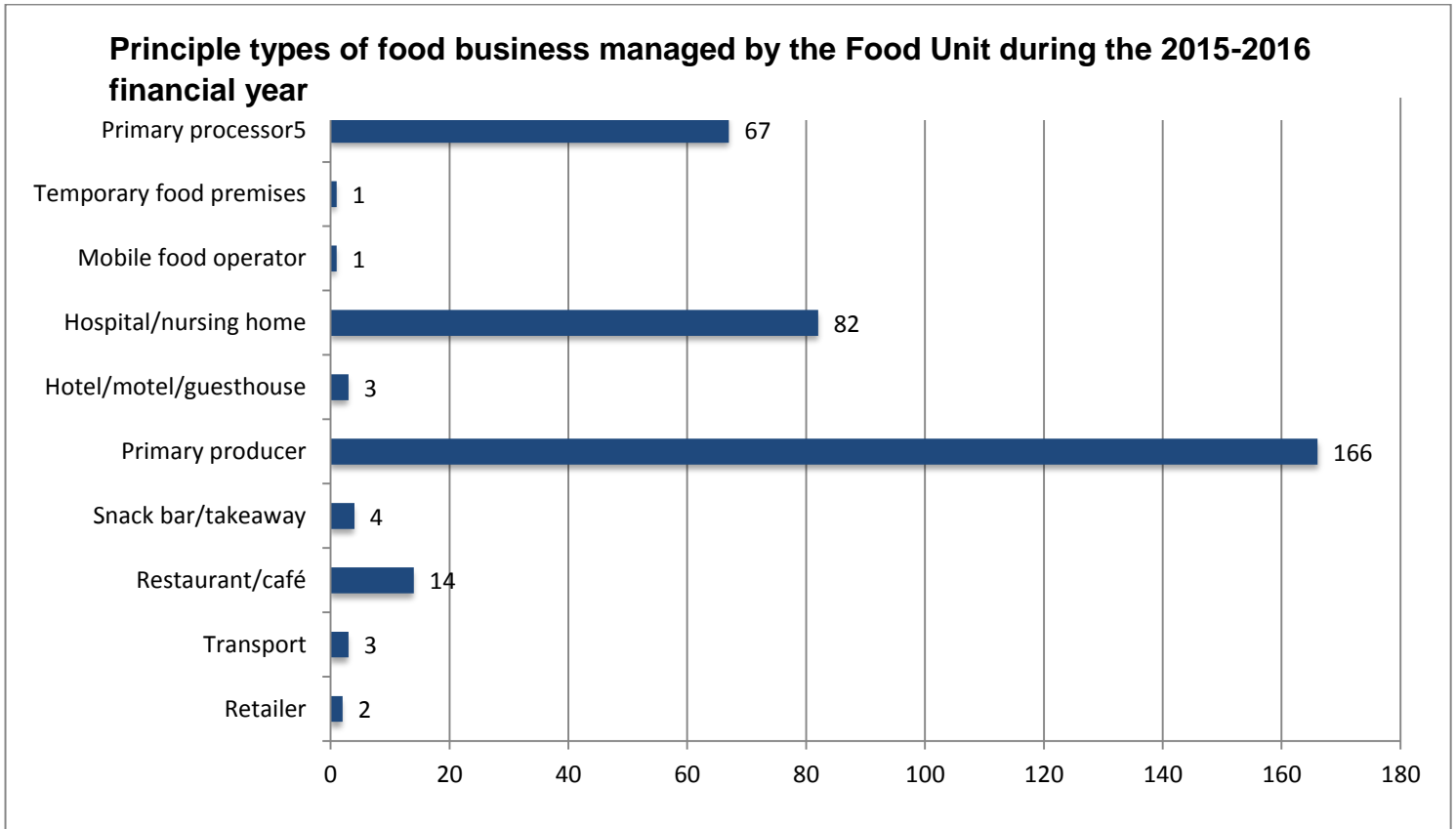
### Contaminated sites





## Food

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



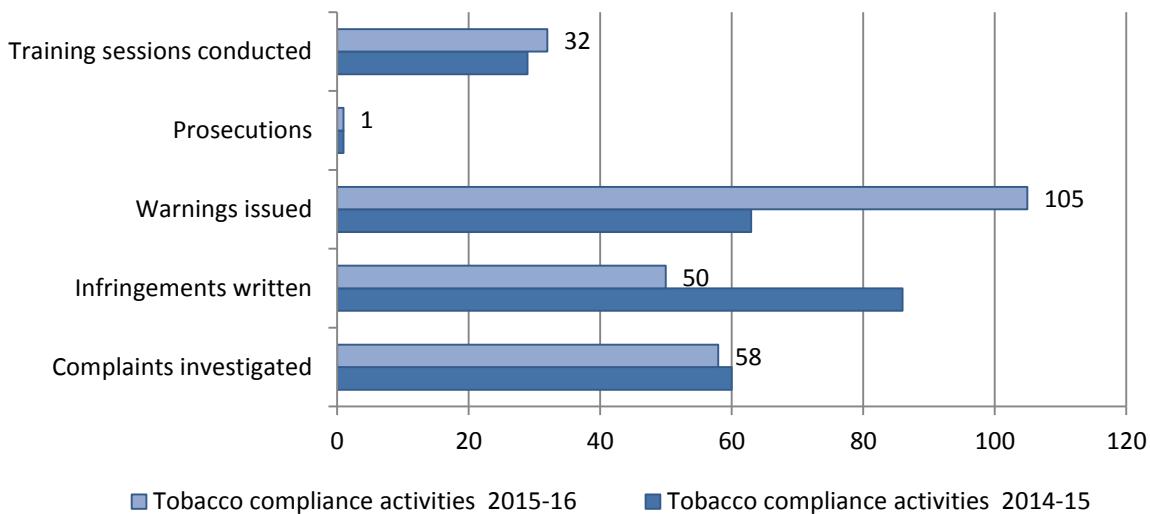
## Radiation Health

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.

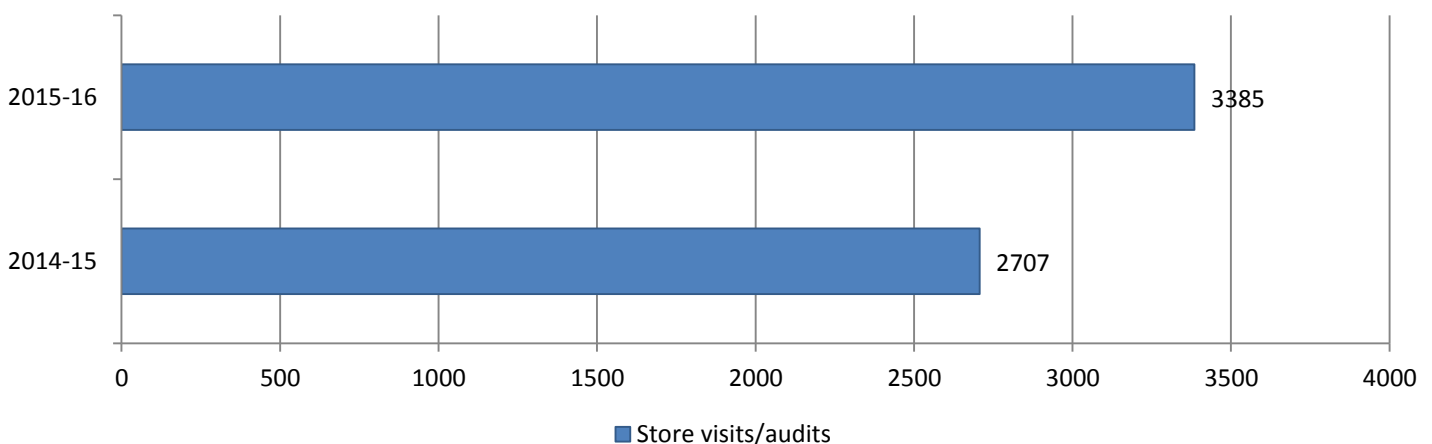
## Science and Policy

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 investigate complaints into matters such as sales of tobacco products to minors and carries out a range of enforcement activities including Controlled Purchase Operations.

**Tobacco compliance activities related to the *Tobacco Products Control Act 2006***

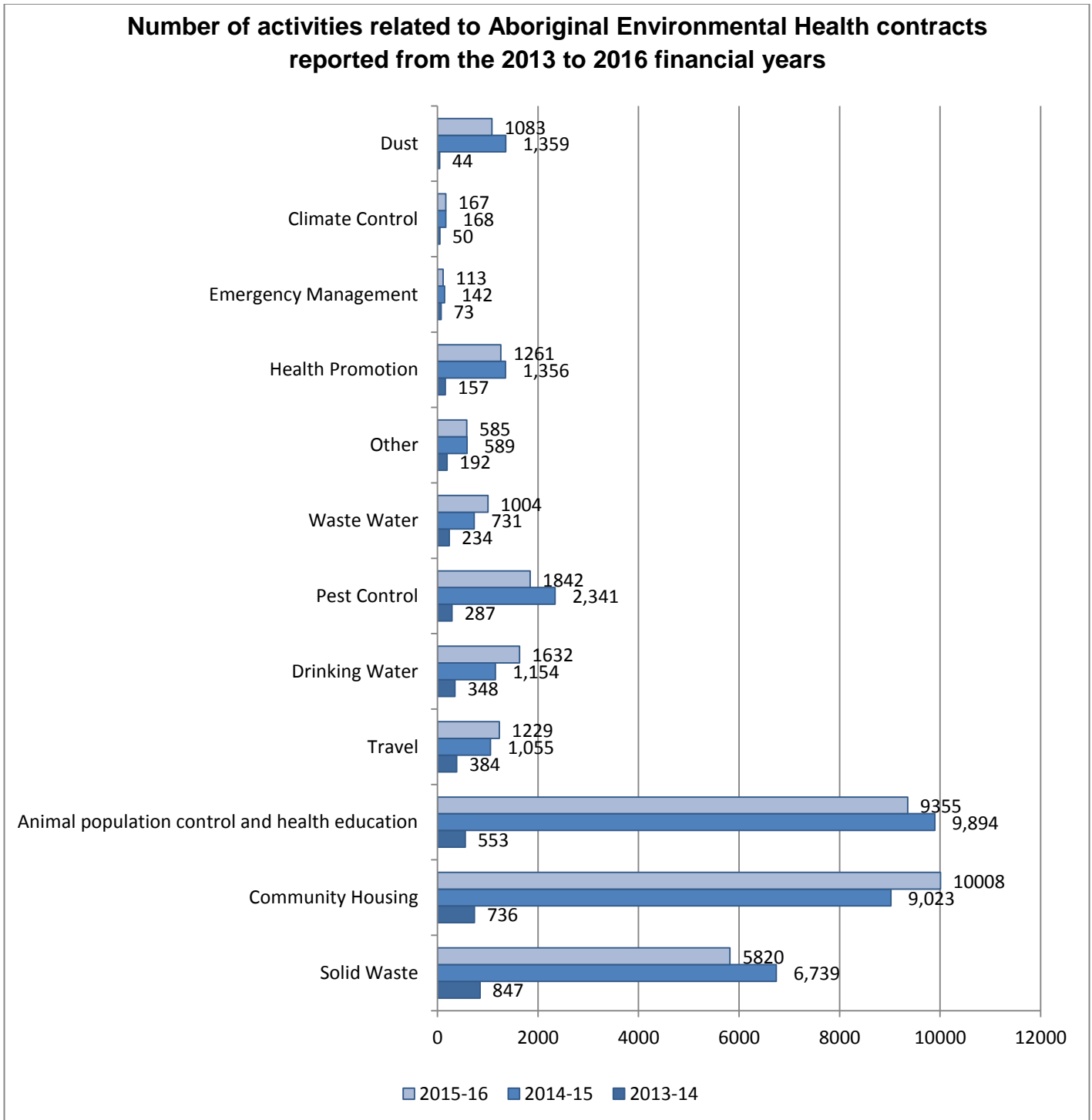


**Store visits/audits related to the *Tobacco Products Control Act 2006***



### 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.



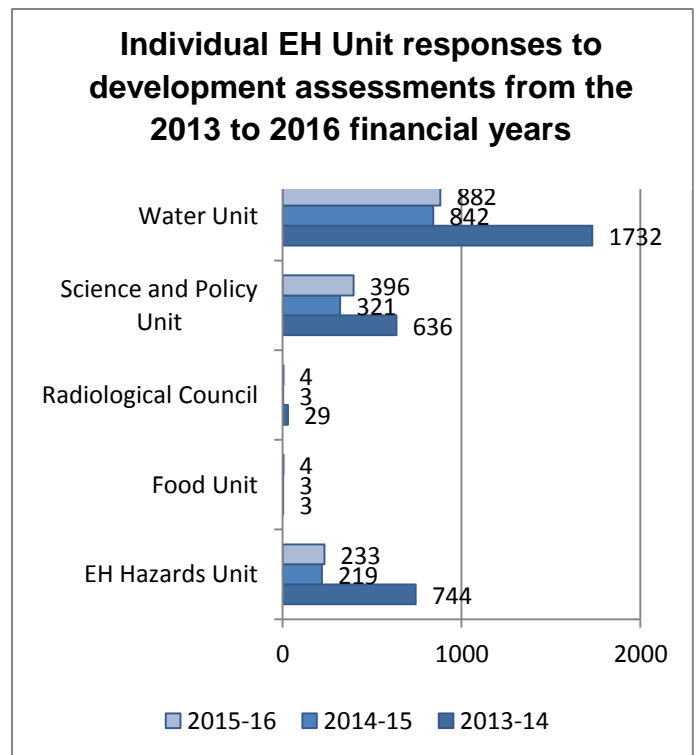
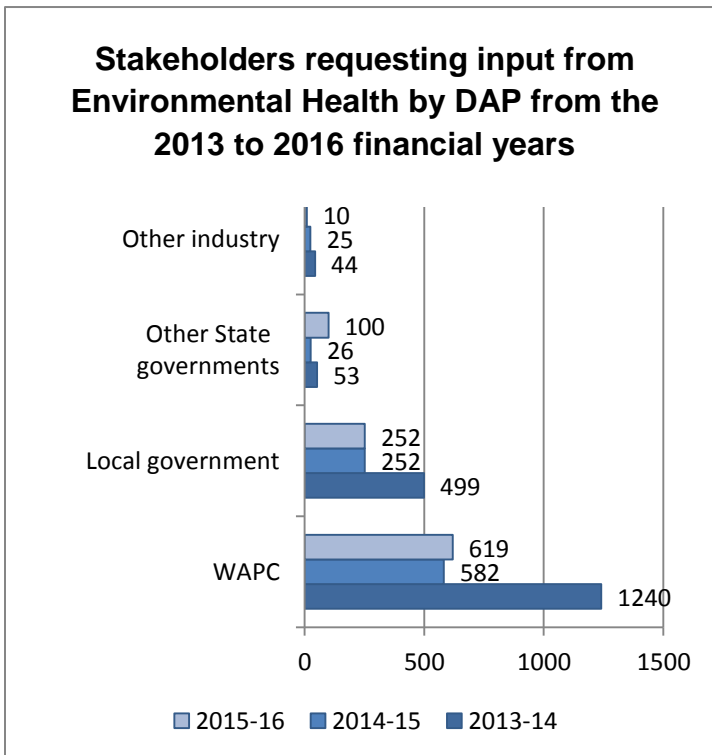
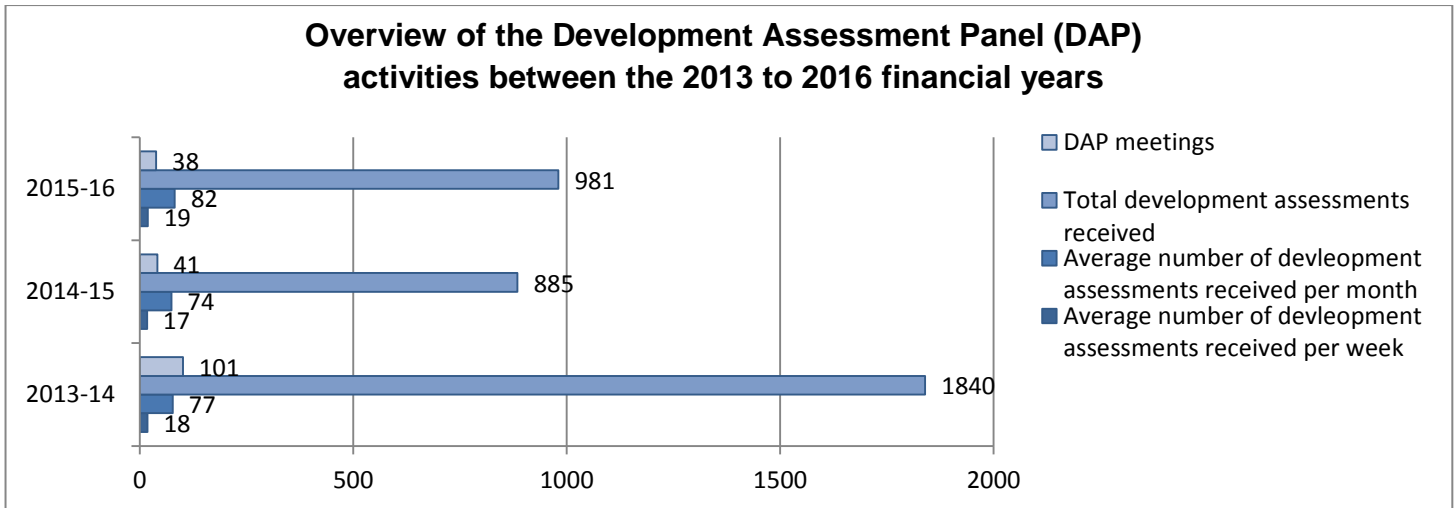


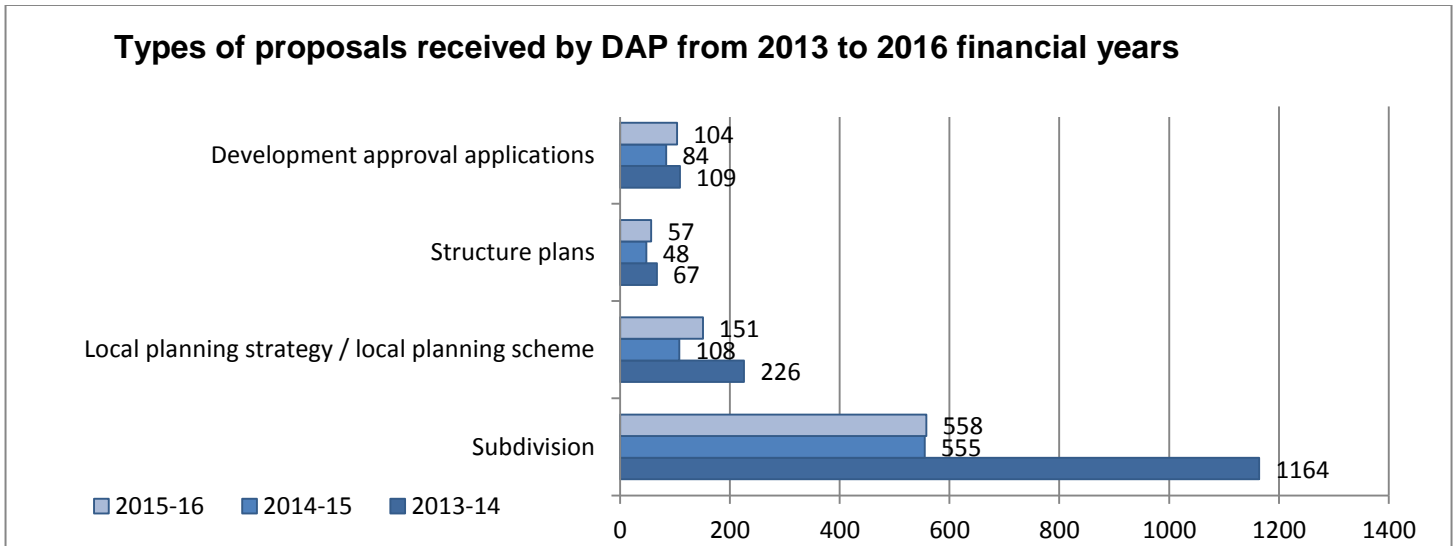
### Development Assessment Panel (DAP)

A large part of the Directorate’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.

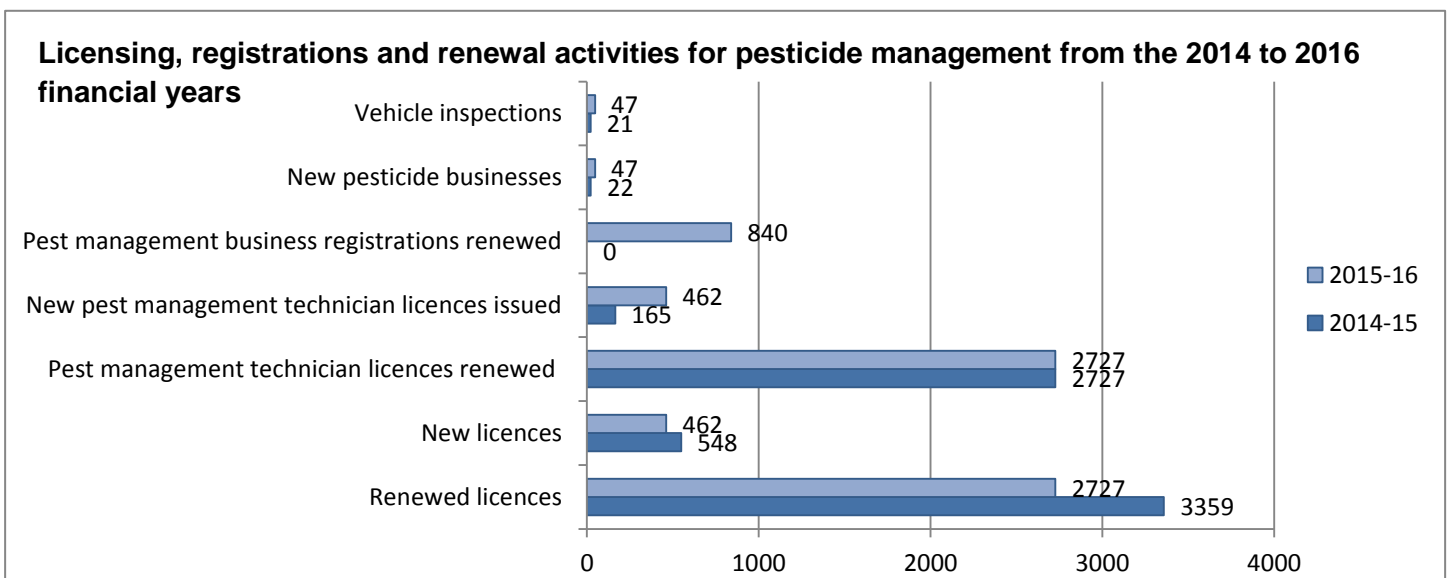
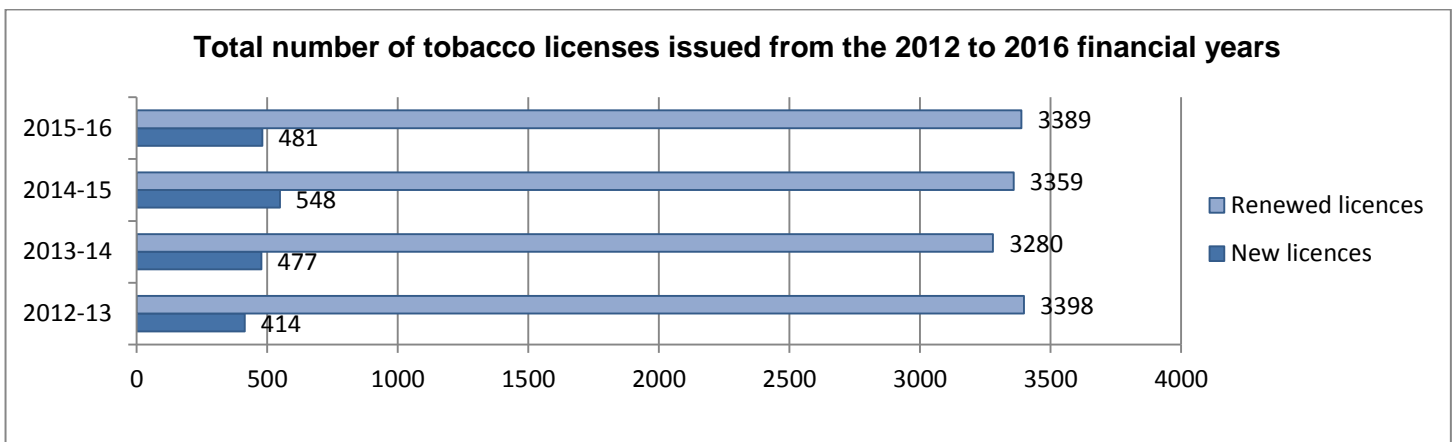
The Science and Policy Unit coordinates regular Development Assessment Panel (known as DAP) meetings to ensure a coordinated approach is taken to reviewing and responding to the large volume of DAP proposals requiring health input. This ensures that experts from a range of disciplines can provide health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





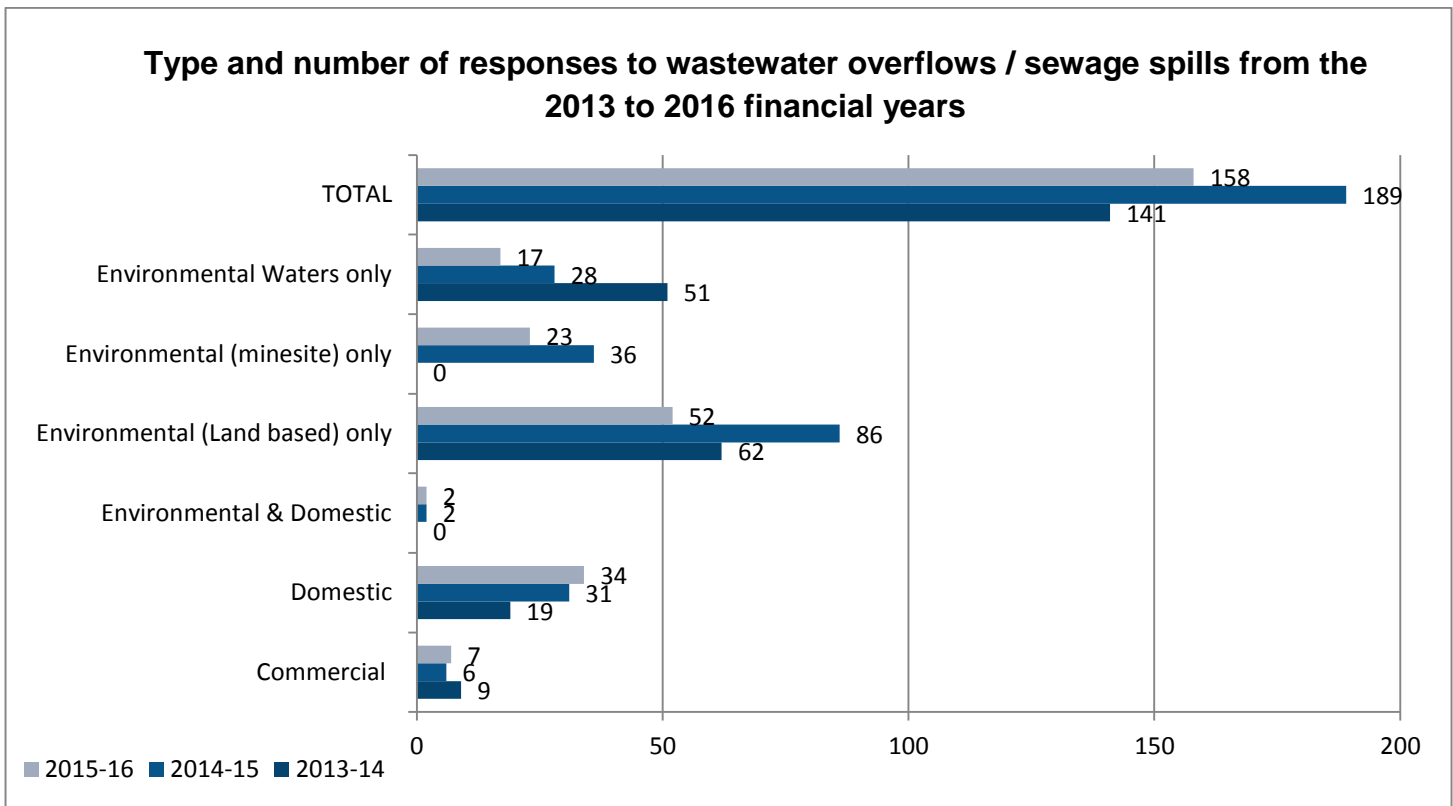
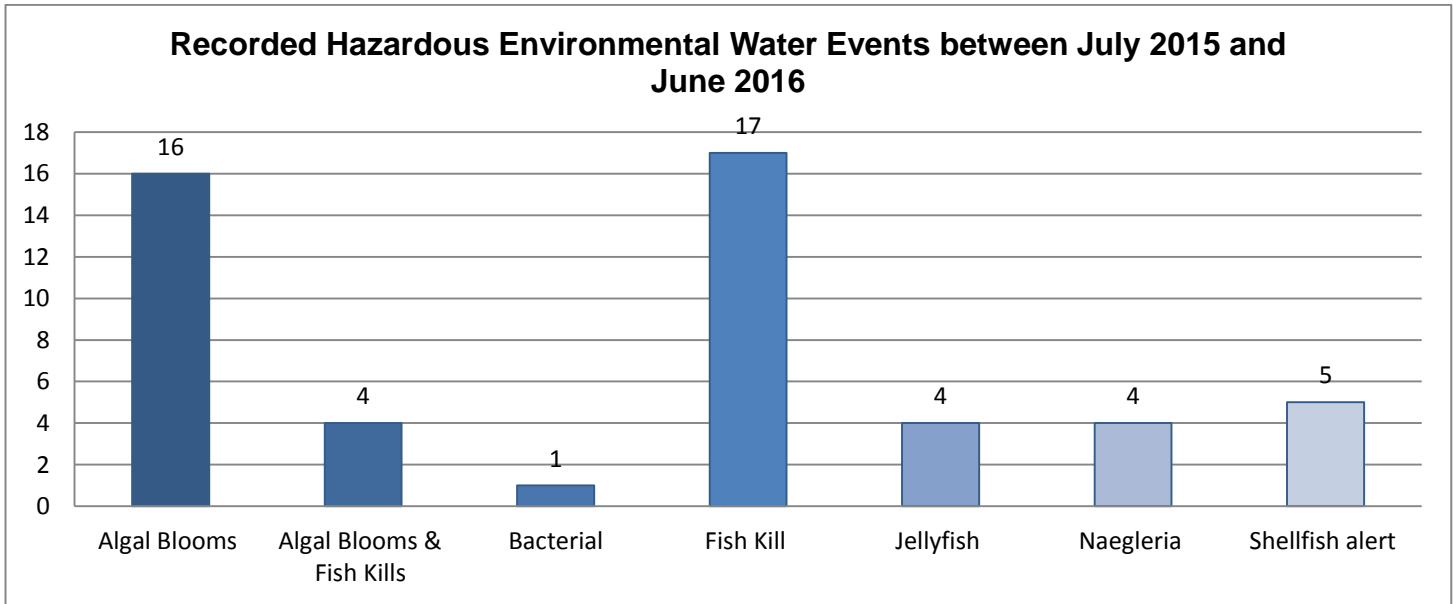
## System Support and Licensing

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.



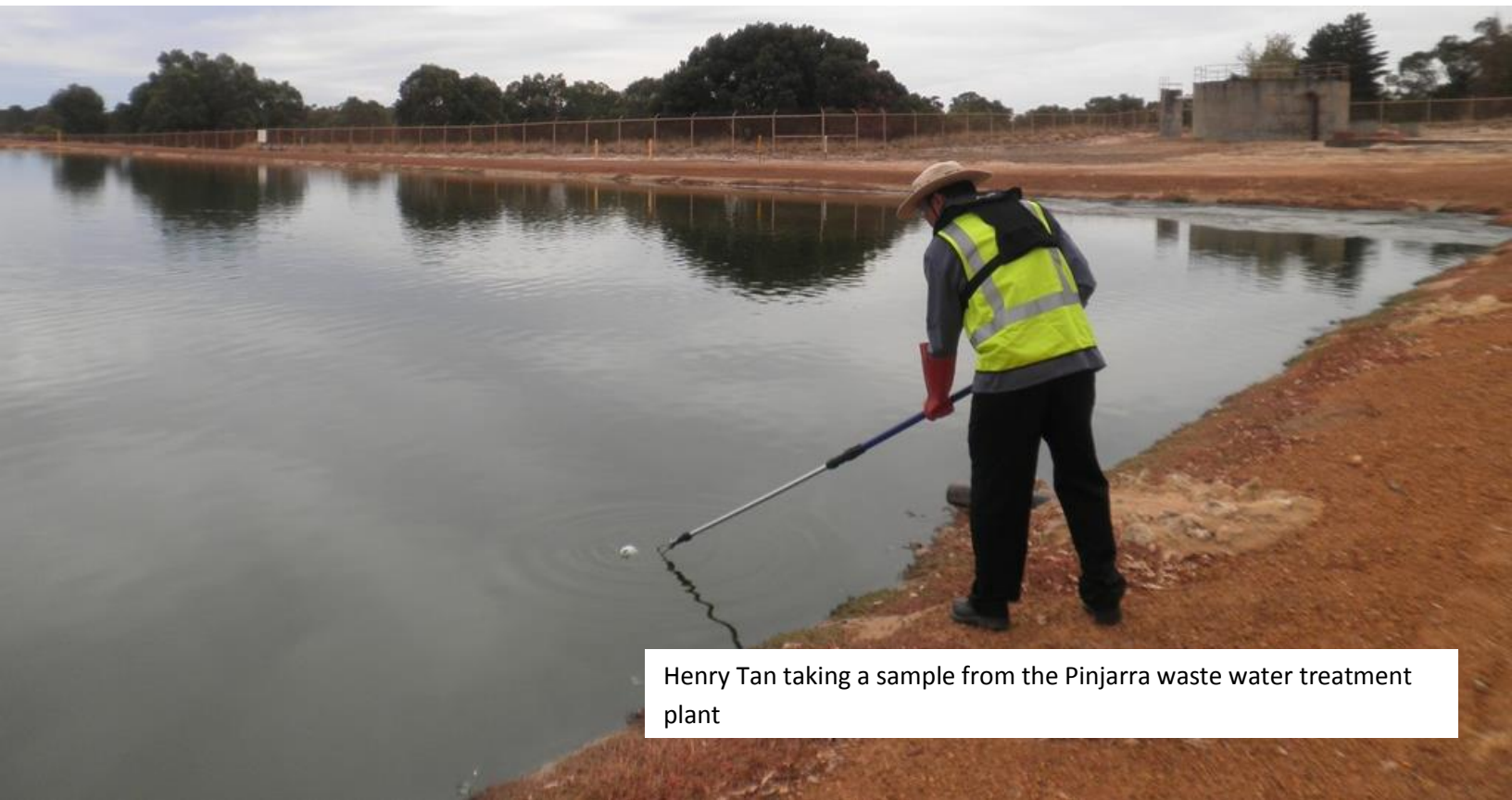
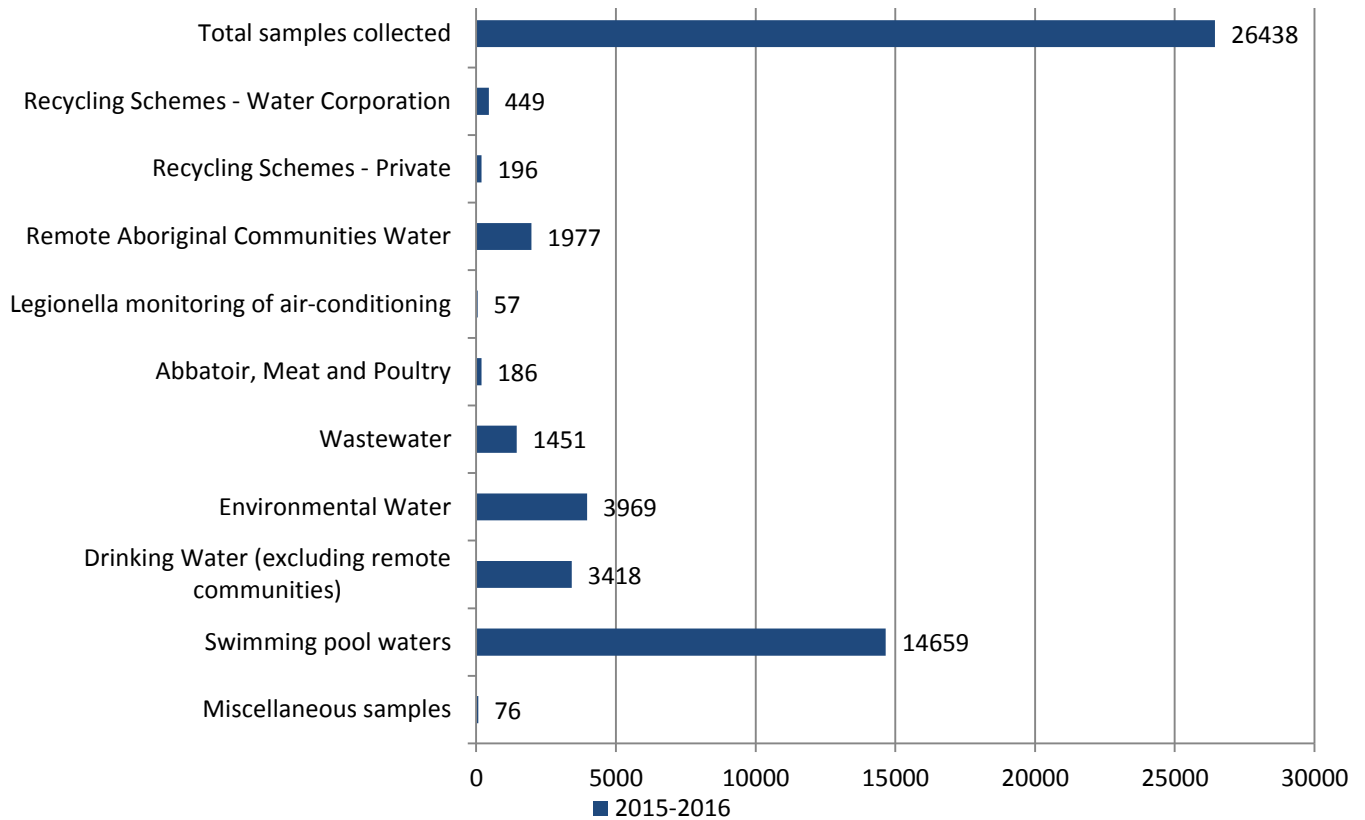
## Water

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.



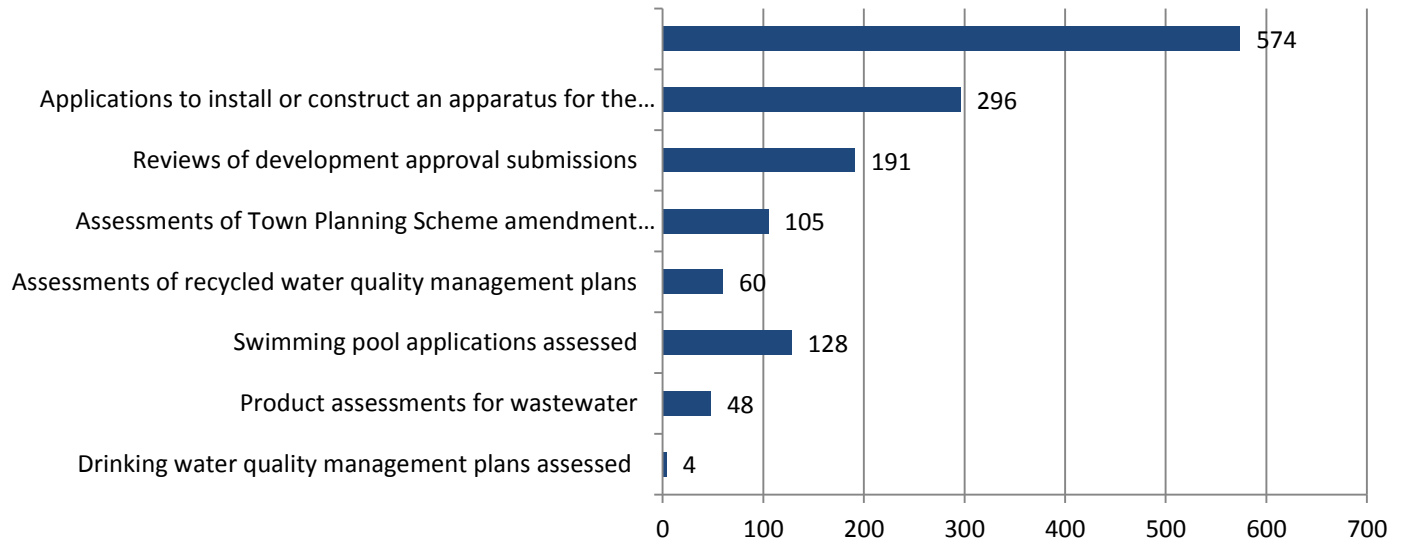


### Number and type of water samples collected between during the 2015- 2016 financial year

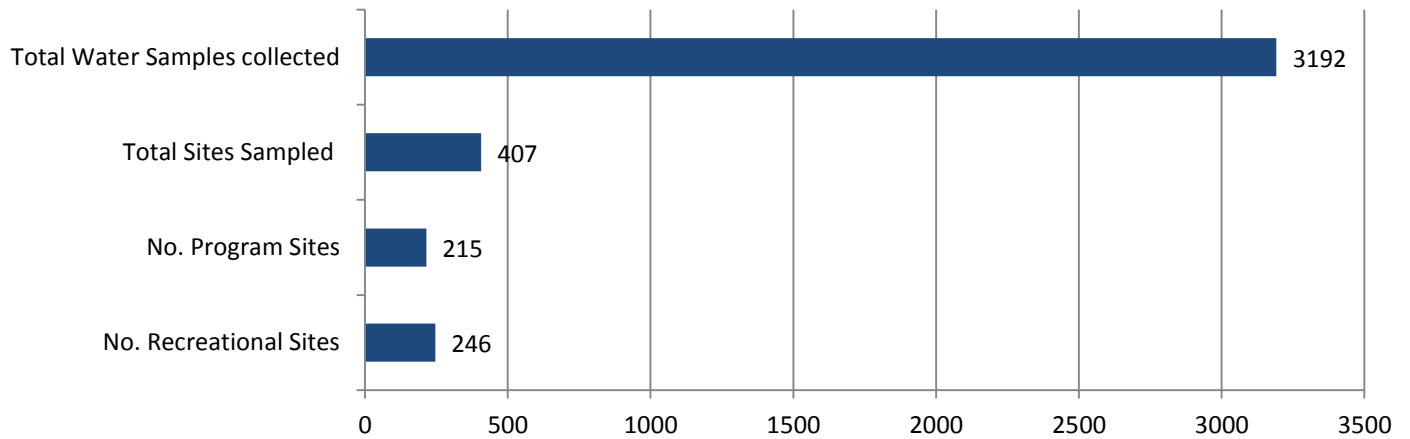


Henry Tan taking a sample from the Pinjarra waste water treatment plant

### Water assessments and approvals for the 2015-16 financial year



### Monitoring activities related to the environmental waters program for the 2015 - 2016 financial year



Over the past year the Department of Health offered voluntary severances as part of the State Government's health reform project. Sixteen staff within the Directorate accepted this package, which meant we lost 16 valuable employees, along with a large amount of knowledge and expertise. We wish our friends a wonderful future and, for some, a relaxing retirement ahead.



**Lindsay Gillam**



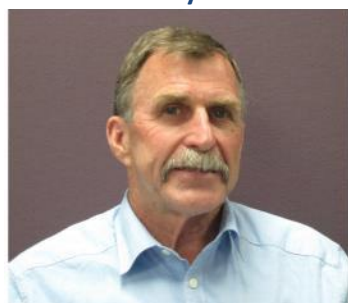
**Allen Tan**



**Kim Marks**



**Leif Dahlskog**



**David Peckitt**



**Llew Withers**



**Krysg Gregory**



**Geoff Harcombe**



**Mary Aerts**



**Bill Kellow**



**Terry Mazzuchelli**



**Colin Jacob**



**Ling Lei**



**Jason Giuffre**



**Sid Brodie**



**Danielle Isaac**



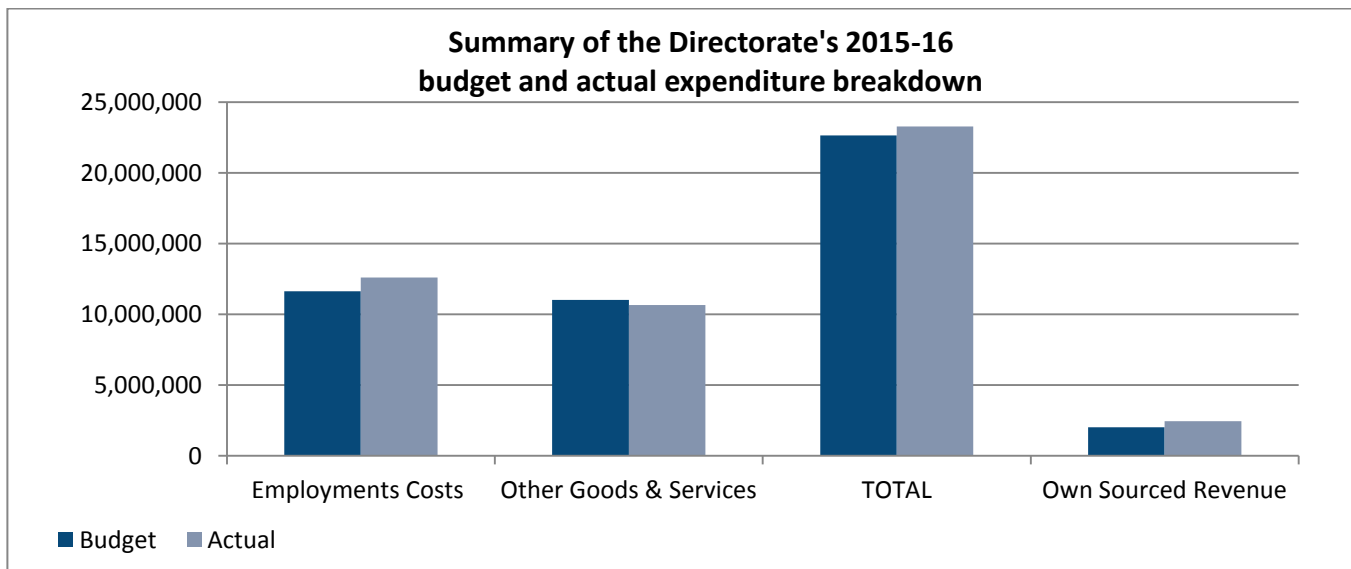
# Financial performance



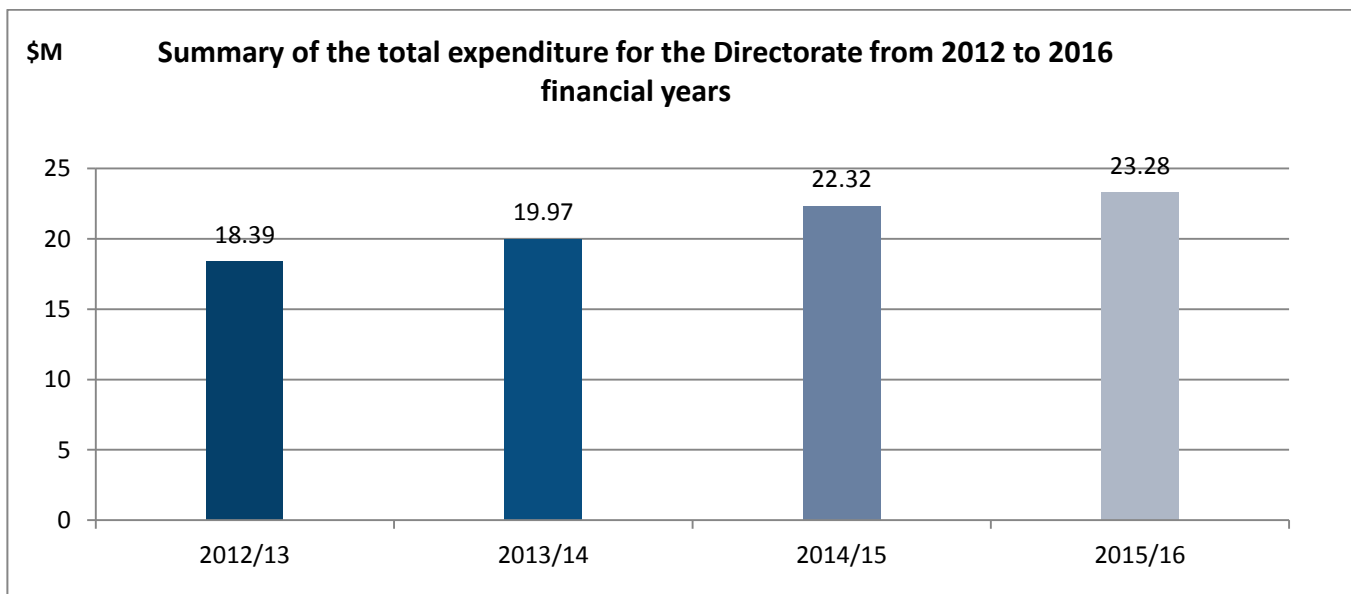
## Expenditure breakdown

The total expenditure for the Directorate during the 2015 - 2016 financial period was **\$23.28 million** which was over the budget allocation of \$22.64 million due to Voluntary Severance Scheme payments for 15 staff.

The Directorate's major areas of expenditure are employment costs and other goods and services (OGS). The employee expenditure has grown in accordance with salary increases allowed for the Public Service and General Officers General Agreement. Included in OGS expenditure are operational expenses and Grace Vaughan House (GVH) building maintenance.

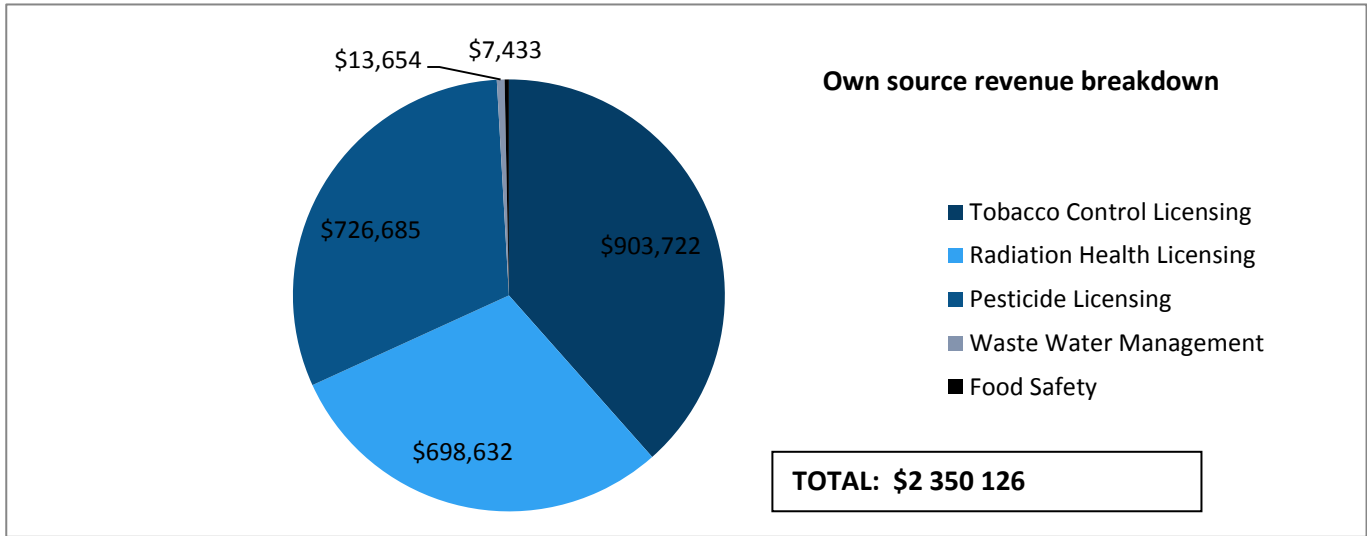


## Summary of total expenditure (\$M)

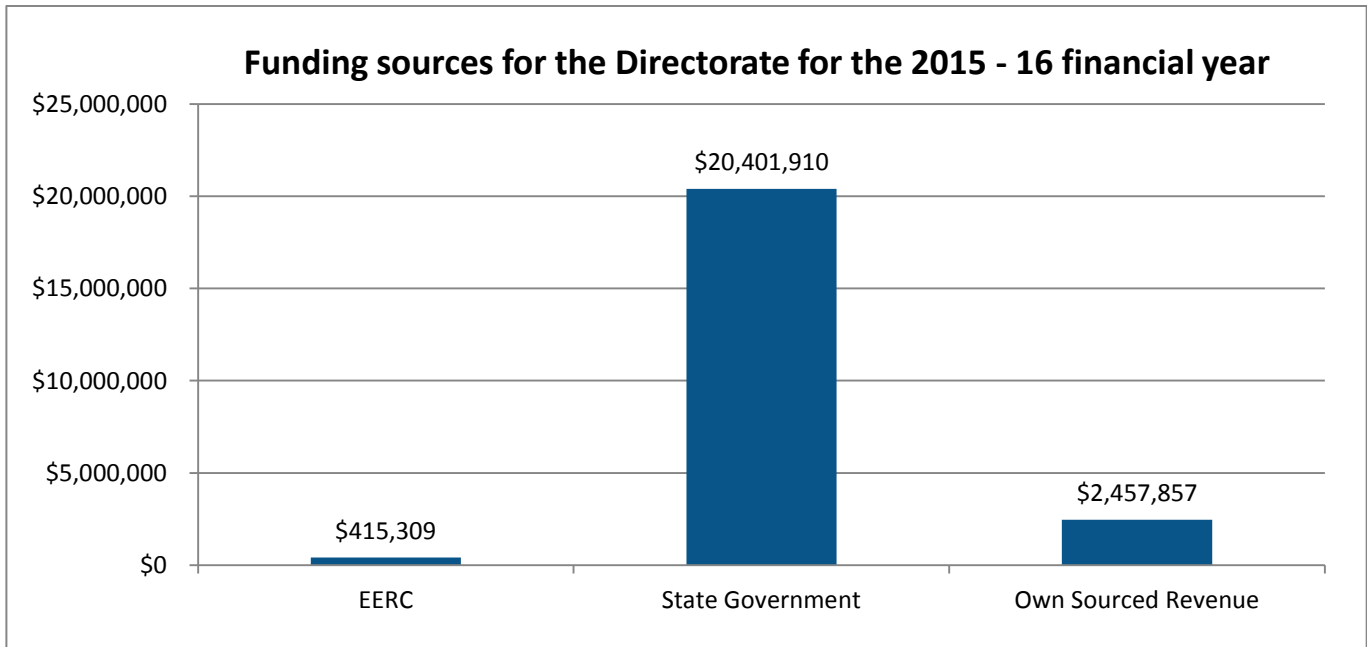


### Own source revenue breakdown

The total of our own source funding was **\$2,350,126**. 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, administration and employment costs.



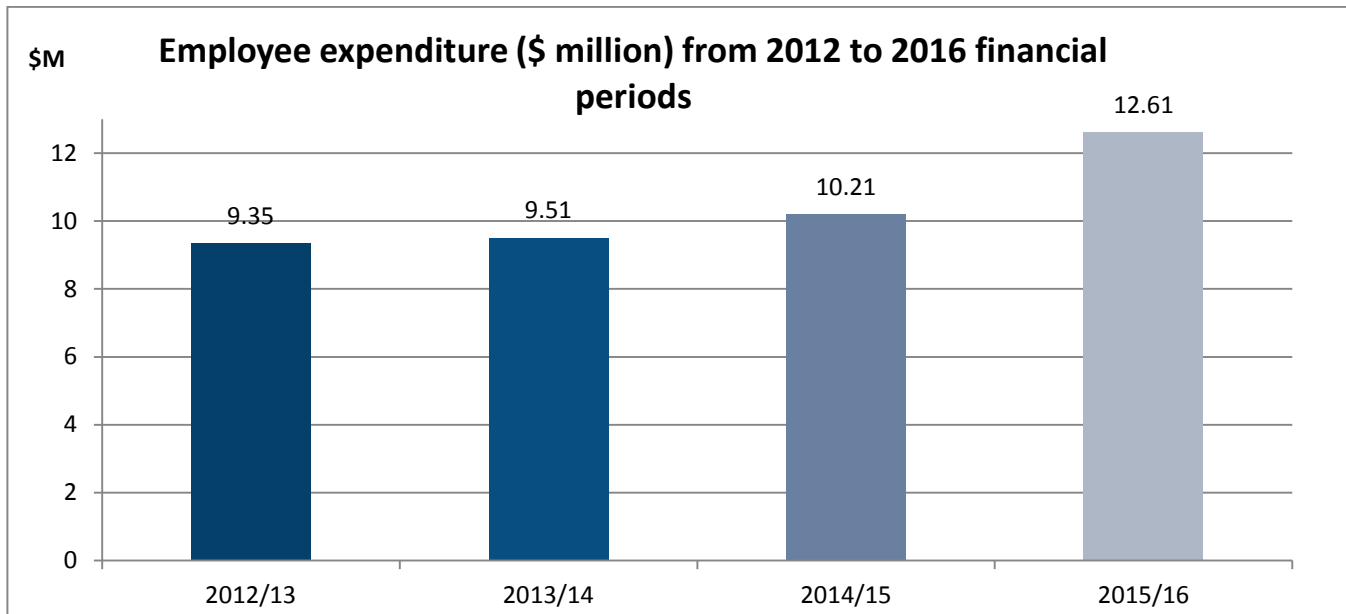
In 2015 - 16, funding for Directorate’s operations came from different sources including the WA State Government and Commonwealth Government.





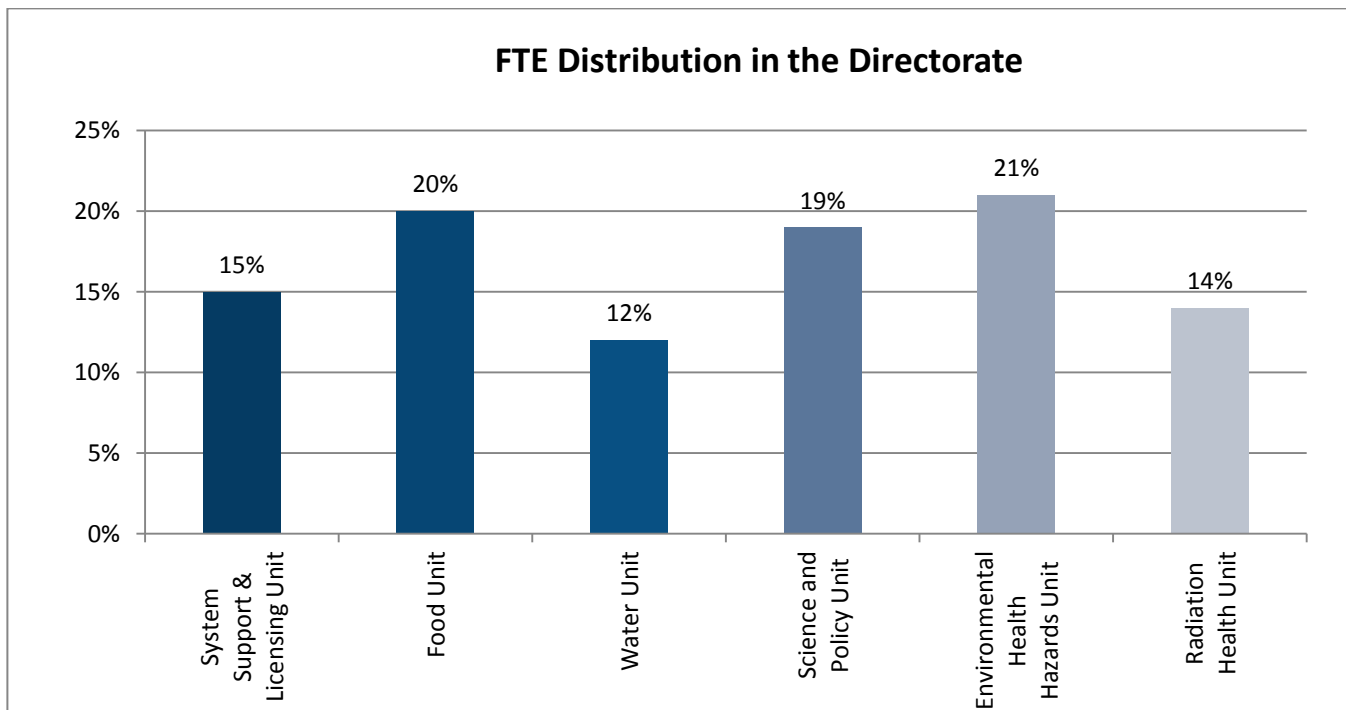
## Employments costs

Employment costs for the 2015 – 16 period included the payout for 15 voluntary severance scheme payouts.



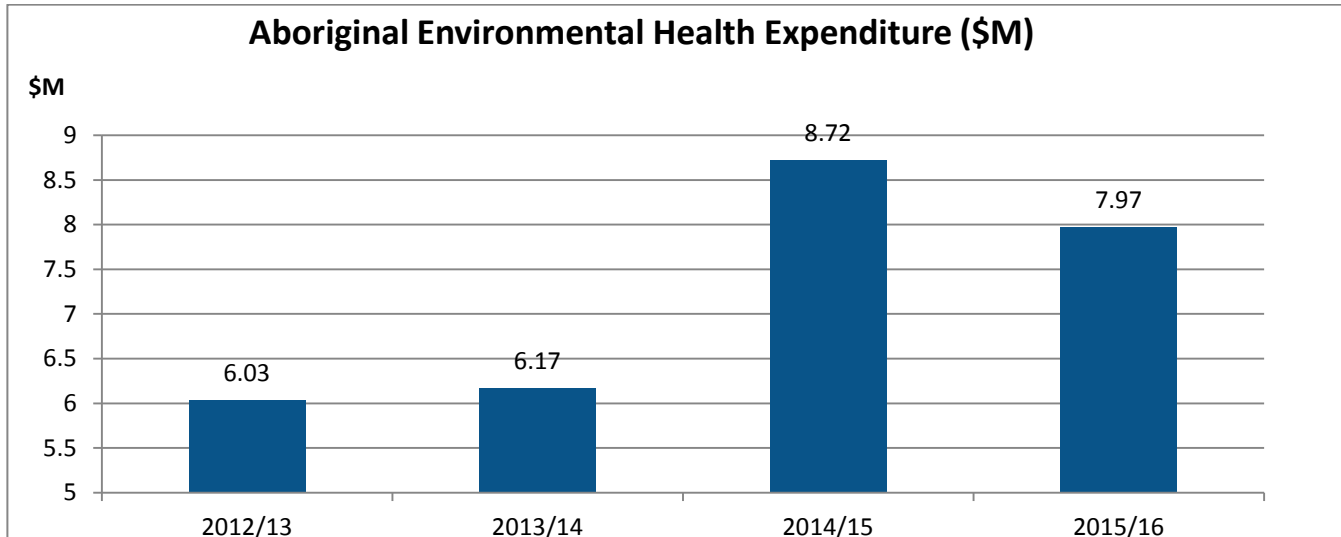
## Workforce distribution

In 2015 - 2016, the Directorate had 101.9 Full Time Equivalents (FTEs) staff working across various program areas.



## Aboriginal Environmental Health expenditure (\$M)

We fund 23 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



## Financial Overview

Some of our financial highlights for 2015 – 16 include:

- **\$7.59 million** provided to various organisations for the provision of Environmental Health Services in Aboriginal communities
- **\$628,555** on mosquito control programs to manage mosquito borne disease impacts
- **\$490,891** for Helicopter larviciding contract to control mosquito breeding in WA
- **\$50,771** to continue development of the WA mosquito atlas
- **\$150,000** to UWA for PhD scholarships on joint research project to control mosquito breeding in WA
- **\$305,795** for testing of mosquitoes for virus isolations and sentinel chicken blood samples for seroconversions to mosquito-borne viruses
- **\$1.6 million** for testing of samples of water and food through PathWest

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