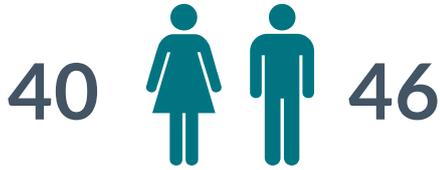


SNAPSHOT



The average age of staff is 43



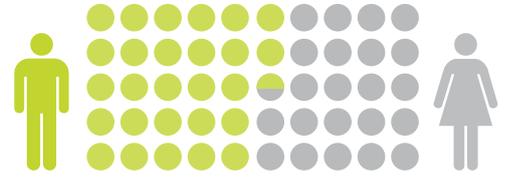
41 of our staff work part-time hours

10+ years

38% of our staff have more than 10 years of service with the NTPS

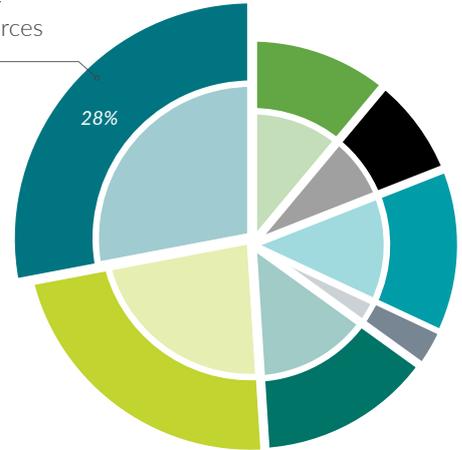


80% of our staff are ongoing (permanent) employees.



55% of staff are male

Water Resources



Water Resources is our largest division, employing 28% of our staff

Our full-time equivalent staff numbers were

296.5

Our headcount of staff was

328



60% of our staff are employed in the professional (31%) or technical (29%) streams

Our separation rate excluding machinery of government transfers is

25%



OUR PEOPLE

Staff commitment and satisfaction are critical ingredients supporting our department's strategic goals and objectives. An engaged, motivated workforce translates to productivity and ideas that help the department achieve its goals, so it is essential that we support and nurture our people.

The department's Human Resource (HR) Services unit is dedicated to delivering best practice in HR management for all employees. We work alongside senior managers to support and encourage a positive workplace culture, which we achieve through a consistent advisory service and our suite of programs, policies and procedures.

WORKFORCE PROFILE

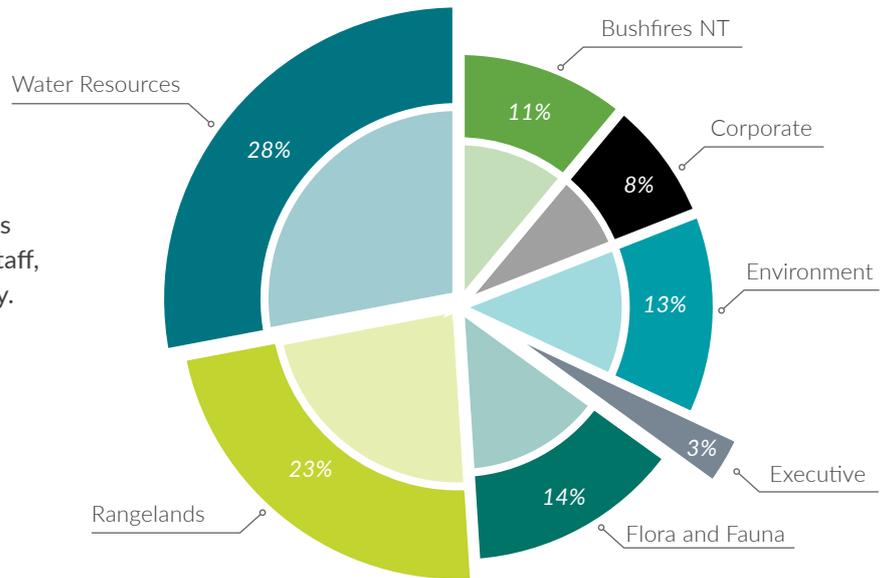
Our staff are highly enthusiastic and dedicated people. There is a strong technical and professional commitment and a culture of tenure and stability. This includes a high proportion of experienced staff with more than 25 years of service.

At year end, the department employed 328 people throughout the Territory, in the major centres of Alice Springs, Katherine, Tennant Creek, Darwin and at remote locations in Batchelor and Maningrida.

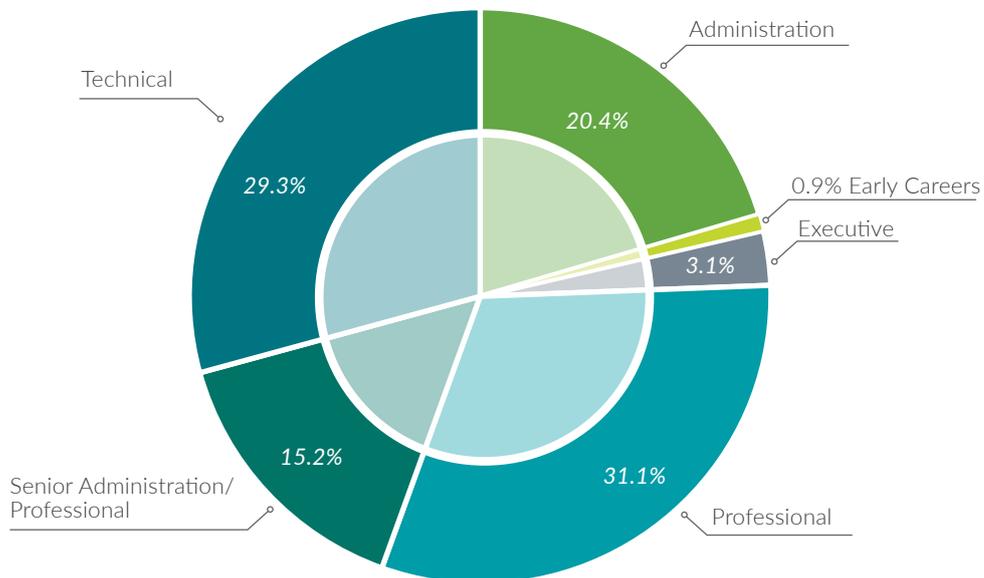
In 2016-17, machinery of government changes saw the departure of some of our corporate services team and the transfer in of environment staff. Since implementing the machinery of government changes, the staffing number has increased slightly by four people.

Employees by division

The Water Resources and Rangelands divisions make up 51% of our total staff, employing 28% and 23% respectively.



Employees by Stream

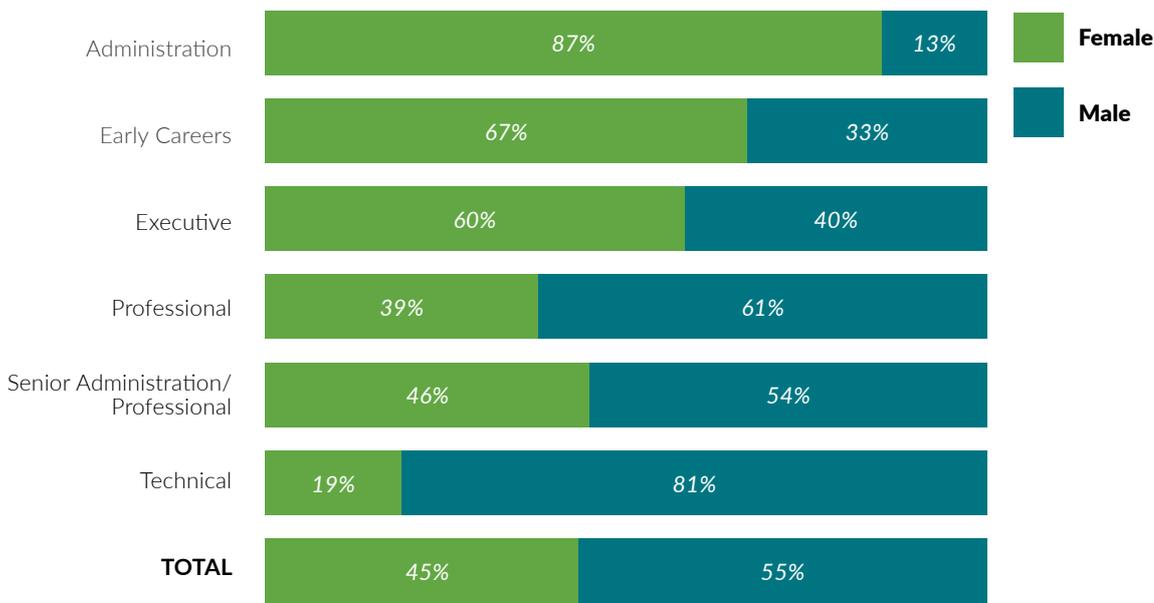


Gender comparison

The department's overall gender comparison rose slightly for males, increasing from 54% in 2015-16 to 55% in 2016-17.

Gender	2015-16	2016-17	NTPS 2016-17
Female	46%	45%	63.6%
Male	54%	55%	36.4%

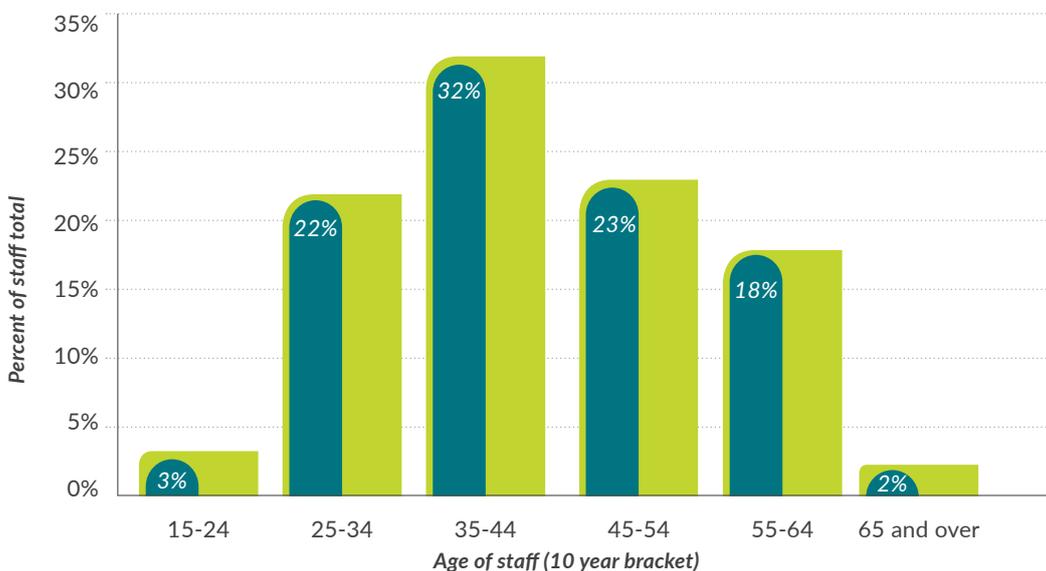
Gender comparison by employment stream



Employees by age and gender

At 30 June 2017, the department had a total of 147 female and 181 male employees. Considering staff age in 10-year brackets, 32 percent of staff are aged 35 to 44 years old, which is the largest proportion of employees of any age group. The rest of the staff are fairly evenly distributed across the 25-34, 45-54 and 55-64 age brackets, with 3 percent aged under 24 and 2 percent aged over 65. The department employs more women in administration, early careers and executive roles. The average age of female employees is 40 and the average age of male employees is 46.

Age by gender comparison at 30 June 2017



Recruitment and retention

During 2016–17, 50 employees commenced employment with the department, and 50 staff left the public sector.

	2015–16	2016–17
Separations	39	50
Commencements	68	50

Source: Personnel Information Payroll System

Note: excludes board members, casual staff and those on long-term workers compensation.

During the reporting period the department had 134 new staff (either commencements in the NTPS or transfers into DENR from elsewhere in the NTPS) and 122 staff departed (either resignations or transfers out to other NTPS agencies). This includes a significant number of transfers which were due to agency structural changes following the 2016 election outcome. Excluding these transfers the department experienced a separation rate of 25 percent, which is slightly higher than the NTPS separation rate of 21.3 percent for ongoing and fixed period staff. Considering only separations from DENR (excluding all transfers out of the agency).

Separations of ongoing and fixed period staff across three employment streams

	Administrative	Professional	Technical
DENR separations	10.7%	13.5%	24.2%
NTPS separations 2015–16	19.9%	23.6%	12.1%

Source: PIPS and OCPE.

Note: excludes casuals and transfers.

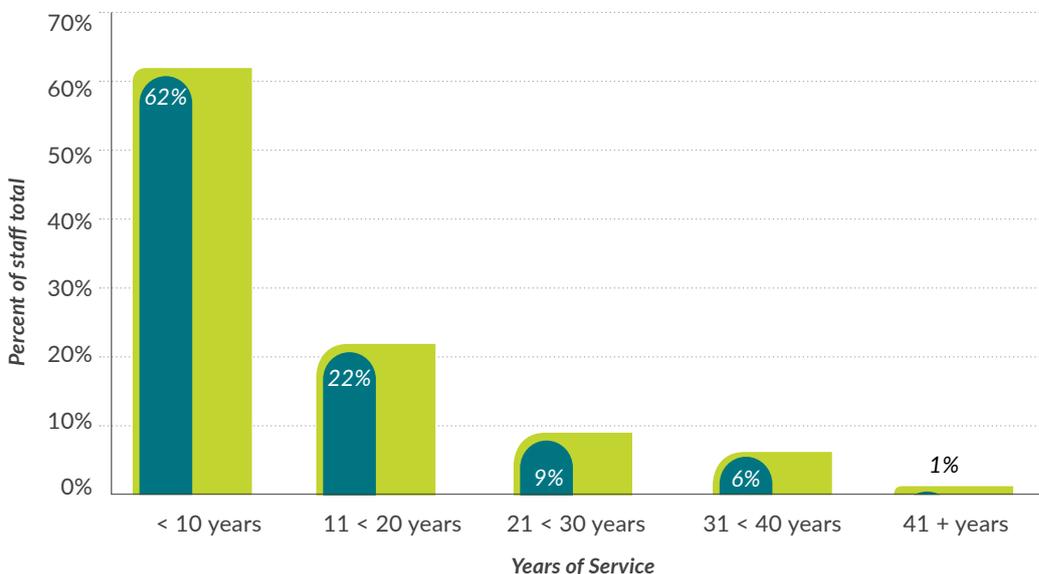
Recruitment

In 2016–17, the department advertised 77 positions, with 11 subsequently cancelled and 54 finalised during that period. The average time from the close of advertising to the selection process being complete was 48 days, which is just outside the NTPS’s ideal timeframe of 42 days.

Retention

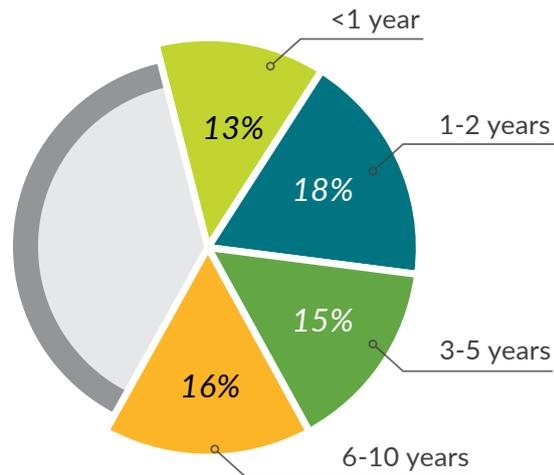
38 percent of our staff have more than 10 years of service within the NTPS.

Years of Service





Of the 62 percent of staff who have less than 10 years of service, half of these people, have less than two years of service.



DEVELOPING OUR WORKFORCE CAPACITY AND CAPABILITY

Building a skilled and capable workforce that will meet the department’s needs as it matures and faces future challenges is important. We will achieve this by building programs and initiatives tailored to our business needs, now and into the future.

The department continues to support individual staff development needs through performance agreements. We promote our in-house training calendar, encourage staff to participate in early career programs and the Office of the Commissioner for Public Employment's suite of targeted leadership programs.

Our culture

The department is committed to inspire and support a workplace culture that is collaborative, respectful and accountable. We achieve this by:

- Building our leadership capacity and capability across the agency
- Having targeted development programs to nurture and grow talent
- Providing a safe working environment and promoting safe practices in both office and field operations
- Making ongoing improvements to business processes and streamlining internal systems.

Diversity

The department is committed to the principles of inclusion, equity and diversity to ensure our workforce represents the broader Northern Territory community. We are committed to attracting new people from diverse backgrounds and building the capacity and capability of our existing people. We are committed to change as our priorities and our people progress.

We recognise our diversity and are proud that our people are from different backgrounds, circumstances and life stages.

Here is a glance at our equal employment opportunity profile.

	% of DENR employees	% of NTPS employees
Aboriginal people	6.0% (target was 6.7%)	10.5% (target was 11.8%)
People with a disability	1.8%	1.0%
Non-English-speaking background	4.2%	10.1%

Learning and professional development

● Learning Management System

The department has a learning management system (LMS) to improve the administration and management of our training programs. The system automates processes, such as promoting programs, nominations and registration workflows, participant onboarding and confirmation. The LMS also has a reporting function that generates flow-on benefits to end users across the department. The system allows for online/self-paced learning along with face-to-face internal corporate and external training programs.

In 2017-18, the department will work with the Office of the Commissioner for Public Employment (OCPE) to roll out the introduction of the proposed whole-of-government LMS system for OCPE programs.

The department's training expenditure comparison for this year and last year:

	\$ 2015-16	\$ 2016-17
Training, study and other*	337 054	348 026
Conferences	59 860	64 668
Total	396 914	412 694

*Other - includes Coaching, HECS, Professional Development Allowance

Senior Leaders Forum

The department hosted a Senior Leaders Forum in April 2017. The forum is an opportunity for staff AO7 and above from all regions to collaborate and share their achievements and current projects, participate in strategic planning and give feedback and advice to other divisions.

The 2017 forum focussed on the theme of 'unity and partnerships'. Presentations focused on how our divisions meet NT Government election commitments while working with the community and stakeholders in the areas of natural resources, such as water allocation planning, bushfire brigades and the co-delivery of ranger programs.

Forum discussions provided valuable input into the final stages of the department's strategic plan. The strategic plan will be in effect for the next three years and is the basis of our business and performance planning. The strategic plan sets the agenda for the new department.

● NTPS People Matters Survey

The NTPS People Matters Survey results for the department were positive, with a 66 percent response rate and a clear indication that our people enjoy working for the department.

The department's highest-rated areas were in the category of commitment to service, administrative management principles and role clarity. The greatest opportunities for improvement were in the areas of diversity, change management, feedback and the perception that the results of the survey would be communicated to staff and action taken to improve the survey results. Strategies to address the lowest-rated areas were submitted in the department response plan to OCPE, and at year end, divisions were working to improve in these areas.

The Human Resources unit delivered workshops across all divisions and regions to delve into the results in more detail and to give staff an opportunity to provide feedback on how to improve identified areas, for their specific division and region. All Executive Directors and senior

management groups received a summary of the feedback and recommendations.

Some changes have already been introduced as a direct response from the feedback received during these workshops such as: introduction of corporate visits/hot desking in order to strengthen relationships with division staff, cessation of an electronic performance management system and development of a paper based approach, and the inclusion of specific corporate training requested such as Combat Bullying, Dealing With The Tough Stuff and retirement planning.

To make it easy for staff to identify when activities are linked to People Matters Survey results, the Corporate Communications team have developed branding for each division to use when new initiatives are introduced as a result of the feedback and recommendation.

Below is a table of the when and where each People Matters workshop was delivered across all regions and divisions.

Date	Division	Region
18/01/2017	Corporate Services	Darwin
2/02/2017	Environment	Darwin
6/02/2017	Rangelands	Darwin
7/02/2017	Bushfires	Batchelor
7/02/2017	All Katherine divisions	Katherine
8/02/2017	Water Resources	Darwin (two workshops)
8/02/2017	Bushfires	Darwin
15/02/2017	Rangelands	Alice Springs (includes Tennant Creek staff)
15/02/2017	Water Resources	Alice Springs
16/02/2017	Bushfires	Alice Springs (includes Tennant Creek staff)
22/02/2017	Environment	Darwin
28/02/2017	Flora and Fauna	All regions captured in a planning day in Darwin

EMPLOYMENT PROGRAMS

The department has continued to support early careers programs across all divisions. These programs are aimed at addressing succession planning and diversity in our workplace by increasing the number of employees living with a disability and people of Aboriginal descent. The programs include:

- **Graduate Development Program**

The department's graduate program offers a one or two-year placement and is aimed at developing graduates' skills, experience, knowledge and abilities to the level required for management positions. The program combines on-the-job training with professional and personal development opportunities.

One graduate completed the Graduate Development Program in early 2017, and the department employed one new graduate during the 2016–17 year.

- **Aboriginal Cadetship Support**

This program offers Aboriginal people an opportunity to take part in the Northern Territory Government's commitment to achieving greater Aboriginal representation across the NTPS.

The program enables Aboriginal students undertaking an undergraduate degree to gain the professional qualifications and work experience needed for a range of jobs in the NTPS.

One student completed the Aboriginal Cadetship Support program with the Flora and Fauna Division in early 2017, after undertaking two years of study. This student then continued with their degree and moved on to seek employment in Victoria upon completion of the program.

- **Apprenticeship and School-Based Apprenticeship Program**

These programs combine employment with structured learning to develop workplace skills and provide a nationally recognised qualification. In 2016–17, the department supported four school-based apprentices who are undertaking Certificates II and III in Business and a Certificate III in Accounts Administration.

One of our Year 12 School Based Apprentices moved to a full-time contract, continuing with the agency's Corporate Services Division in 2017.

One of our full-time Apprentices moved to an ongoing contract, continuing with the agency's Bushfires Division in Katherine. All other Apprentices have gone on to find employment outside the NTPS or moved into further training.

Our current school-based apprentice is in Year 12 for 2017 and is expected to complete their studies by December 2017.

During 2016–17, the department also supported three full-time apprentices in the fields of conservation and land management and business.

Two of these apprentices graduated in December 2016 and January 2017 respectively. Our one current full-time apprentice is engaged in the School Leavers with a Disability initiative.

Successful full-time Apprentice completions	Successful School Based Apprentice completions	Current full time Apprentices	Current School Based Apprentices
2	3	1	1

Note: of the successful completion, two were Aboriginal. One was full time apprentice and the other was a School Based Apprentice.

- **Vacation employment**

The vacation employment program gives students currently undertaking degree studies for the first time at an Australian university an opportunity to gain valuable learning opportunities through paid placements during university breaks.

During 2016–17, the department supported four vacation employment students. Two students completed the program in early 2017; one in Water Resources and the other in Corporate Services. Two students started in June 2017 for the mid-year break in the Rangelands Division.

- **Aboriginal Employment Program**

This pre-employment program is specifically designed to attract Aboriginal jobseekers and is aimed at equipping trainees with foundation skills relevant to entry-level positions.

In 2016–17, we had one regional participant in Rangelands Division located in Katherine, who graduated in late 2016.

SHARK ATTACK ON CABOMBA INFESTATION

The biggest risk to Darwin's drinking water is the spread of cabomba, a weed that chokes waterways and that is currently found in a 1 km downstream section of the Darwin River. Darwin River Dam, which supplies 90 percent of Darwin's potable water, is just six kilometres upstream of the original infestation.

Cabomba (*Cabomba caroliniana*) is an aggressive and invasive aquatic weed. Originally introduced to Australia as an aquarium plant, it is recognised as one of the 32 worst weed species in Australia and as such is listed as a Weed of National Significance (WoNS).

Managing cabomba has proven challenging for the department due to the freshwater aquatic ecosystem's sensitivity and the potential for water flows to impair access, monitoring and control. Diving and underwater herbicide application isn't possible because of the possible presence of saltwater crocodile.

In October 2016, the department trialed a major application of the herbicide Shark™ on Cabomba. The results indicated a positive effect on the weed. The department chose this product because it breaks down rapidly, to the point that it was not even detectable in the water being discharged.

As part of the department's treatment program, a bund wall was constructed across Darwin River on the downstream side of the bridge on Cox Peninsula Road. The bund wall was a safety measure, designed to prevent any potential flow of the herbicide into Darwin Harbour before it broke down naturally and allowed for scientific monitoring of cabomba, the environment and water quality.

The department's Cabomba Eradication Program Manager, Chris Collins, said 'within seven days, we were able to see cabomba showing



Photo: Chris Collins testing water quality at Lok Landji Billabong.

signs of ill health. By three weeks we could see reduced infestation and density levels. The remaining cabomba plants were starting to lie flat and beginning to rot.

We extensively monitored through the treatment process, and so far, we have seen no impacts downstream of the treatment zone and very limited impacts on non-targeted plants, fish or animals at the application site', he said.

A Cabomba Eradication Program quarantine zone remains in place on the Darwin River between Cox Peninsula Road and Leonino Road crossings.

The quarantine order prohibits the movement of people and any object, including boats, vehicles and fishing equipment, into or out of this section of river and within the five metres of land adjacent to the water's edge.

The eradication team also developed a range of community awareness material to help spread the word on the serious risk of

cabomba to Top End waterways, including posters in the local community, fact sheets, information online, a television commercial and social media videos.

Due to the dedicated eradication program since 2004, the original 16 kilometre infestation was reduced to a one kilometre large billabong known as Lok Landji, part of the Darwin River system. Early monitoring results indicate that continued increases in herbicide application will be required to achieve eradication.

The 2017-18 Budget has allocated \$600 000 to implement an intensified cabomba eradication program in Darwin River, including \$300 000 for dedicated project officers and \$300 000 for operational costs.

More than 1 400 litres of Shark™ herbicide has been purchased to date. Additional herbicide treatments will commence within the Lok Landji billabong area in the second half of 2017.

NRM CHAMPIONS PROGRAM



Photo: Tahnee Thompson, the department's Katherine Regional Manager, overseeing weed management planning on station.

In March 2017, the department launched the Territory's first Natural Resource Management (NRM) Champions program.

The NRM Champions program is a sponsored training package for the pastoral industry with opportunities for two people to develop our skills and knowledge in NRM.

The program is managed by the department's Weeds Management Branch and funded by the Australian Government through its established Pest Animals and Weeds initiative, part of the Agricultural Competitiveness White Paper that aims to develop our farmers and a stronger economy.

A trip to western Queensland to learn about the devastating impact of prickly acacia (*Vachellia nilotica*) on pastoral land is one of the many highlights of the program.

The NRM Champions program is an exciting initiative that will give participants a good understanding of NRM and skills and experience to support the sustainability of our pastoral industry.

CAPABILITY BUILDING

As part of the department's commitment to supporting and developing employees, a range of capability-building programs were offered to employees across the department including:

● Study assistance

The department supports employees gaining relevant professional and technical skills through higher education studies. Five employees applied for study assistance during 2016–17.

These employees were undertaking studies from certificates to professional doctorate degree programs. The financial assistance equates to an average of \$2 298 per employee.

Areas of study supported in 2016–17 included:

- Certificate IV in Accounting
- Diploma of Conservation and Land Management
- Bachelor of Business
- Graduate Certificate in Spatial Science
- Professional Doctorate Degree.

● Corporate training

The department offered the following corporate training courses in 2016–17:

Course	Number of participants
Corporate induction	52
Code of Conduct	12
Cross-cultural workshops	21
Simplified recruitment	21
Dealing with the Tough Stuff	11
HR hot topics	48
Procurement awareness	16
A guide to contract management	3
Retirement planning	
• Salary sacrifice	20
• Transition to retirement	
Writing workshops	10

STAFF RECOGNITION AND REWARD SCHEME

Our recognition and reward scheme recognises employees through an achievement award, individually or as part of a team, for outstanding contributions that support the department's values, strategic goals and objectives. The scheme is designed so that all staff in the department are able to submit nominations for their colleagues.

The rationale for the Recognition and Reward scheme is to:

- Positively reinforce excellence in behaviours and performance
- Foster staff engagement and increase job satisfaction
- Promote the work being achieved within the department
- Lead to higher retention rates of staff
- Build an environment where people are encouraged to explore innovative approaches to their work
- Support a culture of performance excellence.

Celebrate the achievements and milestones of staff. The scheme also recognises employee service milestones in the NTPS. This policy complements the NT Government Recognising Service Milestones Policy.

During 2016–17, 14 staff and six teams received a monthly staff achievement award through the scheme.



Staff achievement

Team achievement

Name	Date	Name	Date
Tamara Rolph	Jan 2017	Cabomba Eradication Team	Jan 2017
Roni Opden	Jan 2017	Rangeland Monitoring Branch	Jan 2017
Michelle Franklin	Jan 2017	Cartography Team	Apr 2017
Belinda Townend	Jan 2017	Water Licence Portal Team	May 2017
Athina Pascoe-Bell	Jan 2017	Water Monitoring Group	May 2017
Danny Low Choy	Jan 2017	Corporate Budgets Team	May 2017
Geraldine Lee	Jan 2017		
Christine Tylor	Jan 2017		
Dr Alana Mackay	Jan 2017		
Patrick Burley	Jan 2017		
Michael Carnavas	Jan 2017		
Marguerite Wall	Feb 2017		
Yu-chun Chou	Feb 2017		
Caroline Green	Mar 2017		

STAFF ACHIEVEMENTS

Keith Saalfeld awarded the 2016 Chief Minister's Medal

Flora and Fauna Principal Scientist Keith Saalfeld was one of nine public servants to receive a Chief Minister's Medal in November 2016.

Keith has a long history of involvement in wildlife surveys and monitoring in the Northern Territory, particularly in relation to waterfowl and crocodiles.

He is deeply involved in the crocodile monitoring program, which underpins the sustainability of the Northern Territory industry.

Keith also provides the Minister with advice and recommendations on the length of the waterfowl hunting season and bag limits.

He does his work with a high degree of scientific and technical skill and is published in a number of scientific journals.

Keith is highly professional and a role model for the NT Public Service for getting the job done in a positive and objective way.



Photo: (L-R) DTC Parks and Wildlife Commission NT Wildlife Operations Director Brett Easton, DENR Flora and Fauna Principal Scientist Keith Saalfeld and DENR Flora and Fauna Executive Director Dr Alaric Fisher.



Photo: (L-R) Joshua Fischer Senior Fire Control Officer Alice Springs, Daniel Bacon A/Assistant Commissioner, Southern Operations, NT Police, Dylan Robinson Emergency Response Manager Joint Defence Facility Pine Gap.

Joshua Fischer

February 2017 Joshua Fischer, a Senior Fire Control Officer in Central Australia, was presented with an award for assisting with the development and management of an emergency management exercise in Alice Springs in November 2016.

The exercise, an annual joint initiative with NT Police and NT Emergency Services to ensure regions are prepared for emergencies, was designed around a maximum flood for Alice Springs it allowed participants to experience managing a large-scale severe weather event and to test parts of the emergency plans.

Meritorious Service Medal

Ray Nicholls was awarded the Bushfires NT Long and Meritorious Service Medal. Ray is captain of both the Cox Peninsula Volunteer Bushfire Brigade and the Training Brigade. Ray was presented the award in May 2017 for his many years of tireless effort and dedication as a volunteer at the department's stand at the Freds Pass Show.



Photo: (L-R) Collene Bremner Executive Director Bushfires NT, Rhonda Solien Cox Peninsula Volunteer Bushfire Brigade, Ray Nicholls Captain Cox Peninsula Volunteer Bushfire Brigade, Maree Bredhauer Litchfield Mayor.



Margo Brewin

In March 2017, Margo Brewin, Land Management Officer with Rangelands, received a scholarship to attend 'Science meets Parliament'.

This is an annual event organised by Science and Technology Australia, which brings together professionals in the fields of science, technology, engineering and maths (STEM) and encourages them to engage with the political process.

Milestone awards

In October 2016 people from across the NTPS were recognised for 30, 35 and 40 years of service at an event hosted by OCPE. Mohammed Dilshad from Water Resources Division attended the event and was recognised for his 30 years of service to the public service.

A further six employees from Corporate Services, Water Resources and Bushfires NT divisions will be recognised for achieving their milestones at an event to be held within DENR later in 2017.

NEW DETAILED LAND USE MAPS TO BENEFIT TERRITORIANS

A new mapping project will show how land is being used in the Northern Territory.

The Australian Government is funding the project in collaboration with the department, the Department of Primary Industry and Resources (DPIR) and the NT Farmers.

The department's Land Assessment Branch Director, Jason Hill, said the project represents the first major update to the Territory's land use maps in about 10 years and will contribute to a national land use picture of the NT's 1.4 million square kilometres.

'The new mapping will also build an up-to-date picture of new and expanding agricultural and horticultural land industries in the Territory' he said.

'Other states are also undertaking similar projects that will be combined to build a new national picture.'

Former DPIR Director of Plant Industries Development, Bob Williams, said this information is important to farmers, industry groups, developers and many others.

'You'll be able to see how much land and which areas are devoted to horticulture, urban areas, Aboriginal uses, forestry, animal industries and more. There are many uses for this data, including in biosecurity risk management and emergency disease preparedness.

'If there's a biosecurity incursion threatening a specific crop, for example, we can pinpoint all the paddocks where that crop is growing and respond quickly.

'Detailed mapping will also inform decisions about regional development, private and government investment and sustainable and efficient use of our soil and water.'

Greg Owens from NT Farmers said, 'these maps will show us a lot of useful detail, such as the area and location of crops including which are irrigated and which are not'.

'We'll also be able to add specific data, such as which variety of mango or which fodder crops are being produced in a region.

'This information can help our members make well-informed decisions about what to plant and where.'

When the project is finished, the maps will be available for free online.



Soil Scientist, Nick McGrath laying out a soil core for description and sampling at Ali Curung.

WELLBEING

Work life balance

The department offers flexible working options, recognised as a valuable tool in achieving greater productivity and supporting employees to improve their balance between work and personal commitments. These arrangements help staff return from parental leave, support carer responsibilities and transition to retirement, career breaks, part-time work, working from home and flexible working hours to meet work life balance commitments.

In 2016–17, the department supported 50 flexible working arrangements.

Employee Assistance Program

The department maintains its Employee Assistance Program (EAP), which gives employees and their families a confidential counselling service. EAP can help with personal, family and workplace issues that may affect employees' work performance, productivity and wellbeing. The EAP also provides support to managers and employees on specific workplace issues.

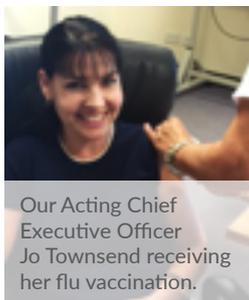
The department will maintain this program into 2017–18 to help our employees meet personal and professional challenges.

Employees who accessed the EAP program in 2016–17:

	2016-17
Employees or their family member who accessed the service	29
Number of visits	109

Flu vaccination program

As in previous years, the department again offered all staff corporately funded influenza (flu) vaccinations in 2016–17. A total of 98 staff had the vaccination in Darwin, Katherine and Alice Springs.



Our Acting Chief Executive Officer Jo Townsend receiving her flu vaccination.

Christmas closedown

In 2016, the department participated in a Christmas closedown period in accordance with the NTPS 2013–2017 Enterprise Agreement. The closedown during the three-day period between Christmas and New Year gave employees an opportunity to take leave while the department was closed.

WORKPLACE HEALTH AND SAFETY

The department is committed to providing and maintaining safe and healthy workplaces. Since the department's establishment, considerable work has been undertaken to ensure compliance with the *Work Health and Safety (National Uniform Legislation) Act* and the *Workers Rehabilitation and Compensation Act*.

Activities undertaken to implement the Work Health and Safety (WHS) legislation have included:

- continual review of current policies, procedures and systems
- regular committee and workplace meetings
- staff trained for committees and fire warden duties
- actioning recommendations from the WHS review in 2015–16.

The Governance Board is the department's WHS approving body and is supported by a WHS committee for each division. Each division's committee is chaired by its respective Governance Board member.

Workplace incidents by mechanism

Mechanism	2014-15	2015-16	2016-17
Being Hit by Objects	3	5	4
Biological Factors	1	-	-
Body Stressing	1	5	3
Chemicals and Substances	-	4	3
Environmental Factors	1	3	3
Hazard	4	8	-
Hitting Objects	3	3	4
Mental Factors	1	-	1
Slips, Trips and Falls	6	2	7
Vehicle Incidents and Other	4	8	11
Totals	24	38	36



Photo: Measuring bore standing water level - Rodney Metcalfe, Water Resources Division.



Photo: Adjusting the Darwin Rural Groundwater Watch signs - Roger Farrow and Rob Chaffer, Water Resources Division.

GROUNDWATER FORECAST FOR THE DARWIN RURAL AREA

The department's Water Resources Division routinely monitors the groundwater of 96 bores across the Darwin rural area.

At the end of each wet season (and again on October 31 each year) a representative sample of these bores is measured to assess and report on groundwater levels and their recharge response and to predict groundwater levels at the end of the dry season across eight districts in the Darwin rural area.

The aquifers underlying the Darwin rural area do not have good storage capacity and rely on annual rain to recharge them. Because of this area's high demand on the resource, we have observed a gradual decline in groundwater levels.

The rural area's end of wet season groundwater levels were lower in 2016 than those recorded in the last 10 years as a result of back-to-back poor wet seasons. Predictions

were made based on use, and some properties in the Darwin rural area were predicted to experience water supply issues. The areas of greatest vulnerability were Howard Springs, Girraween, McMinns Lagoon, Herbert, Lambells Lagoon and Berry Springs.

Water Resources predicted the end of dry season groundwater levels and correlated them against bore screen height records to better quantify households likely to have been affected. This exercise involved matching individual bore records where the top of the bore screen was 10 metres or less above the end of dry season predicted groundwater surface level.

Rural residents were aware of the demand on the water resource and

the poor wet seasons. Education and management strategies were continually being rolled out to promote the following key messages:

- Know your bore
- Reduce your water use
- Diversify your water supply.

Water Resources published groundwater levels in rural newspapers each month and on roadside water level signage close to monitoring bores. They also tailored information on monitoring bore performance and maintenance, established a team to respond to queries and share information about water risk and availability per property.

LEGISLATIVE COMPLIANCE

Employment Instructions

Under the *Public Sector Employment and Management Act (PSEMA)*, Employment Instructions provide direction to agencies on human resource management matters. The department's performance against each Employment Instruction is reported below.

Employment Instruction	Action
Number 1 – Filling Vacancies	<p>Recruitment and establishment procedures are available on the staff intranet. HR consultants provide advice to staff on recruitment and selection processes.</p> <p>Simplified recruitment training was offered online by the Office of the Commissioner for Public Employment throughout 2016–17.</p> <p>In 2016–17, the department advertised 77 (ongoing and fixed-period) positions, with 11 of these subsequently cancelled. The department had 134 staff commence/transfer in and 122 separations/transfers out, including machinery of government transfers. One promotion appeal was lodged for the period.</p>
Number 2 – Probation	<p>The department has a current Probation Policy and flowchart consistent with the PSEMA and relevant awards. New employees are advised of the probation process during induction and given information about their responsibilities.</p> <p>Probation is monitored on a regular basis and managers are advised of upcoming probation due dates to ensure timely compliance.</p>
Number 3 – Natural Justice	<p>The principles of natural justice are communicated to all employees. Natural justice is adhered to in all dealings with employees and reflected in internal policies and procedures.</p>
Number 4 – Employee Performance Management and Development Systems	<p>The department's performance management system, Personnel Evaluation System (PES), is under review to move away from the existing tool to a new and improved model that continues to align with the department's strategic plan.</p> <p>At the beginning of the PES cycle, HR holds training sessions to support managers and employees in conducting performance discussions.</p>
Number 5 – Medical Examinations	<p>Advice is provided to managers as required by HR consultants.</p> <p>There were no medical incapacity cases in 2016–17.</p>
Number 6 – Performance and Inability	<p>The performance and inability guidelines and procedures are available on the department's intranet.</p> <p>HR Services supports managers dealing with under-performance issues and helps managers and staff to improve performance.</p> <p>There was one performance process case in 2016–17.</p>
Number 7 – Discipline	<p>The Discipline Guidelines and Procedure are available on the department's intranet. HR consultants work closely with managers to ensure processes are followed correctly.</p> <p>There were no section 49 disciplinary actions in 2016–17.</p>
Number 8 – Internal Agency Complaints and section 59 Grievance Reviews	<p>The Grievance Policy and Procedure is available on the department's intranet. HR consultants work closely with managers to ensure processes are followed correctly.</p> <p>In 2016–17, two internal complaints were received and no section 59 Grievances were reported. One internal complaint was resolved with the other carrying over into the next reporting period.</p>
Number 9 – Employment Records	<p>The Department of Corporate and Information Services (DCIS) stores all employment records. The department complies with the DCIS policy regarding access to these files. Any requests to access employee records are made through the Director, Human Resources.</p> <p>No requests were lodged for employee information under the <i>Information Act</i> in 2016–17.</p>

Employment Instruction	Action
Number 10 – Equality of Employment Opportunity Programs	The department adheres to the principles of the NTPS Employability Strategy. The department has a Diversity Policy available on the staff intranet.
Number 11 – Occupational Health and Safety Standards Programs	The department has divisional Work Health and Safety (WHS) Committees to ensure WHS compliance. The details of the WHS activities are provided in the annual report. Current obligations, policies and procedures are available to all staff on the intranet.
Number 12 – Code of Conduct	The Code of Conduct is available on the department's intranet and is reinforced through the activities of HR consultants. The Code of Conduct is also covered through the corporate induction, which is mandatory for new staff. Two Code of Conduct workshops were held in 2016–17 with a total of 12 employees attending in Darwin and Alice Springs.
Number 13 – Appropriate Workplace Behaviour	The Bullying Policy and Procedure is available on the department's intranet. HR consultants provide advice to managers on addressing situations as required.
Number 14 – Redeployment and Redundancy Procedures	The department adheres to the current redeployment and redundancy provisions. No redeployees were made redundant.
Number 15 – Special Measures	The department does not have a special measures plan in place. However, the department has clear targets to increasing Aboriginal employment.

CRACKING THE CODE OF TOP END CYCADS

Botanists at the Northern Territory Herbarium teamed up with the University of Edinburgh and California Academy of Sciences to crack the code of Top End cycads in March 2017.

The department's senior botanist Nick Cuff said ongoing research has raised doubts about the identity and distribution of *Cycas armstrongii* in the Top End.

'It's possible there might be more cycad species than previously thought', he said.

Cycad samples taken from different populations across the Top End have been sent to the California Academy of Science for genetic sequencing using a range of sophisticated techniques that characterise large parts of the genome and allow wider comparisons to

be made between different populations or species.

These results will be processed by researchers from the University of Edinburgh using a high performance computing system that allows large amounts of data from multiple samples to be processed to pinpoint differences between them.

'The possibility exists that the plants we are familiar with from the Darwin region are in fact a different species to those elsewhere in the Territory, and we look forward to receiving the results in later in 2017.'



Photo: Cycad and NT Herbarium volunteer Marj King in Darwin's rural area.

IDENTIFYING LINKS BETWEEN FLOW AND RIVER ECOLOGY

Managing rivers sustainably in northern Australia relies on knowledge about the relationships between river flow and river ecology.

During 2016–17, the department studied the migration behaviour of barramundi in the Roper River to understand the ecology for sustainably managing the Roper and other Top End rivers. We need to better understand the timing and nature of these migration behaviours in relation to the timing and volume of river flows to properly manage the impacts of anthropogenic changes in flow in the river.

The department used acoustic telemetry to track fish throughout the river system, that involved tagging fish with devices that transmit a coded signal that can be recorded by underwater receivers positioned at regular intervals along the river. The transmitters are small capsules (13 mm diameter) implanted in the fish's body. The data will build a picture of the movement patterns of individual fish over several years.

At year end, the project had tagged 138 barramundi and compiled a database of more than 2 million detections of tagged fish. The preliminary data highlighted the remarkable journeys individual fish can take. In the 2015–16 wet season, one tagged fish moved 106 kilometres upstream in 8.7 days at an average rate of 12.3 km/day. Another fish moved 173 kilometres downstream in 5.6 days at an average rate of 30.9 km/day. Most downstream movements coincide with a major flow event. However, there is much variability in the timing and pattern of movements. Some of our data from 2016–17 suggests that these movements can extend into the dry season.

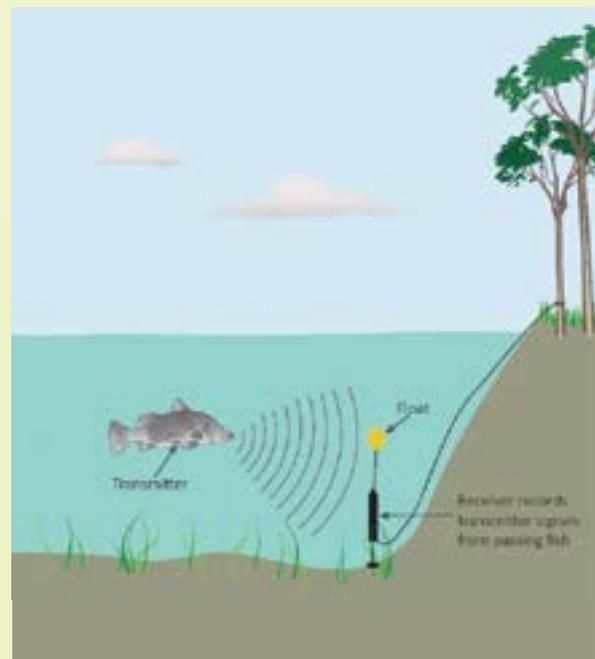


Figure 1: Barramundi are tracked using acoustic telemetry. Coded signals from implanted transmitters are recorded by underwater receivers positioned at regular intervals along the river.

The project is a partnership between the department, the Research Institute for the Environment and Livelihoods at Charles Darwin University, NT Fisheries and the Northern Land Council-managed Yugul Mangi Rangers.

Data collection will continue until at least the dry season of 2019 and will give a better understanding of the barramundi's environmental water requirements.