



ntepa

ANNUAL REPORT

2020–2021



Letter from the Chairperson NT EPA to the Minister

The Hon. Eva Lawler MLA

Minister for Environment
Parliament House
Darwin NT 0800

Dear Minister

I am pleased to present you with the annual report of the Northern Territory Environment Protection Authority (NT EPA) for the year ended 30 June 2021, as required under section 33 of the *Northern Territory Environment Protection Authority Act 2012*.

The report describes the performance of the NT EPA's functions during the 2020–2021 financial year, including its activities outlined in the Statement of Intent 2020–2022.



Dr Paul Vogel AM
Chairperson

Northern Territory Environment Protection Authority
29 October 2021



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Chairperson's message

This year's annual report provides a comprehensive account of the Northern Territory Environment Protection Authority's (NT EPA) performance in carrying out its functions and activities against its Statement of Intent 2020–2022 (Statement of Intent). The NT EPA developed the Statement of Intent last year as a new accountability requirement under the amended provisions of the *Northern Territory Environment Protection Authority Act 2012* (NT EPA Act). This year will be our first report against the Statement of Intent in our annual report. The Statement of Intent is available on the NT EPA website.

The 2020–2021 financial year continued to be a challenging and busy year that saw the NT EPA implement the new *Environment Protection Act 2019* (EP Act) and the Environment Protection Regulations 2020, both having commenced mid-2020. Credit must be extended to the staff of the Environment Division of the Department of Environment, Parks and Water Security (DEPWS) involved in implementing the new environmental impact assessment and approval framework of the EP Act.

Before it commenced, those employees embarked on an extensive program of engagement with proponents, government stakeholders and the community to build understanding of the new and improved environmental impact assessment and approval regime. The new regime has delivered on its promises of increased transparency and public participation, timeframe certainty, and flexibility of assessment options. An impressive accomplishment this year is that the NT EPA met statutory timeframes for all its decisions under the EP Act.

After years of obtaining expert reports, collaborating, synthesising, coordinating, and collating information, the NT EPA finalised and delivered its final report on seabed mining to the Minister for Environment. This was a significant joint effort; the culmination of years of work from the NT EPA supported by staff from across DEPWS.



The NT EPA continued to provide advice to the Minister for Environment on the environmental management of the onshore petroleum industry. Led by the NT EPA's Onshore Gas Committee, the NT EPA reviewed and advised on eight EMPs in 2020–2021 and provided feedback on various guidance materials.

Employees of DEPWS who support the NT EPA deliver its statutory powers and functions (environmental officers) have been kept busy and focused on waste related issues. As well as a number of investigations underway for licence breaches, an investigation into the illegal disposal of end of life tyres was finalised in the Darwin Local Court. The two defendants pled guilty to transporting waste tyres without a licence and an additional charge of polluting the environment causing serious environmental harm. Both individuals received fines in the thousands of dollars.

I would like to express my thanks to the environmental officers and other staff from across DEPWS for their continued support and commitment to the environmental management of the Northern Territory.

Without their support, professionalism and passion, the NT EPA simply would not be able to fulfil its responsibilities or perform its functions in environmental impact assessment and waste and pollution management. I would also like to thank my colleagues, members of the NT EPA, for continuing to provide expert strategic advice across the important work we do that improves environmental outcomes in the Northern Territory for current and future generations.

Dr Paul Vogel AM

Chairperson, NT EPA

Purpose and Function of the NT EPA

The Northern Territory Environment Protection Authority (NT EPA) is established by the *Northern Territory Environment Protection Authority Act 2012* (NT EPA Act) as an independent statutory body providing expert advice on environmental matters in the Northern Territory (NT).

Its purpose is to ensure the environment is protected for the benefit of current and future generations, and its objectives are defined in the NT EPA Act, to:

- promote ecologically sustainable development (ESD)
- protect the environment, having regard to the need to enable ESD
- promote effective waste management and waste minimisation strategies
- enhance community and business confidence in the environmental protection regime of the NT.

The objectives guide the NT EPA's decision making when fulfilling its functions under a range of legislation. The NT EPA's advisory powers are contained in the NT EPA Act; its powers and functions are enabled by the *Environment Protection Act 2019*, the *Environment Protection (Beverage Containers and Plastic Bags) Act 2012*, the *Waste Management and Pollution Control Act 1998* and their supporting regulations.



Independence, accountability and Statement of Intent

The NT EPA's independence is enshrined in the NT EPA Act ensuring that neither the NT EPA (as a separate legal entity) nor any of its members are subject to direction by the Minister or government in the performance of the NT EPA's powers and functions.

The NT EPA is accountable to the NT community and government. This expectation and obligation is reflected under various provisions in the NT EPA Act. During the last financial year, the NT EPA developed its first Statement of Intent 2020–2022 as required under a new accountability and governance provision. The NT EPA is required to report on its fulfilment of the activities under the Statement of Intent in its annual report. As such, the NT EPA's annual report this financial year and onwards will be reported against a Statement of Intent.

The NT EPA comprises seven members appointed by the NT Administrator, and the chair of the Northern Territory Planning Commission who is appointed by the NT Minister for Infrastructure, Planning and Logistics, in accordance with the *Planning Act 1999*. The NT EPA member details are at Appendix 1.

Relationships

The NT EPA relies on its relationship with the community, industry and government to help it achieve the important objectives and functions it is responsible for, including ensuring good environmental management outcomes are achieved and facilitating ecological sustainable development in the NT.

The Chief Executive Officer of the Department of Environment, Parks and Water Security (DEPWS) provides the NT EPA with access to staff and facilities (primarily employees from the department's Environment Division) to enable it to properly exercise its powers and perform its functions. These employees (environmental officers) support the NT EPA by conducting the environmental impact assessment process, administering licences and approvals to protect the environment from the impacts of waste and pollution, investigating pollution complaints and potential breaches of environmental legislation, preparing draft reports and other advisory material to enable the NT EPA to provide the Minister with strategic advice. This set-up allows the NT EPA to focus on significant and strategic matters, while DEPWS employees provide administrative and operational support to the NT EPA including acting under delegation from the NT EPA.

Priorities and Activities of the NT EPA

This annual report outlines the NT EPA's achievements and future priorities according to its key areas of responsibility and the associated priorities detailed in the NT EPA's Statement of Intent 2020–2022. The Statement is available on the NT EPA website.

The NT EPA's key areas of responsibility include:

- Environmental impact assessment.
- Onshore petroleum activities.
- Waste and pollution.
- Guidance and support.

Environmental impact assessment

Priority 1 – Deliver regulatory responsibilities for environmental impact processes

The NT EPA is responsible for implementing the environmental impact assessment process in the Northern Territory under the *Environment Protection Act 2019* (EP Act) and the *Environment Protection Regulations 2020*, in particular, undertaking assessments of environmental impacts of development proposals to inform approval decisions.

The EP Act commenced on 28 June 2020. Implementation is already demonstrating the positive outcomes of greater efficiency and certainty that the new legislation is intended to deliver. The NT EPA has made 25 decisions under the EP Act since commencement. In 2020–2021, 100% of these decisions were made within statutory timeframes.

Two referrals were received using the new option for a proponent to refer its proposal by “proponent initiated environmental impact statement (EIS)”. This new referral option offers potential time savings for the proponent to reach the stage of final terms of reference for an EIS. The NT EPA decided two proposals are to be assessed by Supplementary Environmental Report (SER), a new, mid-tier method of assessment introduced under the EP Act.

Key assessment decisions of the NT EPA in 2020–2021 are listed in Appendix 2, Tables 1 and 2.

The NT EPA continues to assess a small number of proposals under the former *Environmental Assessment Act 1982*. These proposals are being

assessed under transitional arrangements that include the requirement for these proposals to obtain an environmental approval from the Minister for Environment. Engagement with stakeholders and the community is critical, particularly during environmental impact assessment.

The NT EPA has actively engaged with proponents, stakeholders and the community during environmental impact assessment processes. At the commencement of the EP Act the NT EPA launched a new website to assist in notifying stakeholders of new consultations and publishing documents required under the EP Act. The NT EPA website includes a dedicated consultation hub for open and closed consultations and a ‘submit comment’ button to assist in streamlining the engagement process. Further improvements to the website are being explored such as an improved search function, subscription to consultations and proposal updates and interaction with project pages.

Communicating assessment outcomes to stakeholders is equally important to close the loop on the engagement process. Once an assessment decision is made, government authority stakeholders are emailed notification of the NT EPA's decision and a link to the decision notice is provided. A similar approach to notifying public submitters is anticipated in the absence of a subscription to the NT EPA webpage.

Priority 2 – Improve mine planning, rehabilitation and closure

There are very few examples of successful mine closure and relinquishment. Forward planning for rehabilitation and closure can improve effectiveness of rehabilitation. The NT EPA is continuing to focus its efforts on improving outcomes for mine planning, rehabilitation and closure within the environmental impact assessment process. Draft guidance that addresses common environmental issues associated with these activities will be made available for public comment in the year ahead.

The chair of the NT EPA is also the deputy chair of the Cooperative Research Centre for Transformations in Mining Economies (CRC TiME) Board. The CRC TiME is a partnership of over 70 organisations across a range of stakeholder groups. It represents mining and mining service companies, regional development organisations, State and Commonwealth governments and research organisations. The CRC TiME ensures coordinated investment into innovative research that addresses the complex challenges underpinning mine closure and relinquishment. Collectively the CRC TiME members are contributing networks, time and knowledge to support Australian communities into a successful post mining future.

Through their partnerships with CRC TiME, the NT EPA and DEPWS will be able to use the findings and outcomes of CRC TiME projects to develop guidance and direction that results in improved environmental outcomes in mine rehabilitation and supports effective mine closure.

Priority 3 – Improve integration between land use planning and environmental protection

Throughout 2020–2021, the NT EPA engaged strategically with the Northern Territory Planning Commission, Northern Territory Government agencies, in particular the Department of Infrastructure, Planning and Logistics and the Development Consent Authority to improve early consideration of environmental outcomes in land use planning and development.

In improving the integration between land use planning and environmental protection, environmental officers delivered face to face presentations to industry, including pre-referral engagement with proponents to influence early consideration of siting, design and environmental management.

Onshore petroleum activities

Priority 4 – Provide advice and recommendation on EMPs for managing petroleum activities

Under the Petroleum (Environment) Regulations 2016, the Minister for Environment is the regulator for Environment Management Plans (EMPs) and approvals for the onshore petroleum industry in the Northern Territory. A petroleum interest holder is required to submit an EMP to the Minister for review and a decision. EMPs are required to be approved by the Minister prior to commencing an onshore petroleum regulated activity.

The Minister for Environment has requested that the NT EPA provides advice on the appropriateness of proposed EMPs for managing petroleum activities under the Petroleum (Environment) Regulations 2016. The NT EPA's Onshore Gas Committee (Appendix 1) provides expert assessment and advice to the NT EPA to inform its recommendation to the Minister on onshore petroleum EMPs.

In 2020–2021, the NT EPA provided advice to the Minister on eight EMPs. The Onshore Gas Committee has continued to provide feedback on EMP content and assessment processes. The Onshore Gas Committee has recommended interest holders submit whole of scope exploration EMPs rather than individual EMPs for each regulated activity. This provides the regulator and community with a clearer understanding of whole exploration programs and enhances assessment of cumulative impacts.

Since February 2019, the NT EPA has provided independent advice and additional scrutiny to the assessment of 18 onshore petroleum EMPs.

Strategic regional environmental and baseline assessment

One of the many recommendations arising from the independent Scientific Inquiry into Hydraulic Fracturing is the requirement for a strategic regional environmental and baseline assessment (SREBA) in prospective onshore gas basins before granting any production approvals.

The purpose of a SREBA is to ensure water and the environment are appropriately protected through a proper understanding of the values present in prospective gas regions. The SREBA process will provide baseline data that can be used to assess risks and ensure potential impacts to the environment and water resources are accurately identified and mitigated. It is work that the NT Government is leading.

The NT Government has approved a SREBA Framework, which provides technical guidance as to how baseline studies should be undertaken within six domains: water quality and quantity; aquatic ecosystems; terrestrial ecosystems; greenhouse gas emissions; environmental health; social, cultural and economic. Work has commenced on the SREBA for the Beetaloo sub-Basin, which is the most prospective onshore gas basin in the NT.

As part of its strategic engagement, the NT EPA met with NT Government representatives on the progress and implementation of SREBA (refer NT EPA Strategic Engagement). The NT EPA will continue to engage with the NT Government on SREBA to ensure that the knowledge gathered can best support environmental impact assessment and approval decisions.

Waste and pollution

Priority 5 – Deliver waste and pollution regulatory responsibilities

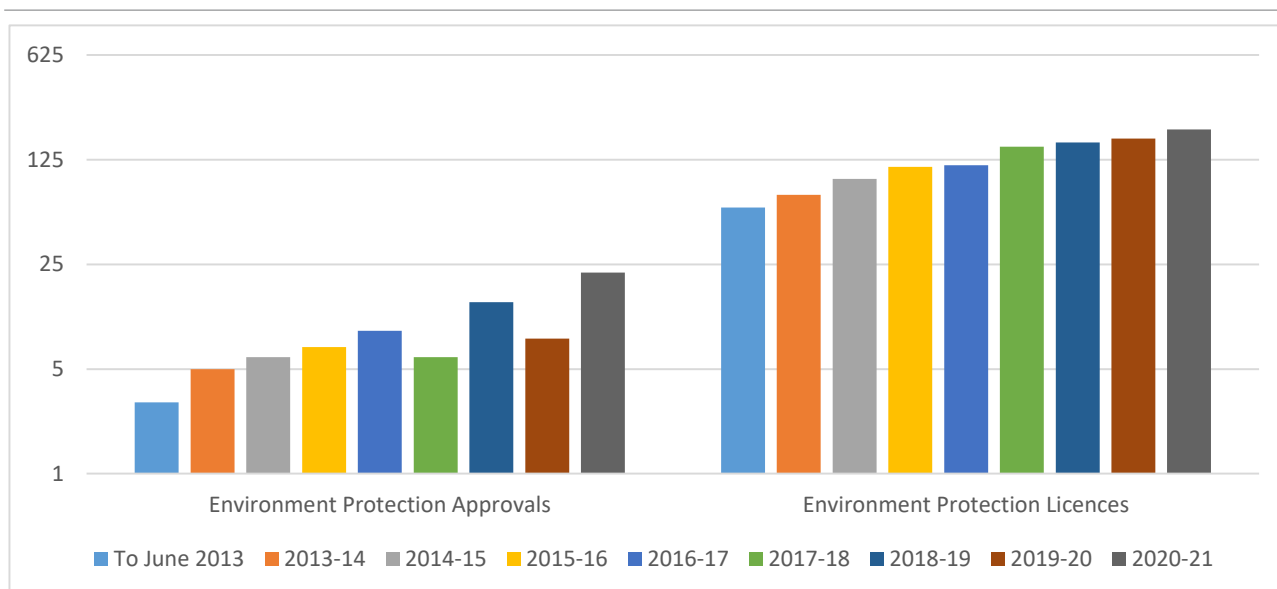
Licences and approvals

The NT EPA is responsible for issuing environment protection licences and approvals, and undertaking compliance and enforcement under the *Waste Management and Pollution Control Act 1998* (WMPC Act) and the *Environment Protection (Beverage Containers and Plastic Bags) Act 2011* (Container Deposit Scheme legislation).

The WMPC Act establishes an environmental approvals and licensing regime for certain activities. Environment protection approvals (EPAs) and environment protection licences (EPLs) are required for a range of activities and facilities, including the storage and transport of listed wastes, the construction and operation of landfills, waste transfer facilities and the construction and operation of liquefied natural gas (LNG) and methanol processing facilities. Container deposit scheme approvals relating to regulated beverage containers supplied for sale by retailers within the NT are granted in accordance with the Container Deposit Scheme legislation.

During 2020–2021, the NT EPA approved 22 EPAs and 199 EPLs (Figure 1); a modest increase from previous years. Further details of the EPAs and EPLs are available on the NT EPA website.

Figure 1: Licences and approvals administered



Container Deposit Scheme

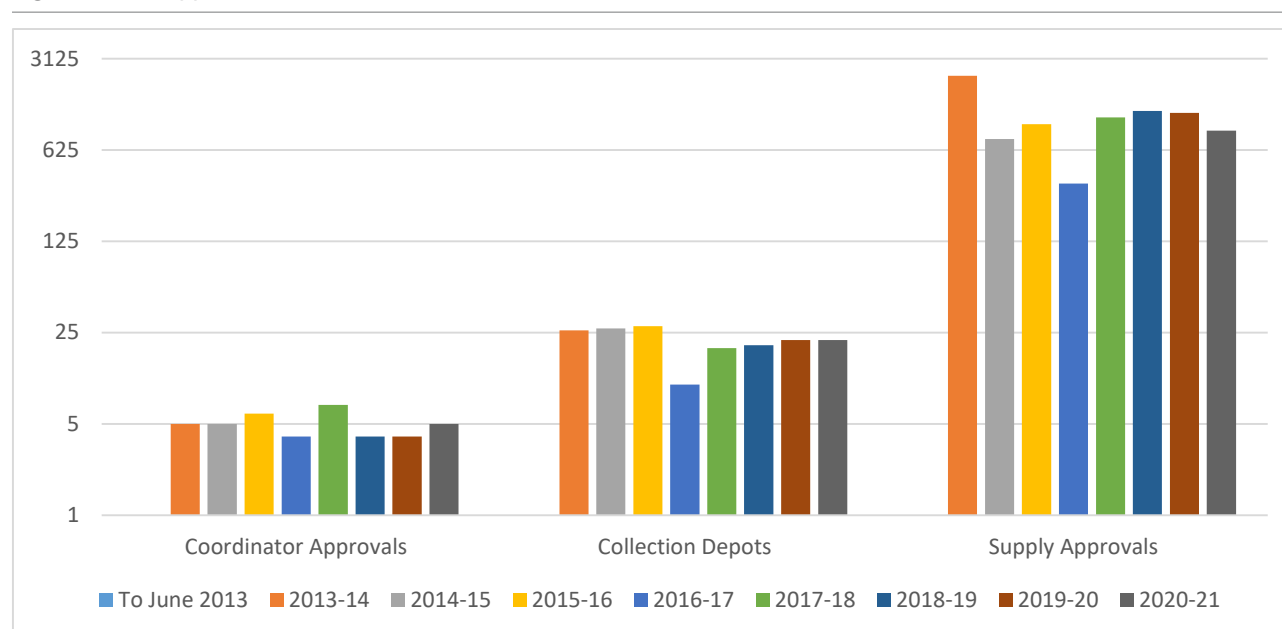
In 2020–2021:

- 905 container deposit scheme (CDS) approvals were administered (Figure 2).
- A total of 140,119,195 approved containers were sold in the NT, up 11% from 126,222,575 in the previous year.
- Of the containers sold in the NT, 72% of containers were redeemed by depots during the financial year (Figure 3).
- Over 101 million containers were redeemed at collection depots, (71%) in Darwin and (29%) in regional and remote localities. This saw over \$10 million in container deposit refunds issued to Territorians.

Container return rates fell in 2019–2020 attributable in part to the temporary closure of a number of collection depots as a result of the COVID-19 pandemic.

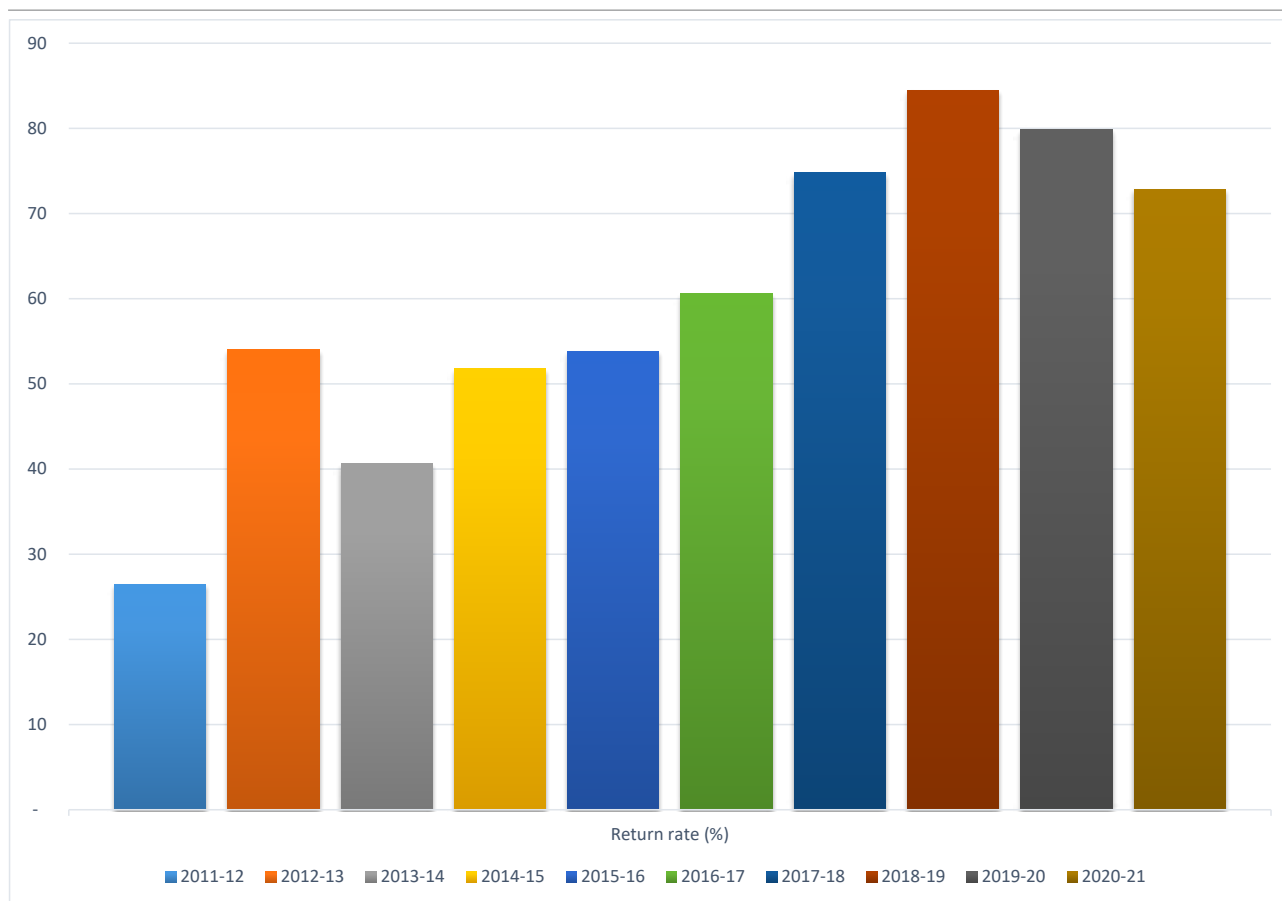
While the total number of containers returned to collection depots in 2020–2021 increased, the overall return rate again fell in 2020–2021. The reasons for this are being investigated by DEPWS, however it appears to be the result of the large increase in sales which has not been completely matched by container redemptions.

Figure 2: CDS approvals



Of the containers
sold in the NT,
72%
of containers were
redeemed by depots
during the
financial year

Figure 3: CDS return rates since 2012



Compliance and enforcement

A strong regulatory compliance and enforcement role is a key function in ensuring the environment is protected. Compliance inspections were completed for 25% of all licensed activities in this financial year.

Compliance inspections focused on high-risk activities in the Greater Darwin region, Katherine, Tennant Creek and Alice Springs, targeting a range of activities including large scale hazardous waste transport and storage facilities, landfills, LNG facilities and end of life tyre storage facilities.

Pollution reporting and response

The NT EPA's 24 hour Pollution Hotline continues to be the main conduit for the NT EPA to receive reports of pollution incidents. Less serious incidents can be reported using a form on the NT EPA's website or email.

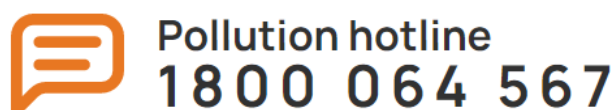
These reports enable officers to quickly respond to pollution events, ensuring environmental harm is minimised and the environment is cleaned up and remediated accordingly by those responsible.

When dealing with pollution incidents, environmental officers use a range of regulatory tools that are reasonable and practicable to ensure effective and efficient outcomes for the environment.

The NT EPA's 'Compliance and Enforcement Policy' guides environmental officers when administering the WMPC Act to ensure evidence based, open, transparent, and proportionate actions.

In the 2020–2021 reporting year, 1001 reports were made to the NT EPA in relation to environmental issues, which is an increase from previous years.

Environmental officers continue to encourage resolution of perceived environmental nuisance through dialogue and mediation between parties. In certain cases such as animal nuisance, complainants are referred to more appropriate authorities. 134 enforcement actions were undertaken in response to pollution reports (refer Appendix 3, Tables 3 and 4), including authorised officer directions, warnings, show cause letters and two prosecution matters during 2020–2021. Officers issued 30 penalty infringement notices (PINs) during the 2020–2021 period, which is a decrease compared to previous years.



Online waste tracking system

The NT EPA's online waste tracking system was implemented in January 2020. The waste tracking system has been built into the existing NT EPA Online platform to enable end to end visibility of wastes generated, reused, recycled or disposed of in the NT. All interstate movement of waste (including waste coming into the NT) is now recorded on a consignment and operators are notified online when loads are due for collection and delivery. Jurisdictions are notified online of consignment applications and completed transports. This has reduced the administrative burden on industry and the NT EPA, and provides for increased accuracy and timeliness of waste data. The system's application will be expanded following development of policy to encompass intrastate movement of waste.

Stormwater

During the Wet season uncontrolled sediment from building sites has the ability to enter the stormwater system and cause sedimentation of waterways. During the 2020–2021 Wet season, environmental officers undertook site inspections to mitigate this risk.

The NT EPA has a targeted focus on educating and implementing change within the building industry in addition to educating land owners and developers who are also responsible for managing their properties. Approximately 600 inspections and site visits were conducted for vacant land and land with building activity throughout the Darwin and Palmerston areas with the majority of land parcels located within busy building development areas such as Muirhead, Berrimah and Zuccoli.

Officers issued 28 authorised officer directions for sites requiring improvements and 11 PINs over the 2020–2021 Wet season. For sites that required minor improvements, emails and phone calls were used to educate and improve performance.

Unlicensed landfills

Environmental officers have commenced monitoring and inspecting unlicensed landfills across the Territory to gain an understanding of compliance with the NT EPA landfill guideline, 'Siting, Design and Management of Solid Waste Disposal Sites in the Northern Territory'.

A number of significant environmental concerns have been observed at landfills across the Territory. These include unmanaged leachate flowing offsite, inadequate storage of listed wastes such as batteries and oils, lack of signage and lack of site security. The aim of the landfill inspection program and long term outlook for unlicensed landfills is to improve the environmental outcomes around waste disposal.



Illegal Dumping

Illegal dumping is a significant and ongoing issue across the Northern Territory. It is estimated that hundreds of thousands of dollars are spent annually by government, local councils and private land owners cleaning up wastes that have been illegally dumped on their lands.

As well as the costs to land owners and the impact to the amenity and cultural values of an area, illegal dumping can cause significant and sometimes irreparable damage to the environment and pose significant risks to human health.

The NT EPA increased its focus on illegal dumping in 2020–2021. Environmental officers identified 'hotspots' for illegal dumping in consultation with stakeholders, including Crown lands and the Power and Water Corporation. Officers conducted targeted surveillance activities at these sites, which resulted in numerous enforcement actions being undertaken against alleged offenders. Some offenders received penalty infringement notices and other enforcement instruments.

Surveillance activities have fed into an educational letter campaign intended to raise awareness about the serious effects illegal dumping has on the environment and the community at large. Those that have received these letters are actively encouraged to report any instances of illegal dumping they witness to the NT EPA Pollution Hotline. Further community awareness raising is also planned.

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Prosecution outcome – Illegal dumping

In May 2019, thousands of waste tyres were discovered dumped at two separate locations on privately owned farmland, and public land in the Darwin rural area. Investigations by environmental officers identified two individuals as being responsible for collecting, transporting and dumping of waste tyres.

Despite consistent denials to environmental officers by both individuals, based on the evidence collected, multiple charges were laid. Charges included intentional serious environmental harm, the most serious environmental offence in the WMPC Act, which include significant financial penalties and potential imprisonment, along with additional charges relating to the unlicensed transport of a scheduled listed waste.

On 30 April 2021 in the Darwin Local Court, the court imposed a sentence of \$23,000 fine and almost \$17,000 in investigation costs awarded against one of the defendants.

On 7 June 2021 the other defendant was convicted and fined \$1,500 plus the usual victims of crime levy, resulting in a total amount of \$1,650 to pay.

This case highlights the risk posed by unscrupulous and unlicensed operators transporting waste, and is a good reminder to all businesses generating any wastes to ensure that their waste contractors hold the appropriate licenses to undertake the prescribed activity.



**On 30 April 2021
the court imposed
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Air quality

The NT EPA manages air quality in the NT (including odour) through licensing of facilities under the WMPC Act, assessing the potential impact of air emissions from proposed and existing projects, responding to air-quality-related pollution incidents and complaints, and conducting continuous monitoring of air quality in the Darwin Region. Real-time and historical air quality data measured at the NT EPA ambient air quality monitoring stations are available to the public on the NT EPA website.

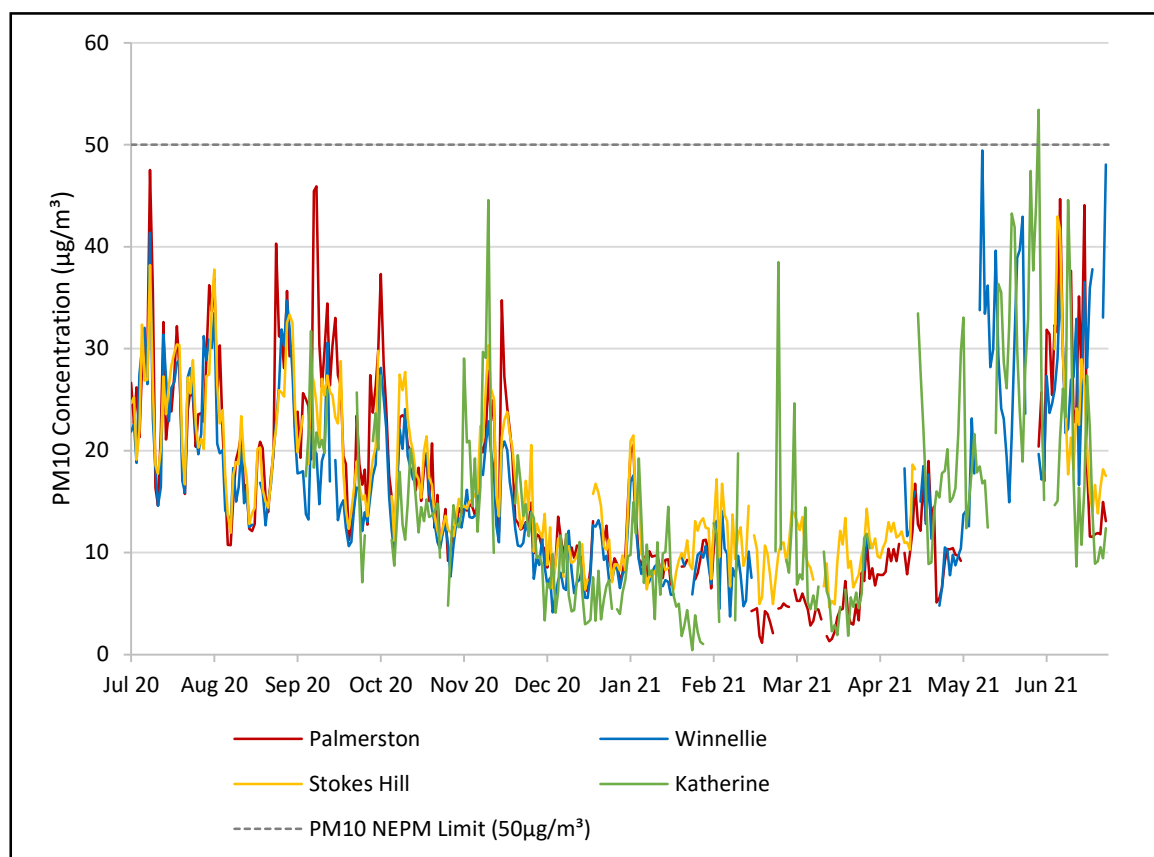
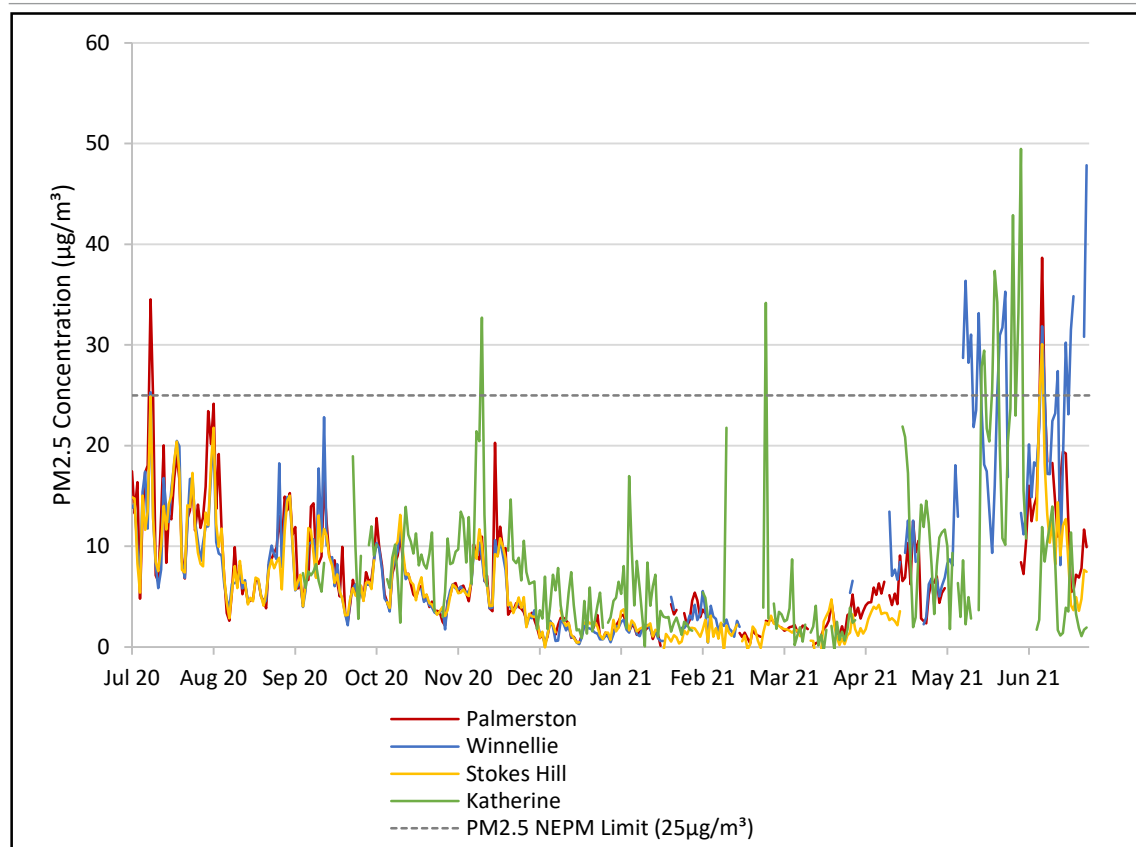
During 2020–2021, the NT EPA continued to maintain and operate a network of three ambient air quality monitoring stations in the Darwin region at Palmerston, Winnellie and Stokes Hill. The stations measure the concentrations of air pollutants including carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂) and particulates (as PM₁₀ and PM_{2.5}). Data collected from the stations enables the NT to report its compliance with the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM), which establishes national ambient air quality standards for key pollutants.

In August 2020, the NT EPA entered into a performance agreement with Katherine Town Council (KTC) that required KTC to install and operate an ambient air quality monitoring station (AQMS) for monitoring particulates in air in Katherine. The Katherine AQMS station started operating in September 2020 and data from the station is displayed on the NT EPA air quality website along with data from the other stations in Darwin.

Air quality in Darwin and Katherine was generally good, except for high particle concentrations that occur frequently during the Dry season. Particulate matter (PM) mass concentrations are measured continuously for particles of different sizes (PM₁₀ and PM_{2.5}) at each air quality monitoring station.

There was only one exceedance of the AAQ NEPM 1-day standard for PM₁₀ (Figure 4). This event occurred at the Katherine AQMS. There were several exceedances of the AAQ NEPM 1-day standard for PM_{2.5} at all of the stations (Figure 5). These exceedances have been attributed exclusively to smoke from controlled burning and wildfires. Elevated O₃ concentrations sometimes occur during bushfire events, but rarely exceed the AAQ NEPM standard. Concentrations of other measured air pollutants CO, NO₂ and SO₂, remained low throughout the year.

The NT EPA continued to coordinate the provision of data from industry to the National Pollutant Inventory (NPI). This included checking data for quality, accuracy and completeness. The NPI is a publicly accessible national database that provides the community, industry and government with information on the emission and transfer of 93 toxic substances from industry, transport and commercial premises to air, land and water. The NT EPA implements NPI reporting in the NT under the Environment Protection (National Pollutant Inventory) Objective 2004. The latest emissions data (2019–2020) is available on the NPI website, with over 100 NT facilities reporting their emissions over this period.

Figure 4: One-day average particulates (PM_{10}) concentrations at the air quality monitoring stations (2020–2021)Figure 5: One-day average particulates ($PM_{2.5}$) concentrations at the air quality monitoring stations (2020–2021)



Particulates monitoring in the NT – The AirRater App

The AirRater App is a free smartphone app that provides users with information about air quality, and other environmental factors such as temperature at a selected location. The App was developed by researchers from the University of Tasmania (UTas) and is funded by the NT EPA and the Department of Health for deployment in the NT. AirRater sends alerts to users and is used by people to get information about protecting their health during extreme air quality or weather events.

Air quality in Darwin remains generally good, except for high particle concentrations that occur during the Dry season. The national ambient air quality standards for particles are exceeded on several occasions because of smoke from planned and unplanned bushfires during the Dry season. Smoke consists of fine particles such as PM_{10} and $PM_{2.5}$ (which are particles with aerodynamic diameters equal to or less than 10 micrometres and 2.5 micrometres respectively).

Poor air quality creates health problems for people, particularly those who suffer from lung and heart conditions, and those who are pregnant, young, or old. In an extreme event such as a bushfire, even people with no prior medical conditions can experience poor health when they inhale fine particles.

The AirRater system gathers data on smoke and temperature from a network of monitors and sensors located in the Darwin region. This includes $PM_{2.5}$ and PM_{10} data, which are measured at the air quality stations. This data is fed to a central database, and sent via the AirRater app, which shows near real-time readings for the immediate area to alert users of the app when the air quality is poor in their current or saved locations, giving them time to act.

Results of a survey of AirRater use in the NT conducted by the UTas team suggested that AirRater App use has been increasing and it had reached and supported vulnerable populations to make informed decisions for health management.



Contaminated land - PFAS

The NT EPA has been working with various NT Government agencies on a response to Per- and poly-fluoroalkyl substance (PFAS) contamination. PFAS are an emerging group of contaminants identified across Australia and worldwide in particular the US and Europe. PFAS are a group of manufactured chemicals that are used in products that are resistant to heat, water and oil. Due to their heat resistant properties, and ability to form aqueous film forming foams, they have been used extensively in fire-fighting foam applications in Australia for decades. PFAS are understood to be highly persistent within the environment, readily leachable from soils, and bio-accumulate up the food chain.

A Territory PFAS Investigation Taskforce has been established between the Department of Chief Minister and Cabinet (DCMC) and DEPWS, driving the PFAS response in the NT. The NT EPA has been in discussion with various NT Government agencies and industry stakeholders to determine which sites are potentially impacted by PFAS. Indicative investigations have commenced and will continue over the next two years to determine the presence or absence of any PFAS contamination at and from the identified priority sites.



Snapshot of actions taken by the NT EPA to address contaminated land in the Territory

Berrimah Rail Terminal

In May 2020 a spill of approximately 20,000L of diesel occurred at the Berrimah Rail Terminal, occupied and controlled by One Rail Australia. Environmental officers were involved in the immediate spill response, issuing directions to ensure the environmental impacts were mitigated.

Remedial works were undertaken, resulting in contaminated materials excavated from the incident location and stockpiled on site for future management.

As a result a Section 48 Notice (requirement to undertake an Environmental Audit) was issued, to determine residual impacts (if any) and further remedial measures (if any) to be undertaken to ensure the site is fit for its ongoing use and environmental impact is acceptable. The results of the Audit are anticipated in December 2021.

Bishop Street Woolner

Environmental officers became aware of chlorinated hydrocarbon contamination resultant from activities associated with an industrial laundromat in Woolner. Officers have been engaging with the site owner and issued a Section 48 Notice (requirement to undertake an Environmental Audit).

The notice formalises the requirement to undertake a contaminated land investigation to determine the nature and extent of contamination at the site and recommend remedial actions to ensure the site is fit for its ongoing use and the environmental impact is acceptable.



Priority 6 – Improve the regulatory framework for waste and pollution

In 2020–2021 the NT EPA contributed to government policy by providing advice to improve the regulatory framework for managing wastes, pollution and end of life product management:

- The NT EPA supported the development of the NT Government's Circular Economy Strategy through provision of strategic and timely advice.
- Ongoing participation in the National Waste Working Group (NWWG) CDS sub-committee. Australia is on track for nation-wide coverage of CDS by 2023. The CDS sub-committee is responsible for promoting harmonisation and progressing strategies to harmonise schemes nationally where possible by 2025, including the container approval processes, deposit amounts, container scope, and container labels. The NT has been actively engaged in this harmonisation process and ensuring the reforms to the CDS are largely consistent with national approaches.
- Progressing national level work with membership of a number of national groups, including: the Air Project Management Group and National Air Quality Advisory Group with significant input into the National Clean Air Agreement; National Chemicals Management and Standards Group (i.e. Industrial Chemicals Environmental Management Standard, Minamata Convention ratification, emerging chemicals such as PFAS); HEPA National Chemicals Working Group (i.e. PFAS National Environmental Management Plan – Version 3.0).
- Participation in a variety of PFAS steering committees and working groups, allowing the NT EPA to be at the forefront of this environmental issue and provide input on a Territory and national scale.



Measures for implementing obligations under the Minamata Convention in the NT

The Minamata Convention on Mercury was agreed in January 2013 and introduces global controls to manage the harmful effects of mercury pollution. It was signed by Australia in October 2013. The Convention's purpose is to protect human health and the environment from anthropogenic releases of mercury and its compounds.

The NT continues to support the Australian Government's progress towards ratification of the Minamata Convention by the end of 2021.

Mercury is a toxic pollutant that can circulate globally through the oceans and the atmosphere for decades, and can cause significant harm to human health and the environment, sometimes at great distances from its point of origin. Acute or chronic exposure can be fatal. The World Health Organisation lists mercury as one of the top 10 chemicals of major public health concern.

The NT does not have any major emitters of mercury such as coal-fired power stations, non-ferrous metal smelters or alumina production; however, there are several industries which use, emit, release or store small quantities of mercury. About 60 industries in the NT report emissions of mercury to air, land and water to the National Pollutant Inventory (NPI) annually.

The NT Government will implement Minamata Convention obligations that come within its responsibility primarily through mechanisms under existing legislation such as the *Environment Protection Act 2019* (EP Act) and the *Waste Management and Pollution Control Act 1998* (the WMPC Act). Any proposed activity that has the potential to have a significant impact on the environment, such as those involving discharge of mercury, must be referred to the NT EPA for assessment under the EP Act and associated regulations. The NT EPA administers the assessment process and provides advice to the Minister for Environment on the environmental acceptability of a proposal.

Guidance and support

Priority 7 – Develop guidance material to support proponents and the community

The NT EPA has a role in enhancing community and business confidence in the environmental protection regime of the Territory. This role includes building understanding around regulatory processes, and clarifying responsibilities, expectations and opportunities for proponents and the community through the development of guidance material.

In 2020–2021, the NT EPA has:

- Advised the NT Government about the potential and actual impacts of seabed mining in the NT through the 'Final Report: Review of seabed mining in the Northern Territory – Environmental impact and management' (Final Report).
- Finalised and published eight guidance documents to support the new environmental impact assessment process. The guidance provides an overview of environmental impact assessment and approvals, making a public submission during environmental impact assessment processes, and matters to be addressed in documents provided for consideration under the EP Act.
- Finalised its environment impact assessment referral guidance for proponents under the EP Act, 'Referring a proposal to the NT EPA'. The purpose of the document is to provide guidance to proponents about when and where to submit a referral to the NT EPA for consideration, the matters that must be addressed in the referral, the structure and process for the referral and how a referral is assessed by the NT EPA.
- Added a new contaminated land audits and notices spatial layer in the Natural Resource Maps (NRMaps) system to spatially represent Site Audits and Pollution Abatement Notices currently included in the NT EPA Public Register. Approximate locations of Site Audits and Pollution Abatement Notices have been provided as points in the layer, with links to related documents detailing: spatial extent, site area and the outcomes of any remediation works (where relevant). It is a useful tool for planners, developers and regulators to inform land use decisions. This new layer aims to enhance customer service capability and collaboration between government, industry and individuals for due diligence and economic development across the NT.



Seabed Mining Final Report

In March 2012, the NT Government introduced a moratorium on exploration and mining in the NT coastal waters (seabed mining). The moratorium was established following community concerns, and limited information and knowledge about the environmental impacts of seabed mining and their management.

To inform the NT Government's review, the NT EPA was requested by the then Minister for Natural Resources, Environment and Heritage, to prepare a report on the actual or potential impacts of seabed mining and methods for managing the impacts.

The NT EPA released its 'Draft Report: Review of Seabed Mining in the Northern Territory – Environmental Impacts and Management' on 29 September 2020 for community comment. The NT EPA considered all the feedback and where appropriate made amendments to its final report. In December 2020, the NT EPA delivered its final report 'Review of Seabed Mining in the Northern Territory – Environmental Impacts and Management' (Seabed Mining Report) to the Minister for Environment.

Following consideration of the NT EPA's Seabed Mining Report and a report from the Aboriginal Areas Protection Authority, on 5 February 2021 the Minister for Environment announced her decision to prohibit seabed mining in the NT, including her intention to consult on the prohibition. In May 2021, the Minister undertook public consultation on a Draft Declaration to Prohibit Subsea mining supported by her Statement of Reasons, including consultation with the NT EPA. In response to the Minister's Draft Declaration, the NT EPA expressed its support and offered specific feedback regarding the Draft Declaration.

The declaration process is expected to be completed in August 2021. The NT EPA's Seabed Mining Report and public consultation information is available on the NT EPA website.

NT EPA strategic engagement

COVID-19 continues to present challenges to people, organisations, business and governments around the globe. Prior to COVID-19, the NT EPA regularly met in person (face to face with other members of the NT EPA) with several stakeholders, and visited various proposals and development sites.

The NT EPA's broader site visit and in-person engagement activities continued to be disrupted in 2020–2021.

The NT EPA continued to meet on a monthly basis via video conference, which has become the norm in the way the NT EPA conducts its business. Two out of the 12 meetings were hybrid meetings (some members of the NT EPA attended in person while others attended via video conference due to state lockdowns).

In 2020–2021, the NT EPA Chairperson met with the Minister for Environment and the Chief Executive Officer of DEPWS on a regular basis. The NT EPA Chairperson engages with the CRC TIME in his role as deputy chairperson, and the NT Planning Commission as an ex-officio member.

The NT EPA met with the following stakeholders:

- Northern Territory Controller of Water – on water allocation planning and licensing.
- Executive Director, Flora and Fauna Division, DEPWS – on SREBA.
- Environmental Defenders Office NT, Arid Lands Environment Centre, and Environment Centre of the NT – stakeholder engagement to build understanding around assessment processes under the new EP Act.
- Department of Industry, Tourism and Trade – on Rum Jungle Mine Rehabilitation.
- Chairperson of TNG Limited and the Chief Executive Officer of TNG Limited – on the Darwin Processing facility proposal.
- Territory Major Projects Commissioner – informing and building understanding of the new Commissioner's role and vice versa, the NT EPA's functions and responsibilities.

These meetings provide the NT EPA with a greater understanding of current and emerging issues and provide an opportunity for robust discussions to occur on important matters and to continue positive partnerships, collaboration and communication.

Heads of EPAs

The NT EPA is an active participant in the activities of the Heads of EPAs (HEPA). HEPA is a high level forum comprising chairpersons or equivalent representatives from all Australian jurisdictions and New Zealand that provides an opportunity to share knowledge and experiences, identify opportunities for improvements in nationally consistent regulation, and promote greater coherence in regulatory practice and policy across jurisdictions.

In May 2021, the NT EPA Chairperson attended a HEPA meeting held in Melbourne, while environmental officers participated in a range of HEPA working groups including the National Waste Working Group (NWWG).



Looking ahead

There is no doubt that the Coronavirus pandemic will continue to impact all aspects of business in the years ahead. Continuing to work together, collaborating, partnering and adapting will help us achieve our priorities during these challenging times.

The NT EPA's Statement of Intent 2020–2022 guides our priorities into the following year. This means the NT EPA will continue to deliver efficient environmental impact assessment within statutory timeframes, including the provision of our first advice to the Minister for Environment regarding draft Environmental Approvals and associated conditions under the EP Act.

The EP Act requires environmental impact assessment to take into account the impacts of a changing climate. This includes consideration of greenhouse gas emissions from development proposals. The assessment and regulation of greenhouse gas emissions is a complex, rapidly evolving and contested issue. It is critical the NT EPA provides clear guidance on its expectations consistent with legislative requirements. The NT EPA has commenced drafting guidance on its Atmospheric Processes Environmental Factor. Finalising this guidance will be informed by consultation with stakeholders during 2021–22.

Recognising the Northern Territory Government's interest in establishing sustainable development precincts, as envisaged by the recommendations of the Territory Economic Reconstruction Commission, the NT EPA will need to prepare itself for the potential referral of strategic proposals under the EP Act. Strategic environmental assessment can deliver a number of benefits, including improved consideration of cumulative impacts and delivery of conservation and planning outcomes on a broader scale compared to project-by-project assessments. Strategic assessments can also provide greater certainty for project proponents and reduce the administrative burden on regulators and proponents.

In 2021–2022 the NT EPA will continue to provide strategic advice on environmental protection and management of onshore petroleum activities, including recommendations to inform the Minister for Environment as the regulator on onshore petroleum EMPs received under the Petroleum (Environment) Regulations 2016. The regulator has acquired extensive expertise over the last two years and the regulatory assessment framework has matured, providing more confidence in the regulatory framework and the regulator.

A Compliance and Enforcement Framework is being developed by the Environment Division that will be finalised in the year ahead. It will provide clarity to the regulated community on the NT EPA's approach to compliance and enforcement. The framework will establish a risk based approach to environmental regulation that is guided by the following principles: targeted, proportionate, transparent, consistent, accountable and independent, inclusive, authoritative, and responsive, timely and effective.

Another area the NT EPA intends to focus on in the year ahead is the review of its website content to:

- ensure contemporary and relevant advice is available on waste management and pollution control matters
- consider platforms to realise benefits of digital environmental impact assessment.

The NT EPA will focus its efforts on developing guidelines and guidance material to assist stakeholders in navigating complex processes particularly in relation to the environmental impact assessment and approval regime, and best practice environmental regulation of landfills in the Territory.

The following guidance material is expected to be finalised in 2021–2022, and made available on the NT EPA website:

- Technical guidance on the NT EPA's Atmospheric Processes Environmental Factor to support consideration of the impacts of a changing climate in impact assessment processes.
- Environmental Impact Assessment guidance - Assessment of cumulative impacts.
- Environmental Impact Assessment guidance - Mine site rehabilitation and closure.

The NT EPA recognises the value of using digital technologies to streamline capture, supply, and interpret data in the environmental impact assessment process. Access to data and information will assist in project-specific environmental impact assessment including information being available for consideration of potential cumulative impacts.

The advantage of digital technologies feeds into improved methods of clearly communicating environmental information, compliance monitoring, consideration of cumulative impacts and building knowledge and data for evidence based decision making.

2021–2022 will also see the NT EPA review its Statement of Intent, as required by the NT EPA Act.

Appendices

Appendix 1: NT EPA membership



Dr Paul Vogel AM, NT EPA Chairperson

Dr Paul Vogel was appointed as the chair of the NT EPA on 14 November 2016.

Now a non-executive board director and strategic consultant, Dr Vogel was the chair of Western Australia's Environmental Protection Authority from 2007 to 2015.

Dr Vogel was also the inaugural Chief Executive and chair of the South Australian EPA from 2002 to 2007 and prior to that held senior executive positions in the WA departments of the Premier and Cabinet and Environmental Protection.

Dr Vogel has a PhD in chemistry from the University of WA and has extensive knowledge and experience across a broad range of environmental issues and sustainability, in organisational and regulatory reform and in the delivery of strategic environmental and business outcomes.

Dr Vogel is also chair of the national Cooperative Research Centre on Contamination and Remediation of the Environment (CRC CARE), Chairperson of the WA Marine Science Institution, Deputy Chairperson of CRC TiME – CRC on Transformations in Mining Economies and a member of the Australia Institute of Company Directors. He was appointed to the NT EPA from 1 January 2016.



Ms Janice van Reyk

Ms Janice van Reyk is an experienced non-executive director on a number of boards and audit and risk committees in the infrastructure and utilities sector including Lochard Energy, Australian Naval Infrastructure and Ports Victoria. She previously served on the Audit, Risk and Finance Committee of Sustainability Victoria and the three person Ministerial Advisory Committee to inquire into the future strategic role of the Environment Protection Authority Victoria.

Ms van Reyk's environmental experience includes advising on a range of socio-economic assessments, stakeholder consultations, environmental and remediation issues. Together with her executive management and experience in industry she brings great depth to the NT EPA.

Ms van Reyk is a Fellow of the Australian Institute of Company Directors, a member of the Environment Institute of Australia and New Zealand and a Fellow of the Certified Practising Accountants. She has a Master of Environment specialising in water, energy and urban issues; a Master of Commerce specialising in corporate finance, economics and accounting; a Bachelor of Arts and a Bachelor of Laws.



Dr Ian Wallis

Dr Ian Wallis brings 30 years' experience as an environmental engineer providing advice to water and sewerage authorities and industries. He has been a registered environmental auditor for 17 years providing advice in the form of environmental studies, audits, investigations and inputs into environmental impact assessments.

Dr Wallis conducted postgraduate research at Monash University in sediment transport, the dispersion of wastes in estuarine and ocean waters, and the social and technical issues involved in managing pollution, and was a researcher at various Universities and laboratories in the UK and USA.

Dr Wallis has extensive experience in environmental assessments, air quality, water quality and oceanographic studies, and is recognised as one of Australia's experts in these fields. He was a member of the Expert Panels on Desalination and on Dredging in Darwin Harbour.



Mr Joe Woodward

Mr Joe Woodward brings more than 35 years' experience managing and advising on environmental regulation and approvals having worked in a variety of roles in the New South Wales Environment Protection Authority and its predecessor, the State Pollution Control Commission.

Mr Woodward has extensive experience in environmental management and regulation. As Deputy Director General of the NSW Department of Environment and Conservation he oversaw assessment and regulation of air, water, noise, waste, chemicals and radiation, as well as biodiversity, threatened species and Aboriginal cultural heritage protection. He has served as a Commissioner for the NSW Independent Planning Commission responsible for statutory assessments and determinations of state significant development proposals including mining, major industrial and urban developments.

Mr Woodward holds a Master of Engineering and Bachelor of Science. In 2009 he was awarded the Public Service Medal for Outstanding Contribution to the Environment in New South Wales.



Ms Samantha Nunan

Ms Nunan is experienced in providing environmental regulatory and policy advice to industry and governments across multiple jurisdictions, including the NT. Working in industry for many years, Ms Nunan has significant experience in participating in regulatory reviews and reform processes, predominantly as an industry participant, but also during her time in government.

During her time as a practising lawyer, Ms Nunan provided advice to businesses and statutory bodies relating to compliance frameworks and responses to environmental regulatory investigations.

Ms Nunan has had extensive exposure to environmental assessment processes, securing project approvals and the application of regulatory policies and legislation across a range of different industries, including resources, renewables, waste, agriculture and planning. With this experience, Ms Nunan brings a good understanding of the existence of and the importance of overlapping interests in land and resources by various stakeholders including Traditional Owners, Government, Industry and broader communities.



Dr Rod Lukateli

Dr Rod Lukateli has a Bachelor of Science (Hons) and a PhD from the University of Western Australia.

Dr Lukateli has 28 years oil and gas industry experience and is now semi-retired, working as an environmental consultant. He has extensive experience in environmental approvals and impact assessment, wastewater treatment, atmospheric emissions management and assessment and remediation of contaminated sites. Previously, Dr Lukateli held an academic position at the University of WA where his research included studies on the impacts of eutrophication on algae and seagrasses in lakes and estuaries; development of ecological models; and the relationships between hydrodynamics and water quality in reservoirs, rivers and estuaries.

Dr Lukateli has been a Board Director of the Cooperative Research Centre on Contamination and Remediation of the Environment since its inception in 2005; was Chairperson of the Great Australian Bight Research Program Management Committee and was a member of the Environmental Protection Authority of Western Australia between 2009 and 2014.

Dr Lukateli is a Director of Perth Racing; and is a Board member of the Western Australian Marine Science Institution.



Dr Vaughan Beck

Dr Vaughan Beck, AM is a Fellow of the Australian Academy of Technological Sciences and Engineering and The Institution of Engineers, Australia. He was a member of the NT Scientific Inquiry into Hydraulic Fracturing in the Northern Territory, 2016–2018.

Dr Beck was recently Senior Advisor, Technical to the Australian Academy of Technological Sciences and Engineering (ATSE) and Executive Director – Technical, responsible for the Academy's research projects and the development of policy advice to government in energy, water, infrastructure, innovation, technology, technology and health, education and climate change. During his appointments with ATSE, Dr Beck was: Chairperson of the International Council of Academies of Engineering and Technological Sciences, Low Carbon Energy Group; Deputy Chairperson of the Australian Council of Learned Academies project report on Shale Gas; and Deputy Chairperson of the ATSE Unconventional Gas Conference and International Workshop.

Dr Beck has qualifications in mechanical engineering, structural engineering and fire safety and risk engineering. He was Visiting Professorial Fellow, Warren Centre of Advanced Engineering, University of Sydney and led the Fire Safety Systems project. He was appointed Professor and Director at the Centre for Environmental Safety and Risk Engineering at Victoria University and subsequently, Pro-Vice Chancellor (Research) at the University.



Dr David Ritchie, Chair of the NT Planning Commission (ex-officio member)

Dr David Ritchie has over 35 years' experience working for organisations responsible for heritage protection and land management, in a combination of professional, expert and also senior management and executive roles. This work includes extensive experience with statutory boards with roles under land rights, native title, and environment and heritage legislation. For more than 20 years he has held Chief Executive roles, leading organisations responsible for land resource planning, remote service delivery, parks & wildlife, natural resource management, environment protection, Aboriginal policy, Aboriginal cultural heritage and museums, art galleries and archives.

Dr Ritchie's work has involved extensive field work in remote regions of the NT working closely with Aboriginal communities and developers on cultural heritage surveys for major infrastructure developments - ranging from gas pipelines and the North Australian Railway to mines, aquaculture and the newly created National Parks.

Dr Ritchie is a graduate of the Australian Institute of Company Directors and a Fellow of the Australian Anthropological Society. He is also a Director of Ninti One Limited, on the board of the Northern Territory Land Corporation and Chairperson of the Northern Territory Grants Commission.

NT EPA Onshore Gas Committee membership

- Mr Joe Woodward (Chair)
- Dr Vaughan Beck
- Dr Rod Lukatulich
- Dr Ian Wallis
- Ms Samantha Nunan

Appendix 2: Decisions made under the Environmental Assessment Act in 2020–2021

Table 1: Decisions that assessment is required

PROPONENT	PROPOSAL	DATE OF DECISION
Primary Gold Limited	Rustlers Roost and Quest 29 Open-cut Redevelopment Project	11 May 2021 (EIS)
Winchelsea Mining Pty Ltd	Winchelsea Island Manganese Mine	10 March 2021 (EIS)
Sun Cable Pty Ltd	Australia-ASEAN Power Link Project	12 January 2021 (EIS)

Table 2: Decisions that assessment is not required

PROPONENT	PROPOSAL	DATE OF DECISION
Department of Chief Minister and Cabinet	Jabiru Power Station	7 June 2021
Groote Eylandt Mining Company Pty Ltd	J Quarry Haul Road Realignment Project	22 December 2020



Appendix 3: Compliance and enforcement actions in 2020–2021

Table 3: Entities issued with penalty infringement notices

ENTITY	NUMBER OF PINS ISSUED
Territory Home Pty Ltd	1
Sunbuild Pty Ltd	2
MPZ Builders Pty Ltd	1
Tsikouris Investments Pty Ltd	1
JGA Concreting Pty Limited	1
Tomazos Group Pty Ltd	1
Antonio Tomazos	1
Option Group Pty Ltd	1
Gerard Peter Paul Breen	1
Corey Edward Woodcroft	1
Woodcroft Constructions Pty Ltd	1
Kassiou Constructions Pty Ltd	1
About Homes NT Pty Ltd	1
George Sfouggaristos	1
Alice Springs Turf Club	1
Power and Water Corporation	2
Antonios Psyris	1
Auriga Marine Pty Ltd	1
Olympic Concreting and Construction Pty Limited	1
NT Fish Pty Ltd	1
Global Marine & Engineering Pty Ltd	1
Robin Congreve	1
JT Construction (NT) Pty Ltd	1
Darwin Secondhand & New Tyres (John Henry Jordan)	1
Mark Voltz	1
Georgios Hatzimihail	1
Elias Hatzimihail	1

Table 4: Prosecutions

DATE	DEFENDENT	OFFENCES	PENALTY \$
30 April 2021	Paul McNally	Section 83(2) – causing serious environmental harm	\$23,870 penalty \$16,823.80 costs \$150 victim levy
7 June 2021	Travis Mills	Section 30(3) – Conduct activity without the appropriate EPL	\$1,500 penalty \$150 victim levy



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