Government of **Western Australia**
Department of **Water and Environmental Regulation**

We're working for Western Australia.

Let's not draw the short straw

reduce single-use plastics

Issues paper
April 2019

Department of Water and Environmental Regulation

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Message from the Minister

"We can do more to reduce single-use plastic."

Many Western Australians are concerned about the environmental impacts of plastic waste. Plastic waste affects marine life through ingestion and entanglement, is commonly littered and contaminates waste treatment facilities. Plastic waste can also impact terrestrial animals and can enter the human food chain, posing a risk to public health.

To address this problem the McGowan Government is taking steps to reduce plastic pollution. So far we have banned the supply of lightweight plastic bags in 2018, instructed government agencies to stop buying all avoidable single-use plastic items such as plastic cups, straws, plates and cutlery and have begun work on the introduction of a container deposit scheme in 2020. Australian environment ministers are also working with the Australian Packaging Covenant Organisation towards a target of 100 per cent of Australian packaging to be recyclable, compostable or reusable by 2025 or earlier.

We can do more and this paper invites you to let us know your view on additional measures to reduce single-use plastic.

This paper outlines problems caused by single-use plastics and invites community input on the best approaches to reduce:

- plastic in marine and aquatic environments;
- plastic in terrestrial environments; and
- plastic contamination of waste treatment facilities.

There are significant opportunities across the packaging sector to avoid some plastics altogether or to minimise their use. Consultation undertaken as part of WA's waste strategy review showed that the community considers that packaging is a key waste issue and improved management of packaging, including avoidance and minimisation, recyclability, labelling and products stewardship, is required.

I invite you to respond to this consultation to help Western Australia implement the best possible approach to reducing single-use plastics.

Hon Stephen Dawson MLC
Minister for Environment

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Get involved to help reduce single-use plastics

This issues paper outlines why Western Australians are concerned about single-use plastics and invites you to provide your views and preferred options to reduce their harmful impacts.

Community feedback promotes transparency in the design of government policy, helping us to improve our programs. It also gives community members the opportunity to put forward innovative ideas to solve problems.

We want to hear from you

You are invited to share your views by completing an online survey or by making a written submission to the Department of Water and Environmental Regulation. Your feedback will help us develop options to better manage the harmful impacts of single-use plastics.

Online survey responses and written submissions will be collated and summarised after the consultation period has closed and then published on the Department's website. We will analyse those responses carefully and then recommend a series of management options for consideration to the Minister for Environment.

You can subscribe at www.dwer.wa.gov.au/single-use-plastic to receive news and updates on reducing single-use plastics.

Making a submission: your legal rights and responsibilities

If you make a submission, please be aware that in doing so, you are consenting to it being treated as a part of a public document.

Your name will be published; however, your contact address will be withheld for privacy. If you do not consent to your submission being treated as part of a public document, you should either mark it as confidential, or specifically identify what information you consider to be confidential, and include an explanation.

Please note that even if your submission is treated as confidential by the Department, it may still be disclosed in accordance with the requirements of the *Freedom of Information Act 1992*, or any other applicable written law.

The Department reserves the right before publishing a submission to delete any content that could be regarded as racially vilifying, derogatory or defamatory to an individual or an organisation.

What are single-use plastics?

Single-use plastics are common as an inexpensive and convenient option for many applications. These products are generally intended to be used only once before being thrown away.

Plastics are used for packaging to contain, protect, handle and market all kinds of products. Modern plastic packaging has reduced production costs, improved product quality and provided hygiene benefits[1].

Apart from packaging, plastics are also found in a wide range of disposable commodity items such as balloons, disposable plates and cutlery, drink stirrers, straws and cigarette filters.

Convenience, low cost and consumer preferences have contributed to the popularity of many of these disposable plastic items at the expense of reusable and more environmentally sustainable alternatives, where these are available[1, 2].

While these products are cheap to make they have a cost that is paid by the environment and community in the form of impacts on resource recovery, waste disposal, environmental clean-up and harm to marine, freshwater and terrestrial environments.

examples of single-use plastics

How can we do better?

Let's take a different approach

Many people like the convenience that single-use plastics provide. Yet these plastics are often thrown away, ending up as litter in our environment. Current waste management infrastructure is not designed to deal with all the different forms of single-use plastics in circulation and only limited markets exist for waste managers to sell these products for recycling.

Changing our habits to avoid using single-use plastics is a great way to start reducing the amount of plastic entering our environment. We can 'choose to refuse' single-use plastics, such as bottled water, drinking straws and plastic shopping bags. Increasingly, the options available to the community such as reusable water bottles, metal or paper straws and reusable bags are becoming more commonplace and accessible. The waste hierarchy diagram below illustrates the options for waste minimisation in the community – from the most to the least preferred – for positive environmental outcomes. If we can avoid using single-use plastics in the first place, we eradicate the need for all the other options.

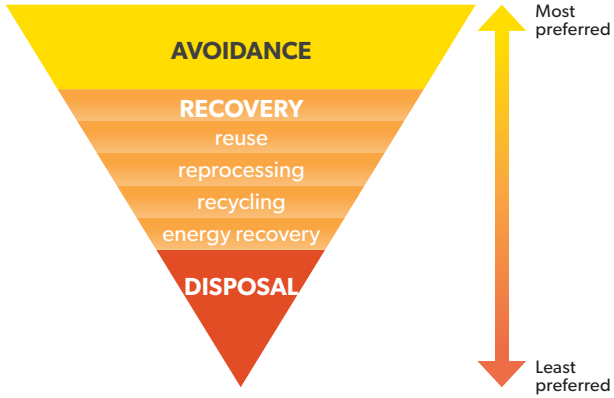


Figure 1: Waste hierarchy

Many people now recognise the need for human societies to move on from the linear consumption model of 'take, make, dispose'. As the world has limited or finite resources, it is important that we keep returning materials into the economy for as long as possible. This approach is known as a circular economy. Many single-use plastic items are not entering the circular economy, but rather ending up in landfill or littering our environment.

Figure 2: Circular economy

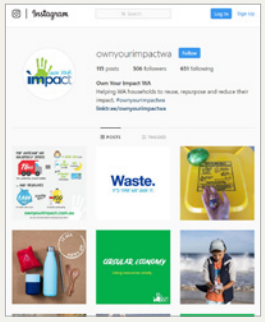
A community that cares

Consumer attitudes towards plastic waste are changing. A survey of Western Australian households in November 2017 found that more than 90 per cent of the community was concerned about the environmental issues associated with plastic waste. The survey also provided insight into consumers' current behaviours and willingness to take responsibility for avoiding the consumption of plastics. More than 50 per cent of consumers reported they refused plastic shopping bags, avoided pre-packed produce and avoided bottled water 'always' or 'most of the time'[5].

These results show that Western Australians are ready to take a new approach to single-use plastics, and that we care about minimising their harmful impacts on the environment.

Own Your Impact

The Government of Western Australia is committed to reducing its own waste, and to supporting households and industry to do the same.



OWN YOUR impact

A new interactive resource, Own Your Impact, encourages all of us to think about our own personal contribution to waste. This resource has been designed to give individuals and families the tools to embrace small (and significant) changes in behaviour toward consumption, recycling and reuse.

For further information on reducing waste and to subscribe for updates visit ownyourimpact.com.au.


Globally, the impact
of debris on the marine
environment is significant
and increasing

What's the problem with single-use plastics?

Plastics persist in the environment – they don't disappear but gradually break down into smaller and smaller pieces. Packaging design, consumer preferences and behaviour (both the desire for convenience and incorrect disposal), littering, illegal dumping and shortcomings in waste management all contribute to single-use plastics ending up in the environment.

In 2017, Keep Australia Beautiful and the Tangaroa Blue Australian Marine Debris Initiative reported that more than 75 per cent of the rubbish collected on Western Australian beaches was plastic[6].

Tangaroa Blue found that the five most common types of plastic on our beaches were plastic fragments, cigarette butts and filters, plastic film remnants (plastic bags and wrap), plastic food packaging (wrap, packets and containers) and fishing line[6]. These five items made up three-quarters of the plastics found on our beaches. A source analysis showed that this rubbish had not moved far from where it was discarded (i.e. it was rubbish from Western Australia, not somewhere else). Cigarette butts and plastic food packaging are more common around major cities (like Perth), while plastic pieces and rope make up most of the plastic rubbish on beaches in areas that are more remote[7]. This finding is consistent with CSIRO research[8].

In Australia and internationally, evidence is mounting of the harmful impacts of plastics on soils, waterways, marine environments and fauna.

Plastic litter in marine and inland water environments

Plastics can cause the injury and death of many different marine species – including seabirds, turtles and mammals such as whales and dolphins – mainly as a consequence of entanglement and ingestion. Since 2003, the Australian Government has identified marine debris as a key threatening process causing injury and fatality to vertebrate marine life as a result of ingestion of, or entanglement in, harmful marine debris[9].

Most marine debris is plastic, which of course is not biodegradable and therefore remains in the environment. Instead they break up into smaller and smaller fragments (microplastics).

In addition, pollutants can accumulate and form a thin layer on these plastics. Concentrations of persistent organic pollutants on microplastic particles can reach several orders of magnitude higher than the surrounding sea water. When these pieces of plastic are ingested by animals, these pollutants accumulate in their tissues and may then enter the human food chain (e.g. by way of fish).

Helium balloon

Research has found that marine species such as seabirds, turtles and fish confuse plastic bags with their preferred food sources (such as jellyfish). Once swallowed, the plastic can block the animal's intestinal tract, causing it to die of starvation.

Plastics can also fill with air inside the animal, preventing it from feeding or diving to escape collisions or predators. Smaller animals become tangled or stuck in plastic materials and this may lead to them drowning.

Helium balloons can have harmful impacts at considerable distances from their point of release, drifting for hundreds of kilometres before bursting and landing in marine, inland waters or terrestrial environments. Burst balloons look like jellyfish when they land in the ocean, which poses an ingestion risk to marine species. Meanwhile, the ribbon can entangle animals.

Plastic litter in terrestrial environments

Plastic litter on land (the terrestrial environment) also poses ingestion and entanglement risks to animals. Those affected can become injured and/or die.

Litter is ugly and the presence of litter attracts further litter. Highly littered areas have been linked to a loss in property values[10]. The cost of cleaning up litter in Australia is $20 to $30 million each year. This cost does not include the environmental harm it causes.

In 2017–18, Keep Australia Beautiful found that most litter in Western Australia consisted of cigarette butts, beverage containers and takeaway containers[11].

A bit about butts

Cigarette butts are made from non-biodegradable plastic and can take up to 12 to 15 years to break up into smaller fragments.

Butts littered on streets get washed into stormwater drains and into waterways where they leach toxic chemicals such as cadmium, lead and zinc.

Cigarette butts are the most littered item in Australia by abundance. More than 29 per cent of the 24 billion filtered cigarettes sold every year in Australia are littered. They comprise around 30 per cent of the Western Australia litter stream[12].
In 2017–18 there was a 22 per cent rise in cigarette litter in Western Australia[11].

How plastics impact on waste treatment facilities

Material recovery facilities

Material recovery facilities sort recyclable materials collected from businesses and households (through kerbside bin recycling) into different material types. Once sorted, the materials are sent away to be re-manufactured into new products.

Non-recyclable products in recycling facilities affect processing and worker safety. For example, while polystyrene is recyclable it has limited re-sale value and must be removed manually by staff. This slows recovery and increases costs. Single-use plastics that cannot be readily recycled must be transported to landfill, which is expensive[13, 14].

Single-use plastics contaminate and reduce the quality of the recyclable material produced, such as cardboard and paper. Soft plastics, disposable nappies, wet wipes and polystyrene all contaminate more readily recyclable products.

On 1 January 2018, China announced strict quality standards for imported recyclables. This has resulted in large amounts of lower-quality recyclable materials on world markets, which in turn has lowered the value and demand for these products. Prices for all plastics have fallen, with mixed plastics most affected[15].

Composting facilities

Organic materials can be processed into compost or mulch using mechanical and/or biological methods. This is more environmentally sustainable than disposal to landfill, with fewer greenhouse gases produced[16]. Some local governments provide collection services to recover the biodegradable portion (e.g. food scraps and green garden waste) from solid waste and process these organic materials.

The impacts of single-use plastics on commercial composting facilities are similar to those of material recovery facilities. Single-use plastics can contaminate compost – reducing the value of the product, increasing processing costs, or requiring its disposal into landfill[13, 14].

Landfill facilities

Most single-use plastics end up as waste and require disposal into landfill facilities.

Some landfill sites are acidic or corrosive environments and under these conditions plastics can degrade. Once they start to degrade, plastic by-products such as heavy metals and other contaminants can leach at the site.

It is preferable to dispose of materials that may leach toxic substances to landfill sites that are lined and collect runoff to ensure contaminants do not enter groundwater or local waterways[17, 18, 19, 20]. An active program addressing problems caused by waste going to landfill is REDcycle, a voluntary, industry-led initiative that involves manufacturers, retailers and consumers sharing the responsibility to reduce the amount of plastic packaging going to landfill. With their program partners, REDcycle collects and recycles soft plastics into a range products. REDcycle collection points are located across Australia, including all Coles and Woolworths stores.

Wastewater treatment facilities

The Water Corporation and other sewerage service providers maintain and operate about 16 000 kilometres of wastewater pipes and more than 100 wastewater treatment plants across Western Australia.

Single-use plastics are commonly flushed down the toilet. Because these plastics do not break down like toilet paper, they can create what is known as a 'fatberg' – a congealed lump of fats, wipes and other items, which can wreak havoc on the wastewater system, either overloading it or causing wastewater blockages.

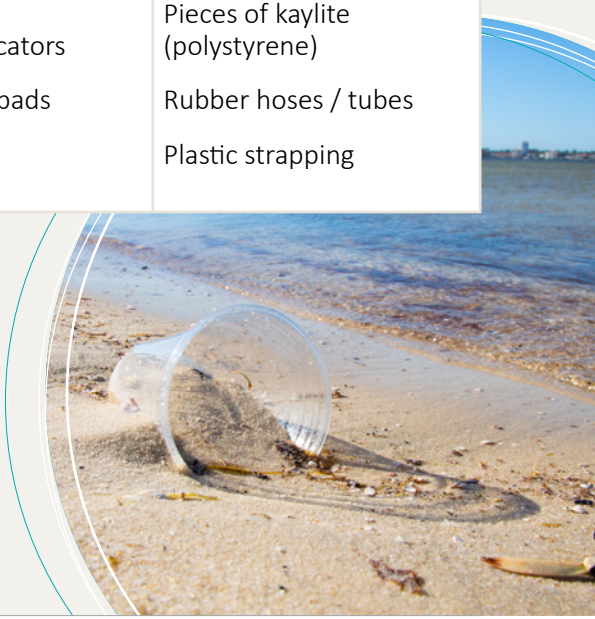
Flush-away society?

Wet wipes are sometimes labelled as 'flushable' but they don't break down like toilet paper. Wet wipes should be thrown in the bin and not flushed down the toilet.

Common items for sewer blockages	Common items that cause problems at wastewater treatment plants	
'Flushable' wipes / baby wipes	Cotton bud tips	Sanitary pads
Condoms	'Flushable' wipes / baby wipes	Disposable nappies
Disposable nappies	Straws	Plastic bags
Incontinence pads	Condoms	Toilet fresheners
Sanitary pads	Tampon applicators	Pieces of kaylite (polystyrene)
Children's toys and balls	Incontinence pads	Rubber hoses / tubes
		Plastic strapping

"The only things going down the toilet should be paper, pee and poo!"

Source: Water Corporation



There's more than a dirty dozen

Table 1 lists common single-use plastic items found in Western Australia, with the tick indicating which environment they cause problems (marine and freshwater and/or terrestrial environment, and/or waste treatment facility operations).

Table 1: Problems caused by single-use plastics

Single-use plastic item	Plastic litter in marine and inland water environments	Plastic litter in terrestrial environments	Plastic contamination of waste treatment facilities			
			Waste Recovery	Composting	Landfills	Wastewater
 Balloons	✓	✓	✓			
 Barrier bags	✓	✓	✓	✓	✓	
 Bunting for elections		✓	✓		✓	
 Cigarette butts / filters	✓	✓		✓		
 Cotton buds with plastic shafts	✓					✓

Table 1: Problems caused by single-use plastics (cont'd)

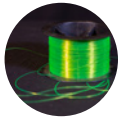
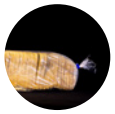
Single-use plastic item	Plastic litter in marine and inland water environments	Plastic litter in terrestrial environments	Plastic contamination of waste treatment facilities			
			Waste Recovery	Composting	Landfills	Wastewater
 Cutlery, plates, stirrers	✓	✓	✓			
 Drinking straws	✓	✓	✓			✓
 Fishing gear	✓	✓				
 Takeaway food containers	✓	✓	✓	✓		
 Lightweight plastic bags	✓	✓	✓	✓	✓	✓
 Thicker plastic bags	✓	✓	✓	✓	✓	
 Microbeads	✓	✓				
 Prepacked fruit and vegetable	✓	✓	✓			

Table 1: Problems caused by single-use plastics (cont'd)

Single-use plastic item	Plastic litter in marine and inland water environments	Plastic litter in terrestrial environments	Plastic contamination of waste treatment facilities			
			Waste Recovery	Composting	Landfills	Wastewater
 Plastic packaging	✓	✓	✓			
 Plastic beverage containers	✓	✓				
 Polystyrene	✓	✓	✓		✓	✓
 Takeaway coffee cups / lids	✓	✓	✓		✓	
 Wet or baby wipes		✓				✓

Source: Bunbury Harvey Regional Council; Cleanaway; Western Australian Local Government Association; Water Corporation.

PET and HDPE (used in soft drink bottles) are of high value for recycling. Machines are generally designed for these plastics and there is a large market for them.

Food for thought – barrier bags

Food businesses have a responsibility to protect food from contamination and reduce the risk of potential cross-contamination from raw to ready-to-eat products.

All food businesses must also comply with the requirements of the Australia New Zealand Food Standards Code. The use of plastic barrier bags helps retailers to meet their obligations, protects public health and reduces the potential spread of bacteria and pathogens.

Department of Health advice indicates that the risks for fruit and vegetables is minimal; alternatives are available. However, unpackaged perishable food items – such as meat, poultry and fish – will need to be protected from contamination or causing contamination.

Are there alternatives to barrier bags that might be considered?

Are degradable, biodegradable and compostable plastics the answer?

According to the United Nations Environment Programme there is little evidence that products labelled as biodegradable will significantly decrease the volume of plastic entering the ocean, or the physical and chemical risks that plastics pose to the marine environment[20].

Biodegradable plastics, do not readily break down in the natural environment and become microplastics when they break up. Many biodegradable plastics require treatment in industrial facilities with temperatures above 50°C for prolonged periods to biodegrade.

Research into biodegradable plastics has shown that no significant difference exists between standard and degradable plastics in the environment or when they are ingested by wildlife.

Mixing the traditional and biodegradable plastics in the waste streams also risks current efforts to increase plastics recycling rates. Biodegradable plastics have different chemical compositions and need to be separated from traditional plastics to be processed.

Do you support including degradable, biodegradable and compostable products in any ban on single-use plastics?

How can we reduce single-use plastics?

Plastic-reduction efforts up until now

Microbeads

Plastic microbeads were introduced to cosmetics in the early 2000s. As the harmful environmental impacts of these products came to be understood, the cosmetics and chemicals industries, encouraged by governments, voluntarily reduced the use of microbeads. At a meeting in 2018 of Australian and New Zealand environment ministers, the Australian Environment Minister noted that 94 per cent of personal care products had become microbead free.

Lightweight plastic bags

The Government of Western Australia banned the supply of lightweight plastic bags in July 2018. Supported by 84 per cent of our community, this initiative will remove about 670 million lightweight plastic bags from circulation and prevent them from being littered or sent to landfill[3].

Plastic packaging

Australian environment ministers, on behalf of all Australian governments, and the Australian Packaging Covenant Organisation (APCO), representing more than 900 packaging companies, recently set a target of 100 per cent of Australian packaging being recyclable, compostable or reusable by 2025 or earlier[4]. This commitment is to address community concern about the growing amount of packaging waste in the environment. Governments will work with the APCO to deliver this target.

Government procurement

Western Australian government agencies have been directed to stop buying avoidable single-use plastic items such as plastic cups, straws, plates and cutlery. The Premier's instruction – issued on 12 November 2018 – aims to reduce the government's environmental footprint and create market opportunities for biodegradable and compostable alternatives to plastic.

Container deposit scheme

The government is working to reduce litter and increase recycling by introducing a container deposit scheme. The Department of Water and Environmental Regulation is developing the scheme, which is scheduled to start in 2020. Consumers will be able to receive a 10 cent refund on all eligible beverage containers such as soft drinks, flavoured milk, bottled water, beer, cider and sports drinks.

Further options to reduce single-use plastics

A number of options are available to the government to take action on single-use plastics. These options include introducing legislative instruments, such as state-wide bans or levies; promoting voluntary plastic reduction strategies; implementing community education and behaviour change campaigns; or a combination of all of these.

Table 2: Options to reduce single-use plastic waste

Options to reduce single-use plastic waste		How do they work?	Examples of approach	Positive outcomes	Examples of limitations
Voluntary reduction strategies	Sustainable product design	Designing products with less packaging or using alternative materials can significantly reduce plastic pollution.	The Australian Packaging Covenant between the Australian Government and the Australian Packaging Covenant Organisation (APCO) creates a cooperative forum to achieve sustainable packaging outcomes. Australian environment ministers have endorsed a target of 100 per cent of Australian packaging to be recyclable, compostable or reusable by 2025 or earlier.	Significant reduction of single-use plastic packaging going to landfill and into the environment.	All associated industry sectors need to comply for the best environmental outcomes. As this action is not legislated, over time businesses may revert to unsustainable practices. Not all biodegradable plastics readily break down in the natural environment. Research has shown that no significant difference exists between standard and degradable plastics in the environment or when they are ingested by wildlife[1].

Table 2: Options to reduce single-use plastic waste (cont'd)

Options to reduce single-use plastic waste		How do they work?	Examples of approach	Positive outcomes	Examples of limitations
Voluntary reduction strategies (Cont'd)	Voluntary agreements with businesses and industry	Government actions and community sentiment can influence companies to take voluntary measures to reduce their use of single-use plastics.	The voluntary phase-out of microbeads overseen by Australian environment ministers is a good example of a voluntary agreement to phase out a single-use plastic. Microbeads are used in 'rinse-off' personal care products, cosmetics and some cleaning products. Ninety-four per cent of cosmetic and personal care products available in the Australian market are now microbead free. Manufacturers in the United Kingdom, United States, Canada, the Netherlands, France, Sweden, Scotland, Wales and New Zealand have reformulated products to replace microbeads with alternatives such as pumice, nut kernels, or silica. Responding to community sentiment, some fast food chains have announced they will phase out plastic straws across Australia by 2020. Some other restaurants and fast food businesses have decided to phase out plastic straws and replace them with alternatives.	These agreements are effective if implemented by all industry players.	If all associated industry sectors do not cooperate, the environmental impacts are reduced but not eradicated. Over time, with a decrease in community concern due to a reduction in use, businesses may reintroduce single-use plastics into their operations.
	Procurement procedures	Government can instruct its agencies to minimise and avoid single-use plastic through their procurement practices.	The Government of Western Australia has instructed government agencies to stop buying all avoidable single-use plastic items such as plastic cups, straws, plates and cutlery.	Government leads by example by avoiding and reducing the use of single-use plastics.	May result in additional costs to Government. If Government does not lead by example this may result in apathy in other sectors of the community and industry.

Options to reduce single-use plastic waste		How do they work?	Examples of approach	Positive outcomes	Examples of limitations
Community education and behaviour change strategies	Education campaigns	Governments, non-government organisations and retailers have instigated education campaigns to influence consumer behaviour and reduce consumption of single-use plastics. These are designed using balanced and objective information to help the community understand the issues, alternatives, opportunities and proposed actions. The most effective programs take into account the specific requirements, contexts, needs, resources and views of the impacted community.	Some examples of current education programs include Keep Australia Beautiful programs and events for litter reduction.	Raises awareness of the harmful impacts of single-use plastics and actions that can be taken to reduce their impacts. Can result in measurable changes in community behaviour.	May not change the behaviours of the majority of the community. Often expensive to implement.
	Behaviour change strategies	Behaviour change strategies aim to achieve more than just awareness of an issue. These strategies seek to shift attitudes, build knowledge on how to take the steps and actions to make the required change, provide support infrastructure to deliver changes and then normalise the behaviour (so that it becomes automatic).	The behaviour change campaign for the Western Australian plastic bag ban found it was most effective to focus on what alternative bag options were available to the consumer. The campaign then highlighted the best choices that not only fitted into established social norms, but also contributed to protecting the environment. The Waste Authority's Own Your Impact website is a comprehensive education and behaviour change program. It includes targeted actions designed to reduce waste including single-use plastic.	The community adapts to the change and the behaviour becomes the 'normal' thing to do.	Significant ongoing investment may be required to ensure an education campaign results in behaviour changes in the target group.

Table 2: Options to reduce single-use plastic waste (cont'd)

Options to reduce single-use plastic waste		How do they work?	Examples of approach	Positive outcomes	Examples of limitations
Regulatory tools	State-wide ban on the sale or supply of single-use plastics	Bans are implemented by way of legislation or regulations. Bans on various single-use plastics have been or will be introduced in the next one-to-two years as countries around the world act to reduce the harmful impacts of plastic litter on our environment.	South Australia, Tasmania, Northern Territory, Australian Capital Territory, Queensland and Western Australia have banned the supply of lightweight plastic bags. Victoria has announced its intention to do the same in late 2019. France is introducing new laws to ban all plastic cups, plates and cutlery by 2020. Italy is banning plastic cotton buds and the United Kingdom is banning plastic straws in the next 12 months.	Banning single-use plastics can reduce plastic litter and harmful impacts on the environment and waste treatment facility operations. Banning single-use plastics results in a decrease in petrochemical use and the need to find viable markets to recycle the plastics.	Lack of effectiveness if ongoing monitoring and compliance actions are not undertaken. The consequences of a ban on employment, income and product affordability, as well as unintended impacts on vulnerable people, need to be considered. Exemptions to the ban may be needed.
	Levies and extended producer responsibility schemes	The polluter-pays principle is an economic concept where the party responsible for the impact (either the producer or consumer) pays for the harm done to the environment. A levy operates as a tax on the sale of single-use plastics. Levies encourage behaviour change (through increased costs) and raise money that may be put towards government priority actions to reduce single-use plastics.	The European Union's new waste legislation, adopted in May 2018, includes mandatory extended producer responsibility schemes for all packaging and some extended producer responsibility schemes may include litter clean-up costs. Under extended producer responsibility schemes, the industries that produce, sell, use and dispose of products share responsibility for the impact of those products on the environment and public health. Ireland's levy on lightweight plastic bags successfully reduced the use of these bags by 89 per cent.	Improved recycling of single-use plastics, with less going to landfill. Less littering of single-use plastic containers that have a monetary value when returned.	Evidence indicates that behaviour changes triggered by levies are not always permanent. Consumption can increase as consumers start to normalise the additional costs[1]. There can be large administrative overheads for government to manage the implementation and ongoing effectiveness of a levy.

Table 2: Options to reduce single-use plastic waste (cont'd)

Options to reduce single-use plastic waste		How do they work?	Examples of approach	Positive outcomes	Examples of limitations
Regulatory tools (Cont'd)	Labelling requirements	Clear and standardised labelling helps the community to correctly recycle or dispose of products and packaging.	Under the Plastic Strategy adopted by the European Commission, labelling requirements apply to sanitary towels, wet wipes and balloons. The Commission is also working to ensure that consumers are provided with clear and accurate information about which plastics can be labelled 'compostable' or 'biodegradable' and how they should be correctly disposed of. This will support consumer decision-making, enhance sorting and, as labelling is often used to market the products, avoid false environmental claims.	Increases awareness and assists the community to dispose of the product correctly and helps minimise impacts on the receiving environments.	Labelling does not necessarily result in the required behaviour and must be supported by education and behaviour change programs.
	Sustainable product design	Designing products with biodegradable material or less packaging can help reduce plastic pollution.	By way of the Australian Packaging Covenant, Australian environment ministers have endorsed a target of 100 per cent of Australian packaging to be recyclable, compostable or reusable by 2025 or earlier. Governments will work with APCO to deliver this target.	A reduction in single-use plastics and an adoption of more sustainable alternatives.	Not all compostable packaging, such as biodegradable plastics, readily break down in the natural environment. Many biodegradable plastics need temperatures above 50°C for prolonged periods to biodegrade and can persist in marine environments for up to six months, during which time pollutants have adhered to their surfaces, in turn posing risks to fauna.

Tell us what you think

Reducing single-use plastic survey

The government is looking at further approaches to reduce single-use plastics across the Western Australian community. To do this we need your input. This survey can also be completed online.

The survey will take about five minutes.

DEMOGRAPHIC INFORMATION

A. What is the post code for the suburb you live in?

B. What age-group are you in?

	Under 18		45–49
	18–24		50–54
	25–29		55–59
	30–34		60–64
	35–39		65 and over
	40–44		Rather not say

C. What is your gender?

	Male		Female
	Please specify		Prefer not to disclose

D. Which of the following best describes your household?

	Single occupant
	One parent family
	Couple with children at home
	Couple with no children at home
	Share house
	Other family

E. Are you currently in paid employment at all, part-time or full-time?

	Full-time (>35 hours per week)
	Part-time
	Casual
	Homekeeper
	Not employed / Retired
	Rather not say

QUESTIONS ABOUT YOUR VIEWS ON SINGLE-USE PLASTICS

1. Do you support reducing the amount of single-use plastics we consume?

	Yes		No

2. How concerned are you about each of the following issues with single-use plastics:

ISSUE	Very concerned	Somewhat concerned	Not very concerned	Not at all concerned	Can't say/ don't know
Plastics end up polluting our waterways and oceans					
Plastic litter is harming our wildlife					
Many plastics cannot be recycled					
Plastic contaminates composting and recycling facilities					
Plastics persist in landfill					
Plastics use oil resources and contribute to global warming					
Plastics are harmful to human health					

3. For each of the choices below, please tell us how consistently you choose alternatives to single-use plastics:

ACTION	Almost always	Most of the time	Sometimes	Rarely	Almost never	N/A – does not apply
Refuse thicker plastic shopping bags (e.g. by using your own bag)						
Avoid buying bottled water and other beverages (e.g. by taking a reusable bottle)						
Avoid fruit and vegetables packed in plastic (choosing loose produce)						
Refuse straws in a café / restaurant / bar or with takeaway drinks						
Refuse take-away coffee cups (by taking your own)						
Look for personal care products (body wash, toothpaste etc.) that don't contain plastic microbeads						
Look for personal care products that are not contained in single-use plastic containers						
Avoid using plastic cutlery, plates, stirrers						

4. Please prioritise your top ten single-use plastics that should be the focus of additional action to reduce their negative impacts, with 1 being most important.

	ITEM		ITEM		ITEM
	Balloon releases		Drinking straws		Polystyrene
	Balloons		Fishing gear		Prepacked fruit and vegetable
	Barrier / produce bags		Lightweight plastic bags		Takeaway coffee cups / lids
	Cigarette butts / filters		Microbeads		Takeaway food containers
	Cotton buds with plastic shafts		Plastic beverage containers		Thicker plastic bags
	Cutlery, plates, stirrers		Plastic packaging		Wet or baby wipes

Other:

A number of options are available to reduce single-use plastics. These include introducing bans; levies; voluntary plastic reduction strategies; community education.

5. For each of your priority single-use plastics, please indicate your top two options to reduce impacts.

ITEM (Items chosen from question 4)	Options to reduce single-use plastic waste						
	Sustainable product design	Voluntary agreements with business and industry	Procurement procedures	Education campaigns / behaviour change strategies	State-wide ban on the sale or supply	Levies and extended producer responsibility schemes	Labelling requirements

Thank you for providing your views and preferred options to reduce single-use plastics.

For further information on reducing waste, visit ownyourimpact.com.au

Hard copies can be mailed to:

Reducing single-use plastic
Department of Water and Environmental Regulation
Locked Bag 10 Joondalup DC WA 6919

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Make a submission

Online survey

Access the online survey at
https://www.surveymonkey.com/r/2M7XBYK

Written submissions

Submissions can be lodged by email (preferred) plastic-action@dwer.wa.gov.au.

Hard copies can be mailed to:

Reducing single-use plastic
Department of Water and Environmental Regulation
Locked Bag 10 Joondalup DC WA 6919

Closing date

Friday 12 July 2019, 5pm (AWST)

For further information

Telephone: (08) 6364 7000
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