

NSW Local Government Waste and Resource Recovery Data Report 2017–18

as reported by councils

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1. Overview

A snapshot of local and statewide waste management

The *NSW Local Government Waste and Resource Recovery Data Report 2017–18* is based on voluntary survey responses from all 128 NSW local councils.

This report provides data about domestic waste and recycling in NSW. It is an important resource to help local councils and industry measure the success of programs and make evidence-based decisions about waste and recycling. It also helps the NSW Environment Protection Authority (EPA) monitor waste and recycling levels across the state.

Sections 1 to 4 of the report focus on the quantity and types of waste created, recycled and disposed while sections 5 and 6 look at waste services.

This report includes only domestic waste and recyclables, which are the main component of the municipal solid waste stream. This report does not include data on commercial and industrial (C&I) or construction and demolition (C&D) waste. All per person averages are based on 30 June 2018 population figures from the Australian Bureau of Statistics (ABS). All data is based on council responses to an annual survey.

Part of a larger environmental program

This report falls under a larger environmental program. The *NSW Waste Avoidance and Resource Recovery Strategy 2014–21* (WARR Strategy) is a framework for waste management. It aims to enable the NSW population to improve the environment and community wellbeing by reducing waste and using resources more efficiently.

The WARR Strategy includes six long-term targets:


1.  avoiding and reducing the rate of waste generation per person
2.  increasing recycling rates to 70% for municipal solid waste, 70% C&I and 80% C&D
3.  increasing waste diverted from landfill to 75%
4.  managing problem wastes better, establishing 86 drop-off facilities or services across NSW
5.  reducing the number of litter items by 40% compared with 2011–12 by 2017
6.  reduce the incidence of illegal dumping by 30% compared with 2010–11 by 2017

A separate biennial report analyses the progress made against these targets in detail.

The NSW Government allocated \$802 million over nine years under the *Waste Less, Recycle More* initiative. This is funded by the waste levy and is the largest program of its kind in Australia. *Waste Less, Recycle More* funds local council initiatives, new and enhanced infrastructure, organics collections, problem waste management, business recycling, illegal dumping and litter prevention.

Focus on recycling will help achieve targets

For local councils to meet the NSW WARR strategy targets, it is vital to focus on reducing waste and increasing recycling. This report includes recycling rates for each waste stream. Results for each council are in Appendix tab 3.

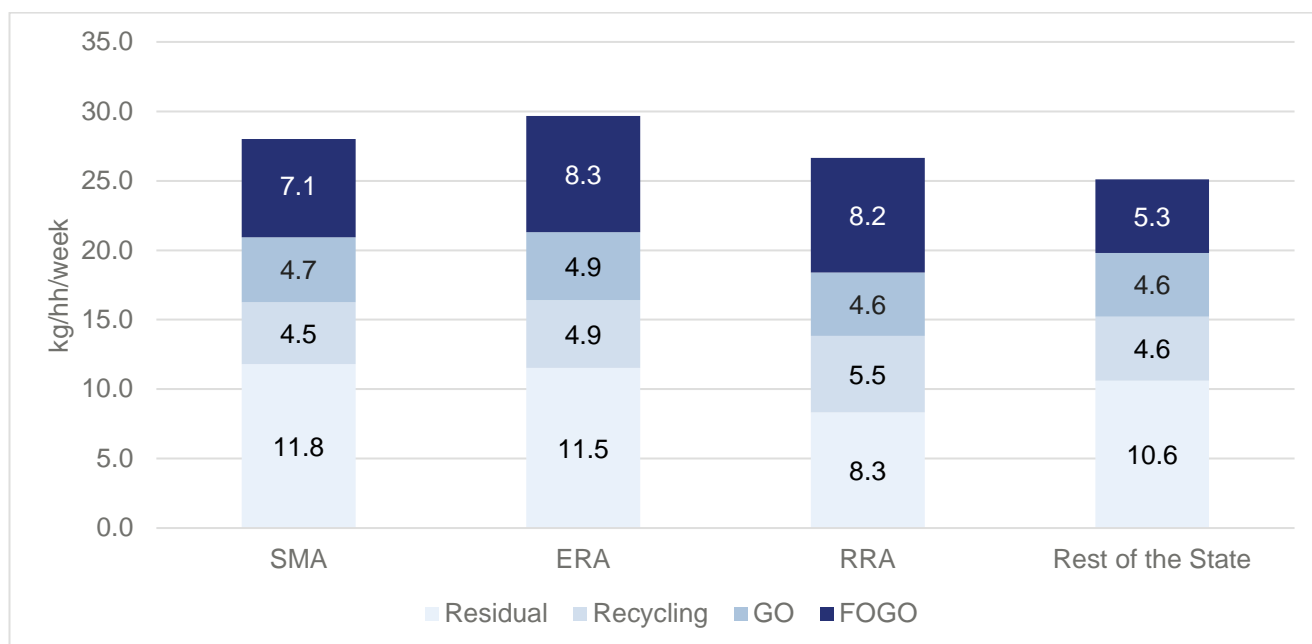
 **Avoid and reduce waste generation – the average per capita and household rate was reduced in 2016-17 compared to the previous two years.**

In 2017–18, households created 3.58 million tonnes of domestic waste, collected 2.11 million tonnes of residual kerbside waste (red-lid bin contents) and 1.47 million tonnes of dry recycling and organics.

The Sydney Metro Area (SMA) collected 1.12 million tonnes of domestic waste and 630,000 tonnes of domestic recycling and organics. The Extended Regional Area (ERA) generated 449,000 tonnes of domestic waste and 322,000 tonnes of domestic recycling and organics. The Regional Regulated Area (RRA) generated 205,000 tonnes of domestic waste and 246,000 tonnes of domestic recycling and organics. With the rest of the state generating 335,000 tonnes of domestic waste and 213,000 tonnes of domestic recycling and organics. Average kilograms per household per week figures for those with a service are shown in Graph 1 below.

Regular kerbside and clean-up collections accounted for 3.07 million tonnes or 88%. Council drop-off facilities collected 450,000 tonnes or 12% of material.

Graph 1: Average kilogram per household per week with service by area 2017–18



* Average per household per week based on separate services.
 * (Note: individual services do not add up to total for an average household per week)

The average NSW household collected 21.9kg total material per week, or 8.6kg per person each week. Different council areas may not offer all collection services. Every week, the average household with a service puts out 4.7kg of recyclables, 4.7kg of garden organics, 7.2kg of food and garden organics and 11.2kg of residual waste at the kerbside for collection.

In 2017-18, there was less waste reported collected from more households. This created a drop in average kg/hh/week from 11.9 to 11.2kg. There was also a significant drop in rainfall ⁽¹⁾ in 2017-18 compared to 2016-17 which led to a drop in overall organics collected, 15,712t less or 1kg per household than 2016-17.

Sidenote the number of households with a service also differs per year due to private contracted services, particularly in multi unit dwellings (MUDs), which Council are unable to provide data on or the amount of waste collected for those households. This may lead to an uneven view of data comparing across historical years.

⁽¹⁾ http://www.bom.gov.au/cgi-bin/climate/change/timeseries.cgi?graph=rain&area=nsw&season=0706&ave_yr=5



Increase recycling

In 2017-18 around 1.70 million tonnes were recycled overall from domestic kerbside, clean-up and drop-off services. This was comprised of 720,000 tonnes of recyclables; 667,500 tonnes of organics, 51,000 tonnes drop-off and clean-up waste recycled and 260,000 tonnes of material recovered via alternate waste treatment (AWT).

Kerbside dry recycling material collected changed to previous years with the introduction of the NSW container deposit scheme (CDS) which started in December 2017. From data provided by the scheme operator and an average conversion factor applied to the numbers of containers collected per material, the EPA has determined that 33,061 tonnes has been collected and recycled through the CDS system. The kerbside yellow lid recycling service collected 638,651 tonnes. The additional CDS amount gives a total of 671,712 tonnes, resulting in 7,347 tonnes less collected than 2016-17 for comparative purposes.

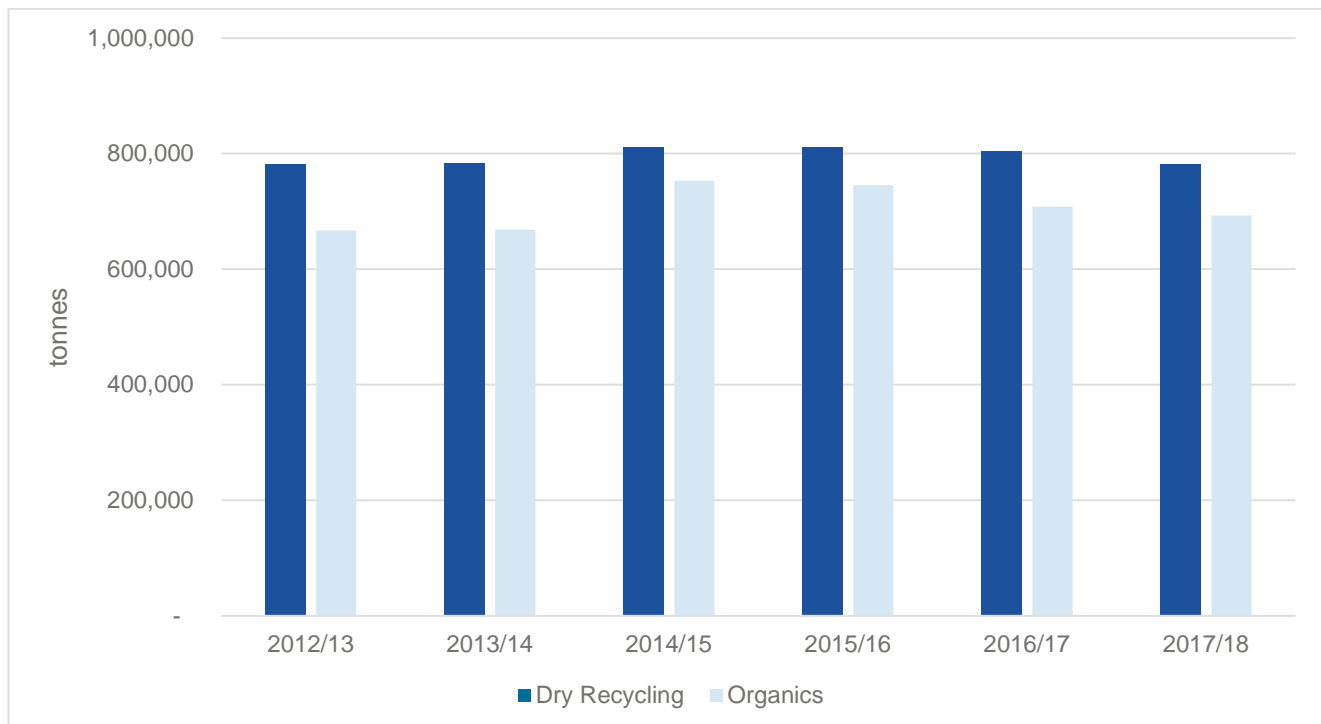
In 2015-16, the amount of kerbside organics collected was 565,600 after a gradual increase. In 2016-17, this dropped slightly to 564,600 tonnes, due to a lack of rainfall and therefore less organics. In 2017-18 the kerbside collected 375,774 tonnes of garden organics and 151,513 tonnes of food and garden organics, in total 37,137 tonnes less than 2016.

In addition, 25 councils sent 492,000 tonnes of kerbside residual waste to AWT facilities where 260,500 tonnes, or an average of 53%, was recycled.

Combined clean-up and drop-off waste services (waste, recycling and organics) recycled 280,000 tonnes -along with 25,215 tonnes of organics recycled by other council services and 3,000 tonnes of hazardous recyclables like batteries, globes and cartridges.

Graph 2 below shows that the total recycling and organics collected, including kerbside, clean-up and drop-off, has remained relatively consistent for the past six years.

Graph 2: Total dry recycling and organics tonnes collected by year 2012–18 (tonnes)

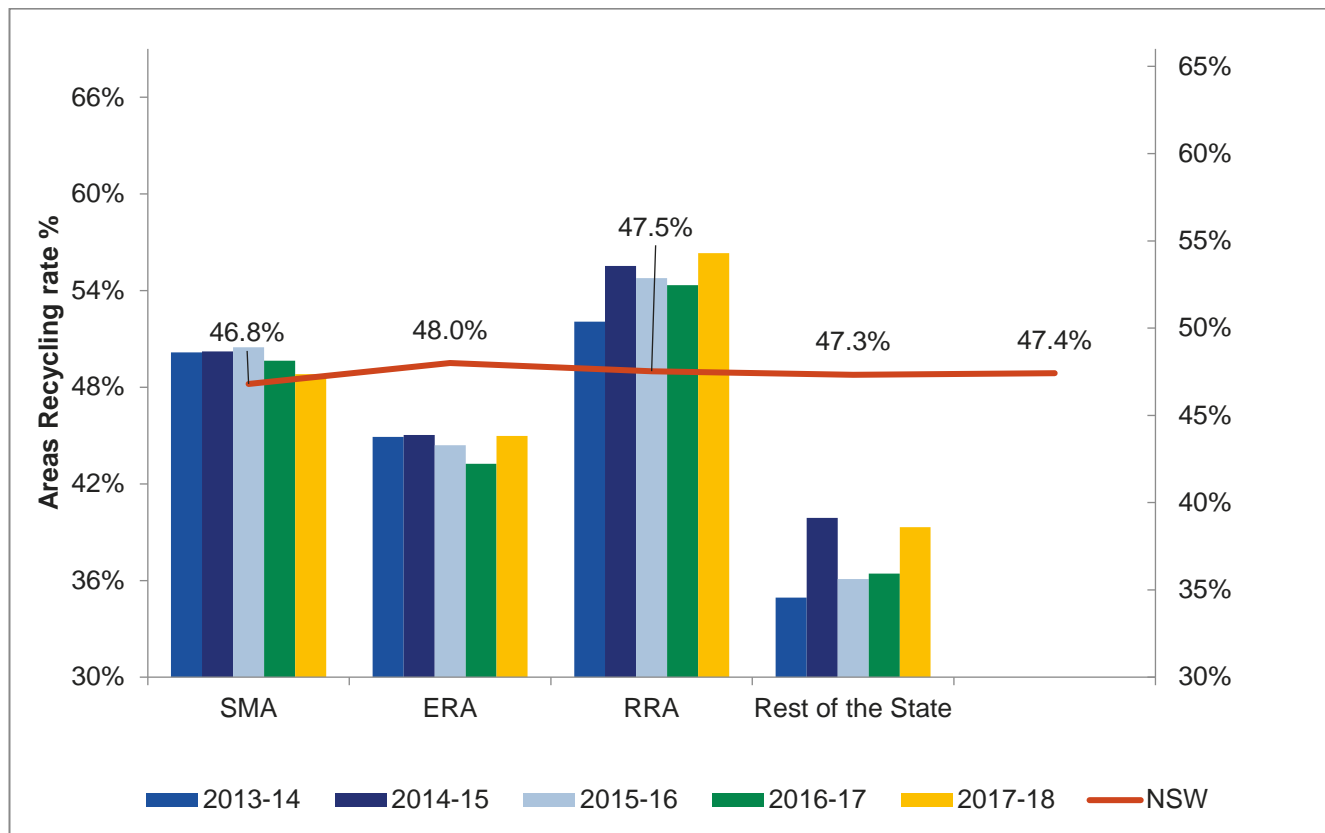




Divert more waste from landfill

In 2017–18, 47.4% of domestic waste created in NSW was diverted from landfill. This is inline with the previous few years.

Graph 3: Areas recycling rate by year and NSW average 2013–18



The Sydney Metropolitan Area generated 1.77 million tonnes of kerbside waste, of which 862,000 tonnes (48.8%) was diverted from landfill.

Across NSW, 1.88 million tonnes went to landfill. Most of this was residual kerbside waste, accounting for 1.41 million tonnes. A further 55,500 tonnes were contaminants from dry recyclables and 13,500 tonnes from organics collections sent as rejects from processing facilities. In addition, 224,000 tonnes from drop-off materials and 181,000 tonnes from kerbside bulky waste clean-up collections was disposed of.

Note: Figures have been rounded to the nearest whole number in this Overview.

2. Total domestic waste

2.1. Generated and recycled



The average domestic waste generated per household each week is 21.9kg in 2017/18. This is a decrease from 23.3kg in 2016–17. Waste generated per household includes regular kerbside collections, clean-up and resident drop-off materials. Introduction of the CDS was a factor in the decrease.

In 2017–18, NSW created 3.58 million tonnes of domestic waste. This is a decrease of 52,000 tonnes from the previous year, but over the five-year period the waste generation rate is relatively static, with

gradual increases in organics. Total domestic waste includes all recyclables, organics and residual waste from household kerbside services and drop-off facilities.

The average total domestic waste generated was 21.9kg per household per week or 8.6kg per person, based on the total number of households and people in NSW.

From the 3.58 million tonnes of domestic waste generated, 1.88 million tonnes of residual waste was disposed to landfill. In absolute terms, this is a decrease of about 31,000 tonnes (-1.6%) in comparison to 2016–17. A total of 1.70 million tonnes of the domestic waste generated was recycled, a decrease of 21,500 tonnes from 2016–17. The total domestic tonnes generated and recycling figures include the 33,000t collected by the CDS.



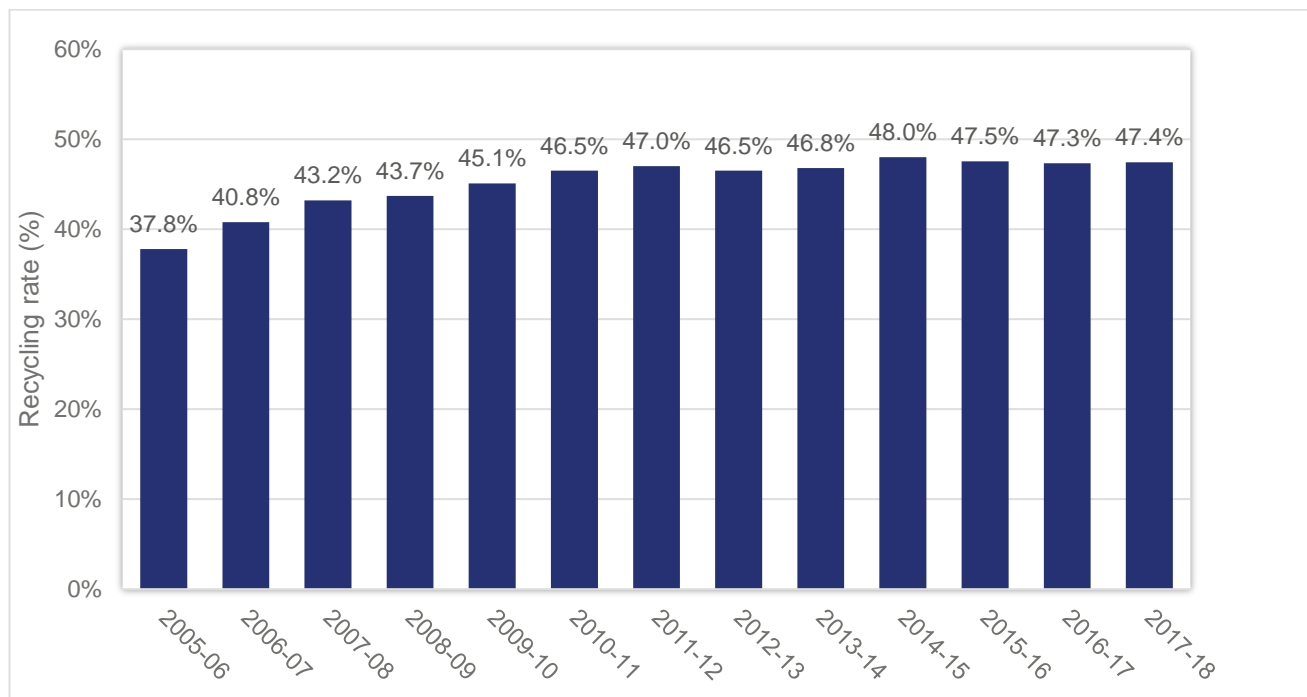
The total domestic recycling rate rose from 46.8% in 2013–14 to 47.4% in 2017–18.

In 2017-18, NSW residents recycled 47.4% of domestic waste: 1.70 of 3.58 million tonnes. This figure includes recycling from:

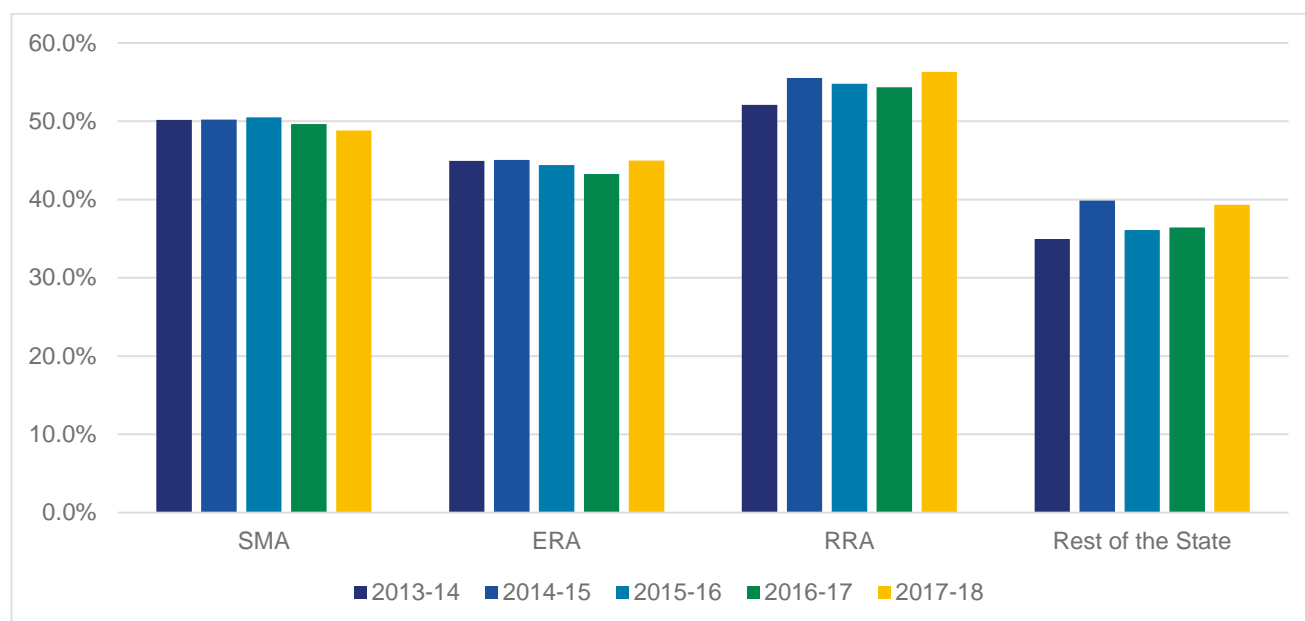
- kerbside recycling (583,000 tonnes)
- CDS recycling (33,000 tonnes)
- kerbside organics (514,000 tonnes)
- alternative waste treatment (260,000 tonnes)
- clean-up services (55,000 tonnes)
- drop-off facilities (229,000 tonnes)
- Other council organics (25,000 tonnes)

Graph 4 shows the recycling rates in NSW over time. Although the increases have been consistent overall, over the past four years they have been marginal. Recycling rates have remained relatively consistent around 47%.

Graph 4: NSW recycling rates for domestic waste between 2005–18



Graph 5: Recycling rates of domestic waste across NSW areas for 2013–18



Graph 5 shows the recycling rates by NSW areas. The highest levels are reported in the Regional Regulated Area (RRA) at 56.3%, an increase from 54.3% in 2016–17, and still up from 52.1% in 2013–14, higher than any other region.

The rest of NSW (Rest of the State) at 39.3% was an increase from 36.4% in 2016–17. ERA also had an increase to 45.0% in 2017-18 from 43.3% in 2016-17 and the SMA had a slight decrease to 48.8% in 2017-18 from 49.7% in 2016-17. This has been the trend over the past couple of years.



1.70 million tonnes were recycled from kerbside collections, drop-off facilities, clean-up services and AWT facilities in 2017–18.

Table 1 shows the weight in tonnes of material collected by waste stream, the amount recycled and the remaining amount disposed of in landfill after processing.

For recyclables and organics, the material disposed of after processing is called contaminants or rejects. For dry recyclables, the proportion of rejects was 7.9%. For organics, the proportion of rejects was 3.8%. For residual waste, 15.6% was recycled from AWT processing and the remaining amount was disposed of in landfill.

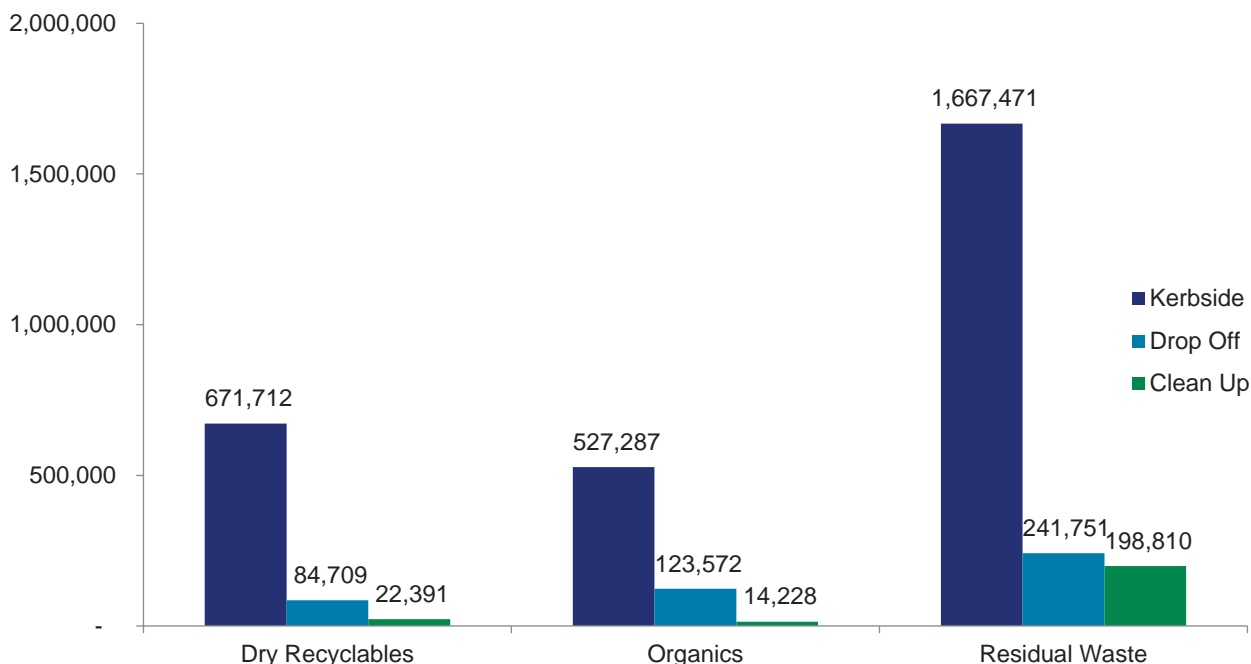
Table 1: Domestic generation and fate by waste stream 2017–18 (tonnes)

Waste stream	Collected	Recycled	Disposed
Dry recyclables	782,032	720,046	61,986
Organics	692,488	667,499	24,981
Residual waste	2,108,031	311,447	1,796,584
Total	3,582,551	1,698,992	1,883,551

* Due to rounding, the total is not the same as the sum of the component figures

Graph 6 shows the total domestic waste tonnes collected by waste stream and collection method. Kerbside collection is the predominant area for generation, thus programs and education are focusing around this stream.

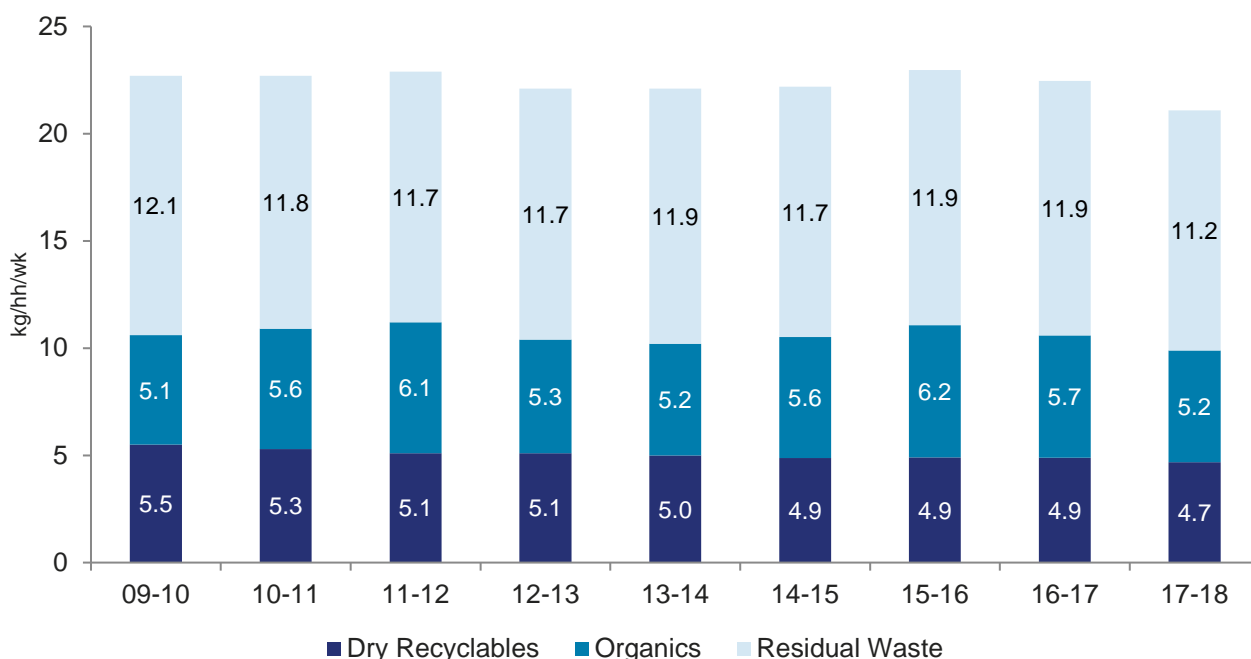
Graph 6: Domestic waste collected by waste stream and collection method 2017–18 (tonnes)



***Note:** Due to rounding, the total is not the same as the sum of the component figures for Residual Waste when compared to Table 1. Includes CDS in dry recyclables.

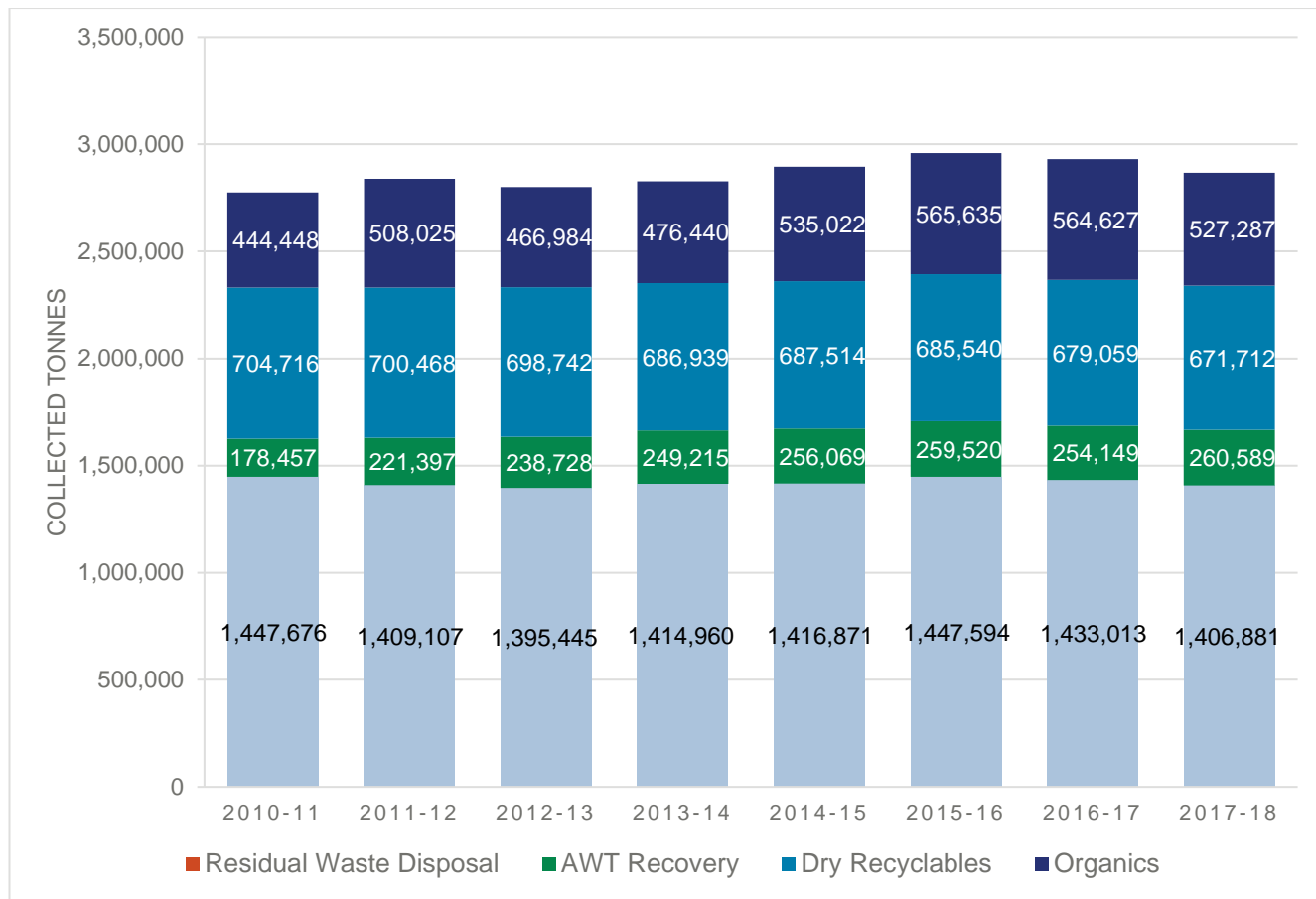
Graph 7 shows the amount of domestic waste collected at the kerbside between 2009 and 2018. The current average amount of domestic waste collected at the kerbside is 21.9kg per household per week. The amount of domestic waste collected at the kerbside for each waste stream is relatively consistent over the eight year period.

Graph 7: Average kilogram per household per week waste generation by stream 2009–18



Graph 8 shows the total amount of waste collected at the kerbside by waste and the amount of waste processed by each end destination method. Although numbers of households have increased, some waste collection reduction may be occurring due to private contracts by multi-unit dwellings not reported under council operations.

Graph 8: Total domestic kerbside waste in tonnes collected by processing method 2010-18



3. Recycling

3.1. Dry recyclables collected and recycled



Dry recyclables formed 22% of total domestic waste in 2017–18, where a total of 782,032 tonnes were collected (compared to 35% or 663,876 tonnes in 2005–06).

Dry recyclables are collected from three sources:

- Kerbside collections accept mixed household recyclables, including paper, newspaper, magazines, cardboard, plastic film and bottles, steel and aluminium cans, and glass bottles.
- Drop-off facilities allow residents to bring in recyclables, including electronic waste (e-waste), batteries, gas bottles and oils.
- Clean-up services collect large metals and bulky goods.

Table 2 shows the collection method and the regional area from which dry recyclables were collected. In 2017-18, 782,032 tonnes of dry recyclables were collected in NSW. Of this, 81.7% or 638,651 tonnes was collected from the kerbside, along with the CDS collecting 4.2% of the total recycling from the seven months in operation from December to June. Residents taking 84,709 tonnes or 10.8% to drop-off points and the remaining 2.9% of recycling collected by clean-up services.

Around 69% of drop-off material was collected from the Regional Area and the Rest of State, while the Sydney Metro collected 79% from kerbside and clean-up services. This reflects the different service provisions and access to kerbside collections between the different areas.

Table 2: Dry recyclables in tonnes by collection method and regional area, 2017–18

	Sydney Metro	Extended Area	Regional Area	Rest of State	NSW
No. of councils	30	12	19	51	112
Kerbside (tonnes)	343,630	135,915	87,064	72,043	638,651
Drop-off (tonnes)	1,766	24,170	24,992	33,782	84,709
Clean-up (tonnes)	17,789	1,924	1,482	1,196	22,391
Total (tonnes)	363,184	162,009	113,538	107,021	745,752
CDS (tonnes)	11,202	8,104	5,206	8,548	33,061
Other Haz Recycled	675	572	664	1,309	3,219
Total Domestic	375,061	170,685	119,408	116,878	782,032

*Total figure does not represent the sum of the component numbers due to rounding

In NSW, 112 of 128 councils reported a recycling collection service covering 89% of households in the state. The Sydney Metro region collected 54% of the total kerbside recyclables from 1.53 million households with a service.

Table 3 shows the average weight of dry recyclables collected from 2,757,316 NSW households and by capita per region. On average, 243 kg/year of kerbside dry recyclables were collected from households with a recycling service in 2017–18, a weekly average of 4.68kg per household or 1.83kg per person.

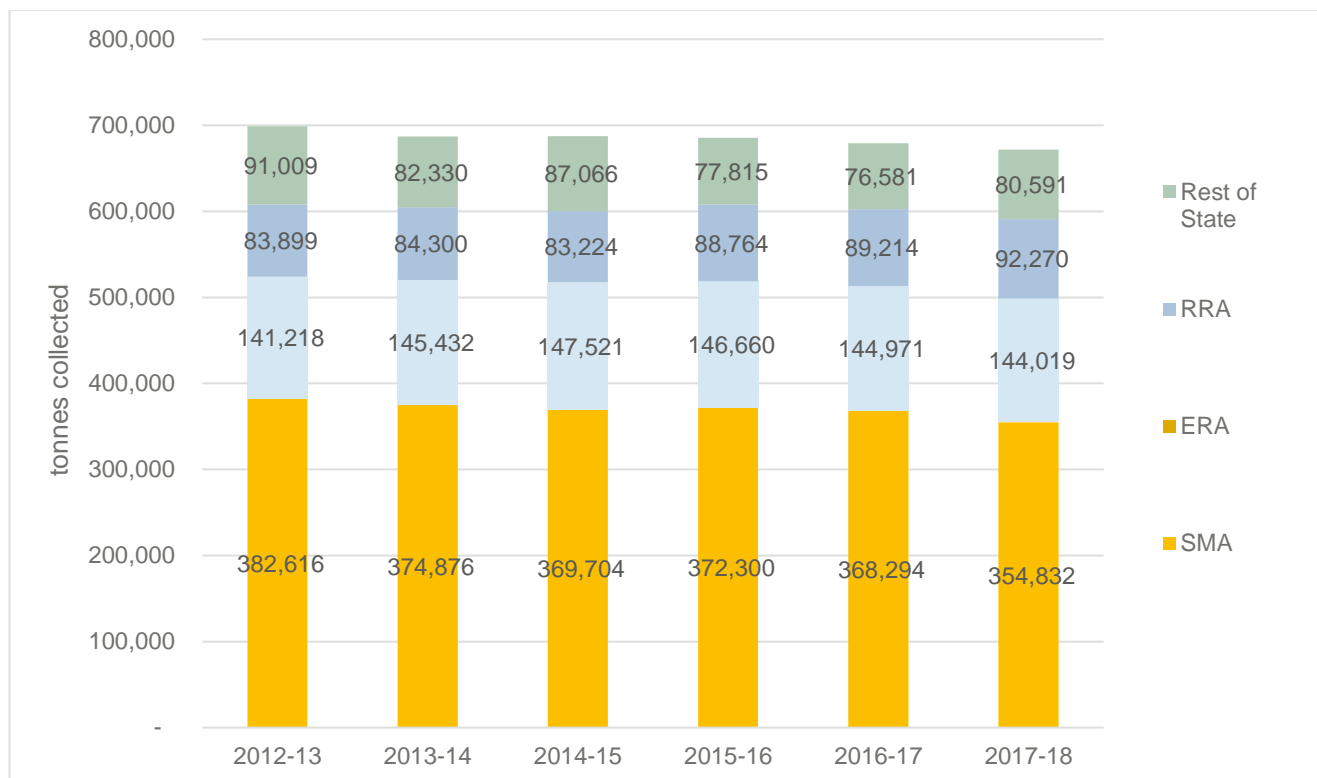
Table 3: Dry recyclables collected per household and per person by region 2017–18

Region	Household ¹			Person ²	
	No. households with service	Annual ave kg	Weekly ave kg	Annual ave kg	Weekly ave kg
Sydney Metro	1,533,260	231.4	4.45	83.9	1.61
Extended Area	565,498	254.7	4.90	105.3	2.03
Regional Area	322,325	286.3	5.51	128.2	2.46
Rest of State	336,233	239.7	4.61	108.5	2.09
NSW	2,757,316	243.6	4.68	95.2	1.83

Note: Due to rounding and presentation of data to 1 decimal place, the multiplication of the weekly data per person may not match the annual figures when multiplied by 52

Graph 9 shows the weight of dry recyclables collected by kerbside collections by area in comparison to the previous year. The Regional Regulated Area slightly increased collection, however the overall NSW total remained broadly the same as the previous five years.

Graph 9: Kerbside dry recyclables in tonnes collected by area 2012–18

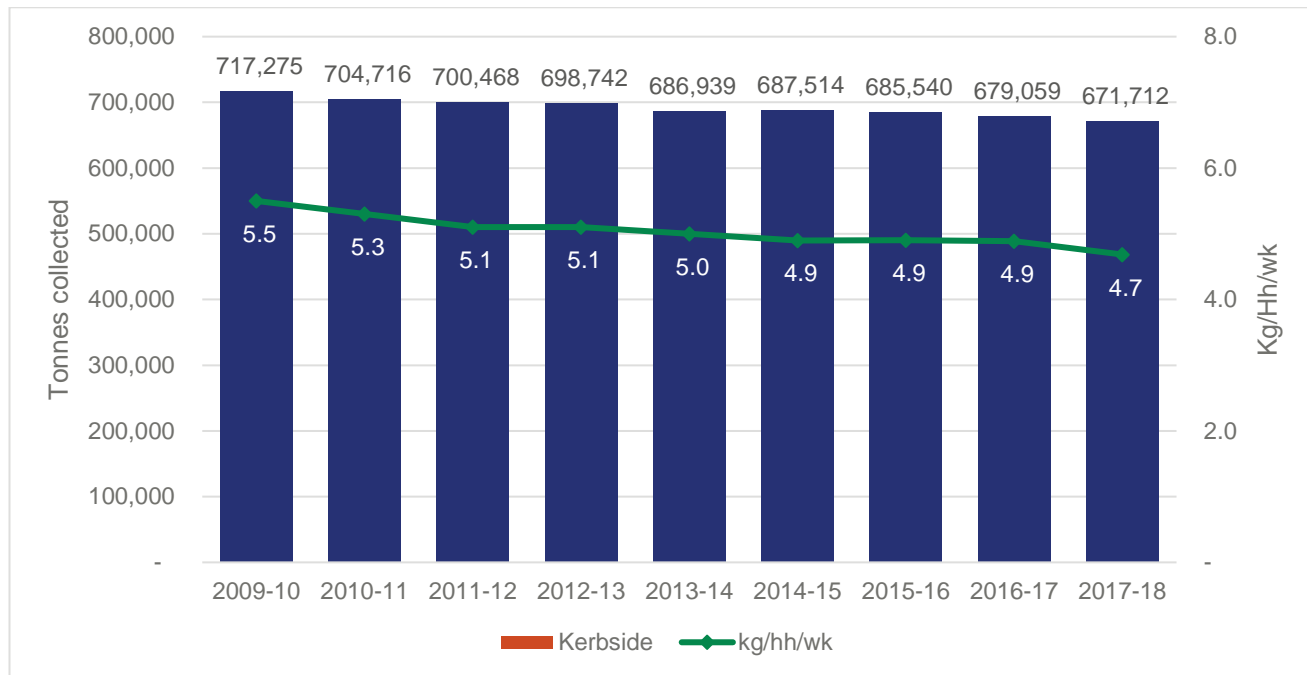


¹ The household average is based on the number of serviced households

² The person average is based on the total population in councils with kerbside recycling

The level of dry recyclables collected at the kerbside has held steady over the past five years as illustrated in Graph 10. Therefore, any increases in overall recycling have come from non-kerbside collections, organic waste collections and AWT material recycled.

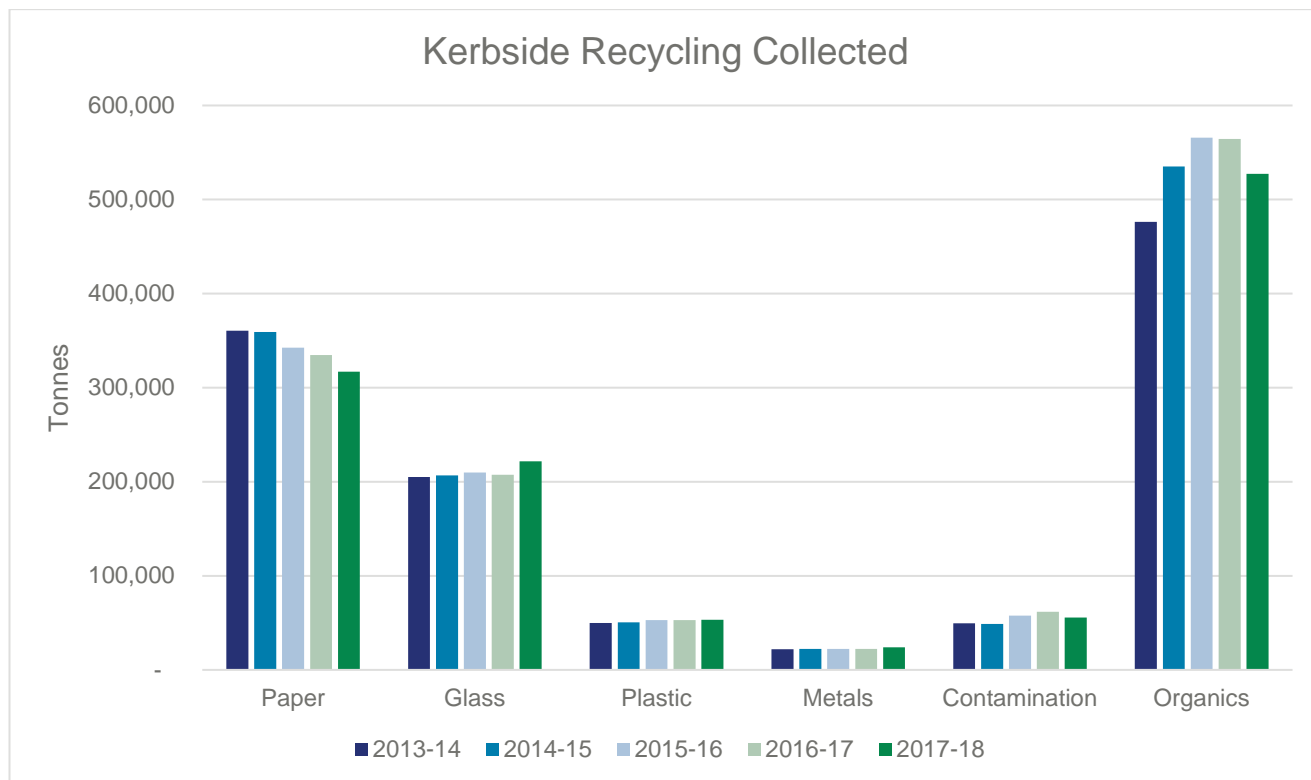
Graph 10: Dry recyclables collected at the kerbside (total and average household yield per week) 2009–18



2017-18 included 33,061 tonnes from CDS collections

Graph 11 below is the average by material collected over the past four years based on compositional recycling audit data.

Graph 11: Kerbside recycling collected by material in tonnes per year 2013–18



3.2. Organics collected and recycled

Like dry recyclables, organics are collected through kerbside, drop-off and clean-up services. A total of 50 councils collect garden organics only and 35 councils collect food and garden organics (FOGO), with four councils using both systems. Statewide, 47 councils did not collect separated organics at the kerbside. Household garden organics are mainly bark, leaves, twigs and lawn clippings, while the FOGO co-collection service also includes household food scraps.

Table 4 shows the organics collected at the kerbside in 2017–18. The total weight of garden organics collected at the kerbside has decreased by 12% from 425,121 in 2016–17 to 375,774 tonnes in 2017–18. The decrease could be attributed to the lack of rainfall over the past year, hence less organics to be collected. The 35 councils with collection systems accepting FOGO collected 151,513 tonnes in 2017–18, with 49% coming from the RRA.

Table 4: Organics collected at the kerbside in tonnes by method and by region 2017–18

	Sydney Metro	Extended Area	Regional Area	Rest of State	NSW
Garden organics					
Councils with service	26	8	5	11	50
Tonnes collected	222,361	108,969	23,149	21,294	375,774
Food and garden organics (FOGO)					
Councils with service	3	2	11	19	35
Tonnes collected	30,951	15,313	73,695	31,554	151,513
Total organics					
Councils with service	29	10	16	30	85
Tonnes collected	253,313	124,282	96,844	52,848	527,287

*Total figures do not represent the sum of the component numbers due to rounding



In 2017-18, there were more FOGO collections in NSW than ever: 35 councils collected 151,500 tonnes, compared to 84,215 tonnes in 2012–13, a 76% increase.

Graph 12 below shows the steady increase in the organics collected by region over the past five years. In 2017-18, kerbside organics collection decreased by 7% (around 37,000 tonnes) from 2016–17. Average rainfall across the state was much less in 2017-18 around 350mm compared to the average 550mm the previous year.

There were increases in drop off organics and FOGO collections but this was offset by a drop in kerbside and clean up organics. NSW councils provided a kerbside collection service to 62.7% of all households for organics and/or FOGO.

Graph 12: Organics collected at the kerbside in tonnes by region 2010–18

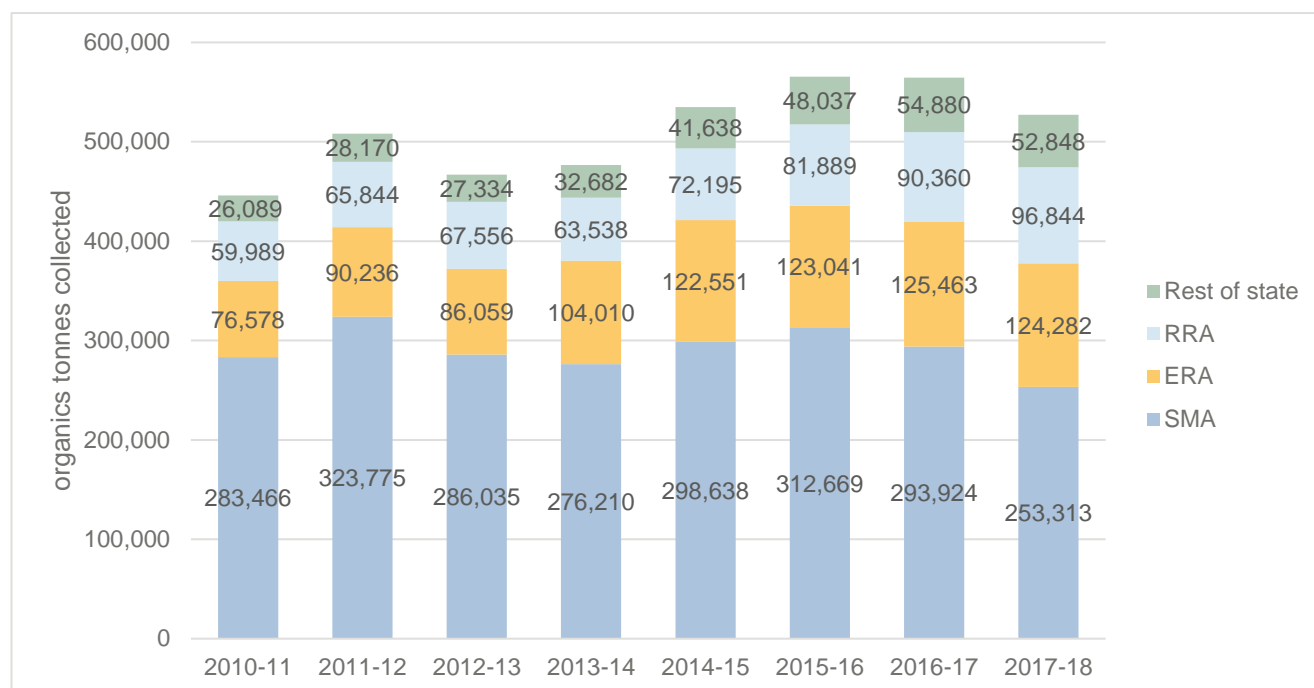


Table 5 shows the collected garden organics compared to the food and garden organics per household and capita weekly. The Sydney Metro area collected 4.7kg of organics per household weekly, compared to 7.1kg of FOGO. The Regional Area collected 4.6kg of organics compared with 8.2kg of FOGO. The Rest of State collected 4.6kg of garden organics and 5.3kg of FOGO per household per week.

Across all areas, FOGO produces the greatest yield, by taking the food out of the waste bin thus reducing landfill and increasing recycling rates.

The FOGO systems have been increasing over the past few years and providing a greater yield in achieving recycling targets per household and capita than the regular garden organics.



Across all areas, FOGO produces greater yield. By taking food out of the waste bin this reduces landfill and increases recycling rates.

Table 5: Organics collected in kilograms per household³ / person⁴ by region 2017–18

Region	No. LGA		Household average		Person average	
	Organics Service	FOGO Service	Organics kg/wk	Fogo kg/wk	Organics kg/wk	Fogo kg/wk
Sydney Metro	26	3	4.7	7.1	1.68	2.72
Extended Area	8	2	4.9	8.3	1.97	3.24
Regional Area	5	11	4.6	8.2	2.04	3.70
Rest of State	11	19	4.6	5.3	2.16	2.38
NSW	50	35	4.73	7.17	1.80	3.07

³ The household average is based on the actual number of serviced households

⁴ The person average is based on the households with a service pro rata to population

Table 6 shows 71.6% of kerbside organics are collected from the Sydney Metro and Extended Area. The amount of material which was sent to landfill as reject or contamination was on average 3% in NSW.

Table 6: Organics including FOGO collected at the kerbside in tonnes by region 2017–18

Region	Collected	Recycled	Disposed
Sydney Metro	253,313	248,472	4,841
Extended Area	124,282	123,289	993
Regional Area	96,844	95,012	1,832
Rest of State	52,848	46,967	5,881
NSW	527,287	513,740	13,548

*Total figures do not represent the sum of the component numbers due to rounding

3.3. Organics collection systems

Overall in 2017-18, kerbside organics-only collected decreased by 7% (37,163 tonnes) in comparison to 2016–17. Drop-off organics increased by 9,000 tonnes and collections from clean-up services decreased by 4,000 tonnes from 2016–17. As organics generation can be seasonal, the decrease tends to be across all areas and councils. This reflects less generation rather than anything else, as the number of households and services have remained consistent.

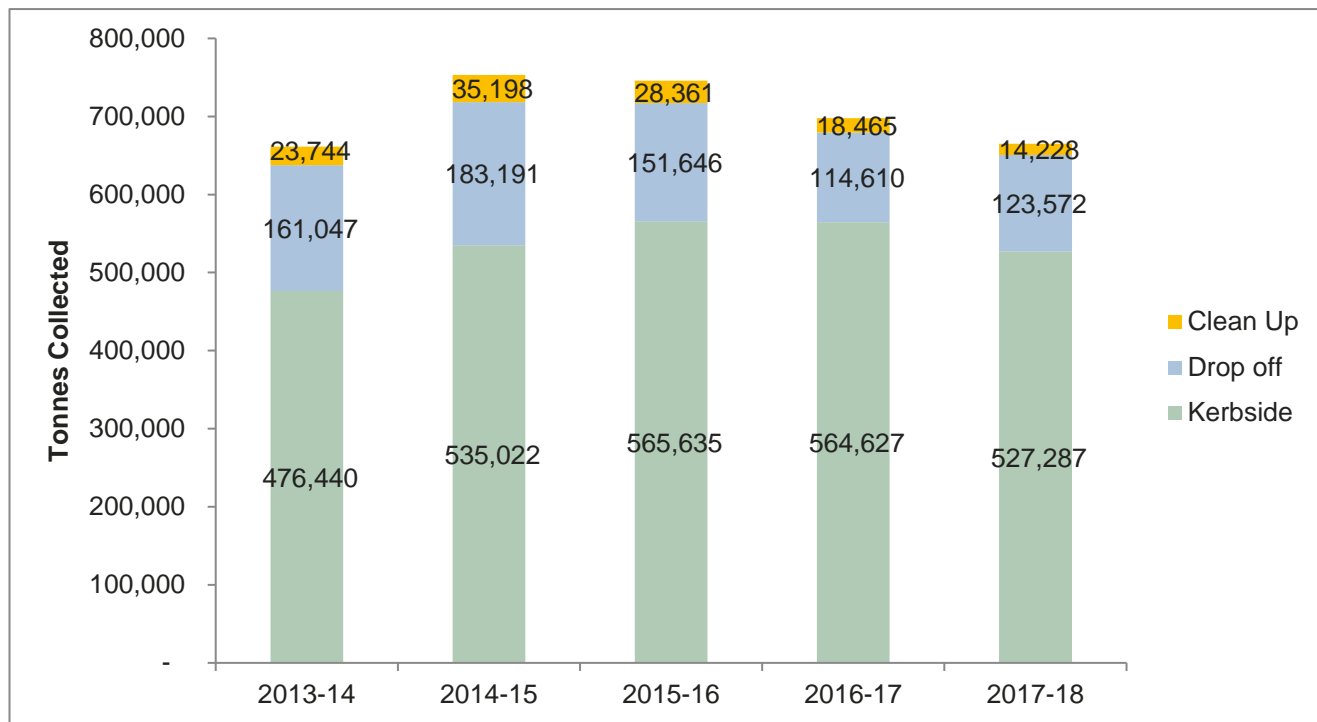
Table 7 shows how organics were collected across NSW, where the majority was collected by kerbside collection. In the Rest of State, the main weight of organics collected was via drop-off, probably reflective of the more limited kerbside provision in this area. In all, 665,087 tonnes of organics were collected from kerbside, drop-off and clean-up services, a further 27,401 tonnes collected from other council organics.

Table 7: Organics collected in tonnes by method and region 2017–18

	Sydney Metro	Extended Area	Regional Area	Rest of State	NSW
Kerbside	253,313	124,282	96,844	52,848	527,287
Drop-off	7,339	28,861	34,580	52,792	123,572
Clean-up	4,924	7,618	1,429	257	14,228
Total tonnes	265,576	160,762	132,853	105,897	665,087

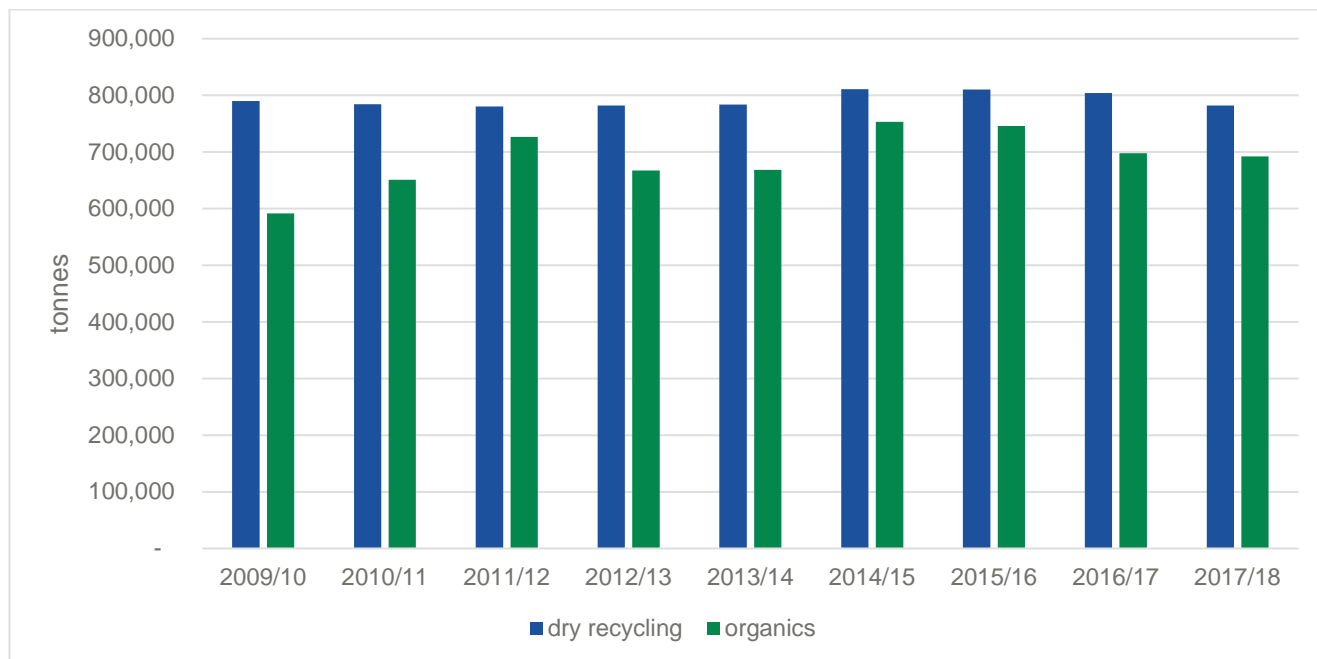
*Total figures do not represent the sum of the component numbers due to rounding

Graph 13: Kerbside organics collected in tonnes by method 2013–18



Graph 14 shows the collected dry recyclables year-on-year is stable but there is a linear increase over time in the quantity of organics collected.

Graph 14: Dry recyclables and organics collected in tonnes by year 2009–18



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4. Residual waste

Residual waste is the remaining waste after households have separated out the dry recyclables and organics. It is collected from one of three methods: kerbside, at drop-off facilities and through clean-up services. The residual waste is either:

- treated in an AWT facility before disposal, or
- sent directly to landfill.

In 2017-18, NSW residents disposed of 1,883,551 tonnes of residual waste to landfill. This figure includes:

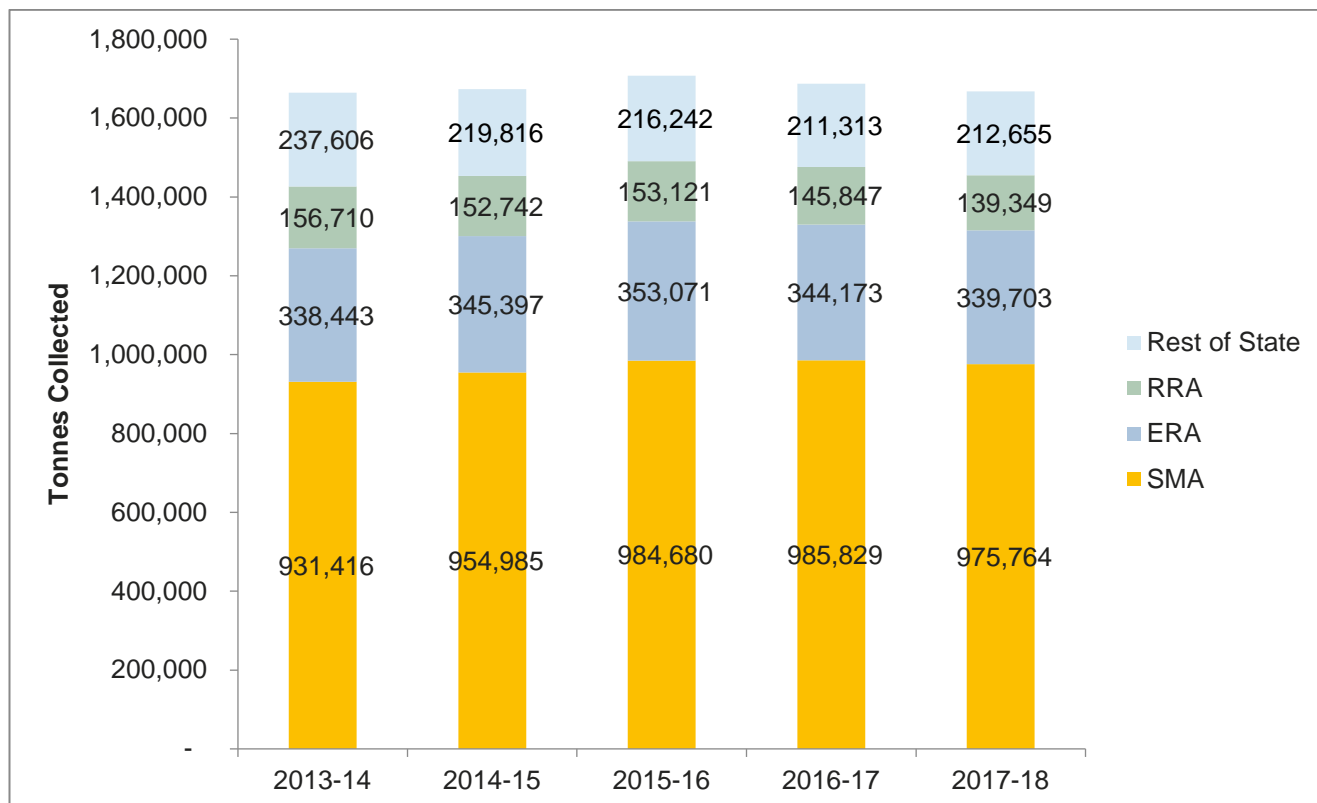
- residual waste collected at the kerbside and sent direct to landfill (1,175,415 tonnes)
- residual waste from drop-off centres (214,077 tonnes)
- residual waste, from clean-up collections (175,626 tonnes)
- rejects from AWT sent to landfill (231,467 tonnes)
- rejects from dry recyclables sent to landfill from kerbside, clean-up and drop-off methods (61,986 tonnes)
- rejects from organics sent to landfill from kerbside, clean-up and drop-off methods (24,981 tonnes).

4.1. Kerbside residual waste collected and recycled

In 2017–18, the total amount of waste collected from kerbside residual waste collections decreased by 1.2% from the previous year to 1,667,471 tonnes

Graph 15 shows that the decreases from last year were across all regions except for the rest of the state with a small increase. This only includes council-contracted and day labour waste collected. It does not include some residential properties serviced by private contractors. However, the average per person collection remains the same since 2013.

Graph 15: Kerbside residual waste collected in tonnes by region 2013–18

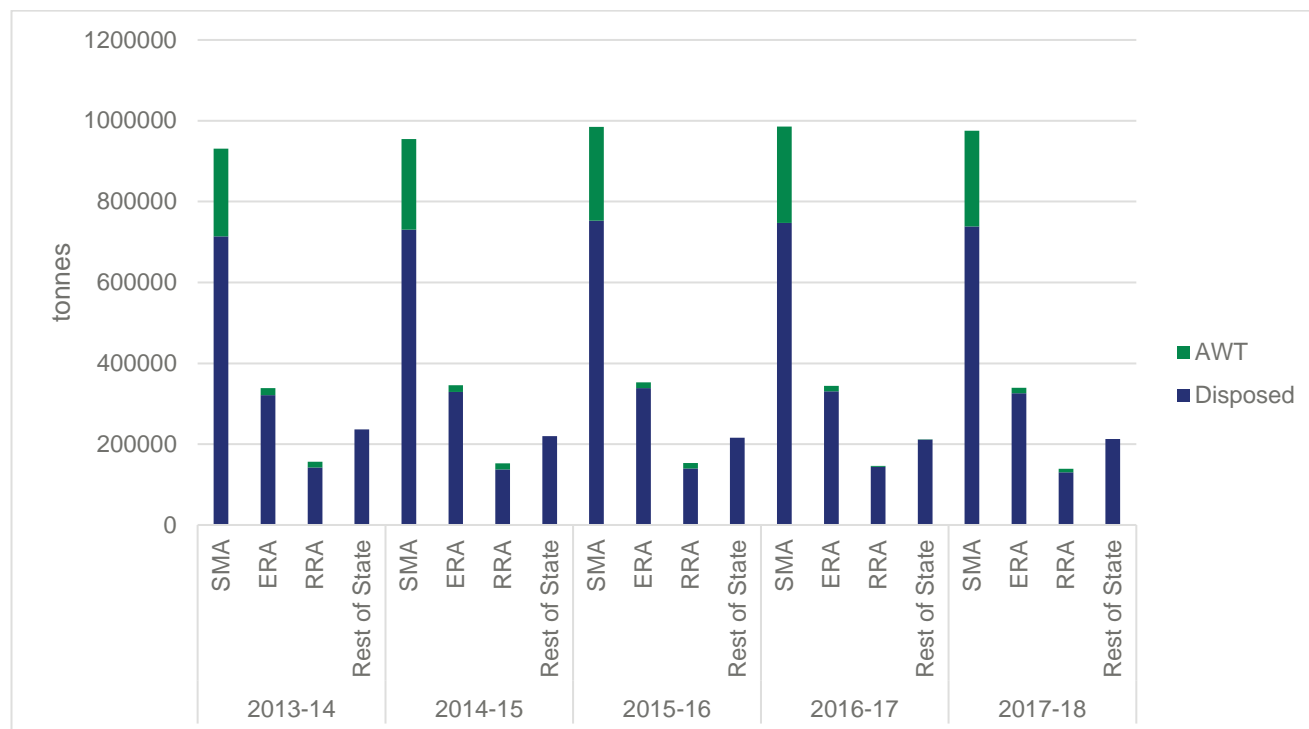




In 2017-18, twenty-five councils sent 492,056 tonnes of kerbside residual waste to an AWT facility where 53% (260,589 tonnes) was processed to be recycled.*

Graph 16 shows the residual waste collected by region and the amount sent to an AWT facility. The SMA accounting for 48% of the NSW tonnes disposed.

Graph 16: Kerbside residual waste in tonnes by end destination by region 2013–18



In 2016-17, the average weekly residual waste created by each household reduced from 11.9kg to 11.2kg. Of the 128 councils with residual waste collection services, 25 sent some or all of their kerbside residual waste to an AWT facility. From the created waste, 260,589 tonnes were recovered by AWT (see Appendix tab 9 for more detail).

Table 8: Kerbside residual waste collected in kilograms per household/person by region 2017–18

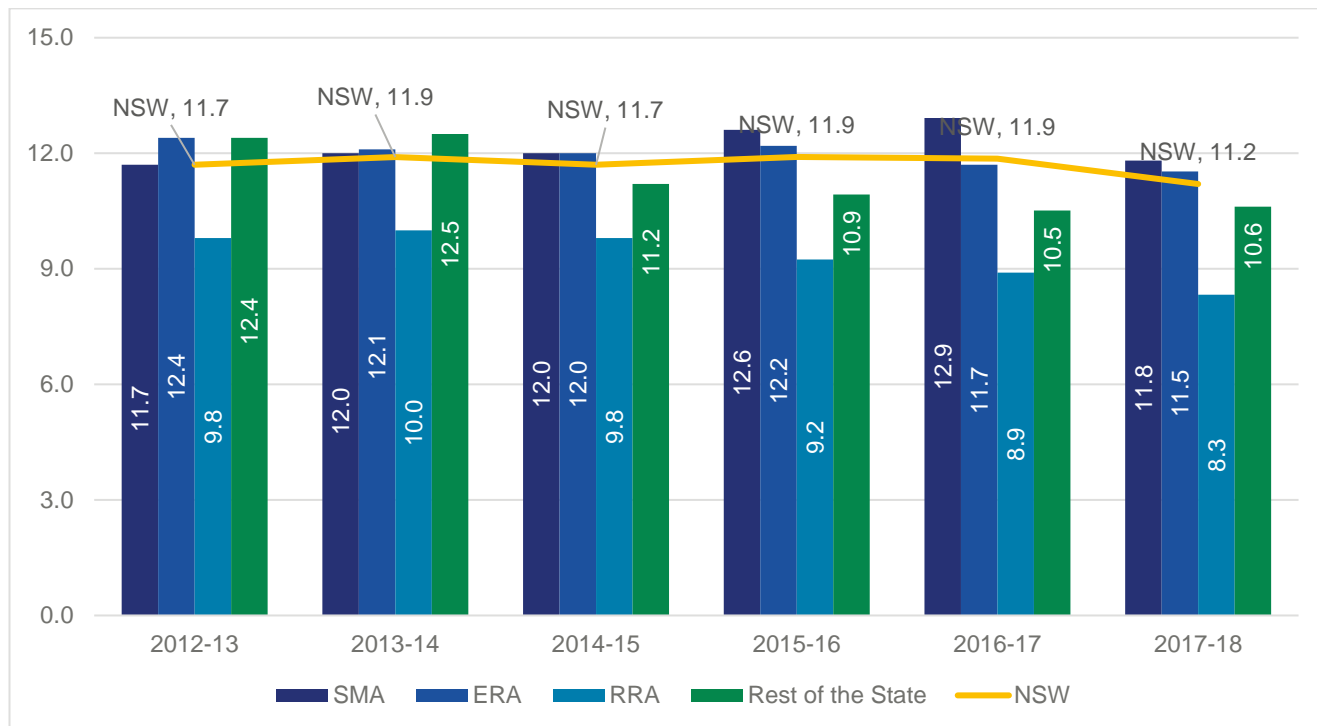
Region	Household Average		Person Average	
	Annual kg	Weekly kg	Annual kg	Weekly kg
Sydney Metro	614.13	11.8	222.27	4.3
Extended Area	599.40	11.5	247.89	4.8
Regional Area	433.24	8.3	193.97	3.7
Rest of State	551.89	10.6	251.44	4.8
NSW*	582.51	11.2	227.66	4.4

*Figure totals for NSW may not add up to the sum of the table component numbers because they are averages.



Avoid and reduce waste generation: per household average residual waste has held level since 2010–11.

Graph 17: Average⁵ household weekly residual waste in kilograms by region 2012–18



4.2. Collection systems

In 2017-18, NSW councils can be categorised into five types of collection systems, each with a combination of waste, recycling, organics and food and garden organics (FOGO). The collection figures in Table 9 are an average amount collected based on households with a service calculated to kilograms per household per week.

All 128 NSW councils had a residual waste collection service. Kerbside waste services covered 92.7% of households in NSW, 95.4% in Sydney Metro, 95% in ERA, 89.1% Regional Area and 82.85% in Rest of State.

A total of 111 of 128 councils provided a weekly waste service, collecting 12.10kg per household per week and 17 councils collected fortnightly, yielding 7.10kg per household per week.

A total of 112 councils provided a dry recycling service; 16 councils with weekly collection at 4.95kg per household per week and 96 with fortnightly predominant service collecting 4.77kg per household per week, delivering a service to 89.3% of households in NSW.

A garden organics service was offered by 50 councils. Of those, 44 used a fortnightly service, yielding 4.57kg per household per week.

The number of councils using food and garden organics (FOGO) increased to 35, with 23 councils having a weekly service collecting 7.04kg per household per week and 12 councils with a fortnightly service collecting 3.93kg per household per week.

⁵ Household average is based on the number of serviced households. Person average is based on the total population in councils that provide waste collection.

The combinations in Table 9 show the average collection yield per system for the councils' predominant service. Note: some councils have a mix and range of services offered.

Table 9: Collection systems and average yield per household per week by council 2017–18

No. LGAs	Avg. collected kg per household per week	Predominant system	Avg. recycling rate %
15	16.71	Waste only	13%
33	17.12	Waste + recycling	37%
45	20.60	Waste + recycling + garden organics	46%
30	19.47	Waste + recycling + FOGO	55%
5	22.47	Waste + recycling + garden organics + FOGO	44%

Appendix tab 8 shows each LGA average yield per household and capita.

5. Disposal to landfill

5.1. Waste streams

Waste sent to landfill can come from a variety of collection or service methods. It is often sent directly from residual waste collections from kerbside or clean-up, and some residents take waste direct to drop-off centres. Rejects or contamination from recycling facilities also contribute to the landfill total, along with material unable to be processed by AWT facilities. Around 50% of residual waste material is processed at AWT facilities before continuing to landfill.

In 2017–18, 1,883,551 tonnes of domestic waste was sent to landfill, a 1.6% decrease from 2016–17. The Sydney Metro councils sent 48% of this (904,325 tonnes) to landfill, followed by the Extended Area councils who sent 437,124 tonnes (23%).

Graph 18 shows the origin of the material sent to landfill.

Graph 18: Tonnes sent to landfill from waste stream/collection method by region 2017–18

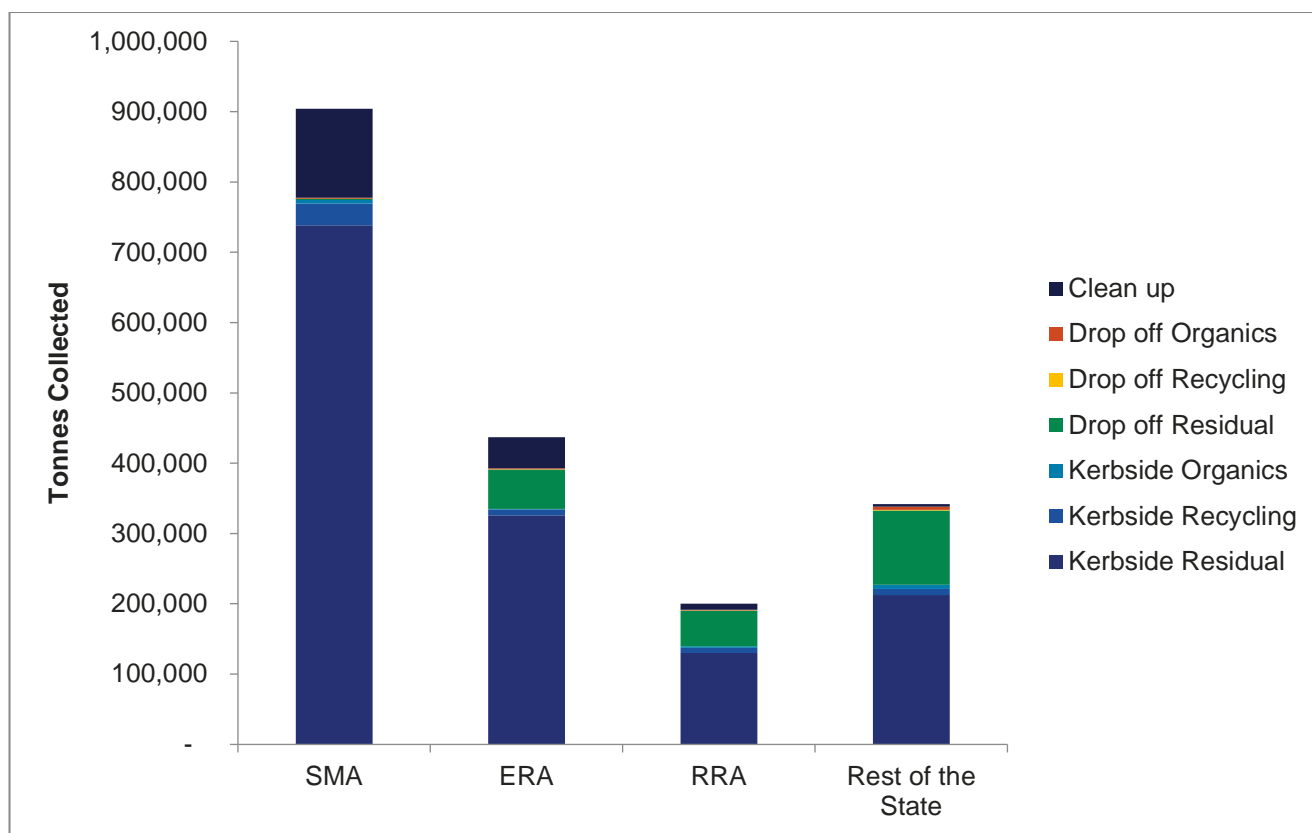
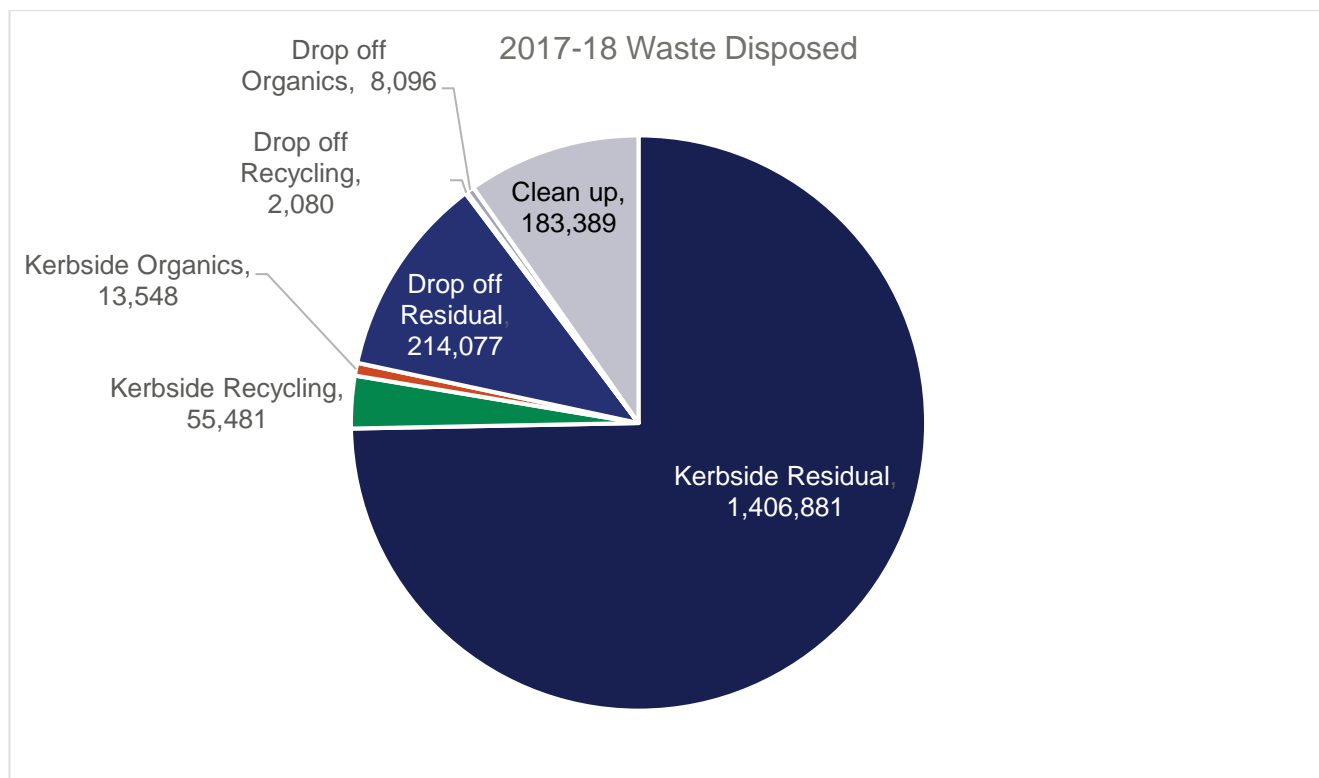


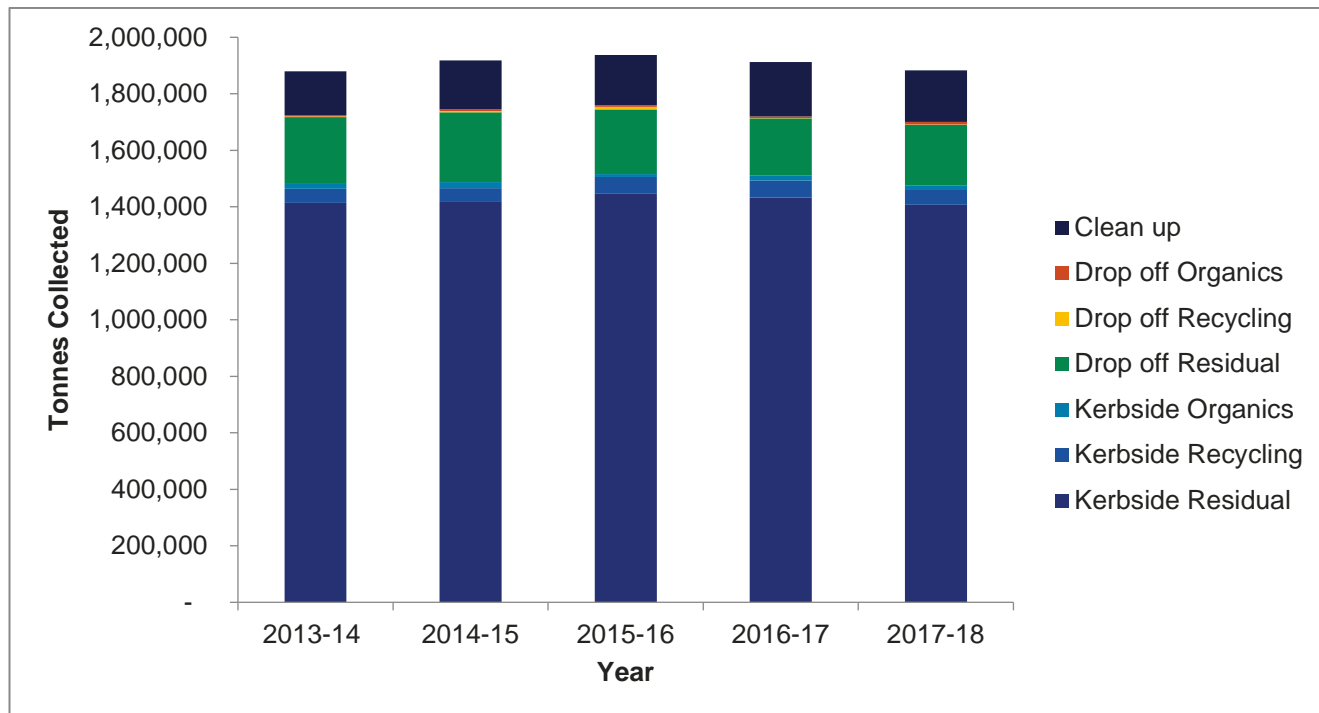
Diagram 1 shows the amount of residual waste disposed to landfill, including AWT disposal plus rejects from recycling and organic process. Contaminants from dry recycling and organics, collected kerbside make up 3.7% (69,029 tonnes) of the total. Drop-off contaminants make up 11.9% (224,252 tonnes). Clean-up contaminants make up 9.7% (183,389). Clean-up waste disposed includes primarily bulky goods and hard waste.

Diagram 1: Total domestic waste sent to landfill in tonnes by collection method/waste stream 2017-18



Graph 19 shows there have been only marginal changes in the amount and proportion of residual waste sent to landfill by collection method and stream from the previous few years, although there is a decrease in the total weight of material sent to landfill. In 2017-18, kerbside residual and contaminants from kerbside and clean up decreased and drop-off recycling increased.

Graph 19: Domestic waste disposed to landfill in tonnes by collection method/waste stream 2013-18

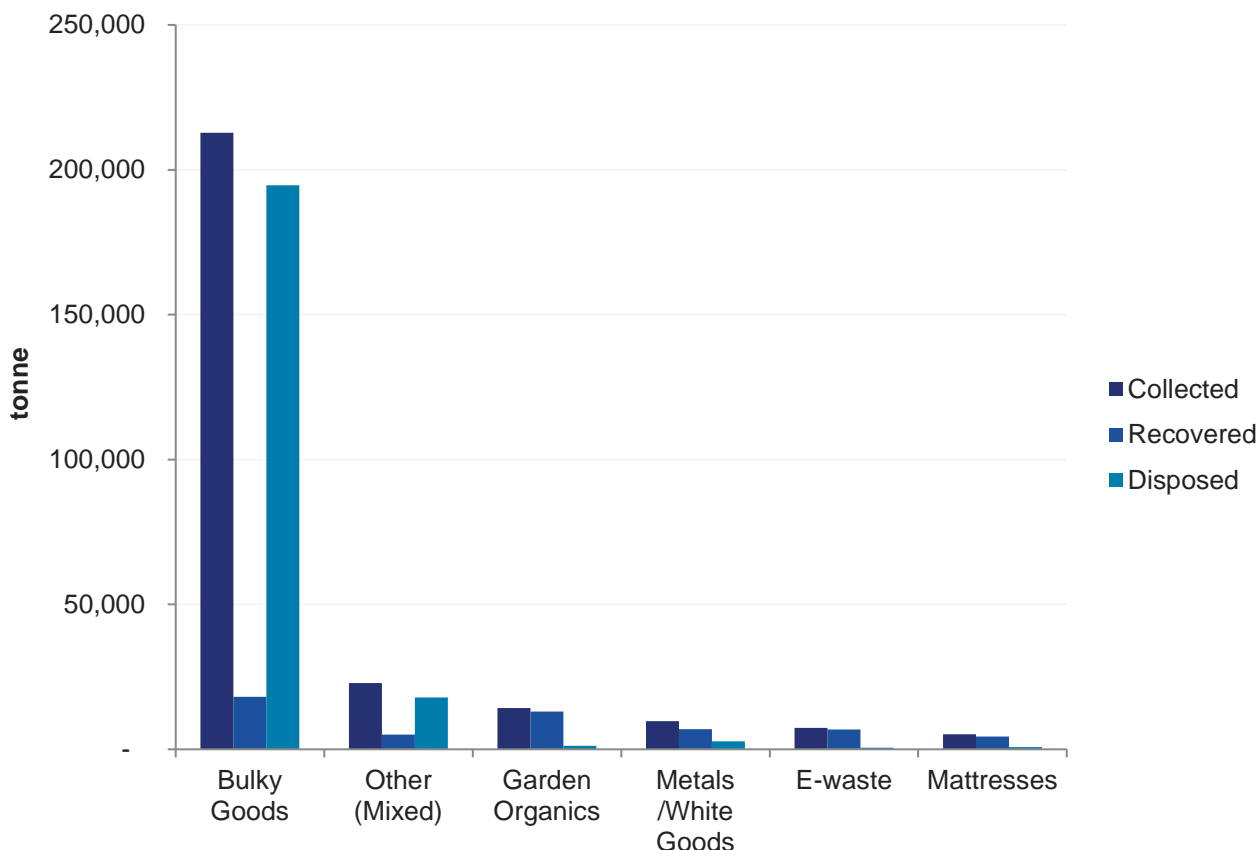


6. Clean-up services

6.1. Waste collected by clean-up services offered by councils

In 2017–18, NSW councils kerbside clean-up services collected 235,429 tonnes. Bulky goods and other waste made up 84.5% (198,810 tonnes), garden organics at 6% (14,228 tonnes), metals made up 4.1% (9,733), the remaining were e-waste (7,438 tonnes) 3.2% and mattresses (5,219 tonnes) 2.2%.

Graph 20: Kerbside clean-up waste in tonnes by material type, collected recycled and disposed 2017–18



23.2% of the 235,429 tonnes collected by clean-up services were recycled

In 2017-18, 79 NSW councils provided a variety of different kerbside clean-up services but access to the services varied across councils.

Table 10 shows the weight of source-separated material collected separately from residual waste. Of the 235,429 tonnes collected from kerbside clean-up services, 54,511 tonnes were recycled and 180,917 tonnes went to landfill. In 2017-18, the recycling rate from kerbside clean-up services was 23.2%.

For some materials such as garden organics, e-waste and white goods, almost all of the material collected was recycled. For other materials collected separately such as bulky goods, only a proportion of was suitable for recycling with the remainder disposed of.

Table 10: Tonnes of source separated clean-up materials by type 2017–18

Material type	Collected	Recycled	Disposed	% Recycled
Bulky goods	175,917	18,147	157,771	10.3%
Other (mixed)	22,892	5,037	17,855	22.0%
Garden organics	14,228	13,068	1,160	91.8%
Metals/white goods	9,733	6,940	2,794	71.3%
E-waste	7,438	6,884	554	92.6%
Mattresses	5,219	4,436	784	85.0%
Total	235,429	54,511	180,917	23.2%

Note: The weight of bulky goods disposed of may include recyclable material which was collected as part of the bulky goods such as garden organics, mattresses etc.

*Total figure does not represent the sum of the component numbers due to rounding



Most of the bulky goods and other mixed materials were sent to landfill

Table 11 shows a significant variation between regions in the weight of material collected from clean-up collections and how much of that was recycled. The largest volume of material was collected from the Sydney Metro region, although only 22% was recycled. Conversely, the Rest of State collected the least weight, but recycled the greatest proportion of the material.

Table 11: Tonnes of bulk waste clean-up materials by area 2016–17

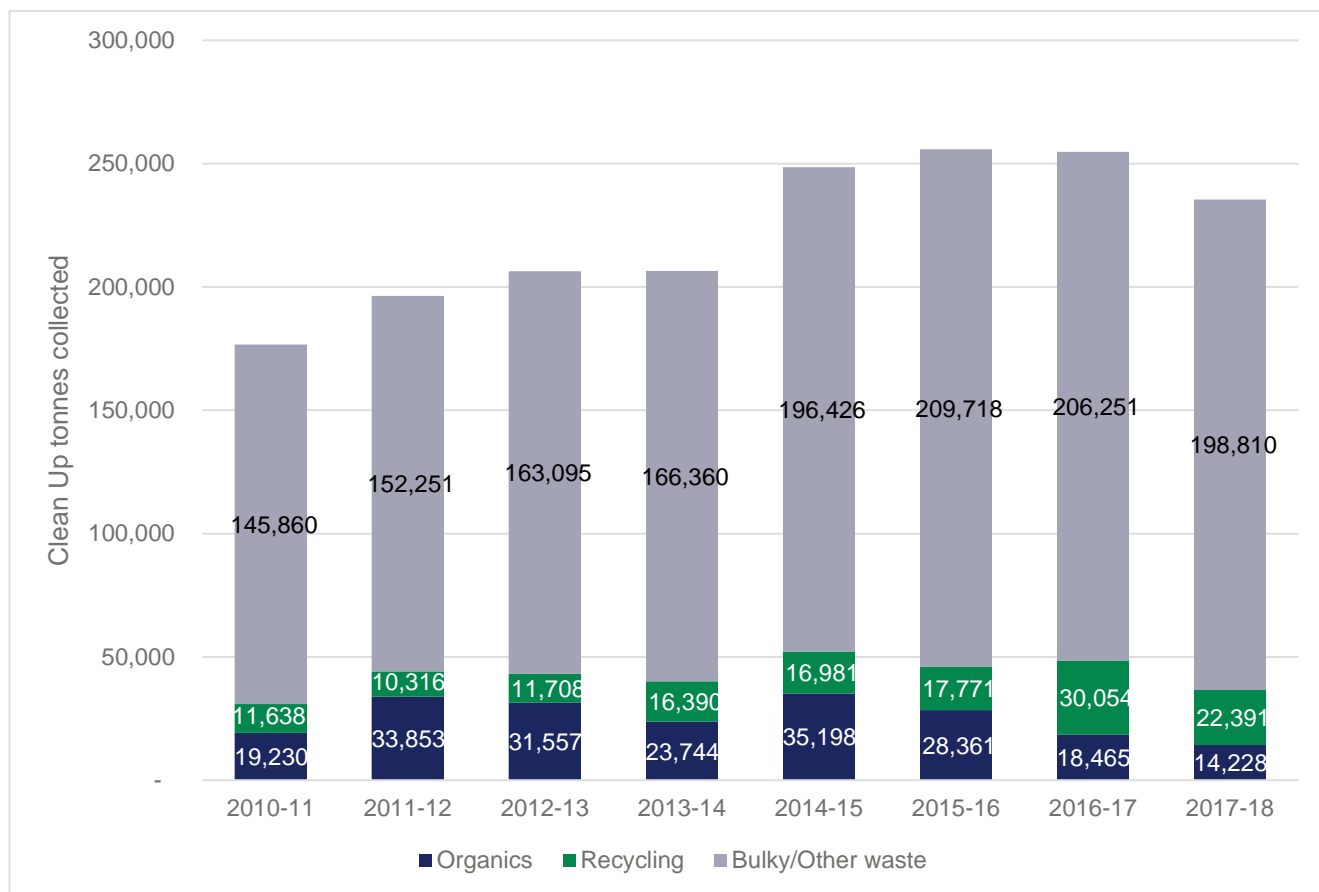
Region	Councils	Collected	Recycled	Landfilled	% Recycled
Sydney Metro	30	161,250	35,523	125,727	22.0%
Extended Area	10	57,860	13,599	44,261	23.5%
Regional Area	15	11,764	3,196	8,568	27.2%
Rest of State	24	4,555	2,193	2,361	48.2%
NSW total	79	235,429	54,511	180,917	23.2%

*Total figures do not represent the sum of the component numbers due to rounding

All areas are similar to the previous year and overall weight collected decreased by 19,341 tonnes.

Graph 21 shows the steady increase in kerbside clean-up collection including garden organics, bulky goods and other (mixed waste) since 2010.

Graph 21: Kerbside clean-up majority waste materials in tonnes 2010–17

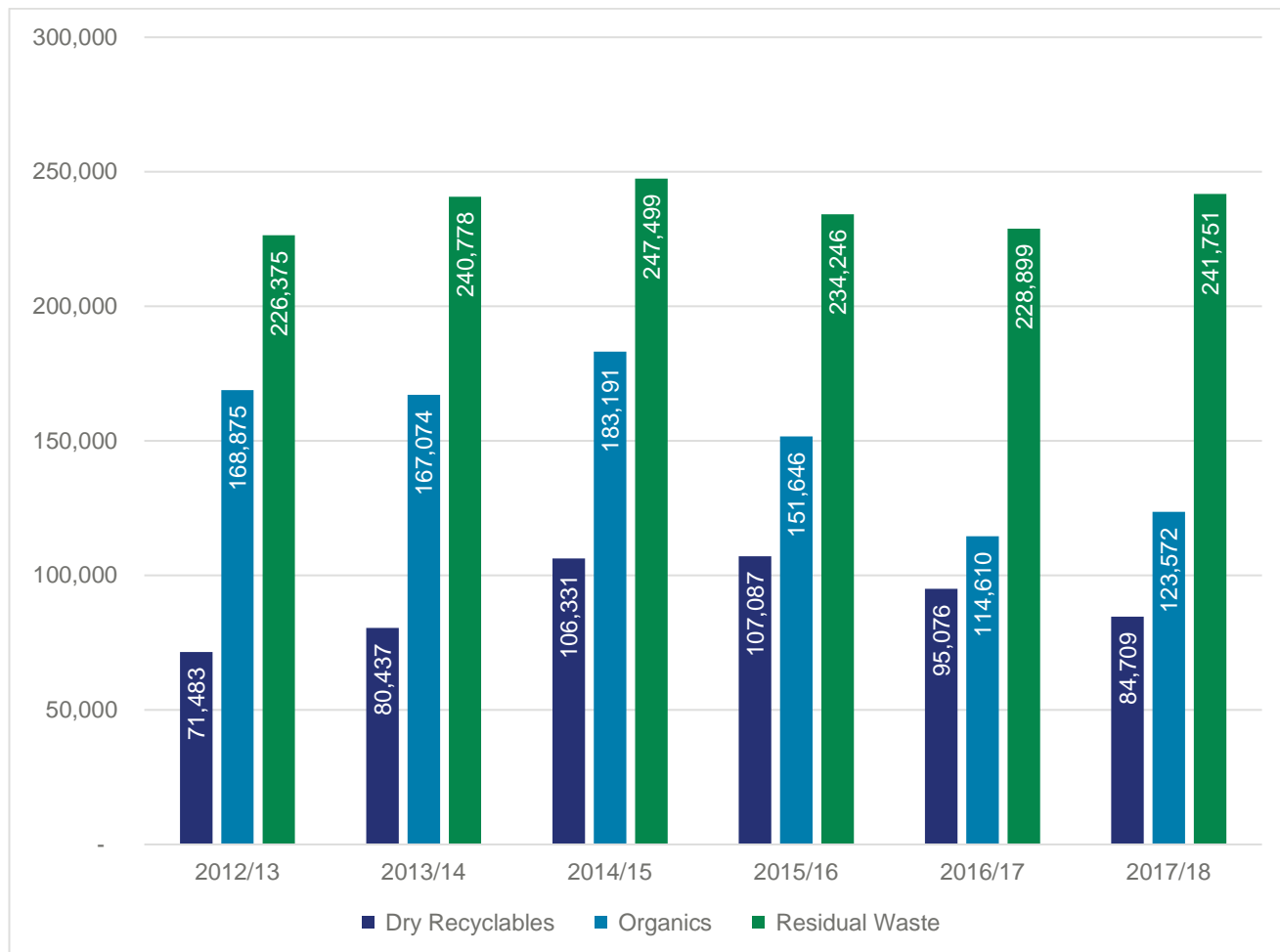


7. Drop-off facilities

7.1. Waste dropped off at a facility by residents

Graph 22 shows that in 2017-18, residents took 450,032 tonnes of material to drop-off facilities. Across NSW, 104 of the total 128 council areas offered some sort of drop-off facility for residents. Graph 22 shows 241,751 tonnes of residual waste and 123,572 tonnes of organics were collected. In 2017-18, dry recyclables decreased to 84,709 tonnes, with waste and organics streams slightly increasing compared to last year. Overall there was a 2.6% increase in material collected at drop-off centres in NSW compared to the previous year.

Graph 22: Drop-off received in tonnes by waste stream 2012–18





In 2017-18, a total of 50.2% of material from drop-off facilities was recycled.

Graph 23: Drop-off material in tonnes received by waste stream 2017-18

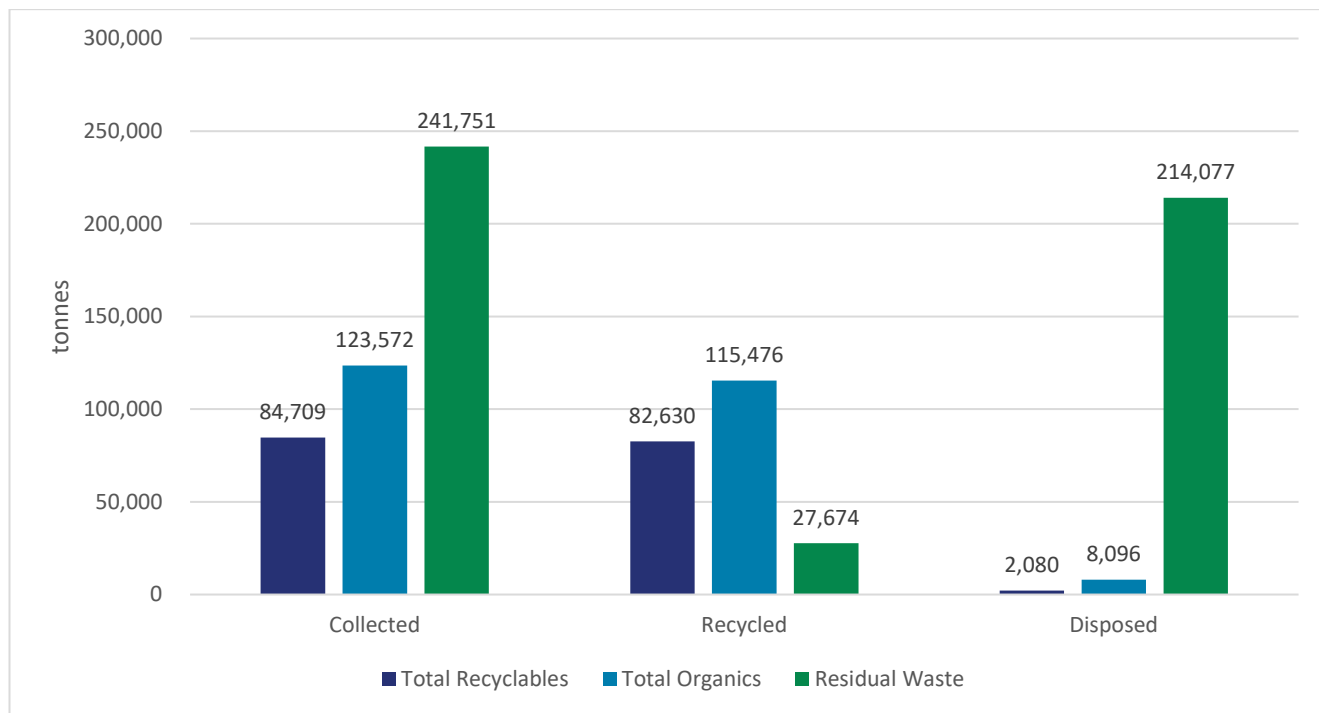


Table 12: Drop-off service provisions in tonnes by region 2017-18

Council region	Collected	Recycled	Disposed	%Recycled
Sydney Metro	14,443	11,178	3,265	77.4%
Extended Area	113,686	56,019	57,668	49.3%
Regional Area	116,314	64,195	52,118	55.2%
Rest of State	205,589	94,388	111,201	45.9%
NSW	450,032	225,780	224,252	50.2%

Terms

Contaminants

The tonnes rejected by recycling operators that are disposed of to landfill from the total amount sent for recycling. For organics, the tonnes which have not been processed are sent to landfill.

Dry recyclables

Household recyclables are collected from three sources:

- Kerbside collection which picks up mixed paper, newspaper, magazines, cardboard, plastic films and bottles, steel and aluminium cans and glass bottles.
- Drop-off facilities accepting the above plus other material (e.g. batteries, gas bottles)
- Clean-up services which collect large metals and bulky goods.

Organic recyclables

Mainly bark, leaves, twigs and lawn clippings. Food and garden organics (FOGO) also include household food scraps. These are collected from kerbside, clean-up and drop-off facilities.

Recyclables

Dry recyclable and organic waste material which is not residual waste

Recycling rates

The percentage of all domestic waste that is recycled, calculated as:

$$\frac{\text{Total recycled}}{\text{Total collected}} \times 100$$

Residual waste

Waste created by domestic activity, less recyclables and organics.

Total domestic waste

All waste created by households which includes residual waste, recyclables and organics that councils collect from households. Council collection services include kerbside, clean-up collections and drop-off facilities

Waste stream

Each category for which the waste material is collected. Residual waste, predominantly red-lid bin material, intended for disposal. Recyclables collected in yellow-lid bin intended for recycling and organics, intended for recycling. All three streams have clean-up and drop-off options along with kerbside collections.