



Department of Planning, Industry and Environment

New South Wales Annual Compliance Report 2020 – Appendix

**National Environment Protection (Ambient Air
Quality) Measure**



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Cover photo: The sky over Stockton Beach at sunrise, Stockton, NSW. Jaime Plaza Van Roon/DPIE

This report includes the appendices to the *New South Wales Air Quality Annual Compliance Report 2020 National Environment Protection (Ambient Air Quality) Measure* (DPIE 2021). This report was prepared by Dr Upma Dutt and Rinat Akter. The report was reviewed by Dr Stephen White and David Salter, all within the Climate and Atmospheric Sciences Branch.

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Appendix A – Particle events by attributed source

A list of particle exceedance days by region and stations is included in this appendix and summarised below in Table 1. The particle event days are very broadly characterised by the cause of the event.

Notes for all tables in Appendix A

- Event types deemed non-exceptional events are presented with underlined text.
- For data described as ‘days above particle standard’, the number ‘x (y)’ includes the total number of days above the standard (x) with non-exceptional exceedance days shown in brackets (y).
For example, ‘10 (1)’ means there were 10 exceedance days in total recorded, of which one (1) was non-exceptional (considered assessable event) and the remaining nine were exceptional event days (non-assessable).
In the cases where there were non-exceptional event days, the numbers are presented in **bold text**. For example, ‘**10 (1)**’ is in bold as there was one exceptional event day.
- Dashes (-) represent ‘pollutant not monitored at this station’.

Table 1 Particle event types, as defined by New South Wales, for the purposes of determining compliance with the AAQ NEPM

Source and event type ¹	Description
Black Summer bushfires 2019–20	Particle pollution day during January to mid-February when smoke impacted air quality, associated with the 2019–20 summer bushfires.
Hazard reduction burning (HRB)	Particle pollution day when smoke impacted air quality, associated with jurisdiction-authorised hazard reduction burning. Mainly during May to December.
Widespread dust (storm)	Particle pollution day when dust impacted air quality, associated with dust storm observed at geographically dispersed locations across the State and beyond (i.e. continental scale).
Mix of dust and smoke events	Particle pollution day when both dust and smoke impacted air quality, and at least one of the two particle sources (dust or smoke) was deemed exceptional. Associated with either: (1) dust storm and bushfires; or (2) dust storm and hazard reduction burning.
<u>Regional dust</u>	Particle pollution day determined to be either from local sources, or a source not determined, but which could not be attributable to a widespread dust storm event, or local-scale dust event, but was observed at multiple locations across a region.
<u>Local dust</u>	Particle pollution day determined to be either from local sources, or a source not determined, but which could not be attributable to a regional dust or widespread dust storm event.

Source and event type ¹	Description
<u>Wood smoke</u>	Particle pollution due to smoke from domestic wood heaters, predominantly observed during the cooler months (May to August).

Particle event days by station (2020)

Table 2 Days above particles standards (2020), with exceptional event days in brackets

Region/Station	Calendar days above PM10 standard at the station	Calendar days above PM2.5 standard at the station
Sydney East		
Chullora	7	9
Cook and Phillip	4	7
Earlwood	9	9
Macquarie Park	7	8
Randwick	9	8
Rozelle	7	8
Sydney North West		
Parramatta North	9	10
Prospect	10	13 (2)
Richmond	9	9 (1)
Rouse Hill	10 (1)	10 (1)
St Marys	11	9
Sydney South West		
Bargo	6	14
Bringelly	11	12
Camden	9	11
Campbelltown West	10	12
Liverpool	7 (2)	7 (1)
Oakdale	10	11
Illawarra		
Albion Park South	10	10
Kembla Grange	19 (7)	11
Wollongong	11	10
Central Coast		
Wyong	5 (1)	3
Lower Hunter		
Beresfield	6	8
Newcastle	9	5 (1)

Region/Station	Calendar days above PM10 standard at the station	Calendar days above PM2.5 standard at the station
Wallsend	6	5
Upper Hunter		
Aberdeen	8	-
Muswellbrook	15 (1)	9 (2)
Singleton	10 (1)	6 (1)
Central Tablelands		
Bathurst	14	13
Orange	12	15 (3)
North West Slopes		
Gunnedah	3	6 (1)
Narrabri	8	1
Tamworth	8	4
Northern Tablelands		
Armidale	4 (1)	27 (23)
South West Slopes		
Albury	19 (1)	16
Wagga Wagga North (Nth)	25 (5)	13
Southern Tablelands		
Goulburn	18	16
Calendar days across network¹	55 (16)	59 (27)

1. The total number of calendar days across network represents total calendar dates counted for the entire AAQ NEPM network. These totals do not add up to the number of event days in the column above (whether for exceptional or non-exceptional), as multiple stations may have recorded levels above the particle standards on the same date.

Particle exceedance events by region (2020)

Sydney East region

Table 3 Days above particle standards: Sydney East region (2020)

Station/s	Days above PM10 standard	Days above PM2.5 standard
Chullora, Cook & Phillip, Earlwood, Macquarie Park, Randwick, Rozelle	11 (0)	13 (0)

Table 4 Particle event days: Sydney East region (2020)

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
1) 01/01/2020	Cook & Phillip	50.5	25.6	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Earlwood	50.6		Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Randwick	56.8	27.9	Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Chullora		28.5	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Earlwood		27.4	Bushfire	Black Summer bushfires 2019–20.
3) 04/01/2020	Chullora	65.1	31.9	Mix dust & burning	N/NW winds brought dust; smoke in the evening on southerly shift.
04/01/2020	Earlwood	67.6	32.5	Mix dust & burning	See Chullora above (04/01/2020).
04/01/2020	Macquarie Park	60.3	30.0	Mix dust & burning	See Chullora above (04/01/2020).
04/01/2020	Randwick	74.7	34.9	Mix dust & burning	See Chullora above (04/01/2020).
04/01/2020	Rozelle	67.0	33.3	Mix dust & burning	See Chullora above (04/01/2020).
4) 05/01/2020	Chullora	65.7	35.2	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Earlwood	60.9	29.8	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Macquarie Park	61.2	31.5	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
05/01/2020	Randwick	63.0	31.7	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Rozelle	59.1	28.8	Bushfire	Black Summer bushfires 2019–20.
5) 08/01/2020	Chullora	102.5	86.2	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Cook & Phillip	130.8	112.5	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Earlwood	116.7	85.1	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Macquarie Park	99.8	77.8	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Randwick	137.3	114.8	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Rozelle	113.5	87.3	Bushfire	Black Summer bushfires 2019–20.
6) 11/01/2020	Chullora		33.4	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Cook & Phillip	50.6	26.4	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Earlwood		27.3	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Macquarie Park		29.2	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Randwick		25.3	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Rozelle		28.2	Bushfire	Black Summer bushfires 2019–20.
7) 12/01/2020	Chullora	63.4	47.7	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Cook & Phillip	57.9	42.0	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Earlwood	61.4	42.6	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Macquarie Park	54.0	40.0	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Randwick	63.4	43.2	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Rozelle	55.6	41.1	Bushfire	Black Summer bushfires 2019–20.
8) 16/01/2020	Cook & Phillip		27.0	Bushfire	Black Summer bushfires 2019–20.
9) 17/01/2020	Chullora		35.9	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Cook & Phillip		39.2	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
17/01/2020	Earlwood		32.3	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Macquarie Park		33.3	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Randwick	51.5	39.3	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Rozelle		33.6	Bushfire	Black Summer bushfires 2019–20.
10) 23/01/2020	Chullora	168.0	28.7	Mix dust & burning	Mix of smoke from bushfires and dust under strong W/NW winds.
23/01/2020	Earlwood	84.7		Mix dust & burning	See Chullora above (23/01/2020).
23/01/2020	Macquarie Park	146.7		Mix dust & burning	See Chullora above (23/01/2020).
23/01/2020	Randwick	74.2		Mix dust & burning	See Chullora above (23/01/2020).
23/01/2020	Rozelle	78.2		Mix dust & burning	See Chullora above (23/01/2020).
11) 24/01/2020	Chullora	88.4	40.0	Mix dust & burning	See Chullora above (23/01/2020).
24/01/2020	Earlwood	73.8	27.4	Mix dust & burning	See Chullora above (23/01/2020).
24/01/2020	Macquarie Park	81.5	34.2	Mix dust & burning	See Chullora above (23/01/2020).
24/01/2020	Randwick	66.8	offline	Mix dust & burning	See Chullora above (23/01/2020).
24/01/2020	Rozelle	74.8	35.7	Mix dust & burning	See Chullora above (23/01/2020).
12) 25/01/2020	Chullora	56.4		Widespread dust	Elevated PM10 on N/NE winds, likely recirculating dust from large storm in previous days; minimal smoke
25/01/2020	Earlwood	58.1		Widespread dust	See Chullora above (25/01/2020).
25/01/2020	Macquarie Park	53.7		Widespread dust	See Chullora above (25/01/2020).
25/01/2020	Randwick	63.0		Widespread dust	See Chullora above (25/01/2020).
25/01/2020	Rozelle	58.0		Widespread dust	See Chullora above (25/01/2020).
13) 30/08/2020	Cook & Phillip		26.2	Hazard reduction burning (HRB)	Resolute HR, Ku-ring-gai Chase NP (100 hectares [ha]); Pogson HR, Cherrybrook (75 ha).
30/08/2020	Macquarie Park		43.6	HRB	See Cook & Phillip above (30/08//2020).
30/08/2020	Randwick		31.4	HRB	See Cook & Phillip above (30/08//2020).

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
14) 03/10/2020	Earlwood		27.7	HRB	Madonna HR (31 ha), Hulk HR (26 ha), Rocky Creek (57 ha).
03/10/2020	Rozelle		27.7	HRB	See Earlwood above (03/10/2020).
15) 01/12/2020	Earlwood	50.1		Bushfire	Backburns undertaken to control the Kataway Bay bushfire (Myall Bay). Smoke transported on northerly winds.

Sydney North West region

Table 5 Days above particle standards: Sydney North West region (2020)

Station/s	Days above PM10 standard ¹	Days above PM2.5 standard ¹
Parramatta North, Prospect, Richmond, Rouse Hill, St Marys	12 (1)	15 (2)

Table 6 Particle event days: Sydney North West region (2020)

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
1) 01/01/2020	Parramatta North	52.5		Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Prospect	57.4	25.8	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Richmond	54.9		Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Rouse Hill	53.3		Bushfire	Black Summer bushfires 2019–20.
01/01/2020	St Marys	63.8	29.4	Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Parramatta North		27.3	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Prospect	54.0	30.4	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Richmond	55.0	29.3	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
02/01/2020	St Marys	64.1	28.9	Bushfire	Black Summer bushfires 2019–20.
3) 04/01/2020	Parramatta North	61.6	28.2	Mix dust & burning	Dust under light N/NW winds during day; evening smoke on southerly change.
04/01/2020	Prospect	68.4	26.8	Mix dust & burning	See Parramatta North above (04/01/2020).
04/01/2020	Richmond	70.5		Mix dust & burning	See Parramatta North above (04/01/2020).
04/01/2020	Rouse Hill	67.2	26.8	Mix dust & burning	See Parramatta North above (04/01/2020).
04/01/2020	St Marys	74.6		Mix dust & burning	See Parramatta North above (04/01/2020).
04/01/2020	Parramatta North	71.2	37.0	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Prospect	81.1	41.7	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Richmond	130.6	93.0	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Rouse Hill	79.9	42.6	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	St Marys	130.4	82.5	Bushfire	Black Summer bushfires 2019–20.
4) 05/01/2020	Parramatta North	71.2	367.0	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Prospect	81.09	41.7	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Richmond	130.6	93.0	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Rouse Hill	79.91	42.6	Bushfire	Black Summer bushfires 2019–20.
5) 08/01/2020	Parramatta North	98.9	72.9	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Prospect	97.8	70.9	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Richmond	76.3	55.3	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Rouse Hill	86.0	61.3	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	St Marys	89.2	68.5	Bushfire	Black Summer bushfires 2019–20.
6) 09/01/2020	St Marys		27.2	Bushfire	Black Summer bushfires 2019–20.
7) 11/01/2020	Parramatta North	51.6	30.7	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
11/01/2020	Prospect	58.0	33.4	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Richmond	76.9	50.1	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Rouse Hill	54.3	31.9	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	St Marys	73.1	48.8	Bushfire	Black Summer bushfires 2019–20.
8) 12/01/2020	Parramatta North	67.6	46.5	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Prospect	69.7	47.2	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Richmond	62.4	43.8	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Rouse Hill	56.5	40.8	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	St Marys	69.9		Bushfire	Black Summer bushfires 2019–20.
9) 13/01/2020	Richmond		27.0	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	St Marys		27.0	Bushfire	Black Summer bushfires 2019–20.
10) 17/01/2020	Parramatta North		30.8	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Prospect		31.3	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Rouse Hill		25.2	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	St Marys		26.8	Bushfire	Black Summer bushfires 2019–20.
11) 23/01/2020	Parramatta North	188.9	25.8	Mix dust & burning	Mix of smoke from bushfires and dust under strong W/NW winds.
23/01/2020	Prospect	245.8	25.4	Mix dust & burning	See Parramatta North above (23/01/2020).
23/01/2020	Richmond	237.7	28.5	Mix dust & burning	See Parramatta North above (23/01/2020).
23/01/2020	Rouse Hill	220.3	28.4	Mix dust & burning	See Parramatta North above (23/01/2020).
23/01/2020	St Marys	260.3	32.4	Mix dust & burning	See Parramatta North above (23/01/2020).
12) 24/01/2020	Parramatta North	98.7	35.9	Mix dust & burning	Dust on light SW winds from mid-morning to mid-afternoon, before the shift to smoky N/NE winds.
24/01/2020	Prospect	105.6	37.5	Mix dust & burning	See Parramatta North above (24/01/2020).

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
24/01/2020	Richmond	89.6	31.4	Mix dust & burning	See Parramatta North above (24/01/2020).
24/01/2020	Rouse Hill	98.3	37.1	Mix dust & burning	See Parramatta North above (24/01/2020).
24/01/2020	St Marys	102.7		Mix dust & burning	See Parramatta North above (24/01/2020).
13) 25/01/2020	Parramatta North	58.2		Widespread dust storm	Elevated PM10 on northerly winds, likely recirculating dust from dust storms in previous days, minimal smoke observed.
25/01/2020	Prospect	61.5		Widespread dust storm	See Parramatta North above (25/01/2020).
25/01/2020	Rouse Hill	53.2		Widespread dust storm	See Parramatta North above (25/01/2020).
25/01/2020	St Marys	56.7		Widespread dust storm	See Parramatta North above (25/01/2020).
14) 02/02/2020	St Marys	53.7		Bushfire	Black Summer bushfires 2019–20.
15) 06/06/2020	Prospect		26.2	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
16) 07/06/2020	Prospect		29.3	<u>Wood smoke</u>	See Prospect above (06/06/2020).
07/06/2020	Richmond		36.3	<u>Wood smoke</u>	See Prospect above (06/06/2020).
07/06/2020	Rouse Hill		26.3	<u>Wood smoke</u>	See Prospect above (06/06/2020).
17) 29/08/2020	Parramatta North		35.8	Hazard Reduction Burning (HRB)	Banks Creek HR, Berowra Heights (50 ha); Resolute HR, at West Head in the Ku-ring-gai Chase National Park (100 ha)
29/08/2020	Prospect		37.1	HRB	See Parramatta North above (29/08/2020).
29/08/2020	Rouse Hill		27.0	HRB	See Parramatta North above (29/08/2020).
18) 10/12/2020	Rouse Hill	57.6		Local dust	Cold front resulted in strong southerly winds lifting dust, likely major contribution from construction site to the south east.

Sydney South West region

Table 7 Days above particle standards: Sydney South West region (2020)

Station/s	Days above PM10 standard ¹	Days above PM2.5 standard ¹
Bargo, Bringelly, Camden, Campbelltown West, Liverpool, Oakdale	14 (2)	18 (1)

Table 8 Particle event days: Sydney South West region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Bargo	offline	64.4	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Bringelly	64.0	32.7	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Camden	63.6	41.0	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Campbelltown West	57.0	31.7	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Oakdale	81.6	60.7	Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Bargo	offline	49.8	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Bringelly	61.3	34.9	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Camden	65.6	45.6	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Campbelltown West	57.2	38.6	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Oakdale	66.7	44.0	Bushfire	Black Summer bushfires 2019–20.
3) 03/01/2020	Bargo		28.6	Bushfire	Black Summer bushfires 2019–20.
03/01/2020	Bringelly	50.3		Bushfire	Black Summer bushfires 2019–20.
03/01/2020	Camden		27.4	Bushfire	Black Summer bushfires 2019–20.
03/01/2020	Oakdale		25.7	Bushfire	Black Summer bushfires 2019–20.
4) 04/01/2020	Bargo	134.7	56.2	Mix dust & burning	Black Summer fires. Southerly change brought significant dust.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
04/01/2020	Bringelly	65.8	26.8	Mix dust & burning	See Bargo above (04/01/2020)
04/01/2020	Camden	88.0	36.1	Mix dust & burning	See Bargo above (04/01/2020)
04/01/2020	Campbelltown West	77.6	39.7	Mix dust & burning	See Bargo above (04/01/2020)
04/01/2020	Oakdale	135.0	71.1	Mix dust & burning	See Bargo above (04/01/2020)
5) 05/01/2020	Bargo	164.2	121.9	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Bringelly	114.1	78.1	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Camden	193.2	149.3	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Campbelltown West	91.8	57.5	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Oakdale	195.0	161.6	Bushfire	Black Summer bushfires 2019–20.
6) 07/01/2020	Bargo		30.6	Bushfire	Black Summer bushfires 2019–20.
07/01/2020	Oakdale	57.2	39.2	Bushfire	Black Summer bushfires 2019–20.
7) 08/01/2020	Bargo	93.6	76.5	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Bringelly	81.6	64.2	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Campbelltown West	85.0	69.0	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Liverpool	100.6	73.6	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Oakdale	74.6	61.1	Bushfire	Black Summer bushfires 2019–20.
8) 11/01/2020	Bargo	offline	62.7	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Bringelly	58.9	47.5	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Camden	77.2	51.2	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Campbelltown West	63.8	47.3	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Liverpool	59.4	42.9	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Oakdale	82.8	60.4	Bushfire	Black Summer bushfires 2019–20.
9) 12/01/2020	Bargo	offline	66.0	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Bringelly	63.9	48.8	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
12/01/2020	Camden	76.2	59.5	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Campbelltown West	73.3	58.4	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Oakdale	73.7	52.9	Bushfire	Black Summer bushfires 2019–20.
10) 13/01/2020	Bargo		35.2	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Bringelly		27.1	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Camden		32.6	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Campbelltown West		28.7	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Oakdale		31.1	Bushfire	Black Summer bushfires 2019–20.
11) 17/01/2020	Bringelly		31.6	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Camden		35.5	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Campbelltown West		30.6	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Liverpool		31.1	Bushfire	Black Summer bushfires 2019–20.
12) 23/01/2020	Bargo	265.7	40.5	Mix dust & burning	Mix of smoke from Black Summer bushfires and dust under strong W/NW winds when PM2.5 was negligible.
23/01/2020	Bringelly	241.8	31.1	Mix dust & burning	See Bargo above (23/01/2020)
23/01/2020	Camden	268.6	39.0	Mix dust & burning	See Bargo above (23/01/2020)
23/01/2020	Campbelltown West	249.7	34.6	Mix dust & burning	See Bargo above (23/01/2020)
23/01/2020	Liverpool	195.1		Mix dust & burning	See Bargo above (23/01/2020)
23/01/2020	Oakdale	248.9	37.6	Mix dust & burning	See Bargo above (23/01/2020)
13) 24/01/2020	Bargo	139.6	37.6	Mix dust & burning	Dust on light SW winds. Shift to N/NE winds brought smoke.
24/01/2020	Bringelly	99.4	34.0	Mix dust & burning	See Bargo above (24/01/2020)
24/01/2020	Camden	91.6	32.5	Mix dust & burning	See Bargo above (24/01/2020)
24/01/2020	Campbelltown West	95.1	37.9	Mix dust & burning	See Bargo above (24/01/2020)

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
24/01/2020	Liverpool	102.2	41.5	Mix dust & burning	See Bargo above (24/01/2020)
24/01/2020	Oakdale	83.4		Mix dust & burning	See Bargo above (24/01/2020)
14) 25/01/2020	Bargo	58.5		Widespread dust storm	Elevated PM10 on N/NE winds, likely dust recirculating from previous day's dust storms. Minimal smoke observed.
25/01/2020	Bringelly	62.5		Widespread dust storm	See Bargo above (25/01/2020)
25/01/2020	Camden	61.9		Widespread dust storm	See Bargo above (25/01/2020)
25/01/2020	Campbelltown West	58.2		Widespread dust storm	See Bargo above (25/01/2020)
25/01/2020	Liverpool	59.9		Widespread dust storm	See Bargo above (25/01/2020)
15) 04/02/2020	Bargo		25.8	Bushfire	Black Summer bushfires 2019–20.
16) 31/05/2020	Liverpool		25.6	<u>Wood smoke</u>	Cold, calm overnight conditions trapped domestic wood heating smoke.
17) 22/07/2020	Liverpool	54.3		<u>Local dust</u>	High PM10 in the evening, a combination of activity at adjacent commercial and recreational facilities.
18) 29/08/2020	Liverpool		26.2	Hazard reduction burning (HRB)	Banks Creek HR, Berowra Heights (50 ha); Resolute HR, at West Head in the Ku-ring-gai Chase National Park (100 ha)
19) 30/08/2020	Bringelly		26.3	HRB	Resolute HR, Ku-ring-gai Chase NP (100 ha); Pogson HR, Cherrybrook (75 ha).
30/08/2020	Campbelltown West		26.3	HRB	See Liverpool above (30/08/2020).
30/08/2020	Liverpool		28.1	HRB	See Liverpool above (30/08/2020).
20) 02/09/2020	Liverpool	66.4		<u>Local dust</u>	Elevated dust in the evening, likely due to activity at the adjacent commercial facilities and sports field.
21) 06/09/2020	Bargo	offline	104.6	HRB	Crawford Rd HR (300 ha).

Central Coast region

Table 9 Days above particle standards: Central Coast region (2020)

Station/s	Days above PM10 standard ¹	Days above PM2.5 standard
Wyong	5 (1)	3 (0)

Table 10 Particle event days: Central Coast region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 04/01/2020	Wyong	59.5	offline	Bushfire	Black Summer bushfires 2019–20.
2) 05/01/2020	Wyong	68.5	offline	Bushfire	Black Summer bushfires 2019–20.
3) 08/01/2020	Wyong	90.5	63.9	Bushfire	Black Summer bushfires 2019–20.
4) 12/01/2020	Wyong		26.1	Bushfire	Black Summer bushfires 2019–20.
5) 24/01/2020	Wyong	83.0	32.7	Mix dust & burning	Wind swung to south in the morning, bringing elevated PM10 and PM2.5. Mostly smoke from south coast fires, but also recirculated dust from previous day under high westerlies.
6) 04/09/2020	Wyong	55.0		<u>Local dust</u>	Local dust, likely from the racetrack to the east of the site. Was a race day, and spikes occurred in short bursts, like races or perhaps vehicle movement, winds generally from east.

Illawarra region

Table 11 Days above particle standards: Illawarra region (2020)

Station/s	Days above PM10 standard ¹	Days above PM2.5 standard
Albion Park South, Kembla Grange, Wollongong	19 (7)	11 (0)

Table 12 Particle event days: Illawarra region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Albion Park South	61.9	35.0	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Kembla Grange	69.6	39.9	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Wollongong	58.5	33.0	Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Albion Park South	60.6	39.6	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Kembla Grange	65.6	40.2	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Wollongong	63.6	41.9	Bushfire	Black Summer bushfires 2019–20.
3) 04/01/2020	Albion Park South	89.9	37.5	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Kembla Grange	93.9	42.1	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Wollongong	74.7	40.0	Bushfire	Black Summer bushfires 2019–20.
4) 05/01/2020	Albion Park South	80.3	45.5	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Kembla Grange	75.8	37.1	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Wollongong	65.4	32.2	Bushfire	Black Summer bushfires 2019–20.
5) 08/01/2020	Albion Park South	117.4	96.3	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Kembla Grange	121.3	100.4	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Wollongong	121.6	100.9	Bushfire	Black Summer bushfires 2019–20.
6) 11/01/2020	Albion Park South	67.9	57.5	Bushfire	Black Summer bushfires 2019–20.
11/01/2020	Kembla Grange	70.5	54.9	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
11/01/2020	Wollongong	60.5	47.8	Bushfire	Black Summer bushfires 2019–20.
7) 12/01/2020	Albion Park South	79.1	62.7	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Kembla Grange	82.5	62.7	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Wollongong	79.9	61.5	Bushfire	Black Summer bushfires 2019–20.
8) 13/01/2020	Albion Park South		32.8	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Kembla Grange	55.2	37.7	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Wollongong	55.4	43.8	Bushfire	Black Summer bushfires 2019–20.
9) 17/01/2020	Albion Park South		35.0	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Kembla Grange		32.5	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Wollongong		39.0	Bushfire	Black Summer bushfires 2019–20.
10) 23/01/2020	Albion Park South	153.3		Mix dust & burning	A westerly front led to significant PM10 at many sites. Additionally, smoke brought through after this front under winds from NE followed by from south.
23/01/2020	Kembla Grange	187.7	45.7	Mix dust & burning	See Albion Park South above (23/01/2020)
23/01/2020	Wollongong	111.1		Mix dust & burning	See Albion Park South above (23/01/2020)
11) 24/01/2020	Albion Park South	102.5	51.3	Mix dust & burning	High PM2.5 on southerly (smoke), and recirculated dust from offshore as well.
24/01/2020	Kembla Grange	101.2	42.9	Mix dust & burning	See Albion Park South above (24/01/2020)
24/01/2020	Wollongong	97.0	45.4	Mix dust & burning	See Albion Park South above (24/01/2020)
12) 25/01/2020	Albion Park South	56.0		Widespread dust	Widespread dust storm from previous days recirculating dust.
25/01/2020	Kembla Grange	57.2		Widespread dust	See Albion Park South above (25/01/2020)
25/01/2020	Wollongong	63.5		Widespread dust	See Albion Park South above (25/01/2020)
13) 01/02/2020	Kembla Grange	54.8		Bushfire	Elevated particles during day with NE winds. Smoke observed on Terra/Modis satellite imagery.

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
14) 07/09/2020	Kembla Grange	50.1		<u>Local dust</u>	Local earthworks directly to the east of site (within 20 metres), high PM10 under strong NE winds.
15) 08/09/2020	Kembla Grange	84.9		<u>Local dust</u>	See Kembla Grange above (07/09/2020).
16) 15/09/2020	Kembla Grange	54.6		<u>Local dust</u>	See Kembla Grange above (07/09/2020). Information received on increased site activity.
17) 16/09/2020	Kembla Grange	54.4		<u>Local dust</u>	See Kembla Grange above (15/09/2020)
18) 20/11/2020	Kembla Grange	52.4		<u>Local dust</u>	Elevated levels on NE winds, more local activity in direct vicinity of site noted.
19) 21/11/2020	Kembla Grange	60.8		<u>Local dust</u>	Horse racing taking place during the day ('The Gong').
20) 29/11/2020	Kembla Grange	61.6		<u>Local dust</u>	Westerly winds showing high spikes from local unpaved road use.

Lower Hunter region

Table 13 Days above particle standards: Lower Hunter region (2020)

Station/s	Days above PM10 standard	Days above PM2.5 standard ¹
Beresfield, Newcastle, Wallsend	10 (0)	10 (1)

Table 14 Particle event days: Lower Hunter region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Beresfield	51.4		Mix dust & burning	Light SE winds brought smoke, followed by raised dust upon southerly change.
01/01/2020	Newcastle	58.9		Mix dust & burning	See Beresfield above (01/01/2020).
01/01/2020	Wallsend	52.6	26.9	Mix dust & burning	See Beresfield above (01/01/2020).
2) 02/01/2020	Beresfield	51.7	37.3	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Wallsend	50.7		Bushfire	Black Summer bushfires 2019–20.
3) 03/01/2020	Beresfield		31.8	Bushfire	Black Summer bushfires 2019–20.
4) 04/01/2020	Beresfield	54.5	45.6	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Newcastle	75.1	32.8	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Wallsend	66.3	38.4	Bushfire	Black Summer bushfires 2019–20.
5) 05/01/2020	Beresfield	69.3	39.3	Mix dust & burning	Dust picked up by southerly, with some smoke from south (Black Summer).
05/01/2020	Newcastle	77.9	39.1	Mix dust & burning	See Beresfield above (05/01/2020).
05/01/2020	Wallsend	65.4	37.8	Mix dust & burning	See Beresfield above (05/01/2020).
6) 08/01/2020	Beresfield	77.7	49.7	Mix dust & burning	Dust and smoke Black Summer bushfires picked up by a southerly change.
08/01/2020	Newcastle	116.2	78.5	Mix dust & burning	See Beresfield (08/01/2020) above
08/01/2020	Wallsend	77.9	56.8	Mix dust & burning	See Beresfield (08/01/2020) above

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
7) 09/01/2020	Beresfield		27.4	Bushfire	Black Summer bushfires 2019–20.
8) 12/01/2020	Beresfield		28.2	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Newcastle	53.2		Bushfire	Black Summer bushfires 2019–20.
9) 23/01/2020	Newcastle	51.4		Widespread dust	Strong cold front brought dust into Newcastle on moderate/strong NW winds.
10) 24/01/2020	Beresfield	75.1	27.6	Mix dust & burning	Light SE winds suggest recirculation of dust and smoke from previous days.
24/01/2020	Newcastle	80.9	31.1	Mix dust & burning	See Beresfield above (24/01/2020).
24/01/2020	Wallsend	76.1	32.7	Mix dust & burning	See Beresfield above (24/01/2020).
11) 19/02/2020	Newcastle	52.4		Widespread dust	High levels of PM10 in the mid to late morning due to moderate NW winds.
12) 06/06/2020	Newcastle		27.6	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
13) 29/11/2020	Newcastle	52.0		Mix dust & burning	Dust on NW winds ahead of strong southerly change, with PM2.5 spikes on southerly bringing smoke from 'Kataway Bay' bushfire at Myall Lake to the north.

Upper Hunter region

Table 15 Days above particle standards: Upper Hunter region (2020)

Station/s	Days above PM10 standard ¹	Days above PM2.5 standard ¹
Aberdeen, Singleton, Muswellbrook	16 (1)	9 (2)

Table 16: Particle event days: Upper Hunter region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Aberdeen	85.3		Mix dust & burning	Light SE winds throughout much of the day brought smoke onshore. Southerly change brought some raised dust.
01/01/2020	Muswellbrook	85.2	33.3	Mix dust & burning	See Aberdeen above (01/01/2020).
01/01/2020	Singleton	65.3	27.3	Mix dust & burning	See Aberdeen above (01/01/2020).
2) 02/01/2020	Muswellbrook	52.0	34.3	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Singleton	53.1	40.5	Bushfire	Black Summer bushfires 2019–20.
3) 03/01/2020	Aberdeen	52.6		Mix dust & burning	Elevated dust, particularly during the evening. As the winds were from the SE, dust was likely local/regionally sourced. Some smoke likely transported from offshore.
03/01/2020	Muswellbrook	50.6		Mix dust & burning	See Aberdeen above (03/01/2020).
4) 04/01/2020	Muswellbrook	50.8		Mix dust & burning	High dust and smoke due to NW winds ahead of a cold front at mid-morning.
04/01/2020	Singleton	56.5		Mix dust & burning	See Muswellbrook above (04/01/2020).
5) 05/01/2020	Aberdeen	119.7		Mix dust & burning	Dust picked up by two southerly changes. Smoke present in the changes.
05/01/2020	Muswellbrook	127.0	49.1	Mix dust & burning	See Aberdeen above (05/01/2020).
05/01/2020	Singleton	82.4	37.2	Mix dust & burning	See Aberdeen above (05/01/2020).

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
6) 06/01/2020	Muswellbrook	50.3		Mix dust & burning	Low pressure trough directed moderate SE winds up the valley, PM10 consistently elevated, PM2.5/PM10 < 50%, suggest dust and smoke.
7) 08/01/2020	Muswellbrook	60.8	33.9	Mix dust & burning	Moderate winds out of the SE all day suggesting smoke recirculation onshore. PM2.5/PM10 low suggests still some dust aloft over the Tasman Sea being brought back onshore.
08/01/2020	Singleton	66.2	46.0	Mix dust & burning	See Muswellbrook above (08/01/2020)
8) 09/01/2020	Muswellbrook		29.3	Bushfire	Low pressure trough offshore directed moderate SE winds up the valley. Some smoke from offshore and fires further up the valley.
09/01/2020	Singleton		25.1	Bushfire	See Muswellbrook above (09/01/2020).
9) 11/01/2020	Aberdeen	267.7		Widespread dust	Very high concentrations of PM10 in the early morning on moderate W/NW winds. Large dust storm across western and central NSW.
11/01/2020	Muswellbrook	181.0	28.4	Widespread dust	See Aberdeen above (11/01/2020).
11/01/2020	Singleton	51.1		Widespread dust	See Aberdeen above (11/01/2020).
10) 12/01/2020	Aberdeen	54.9		Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Muswellbrook	57.6	32.8	Bushfire	Black Summer bushfires 2019–20.
11) 20/01/2020	Aberdeen	60.8		Widespread dust	Low-pressure trough directing dust into the valley on light to moderate W winds. Likely connected to widespread dust in North-west Slopes
20/01/2020	Muswellbrook	82.9		Widespread dust	See Aberdeen above (20/01/2020).
12) 21/01/2020	Aberdeen	55.9		Widespread dust	Large dust storm reported for Dubbo 8pm previous night, also observed at North West Slopes sites on 20 January.
21/01/2020	Muswellbrook	60.6		Widespread dust	See Aberdeen above (21/01/2020).
13) 23/01/2020	Aberdeen	77.9		Widespread dust	Strong cold front brought dust into the Valley on moderate to strong NW winds.
23/01/2020	Muswellbrook	55.5		Widespread dust	See Aberdeen above (23/01/2020).

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
23/01/2020	Singleton	71.7		Widespread dust	See Aberdeen above (23/01/2020).
14) 24/01/2020	Singleton	61.4		Mix dust & burning	Dust arrived on passage of a southerly change following cold front. Wind shifted from to the SE throughout the valley from NW, resulting in elevated PM10 and PM2.5 after the shift in wind direction
15) 19/02/2020	Muswellbrook	51.9		Widespread dust	Strong cold front caused high PM10 for a few hours during the morning.
16) 07/06/2020	Muswellbrook		28.6	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
07/06/2020	Singleton		26.5	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
17) 08/06/2020	Muswellbrook		28.0	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
18) 19/08/2020	Muswellbrook	54.3		Widespread dust	Elevated PM10 at all sites under WNW winds. Widespread dust storm across NSW as reported in Section E.
19/08/2020	Singleton	57.6		Widespread dust	See Muswellbrook above (19/08/2021).
19) 29/11/2020	Muswellbrook	59.1		<u>Regional dust</u>	Dust pushed ahead of a strong southerly change. Not widespread enough to classify as widespread dust storm.
29/11/2020	Singleton	55.2		<u>Regional dust</u>	See Muswellbrook above (29/11/2020).

Central Tablelands region

Table 17 Days above particle standards: Central Tablelands region (2020)

Stations/	Days above PM10 standard	Days above PM2.5 standard ¹
Bathurst, Orange	15 (0)	19 (3)

Table 18 Particle event days: Central Tablelands region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Bathurst	197.1	116.0	Mix dust & burning	Black Summer bushfires 2019–20. Southerly in the evening brought dust.
01/01/2020	Orange	112.9	92.3	Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Bathurst	51.3	30.1	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Orange	64.3	63.8	Bushfire	Black Summer bushfires 2019–20.
3) 03/01/2020	Bathurst	55.3		Mix dust & burning	Black Summer bushfires 2019–20. Evening southerly brought dust.
4) 04/01/2020	Bathurst	86.8	28.8	Mix dust & burning	Black Summer bushfires 2019–20. Southerly in the evening brought dust.
04/01/2020	Orange	57.9		Mix dust & burning	See Bathurst above (04/01/2020).
5) 05/01/2020	Bathurst	303.5	207.3	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Orange	123.8	78.4	Bushfire	Black Summer bushfires 2019–20.
6) 06/01/2020	Bathurst		30.3	Bushfire	Black Summer bushfires 2019–20.
06/01/2020	Orange	56.6	36.6	Bushfire	Black Summer bushfires 2019–20.
7) 09/01/2020	Bathurst		34.2	Bushfire	Black Summer bushfires 2019–20.
09/01/2020	Orange		35.2	Bushfire	Black Summer bushfires 2019–20.
8) 10/01/2020	Bathurst	172.4		Widespread dust	Large dust storm across western and central NSW. NW winds brought dust.
10/01/2020	Orange	219.0	30.7	Widespread dust	See Bathurst above (10/01/2020).
9) 11/01/2020	Bathurst	184.4	27.5	Mix dust & burning	Moderate SW winds during the day brought dust. Some smoke.
11/01/2020	Orange	181.5		Mix dust & burning	See Bathurst above (11/01/2020).
10) 12/01/2020	Bathurst	53.3	39.9	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Orange	53.7	41.1	Bushfire	Black Summer bushfires 2019–20.
11) 13/01/2020	Bathurst		26.3	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Orange		29.5	Bushfire	Black Summer bushfires 2019–20.
12) 14/01/2020	Bathurst	52.5	25.9	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
13) 15/01/2020	Bathurst		25.1	Bushfire	Black Summer bushfires 2019–20.
15/01/2020	Orange		32.0	Bushfire	Black Summer bushfires 2019–20.
14) 23/01/2020	Bathurst	320.4	30.9	Mix dust & burning	All day strong NW winds brought dust. Smoke from Black Summer bushfires.
23/01/2020	Orange	291.8	33.2	Mix dust & burning	See Bathurst above (23/01/2020)
15) 24/01/2020	Bathurst	81.4		Mix dust & burning	All day strong SW winds resulted in high PM10 levels. Some smoke.
24/01/2020	Orange	79.5		Mix dust & burning	See Bathurst above (24/01/2020)
16) 25/01/2020	Bathurst	52.7		Bushfire	Black Summer bushfires 2019–20.
17) 01/02/2020	Bathurst	67.1		Widespread dust	Westerly winds all day brought widespread dust, also observed at SW Slopes.
01/02/2020	Orange	69.6		Widespread dust	See Bathurst above (01/02/2020)
18) 02/02/2020	Bathurst	73.1		Widespread dust	Widespread dust event observed first at SW Slopes.
02/02/2020	Orange	99.2		Widespread dust	See Bathurst above (02/02/2020)
19) 06/05/2020	Bathurst		32.0	Hazard reduction burning (HRB)	Establishment Burn, Oberon Essington State Forest (85 ha) transported under SE winds.
20) 05/06/2020	Orange		27.4	HRB	HRB activity SE of site (Gardiners 2021 AC); southerly winds raised PM2.5.
21) 06/06/2020	Orange		28.4	HRB	See Orange above (05/06/2020)
22) 18/07/2020	Orange		25.9	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
23) 19/07/2020	Orange		40.6	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
24) 30/08/2020	Orange		26.3	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.

North West Slopes region

Table 19 Days above particle standards: North West Slopes region (2020)

Station/s	Days above PM10 standard	Days above PM2.5 standard ¹
Gunnedah, Narrabri, Tamworth	13 (0)	6 (1)

Table 20 Particle event days: North West Slopes region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Tamworth	56.3		Mix dust & burning	Black Summer bushfires 2019–20, and NW winds ahead of low trough brought dust.
2) 04/01/2020	Gunnedah	offline	28.1	Bushfire	Black Summer bushfires 2019–20.
04/01/2020	Tamworth	51.0	28.2	Mix dust & burning	NW winds H-pressure ridge over E QLD. Max wind gust NNW, 43 km/h, 7am.
3) 05/01/2020	Gunnedah	offline	25.6	Bushfire	Black Summer bushfires 2019–20.
05/01/2020	Tamworth	95.7	52.6	Mix dust & burning	See Tamworth above (04/01/2020).
4) 06/01/2020	Gunnedah	offline	26.3	Mix dust & burning	Low pressure trough, NE ahead, SW behind. Wind gust SSE 69 km/h.
06/01/2020	Narrabri	77.8	42.4	Mix dust & burning	See Gunnedah above (06/01/2020).
06/01/2020	Tamworth		26.3	Bushfire	Black Summer bushfires 2019–20.
5) 09/01/2020	Gunnedah	offline	30.3	Widespread dust	Black Summer bushfires 2019–20.
09/01/2020	Narrabri	110.2		Widespread dust	Low pressure trough over region, NE winds. Max wind gust NE 78 km/h.
6) 11/01/2020	Gunnedah	offline	28.5	Mix dust & burning	Low-pressure system and variable winds. Max wind gust WSW 52 km/h. Gunnedah PM10 invalidated due to faulty switching valve but was likely quite high.
11/01/2020	Narrabri	82.1		Widespread dust	See Gunnedah above (11/01/2020).
11/01/2020	Tamworth	177.7	31.8	Mix dust & burning	See Gunnedah above (11/01/2020).

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
7) 20/01/2020	Gunnedah	95.5		Widespread dust	Low pressure trough approaching, NW ahead, SW behind. Max wind gust W 44 km/h.
20/01/2020	Narrabri	119.6		Widespread dust	See Gunnedah above (20/01/2020).
20/01/2020	Tamworth	87.6		Widespread dust	See Gunnedah above (20/01/2020).
8) 21/01/2020	Tamworth	77.3		Widespread dust	Low-pressure trough approaching, NW ahead, SW behind. WNW gust, 44 km/h.
9) 23/01/2020	Tamworth	178.0		Widespread dust	Low-pressure trough approaching, NW ahead, SW behind. No gust data available.
10) 25/01/2020	Narrabri	70.2		Widespread dust	Low-pressure trough over region, NE winds. Max wind gust ENE 54 km/h.
11) 03/02/2020	Narrabri	78.2		Widespread dust	Low-pressure trough over region, NE winds ahead, SW behind. SW gust 50 km/h.
12) 19/02/2020	Gunnedah	76.1		Widespread dust	1pm Gunnedah peak 1h PM10, Namoi elevated 1pm, peaks in Hunter 5am-1pm. Widespread dust storm across western and central NSW
19/02/2020	Narrabri	60.7		Widespread dust	See Gunnedah above (19/02/2020).
13) 06/06/2020	Gunnedah		34.7	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
14) 20/08/2020	Gunnedah	101.2		Widespread dust	PM10 1h>50 $\mu\text{g}/\text{m}^3$ most day. Widespread dust storm across NSW addressed in Section E.
20/08/2020	Narrabri	80.1		Widespread dust	See Gunnedah above (20/08/2020).
20/08/2020	Tamworth	171.3		Widespread dust	See Gunnedah above (20/08/2020).

Northern Tablelands region

Table 21 Days above particle standards: Northern Tablelands region (2020)

Station/s	Days above PM10 standard ¹	Days above PM2.5 standard ¹
Armidale	4 (1)	27 (23)

Table 22 Particle event days: Northern Tablelands region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 03/01/2020	Armidale		31.6	Bushfire	Black Summer bushfires 2019–20.
2) 04/01/2020	Armidale		29.1	Bushfire	Black Summer bushfires 2019–20.
3) 05/01/2020	Armidale	68.4	53.8	Mix dust & burning	Southerly change picked up high dust for a few hours, but also brought mainly smoke (Black Summer).
4) 06/01/2020	Armidale		30.2	Bushfire	Black Summer bushfires 2019–20.
5) 19/02/2020	Armidale	51.8		Widespread dust	Consistent with NW Slopes and Hunter, dust during passage of cold front. Widespread dust storm across NSW.
6) 05/05/2020	Armidale		32.7	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
7) 11/05/2020	Armidale		27.4	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
8) 12/05/2020	Armidale		32.1	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
9) 13/05/2020	Armidale		25.9	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
10) 31/05/2020	Armidale		36.7	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
11) 04/06/2020	Armidale		33.3	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
12) 05/06/2020	Armidale		37.1	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
13) 06/06/2020	Armidale		30.2	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
14) 07/06/2020	Armidale		27.2	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
15) 27/06/2020	Armidale		37.3	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
16) 28/06/2020	Armidale		26.5	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
17) 29/06/2020	Armidale		25.9	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
18) 01/07/2020	Armidale		26.1	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
19) 02/07/2020	Armidale		30.2	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
20) 06/07/2020	Armidale		40.0	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
21) 07/07/2020	Armidale		27.5	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
22) 08/07/2020	Armidale		29.2	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
23) 21/07/2020	Armidale		29.4	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
24) 22/07/2020	Armidale	50.5	44.0	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
25) 23/07/2020	Armidale		27.3	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
26) 01/08/2020	Armidale		28.5	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
27) 05/08/2020	Armidale		27.8	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
28) 12/08/2020	Armidale		33.4	<u>Wood smoke</u>	Cold, calm overnight conditions trapping domestic wood heating smoke.
29) 20/08/2020	Armidale	112.5		Widespread dust	Significant dust storm hit locations in western and northern of NSW on passage of a cold front.

South West Slopes region

Table 23 Days above particle standards: South West Slopes region (2020)

Stations	Days above PM10 standard ¹	Days above PM2.5 standard
Albury, Wagga Wagga Nth	30 (5)	21 (0)

Table 24 Particle event days: South West Slopes region (2020)

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
1) 01/01/2020	Albury	118.9	95.3	Bushfire	Black Summer bushfires 2019–20.
01/01/2020	Wagga Wagga Nth	50.6		Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Albury	offline	152.5	Bushfire	Black Summer bushfires 2019–20.
02/01/2020	Wagga Wagga Nth	295.3	219.5	Bushfire	Black Summer bushfires 2019–20.
3) 03/01/2020	Wagga Wagga Nth	136.0	95.7	Bushfire	Black Summer bushfires 2019–20.
4) 04/01/2020	Wagga Wagga Nth	135.3	34.6	Mix dust & burning	Morning smoke on light southerlies. Afternoon dust peak with passage of cold front (WNW winds).
5) 05/01/2020	Wagga Wagga Nth	offline	559.5	Bushfire	Black Summer bushfires 2019–20.
6) 07/01/2020	Albury	298.3	275.2	Bushfire	Black Summer bushfires 2019–20. Note Albury PM2.5 and PM10 not reporting between 3 and 6 January due to instrument faults.
7) 08/01/2020	Albury	127.5	105.0	Bushfire	Black Summer bushfires 2019–20.
08/01/2020	Wagga Wagga Nth	119.5	68.2	Bushfire	Black Summer bushfires 2019–20.
8) 09/01/2020	Albury	82.5	56.6	Bushfire	Black Summer bushfires 2019–20.
09/01/2020	Wagga Wagga Nth	80.1	53.2	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
9) 10/01/2020	Albury	108.5		Widespread dust	Afternoon moderate/strong winds brought dust on passing cold front. Widespread dust storm across NSW into 11 January.
10/01/2020	Wagga Wagga Nth	259.4	28.6	Widespread dust	See Albury above (10/01/2021).
10) 12/01/2020	Albury	89.2	58.9	Bushfire	Black Summer bushfires 2019–20.
12/01/2020	Wagga Wagga Nth	95.6	53.3	Bushfire	Black Summer bushfires 2019–20.
11) 13/01/2020	Albury	122.3	88.6	Bushfire	Black Summer bushfires 2019–20.
13/01/2020	Wagga Wagga Nth	97.1	65.3	Bushfire	Black Summer bushfires 2019–20.
12) 14/01/2020	Albury	284.3	195.6	Bushfire	Black Summer bushfires 2019–20.
14/01/2020	Wagga Wagga Nth	77.2	28.4	Bushfire	Black Summer bushfires 2019–20.
13) 15/01/2020	Albury	215.2	165.3	Bushfire	Black Summer bushfires 2019–20.
15/01/2020	Wagga Wagga Nth	53.9	32.2	Bushfire	Black Summer bushfires 2019–20.
14) 16/01/2020	Albury	55.0	29.5	Bushfire	Black Summer bushfires 2019–20.
15) 17/01/2020	Albury	61.8	37.3	Bushfire	Black Summer bushfires 2019–20.
17/01/2020	Wagga Wagga Nth	54.2		Bushfire	Black Summer bushfires 2019–20.
16) 18/01/2020	Albury	51.3	39.6	Bushfire	Black Summer bushfires 2019–20.
17) 19/01/2020	Wagga Wagga Nth	54.0		Widespread dust	High PM10 with strong N winds; sub-tropical trough extended south.
18) 23/01/2020	Albury	55.2		Widespread dust	Dust observed following passage of two cold fronts with moderate NW winds.
23/01/2020	Wagga Wagga Nth	62.9		Widespread dust	See Albury above (23/01/2020).
19) 30/01/2020	Wagga Wagga Nth	58.3		Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
20) 31/01/2020	Albury	52.8		<u>Regional dust</u>	PM2.5/PM10 ~10% suggests dust only. Not attributed to widespread dust, considered regionally generated dust from drought-exposed land.
31/01/2020	Wagga Wagga Nth	60.7		<u>Regional dust</u>	See Albury above (31/01/2020).
21) 01/02/2020	Albury	177.6		Widespread dust	Raised dust under strong NW winds during passage of cold front. Dust observed much more widely than previously, due to widespread dust.
01/02/2020	Wagga Wagga Nth	205.3	29.6	Widespread dust	See Albury above (01/02/2020).
22) 04/02/2020	Albury	51.0	25.3	Bushfire	Black Summer bushfires 2019–20.
04/02/2020	Wagga Wagga Nth	61.7	31.5	Mix dust & burning	Black summer bushfires (PM2.5/PM10>60% 5hrs under light SE-ESE winds), dust (PM2.5/PM10 ~29% suggesting more dust).
23) 05/02/2020	Albury	97.9	51.9	Mix dust & burning	Mix of smoke (PM2.5/PM10>60%) and dust (PM2.5/PM10 ~20-35%) across different parts of the day.
05/02/2020	Wagga Wagga Nth	89.8		Mix dust & burning	See Albury above (05/02/2020).
24) 06/02/2020	Albury	113.7	62.0	Bushfire	Black Summer bushfires 2019–20.
25) 07/02/2020	Albury	61.7	49.2	Bushfire	Black Summer bushfires 2019–20.
26) 18/02/2020	Wagga Wagga Nth	70.2		Widespread dust	Low-pressure troughs across region. Dust elevated elsewhere (e.g. Riverina) and PM2.5/PM10 <22%, with strong WNW-SW winds.
27) 28/02/2020	Wagga Wagga Nth	59.3		<u>Local dust</u>	Mixture of local generated sources (<500m from site) under moderate winds.
28) 02/03/2020	Wagga Wagga Nth	68.6		<u>Local dust</u>	Dust peaked with light WNW winds, not observed at most sites in the region.
29) 03/03/2020	Wagga Wagga Nth	61.8		<u>Regional dust</u>	Dust under light NW winds, higher values observed at some sites in the region.

Date	Site	Daily PM10 (µg/m ³)	Daily PM2.5 (µg/m ³)	Cause	Description
30) 28/11/2020	Wagga Wagga Nth	59.6		<u>Local dust</u>	Source likely locally generated near site
31) 05/12/2020	Wagga Wagga Nth	50.5		Widespread dust	Elevated PM10 on moderate WNW winds ahead of extensive cold front approaching. Also observed at DustWatch sites.

Southern Tablelands region

Table 25 Days above particle standards: Southern Tablelands region (2020)

Station/s	Days above PM10 standard	Days above PM2.5 standard
Goulburn	18 (0)	16 (0)

Table 26 Particle event days: Southern Tablelands region (2020)

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
1) 01/01/2020	Goulburn	556.7	516.1	Bushfire	Black Summer bushfires 2019–20.
2) 02/01/2020	Goulburn	204.7	183.9	Bushfire	Black Summer bushfires 2019–20.
3) 03/01/2020	Goulburn	101.5	67.6	Bushfire	Black Summer bushfires 2019–20.
4) 04/01/2020	Goulburn	262.8	166.4	Mix dust & burning	Black Summer South coast fires, along with strong westerly winds that brought dust.
5) 05/01/2020	Goulburn	541.7	479.9	Bushfire	Black Summer bushfires 2019–20.
6) 06/01/2020	Goulburn	72.7	57.2	Bushfire	Black Summer bushfires 2019–20.
7) 07/01/2020	Goulburn	51.7	35.8	Bushfire	Black Summer bushfires 2019–20.
8) 08/01/2020	Goulburn	122.6	107.3	Bushfire	Black Summer bushfires 2019–20.
9) 10/01/2020	Goulburn	81.7		Widespread dust	Moderately westerlies brought dust throughout the day, with similar trends at Albury, Wagga, Bathurst, Orange (although all were also affected by some smoke). Widespread dust storm across NSW.
10) 11/01/2020	Goulburn	158.1	121.1	Bushfire	Black Summer bushfires 2019–20.
11) 12/01/2020	Goulburn	153.1	139.5	Bushfire	Black Summer bushfires 2019–20.

Date	Site	Daily PM10 ($\mu\text{g}/\text{m}^3$)	Daily PM2.5 ($\mu\text{g}/\text{m}^3$)	Cause	Description
12) 14/01/2020	Goulburn		28.7	Bushfire	Black Summer bushfires 2019–20.
13) 17/01/2020	Goulburn	61.7	53.8	Bushfire	Black Summer bushfires 2019–20.
14) 23/01/2020	Goulburn	273.5	26.4	Widespread dust	Dust observed following passage of two cold fronts with moderate NW winds.
15) 24/01/2020	Goulburn	99.4		Mix dust & burning	Mild westerlies brought dust. Wind change late evening brought smoke from south coast fires.
16) 25/01/2020	Goulburn	85.7	43.9	Mix dust & burning	Bushfire influence from previous day. In the afternoon, dust prevailed with PM10 much higher at site and elsewhere in the network, e.g. Sydney.
17) 27/01/2020	Goulburn	52.8	35.9	Bushfire	Black Summer bushfires 2019–20.
18) 29/01/2020	Goulburn		29.0	Bushfire	Black Summer bushfires 2019–20.
19) 01/02/2020	Goulburn	52.8		Widespread dust	Severe drought still causing dust storms. Under westerlies all day, dust observed in the South West Slopes and Central Tablelands regions.
20) 02/02/2020	Goulburn	62.9		Widespread dust	See Goulburn above (02/02/2021).

Appendix B – Trends analysis

This section forms the second part of Section D of the main report. It presents percentile trends for all pollutant standards, at each station, over the last 10 years leading to 2020.

Note for all tables in Appendix B

- *Italicised* entries indicate the annual data availability rate is between 15% and 75%. Where not italicised, data availability is greater than 75% for the whole year. The quarterly data availability requirement of 75% has not been included when italicising. Note that data is nevertheless presented in some cases where annual data availability was less than 15% when exceedances were observed during the Black Summer bushfires.
- For specific data on each year, refer to the equivalent annual NEPM report.
- For all tables, exceedances of the standards and goals are represented by **bold text**. This is applied to:
 - maximum or percentile concentrations, if exceeding the respective standards and goals
 - number of exceedance days where that number exceeds the goal specified for that pollutant at that time.
- Sydney region stations are not grouped by subregions but are listed in alphabetical order instead.

Carbon monoxide 8-hour standard

Table 27 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Camden (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2013	99.0	0	1.9	0.9	0.6	0.4	0.4	0.2	0.2
2014	98.2	0	0.6	0.4	0.4	0.4	0.3	0.2	0.2
2015	97.6	0	0.5	0.4	0.4	0.3	0.3	0.2	0.1
2016	94.8	0	0.5	0.4	0.3	0.3	0.2	0.2	0.1
2017	96.0	0	0.5	0.4	0.3	0.3	0.3	0.2	0.1
2018	94.4	0	0.7	0.5	0.5	0.4	0.3	0.2	0.2
2019	96.7	0	2.0	1.5	1.2	0.7	0.4	0.3	0.2
2020	98.0	0	2.6	1.1	0.7	0.4	0.3	0.3	0.2

Table 28 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.3	0	1.1	0.8	0.7	0.6	0.5	0.4	0.3

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	90.2	0	0.7	0.6	0.6	0.5	0.5	0.3	0.2
2013	98.7	1	9.1	0.8	0.7	0.5	0.5	0.3	0.1
2014	97.9	0	0.9	0.9	0.8	0.7	0.6	0.4	0.3
2015	96.2	0	1.0	0.9	0.8	0.7	0.6	0.5	0.4
2016	98.7	0	1.2	0.9	0.8	0.7	0.6	0.5	0.4
2017	97.0	0	0.8	0.7	0.7	0.6	0.6	0.4	0.3
2018	98.0	0	1.5	1.1	0.8	0.6	0.5	0.4	0.3
2019	98.7	0	2.9	1.6	1.2	0.8	0.6	0.4	0.4
2020	98.2	0	2.3	1.0	0.8	0.7	0.5	0.4	0.3

Note: Campbelltown West station replaced Macarthur in September 2012.

Table 29 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.3	0	1.5	1.4	1.3	1.2	1.0	0.6	0.4
2012	97.7	0	2.0	1.6	1.2	1.1	0.9	0.6	0.5
2013	97.3	0	2.5	1.7	1.2	1.1	0.9	0.6	0.4
2014	97.9	0	1.7	1.3	1.1	0.9	0.8	0.5	0.4
2015	97.4	0	1.4	1.3	1.2	1.0	0.8	0.5	0.4
2016	96.9	0	1.6	1.2	1.1	0.9	0.7	0.5	0.3
2017	97.2	0	1.2	1.1	1.0	0.8	0.7	0.5	0.3
2018	95.6	0	3.4	1.2	1.0	0.8	0.7	0.5	0.3
2019	99.0	0	1.4	1.1	0.9	0.6	0.5	0.3	0.1
2020	96.6	0	1.9	0.8	0.7	0.6	0.5	0.3	0.2

Table 30 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	30.2	0	1.8	1.8	1.5	0.9	0.6	0.3	0.2
2020	92.9	0	2.8	0.7	0.6	0.5	0.4	0.3	0.2

Table 31 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Liverpool (Sydney).

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.9	0	2.4	2.1	1.8	1.5	1.2	0.7	0.5
2012	97.4	0	1.9	1.7	1.6	1.3	1.1	0.7	0.5
2013	98.7	0	2.1	1.9	1.8	1.4	1.1	0.7	0.5
2014	96.9	0	2.2	1.9	1.7	1.4	1.0	0.6	0.4
2015	90.8	0	1.8	1.6	1.4	1.2	0.9	0.6	0.4
2016	95.5	0	1.9	1.6	1.4	1.3	1.0	0.6	0.4
2017	99.1	0	1.8	1.6	1.5	1.1	0.9	0.6	0.4
2018	98.5	0	1.9	1.6	1.4	1.2	1.0	0.6	0.4
2019	97.6	0	1.8	1.4	1.2	1.0	0.8	0.5	0.3
2020	95.9	0	2.1	1.3	1.2	0.9	0.7	0.5	0.2

Table 32 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	37.8	0	0.5	0.5	0.5	0.4	0.4	0.3	0.2
2018	92.5	0	2.5	0.7	0.6	0.5	0.4	0.3	0.2
2019	97.1	0	3.5	1.2	1.0	0.6	0.5	0.4	0.3
2020	99.3	0	2.4	0.9	0.8	0.6	0.5	0.4	0.3

Table 33 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	96.7	0	1.1	1.0	0.9	0.8	0.7	0.4	0.3
2019	98.7	0	3.2	0.7	0.7	0.7	0.7	0.7	0.7
2020	98.8	0	2.0	1.1	0.9	0.8	0.7	0.4	0.3

Table 34 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.6	0	1.7	1.5	1.4	1.1	1.0	0.6	0.4
2012	96.8	0	1.8	1.7	1.4	1.0	0.8	0.6	0.4
2013	94.7	0	1.6	1.4	1.2	0.9	0.7	0.4	0.2

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	96.8	0	1.3	1.1	1.0	0.8	0.6	0.4	0.2
2015	98.4	0	1.5	1.3	1.3	0.9	0.7	0.3	0.2
2016	98.5	0	1.5	1.0	0.9	0.8	0.6	0.3	0.2
2017	98.7	0	1.1	1.0	0.9	0.8	0.6	0.4	0.2
2018	90.9	0	1.1	0.9	0.8	0.6	0.5	0.3	0.1
2019	99.1	0	2.8	1.3	0.9	0.7	0.6	0.3	0.2
2020	99.0	0	1.8	1.0	0.9	0.6	0.5	0.3	0.1

Table 35 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Rouse Hill (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	57.5	0	3.6	3.1	1.6	0.9	0.6	0.3	0.2
2020	98.9	0	1.9	0.8	0.7	0.6	0.5	0.3	0.2

Table 36 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.6	0	1.4	1.2	1.1	0.9	0.8	0.5	0.4
2012	96.9	0	2.2	1.3	1.2	1.0	0.8	0.6	0.5
2013	93.8	0	1.8	1.2	1.1	0.9	0.7	0.5	0.3
2014	99.0	0	1.1	1.0	0.9	0.8	0.6	0.4	0.3
2015	94.9	0	1.1	1.1	1.0	0.8	0.7	0.5	0.3
2016	97.8	0	1.2	1.1	1.0	0.8	0.6	0.4	0.3
2017	92.0	0	0.9	0.7	0.6	0.6	0.5	0.3	0.2
2018	67.6	0	0.7	0.6	0.6	0.5	0.4	0.3	0.2
2019	97.8	0	2.2	1.0	0.8	0.7	0.6	0.4	0.3
2020	98.5	0	2.6	1.0	0.8	0.7	0.5	0.4	0.3

Table 37 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	20.1	0	0.4	0.4	0.4	0.3	0.2	0.2	0.1
2013	98.7	0	0.8	0.4	0.3	0.3	0.3	0.2	0.1

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	97.8	0	0.5	0.4	0.4	0.3	0.3	0.2	0.1
2015	98.5	0	0.4	0.4	0.4	0.3	0.3	0.2	0.2
2016	98.2	0	0.6	0.4	0.4	0.3	0.3	0.2	0.2
2017	98.3	0	0.6	0.4	0.3	0.3	0.2	0.2	0.1
2018	98.8	0	0.9	0.3	0.3	0.3	0.2	0.2	0.2
2019	98.5	0	2.4	1.1	0.7	0.4	0.3	0.2	0.2
2020	96.5	0	1.7	0.7	0.5	0.4	0.3	0.3	0.2

Table 38 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.2	0	1.2	1.1	1.0	0.9	0.7	0.6	0.4
2012	96.5	0	1.2	1.1	1.0	0.8	0.7	0.5	0.4
2013	97.3	0	2.7	0.8	0.8	0.7	0.5	0.4	0.3
2014	98.4	0	0.9	0.8	0.8	0.7	0.6	0.4	0.3
2015	97.9	0	0.8	0.7	0.7	0.6	0.5	0.4	0.3
2016	98.8	0	0.9	0.8	0.7	0.6	0.5	0.4	0.3
2017	97.6	0	0.7	0.7	0.7	0.6	0.5	0.4	0.3
2018	97.5	0	0.9	0.8	0.7	0.6	0.5	0.4	0.3
2019	97.9	0	2.3	1.7	0.9	0.6	0.5	0.4	0.3
2020	97.4	0	3.3	1.0	0.8	0.5	0.5	0.4	0.2

Table 39 Statistical summary for CO: daily maximum rolling 8-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.8	0	1.5	1.2	1.0	0.7	0.5	0.3	0.1
2012	94.3	0	1.3	1.3	1.1	0.8	0.6	0.3	0.1
2013	98.3	0	1.4	1.0	1.0	0.8	0.5	0.3	0.1
2014	89.4	0	2.4	1.6	1.1	0.9	0.7	0.4	0.3
2015	92.0	0	1.5	1.3	1.2	1.0	0.9	0.6	0.5
2016	97.4	0	1.4	1.1	0.9	0.8	0.7	0.4	0.2
2017	96.2	0	1.1	0.9	0.9	0.8	0.6	0.4	0.3
2018	96.7	0	1.0	0.9	0.8	0.7	0.6	0.4	0.3
2019	96.0	0	1.5	1.1	0.9	0.7	0.6	0.4	0.3

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2020	96.5	0	2.6	1.1	0.8	0.7	0.5	0.4	0.3

Nitrogen dioxide 1-hour standard

Table 40 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.0	0	0.046	0.035	0.034	0.028	0.025	0.019	0.013
2012	94.0	0	0.044	0.036	0.033	0.029	0.025	0.021	0.014
2013	94.8	0	0.068	0.052	0.040	0.031	0.027	0.022	0.016
2014	93.0	0	0.036	0.033	0.031	0.027	0.025	0.021	0.015
2015	93.0	0	0.048	0.045	0.038	0.032	0.027	0.020	0.015
2016	92.8	0	0.046	0.041	0.039	0.032	0.028	0.021	0.015
2017	93.3	0	0.066	0.049	0.036	0.032	0.029	0.023	0.017
2018	94.2	0	0.048	0.041	0.038	0.034	0.031	0.025	0.017
2019	93.8	0	0.066	0.056	0.049	0.036	0.030	0.024	0.017
2020	93.9	0	0.045	0.039	0.034	0.030	0.026	0.021	0.015

Table 41 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	87.4	0	0.029	0.024	0.023	0.019	0.017	0.013	0.010
2012	89.7	0	0.038	0.027	0.025	0.022	0.018	0.015	0.011
2013	92.9	0	0.037	0.025	0.022	0.019	0.016	0.013	0.010
2014	91.2	0	0.025	0.025	0.023	0.020	0.016	0.013	0.009
2015	92.8	0	0.027	0.023	0.021	0.017	0.015	0.012	0.009
2016	94.3	0	0.030	0.025	0.023	0.020	0.019	0.014	0.010
2017	91.4	0	0.036	0.027	0.024	0.021	0.017	0.015	0.010
2018	94.6	0	0.036	0.030	0.025	0.023	0.020	0.016	0.012
2019	93.5	0	0.034	0.028	0.024	0.022	0.019	0.015	0.012
2020	83.0	0	0.030	0.022	0.020	0.018	0.015	0.012	0.008

Table 42 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Camden (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	20.0	0	0.022	0.022	0.022	0.020	0.017	0.012	0.009
2013	94.1	0	0.036	0.024	0.020	0.018	0.015	0.013	0.010
2014	92.8	0	0.032	0.024	0.022	0.018	0.016	0.013	0.010
2015	92.6	0	0.026	0.021	0.021	0.018	0.016	0.012	0.009
2016	91.9	0	0.029	0.025	0.023	0.019	0.016	0.013	0.010
2017	94.2	0	0.044	0.027	0.022	0.019	0.017	0.013	0.011
2018	90.7	0	0.029	0.026	0.025	0.021	0.020	0.016	0.012
2019	93.1	0	0.030	0.026	0.024	0.020	0.018	0.015	0.011
2020	93.9	0	0.037	0.026	0.020	0.017	0.015	0.012	0.008

Table 43 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	92.9	0	0.045	0.039	0.037	0.033	0.029	0.024	0.019
2012	86.1	0	0.049	0.043	0.041	0.037	0.032	0.026	0.020
2013	94.9	0	0.054	0.043	0.042	0.038	0.035	0.029	0.023
2014	93.8	0	0.055	0.044	0.041	0.038	0.032	0.027	0.022
2015	91.8	0	0.062	0.048	0.043	0.036	0.033	0.027	0.021
2016	93.3	0	0.054	0.049	0.043	0.038	0.035	0.029	0.022
2017	93.5	0	0.061	0.046	0.045	0.040	0.036	0.030	0.024
2018	94.1	0	0.054	0.051	0.044	0.040	0.037	0.031	0.023
2019	94.1	0	0.059	0.049	0.047	0.040	0.036	0.030	0.025
2020	93.8	0	0.051	0.041	0.039	0.036	0.033	0.027	0.022

Note: Campbelltown West station replaced Macarthur in September 2012.

Table 44 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2010	86.5	0	0.057	0.042	0.040	0.036	0.032	0.028	0.023
2011	93.2	0	0.051	0.046	0.043	0.037	0.034	0.029	0.024
2012	93.6	0	0.059	0.049	0.047	0.041	0.037	0.030	0.024
2013	92.2	0	0.055	0.051	0.047	0.043	0.038	0.031	0.026
2014	92.9	0	0.064	0.050	0.044	0.040	0.036	0.030	0.025

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	94.0	0	0.054	0.051	0.042	0.037	0.034	0.029	0.024
2016	94.6	0	0.046	0.046	0.045	0.040	0.037	0.030	0.024
2017	93.3	0	0.060	0.049	0.046	0.040	0.036	0.031	0.025
2018	94.7	0	0.057	0.044	0.041	0.039	0.035	0.030	0.023
2019	94.9	0	0.070	0.052	0.045	0.038	0.035	0.029	0.024
2020	93.9	0	0.052	0.047	0.039	0.035	0.032	0.026	0.021

Table 45 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	29.7	0	0.110	0.103	0.066	0.047	0.039	0.029	0.024
2020	88.1	0	0.046	0.044	0.041	0.035	0.033	0.028	0.023

Table 46 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Earlwood (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.0	0	0.046	0.037	0.034	0.031	0.028	0.024	0.019
2012	92.2	0	0.051	0.039	0.035	0.033	0.029	0.024	0.019
2013	91.0	0	0.048	0.040	0.037	0.032	0.029	0.025	0.021
2014	87.5	0	0.040	0.035	0.033	0.029	0.027	0.023	0.019
2015	94.4	0	0.053	0.034	0.032	0.028	0.026	0.023	0.019
2016	89.5	0	0.043	0.039	0.036	0.034	0.031	0.026	0.021
2017	94.5	0	0.067	0.044	0.040	0.034	0.031	0.027	0.022
2018	94.3	0	0.050	0.042	0.037	0.035	0.033	0.028	0.021
2019	93.3	0	0.061	0.040	0.038	0.035	0.032	0.027	0.022
2020	93.0	0	0.040	0.036	0.035	0.030	0.027	0.024	0.019

Table 47 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	92.0	0	0.046	0.039	0.038	0.032	0.030	0.025	0.020
2012	90.1	0	0.046	0.039	0.036	0.032	0.030	0.025	0.020
2013	92.2	0	0.056	0.047	0.040	0.037	0.034	0.028	0.024

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	91.0	0	0.044	0.041	0.038	0.034	0.031	0.027	0.022
2015	90.4	0	0.060	0.046	0.038	0.034	0.031	0.026	0.021
2016	94.4	0	0.047	0.045	0.044	0.038	0.035	0.029	0.023
2017	94.7	0	0.064	0.046	0.045	0.040	0.036	0.031	0.025
2018	94.1	0	0.062	0.046	0.044	0.041	0.037	0.032	0.025
2019	94.6	0	0.050	0.048	0.042	0.037	0.035	0.031	0.025
2020	91.3	0	0.048	0.038	0.037	0.035	0.033	0.027	0.023

Table 48 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	37.9	0	0.037	0.033	0.028	0.025	0.022	0.018	0.013
2018	93.4	0	0.030	0.028	0.026	0.024	0.022	0.018	0.013
2019	93.1	0	0.026	0.024	0.024	0.022	0.019	0.017	0.013
2020	94.9	0	0.030	0.026	0.023	0.020	0.018	0.015	0.011

Table 49 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Oakdale (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.5	0	0.027	0.017	0.013	0.011	0.010	0.006	0.004
2012	93.5	0	0.022	0.021	0.017	0.014	0.010	0.006	0.004
2013	94.3	0	0.019	0.017	0.016	0.012	0.010	0.007	0.004
2014	94.5	0	0.026	0.022	0.018	0.012	0.009	0.006	0.004
2015	94.4	0	0.024	0.015	0.012	0.010	0.008	0.006	0.003
2016	92.5	0	0.022	0.017	0.015	0.012	0.009	0.006	0.003
2017	95.3	0	0.022	0.015	0.013	0.010	0.008	0.006	0.003
2018	94.3	0	0.029	0.015	0.014	0.011	0.009	0.006	0.004
2019	92.6	0	0.028	0.023	0.021	0.015	0.011	0.007	0.004
2020	94.8	0	0.055	0.020	0.013	0.009	0.008	0.005	0.003

Table 50 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	92.7	0	0.064	0.051	0.043	0.038	0.034	0.030	0.023
2019	91.9	0	0.070	0.048	0.043	0.037	0.033	0.028	0.023
2020	94.1	0	0.037	0.036	0.034	0.029	0.026	0.023	0.018

Table 51 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.6	0	0.039	0.038	0.035	0.032	0.029	0.025	0.020
2012	92.7	0	0.050	0.043	0.037	0.034	0.030	0.026	0.021
2013	88.8	0	0.049	0.044	0.041	0.037	0.033	0.029	0.022
2014	92.2	0	0.047	0.045	0.040	0.034	0.032	0.027	0.022
2015	93.8	0	0.053	0.043	0.039	0.036	0.034	0.028	0.022
2016	94.3	0	0.053	0.046	0.042	0.037	0.033	0.028	0.021
2017	94.2	0	0.060	0.045	0.041	0.037	0.034	0.029	0.023
2018	87.2	0	0.051	0.043	0.040	0.037	0.035	0.028	0.020
2019	94.5	0	0.049	0.039	0.037	0.035	0.032	0.027	0.021
2020	94.5	0	0.043	0.039	0.036	0.032	0.029	0.024	0.018

Table 52 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	89.5	0	0.053	0.035	0.034	0.031	0.029	0.025	0.019
2012	92.3	0	0.041	0.037	0.034	0.030	0.028	0.024	0.018
2013	92.5	0	0.046	0.041	0.037	0.031	0.028	0.025	0.020
2014	92.8	0	0.047	0.035	0.033	0.029	0.026	0.024	0.019
2015	93.0	0	0.043	0.037	0.036	0.032	0.030	0.027	0.021
2016	93.7	0	0.044	0.039	0.037	0.033	0.030	0.026	0.020
2017	92.9	0	0.041	0.037	0.035	0.031	0.029	0.026	0.020
2018	92.5	0	0.040	0.037	0.034	0.032	0.030	0.025	0.017
2019	93.7	0	0.051	0.034	0.033	0.031	0.028	0.024	0.019
2020	93.9	0	0.037	0.031	0.028	0.025	0.023	0.021	0.015

Table 53 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.4	0	0.029	0.026	0.024	0.021	0.019	0.015	0.011
2012	93.1	0	0.046	0.042	0.028	0.021	0.019	0.015	0.011
2013	92.5	0	0.032	0.024	0.023	0.021	0.018	0.015	0.011
2014	93.3	0	0.028	0.022	0.021	0.020	0.017	0.013	0.009
2015	90.8	0	0.024	0.022	0.021	0.019	0.017	0.012	0.009
2016	93.9	0	0.030	0.024	0.023	0.020	0.018	0.014	0.010
2017	91.3	0	0.026	0.023	0.023	0.020	0.018	0.015	0.011
2018	92.4	0	0.030	0.027	0.026	0.023	0.020	0.016	0.011
2019	94.1	0	0.030	0.025	0.023	0.022	0.019	0.014	0.010
2020	93.1	0	0.035	0.025	0.021	0.017	0.015	0.012	0.007

Table 54 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.7	0	0.037	0.030	0.028	0.025	0.022	0.017	0.012
2012	92.5	0	0.050	0.030	0.028	0.026	0.022	0.016	0.012
2013	94.1	0	0.038	0.031	0.027	0.024	0.022	0.016	0.012
2014	94.1	0	0.033	0.028	0.026	0.024	0.020	0.016	0.012
2015	93.4	0	0.031	0.027	0.025	0.023	0.020	0.016	0.012
2016	83.0	0	0.032	0.029	0.026	0.023	0.019	0.016	0.012
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	56.1	0	0.050	0.036	0.035	0.030	0.028	0.023	0.015
2020	95.0	0	0.034	0.032	0.031	0.026	0.023	0.017	0.012

Note: In May 2019 Rouse Hill monitoring station, replaced Vineyard station (1994–2016).

Table 55 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.9	0	0.050	0.043	0.041	0.035	0.031	0.028	0.022
2012	92.1	0	0.062	0.049	0.046	0.038	0.034	0.028	0.022
2013	91.5	0	0.070	0.048	0.045	0.038	0.035	0.029	0.023
2014	93.9	0	0.055	0.042	0.037	0.033	0.032	0.027	0.022

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	91.3	0	0.060	0.045	0.038	0.034	0.031	0.027	0.021
2016	93.8	0	0.050	0.044	0.039	0.036	0.033	0.029	0.022
2017	93.3	0	0.061	0.057	0.047	0.038	0.034	0.030	0.023
2018	67.7	0	0.057	0.045	0.039	0.036	0.034	0.028	0.022
2019	93.7	0	0.090	0.044	0.040	0.036	0.033	0.027	0.021
2020	94.8	0	0.043	0.037	0.035	0.032	0.029	0.024	0.018

Table 56 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: St Marys (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.6	0	0.036	0.031	0.028	0.025	0.023	0.018	0.013
2012	92.7	0	0.043	0.031	0.029	0.026	0.022	0.018	0.013
2013	90.3	0	0.037	0.032	0.028	0.025	0.021	0.017	0.012
2014	85.4	0	0.031	0.028	0.025	0.023	0.019	0.016	0.010
2015	87.2	0	0.032	0.026	0.024	0.022	0.020	0.015	0.011
2016	93.2	0	0.042	0.028	0.024	0.022	0.020	0.016	0.011
2017	92.9	0	0.037	0.028	0.027	0.025	0.023	0.017	0.012
2018	93.4	0	0.037	0.031	0.030	0.028	0.024	0.018	0.012
2019	93.9	0	0.033	0.029	0.027	0.024	0.021	0.016	0.011
2020	94.2	0	0.034	0.030	0.025	0.020	0.018	0.015	0.011

Table 57 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	18.9	0	0.029	0.028	0.025	0.023	0.018	0.015	0.012
2013	94.7	0	0.041	0.037	0.029	0.026	0.024	0.019	0.014
2014	94.3	0	0.034	0.032	0.029	0.025	0.023	0.019	0.013
2015	93.8	0	0.032	0.027	0.026	0.024	0.022	0.018	0.013
2016	93.4	0	0.046	0.032	0.029	0.024	0.021	0.017	0.013
2017	94.3	0	0.051	0.027	0.026	0.024	0.022	0.018	0.014
2018	93.6	0	0.035	0.028	0.026	0.024	0.021	0.017	0.011
2019	94.0	0	0.036	0.030	0.027	0.023	0.020	0.016	0.012
2020	93.3	0	0.035	0.026	0.025	0.022	0.019	0.015	0.011

Table 58 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	89.1	0	0.040	0.030	0.027	0.021	0.016	0.012	0.007
2012	86.1	0	0.037	0.034	0.028	0.023	0.020	0.014	0.008
2013	92.4	0	0.039	0.036	0.030	0.025	0.019	0.013	0.010
2014	95.1	0	0.038	0.028	0.026	0.021	0.018	0.013	0.009
2015	91.6	0	0.047	0.032	0.026	0.022	0.016	0.012	0.008
2016	91.5	0	0.043	0.035	0.031	0.024	0.018	0.014	0.008
2017	93.0	0	0.038	0.031	0.027	0.023	0.020	0.014	0.009
2018	94.7	0	0.039	0.035	0.032	0.026	0.022	0.016	0.010
2019	94.7	0	0.041	0.031	0.029	0.025	0.022	0.016	0.010
2020	94.8	0	0.039	0.030	0.027	0.023	0.018	0.013	0.008

Table 59 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Kembla Grange (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.0	0	0.037	0.030	0.028	0.024	0.019	0.014	0.009
2012	94.3	0	0.039	0.030	0.027	0.024	0.021	0.016	0.011
2013	95.1	0	0.036	0.029	0.027	0.023	0.020	0.016	0.012
2014	90.2	0	0.031	0.025	0.024	0.021	0.018	0.014	0.010
2015	93.1	0	0.034	0.026	0.024	0.022	0.019	0.015	0.010
2016	93.4	0	0.039	0.030	0.028	0.023	0.021	0.017	0.011
2017	93.7	0	0.037	0.032	0.028	0.026	0.022	0.017	0.011
2018	91.6	0	0.037	0.033	0.031	0.027	0.023	0.017	0.012
2019	93.5	0	0.042	0.029	0.028	0.025	0.022	0.017	0.013
2020	92.1	0	0.038	0.030	0.028	0.023	0.020	0.015	0.010

Table 60 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.8	0	0.043	0.039	0.037	0.031	0.029	0.024	0.019
2012	90.5	0	0.049	0.040	0.039	0.034	0.030	0.025	0.018
2013	89.2	0	0.050	0.048	0.043	0.035	0.031	0.026	0.020
2014	92.6	0	0.038	0.037	0.036	0.032	0.029	0.024	0.018
2015	92.7	0	0.060	0.036	0.035	0.032	0.029	0.024	0.018

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	93.9	0	0.043	0.040	0.037	0.033	0.030	0.024	0.017
2017	93.8	0	0.057	0.039	0.037	0.033	0.029	0.025	0.017
2018	93.2	0	0.043	0.036	0.035	0.033	0.030	0.025	0.017
2019	93.1	0	0.040	0.038	0.036	0.032	0.029	0.022	0.017
2020	92.8	0	0.041	0.036	0.035	0.032	0.029	0.023	0.017

Table 61 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	89.9	0	0.042	0.034	0.031	0.028	0.027	0.022	0.018
2012	93.3	0	0.044	0.037	0.034	0.030	0.028	0.024	0.020
2013	88.6	0	0.041	0.036	0.035	0.033	0.030	0.025	0.020
2014	93.8	0	0.039	0.034	0.032	0.030	0.027	0.023	0.019
2015	93.9	0	0.049	0.035	0.034	0.031	0.027	0.023	0.019
2016	94.2	0	0.041	0.034	0.032	0.028	0.026	0.022	0.018
2017	93.7	0	0.040	0.036	0.033	0.030	0.029	0.025	0.020
2018	92.7	0	0.040	0.037	0.034	0.032	0.029	0.024	0.018
2019	89.9	0	0.056	0.038	0.032	0.029	0.026	0.023	0.018
2020	91.2	0	0.035	0.031	0.030	0.026	0.025	0.020	0.016

Table 62 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.7	0	0.038	0.034	0.033	0.029	0.027	0.023	0.017
2012	92.6	0	0.038	0.035	0.033	0.031	0.029	0.025	0.018
2013	95.0	0	0.042	0.039	0.036	0.033	0.029	0.025	0.019
2014	93.4	0	0.046	0.037	0.035	0.031	0.028	0.023	0.017
2015	93.8	0	0.044	0.034	0.033	0.030	0.027	0.023	0.018
2016	90.9	0	0.038	0.036	0.034	0.032	0.029	0.025	0.018
2017	94.3	0	0.037	0.037	0.034	0.032	0.030	0.025	0.018
2018	94.3	0	0.045	0.037	0.035	0.032	0.029	0.023	0.015
2019	94.5	0	0.044	0.039	0.036	0.033	0.031	0.026	0.018
2020	92.1	0	0.034	0.031	0.030	0.028	0.025	0.021	0.015

Table 63 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.7	0	0.037	0.032	0.029	0.027	0.026	0.021	0.016
2012	94.1	0	0.034	0.030	0.029	0.027	0.025	0.021	0.016
2013	91.8	0	0.043	0.033	0.030	0.027	0.024	0.021	0.016
2014	94.6	0	0.034	0.033	0.030	0.027	0.025	0.021	0.015
2015	93.4	0	0.042	0.033	0.031	0.027	0.025	0.020	0.016
2016	93.4	0	0.037	0.033	0.029	0.027	0.024	0.020	0.015
2017	94.5	0	0.037	0.032	0.031	0.029	0.027	0.022	0.016
2018	93.7	0	0.035	0.033	0.032	0.028	0.026	0.020	0.015
2019	92.6	0	0.042	0.035	0.032	0.029	0.026	0.020	0.015
2020	94.6	0	0.029	0.027	0.027	0.024	0.023	0.018	0.013

Table 64 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Muswellbrook (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	94.6	0	0.044	0.039	0.037	0.033	0.031	0.026	0.021
2013	95.1	0	0.042	0.036	0.034	0.033	0.030	0.026	0.022
2014	93.0	0	0.039	0.035	0.033	0.031	0.029	0.025	0.021
2015	94.9	0	0.042	0.034	0.033	0.030	0.028	0.024	0.019
2016	93.3	0	0.042	0.040	0.036	0.033	0.029	0.024	0.020
2017	93.6	0	0.045	0.038	0.036	0.033	0.030	0.026	0.022
2018	94.3	0	0.047	0.040	0.038	0.035	0.033	0.028	0.023
2019	93.5	0	0.058	0.043	0.039	0.036	0.033	0.028	0.023
2020	89.3	0	0.039	0.035	0.032	0.029	0.027	0.023	0.019

Table 65 Statistical summary for NO₂: daily maximum 1-hour average concentrations.
Station: Singleton (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	94.4	0	0.040	0.034	0.032	0.029	0.027	0.024	0.018
2013	92.7	0	0.041	0.035	0.032	0.029	0.027	0.024	0.019
2014	94.1	0	0.036	0.033	0.031	0.027	0.025	0.022	0.017
2015	94.5	0	0.032	0.030	0.029	0.027	0.024	0.021	0.017
2016	94.5	0	0.032	0.031	0.030	0.027	0.025	0.023	0.018
2017	93.8	0	0.036	0.033	0.031	0.028	0.027	0.023	0.019

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	93.7	0	0.035	0.034	0.032	0.028	0.026	0.023	0.018
2019	93.8	0	0.037	0.034	0.032	0.028	0.026	0.022	0.018
2020	89.3	0	0.033	0.031	0.028	0.026	0.023	0.019	0.015

Table 66 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Gunnedah (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	78.3	0	0.034	0.031	0.029	0.026	0.025	0.019	0.013
2019	94.6	0	0.036	0.029	0.027	0.025	0.023	0.018	0.013
2020	94.4	0	0.028	0.025	0.024	0.022	0.019	0.015	0.010

Table 67 Statistical summary for NO₂: daily maximum 1-hour average concentrations. Station: Goulburn (Southern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	13.8	1	0.161	0.161	0.142	0.027	0.021	0.015	0.008
2020	93.1	0	0.099	0.030	0.028	0.025	0.021	0.014	0.009

Sulfur dioxide

Sulfur dioxide 1-hour standard

Table 68 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.2	0	0.010	0.004	0.004	0.003	0.002	0.001	0.000
2012	94.0	0	0.009	0.005	0.004	0.003	0.002	0.001	0.001
2013	95.0	0	0.017	0.007	0.005	0.003	0.002	0.002	0.001
2014	94.3	0	0.010	0.005	0.004	0.003	0.002	0.001	0.001
2015	93.2	0	0.009	0.007	0.006	0.003	0.002	0.001	0.001
2016	92.4	0	0.010	0.007	0.004	0.003	0.003	0.002	0.001
2017	93.9	0	0.010	0.007	0.005	0.003	0.003	0.002	0.001
2018	94.1	0	0.010	0.007	0.006	0.004	0.003	0.002	0.001
2019	93.7	0	0.020	0.008	0.007	0.005	0.003	0.002	0.001

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2020	94.6	0	0.012	0.008	0.006	0.003	0.002	0.001	0.001

Table 69 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	88.9	0	0.011	0.005	0.005	0.003	0.003	0.002	0.001
2012	94.6	0	0.015	0.005	0.005	0.003	0.003	0.002	0.001
2013	94.5	0	0.011	0.008	0.006	0.004	0.003	0.002	0.001
2014	92.4	0	0.009	0.007	0.006	0.004	0.002	0.002	0.001
2015	92.9	0	0.007	0.005	0.004	0.003	0.002	0.001	0.001
2016	94.5	0	0.006	0.006	0.005	0.004	0.003	0.001	0.001
2017	93.1	0	0.009	0.007	0.006	0.005	0.003	0.001	0.001
2018	94.3	0	0.011	0.008	0.007	0.005	0.004	0.002	0.001
2019	93.4	0	0.028	0.010	0.009	0.007	0.005	0.002	0.001
2020	87.2	0	0.022	0.006	0.005	0.004	0.003	0.002	0.001

Table 70 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.9	0	0.014	0.009	0.006	0.005	0.003	0.002	0.001
2012	86.5	0	0.008	0.005	0.005	0.004	0.003	0.002	0.001
2013	95.0	0	0.009	0.007	0.006	0.004	0.003	0.002	0.001
2014	93.2	0	0.012	0.007	0.006	0.005	0.003	0.002	0.001
2015	91.7	0	0.011	0.006	0.005	0.004	0.003	0.002	0.001
2016	94.2	0	0.016	0.009	0.007	0.005	0.004	0.002	0.001
2017	92.6	0	0.011	0.009	0.008	0.005	0.004	0.002	0.001
2018	93.5	0	0.016	0.009	0.009	0.007	0.005	0.003	0.002
2019	87.1	0	0.020	0.012	0.010	0.007	0.005	0.002	0.001
2020	94.7	0	0.012	0.007	0.006	0.004	0.003	0.002	0.001

Note: Campbelltown West station replaced Macarthur in September 2012.

Table 71 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	92.7	0	0.026	0.016	0.011	0.009	0.006	0.004	0.002
2012	93.6	0	0.025	0.011	0.008	0.007	0.005	0.003	0.002
2013	92.9	0	0.012	0.010	0.008	0.006	0.005	0.003	0.002
2014	94.7	0	0.019	0.010	0.009	0.007	0.005	0.003	0.001
2015	93.5	0	0.014	0.010	0.008	0.005	0.004	0.003	0.001
2016	93.9	0	0.014	0.011	0.008	0.006	0.004	0.003	0.002
2017	93.6	0	0.014	0.010	0.009	0.007	0.005	0.003	0.001
2018	95.0	0	0.021	0.012	0.010	0.007	0.006	0.003	0.002
2019	93.4	0	0.026	0.016	0.012	0.009	0.006	0.003	0.002
2020	93.7	0	0.015	0.012	0.011	0.007	0.004	0.002	0.001

Table 72 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	30.0	0	0.018	0.016	0.013	0.011	0.007	0.004	0.002
2020	86.2	0	0.019	0.013	0.010	0.006	0.004	0.002	0.001

Table 73 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	57.3	0	0.007	0.006	0.006	0.005	0.004	0.003	0.002
2017	92.3	0	0.011	0.009	0.007	0.006	0.005	0.003	0.002
2018	94.1	0	0.020	0.011	0.009	0.007	0.005	0.003	0.002
2019	94.6	0	0.016	0.014	0.011	0.008	0.005	0.003	0.002
2020	92.4	0	0.015	0.010	0.008	0.005	0.004	0.002	0.001

Table 74 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	37.9	0	0.023	0.017	0.014	0.011	0.008	0.003	0.001
2018	93.9	0	0.044	0.018	0.014	0.009	0.006	0.003	0.001
2019	92.1	0	0.029	0.019	0.015	0.009	0.007	0.003	0.001

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2020	95.1	0	0.035	0.020	0.016	0.010	0.006	0.002	0.001

Table 75 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	91.6	0	0.021	0.015	0.012	0.008	0.006	0.003	0.002
2019	94.9	0	0.030	0.018	0.015	0.010	0.006	0.004	0.002
2020	94.8	0	0.020	0.013	0.009	0.007	0.005	0.003	0.001

Table 76 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.8	0	0.014	0.011	0.008	0.006	0.005	0.003	0.002
2012	91.3	0	0.012	0.008	0.007	0.006	0.004	0.003	0.002
2013	90.9	0	0.020	0.014	0.010	0.006	0.005	0.003	0.002
2014	91.4	0	0.019	0.013	0.012	0.008	0.005	0.003	0.002
2015	94.6	0	0.027	0.010	0.008	0.006	0.004	0.003	0.002
2016	93.4	0	0.021	0.015	0.012	0.008	0.005	0.003	0.002
2017	94.5	0	0.023	0.012	0.011	0.007	0.005	0.003	0.002
2018	86.6	0	0.025	0.013	0.011	0.009	0.006	0.003	0.002
2019	94.7	0	0.021	0.017	0.014	0.010	0.006	0.003	0.002
2020	94.1	0	0.018	0.014	0.011	0.007	0.005	0.002	0.001

Table 77 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.3	0	0.023	0.015	0.014	0.012	0.009	0.006	0.004
2012	89.8	0	0.023	0.016	0.015	0.011	0.009	0.006	0.004
2013	93.2	0	0.027	0.023	0.017	0.011	0.008	0.005	0.003
2014	93.7	0	0.026	0.018	0.013	0.011	0.009	0.006	0.004
2015	93.8	0	0.031	0.015	0.013	0.011	0.009	0.006	0.003
2016	93.9	0	0.034	0.021	0.017	0.012	0.009	0.006	0.003
2017	94.0	0	0.029	0.020	0.017	0.013	0.010	0.006	0.004

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	93.3	0	0.021	0.019	0.017	0.011	0.009	0.006	0.003
2019	93.0	0	0.029	0.022	0.015	0.013	0.008	0.005	0.003
2020	94.9	0	0.014	0.011	0.010	0.007	0.005	0.003	0.002

Table 78 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.5	0	0.010	0.008	0.005	0.004	0.003	0.002	0.001
2012	83.4	0	0.013	0.008	0.007	0.005	0.004	0.002	0.001
2013	94.2	0	0.010	0.008	0.007	0.005	0.004	0.002	0.001
2014	94.0	0	0.009	0.007	0.006	0.005	0.003	0.001	0.001
2015	92.6	0	0.032	0.011	0.006	0.005	0.003	0.002	0.001
2016	93.8	0	0.025	0.008	0.007	0.005	0.003	0.002	0.001
2017	91.9	0	0.034	0.011	0.008	0.006	0.004	0.002	0.001
2018	93.3	0	0.017	0.009	0.008	0.005	0.004	0.002	0.001
2019	93.4	0	0.023	0.013	0.009	0.006	0.004	0.002	0.001
2020	92.5	0	0.012	0.010	0.006	0.004	0.003	0.001	0.001

Table 79 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.5	0	0.013	0.009	0.007	0.005	0.004	0.002	0.001
2012	94.1	0	0.011	0.008	0.007	0.006	0.004	0.002	0.001
2013	94.1	0	0.011	0.009	0.007	0.006	0.004	0.002	0.001
2014	92.2	0	0.010	0.009	0.008	0.006	0.004	0.002	0.001
2015	93.6	0	0.017	0.008	0.006	0.005	0.003	0.001	0.001
2016	83.0	0	0.014	0.012	0.008	0.006	0.004	0.002	0.001
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	55.2	0	0.033	0.015	0.012	0.009	0.005	0.003	0.001
2020	95.0	0	0.019	0.016	0.011	0.007	0.005	0.002	0.001

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 80 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	78.8	0	0.028	0.021	0.019	0.014	0.009	0.004	0.002
2016	93.8	0	0.020	0.013	0.011	0.008	0.006	0.003	0.002
2017	92.6	0	0.024	0.015	0.013	0.010	0.006	0.003	0.001
2018	67.0	0	0.030	0.023	0.019	0.014	0.008	0.004	0.002
2019	94.0	0	0.032	0.016	0.015	0.011	0.008	0.004	0.002
2020	94.8	0	0.016	0.009	0.009	0.007	0.005	0.002	0.001

Table 81 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	19.3	0	0.030	0.030	0.027	0.018	0.013	0.005	0.002
2013	94.7	0	0.029	0.024	0.020	0.015	0.009	0.004	0.002
2014	93.7	0	0.040	0.023	0.019	0.014	0.010	0.005	0.001
2015	92.9	0	0.069	0.029	0.022	0.015	0.009	0.004	0.001
2016	94.4	0	0.032	0.025	0.024	0.013	0.010	0.004	0.001
2017	92.9	0	0.047	0.029	0.023	0.017	0.010	0.004	0.001
2018	94.2	0	0.062	0.038	0.034	0.021	0.013	0.005	0.001
2019	94.4	0	0.061	0.043	0.034	0.023	0.015	0.005	0.001
2020	93.7	0	0.069	0.038	0.028	0.017	0.009	0.004	0.001

Table 82 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	87.4	0	0.035	0.024	0.022	0.017	0.009	0.004	0.000
2012	92.5	0	0.027	0.017	0.015	0.010	0.008	0.003	0.001
2013	89.6	0	0.039	0.022	0.017	0.012	0.009	0.004	0.001
2014	94.5	0	0.016	0.015	0.013	0.010	0.008	0.004	0.001
2015	90.8	0	0.036	0.018	0.017	0.013	0.010	0.004	0.001
2016	94.1	0	0.022	0.019	0.017	0.013	0.009	0.004	0.001
2017	94.6	0	0.030	0.024	0.020	0.016	0.011	0.004	0.000
2018	94.8	0	0.031	0.021	0.019	0.017	0.013	0.006	0.001
2019	94.0	0	0.025	0.020	0.017	0.015	0.012	0.006	0.001
2020	93.4	0	0.022	0.016	0.015	0.012	0.009	0.003	0.000

Table 83 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	92.9	0	0.018	0.018	0.017	0.012	0.009	0.005	0.003
2012	94.9	0	0.017	0.016	0.014	0.010	0.008	0.004	0.002
2013	92.4	0	0.040	0.018	0.016	0.010	0.008	0.005	0.002
2014	92.7	0	0.019	0.017	0.016	0.012	0.009	0.005	0.003
2015	89.7	0	0.019	0.017	0.013	0.011	0.009	0.005	0.002
2016	91.7	0	0.020	0.016	0.014	0.011	0.009	0.005	0.002
2017	94.3	0	0.047	0.021	0.017	0.013	0.011	0.006	0.003
2018	92.2	0	0.039	0.018	0.017	0.015	0.011	0.008	0.004
2019	92.1	0	0.034	0.025	0.018	0.013	0.011	0.007	0.004
2020	92.4	0	0.020	0.015	0.014	0.011	0.008	0.006	0.002

Table 84 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.9	0	0.060	0.029	0.024	0.018	0.015	0.010	0.006
2012	94.1	0	0.037	0.026	0.021	0.016	0.013	0.009	0.005
2013	93.2	0	0.031	0.024	0.022	0.016	0.013	0.008	0.005
2014	94.4	0	0.031	0.026	0.022	0.018	0.014	0.009	0.005
2015	93.8	0	0.082	0.026	0.022	0.015	0.012	0.008	0.005
2016	94.6	0	0.033	0.030	0.025	0.018	0.013	0.009	0.006
2017	94.1	0	0.054	0.031	0.026	0.021	0.016	0.010	0.006
2018	94.1	0	0.070	0.038	0.029	0.022	0.016	0.010	0.006
2019	94.5	0	0.068	0.027	0.025	0.019	0.017	0.012	0.007
2020	94.1	0	0.038	0.026	0.023	0.017	0.014	0.009	0.005

Table 85 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.7	0	0.033	0.027	0.023	0.017	0.014	0.008	0.005
2012	93.1	0	0.034	0.025	0.022	0.019	0.014	0.008	0.004
2013	95.1	0	0.052	0.030	0.024	0.017	0.015	0.009	0.004
2014	93.7	0	0.064	0.030	0.024	0.019	0.015	0.009	0.004
2015	93.6	0	0.036	0.032	0.027	0.018	0.014	0.008	0.004

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	93.1	0	0.055	0.033	0.025	0.020	0.015	0.010	0.006
2017	94.4	0	0.050	0.029	0.025	0.020	0.016	0.010	0.005
2018	92.8	0	0.039	0.032	0.025	0.018	0.015	0.009	0.005
2019	94.7	0	0.046	0.024	0.023	0.016	0.013	0.009	0.005
2020	93.4	0	0.040	0.027	0.022	0.015	0.011	0.006	0.003

Table 86 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.7	0	0.044	0.031	0.024	0.018	0.014	0.008	0.004
2012	95.1	0	0.035	0.021	0.020	0.016	0.013	0.008	0.004
2013	92.2	0	0.050	0.028	0.021	0.016	0.012	0.007	0.004
2014	93.7	0	0.046	0.030	0.022	0.018	0.015	0.009	0.004
2015	90.3	0	0.034	0.024	0.021	0.017	0.013	0.008	0.003
2016	93.5	0	0.038	0.024	0.022	0.018	0.013	0.008	0.004
2017	94.5	0	0.056	0.032	0.026	0.019	0.017	0.010	0.005
2018	93.4	0	0.079	0.030	0.028	0.021	0.015	0.009	0.004
2019	90.6	0	0.050	0.032	0.029	0.023	0.018	0.011	0.006
2020	93.8	0	0.040	0.033	0.026	0.020	0.014	0.010	0.005

Table 87 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Muswellbrook (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	94.4	0	0.145	0.084	0.076	0.058	0.042	0.020	0.006
2013	94.6	0	0.148	0.120	0.088	0.062	0.043	0.021	0.005
2014	94.5	0	0.190	0.106	0.090	0.065	0.046	0.025	0.008
2015	94.9	0	0.104	0.088	0.065	0.059	0.042	0.022	0.008
2016	93.3	1	0.210	0.127	0.096	0.053	0.036	0.017	0.004
2017	93.9	0	0.113	0.102	0.082	0.051	0.041	0.020	0.007
2018	92.8	0	0.120	0.096	0.074	0.063	0.042	0.023	0.009
2019	93.3	0	0.130	0.107	0.092	0.072	0.045	0.027	0.008
2020	89.2	0	0.135	0.072	0.069	0.048	0.031	0.018	0.006

Table 88 Statistical summary for sulfur dioxide: daily maximum 1-hour average concentrations. Station: Singleton (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	95.2	0	0.083	0.065	0.056	0.038	0.026	0.011	0.003
2013	95.1	0	0.053	0.048	0.040	0.030	0.022	0.011	0.003
2014	94.8	0	0.091	0.048	0.042	0.030	0.022	0.012	0.004
2015	95.1	0	0.063	0.051	0.046	0.034	0.023	0.013	0.004
2016	94.6	0	0.077	0.055	0.047	0.032	0.024	0.014	0.005
2017	92.1	0	0.099	0.043	0.042	0.033	0.024	0.011	0.003
2018	94.6	0	0.067	0.048	0.042	0.031	0.023	0.013	0.005
2019	95.1	0	0.096	0.048	0.044	0.036	0.028	0.015	0.006
2020	94.6	0	0.055	0.045	0.039	0.030	0.024	0.012	0.005

Sulfur dioxide 24-hour standard

Table 89 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.5	0	0.002	0.001	0.001	0.001	0.000	0.000	0.000
2012	97.5	0	0.002	0.002	0.001	0.001	0.001	0.000	0.000
2013	99.5	0	0.003	0.002	0.001	0.001	0.001	0.001	0.000
2014	98.4	0	0.002	0.002	0.001	0.001	0.001	0.000	0.000
2015	96.2	0	0.002	0.002	0.001	0.001	0.001	0.000	0.000
2016	94.8	0	0.004	0.002	0.002	0.002	0.001	0.001	0.000
2017	97.5	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2018	97.5	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2019	97.0	0	0.006	0.003	0.002	0.002	0.001	0.001	0.000
2020	98.1	0	0.003	0.002	0.001	0.001	0.001	0.000	0.000

Table 90 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.8	0	0.002	0.001	0.001	0.001	0.001	0.000	0.000
2012	98.4	0	0.002	0.002	0.001	0.001	0.001	0.001	0.000
2013	98.6	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2014	96.2	0	0.003	0.002	0.002	0.001	0.001	0.000	0.000

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	96.7	0	0.001	0.001	0.001	0.001	0.001	0.000	0.000
2016	98.4	0	0.002	0.001	0.001	0.001	0.001	0.000	0.000
2017	96.7	0	0.002	0.002	0.001	0.001	0.001	0.000	0.000
2018	97.8	0	0.003	0.002	0.002	0.001	0.001	0.001	0.000
2019	97.8	0	0.004	0.002	0.002	0.002	0.001	0.001	0.000
2020	91.0	0	0.003	0.002	0.001	0.001	0.001	0.001	0.000

Table 91 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.9	0	0.014	0.009	0.006	0.005	0.003	0.002	0.001
2012	89.6	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2013	99.2	0	0.002	0.002	0.002	0.002	0.001	0.001	0.000
2014	96.4	0	0.004	0.002	0.002	0.001	0.001	0.001	0.000
2015	93.7	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2016	97.8	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2017	96.2	0	0.003	0.002	0.002	0.001	0.001	0.001	0.000
2018	96.7	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001
2019	90.4	0	0.004	0.003	0.003	0.002	0.002	0.001	0.000
2020	98.9	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 92 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.7	0	0.005	0.003	0.003	0.002	0.002	0.001	0.001
2012	97.0	0	0.004	0.003	0.002	0.002	0.001	0.001	0.000
2013	97.3	0	0.003	0.003	0.002	0.002	0.001	0.001	0.001
2014	98.6	0	0.004	0.003	0.002	0.002	0.001	0.001	0.000
2015	96.7	0	0.003	0.003	0.002	0.002	0.001	0.001	0.000
2016	97.0	0	0.003	0.002	0.002	0.002	0.001	0.001	0.000
2017	97.5	0	0.003	0.003	0.002	0.002	0.002	0.001	0.000
2018	99.2	0	0.003	0.003	0.002	0.002	0.002	0.001	0.000
2019	97.0	0	0.004	0.003	0.003	0.002	0.002	0.001	0.000

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2020	97.3	0	0.004	0.003	0.002	0.002	0.001	0.001	0.000

Table 93 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	31.0	0	0.003	0.003	0.002	0.002	0.001	0.001	0.001
2020	89.1	0	0.003	0.003	0.002	0.001	0.001	0.001	0.000

Table 94 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	59.6	0	0.002	0.002	0.002	0.002	0.001	0.001	0.001
2017	96.2	0	0.003	0.002	0.002	0.002	0.002	0.001	0.001
2018	97.5	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001
2019	98.1	0	0.004	0.003	0.002	0.002	0.002	0.001	0.001
2020	95.6	0	0.003	0.002	0.002	0.001	0.001	0.001	0.000

Table 95 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	39.5	0	0.003	0.003	0.003	0.002	0.001	0.001	0.000
2018	97.8	0	0.007	0.003	0.003	0.002	0.002	0.001	0.000
2019	95.3	0	0.004	0.003	0.003	0.002	0.001	0.001	0.000
2020	99.2	0	0.004	0.003	0.002	0.002	0.001	0.000	0.000

Table 96 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	94.2	0	0.005	0.003	0.002	0.002	0.002	0.001	0.000
2019	98.6	0	0.006	0.004	0.003	0.002	0.002	0.001	0.001
2020	98.4	0	0.005	0.003	0.002	0.002	0.001	0.001	0.001

Table 97 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.8	0	0.003	0.003	0.002	0.002	0.001	0.001	0.001
2012	94.5	0	0.003	0.002	0.002	0.002	0.002	0.001	0.001
2013	93.4	0	0.004	0.003	0.002	0.002	0.002	0.001	0.001
2014	94.5	0	0.005	0.003	0.002	0.002	0.002	0.001	0.001
2015	98.4	0	0.003	0.003	0.002	0.002	0.001	0.001	0.000
2016	97.5	0	0.004	0.003	0.002	0.002	0.001	0.001	0.000
2017	98.1	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001
2018	89.9	0	0.005	0.004	0.003	0.002	0.002	0.001	0.001
2019	98.4	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001
2020	98.1	0	0.004	0.003	0.002	0.002	0.001	0.001	0.000

Table 98 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.7	0	0.005	0.004	0.003	0.003	0.002	0.002	0.001
2012	93.4	0	0.005	0.004	0.003	0.003	0.002	0.002	0.001
2013	96.7	0	0.004	0.004	0.003	0.002	0.002	0.001	0.001
2014	96.7	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001
2015	97.5	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001
2016	97.8	0	0.003	0.003	0.003	0.002	0.002	0.001	0.001
2017	97.5	0	0.008	0.004	0.003	0.003	0.002	0.001	0.001
2018	96.2	0	0.004	0.004	0.003	0.003	0.002	0.001	0.001
2019	96.2	0	0.005	0.004	0.003	0.002	0.002	0.001	0.001
2020	98.9	0	0.004	0.003	0.003	0.002	0.002	0.001	0.001

Table 99 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.4	0	0.003	0.001	0.001	0.001	0.001	0.000	0.000
2012	86.3	0	0.002	0.002	0.001	0.001	0.001	0.000	0.000
2013	98.1	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2014	97.5	0	0.002	0.002	0.001	0.001	0.001	0.000	0.000
2015	95.1	0	0.003	0.002	0.002	0.001	0.001	0.001	0.000

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	97.3	0	0.002	0.002	0.002	0.001	0.001	0.001	0.000
2017	94.8	0	0.004	0.003	0.002	0.002	0.001	0.000	0.000
2018	96.4	0	0.005	0.003	0.002	0.001	0.001	0.001	0.000
2019	96.7	0	0.004	0.003	0.002	0.002	0.001	0.001	0.000
2020	95.6	0	0.003	0.002	0.002	0.001	0.001	0.000	0.000

Table 100 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.5	0	0.013	0.009	0.007	0.005	0.004	0.002	0.001
2012	94.1	0	0.011	0.008	0.007	0.006	0.004	0.002	0.001
2013	94.1	0	0.011	0.009	0.007	0.006	0.004	0.002	0.001
2014	92.2	0	0.010	0.009	0.008	0.006	0.004	0.002	0.001
2015	93.6	0	0.017	0.008	0.006	0.005	0.003	0.001	0.001
2016	83.0	0	0.014	0.012	0.008	0.006	0.004	0.002	0.001
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	57.3	0	0.005	0.004	0.003	0.003	0.002	0.001	0.000
2020	98.6	0	0.005	0.003	0.002	0.002	0.001	0.001	0.000

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 101 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	82.2	0	0.005	0.004	0.003	0.003	0.002	0.001	0.001
2016	97.3	0	0.005	0.003	0.003	0.002	0.001	0.001	0.000
2017	95.6	0	0.003	0.003	0.002	0.002	0.002	0.001	0.000
2018	69.9	0	0.005	0.004	0.003	0.003	0.002	0.001	0.001
2019	97.5	0	0.005	0.004	0.004	0.003	0.002	0.001	0.001
2020	98.6	0	0.003	0.002	0.002	0.002	0.001	0.001	0.000

Table 102 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	19.9	0	0.004	0.004	0.004	0.003	0.003	0.002	0.001
2013	98.1	0	0.005	0.004	0.003	0.002	0.002	0.001	0.000
2014	97.0	0	0.004	0.004	0.003	0.002	0.002	0.001	0.000
2015	96.4	0	0.009	0.003	0.003	0.002	0.002	0.001	0.000
2016	97.5	0	0.004	0.004	0.003	0.002	0.002	0.001	0.000
2017	96.2	0	0.007	0.004	0.004	0.003	0.002	0.001	0.000
2018	97.8	0	0.008	0.005	0.004	0.003	0.002	0.001	0.000
2019	97.8	0	0.006	0.005	0.005	0.003	0.002	0.001	0.000
2020	97.8	0	0.008	0.005	0.004	0.003	0.002	0.001	0.000

Table 103 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.8	0	0.010	0.007	0.006	0.004	0.002	0.001	0.000
2012	96.4	0	0.010	0.004	0.004	0.003	0.002	0.001	0.000
2013	93.4	0	0.009	0.007	0.005	0.003	0.002	0.001	0.000
2014	98.4	0	0.005	0.005	0.003	0.003	0.002	0.001	0.000
2015	93.4	0	0.007	0.006	0.004	0.003	0.002	0.001	0.000
2016	97.8	0	0.006	0.005	0.004	0.003	0.002	0.001	0.000
2017	97.8	0	0.008	0.007	0.006	0.004	0.003	0.001	0.000
2018	98.4	0	0.008	0.006	0.005	0.004	0.003	0.001	0.000
2019	97.5	0	0.008	0.007	0.006	0.004	0.003	0.001	0.000
2020	97.0	0	0.005	0.005	0.004	0.003	0.002	0.000	0.000

Table 104 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.7	0	0.009	0.004	0.003	0.003	0.002	0.001	0.000
2012	99.2	0	0.005	0.004	0.003	0.002	0.001	0.001	0.000
2013	96.4	0	0.008	0.004	0.003	0.002	0.002	0.001	0.000
2014	96.4	0	0.005	0.004	0.003	0.002	0.002	0.001	0.001
2015	93.4	0	0.004	0.004	0.003	0.002	0.002	0.001	0.000
2016	95.1	0	0.004	0.003	0.003	0.002	0.002	0.001	0.000

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	98.4	0	0.005	0.005	0.004	0.003	0.002	0.001	0.001
2018	95.9	0	0.009	0.005	0.004	0.003	0.002	0.001	0.001
2019	95.3	0	0.006	0.005	0.004	0.003	0.002	0.001	0.001
2020	95.4	0	0.004	0.004	0.003	0.002	0.002	0.001	0.000

Table 105 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.8	0	0.012	0.010	0.007	0.005	0.004	0.002	0.001
2012	98.4	0	0.009	0.006	0.005	0.004	0.003	0.002	0.001
2013	97.0	0	0.005	0.004	0.004	0.003	0.003	0.002	0.001
2014	98.4	0	0.007	0.006	0.004	0.003	0.003	0.002	0.001
2015	97.0	0	0.008	0.004	0.004	0.003	0.002	0.002	0.001
2016	98.9	0	0.008	0.007	0.005	0.004	0.003	0.002	0.001
2017	98.4	0	0.008	0.007	0.005	0.004	0.003	0.002	0.001
2018	98.6	0	0.007	0.007	0.005	0.004	0.003	0.002	0.001
2019	98.9	0	0.009	0.007	0.006	0.004	0.003	0.002	0.001
2020	98.1	0	0.008	0.006	0.005	0.004	0.003	0.002	0.001

Table 106 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	0	0.009	0.006	0.005	0.005	0.004	0.002	0.001
2012	97.5	0	0.007	0.006	0.005	0.004	0.003	0.002	0.001
2013	98.6	0	0.007	0.006	0.005	0.004	0.003	0.002	0.001
2014	97.8	0	0.006	0.005	0.004	0.004	0.003	0.002	0.001
2015	97.3	0	0.007	0.006	0.005	0.004	0.003	0.002	0.001
2016	96.4	0	0.007	0.007	0.005	0.004	0.003	0.002	0.001
2017	98.1	0	0.006	0.006	0.006	0.004	0.004	0.002	0.001
2018	96.2	0	0.007	0.006	0.005	0.004	0.003	0.002	0.001
2019	98.4	0	0.006	0.005	0.004	0.004	0.003	0.002	0.001
2020	97.0	0	0.007	0.005	0.004	0.003	0.002	0.001	0.001

Table 107 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.5	0	0.007	0.005	0.005	0.003	0.002	0.001	0.001
2012	99.7	0	0.005	0.004	0.004	0.003	0.002	0.002	0.001
2013	96.2	0	0.005	0.004	0.004	0.003	0.002	0.002	0.001
2014	97.5	0	0.008	0.006	0.004	0.004	0.003	0.002	0.001
2015	92.9	0	0.007	0.005	0.004	0.003	0.003	0.001	0.001
2016	97.8	0	0.006	0.005	0.004	0.003	0.003	0.002	0.001
2017	98.6	0	0.010	0.006	0.005	0.004	0.003	0.002	0.001
2018	96.4	0	0.008	0.006	0.005	0.004	0.003	0.002	0.001
2019	93.4	0	0.009	0.006	0.006	0.004	0.003	0.002	0.001
2020	97.5	0	0.010	0.007	0.006	0.004	0.003	0.002	0.001

Table 108 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Muswellbrook (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	98.6	0	0.017	0.013	0.011	0.008	0.007	0.003	0.001
2013	98.9	0	0.022	0.017	0.012	0.009	0.007	0.003	0.001
2014	99.2	0	0.018	0.016	0.014	0.010	0.008	0.004	0.001
2015	99.2	0	0.017	0.014	0.012	0.008	0.006	0.004	0.001
2016	97.0	0	0.023	0.016	0.013	0.009	0.006	0.003	0.000
2017	98.1	0	0.022	0.016	0.013	0.010	0.008	0.003	0.001
2018	96.7	0	0.021	0.015	0.014	0.009	0.007	0.004	0.001
2019	97.0	0	0.024	0.018	0.017	0.012	0.009	0.004	0.002
2020	92.1	0	0.015	0.013	0.010	0.008	0.006	0.004	0.001

Table 109 Statistical summary for sulfur dioxide: 24-hour average concentrations. Station: Singleton (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	99.7	0	0.018	0.012	0.009	0.006	0.004	0.002	0.001
2013	99.5	0	0.008	0.007	0.006	0.004	0.003	0.002	0.000
2014	98.9	0	0.008	0.006	0.006	0.005	0.003	0.002	0.001
2015	99.2	0	0.009	0.007	0.006	0.005	0.004	0.002	0.001
2016	98.6	0	0.010	0.010	0.008	0.005	0.004	0.002	0.001

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	95.9	0	0.010	0.008	0.006	0.005	0.003	0.001	0.000
2018	98.4	0	0.013	0.008	0.007	0.005	0.004	0.002	0.001
2019	98.9	0	0.012	0.008	0.007	0.005	0.004	0.003	0.001
2020	98.4	0	0.011	0.010	0.008	0.006	0.004	0.002	0.001

Ozone

Ozone 1-hour standard

Table 110 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.9	1	0.126	0.082	0.076	0.060	0.049	0.035	0.029
2012	94.0	0	0.091	0.084	0.069	0.057	0.048	0.037	0.029
2013	94.8	0	0.095	0.087	0.082	0.066	0.056	0.040	0.031
2014	94.6	2	0.105	0.093	0.080	0.067	0.055	0.040	0.032
2015	93.4	0	0.083	0.076	0.070	0.059	0.051	0.039	0.029
2016	93.5	1	0.105	0.083	0.077	0.061	0.055	0.040	0.030
2017	94.0	0	0.095	0.090	0.075	0.067	0.056	0.039	0.032
2018	92.8	1	0.102	0.085	0.082	0.066	0.057	0.042	0.034
2019	93.9	6	0.128	0.114	0.099	0.083	0.067	0.044	0.032
2020	93.7	1	0.114	0.082	0.076	0.06	0.054	0.038	0.030

Table 111 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	88.5	2	0.125	0.087	0.080	0.065	0.055	0.038	0.030
2012	93.0	0	0.088	0.075	0.072	0.060	0.049	0.040	0.030
2013	94.8	1	0.108	0.085	0.081	0.062	0.053	0.040	0.031
2014	93.4	2	0.124	0.089	0.080	0.064	0.056	0.041	0.032
2015	93.1	0	0.087	0.078	0.072	0.065	0.055	0.040	0.029
2016	90.7	0	0.094	0.080	0.076	0.065	0.054	0.042	0.030
2017	92.0	0	0.098	0.088	0.081	0.071	0.054	0.041	0.032
2018	94.1	2	0.110	0.097	0.084	0.070	0.059	0.042	0.032

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	93.2	7	0.144	0.104	0.100	0.087	0.071	0.044	0.034
2020	87.7	1	0.112	0.082	0.076	0.067	0.053	0.041	0.031

Table 112 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Camden (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	20.3	0	0.095	0.094	0.091	0.078	0.068	0.053	0.041
2013	93.1	1	0.110	0.098	0.079	0.069	0.056	0.042	0.031
2014	94.4	2	0.123	0.099	0.085	0.067	0.056	0.042	0.033
2015	94.3	0	0.086	0.075	0.074	0.067	0.054	0.040	0.030
2016	91.1	0	0.097	0.083	0.077	0.066	0.056	0.043	0.031
2017	93.8	1	0.122	0.085	0.080	0.068	0.054	0.042	0.032
2018	90.0	2	0.112	0.096	0.089	0.071	0.060	0.044	0.033
2019	93.2	11	0.138	0.115	0.105	0.089	0.075	0.045	0.034
2020	94.5	1	0.107	0.088	0.081	0.066	0.054	0.042	0.032

Table 113 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.6	2	0.131	0.096	0.084	0.067	0.054	0.037	0.030
2012	85.0	0	0.080	0.075	0.072	0.063	0.050	0.037	0.030
2013	93.9	0	0.094	0.085	0.076	0.061	0.049	0.037	0.029
2014	91.8	1	0.124	0.087	0.076	0.060	0.052	0.038	0.030
2015	92.0	0	0.086	0.077	0.073	0.062	0.053	0.037	0.028
2016	94.0	0	0.091	0.087	0.073	0.066	0.055	0.039	0.029
2017	93.5	0	0.094	0.090	0.081	0.066	0.053	0.039	0.031
2018	93.7	3	0.110	0.097	0.085	0.070	0.058	0.038	0.031
2019	91.4	9	0.131	0.115	0.107	0.092	0.071	0.042	0.032
2020	95.1	1	0.108	0.085	0.078	0.063	0.05	0.037	0.029

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 114 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Chullora (Sydney)

95.1	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.2	1	0.114	0.073	0.061	0.052	0.043	0.032	0.025
2012	94.2	0	0.080	0.065	0.055	0.047	0.040	0.031	0.026
2013	94.8	1	0.105	0.072	0.066	0.052	0.045	0.035	0.028
2014	94.7	0	0.079	0.071	0.061	0.055	0.045	0.033	0.027
2015	93.8	0	0.093	0.085	0.072	0.056	0.047	0.035	0.028
2016	94.6	0	0.090	0.084	0.080	0.059	0.050	0.035	0.029
2017	93.7	1	0.114	0.085	0.072	0.055	0.048	0.035	0.030
2018	95.0	0	0.092	0.080	0.070	0.055	0.045	0.035	0.029
2019	95.2	2	0.176	0.088	0.079	0.071	0.055	0.037	0.029
2020	94.6	1	0.107	0.066	0.062	0.054	0.047	0.034	0.029

Table 115 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	28.4	1	0.107	0.097	0.081	0.062	0.047	0.033	0.025
2020	87.0	0	0.059	0.048	0.042	0.037	0.032	0.027	0.022

Table 116 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Earlwood (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.6	0	0.099	0.069	0.056	0.046	0.040	0.031	0.027
2012	94.8	0	0.082	0.065	0.052	0.047	0.042	0.032	0.028
2013	92.4	1	0.101	0.090	0.063	0.050	0.045	0.034	0.028
2014	95.0	0	0.069	0.066	0.056	0.048	0.042	0.032	0.028
2015	93.7	0	0.093	0.076	0.067	0.052	0.040	0.031	0.027
2016	94.1	0	0.092	0.081	0.072	0.053	0.042	0.031	0.027
2017	90.3	1	0.109	0.077	0.067	0.052	0.043	0.033	0.029
2018	94.8	0	0.072	0.068	0.057	0.048	0.039	0.033	0.028
2019	93.9	2	0.179	0.092	0.081	0.062	0.050	0.034	0.028
2020	94.1	0	0.091	0.062	0.059	0.051	0.043	0.034	0.028

Table 117 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.1	1	0.103	0.080	0.071	0.057	0.046	0.032	0.025
2012	92.4	0	0.079	0.068	0.065	0.054	0.047	0.035	0.028
2013	94.2	1	0.117	0.086	0.074	0.060	0.050	0.040	0.030
2014	93.6	1	0.103	0.084	0.073	0.062	0.052	0.038	0.030
2015	91.5	0	0.087	0.079	0.072	0.062	0.052	0.037	0.027
2016	93.1	0	0.095	0.078	0.075	0.064	0.055	0.038	0.028
2017	94.5	2	0.135	0.085	0.076	0.062	0.051	0.037	0.030
2018	93.5	1	0.111	0.086	0.077	0.063	0.055	0.039	0.030
2019	94.1	4	0.157	0.106	0.092	0.080	0.068	0.041	0.031
2020	92.6	1	0.102	0.076	0.068	0.059	0.051	0.036	0.030

Table 118 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	35.9	0	0.091	0.084	0.077	0.063	0.051	0.042	0.033
2018	93.9	0	0.087	0.076	0.071	0.060	0.050	0.039	0.032
2019	91.8	2	0.122	0.091	0.084	0.072	0.058	0.039	0.031
2020	92.2	1	0.102	0.074	0.069	0.057	0.048	0.037	0.030

Table 119 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Oakdale (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.0	3	0.126	0.084	0.075	0.063	0.051	0.039	0.031
2012	92.7	0	0.089	0.078	0.072	0.056	0.048	0.039	0.030
2013	94.0	0	0.095	0.085	0.078	0.063	0.055	0.041	0.032
2014	94.5	1	0.110	0.090	0.079	0.066	0.054	0.042	0.032
2015	93.7	0	0.084	0.079	0.072	0.060	0.053	0.040	0.030
2016	93.3	0	0.083	0.074	0.072	0.061	0.054	0.041	0.031
2017	95.2	0	0.095	0.093	0.080	0.065	0.055	0.043	0.033
2018	93.8	0	0.097	0.085	0.077	0.069	0.059	0.043	0.034
2019	92.3	7	0.147	0.109	0.101	0.085	0.066	0.044	0.034
2020	94.9	1	0.116	0.081	0.079	0.064	0.052	0.041	0.032

Table 120 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	92.7	1	0.102	0.081	0.076	0.059	0.053	0.038	0.031
2019	94.9	2	0.157	0.098	0.092	0.081	0.068	0.042	0.033
2020	95.1	0	0.093	0.078	0.071	0.062	0.052	0.038	0.031

Table 121 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.2	1	0.126	0.086	0.068	0.057	0.046	0.034	0.028
2012	91.8	0	0.080	0.076	0.069	0.061	0.050	0.039	0.028
2013	91.5	1	0.111	0.084	0.070	0.062	0.053	0.042	0.031
2014	93.4	1	0.103	0.088	0.079	0.065	0.053	0.041	0.031
2015	94.2	0	0.085	0.075	0.071	0.062	0.052	0.039	0.028
2016	93.4	1	0.104	0.086	0.070	0.059	0.052	0.039	0.030
2017	94.6	1	0.123	0.078	0.075	0.061	0.050	0.038	0.030
2018	85.9	1	0.105	0.083	0.076	0.069	0.056	0.041	0.032
2019	94.3	4	0.132	0.111	0.095	0.082	0.066	0.042	0.033
2020	94.8	1	0.102	0.082	0.073	0.063	0.052	0.039	0.032

Table 122 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.1	0	0.073	0.064	0.057	0.047	0.040	0.034	0.027
2012	94.0	0	0.066	0.059	0.057	0.049	0.041	0.033	0.029
2013	92.7	0	0.075	0.071	0.064	0.050	0.044	0.035	0.029
2014	94.6	0	0.066	0.059	0.056	0.047	0.041	0.033	0.030
2015	94.0	1	0.113	0.065	0.060	0.051	0.043	0.034	0.029
2016	94.8	0	0.099	0.085	0.077	0.058	0.045	0.035	0.030
2017	94.3	2	0.116	0.090	0.075	0.053	0.046	0.036	0.032
2018	94.1	0	0.073	0.062	0.056	0.049	0.042	0.035	0.032
2019	94.4	2	0.150	0.093	0.075	0.056	0.047	0.036	0.031
2020	95.0	0	0.090	0.083	0.074	0.063	0.051	0.040	0.032

Table 123 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.3	1	0.116	0.077	0.067	0.058	0.048	0.037	0.031
2012	92.9	0	0.085	0.070	0.065	0.056	0.047	0.039	0.031
2013	94.3	0	0.095	0.071	0.070	0.061	0.054	0.043	0.034
2014	94.3	0	0.090	0.085	0.074	0.062	0.054	0.042	0.033
2015	93.2	0	0.094	0.083	0.066	0.056	0.050	0.040	0.030
2016	94.4	0	0.081	0.069	0.066	0.060	0.052	0.042	0.033
2017	92.9	0	0.093	0.089	0.081	0.060	0.053	0.041	0.034
2018	94.2	1	0.103	0.091	0.079	0.067	0.055	0.043	0.034
2019	94.1	4	0.137	0.102	0.093	0.080	0.066	0.043	0.034
2020	92.8	0	0.093	0.073	0.061	0.050	0.044	0.036	0.030

Table 124 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.2	0	0.094	0.071	0.060	0.054	0.044	0.034	0.028
2012	94.8	0	0.080	0.069	0.063	0.053	0.047	0.038	0.029
2013	94.6	1	0.105	0.078	0.069	0.060	0.053	0.042	0.032
2014	94.9	1	0.112	0.082	0.076	0.064	0.054	0.042	0.032
2015	93.9	0	0.088	0.079	0.074	0.059	0.052	0.041	0.031
2016	83.6	0	0.076	0.071	0.069	0.058	0.050	0.039	0.031
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	57.0	2	0.112	0.102	0.093	0.081	0.065	0.042	0.034
2020	94.7	0	0.091	0.082	0.075	0.065	0.051	0.038	0.031

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 125 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.3	0	0.093	0.066	0.053	0.044	0.038	0.031	0.026
2012	94.8	0	0.069	0.057	0.052	0.045	0.042	0.034	0.029
2013	92.4	0	0.073	0.063	0.054	0.046	0.041	0.033	0.029
2014	94.8	0	0.067	0.065	0.055	0.046	0.040	0.033	0.028

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	92.9	0	0.099	0.068	0.057	0.051	0.040	0.031	0.027
2016	94.6	0	0.089	0.078	0.063	0.049	0.040	0.032	0.027
2017	93.3	1	0.114	0.076	0.057	0.045	0.040	0.032	0.027
2018	67.7	0	0.078	0.062	0.051	0.043	0.039	0.033	0.030
2019	94.1	2	0.179	0.090	0.074	0.057	0.045	0.035	0.029
2020	94.8	0	0.083	0.068	0.060	0.051	0.044	0.035	0.029

Table 126 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: St Marys (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.8	3	0.136	0.094	0.074	0.060	0.051	0.037	0.030
2012	93.3	0	0.085	0.074	0.069	0.058	0.049	0.038	0.030
2013	93.7	1	0.110	0.076	0.073	0.063	0.054	0.043	0.032
2014	94.2	0	0.100	0.089	0.078	0.066	0.055	0.043	0.033
2015	93.0	0	0.082	0.078	0.073	0.061	0.055	0.041	0.030
2016	93.8	1	0.101	0.085	0.074	0.065	0.055	0.042	0.033
2017	94.2	1	0.110	0.092	0.081	0.067	0.056	0.043	0.034
2018	93.9	1	0.105	0.088	0.085	0.073	0.059	0.045	0.035
2019	94.4	8	0.137	0.115	0.106	0.084	0.069	0.045	0.035
2020	94.9	1	0.115	0.080	0.075	0.064	0.051	0.039	0.031

Table 127 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	19.3	0	0.078	0.077	0.071	0.060	0.056	0.041	0.032
2013	92.2	0	0.079	0.070	0.061	0.053	0.044	0.037	0.030
2014	94.2	0	0.076	0.062	0.060	0.049	0.043	0.036	0.030
2015	92.0	0	0.097	0.068	0.060	0.051	0.042	0.034	0.029
2016	93.9	0	0.086	0.079	0.061	0.053	0.046	0.035	0.029
2017	94.2	1	0.121	0.074	0.067	0.053	0.046	0.037	0.031
2018	91.8	0	0.075	0.064	0.058	0.049	0.042	0.035	0.031
2019	93.3	0	0.100	0.087	0.076	0.056	0.049	0.037	0.031
2020	93.9	1	0.101	0.070	0.068	0.052	0.046	0.036	0.031

Table 128 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	89.6	1	0.118	0.071	0.059	0.046	0.038	0.032	0.028
2012	93.8	0	0.067	0.058	0.051	0.044	0.041	0.032	0.029
2013	93.2	3	0.120	0.094	0.064	0.053	0.044	0.035	0.031
2014	93.2	0	0.094	0.064	0.058	0.050	0.042	0.035	0.031
2015	91.8	0	0.079	0.065	0.060	0.048	0.041	0.033	0.029
2016	94.6	1	0.104	0.075	0.067	0.051	0.043	0.033	0.030
2017	94.1	2	0.117	0.086	0.074	0.047	0.040	0.034	0.031
2018	94.1	0	0.076	0.061	0.055	0.046	0.039	0.033	0.030
2019	94.3	0	0.099	0.083	0.069	0.053	0.043	0.035	0.030
2020	92.3	1	0.102	0.063	0.055	0.048	0.042	0.033	0.030

Table 129 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Kembla Grange (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.4	1	0.121	0.073	0.063	0.052	0.042	0.034	0.030
2012	94.3	0	0.068	0.057	0.052	0.045	0.041	0.032	0.029
2013	93.8	2	0.126	0.081	0.063	0.048	0.043	0.034	0.030
2014	94.4	0	0.094	0.064	0.062	0.051	0.042	0.034	0.030
2015	94.7	1	0.104	0.073	0.065	0.051	0.040	0.032	0.028
2016	92.9	1	0.114	0.071	0.065	0.052	0.042	0.033	0.029
2017	94.6	2	0.122	0.087	0.073	0.051	0.043	0.034	0.031
2018	92.9	0	0.070	0.062	0.055	0.048	0.040	0.034	0.031
2019	94.1	0	0.100	0.078	0.070	0.056	0.045	0.035	0.030
2020	92.5	0	0.089	0.064	0.060	0.049	0.042	0.033	0.029

Table 130 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.1	0	0.084	0.069	0.055	0.048	0.040	0.034	0.028
2012	94.9	0	0.065	0.062	0.054	0.047	0.039	0.031	0.027
2013	92.7	2	0.112	0.085	0.066	0.052	0.043	0.034	0.029
2014	94.3	0	0.077	0.061	0.055	0.048	0.041	0.033	0.029

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	94.8	0	0.092	0.075	0.070	0.050	0.042	0.033	0.028
2016	94.6	0	0.095	0.083	0.069	0.051	0.043	0.035	0.030
2017	92.1	2	0.107	0.084	0.070	0.051	0.044	0.035	0.031
2018	93.8	0	0.066	0.063	0.055	0.049	0.041	0.035	0.031
2019	94.5	1	0.111	0.085	0.077	0.058	0.047	0.037	0.031
2020	93.1	0	0.079	0.066	0.059	0.051	0.042	0.034	0.029

Table 131 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	91.2	0	0.071	0.063	0.059	0.048	0.042	0.032	0.027
2012	92.9	0	0.070	0.065	0.057	0.050	0.043	0.033	0.027
2013	89.2	0	0.077	0.071	0.065	0.052	0.043	0.035	0.027
2014	95.0	0	0.090	0.068	0.063	0.053	0.047	0.035	0.029
2015	93.9	0	0.077	0.069	0.061	0.052	0.046	0.034	0.027
2016	94.8	0	0.085	0.067	0.063	0.055	0.046	0.035	0.028
2017	93.6	0	0.083	0.069	0.065	0.056	0.048	0.035	0.028
2018	93.8	1	0.107	0.074	0.061	0.054	0.046	0.036	0.029
2019	94.3	1	0.126	0.093	0.081	0.068	0.057	0.039	0.031
2020	93.1	0	0.093	0.072	0.063	0.053	0.045	0.035	0.029

Table 132 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.7	0	0.066	0.057	0.053	0.047	0.041	0.035	0.029
2012	94.3	0	0.071	0.057	0.052	0.046	0.041	0.033	0.028
2013	93.9	0	0.081	0.059	0.057	0.048	0.042	0.035	0.028
2014	93.7	0	0.065	0.060	0.054	0.046	0.040	0.034	0.030
2015	94.0	0	0.074	0.061	0.055	0.048	0.043	0.033	0.028
2016	93.5	0	0.077	0.064	0.058	0.050	0.041	0.034	0.029
2017	94.0	0	0.086	0.067	0.057	0.049	0.042	0.034	0.030
2018	93.4	0	0.067	0.061	0.058	0.044	0.039	0.033	0.030
2019	94.6	2	0.104	0.086	0.070	0.054	0.044	0.036	0.030
2020	94.0	0	0.090	0.074	0.054	0.047	0.041	0.035	0.030

Table 133 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.0	0	0.071	0.056	0.055	0.049	0.040	0.033	0.027
2012	94.7	0	0.080	0.064	0.055	0.050	0.043	0.034	0.028
2013	92.2	0	0.084	0.071	0.065	0.055	0.046	0.038	0.030
2014	94.7	0	0.087	0.064	0.057	0.050	0.044	0.036	0.030
2015	94.2	0	0.071	0.065	0.061	0.050	0.044	0.034	0.027
2016	94.4	0	0.086	0.073	0.066	0.056	0.046	0.036	0.029
2017	94.9	1	0.106	0.073	0.066	0.058	0.047	0.036	0.031
2018	93.8	0	0.086	0.069	0.064	0.055	0.044	0.035	0.031
2019	92.7	2	0.110	0.091	0.080	0.064	0.054	0.039	0.031
2020	93.1	0	0.083	0.070	0.062	0.051	0.044	0.036	0.029

Table 134 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Gunnedah (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	78.9	0	0.063	0.056	0.055	0.052	0.048	0.041	0.035
2019	94.7	0	0.094	0.078	0.073	0.067	0.057	0.045	0.036
2020	93.0	0	0.080	0.072	0.065	0.058	0.050	0.041	0.034

Table 135 Statistical summary for ozone: daily maximum 1-hour average concentrations. Station: Goulburn (Southern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	14.4	2	0.147	0.147	0.133	0.098	0.080	0.065	0.046
2020	95.0	0	0.092	0.075	0.073	0.054	0.045	0.037	0.031

Ozone 4-hour standard

Table 136 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.1	1	0.098	0.074	0.068	0.051	0.044	0.033	0.028
2012	97.9	1	0.083	0.071	0.059	0.050	0.044	0.035	0.029
2013	98.9	1	0.082	0.076	0.073	0.060	0.049	0.037	0.030

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	98.7	3	0.093	0.078	0.071	0.060	0.052	0.037	0.031
2015	97.4	0	0.074	0.066	0.062	0.052	0.046	0.036	0.029
2016	97.4	0	0.080	0.070	0.067	0.055	0.049	0.037	0.029
2017	98.0	3	0.086	0.073	0.067	0.059	0.050	0.037	0.031
2018	96.5	2	0.084	0.078	0.070	0.058	0.052	0.039	0.032
2019	97.9	15	0.125	0.096	0.089	0.075	0.059	0.041	0.031
2020	97.6	1	0.106	0.075	0.067	0.054	0.049	0.036	0.029

Table 137 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	88.5	2	0.118	0.076	0.070	0.056	0.048	0.035	0.029
2012	97.0	0	0.072	0.066	0.062	0.054	0.046	0.037	0.029
2013	98.9	1	0.102	0.074	0.068	0.054	0.047	0.037	0.030
2014	97.2	3	0.113	0.078	0.070	0.056	0.049	0.038	0.031
2015	97.0	0	0.078	0.065	0.062	0.057	0.050	0.037	0.029
2016	94.5	0	0.080	0.066	0.064	0.055	0.049	0.038	0.029
2017	95.6	1	0.089	0.077	0.070	0.063	0.050	0.038	0.031
2018	97.9	4	0.092	0.083	0.075	0.062	0.053	0.039	0.031
2019	96.8	17	0.111	0.096	0.087	0.078	0.063	0.041	0.032
2020	91.5	1	0.101	0.074	0.068	0.058	0.049	0.038	0.030

Table 138 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Camden (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	21.1	1	0.084	0.083	0.074	0.069	0.059	0.048	0.038
2013	97.0	4	0.090	0.085	0.072	0.062	0.050	0.038	0.030
2014	98.3	3	0.110	0.080	0.071	0.058	0.050	0.040	0.032
2015	98.4	0	0.072	0.067	0.064	0.058	0.048	0.037	0.029
2016	94.8	0	0.075	0.070	0.066	0.056	0.051	0.039	0.030
2017	97.6	3	0.108	0.076	0.072	0.058	0.048	0.038	0.031
2018	93.7	4	0.094	0.082	0.075	0.064	0.055	0.040	0.032
2019	97.2	17	0.115	0.102	0.094	0.078	0.068	0.041	0.032
2020	98.5	2	0.096	0.075	0.069	0.058	0.049	0.039	0.031

Table 139 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.4	2	0.122	0.079	0.072	0.062	0.048	0.035	0.029
2012	88.5	0	0.073	0.065	0.061	0.054	0.044	0.035	0.029
2013	97.8	1	0.082	0.074	0.067	0.054	0.044	0.034	0.028
2014	95.4	2	0.111	0.078	0.066	0.054	0.046	0.035	0.029
2015	95.8	0	0.079	0.067	0.064	0.056	0.046	0.035	0.027
2016	97.7	0	0.077	0.075	0.064	0.056	0.049	0.036	0.028
2017	97.1	1	0.091	0.078	0.069	0.058	0.049	0.036	0.030
2018	97.6	4	0.098	0.088	0.074	0.062	0.052	0.036	0.030
2019	94.7	18	0.117	0.106	0.092	0.081	0.062	0.039	0.030
2020	99.2	2	0.091	0.074	0.070	0.058	0.047	0.035	0.028

Note: Campbelltown West station replaced Macarthur in September 2012.

Table 140 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.1	1	0.096	0.067	0.056	0.047	0.038	0.030	0.023
2012	98.1	0	0.068	0.058	0.049	0.041	0.037	0.028	0.024
2013	98.7	1	0.094	0.061	0.055	0.048	0.042	0.032	0.026
2014	98.8	0	0.073	0.060	0.055	0.049	0.041	0.031	0.025
2015	97.9	0	0.078	0.069	0.063	0.052	0.042	0.033	0.026
2016	98.7	0	0.077	0.073	0.069	0.053	0.045	0.033	0.027
2017	97.7	3	0.110	0.079	0.064	0.050	0.044	0.033	0.028
2018	99.1	1	0.082	0.071	0.061	0.049	0.042	0.032	0.028
2019	99.4	4	0.121	0.081	0.070	0.062	0.050	0.034	0.028
2020	97.9	1	0.098	0.060	0.057	0.050	0.043	0.033	0.027

Table 141 Statistical summary for ozone: daily maximum 4-hour average concentrations. Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	29.3	0	0.075	0.073	0.070	0.056	0.042	0.029	0.024
2020	90.1	0	0.047	0.042	0.039	0.034	0.030	0.025	0.021

Table 142 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Earlowood (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.4	1	0.088	0.061	0.052	0.042	0.036	0.030	0.025
2012	98.7	0	0.068	0.061	0.048	0.043	0.039	0.030	0.026
2013	96.1	3	0.082	0.075	0.052	0.045	0.041	0.032	0.026
2014	99.0	0	0.065	0.057	0.051	0.045	0.038	0.030	0.026
2015	97.6	1	0.081	0.064	0.058	0.051	0.039	0.029	0.025
2016	97.7	1	0.082	0.075	0.062	0.048	0.037	0.030	0.025
2017	93.9	3	0.087	0.075	0.058	0.048	0.039	0.032	0.028
2018	98.9	0	0.065	0.061	0.053	0.044	0.036	0.030	0.027
2019	97.8	4	0.125	0.081	0.070	0.057	0.046	0.032	0.027
2020	98.1	1	0.085	0.058	0.053	0.047	0.041	0.033	0.027

Table 143 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.3	1	0.095	0.068	0.060	0.051	0.042	0.030	0.024
2012	96.1	0	0.071	0.062	0.055	0.048	0.043	0.033	0.026
2013	98.2	1	0.110	0.070	0.065	0.055	0.044	0.036	0.028
2014	97.6	1	0.087	0.075	0.063	0.056	0.046	0.035	0.028
2015	95.2	0	0.077	0.065	0.061	0.054	0.047	0.034	0.026
2016	97.0	2	0.086	0.070	0.065	0.055	0.050	0.035	0.027
2017	98.5	2	0.117	0.075	0.066	0.056	0.047	0.035	0.029
2018	97.4	3	0.093	0.077	0.069	0.056	0.050	0.036	0.029
2019	98.2	9	0.115	0.094	0.086	0.074	0.061	0.037	0.030
2020	96.6	1	0.093	0.069	0.062	0.055	0.046	0.034	0.029

Table 144 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	37.0	1	0.087	0.075	0.068	0.059	0.048	0.039	0.032
2018	97.5	0	0.080	0.068	0.064	0.055	0.046	0.036	0.031
2019	95.6	4	0.105	0.084	0.074	0.065	0.052	0.037	0.030
2020	96.1	1	0.086	0.065	0.062	0.051	0.045	0.035	0.028

Table 145 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Oakdale (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.2	3	0.098	0.074	0.066	0.057	0.047	0.036	0.030
2012	96.7	1	0.081	0.071	0.060	0.050	0.045	0.036	0.029
2013	97.9	1	0.081	0.069	0.068	0.057	0.050	0.039	0.031
2014	98.5	1	0.088	0.077	0.067	0.058	0.049	0.039	0.030
2015	97.7	0	0.070	0.069	0.062	0.054	0.047	0.038	0.029
2016	97.2	0	0.067	0.064	0.061	0.053	0.050	0.038	0.030
2017	99.3	0	0.080	0.076	0.070	0.057	0.051	0.040	0.032
2018	97.7	2	0.082	0.076	0.070	0.061	0.053	0.041	0.033
2019	96.2	13	0.130	0.097	0.092	0.075	0.060	0.041	0.033
2020	99.0	1	0.102	0.071	0.068	0.058	0.049	0.039	0.032

Table 146 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	96.5	2	0.095	0.073	0.068	0.056	0.048	0.035	0.030
2019	98.8	10	0.122	0.086	0.082	0.073	0.060	0.039	0.031
2020	99.1	1	0.081	0.071	0.064	0.057	0.049	0.036	0.030

Table 147 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.3	3	0.114	0.077	0.061	0.051	0.043	0.032	0.026
2012	95.6	0	0.073	0.064	0.061	0.053	0.045	0.036	0.027
2013	95.2	1	0.104	0.072	0.064	0.056	0.048	0.038	0.030
2014	97.3	1	0.097	0.076	0.068	0.056	0.049	0.038	0.029
2015	98.2	0	0.070	0.063	0.061	0.056	0.048	0.036	0.027
2016	97.2	0	0.078	0.067	0.062	0.054	0.048	0.036	0.029
2017	98.7	2	0.106	0.073	0.066	0.055	0.046	0.036	0.029
2018	89.6	2	0.091	0.074	0.070	0.058	0.051	0.038	0.031
2019	98.4	10	0.122	0.095	0.087	0.073	0.060	0.040	0.031
2020	98.7	1	0.093	0.075	0.067	0.057	0.049	0.036	0.030

Table 148 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.7	0	0.069	0.055	0.051	0.043	0.037	0.032	0.026
2012	97.9	0	0.063	0.053	0.051	0.046	0.039	0.032	0.028
2013	96.6	0	0.067	0.059	0.056	0.047	0.042	0.033	0.028
2014	98.7	0	0.061	0.057	0.051	0.044	0.038	0.032	0.028
2015	97.9	1	0.085	0.059	0.055	0.047	0.039	0.032	0.028
2016	98.8	1	0.090	0.076	0.069	0.050	0.041	0.033	0.028
2017	98.3	3	0.102	0.080	0.066	0.051	0.041	0.034	0.030
2018	98.2	0	0.069	0.058	0.050	0.043	0.039	0.034	0.031
2019	98.4	5	0.111	0.084	0.065	0.051	0.042	0.034	0.030
2020	99.0	1	0.081	0.062	0.056	0.048	0.041	0.034	0.030

Table 149 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.5	1	0.088	0.065	0.059	0.050	0.045	0.034	0.029
2012	96.6	0	0.070	0.061	0.056	0.050	0.044	0.036	0.030
2013	98.3	0	0.076	0.065	0.061	0.054	0.049	0.039	0.032
2014	98.3	0	0.073	0.068	0.065	0.057	0.049	0.039	0.032
2015	97.1	0	0.074	0.067	0.059	0.051	0.045	0.037	0.029
2016	98.4	0	0.070	0.061	0.059	0.053	0.047	0.038	0.031
2017	96.7	2	0.085	0.077	0.067	0.055	0.048	0.039	0.032
2018	98.2	2	0.087	0.076	0.069	0.060	0.050	0.041	0.033
2019	98.0	8	0.120	0.098	0.083	0.070	0.059	0.040	0.032
2020	96.7	1	0.086	0.073	0.066	0.056	0.046	0.038	0.031

Table 150 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.1	0	0.075	0.058	0.054	0.049	0.040	0.032	0.026
2012	98.8	0	0.070	0.059	0.056	0.047	0.043	0.034	0.028
2013	98.7	2	0.090	0.066	0.061	0.053	0.048	0.039	0.030
2014	99.0	0	0.075	0.071	0.066	0.056	0.049	0.039	0.031
2015	98.0	0	0.071	0.068	0.064	0.053	0.047	0.038	0.030

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	87.1	0	0.064	0.061	0.058	0.052	0.044	0.037	0.030
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019	59.3	5	0.101	0.096	0.083	0.074	0.061	0.039	0.032
2020	98.8	1	0.083	0.073	0.068	0.058	0.046	0.036	0.030

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 151 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.1	0	0.080	0.058	0.049	0.041	0.035	0.029	0.024
2012	98.6	0	0.054	0.049	0.047	0.042	0.037	0.032	0.028
2013	96.0	0	0.063	0.051	0.045	0.041	0.037	0.031	0.027
2014	98.8	0	0.060	0.053	0.049	0.042	0.036	0.030	0.027
2015	96.7	0	0.079	0.060	0.050	0.046	0.036	0.029	0.026
2016	98.6	0	0.075	0.067	0.059	0.043	0.036	0.030	0.026
2017	96.8	1	0.109	0.069	0.054	0.040	0.036	0.030	0.025
2018	70.5	0	0.066	0.050	0.046	0.039	0.036	0.032	0.029
2019	98.1	4	0.149	0.081	0.065	0.049	0.042	0.032	0.028
2020	98.9	0	0.078	0.062	0.053	0.047	0.041	0.033	0.028

Table 152 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: St Marys (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.8	3	0.121	0.080	0.063	0.054	0.047	0.034	0.028
2012	97.2	0	0.072	0.065	0.061	0.053	0.045	0.035	0.029
2013	97.6	2	0.101	0.068	0.063	0.057	0.048	0.040	0.030
2014	97.7	2	0.085	0.076	0.068	0.059	0.051	0.040	0.032
2015	94.9	0	0.071	0.065	0.064	0.055	0.049	0.038	0.029
2016	97.7	1	0.081	0.068	0.065	0.057	0.051	0.040	0.031
2017	98.2	4	0.096	0.082	0.073	0.059	0.050	0.040	0.032
2018	97.9	2	0.094	0.080	0.073	0.063	0.055	0.041	0.034
2019	98.4	14	0.118	0.107	0.094	0.076	0.059	0.041	0.033
2020	98.9	3	0.107	0.078	0.066	0.056	0.046	0.036	0.030

Table 153 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	20.1	0	0.066	0.066	0.065	0.057	0.050	0.039	0.031
2013	96.1	0	0.072	0.063	0.057	0.046	0.040	0.034	0.028
2014	98.1	0	0.069	0.058	0.055	0.046	0.039	0.033	0.029
2015	95.6	1	0.091	0.059	0.054	0.045	0.040	0.032	0.027
2016	97.9	0	0.079	0.070	0.057	0.048	0.041	0.033	0.028
2017	98.0	2	0.105	0.064	0.059	0.049	0.042	0.035	0.030
2018	95.4	0	0.067	0.058	0.053	0.045	0.038	0.033	0.029
2019	97.3	3	0.090	0.077	0.068	0.051	0.044	0.035	0.030
2020	97.8	1	0.089	0.064	0.056	0.048	0.042	0.035	0.029

Table 154 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	85.7	3	0.099	0.061	0.052	0.042	0.034	0.031	0.027
2012	97.8	0	0.064	0.051	0.047	0.041	0.037	0.031	0.028
2013	97.1	3	0.100	0.074	0.056	0.047	0.041	0.034	0.029
2014	97.2	0	0.079	0.057	0.054	0.044	0.039	0.033	0.030
2015	95.7	0	0.075	0.061	0.054	0.044	0.037	0.032	0.028
2016	98.5	2	0.098	0.068	0.061	0.047	0.038	0.032	0.029
2017	98.0	2	0.102	0.076	0.063	0.042	0.037	0.033	0.029
2018	98.1	0	0.073	0.054	0.047	0.043	0.036	0.031	0.029
2019	98.3	0	0.078	0.070	0.064	0.047	0.040	0.033	0.029
2020	96.1	1	0.084	0.060	0.050	0.044	0.039	0.032	0.029

Table 155 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Kembla Grange (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.4	2	0.105	0.066	0.057	0.048	0.038	0.033	0.029
2012	98.4	0	0.061	0.051	0.047	0.041	0.037	0.031	0.027
2013	97.8	2	0.103	0.070	0.057	0.044	0.039	0.032	0.029
2014	98.4	0	0.080	0.058	0.055	0.047	0.039	0.032	0.029
2015	98.8	0	0.079	0.071	0.057	0.046	0.037	0.031	0.027
2016	96.8	1	0.102	0.064	0.059	0.047	0.039	0.031	0.028

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	98.6	4	0.098	0.081	0.063	0.047	0.040	0.033	0.030
2018	96.8	0	0.059	0.056	0.050	0.044	0.037	0.033	0.030
2019	98.1	2	0.092	0.073	0.063	0.052	0.042	0.033	0.029
2020	96.4	1	0.081	0.059	0.053	0.045	0.039	0.032	0.028

Table 156 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.9	0	0.078	0.066	0.052	0.043	0.036	0.032	0.027
2012	98.9	0	0.061	0.055	0.050	0.042	0.038	0.030	0.026
2013	96.5	2	0.091	0.076	0.058	0.048	0.041	0.032	0.027
2014	98.2	0	0.068	0.059	0.051	0.044	0.039	0.031	0.028
2015	98.4	1	0.083	0.066	0.064	0.048	0.039	0.031	0.027
2016	98.6	1	0.085	0.075	0.062	0.049	0.040	0.033	0.028
2017	96.0	2	0.094	0.080	0.063	0.047	0.041	0.034	0.030
2018	97.9	0	0.061	0.057	0.050	0.045	0.038	0.033	0.029
2019	98.5	2	0.094	0.074	0.066	0.051	0.044	0.034	0.029
2020	97.1	0	0.071	0.061	0.052	0.047	0.040	0.032	0.028

Table 157 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	94.5	0	0.064	0.058	0.052	0.045	0.038	0.030	0.025
2012	96.8	0	0.067	0.058	0.053	0.045	0.041	0.031	0.025
2013	92.9	0	0.074	0.065	0.054	0.048	0.040	0.033	0.025
2014	99.1	0	0.077	0.063	0.054	0.050	0.043	0.033	0.028
2015	97.8	0	0.067	0.062	0.057	0.049	0.042	0.032	0.026
2016	98.9	0	0.068	0.063	0.058	0.050	0.043	0.033	0.027
2017	97.5	0	0.079	0.065	0.060	0.050	0.044	0.034	0.027
2018	97.6	1	0.089	0.064	0.058	0.050	0.042	0.032	0.028
2019	98.1	4	0.107	0.082	0.072	0.060	0.049	0.037	0.029
2020	96.8	0	0.076	0.061	0.059	0.050	0.041	0.033	0.027

Table 158 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	86.8	0	0.063	0.051	0.048	0.044	0.038	0.033	0.027
2012	97.8	0	0.057	0.049	0.048	0.043	0.039	0.032	0.027
2013	98.0	0	0.075	0.054	0.050	0.044	0.039	0.033	0.027
2014	97.0	0	0.056	0.054	0.048	0.042	0.037	0.032	0.028
2015	97.4	0	0.066	0.054	0.050	0.045	0.038	0.032	0.026
2016	97.4	0	0.069	0.058	0.055	0.045	0.039	0.032	0.027
2017	97.8	0	0.073	0.058	0.051	0.044	0.039	0.033	0.028
2018	97.4	0	0.058	0.054	0.052	0.040	0.037	0.031	0.028
2019	98.4	2	0.097	0.070	0.061	0.050	0.042	0.034	0.029
2020	97.8	0	0.080	0.062	0.051	0.044	0.038	0.034	0.028

Table 159 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.8	0	0.059	0.053	0.050	0.045	0.037	0.031	0.025
2012	98.7	0	0.070	0.056	0.051	0.046	0.041	0.033	0.027
2013	96.1	0	0.078	0.063	0.057	0.049	0.042	0.036	0.029
2014	98.8	0	0.065	0.059	0.052	0.045	0.040	0.034	0.029
2015	98.2	0	0.062	0.058	0.052	0.045	0.041	0.031	0.026
2016	98.1	0	0.078	0.061	0.057	0.050	0.042	0.033	0.027
2017	99.0	2	0.097	0.066	0.060	0.051	0.043	0.034	0.029
2018	97.8	0	0.068	0.060	0.058	0.047	0.041	0.033	0.029
2019	96.6	4	0.097	0.081	0.073	0.059	0.047	0.036	0.030
2020	97.0	0	0.079	0.064	0.058	0.047	0.040	0.034	0.028

Table 160 Statistical summary for ozone: daily maximum rolling 4-hour average concentrations. Station: Gunnedah (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	82.1	0	0.058	0.054	0.053	0.050	0.047	0.040	0.034
2019	98.6	2	0.087	0.074	0.068	0.064	0.055	0.043	0.034
2020	96.9	0	0.078	0.067	0.061	0.055	0.048	0.040	0.033

Table 161 Statistical summary for ozone: daily maximum 1-hour average concentrations.
Station: Goulburn (Southern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum (ppm)	Percentile (ppm)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	15.0	4	0.137	0.137	0.117	0.086	0.075	0.059	0.042
2020	99.0	4	0.091	0.081	0.069	0.053	0.043	0.036	0.030

Particulate matter

Particles as PM10 24-hour standard

Note on data tables in this section

- Before 2015, the PM10 standard required no more than five exceedances in a calendar year regardless of source. Since 2015 when the exceptional event rule for particles was introduced, zero non-exceptional days are allowed. Non-exceptional days are shown in brackets for 2015 to 2020. The number in bracket is non-additive (i.e. 5 (2) means 5 total exceedance days, of which 2 were due to non-exceptional events and 3 were due to exceptional events).
- For all tables, exceedances of the standards and goals are represented by **bold text**. This is applied to number of exceedance days where that number exceeds the goal specified for that pollutant at that time.
- Note also that exceedance day counts if not in bold font indicates all exceedance days were exceptional days.

Table 162 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.2	1	89.7	38.0	27.6	23.4	19.8	15.8	11.8
2012	98.4	0	45.2	36.7	30.3	26.7	22.7	17.5	13.6
2013	98.4	2	208.9	44.4	36.5	30.2	25.6	18.6	12.8
2014	99.5	1	50.8	31.6	29.0	25.9	23.5	17.8	13.2
2015	97.3	2 (0)	52.2	37.6	29.4	24.0	21.0	16.4	11.9
2016	97.0	3 (1)	58.4	36.3	31.0	26.9	23.4	18.1	13.3
2017	98.6	1 (0)	53.5	32.0	27.7	24.0	21.9	17.1	12.7
2018	98.1	4 (0)	60.8	53.7	47.5	33.6	28.0	21.3	14.5
2019	98.1	21 (0)	188.9	129.5	96.5	54.4	36.3	23.9	15.4
2020	97.3	6 (0)	265.7	135.2	47.3	31.5	25.3	17.6	12.2

Table 163 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	2	86.0	41.5	36.5	30.7	25.0	18.9	14.3
2012	100	0	40.1	34.6	30.2	27.1	24.7	19.0	14.9
2013	99.5	3	97.2	46.1	35.9	30.4	26.9	20.9	15.1
2014	98.4	0	42.6	36.2	33.4	29.2	25.9	20.6	15.5
2015	99.2	1 (0)	57.0	36.9	32.6	27.8	24.3	19.6	15.1

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	98.6	3 (0)	61.6	41.4	34.1	30.1	26.7	21.5	15.9
2017	97.0	6 (2)	83.7	55.0	49.4	37.0	30.6	24.0	17.4
2018	98.4	8 (0)	92.9	62.2	56.5	38.1	32.7	26.5	19.5
2019	98.6	24 (0)	134.0	112.3	87.7	63.9	39.9	27.5	18.8
2020	98.9	11 (0)	241.8	82.3	63.1	37.7	30.8	21.6	14.6

Table 164 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Camden (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	19.1	0	35.6	35.5	34.5	31.1	28.6	23.6	20.0
2013	98.9	2	98.1	40.9	34.3	30.6	25.9	18.8	13.5
2014	99.2	0	41.4	35.5	31.5	28.0	24.9	19.4	14.6
2015	98.9	1 (0)	62.4	32.4	30.6	24.7	22.2	16.9	12.6
2016	95.1	0	43.6	33.9	31.6	26.2	23.4	18.3	13.5
2017	98.4	0	48.4	33.9	31.4	27.1	23.9	18.1	13.3
2018	99.5	6 (0)	68.1	54.9	45.6	31.5	27.6	22.5	15.3
2019	97.0	27 (0)	139.2	120.2	108.6	68.7	41.0	25.1	16.0
2020	97.0	9 (0)	268.6	88.4	64.7	35.1	26.0	18.0	12.8

Table 165 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.4	0	38.1	31.9	28.5	23.0	20.6	16.0	12.1
2012*	89.9	0	39.3	33.9	30.9	27.9	24.7	18.7	14.1
2013	99.2	1	56.9	36.9	32.0	29.4	25.7	18.9	14.1
2014	91.8	0	49.4	36.6	33.8	30.1	26.2	20.7	16.0
2015	95.9	1 (0)	69.7	38.9	34.5	27.9	24.4	19.2	13.8
2016	98.1	1 (0)	50.1	35.3	31.7	29.2	25.3	20.4	15.0
2017	98.1	1 (0)	53.1	32.5	31.5	27.8	24.5	18.8	14.3
2018	97.8	3 (0)	72.3	49.4	44.1	31.6	28.8	22.5	15.8
2019	98.1	24 (0)	132.0	116.6	94.0	60.5	37.5	25.4	16.9
2020	99.5	10 (0)	249.7	85.1	60.3	33.9	27.4	18.9	13.4

Note: Campbelltown West station replaced Macarthur in September 2012.

Table 166 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.2	7	65.2	55.8	49.0	38.1	30.7	23.1	18.1
2012	98.6	1	52.4	36.6	35.1	31.7	27.6	21.8	16.9
2013	99.5	4	69.4	50.8	39.0	32.2	28.0	21.6	17.1
2014	98.9	0	40.0	36.8	34.0	30.3	26.6	21.3	17.1
2015	98.1	1 (0)	64.6	46.0	32.2	29.4	26.3	21.7	16.3
2016	99.2	1 (0)	63.5	43.5	35.1	30.7	27.9	22.2	17.1
2017	99.5	4 (2)	63.0	51.3	42.3	33.9	30.0	24.1	18.2
2018	98.1	7 (0)	90.7	60.5	50.6	40.3	32.5	26.0	20.3
2019	98.4	20 (0)	140.4	103.1	89.7	53.4	39.5	27.4	20.3
2020	98.6	7 (0)	167.9	66.9	52.8	37.7	31.8	23.9	17.6

Table 167 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	24.9	13 (0)	116.8	113.9	104.9	84.3	66.8	35.0	22.0
2020	86.9	4 (0)	130.8	50.5	39.2	30.5	25.1	18.0	14.0

Table 168 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Earlwood (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.7	2	124.9	47.0	39.9	31.0	27.3	21.7	16.5
2012	99.5	0	44.2	38.8	37.6	34.3	30.2	23.6	18.1
2013	98.4	5	63.1	52.6	46.6	35.7	30.2	23.9	18.0
2014	99.2	0	45.2	39.2	36.6	30.5	28.0	21.7	17.0
2015	99.5	1 (0)	66.5	35.9	31.5	28.7	25.4	20.9	16.2
2016	97.0	0	42.9	40.7	34.1	30.5	27.8	22.3	16.6
2017	99.2	1 (0)	59.8	37.1	35.1	30.9	27.1	21.6	16.2
2018	98.6	5 (0)	86.5	54.5	39.5	34.0	29.4	23.5	18.4
2019	98.4	17 (0)	129.4	100.1	79.7	48.9	36.6	26.5	19.2
2020	99.5	9 (0)	116.7	67.8	53.4	34.7	29.4	21.8	15.8

Table 169 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	69.0	1	68.8	46.1	37.5	33.1	27.7	21.7	16.9
2012	97.0	0	42.5	39.3	37.7	35.1	30.8	24.4	18.8
2013	97.8	3	98.5	45.2	40.3	36.5	31.9	26.1	19.3
2014	97.8	0	40.8	39.2	36.6	32.9	30.1	23.7	17.9
2015	95.1	1 (0)	68.6	35.6	34.1	31.0	28.3	22.9	17.2
2016	99.5	3 (0)	68.7	39.8	36.1	32.8	30.3	25.1	18.4
2017	98.9	2 (0)	73.6	42.4	38.0	35.0	31.3	25.0	19.6
2018	98.4	13 (2)	101.5	61.9	58.0	43.7	37.5	29.3	23.2
2019	98.9	28 (1)	178.9	128.5	93.0	61.0	43.9	31.4	23.2
2020	96.2	7 (2)	195.1	71.3	51.1	38.6	32.7	24.7	18.3

Table 170 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days ¹	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	37.8	0	49.6	36.6	29.5	25.5	23.2	18.4	14.0
2018	98.4	4 (0)	85.6	52.8	44.5	29.9	27.1	20.7	15.3
2019	98.6	16 (0)	187.3	94.1	78.1	46.2	32.9	22.7	15.1
2020	98.9	7 (0)	146.7	62.0	51.2	33.5	24.9	17.0	13.3

Table 171 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Oakdale (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.5	1	54.7	28.1	24.9	21.3	17.3	13.1	9.6
2012	98.9	0	38.9	33.4	28.2	24.0	19.8	14.9	10.2
2013	100	4	99.0	70.3	31.6	27.7	22.5	16.8	11.3
2014	98.4	1	56.3	32.7	31.3	24.9	21.9	16.5	11.3
2015	98.9	1 (0)	61.7	29.7	27.3	22.4	20.0	14.5	10.0
2016	96.4	5 (2)	75.9	56.9	27.4	23.5	21.0	15.0	10.5
2017	98.6	0	46.8	28.7	26.1	22.3	19.6	15.0	10.9
2018	99.2	5 (1)	105.1	53.4	42.9	28.1	25.4	19.4	12.8
2019	97.0	28 (1)	216.8	168.3	143.1	81.5	39.5	22.4	12.9
2020	99.2	10 (0)	248.9	85.1	74.0	32.2	22.6	15.3	9.9

Table 172 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	97.3	8 (0)	107.4	63.8	52.2	39.2	33.1	26.2	20.1
2019	99.5	22 (0)	195.3	126.1	92.8	59.3	40.9	29.6	20.3
2020	99.5	9 (0)	188.9	71.8	54.6	37.7	30.4	21.8	16.5

Table 173 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	93.2	0	41.5	36.2	31.7	27.4	24.3	19.3	15.1
2012	94.3	0	38.7	34.8	33.8	29.3	26.5	20.5	16.3
2013	94.5	4	81.8	51.2	43.4	33.8	30.0	23.3	17.6
2014	93.4	0	44.3	35.4	34.3	30.2	25.6	21.1	16.8
2015	95.1	1 (0)	68.7	39.8	34.1	29.9	26.2	21.1	16.8
2016	98.9	4 (0)	110.1	51.2	38.0	33.8	29.7	23.1	17.6
2017	98.4	1 (0)	61.1	37.9	36.2	32.0	28.1	22.5	17.7
2018	99.5	8 (0)	113.3	62.0	54.9	37.5	33.4	25.8	20.2
2019	99.2	25 (0)	182.8	129.1	93.4	63.5	41.1	29.9	20.4
2020	99.5	10 (0)	245.8	81.5	59.4	40.3	31.7	23.0	16.8

Table 174 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.5	0	40.1	32.9	30.6	26.4	23.9	19.5	15.1
2012	96.2	0	43.7	36.6	33.4	31.4	27.5	21.7	16.7
2013	99.5	3	55.3	45.5	41.5	35.0	30.2	22.5	17.1
2014	95.6	0	46.1	40.7	39.6	31.7	26.1	21.2	16.8
2015	98.4	1 (0)	77.4	38.2	37.0	31.9	28.2	22.5	17.1
2016	99.2	0	44.1	35.3	34.3	32.1	28.6	22.0	17.2
2017	98.4	1 (0)	56.1	40.0	37.5	32.1	29.2	23.5	17.7
2018	98.4	5 (0)	95.5	60.1	44.8	36.0	32.1	25.0	19.7
2019	97.5	19 (0)	127.7	89.7	79.2	52.8	38.6	28.3	20.1
2020	99.2	9 (0)	137.3	67.0	59.2	37.5	30.9	22.9	16.6

Table 175 Statistical summary for particles as PM₀: 24-hour average concentrations. Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	0	46.2	32.3	29.7	25.3	21.3	15.9	11.8
2012	95.9	3	99.2	43.7	33.8	28.6	24.8	17.6	12.9
2013	97.8	5	112.7	70.1	45.9	35.7	27.8	20.4	14.6
2014	97.3	0	40.0	34.5	33.0	26.4	23.7	19.2	14.2
2015	96.7	0	49.3	32.2	27.3	25.6	21.8	16.1	12.0
2016	96.2	2 (0)	102.8	44.5	35.5	31.1	26.2	19.3	14.6
2017	95.9	1 (0)	51.5	37.9	33.4	29.3	25.5	19.4	14.5
2018	96.2	8 (0)	116.3	64.7	52.7	34.7	29.0	22.7	16.6
2019	98.1	28 (0)	193.4	123.2	101.5	65.4	43.8	26.8	17.4
2020	93.7	9 (0)	237.7	79.9	60.9	35.6	26.8	18.4	13.3

Table 176 Statistical summary for particles as PM₁₀: 24-hour average concentrations. Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.5	0	32.7	31.8	29.5	25.2	21.8	16.9	13.0
2012	98.9	0	34.3	32.9	29.2	26.3	22.9	16.8	13.5
2013	97.3	4	67.8	52.8	42.9	28.9	24.9	19.5	14.5
2014	94.0	0	41.9	35.1	32.8	28.1	25.2	20.7	15.4
2015	95.9	1 (0)	59.0	38.3	36.1	29.0	24.6	19.4	14.8
2016	86.3	4 (0)	105.4	54.9	38.6	31.1	27.5	20.6	15.8
2017	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-
2019*	59.5	24 (0)	216.2	165.2	125.7	86.3	59.2	31.0	18.2
2020	98.6	10 (1)	220.3	80.2	55.3	36.2	29.1	20.6	14.8

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 177 Statistical summary for particles as PM₁₀: 24-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.4	0	39.4	34.7	32.3	27.2	24.5	20.5	15.7
2012	99.5	0	40.7	35.4	32.1	29.4	25.6	20.3	15.7
2013	96.7	3	58.5	42.9	39.5	33.6	29.3	21.9	16.6
2014	96.7	0	43.8	39.4	37.7	30.4	26.6	21.4	16.9

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	96.4	1 (0)	60.3	37.1	32.6	29.5	25.5	20.4	15.4
2016	98.4	1 (0)	58.8	35.0	32.0	29.6	26.9	20.9	15.8
2017	98.6	1 (1)	54.1	43.0	35.4	31.2	27.8	21.5	16.3
2018	70.4	2 (0)	88.3	49.9	34.4	31.3	27.5	22.5	16.8
2019	96.7	18 (0)	142.7	89.7	76.7	50.1	35.9	26.5	18.6
2020	97.8	7 (0)	113.5	67.7	50.9	34.4	28.6	21.0	15.9

Table 178 Statistical summary for particles as PM10: 24-hour average concentrations. Station: St Marys (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.2	1	73.9	35.8	32.9	28.6	22.7	18.4	13.0
2012	96.7	0	34.3	32.1	30.4	26.6	23.5	17.7	13.2
2013	97.0	2	93.0	46.5	38.3	32.8	27.2	19.2	14.0
2014	98.9	0	45.0	38.2	33.3	28.5	25.3	21.0	15.4
2015	97.8	1 (0)	53.0	36.0	33.2	27.4	24.5	17.6	13.8
2016	96.7	3 (0)	100.2	47.2	34.3	29.9	26.4	19.9	14.1
2017	98.6	0	49.8	35.9	35.1	29.9	26.1	20.0	14.6
2018	78.1	2 (0)	100.5	46.1	37.1	34.1	29.8	23.8	18.0
2019	98.4	26 (0)	159.8	119.8	90.2	65.2	43.3	29.7	19.5
2020	99.2	11 (0)	260.3	89.6	66.4	39.4	31.0	21.3	14.6

Table 179 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	19.9	0	37.4	37.2	35.4	31.3	30.4	26.9	21.7
2013	98.6	1	70.2	40.8	36.9	32.4	28.6	20.3	14.3
2014	98.6	0	41.9	37.4	35.2	28.0	24.2	18.4	13.7
2015	98.9	1 (0)	58.6	34.5	33.0	27.0	24.4	18.3	13.0
2016	98.4	0	46.0	33.6	32.1	27.5	25.2	19.1	13.6
2017	98.4	1 (0)	63.4	36.0	32.7	29.5	25.5	19.9	14.3
2018	98.9	6 (0)	138.3	66.9	48.0	30.9	27.1	21.7	16.0
2019	97.5	19 (0)	128.4	99.8	85.6	52.8	35.6	24.4	16.1
2020	99.2	5 (1)	90.5	59.8	46.8	36.2	28.4	18.6	13.3

Table 180 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	1	51.0	34.9	31.6	27.2	23.5	17.0	11.9
2012	98.4	0	43.9	36.0	32.7	26.9	22.9	16.7	11.9
2013	96.7	2	69.0	45.4	40.8	32.7	25.1	17.6	12.6
2014	99.7	0	48.3	39.7	35.9	30.0	25.9	20.0	15.1
2015	95.1	0	41.2	38.1	33.4	27.8	22.2	17.6	12.5
2016	98.4	0	43.1	36.7	33.8	30.4	25.7	19.5	12.9
2017	98.9	0	44.6	40.6	34.9	30.6	26.1	19.2	13.0
2018	98.9	2 (0)	94.4	49.8	43.5	35.0	30.3	21.8	15.6
2019	92.9	14 (0)	104.3	73.9	65.1	44.1	35.9	23.3	16.1
2020	98.1	10 (0)	153.3	90.8	64.8	35.4	28.2	19.8	13.7

Table 181 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Kembla Grange (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	1	55.5	45.9	39.7	33.6	29.1	21.1	15.0
2012	98.4	3	57.2	45.5	42.6	37.1	29.7	23.7	16.5
2013	99.7	4	102.2	56.0	46.7	37.4	31.2	23.0	15.9
2014	98.1	1	99.2	41.5	36.9	32.6	27.5	21.3	16.4
2015	99.2	1 (0)	62.8	45.0	42.1	34.5	28.6	22.1	16.5
2016	99.2	4 (3)	56.3	50.7	45.7	39.0	33.2	26.0	18.2
2017	98.4	4 (2)	67.7	55.5	45.4	38.9	33.1	24.8	18.1
2018	96.7	10 (3)	71.8	64.9	54.1	44.9	39.2	28.9	20.3
2019	93.4	21 (3)	115.8	89.4	78.2	55.1	44.8	32.5	21.1
2020	97.3	19 (7)	187.7	94.6	73.4	52.0	37.7	25.6	16.3

Table 182 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.7	0	48.5	42.4	37.7	32.6	26.3	21.0	15.8
2012	98.6	0	47.5	38.2	36.1	33.4	28.8	22.8	16.5
2013	98.9	6	94.3	54.1	49.3	37.2	29.7	20.7	15.3
2014	99.7	0	45.3	40.9	37.9	34.3	29.7	21.6	16.0
2015	99.5	0	45.8	38.1	37.1	31.9	27.0	21.6	15.3

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	98.6	2 (1)	52.9	46.5	42.1	36.1	29.9	22.5	15.4
2017	98.4	1 (1)	55.2	46.3	42.8	35.4	30.5	23.6	15.2
2018	98.1	5 (0)	59.7	53.2	46.4	39.7	32.6	24.4	17.8
2019	88.5	17 (0)	117.6	91.2	75.8	51.7	40.7	27.0	17.5
2020	95.9	11 (0)	121.6	82.5	63.6	39.2	33.1	22.2	15.0

Table 183 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	95.1	0	42.8	39.9	35.8	29.3	25.5	21.3	16.1
2012	99.2	1	50.8	47.4	44.1	39.2	32.4	25.8	19.6
2013	95.9	5	55.3	52.4	44.3	38.0	34.5	26.5	19.1
2014	95.3	0	45.4	42.0	39.4	33.9	30.0	23.3	18.3
2015	97.8	2 (0)	64.9	42.2	36.4	32.4	28.4	22.8	17.8
2016	99.2	0	48.0	39.3	36.4	32.5	29.9	23.4	17.7
2017	98.9	0	49.4	40.8	37.1	33.4	29.2	23.7	18.6
2018	99.5	8 (0)	149.1	65.2	54.5	37.6	32.8	25.3	19.5
2019	98.6	30 (0)	136.7	106.2	84.1	63.7	40.7	29.6	21.0
2020	99.2	6 (0)	77.7	55.0	46.7	37.1	29.7	22.2	16.3

Table 184 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.5	0	49.2	42.6	38.7	32.4	29.6	24.0	18.2
2012	98.9	0	48.7	43.3	41.8	36.2	32.5	26.0	18.8
2013	98.9	4	69.0	50.5	48.3	41.9	37.4	27.8	20.5
2014	98.6	2	53.7	48.1	40.5	35.7	31.8	25.6	20.5
2015	98.6	3 (1)	70.4	46.6	42.3	37.2	32.9	26.5	20.2
2016	97.5	1 (0)	89.1	43.1	41.1	36.9	34.3	27.1	20.8
2017	98.6	1 (0)	55.0	46.3	44.3	36.3	32.5	26.7	20.8
2018	98.6	8 (0)	146.0	62.9	51.8	41.7	35.1	28.2	23.1
2019	98.4	29 (0)	125.8	107.0	86.1	62.7	46.3	33.9	23.7
2020	97.8	9 (0)	116.2	75.3	52.2	43.4	34.1	27.1	20.5

Table 185 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.5	0	38.9	31.5	26.9	24.3	21.3	17.2	13.4
2012	100	0	38.1	34.0	31.8	27.1	23.9	18.0	13.5
2013	69.6	2	52.5	47.2	38.9	31.3	28.5	21.1	15.4
2014	96.7	0	43.4	39.0	34.8	28.3	25.0	19.9	16.1
2015	97.3	1 (0)	77.5	37.0	33.6	28.4	25.3	20.0	15.5
2016	97.3	1 (0)	65.5	34.3	32.1	28.4	25.7	20.1	15.4
2017	97.5	0	47.9	35.8	33.7	28.9	25.7	20.1	16.5
2018	94.8	5 (0)	136.5	57.2	45.3	33.8	28.6	21.9	17.8
2019	95.3	21 (0)	127.9	86.4	74.8	55.5	38.3	26.3	18.7
2020	99.2	6 (0)	77.9	65.4	44.0	34.7	28.7	20.5	15.5

Table 186 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Aberdeen (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	99.5	0	45.8	35.7	34.2	30.6	27.3	21.7	16.2
2013	99.5	0	42.7	41.3	37.4	32.4	28.4	21.6	16.5
2014	99.5	2	50.4	44.7	38.7	33.6	28.6	22.0	16.9
2015	99.2	1 (0) *	64.8	41.7	32.8	28.6	24.4	19.0	14.0
2016	98.4	0	41.2	35.6	33.8	28.9	26.4	20.5	14.7
2017	99.5	2 (0)	59.4	47.2	38.5	30.5	26.5	21.8	16.2
2018	99.5	7 (0)	178.9	63.2	49.2	38.6	34.1	26.9	20.0
2019	99.5	51 (2)	246.7	105.1	100.9	73.2	57.1	32.7	22.7
2020	99.5	8 (0)	267.7	78.0	53.5	38.6	31.5	19.8	14.3

* Note: In 2015, PM10 was not recorded as NEPM parameter at Aberdeen, and the Annual Air Quality Statement (completed in January 2016) did not classify events. The 2015 statement reported multiple PM10 exceedances across the NSW network on this day (6 May 2015) from a widespread dust storm, with exceedances in Albury, Wagga Wagga, Bathurst, Sydney, Central Coast, Lower Hunter and Tamworth. As such, this is likely considered an exceptional event.

Table 187 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Muswellbrook (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.8	0	46.5	42.5	37.3	31.8	28.1	23.7	19.3
2012	97.5	1	51.0	44.2	41.3	37.6	32.1	26.4	20.4
2013	99.5	3	55.6	48.5	46.1	40.7	35.2	27.1	21.0

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	99.5	1	53.0	45.3	39.8	36.1	32.0	26.4	20.5
2015	99.2	2 (0) *	72.6	46.2	37.6	33.4	29.4	23.5	18.4
2016	97.3	0	43.9	39.7	35.6	32.6	30.4	24.4	19.1
2017	99.5	2 (0)	56.5	46.5	41.8	35.2	32.1	25.6	20.3
2018	98.1	13 (4)	185.9	71.7	56.7	48.5	40.7	32.3	24.5
2019	99.2	58 (3)	231.3	114.3	108.8	84.3	60.2	39.6	28.7
2020	98.9	15 (1)	181.0	83.0	58.2	44.7	35.4	25.7	19.3

* Note: In 2015, PM10 was not recorded as NEPM parameter at Muswellbrook, and the Annual Air Quality Statement (completed in January 2016) did not classify events. The 2015 statement reported multiple PM10 exceedances across the NSW network on one day (6 May 2015) from a widespread dust storm, with exceedances in Albury, Wagga Wagga, Bathurst, Sydney, Central Coast, Lower Hunter and Tamworth. The second day (26 November) occurred the same day as bushfires in the Hunter Valley. As such, both days are likely to be considered exceptional events.

Table 188 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Singleton (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	2	60.5	46.7	45.0	38.1	32.5	24.6	17.7
2012	99.2	6	63.6	54.7	49.5	42.1	36.6	27.2	20.0
2013	99.5	12	62.7	58.4	53.9	45.2	39.3	29.9	20.6
2014	98.1	1	54.5	44.7	42.4	37.4	32.1	25.8	19.8
2015	98.9	3 (?) *	85.3	47.9	44.9	36.6	31.5	23.3	17.6
2016	99.2	1 (0)	60.8	38.4	35.0	32.8	29.1	24.2	18.5
2017	98.4	5 (2)	57.0	50.6	46.9	37.7	33.9	25.4	19.2
2018	99.2	10 (0)	198.0	71.7	58.7	43.9	37.1	29.5	21.5
2019	98.9	40 (3)	206.1	117.5	103.8	78.3	52.9	34.6	24.5
2020	99.5	10 (1)	82.4	65.3	55.7	42.6	34.3	25.8	17.7

* Note: In 2015, PM10 was not recorded as NEPM parameter at Singleton, and the Annual Air Quality Statement (completed in January 2016) did not classify events. The 2015 statement reported multiple PM10 exceedances across the NSW network on one day (6 May 2015) from a widespread dust storm, with exceedances in Albury, Wagga Wagga, Bathurst, Sydney, Central Coast, Lower Hunter and Tamworth. The second day (17 September 2015) recorded an atypical hourly spike not replicated at other nearby Upper Hunter sites. The last day (26 November 2015) occurred on the same day as bushfires in the Hunter Valley. Thus, the classification for two days is considered likely to be exceptional, with the second day not able to be determined.

Table 189 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Bathurst (Central Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.3	0	24.3	23.2	21.1	18.6	17.5	13.8	10.3

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	99.5	2	55.5	31.0	28.1	24.2	21.3	16.4	12.2
2013	99.7	3	145.0	46.9	43.7	32.4	25.3	17.3	12.7
2014	98.6	0	42.8	37.8	36.0	29.4	25.1	18.2	12.8
2015	99.5	2 (0)	94.6	39.5	32.9	28.7	22.3	16.1	11.7
2016	93.2	0	34.1	31.8	29.7	25.9	23.6	17.5	11.6
2017	97.3	0	49.9	37.3	30.3	24.9	21.2	16.9	12.8
2018	98.4	8 (0)	274.1	86.1	66.4	38.9	32.6	21.7	15.1
2019	99.2	40 (0)	296.6	201.0	159.0	103.0	51.7	26.0	16.0
2020	98.4	14 (0)	320.4	185.2	76.9	45.1	26.7	16.2	11.0

Table 190 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Orange (Central Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	94.0	35 (1)	423.7	236.1	174.6	90.8	50.8	27.4	18.4
2020	97.0	12 (0)	291.8	130.3	75.1	42.7	29.7	20.1	12.8

Table 191 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Gunnedah (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	98.1	10 (0)	234.9	92.4	70.2	37.7	32.2	21.9	14.5
2019	91.8	30 (0)	205.2	123.6	102.5	72.5	41.8	27.6	18.9
2020	95.1	3 (0)	101.2	52.8	38.5	28.0	23.8	17.5	12.0

Table 192 Statistical summary for particles as PM10: 24-hour average concentrations. Station: Narrabri (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	98.9	10 (0)	221.7	103.3	65.5	26.9	21.7	14.9	11.0
2019	98.6	31 (0)	232.6	156.4	128.8	79.6	46.2	23.6	13.9
2020	98.1	8 (0)	119.6	80.3	65.3	30.9	20.5	13.0	9.1

Table 193 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Tamworth (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.7	1	50.9	34.0	27.4	22.4	19.2	15.8	12.3
2012	98.9	1	55.1	47.0	38.0	27.8	24.3	19.5	14.3
2013	98.4	0	47.5	43.8	35.9	30.7	27.0	20.4	15.2
2014	99.5	1	66.6	36.5	34.5	27.6	24.7	19.3	14.9
2015	98.9	1 (0)	52.7	30.9	29.1	24.7	22.2	17.1	12.9
2016	99.5	1 (1)	51.7	32.2	30.1	27.0	23.1	18.6	14.6
2017	99.2	2 (0)	54.1	37.1	33.7	27.1	22.5	18.5	14.0
2018	99.2	9 (0)	145.4	95.2	61.1	37.7	31.2	23.8	17.0
2019	98.9	52 (0)	240.2	199.1	169.2	111.1	67.7	33.2	22.7
2020	98.6	8 (0)	178.0	99.8	53.3	34.6	24.8	18.6	13.4

Table 194 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Armidale (Northern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	70.7	3 (0)	157.5	95.9	44.8	39.6	35.4	24.2	13.4
2019	92.3	41 (0)	309.7	187.1	134.2	106.0	58.9	31.0	17.3
2020	99.2	4 (1)	112.5	50.5	42.5	34.7	28.3	17.8	10.5

Table 195 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Albury (South West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	90.7	0	28.0	25.2	23.7	19.9	17.9	14.5	11.9
2012	92.1	1	54.4	38.7	32.3	25.8	21.3	16.7	12.8
2013	98.6	2	59.2	47.8	42.5	30.7	26.4	18.8	13.6
2014	98.9	5	159.6	88.2	37.8	29.4	22.8	17.4	13.4
2015	95.6	2 (0)	92.5	35.4	30.2	26.0	23.3	17.5	13.0
2016	98.6	1 (1)	51.0	47.2	43.5	32.4	25.6	18.7	13.1
2017	97.5	0	48.8	37.8	33.4	28.6	24.2	19.3	14.7
2018	95.6	7 (1)	107.8	61.6	50.0	40.8	33.6	24.3	16.4
2019	98.6	25 (2)	222.4	134.1	83.1	56.3	43.0	26.1	16.5
2020	97.5	19 (1)	298.3	181.1	116.4	51.2	27.1	18.9	14.0

Table 196 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Wagga Wagga North / Wagga Wagga (South West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011*	96.4	1	56.3	34.3	31.3	27.5	24.2	19.4	14.4
2012	98.4	1	67.2	46.5	43.1	37.4	32.6	23.1	16.6
2013	98.9	15	110.7	67.9	57.8	47.2	40.5	27.9	18.9
2014	96.4	13	88.2	59.3	55.1	44.9	36.8	25.5	18.3
2015	98.4	7 (1)	145.1	72.4	51.3	42.3	34.2	24.8	17.2
2016	98.9	16 (16)	114.7	66.8	57.7	48.2	39.9	27.2	17.5
2017	98.4	10 (10)	171.6	61.5	53.2	42.5	33.3	25.7	17.9
2018	97.0	34 (22)	127.2	110.8	82.2	59.8	49.1	36.4	22.5
2019	94.8	63 (24)	251.7	206.4	142.5	103.2	69.3	42.9	24.4
2020	98.4	25 (5)	295.3	140.4	96.3	59.5	41.6	24.8	16.8

* Note: Wagga Wagga North monitoring station replaced Wagga Wagga station in 2011.

Table 197 Statistical summary for particles as PM10: 24-hour average concentrations.
Station: Goulburn (Southern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	98.9	10 (0)	221.7	103.3	65.5	26.9	21.7	14.9	11.0
2019	98.6	31 (0)	232.6	156.4	128.8	79.6	46.2	23.6	13.9
2020	97.3	18 (0)	556.7	263.9	139.1	50.2	22.1	15.5	10.6

Particles as PM_{2.5} 24-hour standard

Note on data tables in this section

- Before 2015, the PM_{2.5} standard did not exist, however, daily averages were compared against an advisory reporting standard of 25.0 µg/m³. Since 2015 when the exceptional rule was introduced, zero non-exceptional events are allowed. Non-exceptional days are shown in brackets for 2015 to 2020. The number in bracket is non-additive (i.e. 5 (2) means 5 total exceedance days, of which 2 were due to non-exceptional events and 3 were due to exceptional events).
- For all tables, exceedances of the standards and goals are represented by bold text. This is applied to number of exceedance days where that number exceeds the goal specified for that pollutant at that time.
- Note also that exceedance day counts if not in bold font indicates all exceedance days were exceptional days.

Table 198 Statistical summary for particles as PM_{2.5}: 24-hour average concentrations.
Station: Bargo (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (µg/m ³)	Percentile (µg/m ³)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	97.5	0	20.9	16.4	14.6	11.8	10.0	7.8	5.8
2018	97.3	2 (0)	38.1	20.7	16.1	12.2	10.6	8.4	6.0
2019	95.3	21 (0)	170.7	107.4	69.3	28.5	16.0	9.7	6.4
2020	94.8	14 (0)	121.9	68.0	54.4	19.2	11.2	8.0	5.0

Table 199 Statistical summary for particles as PM_{2.5}: 24-hour average concentrations.
Station: Bringelly (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (µg/m ³)	Percentile (µg/m ³)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	47.5	0	21.6	17.4	14.8	13.2	12.0	9.6	7.1
2017	94.5	2 (0)	55.7	21.9	17.8	15.3	12.4	9.1	6.4
2018	98.9	4 (0)	55.6	26.4	18.5	15.5	13.0	9.8	7.2
2019	98.1	27 (0)	178.0	67.2	55.2	35.4	19.0	11.9	7.5
2020	95.9	12 (0)	78.1	47.7	32.3	20.7	14.3	10.2	6.8

Table 200 Statistical summary for particles as PM_{2.5}: 24-hour average concentrations.
Station: Camden (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (µg/m ³)	Percentile (µg/m ³)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	20.8	0	19.5	19.4	18.1	13.2	11.6	9.5	7.8
2013	99.7	3	69.9	24.8	16.7	13.2	10.9	8.0	5.5
2014	98.6	0	18.5	15.4	14.0	12.4	10.6	8.1	5.8
2015	98.4	0	25.0	17.3	13.4	11.2	10.2	7.9	5.8

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	94.3	3 (0)	36.0	17.2	13.4	11.2	10.1	8.0	5.9
2017	96.7	2 (0)	27.7	19.5	17.5	13.1	10.7	8.2	6.0
2018	98.6	2 (0)	37.0	20.6	19.0	14.2	11.4	8.9	6.6
2019	95.3	28 (0)	155.3	111.6	66.9	41.6	20.1	11.2	7.1
2020	97.8	11 (0)	149.3	46.1	35.8	18.5	12.9	8.2	5.5

Table 201 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Campbelltown West/Macarthur (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	20.3	0	15.7	15.6	15.2	13.4	11.9	10.2	7.3
2016	95.1	3 (0)	35.8	26.0	17.0	14.0	12.3	9.6	7.2
2017	95.3	0	25.0	16.9	15.9	12.8	11.0	9.0	7.0
2018	93.4	2 (0)	45.4	21.5	18.2	15.3	13.6	10.2	7.5
2019	89.3	27 (0)	106.0	82.2	63.9	38.1	21.4	11.9	8.0
2020	98.4	12 (0)	69.0	47.9	36.1	17.4	13.1	8.6	5.4

Note: Campbelltown West station replaced Macarthur in September 2012.

Table 202 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Chullora (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	0	23.9	18.6	16.2	12.3	10.8	7.6	5.2
2012	97.0	0	23.4	17.6	14.5	12.1	9.9	7.5	5.3
2013	98.6	3	49.1	22.4	19.9	15.9	13.6	10.6	7.2
2014	89.0	0	23.1	20.5	18.3	16.3	14.1	10.9	8.2
2015	96.4	1 (0)	37.2	16.8	15.3	14.4	12.5	9.7	7.4
2016	96.2	5 (0)	49.4	28.5	19.2	14.3	12.7	9.6	7.1
2017	97.3	8 (4)	44.7	33.6	26.8	20.1	14.7	10.9	8.3
2018	97.8	3 (0)	29.1	23.5	21.5	16.6	13.6	10.5	7.8
2019	81.4	18 (0)	97.6	71.5	53.6	31.4	18.5	12.1	9.0
2020	97.8	9 (0)	86.2	36.2	30.3	19.6	15.4	9.9	6.9

Table 203 Statistical summary for particles as PM_{2.5}: 24-hour average concentrations.
Station: Cook and Phillip (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (µg/m ³)	Percentile (µg/m ³)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	24.7	19 (0)	96.5	93.9	83.4	58.8	36.3	15.3	8.0
2020	86.9	7 (0)	112.5	35.2	25.8	16.9	13.7	9.5	6.3

Table 204 Statistical summary for particles as PM_{2.5}: 24-hour average concentrations.
Station: Earlwood (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (µg/m ³)	Percentile (µg/m ³)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.2	0	23.6	18.4	15.8	12.7	10.5	6.9	4.5
2012	98.9	0	20.7	17.4	14.5	11.8	10.3	7.3	4.6
2013	91.2	4	37.3	27.4	20.8	16.6	13.5	9.8	6.6
2014	97.3	0	22.7	18.1	17.4	14.5	12.9	9.7	7.1
2015	93.4	2 (1)	28.0	22.9	20.4	16.4	14.0	10.8	7.7
2016	95.6	5 (0)	33.3	28.5	21.9	15.9	13.4	10.0	6.8
2017	99.5	2 (0)	50.9	20.7	18.7	15.2	12.0	9.0	6.4
2018	97.0	1 (0)	28.5	21.9	19.1	16.0	13.2	9.8	7.0
2019	95.6	22 (0)	86.2	68.3	47.2	29.6	17.5	11.5	7.7
2020	97.3	9 (0)	85.1	32.3	27.4	18.8	14.7	9.5	6.1

Table 205 Statistical summary for particles as PM_{2.5}: 24-hour average concentrations.
Station: Liverpool (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum (µg/m ³)	Percentile (µg/m ³)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.2	2	38.0	20.7	16.2	14.0	10.9	7.4	4.9
2012	85.8	0	24.9	21.5	19.5	15.2	13.9	10.8	7.6
2013	93.2	2	73.8	24.4	22.1	18.8	16.2	11.7	8.1
2014	97.0	0	24.3	20.4	19.1	16.1	14.4	10.8	7.6
2015	94.2	2 (1)	32.2	22.6	20.8	17.1	14.0	10.8	7.3
2016	95.6	4 (0)	50.8	31.4	20.9	15.8	13.4	10.9	7.6
2017	95.3	3 (1)	59.2	25.2	20.9	16.6	14.1	10.9	8.0
2018	97.3	8 (0)	45.4	30.1	26.5	18.6	16.7	12.9	9.1
2019	96.2	32 (1)	156.0	84.4	60.9	34.0	21.4	13.6	9.4
2020	94.8	7 (1)	73.6	33.1	25.4	20.8	16.8	11.2	7.5

Table 206 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Macquarie Park (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	37.5	0	24.1	20.9	18.4	15.0	10.3	8.0	5.4
2018	98.4	4 (0)	58.4	27.8	17.4	12.7	11.0	8.5	6.1
2019	98.6	18 (0)	152.0	61.9	42.7	25.0	15.3	9.7	6.2
2020	98.9	8 (0)	77.8	34.4	29.6	16.2	12.4	8.1	5.5

Table 207 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Oakdale (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	94.8	1 (0)	33.0	17.0	13.9	11.0	9.2	7.7	5.4
2018	95.3	2 (0)	75.4	20.6	16.6	12.5	10.6	8.1	6.0
2019	95.9	28 (0)	250.2	158.6	124.0	55.5	18.2	9.8	5.7
2020	97.3	11 (0)	161.6	60.7	41.8	16.2	9.7	6.4	4.6

Table 208 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Parramatta North (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	95.1	4 (0)	42.1	27.1	22.0	17.6	14.4	10.8	8.3
2019	99.5	21 (0)	130.1	66.6	41.5	26.7	17.5	11.3	7.5
2020	96.2	10 (0)	72.9	36.0	29.8	20.7	14.7	9.3	6.5

Table 209 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Prospect (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	92.6	1 (0)	29.6	21.3	19.2	15.6	13.5	10.0	7.3
2016	98.6	6 (0)	84.9	38.7	24.0	17.9	14.0	10.1	7.2
2017	97.0	3 (0)	30.1	24.6	20.6	15.7	11.7	9.3	6.9
2018	96.4	4 (0)	47.5	27.0	20.3	16.2	13.9	10.4	7.3
2019	92.3	25 (0)	134.1	72.7	51.5	33.9	19.2	13.2	8.5
2020	97.5	13 (2)	70.8	37.9	30.9	21.2	15.4	9.5	7.0

Table 210 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Randwick (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	72.3	1 (0)	48.7	20.7	17.1	12.8	10.8	8.2	5.9
2018	92.3	1 (0)	31.8	20.4	17.0	13.9	12.4	9.3	7.0
2019	91.0	18 (0)	95.2	53.8	42.8	27.5	16.7	11.1	8.6
2020	92.1	8 (0)	114.8	36.2	27.7	16.1	12.3	8.6	6.0

Table 211 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Richmond (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	97.8	2	42.9	22.7	15.7	10.6	8.6	6.2	3.7
2012	94.3	2	116.7	18.0	14.8	11.0	9.4	6.7	4.1
2013	94.5	15	97.6	41.2	32.5	24.5	14.8	9.7	5.9
2014	95.9	1	29.1	18.1	16.4	13.3	11.5	8.4	6.0
2015	92.6	0	24.5	23.4	18.2	15.0	13.1	9.6	6.9
2016	94.5	6 (0)	83.4	35.4	21.9	15.6	12.5	9.4	6.7
2017	93.2	3 (0)	34.3	24.9	20.7	14.3	11.6	8.5	6.2
2018	95.1	4 (0)	123.9	38.4	19.7	14.9	12.6	9.5	6.8
2019	86.6	32 (0)	141.2	83.8	61.4	43.7	26.2	12.9	8.7
2020	91.5	9 (0)	93.0	45.7	29.3	19.9	13.9	10.2	6.8

Table 212 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Rouse Hill / Vineyard (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	58.9	24 (0)	183.5	108	69.3	44.1	29.8	12.2	6.8
2020	97.5	10 (0)	61.3	37.4	26.9	19.2	13.6	8.1	5.4

Note: In May 2019, Rouse Hill monitoring station replaced Vineyard station (1994–2016).

Table 213 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Rozelle (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	77.5	1 (0)	36.0	18.8	17.0	13.7	11.9	8.9	6.3
2016	97.8	5 (0)	49.4	30.6	22.8	14.4	12.0	8.8	6.4
2017	97.5	2 (0)	36.3	19.6	16.8	13.5	11.3	9.0	6.4

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	70.7	0	19.2	17.2	16.4	13.8	11.5	8.8	6.6
2019	95.6	21 (0)	101.8	53.5	50.6	28.3	16.4	11.2	7.8
2020	98.4	8 (0)	87.3	33.7	27.9	18.0	13.6	8.8	5.9

Table 214 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: St Marys (Sydney)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	77.0	7 (1)	93.2	49.5	25.8	13.9	11.5	9.1	6.5
2017	98.6	3 (0)	38.2	24.4	21.5	13.1	10.8	8.3	6.2
2018	93.7	3 (0)	80.5	25.0	15.9	13.3	11.3	9.3	7.2
2019	97.3	21 (0)	88.3	64.8	40.9	29.2	16.4	10.8	7.2
2020	89.1	9 (0)	82.5	39.0	27.2	16.3	11.1	8.8	6.2

Table 215 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Wyong (Central Coast)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2012	19.7	0	14.7	14.7	14.6	12.5	11.4	9.0	6.9
2013	94.2	1	55.8	20.7	16.7	12.6	11.0	8.1	5.8
2014	96.2	0	19.7	14.6	13.1	10.8	8.9	6.5	4.9
2015	97.3	0	13.2	11.7	10.6	9.1	8.0	6.4	4.8
2016	97.3	0	19.8	13.9	13.0	10.9	9.4	7.1	5.3
2017	97.8	1 (0)	27.2	17.9	14.2	10.5	9.1	7.1	5.2
2018	91.5	0	18.1	16.5	14.3	12.0	10.5	8.2	6.3
2019	92.9	23 (0)	202.1	72.5	51.8	27.2	15.4	10.0	7.3
2020	95.6	3 (0)	63.9	23.2	19.4	12.8	10.2	6.4	4.6

Table 216 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Albion Park South (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	78.4	0	21.1	16.9	15.3	13.0	11.1	7.8	5.4
2016	89.3	2 (0)	30.7	18.2	15.8	13.1	11.2	8.7	6.5
2017	85.8	0	19.3	15.5	14.0	11.3	10.5	8.1	6.0
2018	95.9	1 (0)	29.4	18.4	16.2	13.6	11.0	8.2	6.1

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	92.9	12 (0)	49.4	39.1	33.6	20.2	15.0	10.0	6.9
2020	99.2	10 (0)	96.3	51.5	36.0	16.8	10.7	7.3	4.9

Table 217 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Kembla Grange (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2015	72.9	0	23.8	15.5	14.7	12.7	10.9	8.4	6.3
2016	96.4	2 (0)	32.0	17.8	15.1	12.6	10.7	8.1	5.9
2017	93.2	0	21.3	17.3	15.2	12.8	11.0	8.6	6.2
2018	97.3	0	21.9	17.8	15.8	13.4	11.3	8.6	6.7
2019	95.9	12 (0)	70.1	47.7	38.9	21.8	15.3	9.9	6.4
2020	95.9	11 (0)	100.4	47.1	40.1	17.6	11.7	7.1	4.9

Table 218 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Wollongong (Illawarra)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.4	0	17.7	16.0	14.1	11.2	8.8	6.4	3.8
2012	98.1	0	15.6	13.7	13.1	10.6	8.3	5.9	4.0
2013	94.8	4	118.7	28.8	21.5	15.5	12.8	9.2	6.4
2014	92.1	0	17.3	15.9	14.9	13.1	11.8	9.1	6.4
2015	81.6	1 (0)	31.6	18.9	16.3	14.2	12.5	9.5	6.9
2016	91.0	3 (0)	33.7	22.7	18.4	15.3	11.8	9.2	6.6
2017	94.8	0	24.7	16.4	15.6	13.4	11.5	8.8	6.5
2018	96.2	3 (0)	47.6	22.3	16.6	13.6	11.9	8.9	6.5
2019	97.8	14 (0)	81.5	50.9	36.5	22.9	15.5	10.1	6.6
2020	84.4	10 (0)	100.9	46.8	40.9	17.1	13.1	8.3	5.9

Table 219 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Beresfield (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	99.2	0	18.8	15.0	13.5	11.0	9.7	7.0	4.9
2012	93.4	0	22.4	21.0	18.1	14.4	12.7	9.9	7.1
2013	94.2	2	40.8	23.2	20.4	15.9	13.3	10.3	7.2

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	96.2	0	19.0	17.1	16.3	13.9	12.1	9.4	6.9
2015	93.7	1 (0)	25.9	19.7	16.5	13.4	12.4	9.3	6.6
2016	97.5	1 (0)	27.9	17.3	15.9	13.6	11.7	9.4	7.0
2017	98.6	0	18.7	16.7	15.5	13.8	11.8	9.4	7.0
2018	95.3	0	24.9	17.1	16.7	15.4	13.4	10.9	8.3
2019	96.2	23 (0)	100.5	61.5	51.8	32.4	18.9	13.1	9.2
2020	96.7	8 (0)	49.7	35.7	27.5	16.4	13.4	9.3	6.4

Table 220 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Newcastle (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2014	95.1	0	21.2	20.0	17.3	15.6	13.3	10.3	7.4
2015	93.2	1 (?) *	30.2	19.5	17.3	15.4	13.0	9.6	7.2
2016	95.6	1 (0)	66.1	17.6	15.9	14.3	11.9	9.5	7.1
2017	97.3	0	18.0	16.9	15.4	12.8	11.8	9.2	6.8
2018	98.6	0	20.2	17.3	15.9	14.4	12.3	9.8	7.2
2019	98.6	26 (0)	95.5	62.5	53.6	31.2	17.0	11.7	8.0
2020	73.8	5 (1)	78.5	32.7	25.0	20.0	13.4	9.4	6.6

* Note: In 2015, PM2.5 was not recorded as NEPM parameter at Newcastle, and the Annual Air Quality Statement (completed in January 2016) did not classify events. Thus, no classification for this day exists. It is expected to be an exceptional event as it occurred the day following an exceptional particle event (PM2.5) due to hazard reduction burning at Beresfield, and two nearby Newcastle industry monitoring sites also recorded daily PM2.5 greater than 25 $\mu\text{g}/\text{m}^3$.

Table 221 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Wallsend (Lower Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	100	0	16.2	13.9	12.3	10.9	8.8	6.2	4.2
2012	99.5	0	16.2	14.2	13.1	11.3	9.1	6.4	4.3
2013	96.2	6	37.0	29.1	22.5	16.6	13.1	9.6	6.2
2014	96.2	0	18.0	15.2	13.6	12.3	10.1	8.5	6.3
2015	95.9	0	24.0	21.9	17.2	14.2	12.3	9.3	6.3
2016	91.0	1 (0)	50.7	19.6	16.7	14.4	12.6	9.9	7.5
2017	98.6	0	20.4	17.1	15.6	13.7	11.7	9.4	6.7
2018	97.8	0	20.2	16.3	15.7	14.1	12.1	9.6	6.8
2019	95.6	19 (0)	108.3	65.9	45.5	30.1	16.9	11.3	7.6

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2020	98.6	5 (0)	56.8	32.9	21.8	16.9	12.8	8.6	6.1

Table 222 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Muswellbrook (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	96.7	4	28.3	25.9	24.5	20.2	17.5	11.2	7.5
2012	95.4	3	26.4	25.1	22.7	19.5	17.6	13.2	9.0
2013	91.5	1	36.6	22.4	21.0	19.0	16.1	12.0	8.4
2014	96.7	3	27.4	23.6	21.8	19.3	16.8	11.9	8.5
2015	96.4	3 (?) *	31.2	24.8	22.6	20.5	16.9	10.8	7.1
2016	96.4	1 (1)	29.4	20.7	20.3	17.6	15.1	10.5	7.4
2017	98.9	2 (1)	31.1	23.2	21.4	19.4	16.9	12.2	8.3
2018	97.8	2 (2)	26.5	24.1	20.6	18.6	16.9	11.7	8.3
2019	95.1	27 (2)	77.4	57.5	48.1	28.9	21.6	14.3	9.8
2020	97.8	9 (2)	49.1	33.3	28.5	19.3	17.4	11.8	8.2

* Note: In 2015, PM2.5 was not recorded as NEPM parameter at Muswellbrook, and the Annual Air Quality Statement (completed in January 2016) did not classify events. These exceedance days occurred in June and July, with highest concentrations during cool evenings with low wind. Thus, while no classification for these days exist, they are likely to be non-exceptional events.

Table 223 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Singleton (Upper Hunter)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	98.9	0	21.5	20.3	19.1	15.2	12.7	9.1	6.8
2012	98.1	0	19.5	16.4	16.0	14.9	13.3	10.2	7.6
2013	96.4	0	22.6	20.5	19.2	15.8	14.3	10.7	6.7
2014	97.3	1	28.5	19.0	17.2	14.3	12.7	10.0	7.1
2015	94.2	0	24.9	20.3	19.2	16.7	13.9	9.7	6.4
2016	96.4	2 (0)	27.7	19.1	18.3	16.2	13.3	10.7	7.1
2017	97.0	1 (0)	29.6	19.9	17.5	15.9	13.9	10.7	7.6
2018	95.9	0	19.2	18.3	17.4	15.1	13.4	10.3	7.4
2019	97.5	22 (1)	69.3	67.2	52.5	28.2	18.8	12.4	8.3
2020	98.1	6 (1)	46.0	28.0	24.2	18.5	15.1	10.4	7.0

Table 224 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Bathurst (Central Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	64.8	0	15.0	14.5	12.2	10.0	8.8	7.7	5.8
2017	97.3	0	17.5	13.1	12.0	10.1	9.2	7.7	6.0
2018	98.6	2 (0)	40.5	21.7	19.0	13.0	11.3	8.2	6.2
2019	98.6	24 (0)	199.5	126.9	83.7	42.1	14.6	9.0	6.3
2020	98.6	13 (0)	207.3	34.5	30.2	18.5	11.6	8.0	5.3

Table 225 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Orange (Central Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	94.0	31 (4)	387.4	186.5	113.3	42.2	23.8	14.7	7.7
2020	97.0	15 (1)	92.3	43.7	34.3	23.2	17.4	11.4	6.4

Table 226 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Armidale (Northern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	69.3	31 (31)	40.0	36.4	33.9	31.0	27.3	18.8	8.4
2019	95.9	60 (24)	267.3	144.3	111.5	63.5	31.4	21.0	9.6
2020	99.2	27 (23)	53.7	37.4	33.4	28.1	23.1	11.7	5.8

Table 227 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Gunnedah (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	98.1	5 (4)	50.7	29.3	23.8	22.1	18.1	10.6	7.3
2019	94.2	24 (2)	94.1	83.4	58.9	29.0	22.1	13.5	7.4
2020	98.6	6 (0)	34.7	28.1	23.6	20.0	16.7	9.5	5.9

Table 228 Statistical summary for particles as PM2.5: 24-hour average concentrations.
Station: Narrabri (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2018	97.8	1 (0)	26.3	17.5	13.7	9.3	7.6	5.6	4.3
2019	98.6	20 (0)	87.7	69.4	39.0	25.7	16.4	7.3	4.6

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2020	98.1	1 (0)	42.4	19.7	17.0	11.6	9.2	6.7	4.7

Table 229 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Tamworth (North West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2016	74.6	0	17.6	16.7	15.8	14.5	12.2	9.7	7.1
2017	94.8	0	21.6	17.2	15.7	14.3	12.9	9.9	7.2
2018	92.1	0	24.2	19.9	19.2	16.9	14.1	10.3	7.5
2019	97.8	32 (0)	164.2	122.7	97.4	43.5	24.5	13.4	9.0
2020	97.8	4 (0)	52.6	26.5	21.4	15.9	11.6	8.5	5.7

Table 230 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Albury (South West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2017	85.2	0	18.7	17.7	16.9	14.8	13.1	9.6	6.3
2018	96.2	2 (2)	30.4	22.4	18.7	14.8	11.9	8.9	6.6
2019	99.2	19 (0)	167.1	89.4	51.9	25.1	14.6	10.2	7.1
2020	93.2	16 (0)	275.2	155.7	84.3	23.6	14.7	9.9	6.6

Table 231 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Wagga Wagga North (South West Slopes)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011*	42.5	0	15.4	15.1	14.2	12.4	10.9	8.8	6.4
2012	85.8	0	23.2	22.4	21.8	17.9	14.9	11.4	7.5
2013	98.9	3	29.9	24.3	20.7	16.2	14.3	9.6	6.6
2014	96.2	2	27.6	20.8	17.0	14.0	12.7	9.7	6.6
2015	98.9	0	24.2	21.4	19.6	16.3	13.7	9.4	6.4
2016	98.1	2 (2)	28.1	22.1	19.6	16.3	13.5	8.8	6.4
2017	98.1	5 (2)	32.5	27.0	22.8	18.3	14.4	10.1	6.7
2018	95.3	0	21.6	20.7	19.7	16.3	14.5	10.5	7.6
2019	94.8	17 (0)	239.6	90.8	57.3	25.5	15.9	11.4	7.6
2020	98.4	13 (0)	559.5	69.9	43.2	21.1	16.0	9.8	6.1

* Note Wagga Wagga North monitoring station replaced Wagga Wagga station in 2011.

Table 232 Statistical summary for particles as PM2.5: 24-hour average concentrations. Station: Goulburn (Southern Tablelands)

Year	Data availability rate (%)	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2019	14.8	28 (0)	333.7	333.7	320.5	253.2	226.7	82.0	26.1
2020	97.3	16 (0)	516.1	168.2	89.0	23.7	14.1	9.2	5.3

Table 233 Statistical summary for particles as PM2.5 by Federal Reference Method: 24-hour average concentrations. Station: Chullora (Sydney)

Year	Data availability rate (%) [*]	Exceedance Days	Maximum ($\mu\text{g}/\text{m}^3$)	Percentile ($\mu\text{g}/\text{m}^3$)					
				99 th	98 th	95 th	90 th	75 th	50 th
2011	80.5	0	16.7	16.3	15.4	13.8	12.3	7.5	5.4
2012	51.8	0	12.4	11.7	11.1	10.4	9.5	7.9	5.8
2013	78.1	2	53.9	29.1	24.8	14.6	12.2	8.5	5.0
2014	77.0	0	18.9	18.1	16.2	14.1	11.6	8.7	6.3
2015	81.4	1	38.6	14.3	13.8	13.0	12.3	8.6	5.9
2016	74.8	0	21.0	16.8	16.0	12.6	11.7	8.8	5.9
2017	68.2	1 (1)	27.9	24.2	21.2	17.5	12.5	8.8	5.8
2018	84.4	2 (1)	39.6	29.9	23.5	16.1	11.7	9.2	6.7
2019	86.3	7 (0)	87.5	74.5	60.8	27.5	17.0	10.8	7.1
2020	94.3	2 (0)	45.8	35.8	23.0	19.7	14.0	9.6	5.8

* Note: Data availability rates are based on a 1-day-in-3 sampling regime.