SPECIAL INVESTIGATION

# 13 new monitors lowered Delhi's AQI on all 26 days, by 11.6 points on average

**Thirteen monitors added in October lowered Delhi's 4 PM AQI by 11.6 points on average from 13 October to 7 November 2026. On 7 November, CPCB's 369 would have read 380 to 382 without them, still Very Poor.**

7 November 2026
hawakahisab.in

**11.6**
11.6 points: average lowering of Delhi's 4 PM AQI by the 13, 13 Oct to 7 Nov 2026

**380**
380 to 382: CPCB's 369 of 7 Nov without the 13

**None**
None of 20,000 random sets of 13 older stations came near the 13

**Shri Ajay Maken**
Published by

## What this report covers

Delhi's air quality network grew from 39 stations to 59 in about a year, in two waves. Seven stations joined between December 2025 and March 2026, and 13 began reporting in a single week of October 2026. This report sets each wave against the 39 older stations and asks what each does to the AQI that CPCB publishes for the city. It then checks how the new stations read against the older stations nearest them, pollutant by pollutant and hour by hour. It also checks, claim by claim, the Hindustan Times front page of 7 November 2026. Every figure is a reconstruction of CPCB's own figure, built from CPCB's own station readings. Where the data cannot settle a question, such as whether the new monitors read correctly or why their sites were chosen, the report says so and names the record that would settle it.

Shri Ajay Maken

New Delhi. 7 November 2026.

## What is in this book, and where

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# The same shape on every page

## Four things to know before the numbers




1. Start with the answer in brief, which carries the main figure and its limits.
2. Read every result about the 7 as a group as exploratory, which means a lead to be tested again and not a finding.
3. Read every figure for 6 and 7 November as a band, because the reconstruction ran about 5 points above CPCB's bulletin on those days.
4. Turn to Annexure A for how each figure was made, and for the data it rests on.

**Banner**
The page finding

**Content**
The supporting record

**Caution**
The limit

**The point**
The factual close

# Thirteen new monitors lowered Delhi's 4 PM AQI by 11.6 points on average

## The answer in brief

Thirteen monitors added in October lowered Delhi's 4 PM AQI by 11.6 points on average from 13 October to 7 November 2026. On 7 November, CPCB's 369 would have read 380 to 382 without them, still in the Very Poor band.

Over the same 26 days the 13 new stations read 57.1 points below the 39 older stations on average. They read below them on 26 of the 26 days. This report removed 20,000 random sets of 13 older stations from the city average, and none of them came near the effect of the 13.

Both city figures are a reconstruction of CPCB's 4 PM figure for Delhi, built from CPCB's own station readings. That reconstruction tracked CPCB's daily bulletin within 1.01 points on average over 67 days, from 1 September to 7 November 2026. Its largest gap was 5.36 points. CPCB's bulletin of 7 November 2026 read 369, counting 59 of 59 stations.

*Source: CPCB and DPCC hourly station readings to 4 PM IST on 7 November 2026, from CREA's public feed of CPCB data; CPCB daily AQI bulletins, 1 September to 7 November 2026. Calculated on 7 November 2026.*

Delhi's monitoring network gained 20 stations in two waves. The first wave added 7 stations between December 2025 and March 2026. The second wave added 13 stations in October 2026. This report sets each wave against the 39 older stations that made up Delhi's network before December 2025. It does not test how close any station sits to anything.

1. **The 13 added in October 2026 lower Delhi's published figure, and this is a finding.** From 13 October to 7 November 2026 they lowered the 4 PM figure by 11.6 points on average. The effect ranged from 0.6 to 18.1 points a day. It was 10 points or more on 20 of the 26 days. No random set of 13 older stations, in 20,000 draws, came near it.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Thirteen new monitors lowered Delhi's 4 PM AQI by 11.6 points on average

2. **The 7 added from December 2025 to March 2026 are a lead, not a finding.** Over the same 26 days they lowered the figure by 1.4 points, and 375 of 20,000 random sets of seven older stations did as much or more. Over March to early October they lowered it by about 3 points, and only a handful of 20,000 sets did as much. That stretch is where the lead was first seen, so the same data cannot also confirm it. Every result about the 7 as a group is therefore exploratory.

3. **Most of the 7's recent effect sits at two stations whose two particle readings disagree with each other.** At IGNOU Maidan Garhi and Cantonment Area, PM2.5 reads about a fifth of the older stations nearby, while PM10 reads about three-quarters. PM10 sets their AQI almost every day. At IIT Delhi the pattern is reversed. Its PM10 has read higher and higher against its neighbours since June 2026. That PM10 reading, 590 µg/m³, set IIT Delhi's 490 on 7 November, the highest station figure in Delhi that day. Its PM2.5 read 232 µg/m³.

4. **The data cannot say which readings are right, or why any site was chosen.** Only the calibration records of DPCC and IITM, or a reference monitor placed beside the new ones, can settle that. This report recommends that DPCC and IITM make those records available, and that a reference monitor be placed beside two or three of the 13 for two weeks.

In this report "exploratory" means that a result is a lead to be tested again, and not a finding. A result is exploratory when it does not clear the line set for many tests at once. It is also exploratory when it re-examines the same data in which it was first noticed.

| | |
|---|---|
| READING | From 13 October to 7 November 2026 the 13 lowered the published-fit 4 PM figure by 11.6 points on average. On 7 November, CPCB's 369 would have read 380 to 382 without them, still Very Poor. |
| CAUTION | The 7 added from December 2025 to March 2026 are a lead, not a finding. The data cannot say which readings are right or why any site was chosen. |
| SOURCE | CPCB and DPCC hourly station readings to 4 PM IST on 7 November 2026, from CREA's public feed of CPCB data; CPCB daily AQI bulletins, 1 September to 7 November 2026. Calculated on 7 November 2026. |

THE POINT

**The 13 lower Delhi's published figure, and no random set of 13 older stations comes near them.**

# Twenty stations joined in two waves, 13 of them in one October week

## Who was added, and when

The 13 are all stations of the Delhi Pollution Control Committee (DPCC). They first reported in the feed between 6 and 12 October 2026. They are Burari, Badarpur, Vasundhara Enclave, Chhawla, Maidan Garhi, NIH Narela, Nangloi, Karala, Ghummanhera, Jharoda Kalan, Uttam Nagar, Ghoga and Tikri Kalan. The Maidan Garhi in this list is a separate station from IGNOU Maidan Garhi, which belongs to the 7.

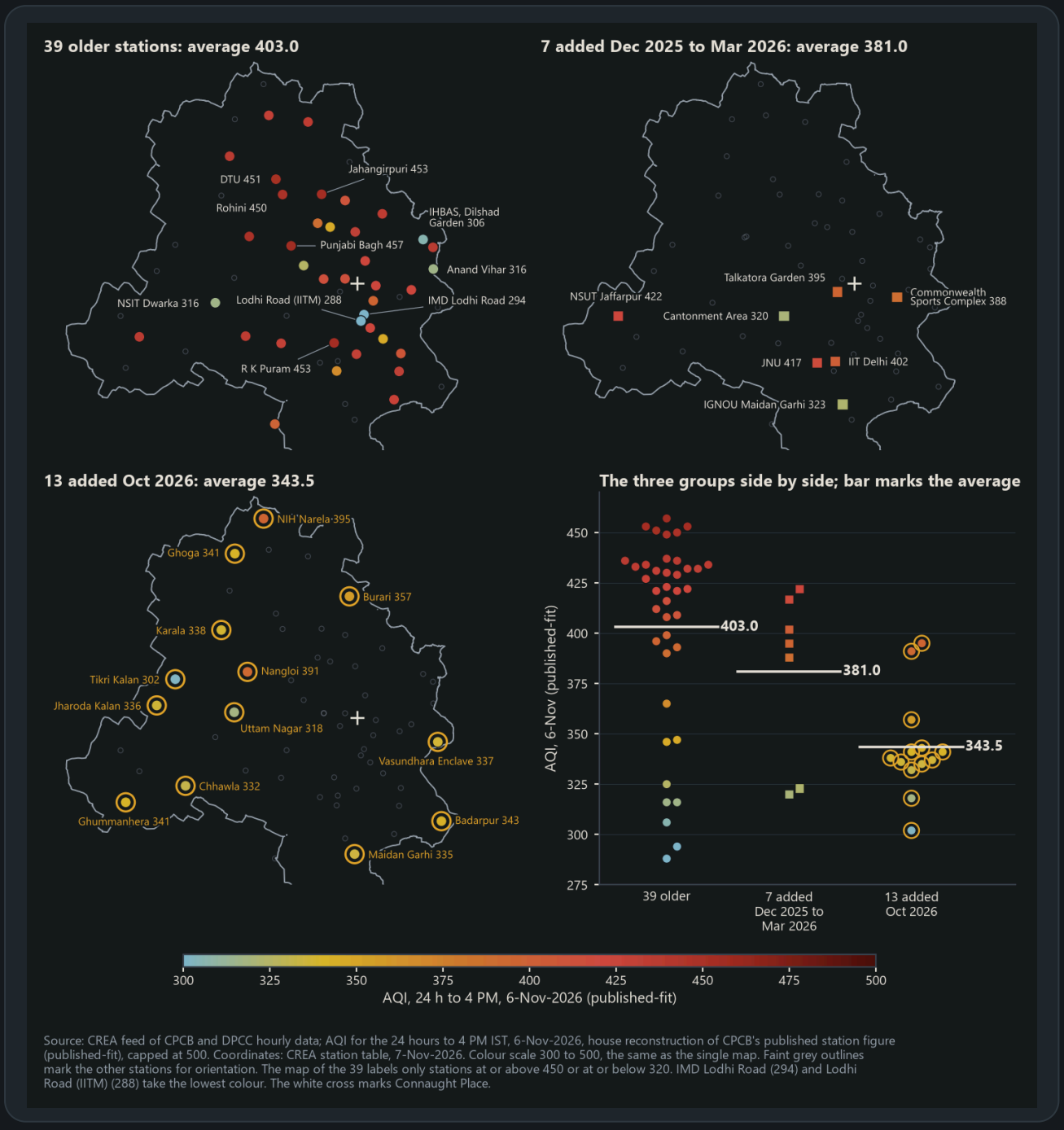
The 7 are six DPCC stations and IIT Delhi, which the Indian Institute of Tropical Meteorology (IITM) runs. IIT Delhi first reported on 1 December 2025. JNU, NSUT Jaffarpur, Commonwealth Sports Complex, IGNOU Maidan Garhi and Talkatora Garden first reported on 27 February 2026. Cantonment Area first reported on 2 March 2026.

The 39 older stations are 24 DPCC stations, 9 IITM or IMD stations and 6 CPCB stations. "First reported" means the first reading in the feed. The operator is read from the label in each station's name.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Twenty stations joined in two waves, 13 of them in one October week




Source: CREA feed of CPCB and DPCC hourly data; AQI for the 24 hours to 4 PM IST, 6-Nov-2026, house reconstruction of CPCB's published station figure (published-fit), capped at 500. Coordinates: CREA station table, 7-Nov-2026. Colour scale 300 to 500, the same as the single map. Faint grey outlines mark the other stations for orientation. The map of the 39 labels only stations at or above 450 or at or below 320. IMD Lodhi Road (294) and Lodhi Road (IITM) (288) take the lowest colour. The white cross marks Connaught Place.

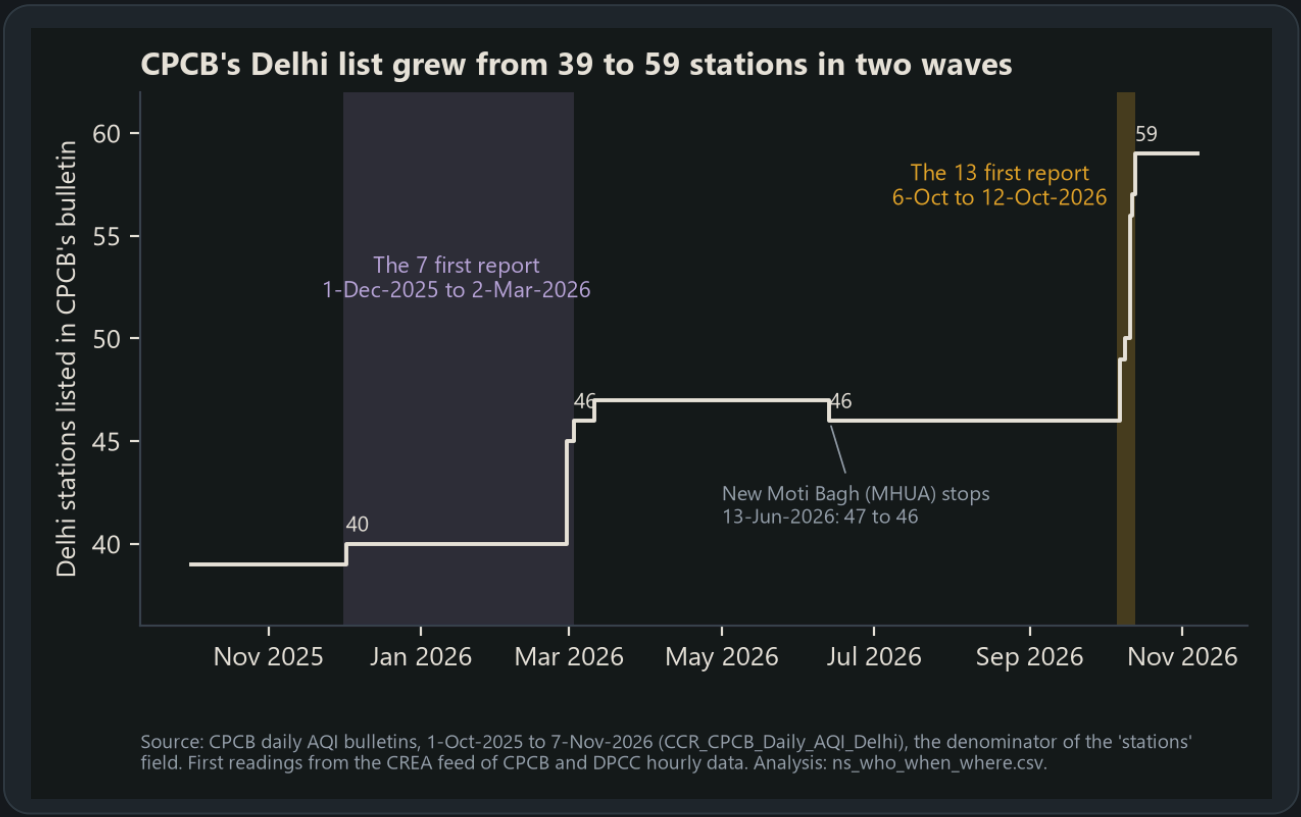
Where the 59 stations stand on 6 November 2026, coloured by group: the 39 older stations averaged 403.0, the 7 averaged 381.0 and the 13 averaged 343.5. This is a locator map only, and it is not evidence about why any site was chosen.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Twenty stations joined in two waves, 13 of them in one October week

CPCB's bulletin counted 39 Delhi stations on 1 October 2025. The count rose to 40 from 2 December 2025, 45 from 28 February 2026, 46 from 3 March and 47 from 11 March. It fell to 46 from 13 June. It rose to 49 from 7 October, 50 from 9 October, 56 from 11 October, 57 from 12 October and 59 from 13 October 2026.




CPCB's bulletin counted 39 Delhi stations in October 2025 and 59 from 13 October 2026, and the shaded bands mark when the 7 and the 13 joined the network.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

## Twenty stations joined in two waves, 13 of them in one October week

The rise to 47 on 11 March 2026 and the fall to 46 on 13 June 2026 fit New Moti Bagh (MHUA) entering and leaving the bulletin. New Moti Bagh reported in the CREA feed from 1 January 2025 to 13 June 2026, with only CO, NO2 and PM2.5. That is an inference, and no CPCB document available to this report confirms it. Its effect on any figure for the 7 is under 0.03 points.

The stations have not reported on every day. IIT Delhi has a 4 PM AQI on 330 of 342 days since its first reading. The other six of the 7 have 229 to 248 of 251 to 254 days. The 13 have 23 to 32 of 27 to 33 days.

*Source: CPCB daily AQI bulletins, 1 October 2025 to 7 November 2026; CREA's feed of CPCB and DPCC hourly station data and its station table, read on 7 November 2026.*

| | |
|---|---|
| READING | The 13 first reported between 6 and 12 October 2026. The 7 first reported between 1 December 2025 and 2 March 2026. CPCB's bulletin counted 39 Delhi stations on 1 October 2025 and 59 from 13 October 2026. |
| CAUTION | "First reported" means the first reading in the feed. New Moti Bagh's entry into the bulletin and exit from it is an inference that no CPCB document available to this report confirms. |
| SOURCE | CPCB daily AQI bulletins, 1 October 2025 to 7 November 2026; CREA's feed of CPCB and DPCC hourly station data and its station table, read on 7 November 2026. |

THE POINT

**Delhi's published figure now rests on 59 stations, against 39 on 1 October 2025.**

# The 13 sat below the older stations on every one of 26 days

## How the new stations read against the 39 older stations

Every station and city figure in the body of this report is a reconstruction of the figure CPCB publishes. This report calls it the published-fit figure, because it is fitted to CPCB's published number. It is built from CPCB's own station readings, covers the 24 hours to 4 PM IST, and is capped at 500, as CPCB caps it. Annexure A explains how it differs from CPCB's documented formula.

## On 6 and 7 November 2026

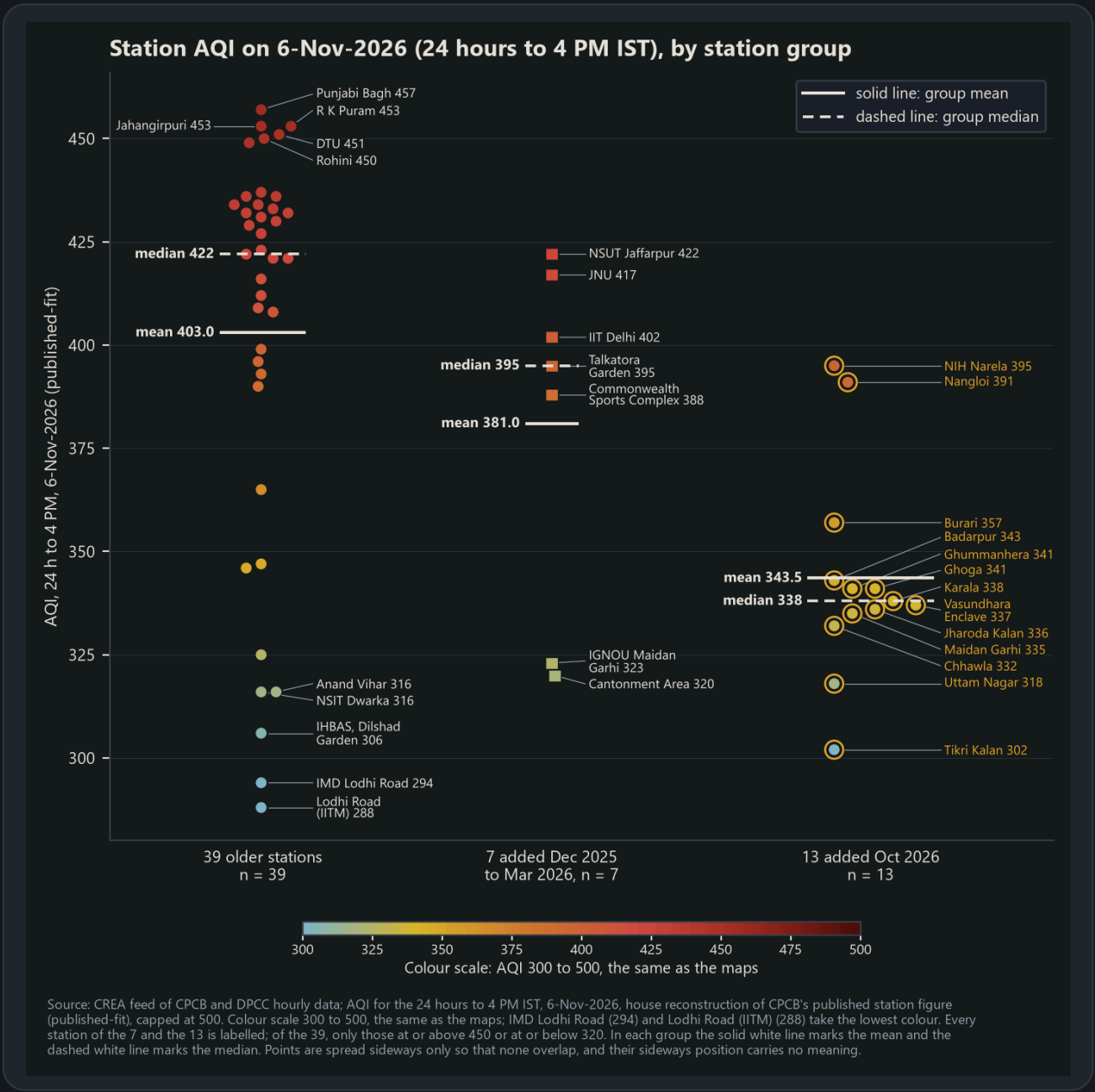
On 6 November the 39 older stations averaged 403.0, with a median of 422. The 7 averaged 381.0 (median 395), and the 13 averaged 343.5 (median 338). The 13 sat 59.4 points below the 39 by the mean and 84 points below by the median. The 7 sat 22.0 points below by the mean and 27 by the median, a result that is exploratory. The mean is the average of a group's readings. The median is its middle reading, which a few low stations cannot move.

On 6 November the 13 read 81.1 µg/m³ less PM2.5 than the 39 on average, and 130.1 µg/m³ less PM10. The 7 read 67.6 µg/m³ less PM2.5 and 66.2 µg/m³ less PM10. That is a single day. Only 6 of the 7 had a PM10 figure that day. IIT Delhi read 402 on 13 hours of particle data, and CPCB most likely left it out of the 6 November bulletin.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days




Station AQI on 6 November 2026 by group. IIT Delhi's 402 rests on 13 hours of particle data, and PM10 set IGNOU Maidan Garhi's 323 and Cantonment Area's 320, where PM2.5 read 39 and 52 µg/m³.

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Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days

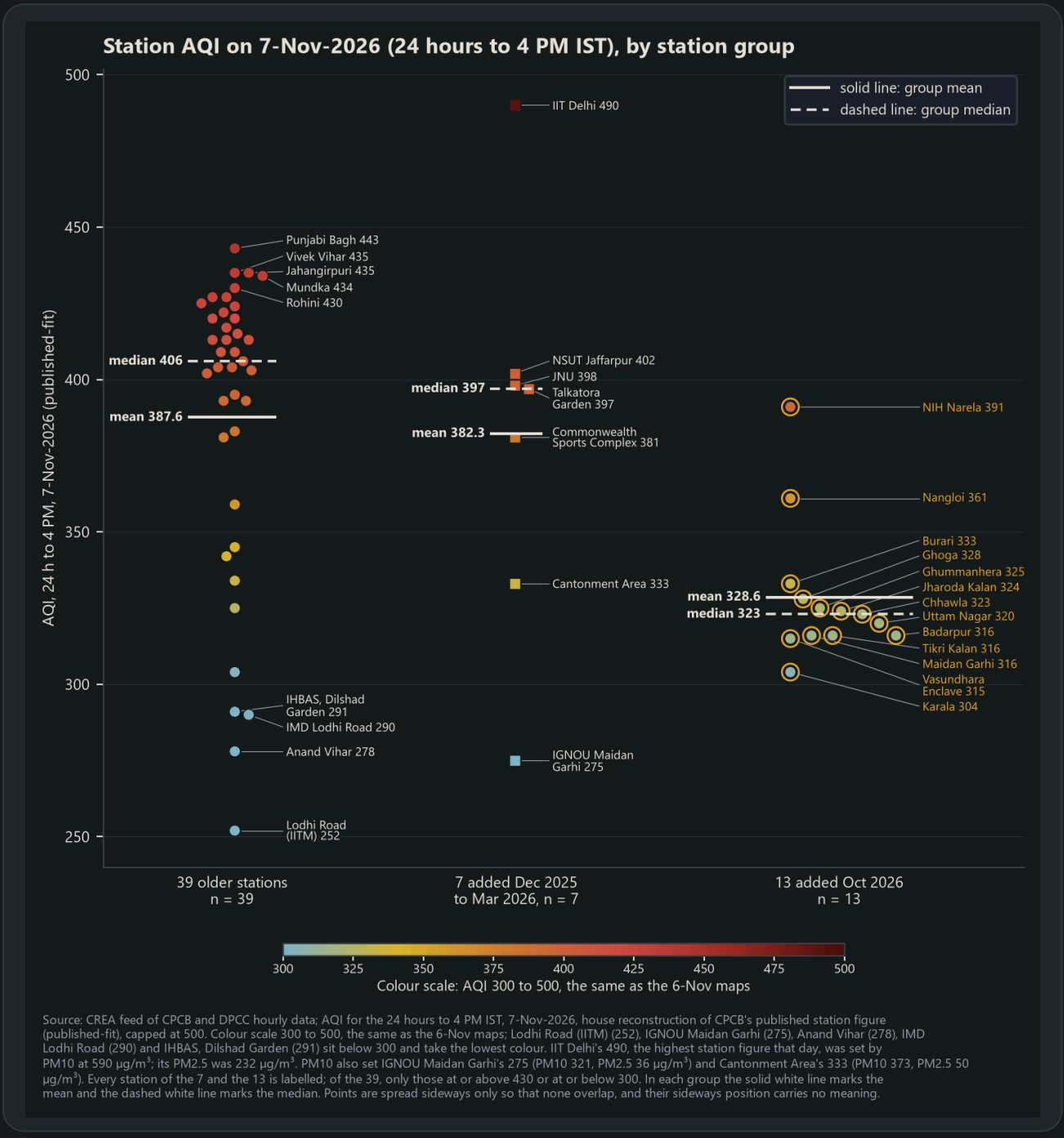
On 7 November the 39 averaged 387.6 (median 406), the 7 averaged 382.3 (median 397), and the 13 averaged 328.6 (median 323). The 13 sat 58.9 points below the 39 by the mean and 83 by the median. The 7 sat 5.2 points below by the mean and 9 by the median, which is exploratory. The 13 read 72.5 µg/m³ less PM2.5 and 108.6 µg/m³ less PM10 than the 39. The 7 read 52.3 µg/m³ less PM2.5, and only 8.9 µg/m³ less PM10, because IIT Delhi's PM10 pulled their average up.

IIT Delhi read 490 on 7 November, the highest station figure in Delhi that day. PM10 set that figure, at 590 µg/m³. Its PM2.5 was 232 µg/m³, close to the older stations' average. Since 13 October IIT Delhi's PM10 has read about one and a half times the older stations nearest it. PM10 also set IGNOU Maidan Garhi's 275 (PM10 321, PM2.5 36 µg/m³) and Cantonment Area's 333 (PM10 373, PM2.5 50 µg/m³). A superlative such as "the highest in Delhi" therefore rests on one analyser.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days




Source: CREA feed of CPCB and DPCC hourly data; AQI for the 24 hours to 4 PM IST, 7-Nov-2026, house reconstruction of CPCB's published station figure (published-fit), capped at 500. Colour scale 300 to 500, the same as the 6-Nov maps; Lodhi Road (IITM) (252), IGNOU Maidan Garhi (275), Anand Vihar (278), IMD Lodhi Road (290) and IHBAS, Dilshad Garden (291) sit below 300 and take the lowest colour. IIT Delhi's 490, the highest station figure that day, was set by PM10 at 590 µg/m³; its PM2.5 was 232 µg/m³. PM10 also set IGNOU Maidan Garhi's 275 (PM10 321, PM2.5 36 µg/m³) and Cantonment Area's 333 (PM10 373, PM2.5 50 µg/m³). Every station of the 7 and the 13 is labelled; of the 39, only those at or above 430 or at or below 300. In each group the solid white line marks the mean and the dashed white line marks the median. Points are spread sideways only so that none overlap, and their sideways position carries no meaning.

Station AQI on 7 November 2026 by group: the 13 averaged 328.6 against 387.6 for the 39. PM10 at 590 µg/m³ set IIT Delhi's 490, while its PM2.5 was 232 µg/m³.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days

*Source: CREA's feed of CPCB and DPCC hourly station data for the 24 hours to 4 PM IST on 6 and 7 November 2026; published-fit station figures calculated on 7 November 2026. The statistical tests behind these comparisons are in Annexure A.*

## Over the 26 days from 13 October to 7 November 2026

Over the 26 days the 13 sat 57.1 points below the 39 on average. The daily gap ran from 84.1 points to 3.3 points below. The gap between the two groups' medians was 66.6 points. The 13 read 37.6 µg/m³ less PM2.5 than the 39, or 31.5 per cent less, and 80.8 µg/m³ less PM10.

Over the same days the 7 sat 25.7 points below the 39 on average, with a daily gap from 71.2 to 3.8 points below. The gap between the medians was 25.5 points. The 7 read 31.2 µg/m³ less PM2.5 by the mean, but only 17.1 µg/m³ less between the group medians. They read 42.3 µg/m³ less PM10. Two stations pull the 7's mean PM2.5 gap down, which is why the median gap is about half the mean gap.

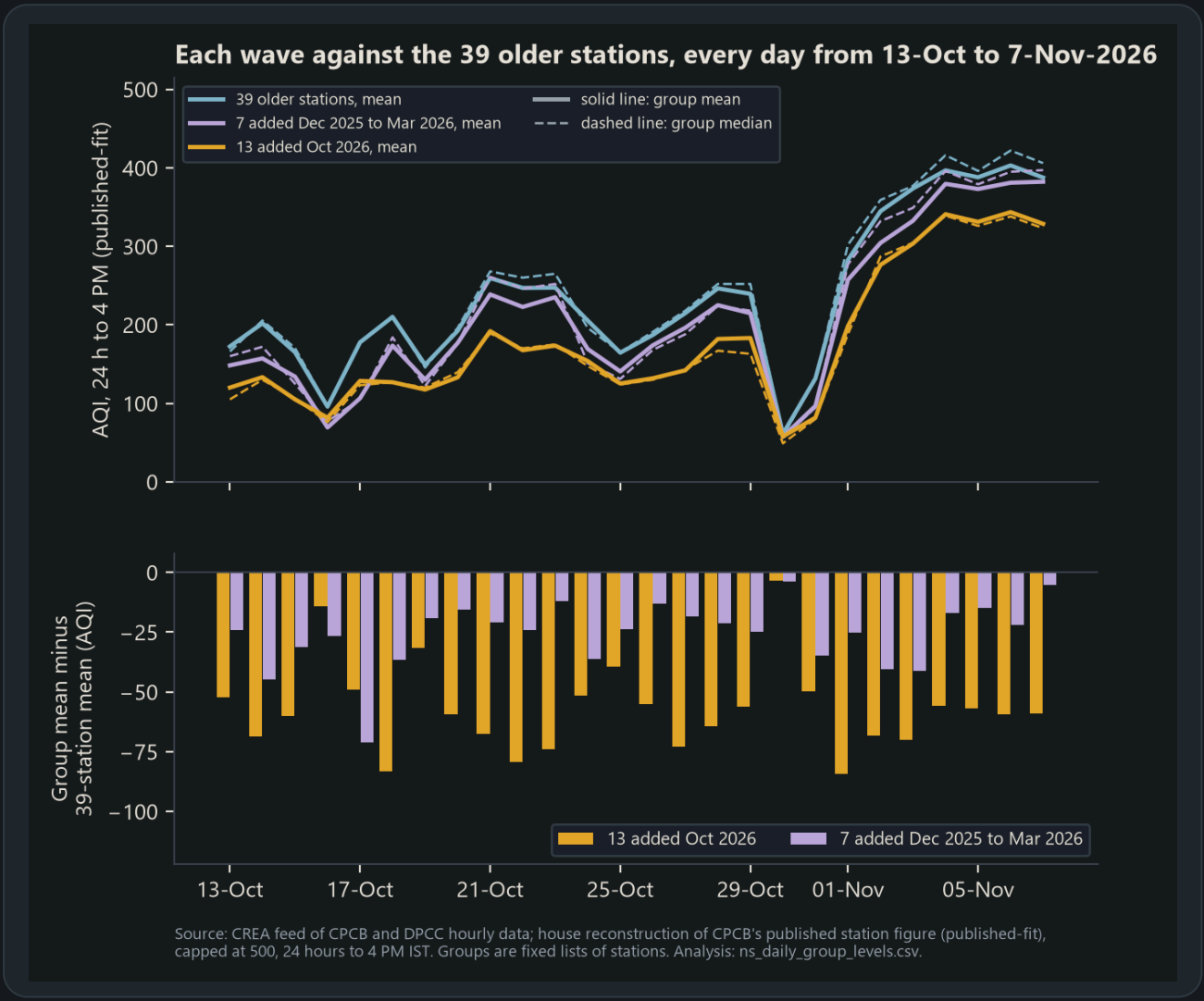
| Over 13 Oct to 7 Nov 2026 (26 days), against the 39 | The 13 | The 7 (exploratory) |
|---|---|---|
| Average daily gap, AQI points | 57.1 below | 25.7 below |
| Range of the daily gap, AQI points | 84.1 to 3.3 below | 71.2 to 3.8 below |
| Gap between the group medians, AQI points | 66.6 | 25.5 |
| PM2.5, µg/m³ less than the 39 | 37.6 by the mean | 31.2 by the mean, 17.1 by the median |
| PM10, µg/m³ less than the 39 | 80.8 | 42.3 |
| Days below the 39 | 26 of 26 | 26 of 26 |

Both waves sat below the 39 on 26 of the 26 days. That count describes a persistent gap, and it is not offered as a test. On 30 October, a clean day, every group read near 60: the 7 at 57.1, the 13 at 57.7 and the 39 at 61.0.

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Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days

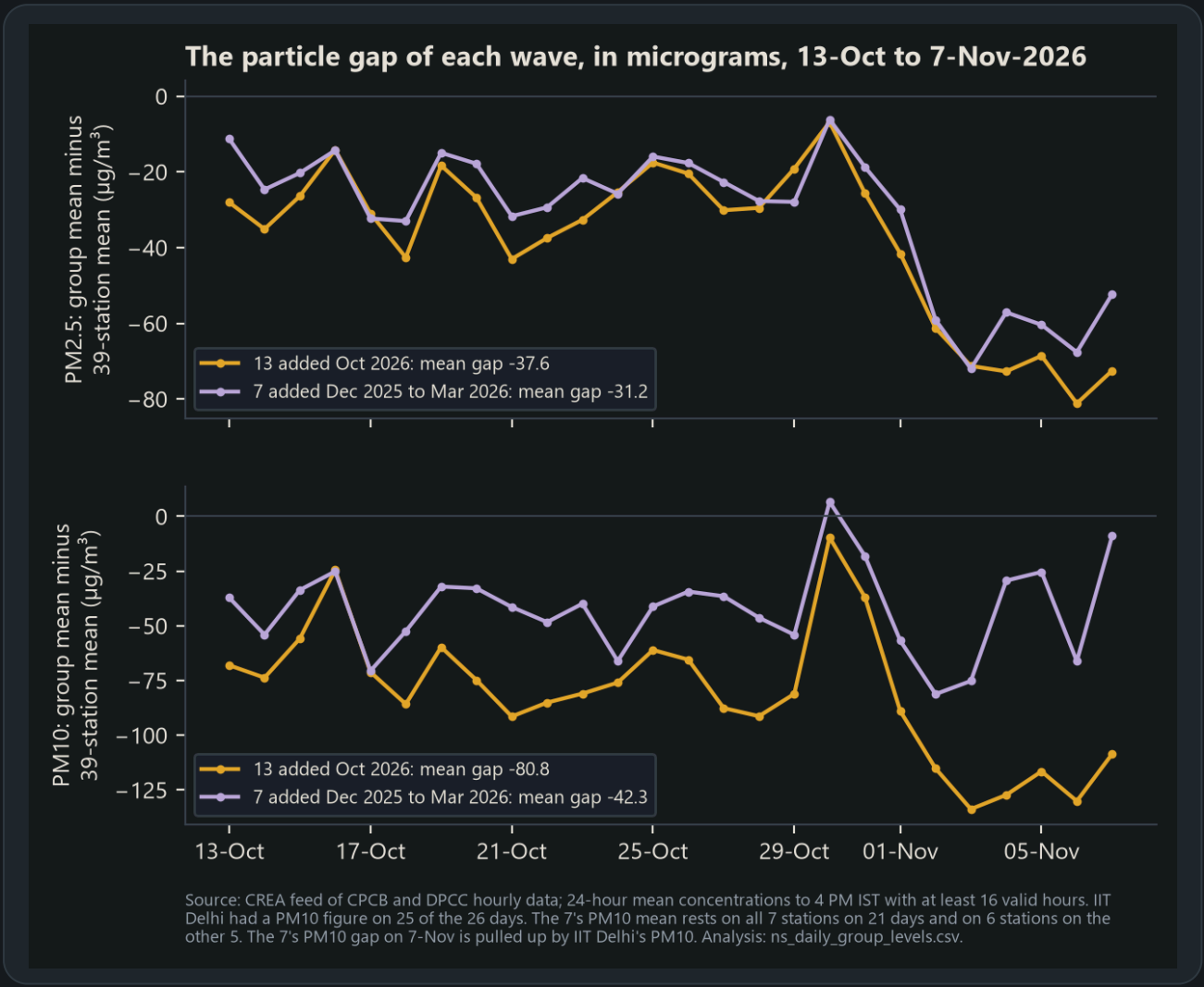



Each day from 13 October to 7 November 2026 the 13 sat below the 39, by 57.1 points on average, and the 7 sat below by 25.7 points.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

## The 13 sat below the older stations on every one of 26 days




In µg/m³ the 13 read 37.6 less PM2.5 and 80.8 less PM10 than the 39 on average over the 26 days, and IIT Delhi's PM10 pulls up the 7's PM10 figure.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days

*Source: CREA's feed of CPCB and DPCC hourly station data, 13 October to 7 November 2026, 24 hours to 4 PM IST each day; calculated on 7 November 2026.*

## Station by station

Taking one number per station over the 26 days, the 13 averaged 57.3 points below the 39. The 39 themselves averaged plus 0.03. All 13 sit below zero, and this result clears the line set for many tests. The highest of the 13 is NIH Narela, at 6.2 points below. Thirteen of the 39 older stations sit at or below that level. One low station is therefore not evidence on its own, and the case rests on the group.

For the 7 the average station gap over the 26 days was 26.1 points below, which is exploratory. Five of the 7 sit below zero. IIT Delhi sits 19.8 points above. PM10 set its station figure on 25 of 26 days, while its PM2.5 read 1.02 of its neighbours. Over 3 March to 5 October 2026 the 7's average station gap was 19.9 points below, with six of the 7 below zero. That result is also exploratory.

*Source: CREA's feed of CPCB and DPCC hourly station data, 3 March to 7 November 2026; calculated on 7 November 2026. The tests are in Annexure A.*

## The 7 over their longer record (exploratory)

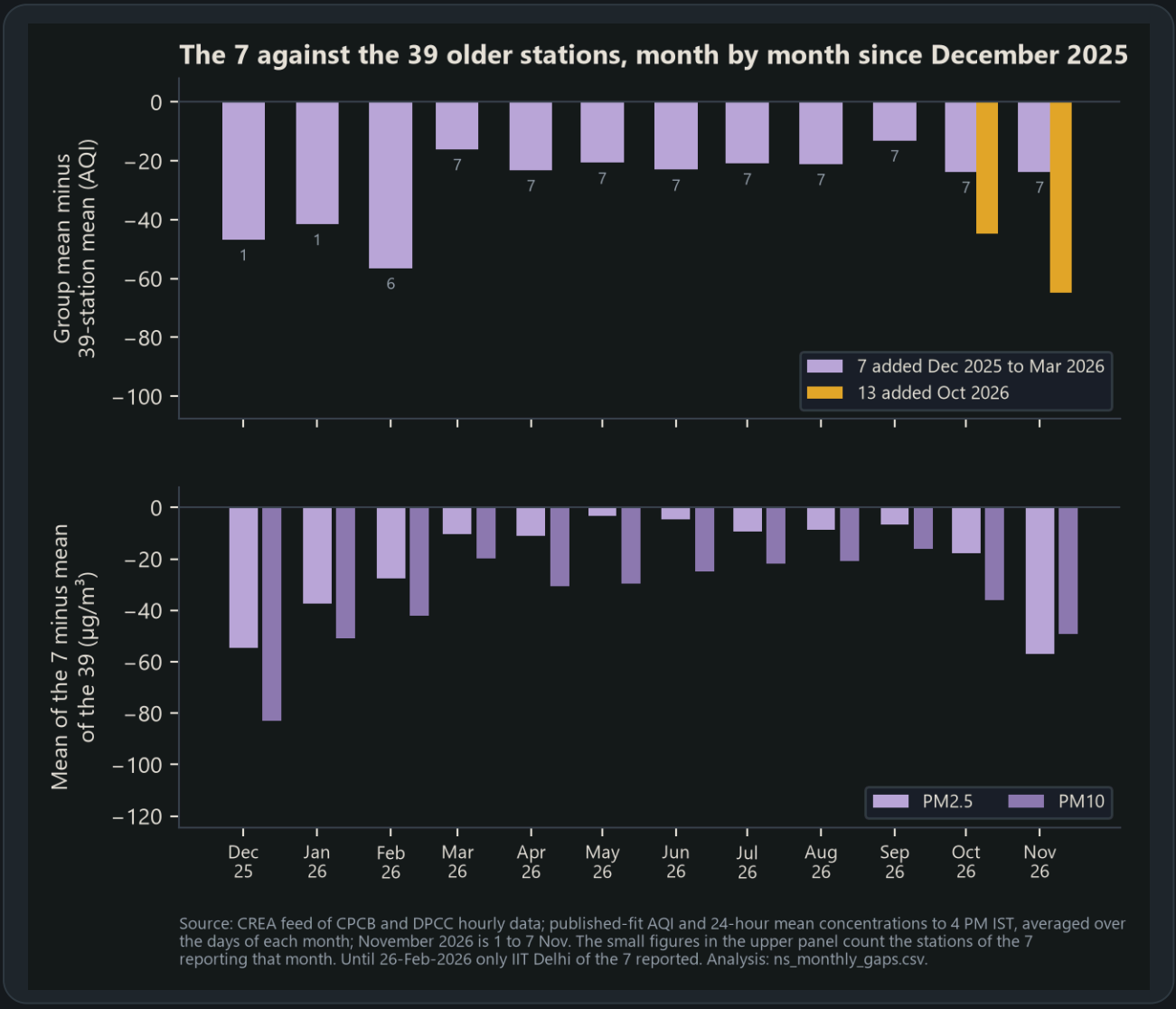
The 7 have a longer record than the 13, and every figure in this part is exploratory. Over the whole span from 1 December 2025 to 7 November 2026, on 336 days with a reading, the 7 sat 27.5 points below the 39 on average. They sat below them on 326 days. From 3 March to 5 October 2026, when all 7 reported and the 13 did not yet exist, the gap was 19.8 points over 212 days. In that window the PM2.5 gap was 8.0 µg/m³ and the PM10 gap 23.7 µg/m³.

Before 27 February 2026 the 7 means IIT Delhi alone. IIT Delhi alone sat 48.2 points below the 39 from 1 December 2025 to 26 February 2026, over 87 days. By month the gap was 46.7 points in December and 41.5 in January, when only IIT Delhi reported, and 56.4 in February. From March to November the monthly gap ran from 13.0 points in September to 23.7 in October and November.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days




The 7's gap to the 39 month by month since December 2025, in AQI, PM2.5 and PM10. Until 26 February 2026 the 7 means IIT Delhi alone, and the figures are exploratory.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13 sat below the older stations on every one of 26 days

*Source: CREA's feed of CPCB and DPCC hourly station data, 1 December 2025 to 7 November 2026; calculated on 7 November 2026.*

## Where the 7's gap sits

Over 13 October to 7 November, most of the 7's small effect on the city figure sits at two stations, IGNOU Maidan Garhi and Cantonment Area. Removing those two alone would raise the figure by 2.0 points, more than removing all seven (1.4), because the other five together read slightly above the 39. At both stations the AQI is set by PM10, which reads about three-quarters of the older stations nearest them. Their PM2.5 reads about a fifth, so the two particle readings at each station disagree with each other. Over March to October the effect was spread more evenly: the two accounted for 1.2 points and the other five for 1.6. These figures are exploratory, and they do not show which reading is right.

Over the 26 days IGNOU Maidan Garhi sat 70.5 points below the 39 and Cantonment Area 77.9 points below. PM10 set IGNOU Maidan Garhi's figure on all 24 of its days with a figure, and Cantonment Area's on 23 of 26 days. Their PM10 read 0.79 and 0.76 of the older stations nearest them. Their PM2.5 read 0.21 and 0.23, so low that it never set their AQI. The other five averaged 6.9 points below the 39. NSUT Jaffarpur sat 0.5 points above, Commonwealth Sports Complex 5.0 below, Talkatora Garden 22.1 below and JNU 28.0 below. IIT Delhi sat 19.8 above, on a figure its PM10 set, while its PM2.5 read close to its neighbours. These station figures are exploratory as a group result.

*Source: CREA's feed of CPCB and DPCC hourly station data, 3 March to 7 November 2026; calculated on 7 November 2026.*

| | |
|---|---|
| READING | From 13 October to 7 November 2026 the 13 sat 57.1 points below the 39 on average, and the 7 sat 25.7 points below. All 13 sit below the 39 station by station. |
| CAUTION | The day counts describe a persistent gap and are not tests. Every result about the 7 as a group is exploratory, and most of their gap sits at two stations. |
| SOURCE | CREA's feed of CPCB and DPCC hourly station data, 1 December 2025 to 7 November 2026, 24 hours to 4 PM IST each day; published-fit station figures calculated on 7 November 2026. |

THE POINT

**The 13 read low as a group, while the 7's lower readings sit mostly at IGNOU Maidan Garhi and Cantonment Area.**

# Removing the 13 raises Delhi's 4 PM figure by 11.6 points on average

## What the new stations do to Delhi's published figure

The 13 added in October 2026 lowered Delhi's published-fit 4 PM figure by 11.6 points on average from 13 October to 7 November 2026. The city figure is the plain average of the station figures each day, as CPCB's bulletin is. Removing the 13 from that average shows what they do to it. The rise ranged from 0.6 points to 18.1 points a day. It was 10 points or more on 20 of the 26 days, and on average it was 5.5 per cent of the level.

| Stations in the average | Average 4 PM city figure, 13 Oct to 7 Nov 2026 |
|---|---|
| All stations reporting | 220.7 |
| Without the 13 | 232.3 |
| Without the 7 | 222.1 |
| The 39 older stations alone | 236.3 |

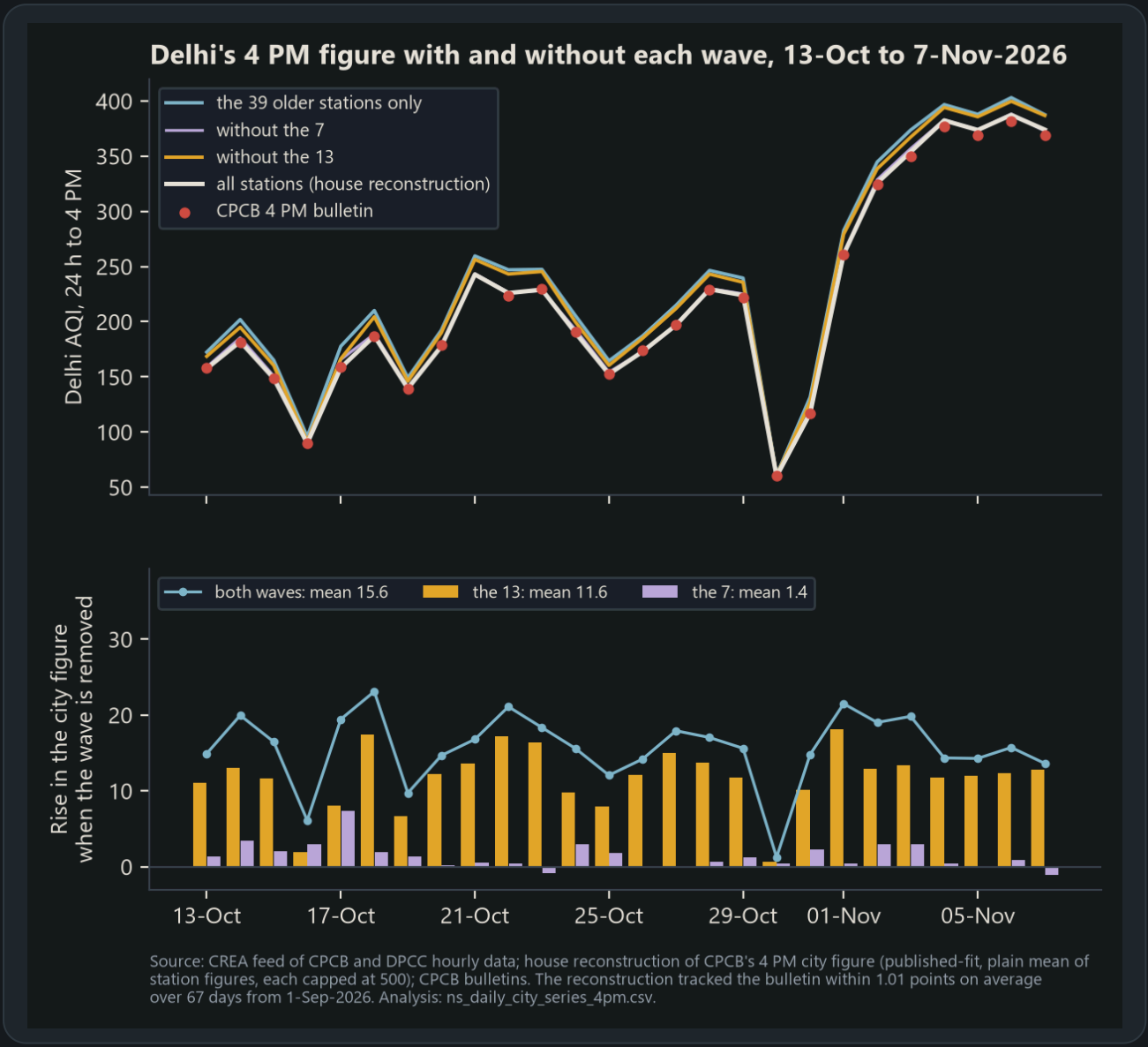
Removing the 7 raised the figure by 1.4 points on average, within a daily range from 1.12 points lower to 7.40 points higher. The rise was below zero on 3 days. This result is exploratory. Removing both waves raised the figure by 15.6 points, within a range of 1.2 to 23.0 points. The two parts do not add to this total, because removing one wave changes the share of the other in the average.

No single one of the 13 drives the effect. Leaving any one out, the other twelve still lower the figure by between 9.9 and 11.6 points on average.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Removing the 13 raises Delhi's 4 PM figure by 11.6 points on average




Delhi's 4 PM figure with and without each wave from 13 October to 7 November 2026: removing the 13 raised it by 11.6 points on average, the 7 by 1.4 (exploratory), and both by 15.6.

*Source: CREA's feed of CPCB and DPCC hourly station data, 13 October to 7 November 2026; published-fit city figures calculated on 7 November 2026.*

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

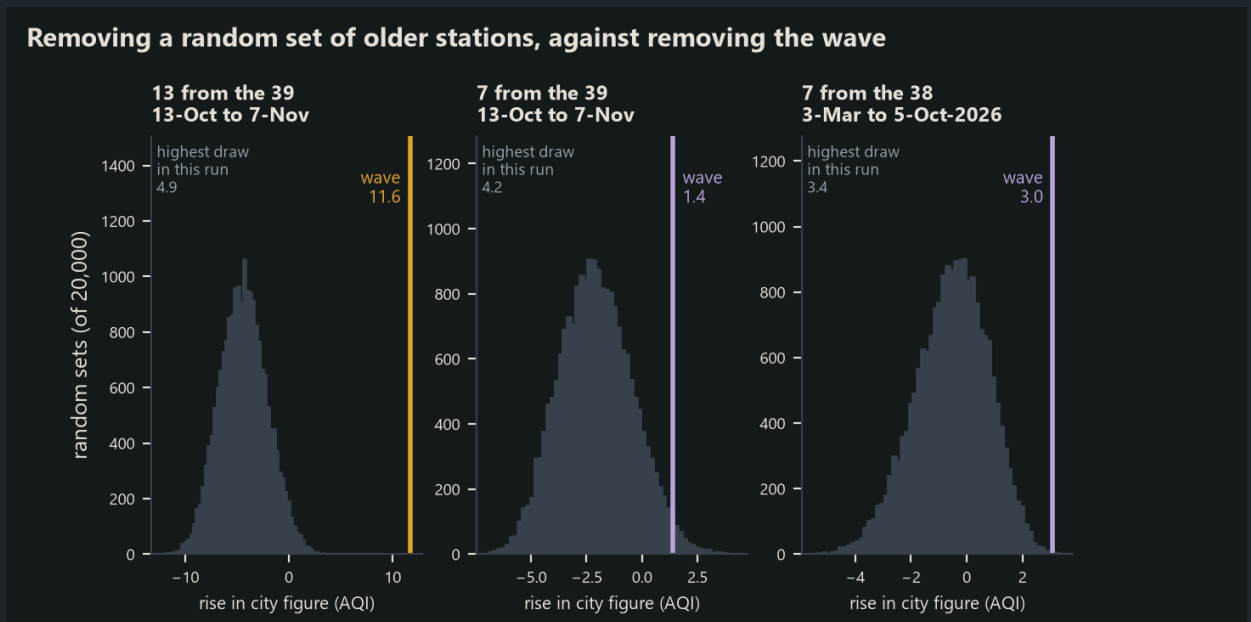
# Removing the 13 raises Delhi's 4 PM figure by 11.6 points on average

## Could any 13 older stations do the same?

The random-set test asks whether the effect is unusual. It removes a random set of older stations, of the same size as the wave, and records how much the 26-day city figure rises. It repeats this 20,000 times. If many random sets raise the figure as much as the wave does, the wave's effect is ordinary.

None of 20,000 random sets of 13 older stations raised the figure as much as the 13. The highest rise from a random set was 4.9 points in this run of 20,000 draws, against 11.6 for the 13. The same holds for all 20 new stations together. None of 20,000 random sets of 20 older stations reached their 15.6 points.

For the 7, the 26-day result is ordinary: 375 of 20,000 sets did as much. Over 3 March to 5 October only 11 of 20,000 sets of seven older stations raised the figure as much as the 7. A second run with another starting seed gave 9 of 20,000. That window is the one in which the lead was first seen, so it cannot confirm it, and the result stays exploratory.




No random set of 13 older stations, in 20,000 draws, raised the 4 PM figure as much as the 13; the 7's results are exploratory.

*Source: CREA's feed of CPCB and DPCC hourly station data, 3 March to 7 November 2026; random-set draws calculated on 7 November 2026. All three runs of the test are in Annexure A.*

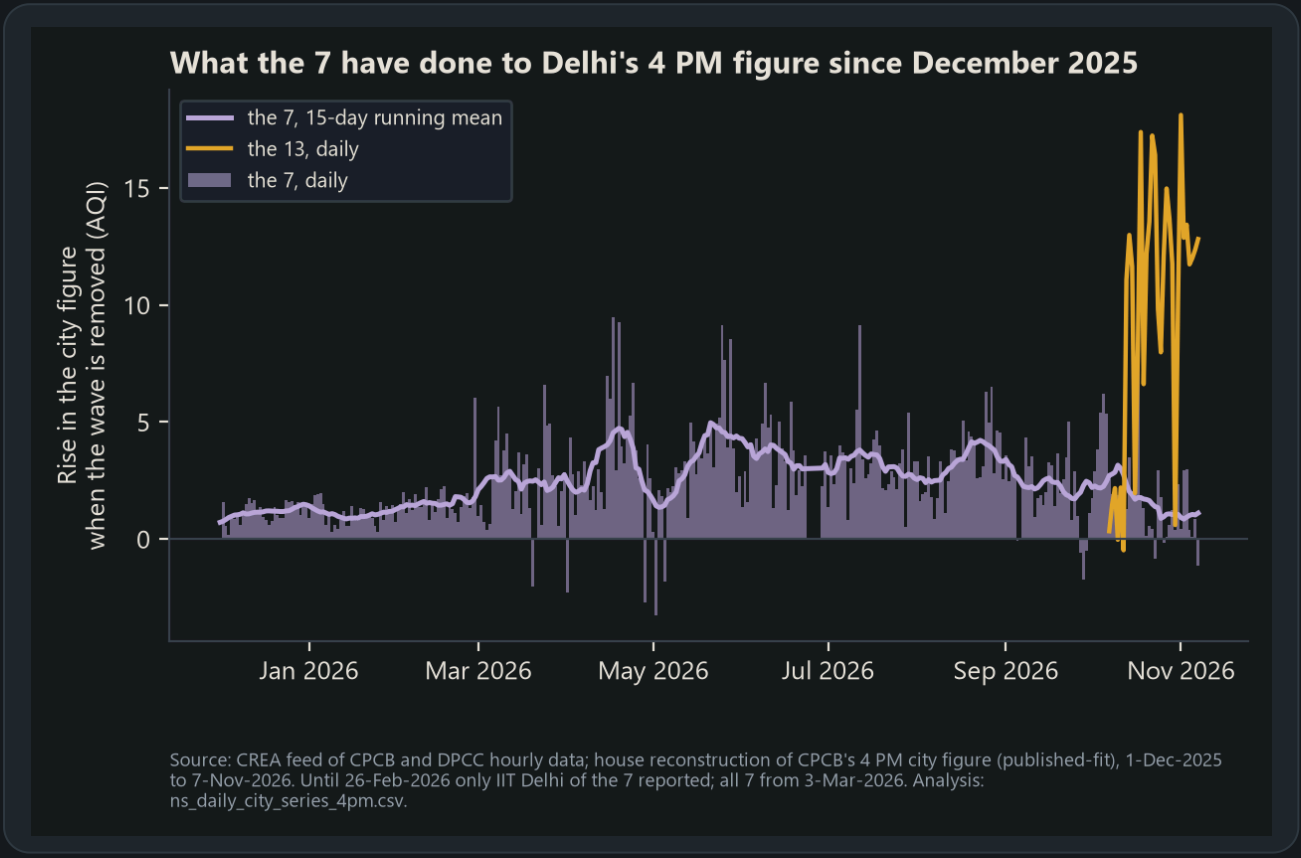
Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Removing the 13 raises Delhi's 4 PM figure by 11.6 points on average

## The 7 over a longer span (exploratory)

From 3 March to 5 October 2026, when all 7 reported, removing them raised the 4 PM figure by about 3 points on average. From 1 December 2025 to 5 October 2026, over 304 days before the 13 existed, the rise was 2.5 points. It was below zero on 10 days. Over the whole span to 7 November 2026 it was 2.4 points. Until 26 February 2026 only IIT Delhi of the 7 reported. All these figures are exploratory.




What the 7 have done to the 4 PM figure since December 2025: about 3 points on average from March to early October 2026, a result that is exploratory.

*Source: CREA's feed of CPCB and DPCC hourly station data, 1 December 2025 to 7 November 2026; calculated on 7 November 2026.*

## On 6 and 7 November at 4 PM

The reconstruction ran 5.29 points above CPCB's bulletin of 382 on 6 November, and 4.95 points above its bulletin of 369 on 7 November. Every figure for those two days is printed after removing that day's gap. Nobody outside CPCB knows how CPCB's figure shares that gap among stations. Each figure is therefore a band across three ways of sharing it. The first takes the same amount off every station. The second takes all of it off the stations kept. The third takes an amount in proportion to each reading.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Removing the 13 raises Delhi's 4 PM figure by 11.6 points on average

| Day and CPCB bulletin | Without the 13 | Without the 7 | Without both |
|---|---|---|---|
| 6 Nov, 382 | 392.9 to 394.4 | 382.1 to 382.8 | 395.0 to 397.7 |
| 7 Nov, 369 | 380.4 to 381.8 | 367.2 to 367.9 | 380.1 to 382.6 |

Without the 13, CPCB's 382 on 6 November would have read 393 to 394. Its 369 on 7 November would have read 380 to 382. Every figure in the table is Very Poor, with or without either wave.

On 6 November the 7 made no difference to CPCB's 382: without them the figure would have read 382 or 383. On 7 November the 7 raised the figure: without them CPCB's 369 would have read 367 or 368. That rise came mostly from IIT Delhi's 490, which its PM10 reading set. Its PM2.5 that day was 232 µg/m³. On 6 November the band for the 7 counts IIT Delhi, which CPCB most likely left out that day.

*Source: CPCB daily AQI bulletins of 6 November 2026 (382, 57 of 59 stations) and 7 November 2026 (369, 59 of 59 stations); CREA's feed of CPCB and DPCC hourly station data to 4 PM IST on each day.*

## GRAP Stage I and the 13

GRAP is the Graded Response Action Plan. Under it, the Commission for Air Quality Management (CAQM) orders stages of restrictions as Delhi's AQI rises.

On 18 October the rolling hourly figure on Delhi's full network peaked at 191, Moderate. Without the 13 new stations it would have stood at 201 or more for 11 hours, from 7 AM to 5 PM, and peaked at 212. That is inside the Stage I band of 201 to 300 in CAQM's GRAP schedule. The full network first reached 201 in the early hours of 21 October, and CAQM invoked Stage I that day, citing a figure of 244 at 2 PM.

This report does not claim that any GRAP order was delayed or would have been different.

*Source: CREA's feed of CPCB and DPCC hourly station data, 18 to 21 October 2026; CAQM's GRAP schedule, and CAQM's Stage I order of 21 October 2026, paragraph 2.*

| | |
|---|---|
| READING | Removing the 13 raised the 26-day figure by 11.6 points, removing the 7 by 1.4 (exploratory), and removing both by 15.6. Leaving out any one of the 13, the other twelve still lower it by 9.9 to 11.6. |
| CAUTION | The 4 PM figure was Very Poor with or without either wave on 6 and 7 November. This report does not claim that any GRAP order was delayed. |
| SOURCE | CREA's feed of CPCB and DPCC hourly station data, 1 December 2025 to 7 November 2026; CPCB daily AQI bulletins of 6 and 7 November 2026; CAQM's Stage I order of 21 October 2026, paragraph 2. |

**THE POINT**

**None of 20,000 random sets of 13 older stations lowered the figure as much as the 13.**

# The 13's low readings hold on every comparison and sit in the particles

## Measurement checks on the new stations

These checks measure each new station against the air around it. They ask whether the low readings of the 13 are confined to one comparison, one hour, one pollutant or one stretch of days. They cannot say which readings are right.

## Against the older stations nearest each one

Each station is compared with the average of its 7 nearest stations among the 39 older ones. Distance is used only to pick air of the same kind to compare with. This is a yardstick, and it is not a test of closeness.

Over the 26 days the 13 read about 35 per cent less PM2.5 than the older Delhi stations nearest them, on the median of 325 station-days. Counting the NCR monitors across the boundary as neighbours, the gap is 29.5 per cent (Annexure A). The 13 read 40.1 per cent less PM10 and, on average, 65.8 AQI points less than their neighbours. The daily median PM2.5 gap ran from 45.9 to 30.2 per cent. Twelve of the 13 read below their neighbours on at least 80 per cent of days, against 12 of the 39 older stations.

The 39 themselves, as a control, sat 0.48 AQI points and 1.9 per cent PM2.5 above their neighbours. The 7, over the 26 days, sat 15.0 AQI points below their neighbours, with PM2.5 0.5 per cent above and PM10 21.1 per cent below. These figures for the 7 are exploratory. Two of the 7 read below their neighbours on at least 80 per cent of days. Over their whole span the 7's PM2.5 was 2.3 per cent below their neighbours and their PM10 15.4 per cent below.

The NCR monitors belong to other state boards, so a lower reading there carries the same doubt about instruments as a lower reading at the 13. The full comparison with the NCR monitors is in Annexure A.

## By the operator of the older stations

The size of a neighbour gap depends on whose stations are the neighbours. Older DPCC stations read somewhat above their own neighbours, so the gap is shown against each operator's stations separately.

| Older comparison stations | The 13 | The 7 | The 39, as a control |
|---|---|---|---|
| All 39 | 0.660 | 1.027 | 1.016 |

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles

## Measurement checks on the new stations, continued

| Older comparison stations | The 13 | The 7 | The 39, as a control |
|---|---|---|---|
| Older DPCC stations only | 0.592 | 0.912 | 1.033 |
| CPCB and IITM-IMD stations only | 0.729 | 1.030 | 1.044 |

The figures are PM2.5 ratios, a station's reading divided by its neighbours' reading. Against the nearest CPCB and IMD-IITM stations alone, the 13 read about a quarter less PM2.5 (27 per cent). Against older DPCC stations alone, they read about two-fifths less (40.7 per cent).

## Against the older stations' map after installation

This check sets each new station against what the 39 older stations' readings predict at its site, after the station began reporting. The prediction is a weighted average of the older stations, with the nearer ones weighted more. Its point is the reading at the new site.

Over the 26 days the 13 read 27.2 per cent below what the older stations predict at their sites. None of 20,000 random sets of 13 older stations was as low, and the lowest in this run was 13.7 per cent below. The 7 read 8.9 per cent below over the same days, and 1,223 of 20,000 random sets were at or below that. Over 3 March to 5 October 2026 the 7 read 7.7 per cent below, with 1,454 of 20,000 sets at or below. Both results for the 7 are exploratory.

## Does the gap drift?

New instruments can take time to settle, so the gap was tested for a trend since each station began reporting.

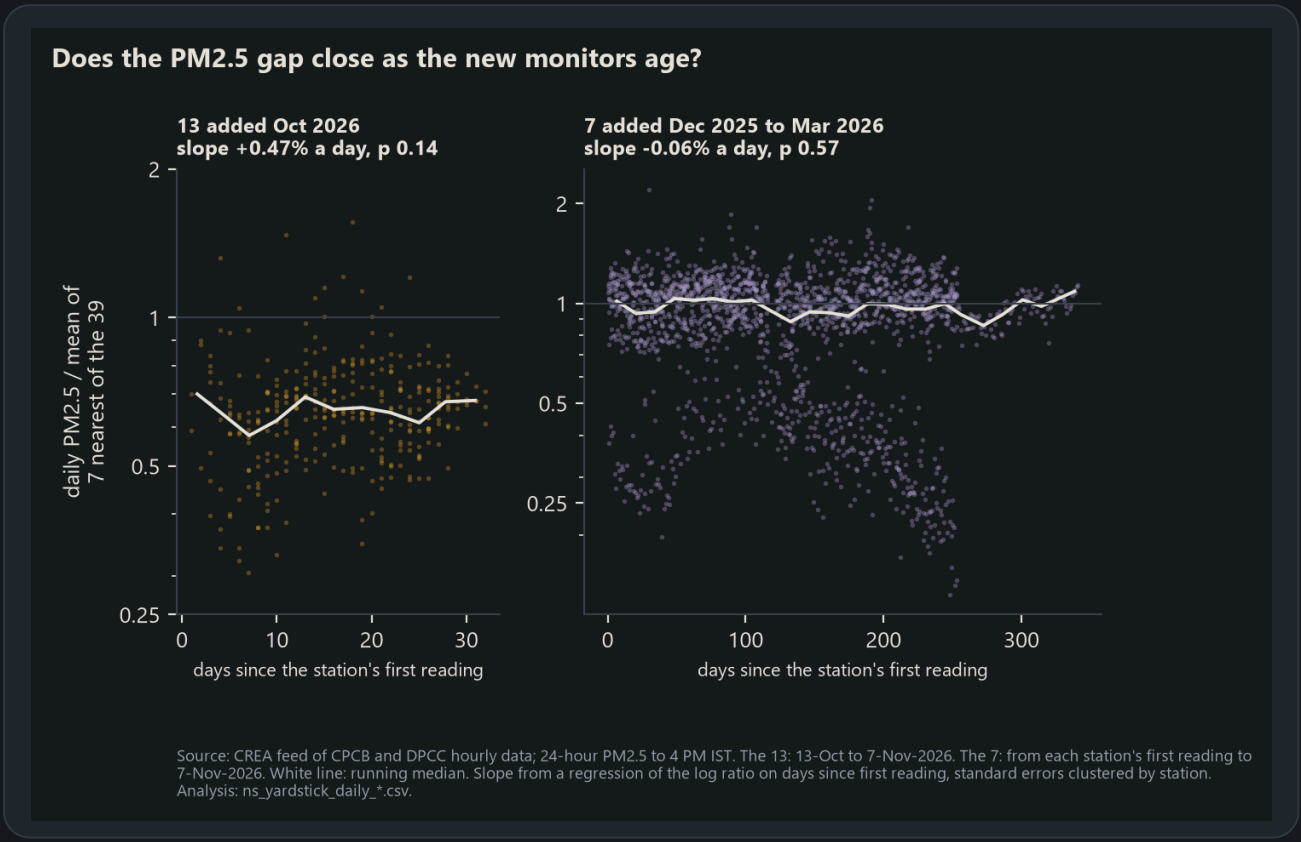
Neither wave shows a significant drift. For the 13 the PM2.5 ratio edged towards the neighbours by about 0.5 per cent a day (p 0.14). Over the same days the AQI gap widened by 0.4 points a day (p 0.16) as the level rose. The 13 have at most 32 days of record, which is too short to say whether the gap will last.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles

The 7's PM2.5 ratio moved by 0.06 per cent a day over their whole span (p 0.57). The 39, as a control, moved by 0.012 per cent a day from 3 March to 7 November (p 0.44). The AQI gap grows with the level, and the level rose sharply in November. The PM2.5 ratio is therefore the measure that does not depend on the level.




Neither wave shows a significant drift in its PM2.5 ratio to its neighbours since its first reading, and the 13 have at most 32 days of record.

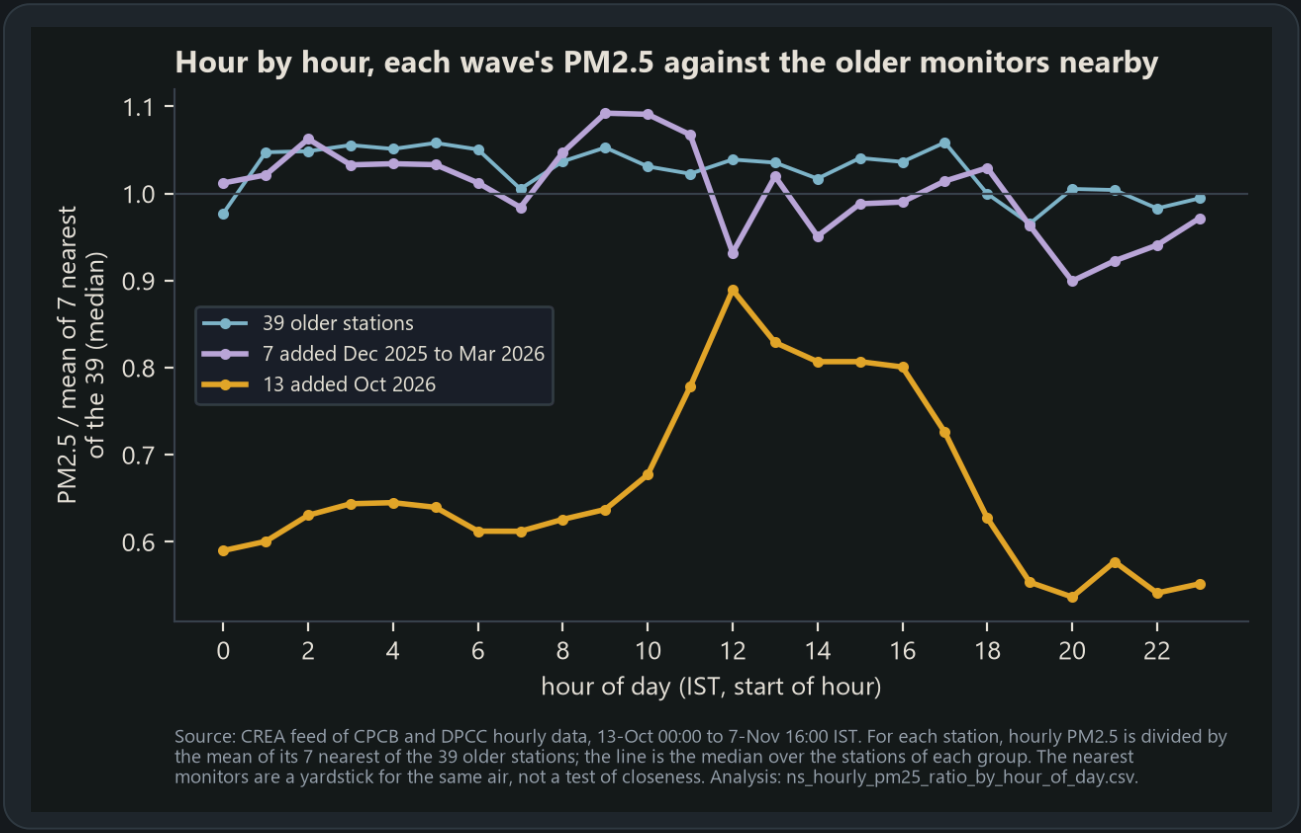
Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles

## Hour of day, and hour-by-hour movement

From 13 October to 7 November the 13 read 0.54 to 0.65 of their neighbours' PM2.5 between 19:00 and 09:00. They read 0.80 to 0.89 between 12:00 and 16:00. The 7 read 0.90 to 1.09 at night and 0.93 to 1.02 in the afternoon, so they do not share the 13's night deficit. The 11 older stations that read 0.85 or less of their neighbours show a smaller night dip, with a median night-over-afternoon ratio of 0.93. The night shape cannot weigh towards an instrument fault or towards a cleaner site.




The 13 read about 0.54 to 0.65 of their neighbours' PM2.5 at night and 0.80 to 0.89 in the afternoon, while older low-reading stations show a smaller night dip.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles

Hour by hour, each station was also set against its single nearest older station. The median hourly correlation was 0.921 for the 13, 0.883 for the 7 and 0.901 for the 39. The median ratio was 0.624, 0.897 and 0.992. The 13 move with their neighbours as closely as older stations do, but at about two-thirds of the level.

## Every pollutant

Each figure below is the wave's median station ratio to its neighbours, divided by the same ratio for the 39, from 13 October to 7 November 2026. Only the 13's PM2.5 and PM10 results clear the line set for many tests, and every other cell is exploratory.

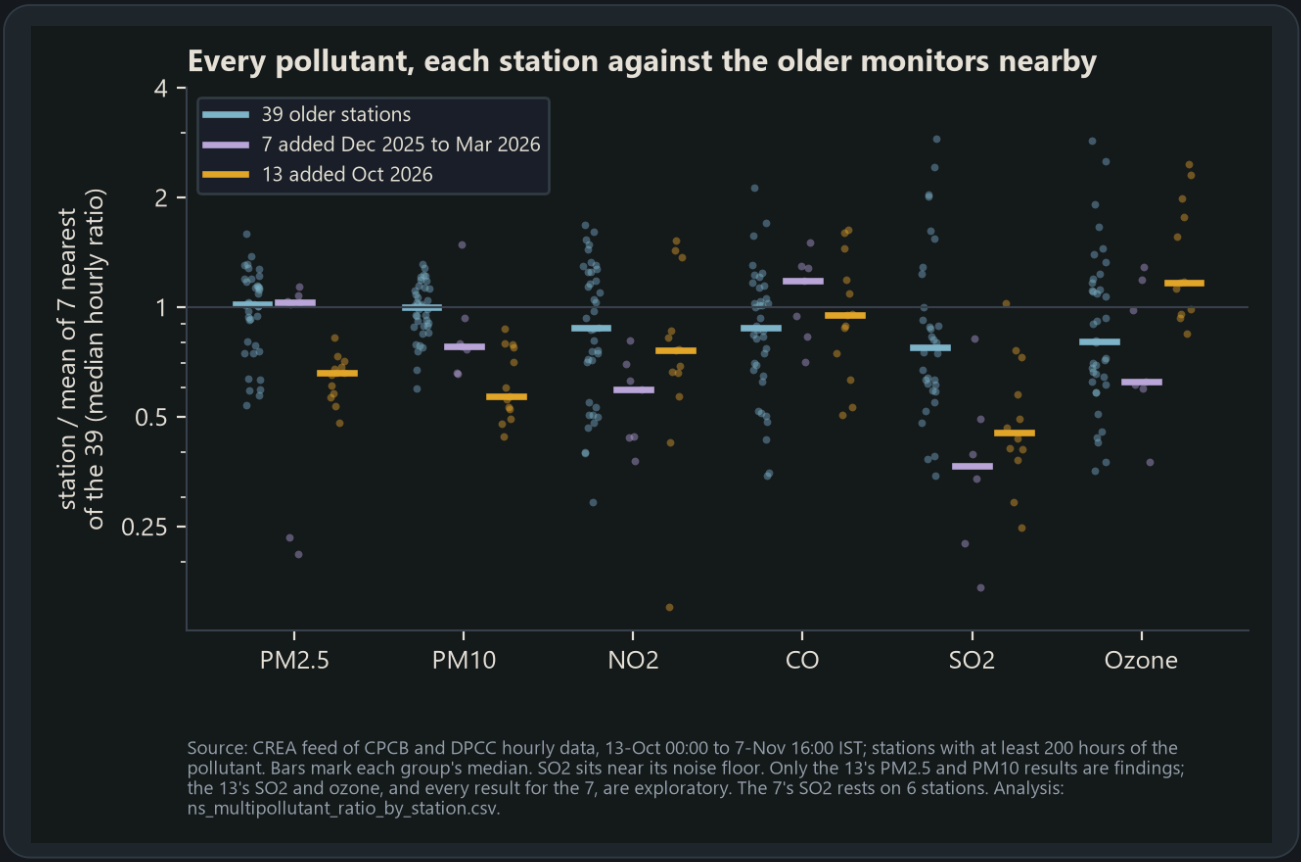
| Pollutant | The 13 | p | Status for the 13 | The 7 | p | Status for the 7 |
|---|---|---|---|---|---|---|
| PM2.5 | 0.649 | 0.000045 | Finding | 1.011 | 0.53 | Exploratory |
| PM10 | 0.570 | 0.0000019 | Finding | 0.781 | 0.038 | Exploratory |
| NO2 | 0.867 | 0.40 | Cannot be told apart | 0.675 | 0.009 | Exploratory |
| CO | 1.085 | 0.51 | Cannot be told apart | 1.346 | 0.12 | Exploratory |
| SO2 | 0.583 | 0.003 | Exploratory, near its noise floor | 0.473 (6 stations) | 0.003 | Exploratory, 6 stations |
| Ozone | 1.451 | 0.006 | Exploratory | 0.775 | 0.51 | Exploratory |

The 13's clear deficit is in the particles: PM2.5 at 0.65 and PM10 at 0.57 of the older stations' ratio. SO2 also reads lower (0.58), but it sits near its noise floor and is exploratory. NO2 reads somewhat lower (0.87) and CO about the same (1.08), and neither can be told apart from the older stations. Ozone reads higher (1.45, exploratory), which fits less fresh nitric oxide nearby. The 7 show no PM2.5 deficit as a group. Their lower NO2 (0.68) and SO2 (0.47, on 6 stations) are exploratory. The gases do not settle which particle readings are right.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles




Each pollutant against the older monitors nearby: the 13's clear deficit is in PM2.5 and PM10, and their SO2 and ozone results are exploratory.

## The two particle readings at three of the 7

A station measures PM2.5 and PM10 on separate channels. PM2.5 is part of PM10, so the share of PM2.5 in PM10 shows whether the two readings at one station agree with each other. From 13 October to 7 November the median share was 0.523 at the 39, 0.607 at the 7 and 0.55 at the 13 (against the 39, p 0.49). The 13's PM2.5 and PM10 fall together.

Among the 7, three stations read a share below 0.35: IGNOU Maidan Garhi at 0.13, Cantonment Area at 0.156 and IIT Delhi at 0.337. Among the 39, IGI Airport (T3) read 0.299, NSIT Dwarka 0.343 and Anand Vihar 0.347.

IIT Delhi's low share of PM2.5 in PM10 comes from its PM10 reading. Against the older stations nearest it, its PM10 read about 0.8 in December 2025 and January 2026. It rose past 1.0 in May, and has read about 1.3 to 1.6 since June. It was 1.48 over 13 October to 7 November. Its PM2.5 has read between 0.84 and 1.07 of its neighbours in every month since May, and 1.02 over 13 October to 7 November. The data show that the PM10 reading has drifted upward against its neighbours. They do not show which reading is right.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

## The 13's low readings hold on every comparison and sit in the particles

IGNOU Maidan Garhi's PM2.5 read slightly above the older stations nearest it from February to May 2026. It fell to 0.43 of them in July and to about a fifth by October, while its PM10 stayed at about four-fifths. Cantonment Area's PM2.5 has read between 0.21 and 0.53 of its neighbours in every month since it began in March, and 0.23 over 13 October to 7 November. A low ratio shows that a station's two particle readings disagree with each other. It does not show which one is wrong.

The table gives each station's hourly reading divided by the average of its 7 nearest older stations in the same hour, as a median for each month. A dash means the station had not begun.

| Station and pollutant | Dec 25 | Jan 26 | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov (1 to 7) | 13 Oct to 7 Nov |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IIT Delhi, PM2.5 | 0.77 | 0.76 | 0.81 | 0.84 | 0.84 | 1.00 | 1.02 | 0.95 | 0.84 | 0.91 | 1.00 | 1.07 | 1.02 (595 h) |
| IIT Delhi, PM10 | 0.82 | 0.82 | 0.84 | 0.95 | 0.95 | 1.06 | 1.28 | 1.33 | 1.30 | 1.33 | 1.41 | 1.62 | 1.48 (604 h) |
| IGNOU Maidan Garhi, PM2.5 | - | - | 1.16 | 1.17 | 1.06 | 1.07 | 0.83 | 0.43 | 0.36 | 0.33 | 0.24 | 0.16 | 0.21 (570 h) |
| IGNOU Maidan Garhi, PM10 | - | - | 0.99 | 1.00 | 0.92 | 0.89 | 0.85 | 0.77 | 0.78 | 0.81 | 0.81 | 0.83 | 0.79 (572 h) |
| Cantonment Area, PM2.5 | - | - | - | 0.30 | 0.34 | 0.47 | 0.53 | 0.46 | 0.42 | 0.40 | 0.25 | 0.21 | 0.23 (616 h) |
| Cantonment Area, PM10 | - | - | - | 0.89 | 0.85 | 0.76 | 0.80 | 0.71 | 0.65 | 0.50 | 0.64 | 0.88 | 0.76 (574 h) |

IGNOU Maidan Garhi's February column rests on 46 hours, from 27 February. Cantonment Area's June PM10 rests on 318 hours, and the November column on 138 to 161 hours. Every other month has 610 to 744 hours.

The next table shows which pollutant set each of the 7's station figures on each day from 13 October to 7 November 2026.

| Station | Days with a figure | Set by PM10 | Set by PM2.5 | Set by another pollutant |
|---|---|---|---|---|
| IIT Delhi | 26 | 25 | 1 | 0 |
| IGNOU Maidan Garhi | 24 | 24 | 0 | 0 |

Continues on the next page.

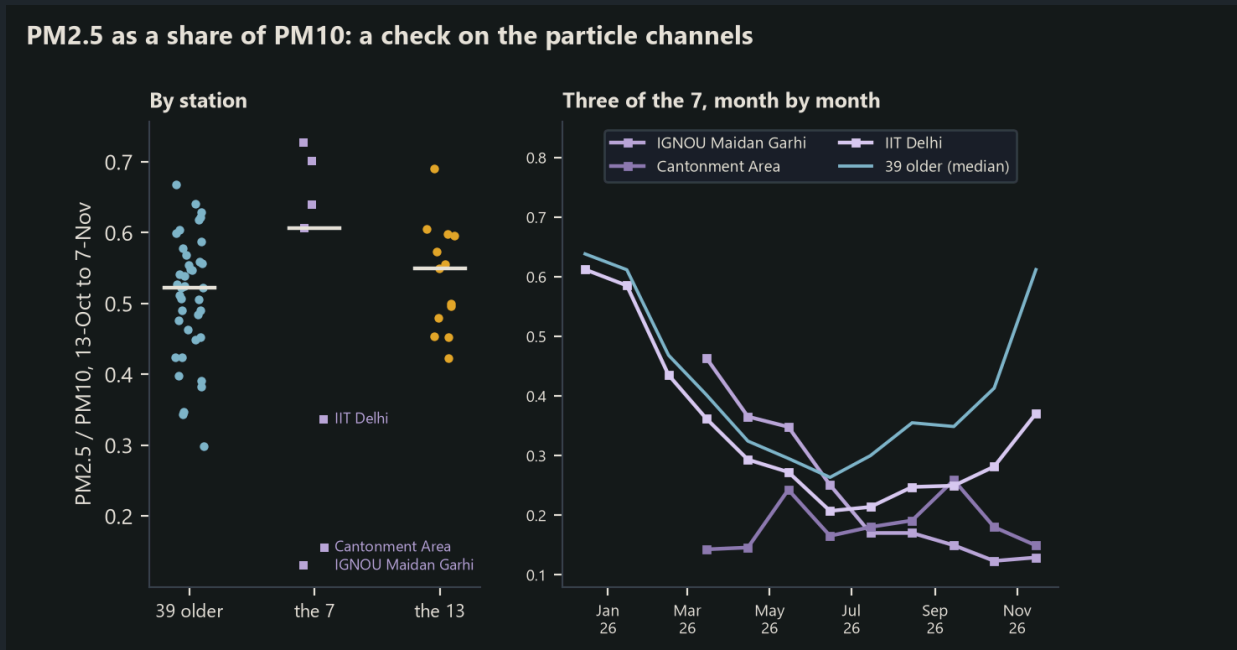
Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles

## Measurement checks on the new stations, continued

| Station | Days with a figure | Set by PM10 | Set by PM2.5 | Set by another pollutant |
|---|---|---|---|---|
| Cantonment Area | 26 | 23 | 0 | NO2 2, CO 1 |
| JNU | 26 | 3 | 22 | Ozone 1 |
| NSUT Jaffarpur | 26 | 0 | 25 | CO 1 |
| Commonwealth Sports Complex | 26 | 0 | 24 | Ozone 1, CO 1 |
| Talkatora Garden | 26 | 0 | 24 | CO 2 |

A low or high ratio says the two readings at a station disagree. It does not say which reading is wrong, and the data do not show what causes the disagreement.




Source: CREA feed of CPCB and DPCC hourly data. Ratio of mean PM2.5 to mean PM10 over hours with both, 13-Oct 16:00 to 7-Nov 15:00 IST (left) and by calendar month from December 2025 (right; a month needs over 100 paired hours). Analysis: ns_pm25_pm10_ratio_13oct_7nov.csv, ns_pm25_pm10_ratio_by_month.csv.

PM2.5 as a share of PM10: the two particle readings disagree at IGNOU Maidan Garhi and Cantonment Area, and IIT Delhi's low share comes from its PM10. Neither shows which reading is right.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# The 13's low readings hold on every comparison and sit in the particles

## Completeness

A station-day enters any figure in this report only with 16 or more valid hours. From 13 October to 7 November the 13 averaged 23.74 PM2.5 hours per station-day (lowest 15). The 7 averaged 23.57 (lowest 2) and the 39 averaged 23.54 (lowest 10). Between 34 and 39 of the older stations reported each day over 13 October to 7 November, and between 32 and 38 over 3 March to 5 October. Lodhi Road (IITM) had no AQI from 27 December 2025 to 20 October 2026, a stretch of 296 days.

*Source for this section: CREA's feed of CPCB and DPCC hourly station data, 1 December 2025 to 7 November 2026, 24 hours to 4 PM IST each day; calculated on 7 November 2026.*

| | |
|---|---|
| READING | The 13 read about 35 per cent less PM2.5 than the older stations nearest them, and 29.5 per cent less with NCR monitors counted. Their PM2.5 and PM10 deficits are findings, while their gases cannot be told apart or are exploratory. |
| CAUTION | These checks cannot say which readings are right. At IGNOU Maidan Garhi, Cantonment Area and IIT Delhi the two particle readings disagree, and the data do not show which one is wrong. |
| SOURCE | CREA's feed of CPCB and DPCC hourly station data, 1 December 2025 to 7 November 2026; CREA's public data service for 54 NCR monitors, read on 7 November 2026. |

THE POINT

**Only calibration records or a reference monitor beside the new ones can say which readings are right.**

# HT's arithmetic on the 13 holds, and its PM2.5 claim does not hold for the 7

## The Hindustan Times front page of 7 November 2026, claim by claim

The Hindustan Times led its front page of 7 November 2026 with "New stations on periphery cloud AQI data in Capital". It reported that Delhi's AQI "hit 382 on Friday, the city's worst since January 19". It added that "Without the new stations, Friday's 4pm bulletin would have read 393." Every claim about the 13 that this report could test is confirmed, and one is close.

The table gives the verdict on each of HT's claims about the 13. It also says what the same claim shows for the 7, which HT did not write about. CONFIRMED means the figure here matches HT's. CLOSE means it matches within the reconstruction's gap or within a few stations. CANNOT CHECK means no data available to this report tests the claim. NOT TESTED HERE means the claim is about where the stations sit, which this report leaves out.

| No. | HT's claim | The 13 | The 7 |
|---|---|---|---|
| H01 | Delhi's AQI hit 382 on Friday | CONFIRMED | Not about the 7 |
| H02 | The worst since January 19 | CONFIRMED | Not about the 7 |
| H03 | 13 new stations added in October | CONFIRMED | Not about the 7 |
| H04 | Set up by the DPCC | CONFIRMED | Six of the 7 are DPCC; IIT Delhi is IITM |
| H05 | 59 stations, 46 older | CONFIRMED | 7 of HT's 46 were added from December 2025 to March 2026 |
| H06 | Without the new stations, 393 | CONFIRMED; 392.9 to 394.4 reproduced | Without the 7, 382.1 to 382.8, no change to 382; without both waves, 395.0 to 397.7 |
| H07 | Most new monitors on the periphery | NOT TESTED HERE | NOT TESTED HERE |

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# HT's arithmetic on the 13 holds, and its PM2.5 claim does not hold for the 7

## The Hindustan Times front page of 7 November 2026, claim by claim, continued

| No. | HT's claim | The 13 | The 7 |
|---|---|---|---|
| H08 | Older stations as far out read much higher | NOT TESTED HERE | NOT TESTED HERE |
| H09 | PM2.5 the biggest contributor | CONFIRMED for 6 Nov: PM2.5 set the station figure at 49 of 59 stations | PM2.5 set the figure at 5 of the 7 |
| H10 | PM2.5 at new stations about 35 per cent below neighbours | CONFIRMED: 35.06 per cent to 7 Nov over 325 station-days; 29.5 per cent with NCR monitors counted | Does not hold for the 7 as a group: 0.5 per cent above over 26 days, 6.6 per cent above on 6 Nov. IGNOU Maidan Garhi and Cantonment Area read about 79 and 77 per cent less PM2.5, while PM10 sets their AQI |
| H11 | Dhanteras brings heavy traffic | CANNOT CHECK | CANNOT CHECK |
| H12 | CPCB's figure is a plain average | CONFIRMED | Same |
| H13 | 389 to 391 from 7 AM to noon | CLOSE | Not recomputed for the 7 |
| H14 | The 13 about 350 at 10 AM | CONFIRMED; 349.7 before removing the gap | The 7 read 398.4 at 10 AM before removing the gap |
| H15 to H20 | Hourly figures and Severe-band counts without the 13 | NOT TESTED HERE | Not recomputed for the 7 |

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# HT's arithmetic on the 13 holds, and its PM2.5 claim does not hold for the 7

## The Hindustan Times front page of 7 November 2026, claim by claim, continued

| No. | HT's claim | The 13 | The 7 |
|---|---|---|---|
| H21 to H23 | GRAP stages and CAQM | NOT TESTED HERE | Not about the 7 |
| H24 | Map of new monitors in outer areas | NOT TESTED HERE | Not about the 7 |
| Lede | The figure "may still be understating pollution levels" | Arithmetic CONFIRMED | Not about the 7 |

PM2.5 set the station figure at 49 of 59 stations on 6 November: 32 of the 39, 5 of the 7 and 12 of the 13, on the published-fit basis. On CPCB's documented formula without the cap at 500, the count is 45 of 59 (Annexure A).

HT reported that PM2.5 at the new stations is "about 35% lower than those at their neighbouring stations". This report finds 35.06 per cent over 325 station-days to 7 November, which supports HT's figure. The same claim does not hold for the 7 as a group, which HT did not cover.

"Understating" is HT's word. The data show that the 13 lower the published figure. They cannot say whether the older readings or the new ones are right. HT's figures and these figures come from the same CPCB feed. Their agreement therefore confirms the arithmetic, and it is not independent evidence for HT's reading of it.

*Source: Hindustan Times, front page, 7 November 2026, "New stations on periphery cloud AQI data in Capital", by Binayak Dasgupta, Saloni Bhatia and Jasjeev Gandhiok. The checks use CPCB's daily AQI bulletin of 6 November 2026 and CREA's feed of CPCB and DPCC hourly station data to 4 PM IST that day.*

**READING** Without the 13, CPCB's 382 on 6 November would have read 392.9 to 394.4, as HT reported. HT's 35 per cent PM2.5 gap is reproduced at 35.06 per cent over 325 station-days.

**CAUTION** HT's figures and these figures come from the same CPCB feed. "Understating" is HT's word, and the data cannot settle it. HT's claims about the periphery are not tested in this report.

**SOURCE** Hindustan Times, front page, 7 November 2026, "New stations on periphery cloud AQI data in Capital". The checks use CPCB's daily AQI bulletin of 6 November 2026 and CREA's feed of CPCB and DPCC hourly station data to 4 PM IST that day.

**THE POINT**

**Every claim about the 13 that this report could test is confirmed, and one is close.**

# Calibration records and a reference monitor would settle which readings are right

## What the data cannot show, and what should be made available

The data available to this report cannot settle eight questions. Each is listed with the record that would settle it.

1. Which readings are right, the new ones or the old ones. No reference reading taken beside any of the 20 new stations, and no calibration record, was available to this report. A two-week co-location of a reference monitor at two or three of the 13 would settle it. So would DPCC's make, model and calibration certificates.

2. Why the sites were chosen. The siting reports are not public. DPCC's and IITM's siting reports for the 13 and the 7, with the file notings under which they were approved, would settle it.

3. The make, model and calibration of any monitor. The CREA station data carry no such field.

4. CPCB's own station-wise figures. CPCB publishes only the city figure in the bulletin. CPCB's own station-wise 24-hour AQI at 4 PM on 6 and 7 November 2026 would show how the reconstruction's gap of about 5 points is shared among stations.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Calibration records and a reference monitor would settle which readings are right

5. HT's continuation on pages 8 and 10, and CAQM's Stage III order of 6 November, which this report has not read.

6. Whether New Moti Bagh was the station that entered the bulletin on 11 March 2026 and left it on 13 June 2026. CPCB's station-wise bulletin annexures for those dates would settle it.

7. Why IGNOU Maidan Garhi's PM2.5 fell against its neighbours from June 2026, and why IIT Delhi's PM10 rose against its neighbours over the same months. No maintenance or calibration log of either station was available to this report.

8. Whether the 7 lower the city figure beyond chance. Only a window chosen now and not yet looked at can test it, such as 8 November to 31 December 2026, with the line fixed in advance.

This report recommends three steps. DPCC should make available the calibration and maintenance records of the 13 new stations, and of the PM2.5 analysers at IGNOU Maidan Garhi and Cantonment Area. IITM should make available the calibration and maintenance records of the PM10 analyser at IIT Delhi. A reference monitor should be placed beside two or three of the 13 for two weeks.

| | |
|---|---|
| READING | Eight questions stay open, each with the record that would settle it. DPCC and IITM should make available the calibration and maintenance records, and a reference monitor should be placed beside two or three of the 13 for two weeks. |
| CAUTION | The data cannot say whether the new readings or the older ones are right, and they cannot show why any site was chosen. |
| SOURCE | CREA's feed of CPCB and DPCC hourly station data and its station table, read on 7 November 2026; CPCB daily AQI bulletins to 7 November 2026. |

THE POINT

**Each open question names a record that DPCC, IITM or CPCB holds.**

# Method, data, the annex figures and the location annex

## Annexure A. Method and data

### How the numbers were made

The groups are fixed for every day. The 13 are the DPCC stations that first reported between 6 and 12 October 2026. The 7 are IIT Delhi, JNU, NSUT Jaffarpur, Commonwealth Sports Complex, IGNOU Maidan Garhi, Talkatora Garden and Cantonment Area. The 39 are every other station of the 59 that reported on 7 November.

**The published-fit figure.** Every station figure in the body is published-fit. For PM2.5, PM10, NO2 and SO2 it takes the hourly sub-index for each hour and averages them. For CO and ozone it takes the single 8-hour average at 4 PM. It covers the 24 hours to 4 PM IST, with each hour labelled by its start, and it is capped at 500. The city figure is the plain average of the station figures that day. It tracked CPCB's 4 PM bulletin within 1.01 points on average over 67 days from 1 September to 7 November 2026, with a largest gap of 5.36 points. The bulletin of 21 October is missing.

**CPCB's documented formula.** CPCB's documented AQI formula works differently. CPCB sets it out in How AQI is calculated and in its AQI calculator. It takes the sub-index of each pollutant's 24-hour average, and the highest 8-hour average of the day for CO and ozone. The published-fit figure is used in the body because it follows CPCB's published number more closely. On the documented formula, removing the 13 raised the 26-day figure by 12.67 points, and removing the 7 raised it by 1.86 points. The figure for the 7 is exploratory.

On 6 November the reconstruction ran 5.29 points above the bulletin of 382, which counted 57 of 59 stations. On 7 November it ran 4.95 points above the bulletin of 369, which counted 59 of 59. Every 4 PM figure for those two days is printed after removing that gap, as a band across the three ways of sharing it described in the body.

**The random-set test.** The test removes 20,000 random sets of older stations, each the same size as the wave, and records the rise in the 26-day average city figure. The pool is the 39 older stations. Over 3 March to 5 October the pool is 38, because Lodhi Road (IITM) had no AQI from 27 December 2025 to 20 October 2026. The test is one-sided. Its p-value is the share of draws at or above the wave's rise, with one added to each count. Every test was run with seed 20261107, run again with seed 7110, and run a third time on independently written code.

**The neighbour yardstick.** The yardstick for each station is the average of its 7 nearest stations among the 39 older ones. It is used only to measure each station against the same air nearby. No finding here depends on how near or far a station sits.

**The line for many tests.** Many tests were run, so a line was drawn at about p 0.0005. A result for the 13 below that line is a finding, and every other result is labelled exploratory. Every result for the 7 is exploratory, for two reasons. First, the 7 are one group of seven tested many ways. Second, their strongest test, over 3 March to 5 October 2026, sits on the line and re-examines the same stretch of data in which the lead was first seen. The only fresh window, 13 October to 7 November, gives p about 0.02.

**Rounding.** In prose, a figure that supports the report's findings is cut to one decimal towards the smaller value, after taking it at two decimals. So 11.67 prints as 11.6, 15.66 as 15.6, 29.56 as 29.5 and 9.95 as 9.9. A figure that stands for CPCB's own city AQI is rounded to the whole number, as CPCB states AQI. Tables may carry two decimals.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Method, data, the annex figures and the location annex

**Independent check.** Every figure in this report was checked by an independent statistical reading of the evidence before the report was written. That reading re-ran the main tests on its own code and settled the wording of the figures.

## The statistical tests behind the group comparisons

On 6 November the gap between the 13 and the 39 gives a Mann-Whitney p of 0.00035, and the gap between the 7 and the 39 gives p 0.084, which is exploratory. On 7 November the same tests give p 0.00023 for the 13 and p 0.30 for the 7, which is exploratory. Over the 26 days, taking one number per station, the 13's gap gives a Welch p of 0.00000009 and a Mann-Whitney p of 0.00003. The 7's gap gives a Welch p of 0.12 and a Mann-Whitney p of 0.076, which is exploratory. Over 3 March to 5 October 2026 the 7's station gap gives a Welch p of 0.012 and a Mann-Whitney p of 0.014, which is also exploratory.

## The data

The Delhi data are the CPCB and DPCC hourly station readings to 7 November 2026, through the hour that ends at 4 PM IST, as carried in CREA's public feed of CPCB data. The CPCB daily AQI bulletins run to 7 November 2026 at 4 PM, when the bulletin read 369 on 59 of 59 stations. The NCR comparison uses 54 NCR monitors from CREA's public data service. The next bulletin was due at 4 PM on 8 November 2026. CAQM's Stage III order of 6 November 2026 was not read for this report.

## Figures that belong to this annexure

**The H09 count on CPCB's documented formula.** Here the documented formula is applied without the cap at 500. On that basis, PM2.5 set the station figure at 45 of 59 stations on 6 November: 27 of the 39, 5 of the 7 and 13 of the 13. These figures are not capped at 500, which CPCB's published figure is.

**The 7 over March to October.** The body prints "about 3 points" for the 7's effect over 3 March to 5 October 2026. The two exact figures are 3.04 on the city series that includes New Moti Bagh, and 3.07 on the 59 stations of 7 November, which the random-set test uses.

**The random-set test, all three runs.** The table gives each test's result on all three runs. The p-value range is the 95 per cent range from the number of draws.

| Test | Wave's rise | Highest draw, first run | Draws reaching the wave, first run | Same, second run | Same, independent code | p, first run (95 per cent range) |
|---|---|---|---|---|---|---|
| 13 from the 39, 13 Oct to 7 Nov | 11.67 | 4.87 | 0 | 0 | 0 | 0.00005 (0 to 0.00015) |

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Method, data, the annex figures and the location annex

## Annexure A. Method and data, continued

| Test | Wave's rise | Highest draw, first run | Draws reaching the wave, first run | Same, second run | Same, independent code | p, first run (95 per cent range) |
|---|---|---|---|---|---|---|
| 7 from the 39, 13 Oct to 7 Nov | 1.40 | 4.20 | 375 | 369 | 406 | 0.019 (0.017 to 0.021) |
| 7 from the 38, 3 Mar to 5 Oct 2026 | 3.07 | 3.36 | 11 | 5 | 9 | 0.0006 (0.0003 to 0.0009) |
| 20 from the 39, 13 Oct to 7 Nov | 15.66 | 2.48 | 0 | 0 | 0 | 0.00005 (0 to 0.00015) |

For the 7 over 3 March to 5 October, the three runs gave between 5 and 11 of 20,000. Pooled, they give 25 of 60,000, a p of about 0.0004, with a 95 per cent range of about 0.0003 to 0.0006. That range still straddles the line of 0.0005, so the line cannot decide the test. The result stays exploratory in any case, because it reuses the data in which the lead was first seen. The highest draw for the 13 moves with the seed: 4.87, 4.03 and 4.03 on the three runs. None of 20,000 sets reached the 13 on any run.

**Days on which the 7 moved the CPCB category.** These days are exploratory. From 1 December 2025 the 7 moved the 4 PM category on nine days, after each day's gap was removed. On each day the figure without the 7 lands within 3 points of the line.

| Day | Figure with the 7, then without | Distance past the line |
|---|---|---|
| 17 Jan 2026 | 400 to 400.9, on the Severe line | 0.4 |
| 26 Feb 2026 | 200 to 201.3 | 0.8 |
| 27 Feb 2026 | 200 to 201.8 | 1.3 |
| 8 May 2026 | 100 to 102.3 | 1.8 |
| 31 May 2026 | 98 to 100.7 | 0.2 |
| 9 Jul 2026 | 48 to 51.0 | 0.5 |
| 29 Jul 2026 | 96 to 101.4 | 0.9 |
| 14 Aug 2026 | 98 to 101.8 | 1.3 |

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Method, data, the annex figures and the location annex

## Annexure A. Method and data, continued

| Day | Figure with the 7, then without | Distance past the line |
|---|---|---|
| 18 Aug 2026 | 100 to 103.4 | 2.9 |

None reaches the 3.9 points of the 204.4 for the 13 on 18 October. Five of the nine are within 1 point of the line. Each also appears for both waves together, because each falls before 6 October. On 17 January and 26 February only IIT Delhi of the 7 was reporting, and on 27 February only three of them. On 17 January the reconstruction ran 9.4 points above the bulletin. A margin of 0.4 point past the Severe line therefore depends wholly on how that gap is shared. None of these days carries any GRAP consequence.

For the 13, three days changed category at 4 PM after the gap was removed: 18 October, from 187 to 204.4; 24 October, from 191 to 200.8, on the line; and 27 October, from 197 to 212.0.

**Against the NCR monitors across the boundary.** This comparison asks whether the 13 still read low when NCR monitors across the boundary count among their neighbours. Every figure is PM2.5 from 13 October to 7 November 2026, on the median of station medians.

| Comparison | The 13 | The 7 | The 39 |
|---|---|---|---|
| 7 nearest older Delhi monitors | 33.80 per cent below | 1.90 above | 0.56 above |
| 7 nearest, NCR monitors counted | 29.56 per cent below | 1.90 above | 2.46 above |
| Single nearest NCR monitor | 20.14 per cent below | 18.09 above | 42.82 above |

Counting the NCR monitors as neighbours narrows the gap of the 13 from 33.8 to 29.5 per cent, on the median of station medians. The 35 per cent printed in the body is a median of station-days, the measure HT used, and it is a different basis from these figures.

Three of the 7 have NCR monitors among their seven nearest: NSUT Jaffarpur, Commonwealth Sports Complex and IGNOU Maidan Garhi. The group median stays at plus 1.9 per cent, because the middle station of the seven, IIT Delhi, has none. For those three, counting NCR monitors moves NSUT Jaffarpur from 3.2 to 13.4 per cent above. It moves Commonwealth Sports Complex from 12.5 to 14.1 per cent above, and IGNOU Maidan Garhi from 76.6 to 76.1 per cent below.

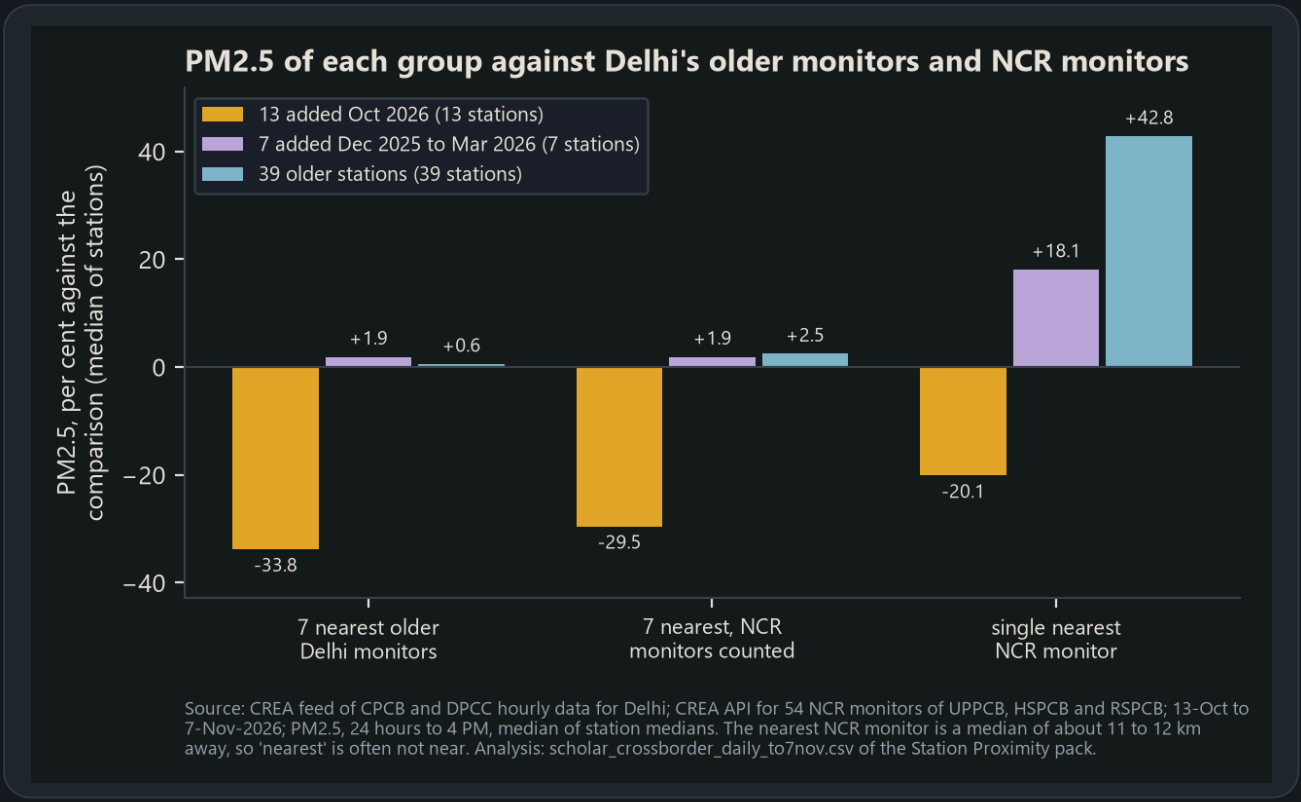
The median distance to the nearest NCR monitor is 11.9 km for the 13 and 11.85 km for the 7. From 21 October the 13 read 34.4, 27.9 and 8.3 per cent below on the three comparisons in the table, and the 7 read 5.0, 5.1 and 20.0 per cent above. Against the nearest NCR monitor, the 13's daily median on 4, 5, 6 and 7 November was 0.7 per cent below, 4.8 above, 13.2 above and 20.0 below. The 7 read 39.6, 33.1, 53.6 and 27.2 per cent above on those days.

The NCR monitors belong to other state boards (UPPCB, HSPCB and RSPCB). A cleaner reading there carries the same doubt about instruments as a cleaner reading at the 13. The nearest NCR monitor is often not near.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Method, data, the annex figures and the location annex




Counting NCR monitors as neighbours narrows the 13's PM2.5 gap from 33.8 to 29.5 per cent, on the median of station medians, and the nearest NCR monitor is a median 11.9 km away.

*Source for this annexure: CREA's feed of CPCB and DPCC hourly station data, and CPCB's daily AQI bulletins, both 1 December 2025 to 7 November 2026. The NCR figures come from CREA's public data service for 54 NCR monitors of UPPCB, HSPCB and RSPCB, read on 7 November 2026.*

## Annexure B. Location on the older network's map, which is not a test of closeness

This annexure is not a test of closeness. It asks what the older network's own readings predicted at each new site.

The older network's map here is a surface drawn each day from the 39 older stations. Each place on it is given a weighted average of the stations around it. It sees only what the 39 measured, and no part of this annexure measures how close a station is to anything.

## Readings part, map part and other additions

Each wave's effect on the city figure splits exactly into three parts. The readings part is the wave's share of the average times the difference between the wave and what the older network's map predicts at its sites. The map part is the share times the difference between that prediction and the 39's average. The third part is the effect of the other additions to the network.

Continues on the next page.

Source: calculated 7 November 2026, listed in full at the close of this chapter.

# Method, data, the annex figures and the location annex

| Wave and window | Effect | Readings part | Map part | Other additions |
|---|---|---|---|---|
| The 13, 13 Oct to 7 Nov | 11.67 | 13.70 | minus 1.16 | minus 0.87 |
| The 7, 13 Oct to 7 Nov (exploratory) | 1.40 | 2.00 | 1.13 | minus 1.72 |
| The 7, 3 Mar to 5 Oct 2026 (exploratory) | 3.04 | 1.65 | 1.40 | minus 0.01 |
| The 7, 1 Dec 2025 to 7 Nov 2026 (exploratory) | 2.42 | 1.41 | 1.15 | minus 0.14 |

By the older network's own map the 13 sites were not cleaner than the older average. The lowering lies in what the 13 record at their own sites. That may reflect a cleaner spot inside each compound, or a monitor that reads low, and these data cannot separate the two.

Over 3 March to 5 October, 1.4 of the 3.0 points lie in where the older network's map puts the 7 sites, and 1.6 in what the 7 record against that map. This is exploratory. The map part is negative on only 5 of 212 days in that window. The three parts add exactly on every day, with an error below 1e-13.

## What the older network read at the 7 sites before they reported (exploratory)

The 39's map predicted the 7 sites at 5.0 per cent below the city average in October to December 2025 (random-place p 0.014), and 6.0 per cent below in September 2026 (p 0.070). For the 13 sites the predictions were 0.2 per cent above and 0.7 per cent below. This is exploratory, a lead and not a finding. The data cannot show why any site was chosen.

*Source: CREA's feed of CPCB and DPCC hourly station data and its station table, 1 October 2025 to 7 November 2026; calculated on 7 November 2026.*

**READING** The reconstruction tracked CPCB's bulletin within 1.01 points on average over 67 days. By the older network's own map the 13 sites were not cleaner than the older average.

**CAUTION** The H09 count on the documented formula is not capped at 500, which CPCB's published figure is. The location annex is not a test of closeness, and its results for the 7 are exploratory.

**SOURCE** CREA's feed of CPCB and DPCC hourly station data and its station table, 1 October 2025 to 7 November 2026, and CPCB's daily AQI bulletins, 1 September to 7 November 2026. The NCR figures come from CREA's public data service for 54 NCR monitors of UPPCB, HSPCB and RSPCB, read on 7 November 2026.

**THE POINT**

**Every figure was checked by an independent statistical reading, and the lowering by the 13 lies in what they record at their own sites.**