

Clarity Data Graphs

In response to a request from a Steering Committee member, the District is providing graphs of the data collected from the 20 Clarity low-cost sensors that have been installed for the Phase 1 monitoring the South Sacramento – Florin Community. These graphs show the fine particulate matter (PM_{2.5}) or nitrogen dioxide (NO₂) concentrations from each Clarity monitor from July 1, 2019 to January 31, 2020. The monitor locations are shown in Figure 1, and monitor names are listed in Table 1.

Draft Clarity PM_{2.5} Data Graphs

The PM_{2.5} concentration is shown in micrograms per cubic meter (µg/m³). The daily average concentration is used because it is the averaging period which has an established federal 24-hour PM_{2.5} standard of 35 µg/m³. Note that low cost sensors, like Clarity, are screening tools, and they are not used to determine compliance with the federal standards. The colored background of the graph shows the Air Quality Index (AQI) for PM_{2.5}. The AQI range and meaning are described in Table 2.

Draft Clarity NO₂ Data Graph

The District has included a graph of the average NO₂ concentration by hour of day for each Clarity with a NO₂ sensor. The data show a clear diurnal pattern for individual monitors. The District does not know that the concentrations reported by the NO₂ sensors are representative of actual NO₂ concentrations in the community. The District and other experts understand low-cost NO₂ sensors are developing technologies and do not produce reliable results on a consistent basis. The District is working with Clarity to understand how to use the data being collected going forward.

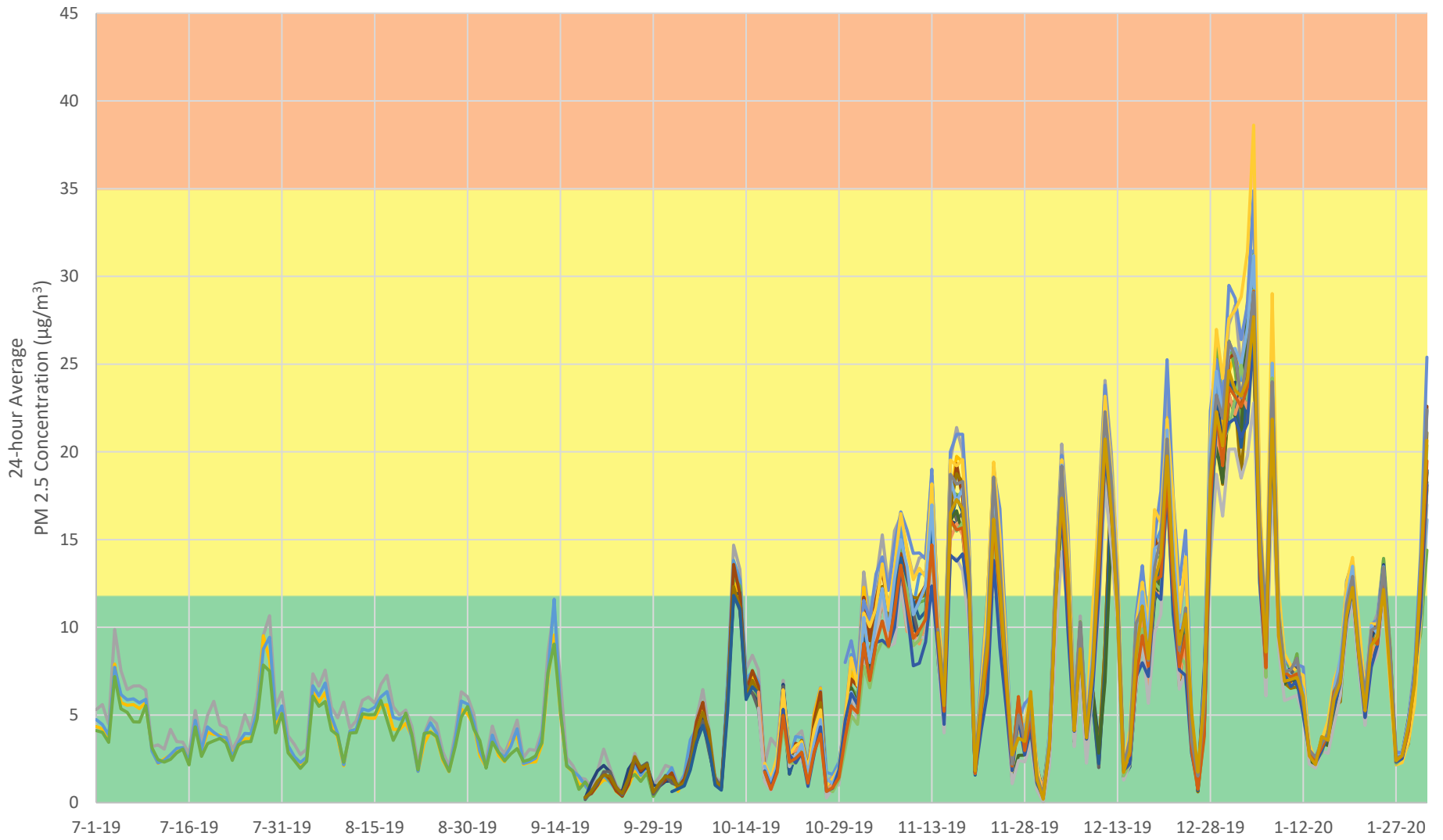
Table 1 – Low-cost Sensor Locations

Label	Location	Nickname
1	Bowling Green Park	Bowling Green
3	Nicholas Park	Nicholas
4	Sacramento County Sheriff Service Center	Sheriff Center
5	Mack Road Partnership	Mack Partnership
6	Florin Elementary School	Florin ES
7	Nicholas Elementary School	Nicholas ES
8	Isabelle Jackson Elementary School	Isabelle Jackson ES
9	Bowling Green Elementary School	Bowling Green ES
10	District Council 16 Tapers and Glazers Union Hall	District Council 16
11	David Reese Elementary School	David Reese ES
12	Parkway Swim Club	Parkway Swim
13	Elk Grove Adult and Community Education	Adult Education
14	Camellia Elementary School	Camellia ES
15	Mack Road Valley Hi Community Center	Valley Hi Community Center
16	Valley High School	Valley HS
18	Irene B West Elementary School	Irene B West ES
19	Raymond Case Elementary School	Raymond Case ES
20	Herman Leimbach Elementary School	Herman Leimbach ES
21	Countryside Community Park	Countryside Park
22	Southgate Library	Southgate Library

Table 2 – AQI – PM_{2.5}

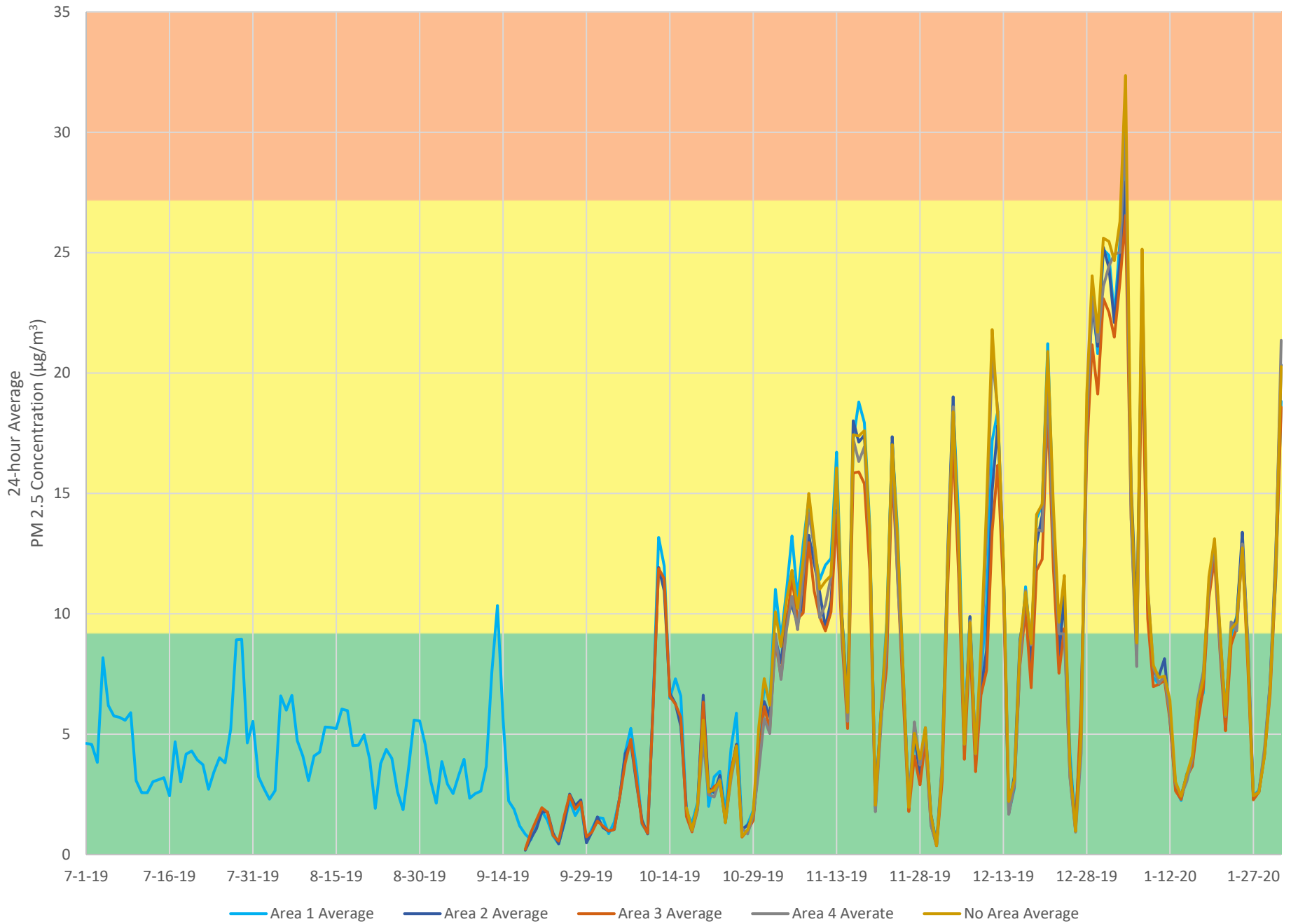
AQI	Concentration (µg/m ³)	Color	Descriptor	Meaning
301 to 500	>250.5	Maroon	Hazardous	Health warnings of emergency conditions. The entire population is more likely to be affected.
201 to 300	150.5 to 250.4	Purple	Very Unhealthy	Health alert: everyone may experience more serious health effects.
151 to 200	55.5 to 150.4	Red	Unhealthy	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
101 to 150	35.5 to 55.4	Orange	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
51 to 100	12.1 to 35.4	Yellow	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
0 to 50	0 to 12	Green	Good	Air quality is considered satisfactory, and air pollution poses little or no risk.

Draft Clarity PM_{2.5} Concentrations - All Clarities

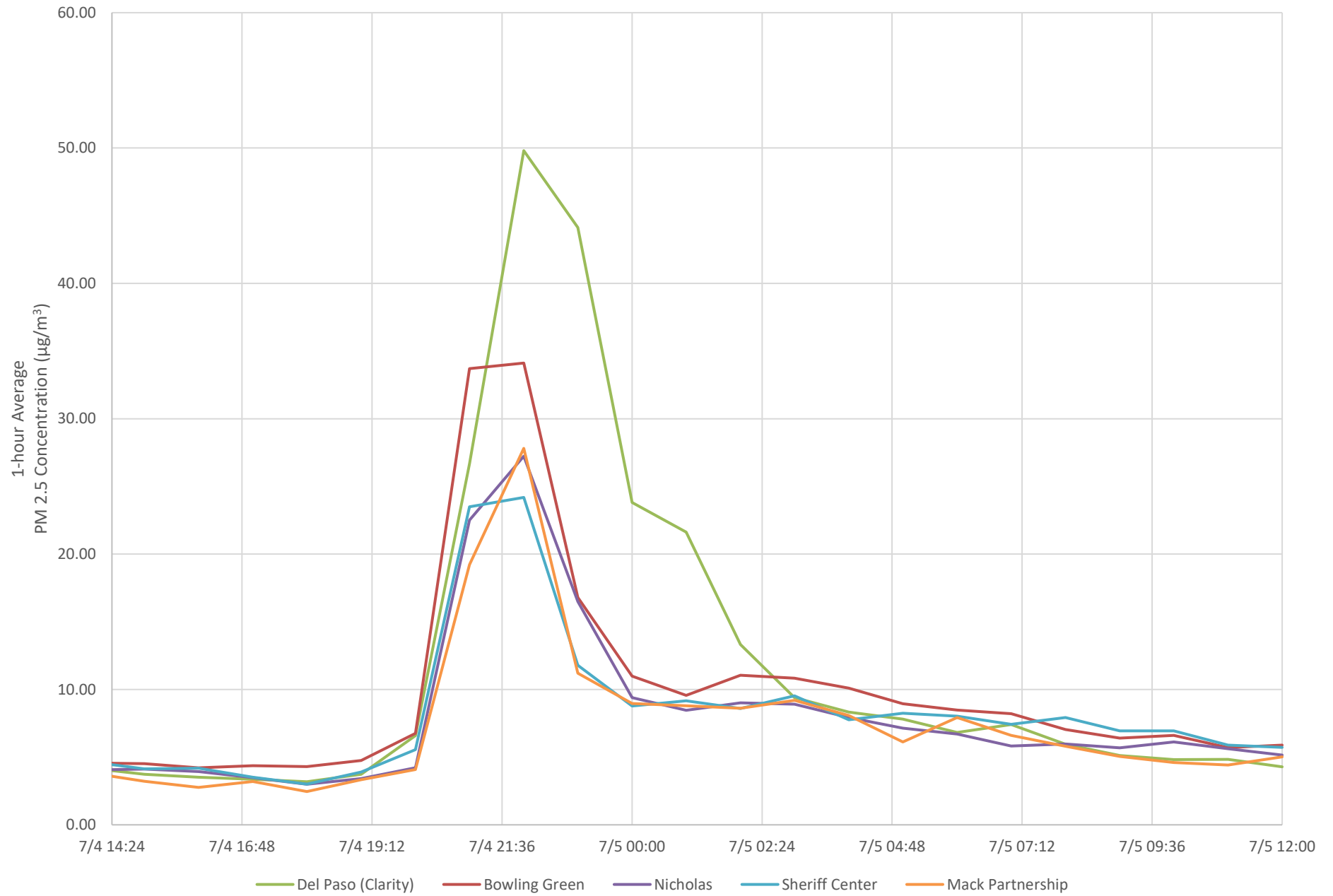


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|-------------------|-----------------------|----------------------|------------------------------|---------------------|
| — Bowling Green | — Nicholas | — Sheriff Center | — Mack Partnership | — Florin ES |
| — Nicholas ES | — Isabelle Jackson ES | — Bowling Green ES | — District Council 16 | — David Reese ES |
| — Parkway Swim | — Adult Education | — Camellia ES | — Valley Hi Community Center | — Valley HS |
| — Irene B West ES | — Raymond Case ES | — Herman Leimbach ES | — Countryside Park | — Southgate Library |

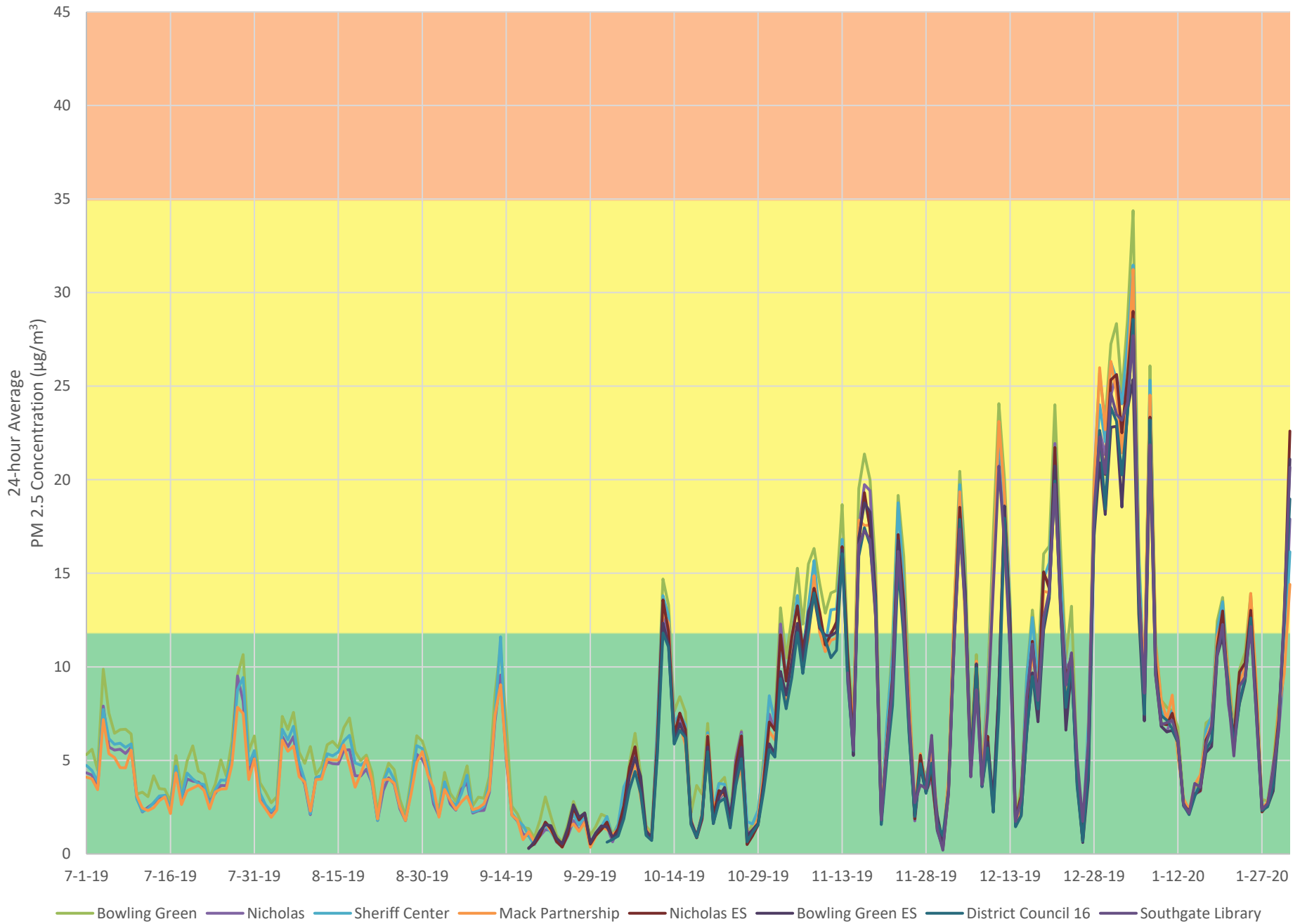
Draft Clarity PM_{2.5} Concentrations - Area Averages



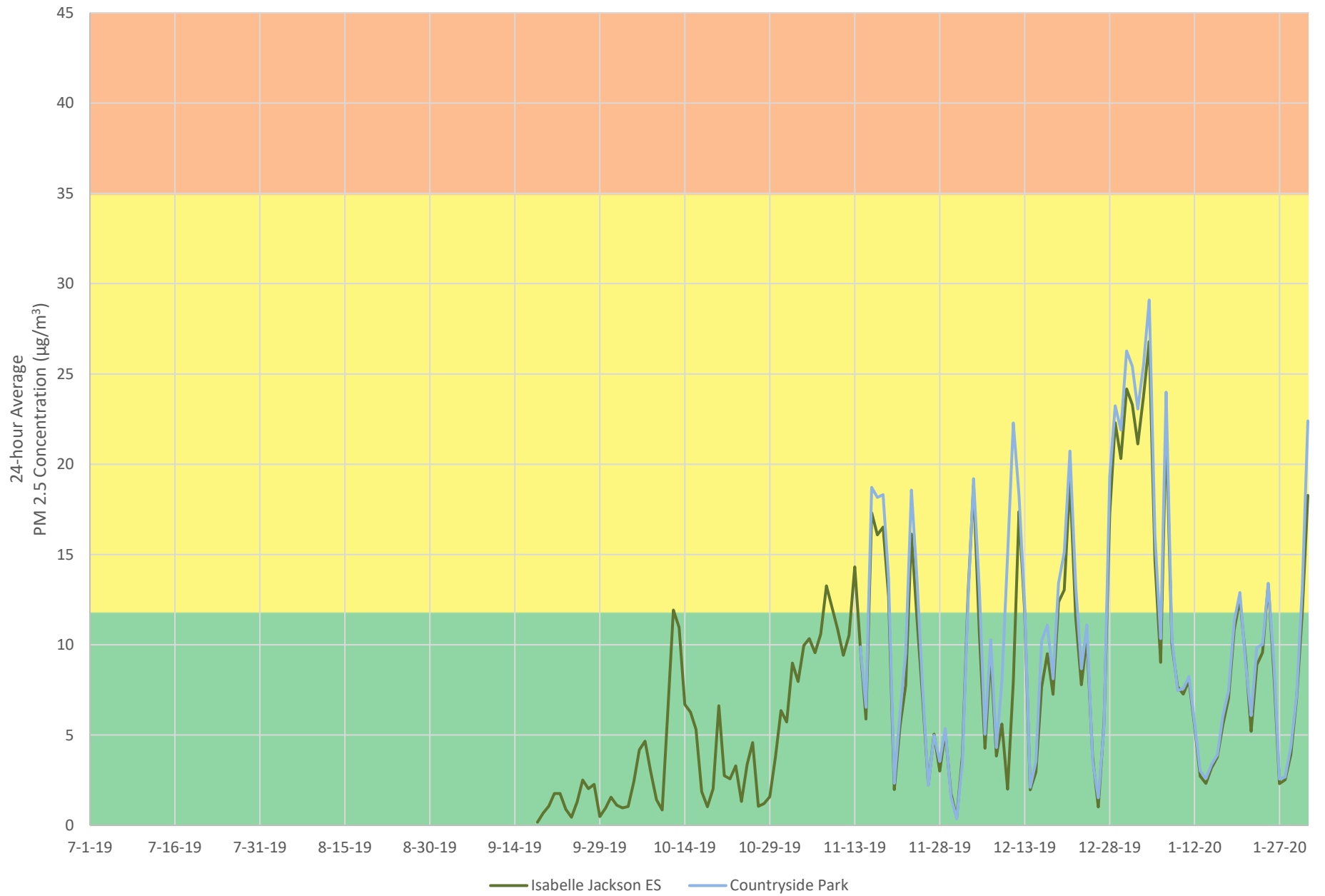
Draft Clarity Data - 4th of July Event



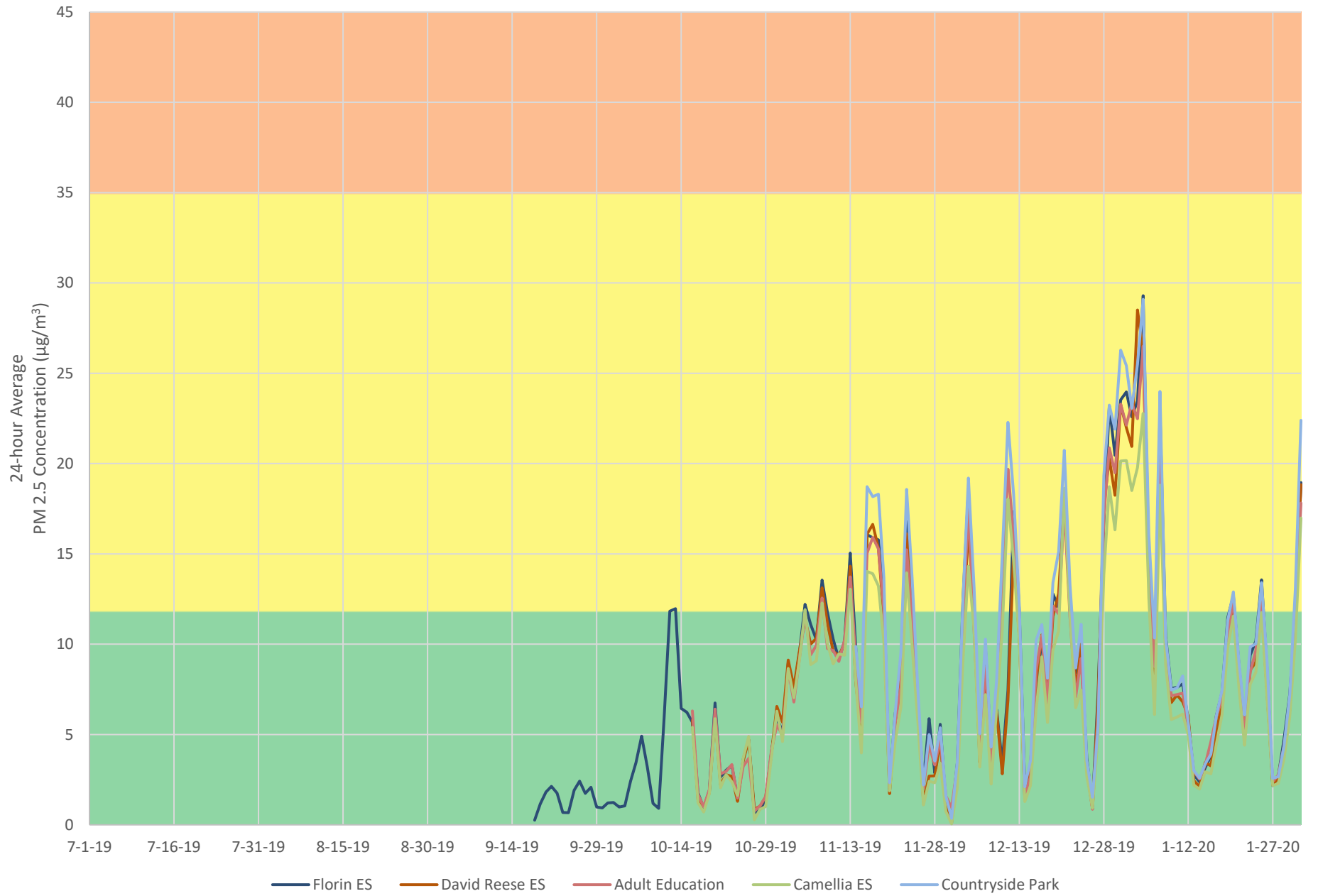
Draft Clarity PM_{2.5} Concentrations - Area 1



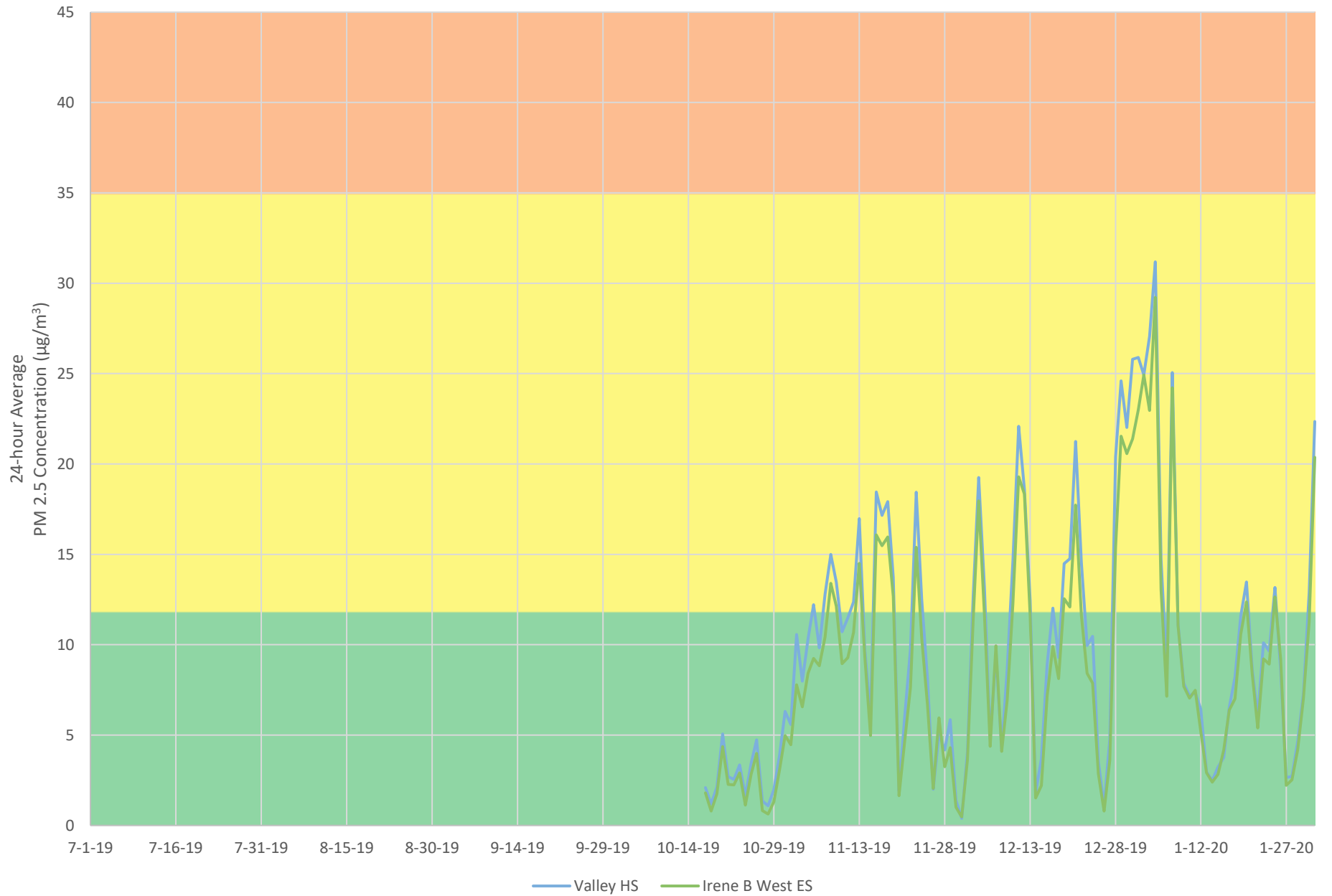
Draft Clarity PM_{2.5} Concentrations - Area 2



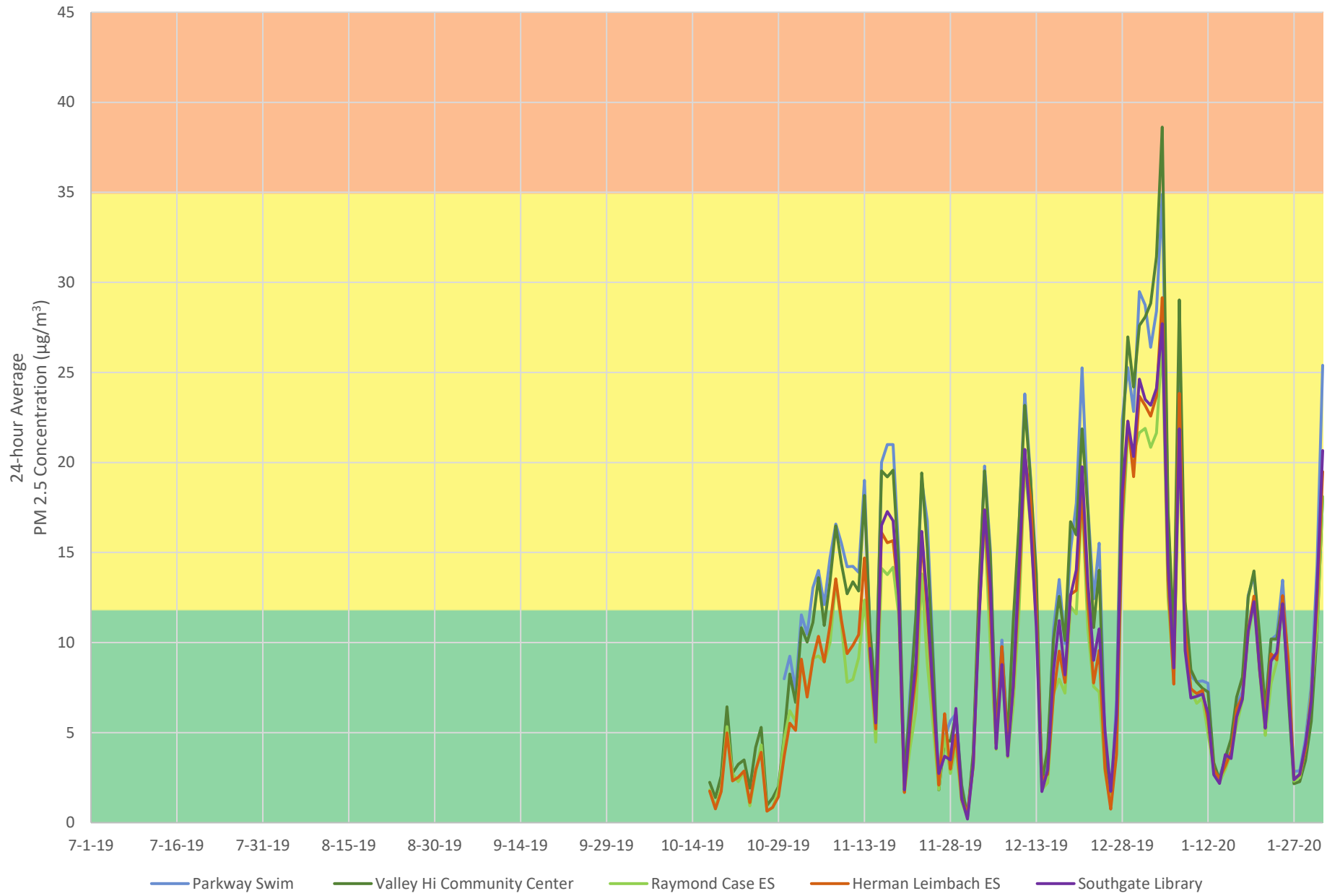
Draft Clarity PM_{2.5} Concentrations - Area 3



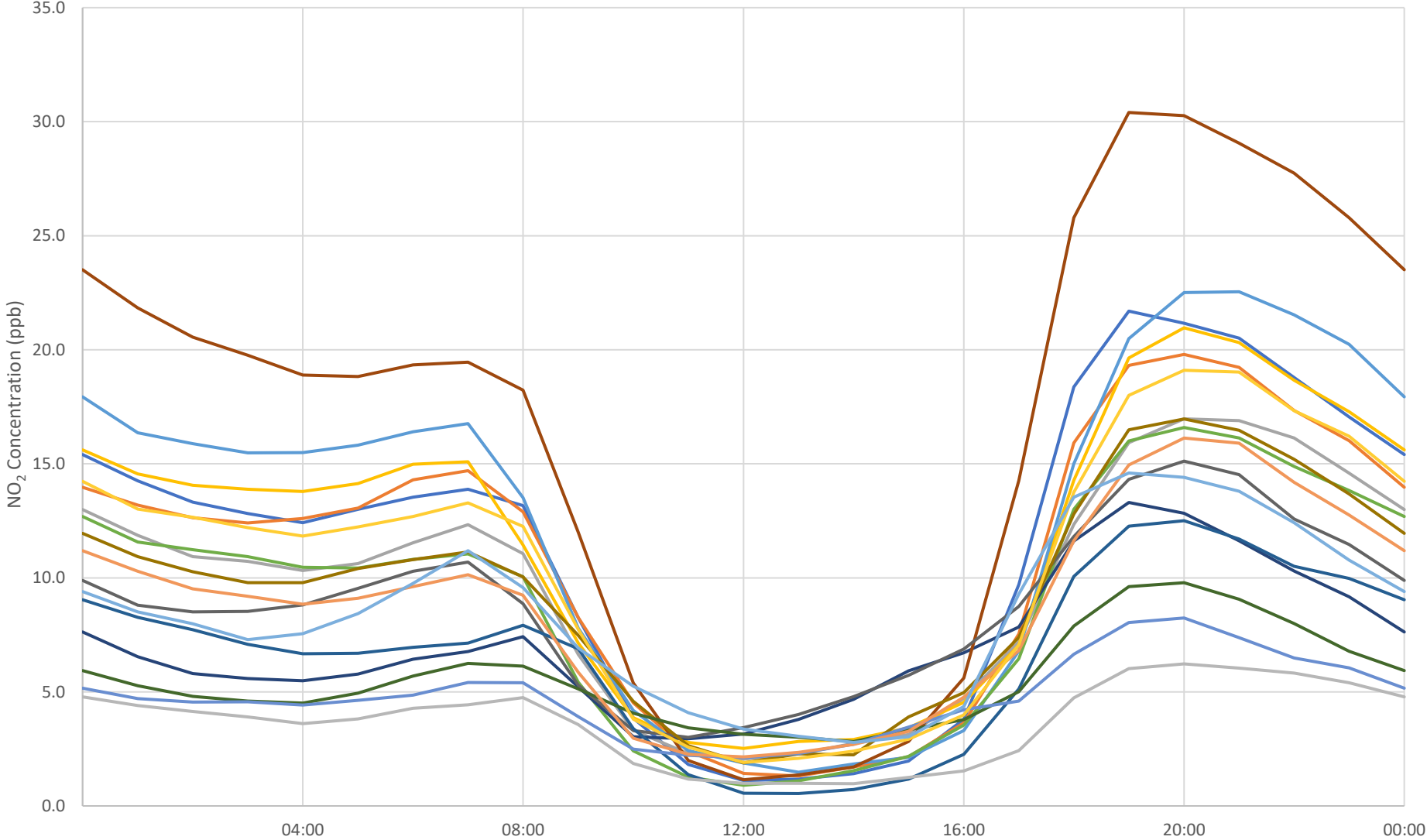
Draft Clarity PM_{2.5} Concentrations - Area 4



Draft Clarity PM_{2.5} Concentrations - Not Priority Area



Daft Clarity NO₂ Concentration by Hour of Day - All Clarities



- Valley Hi Community Center
- Camellia ES
- Countryside Park
- David Reese ES
- Adult Education
- Herman Leimbach ES
- Bowling Green ES
- DPM
- Valley HS
- Nicholas ES
- Isabelle Jackson ES
- Parkway Swim
- Florin ES
- District Council 16
- Raymond Case ES
- Irene B West ES
- Southgate Library