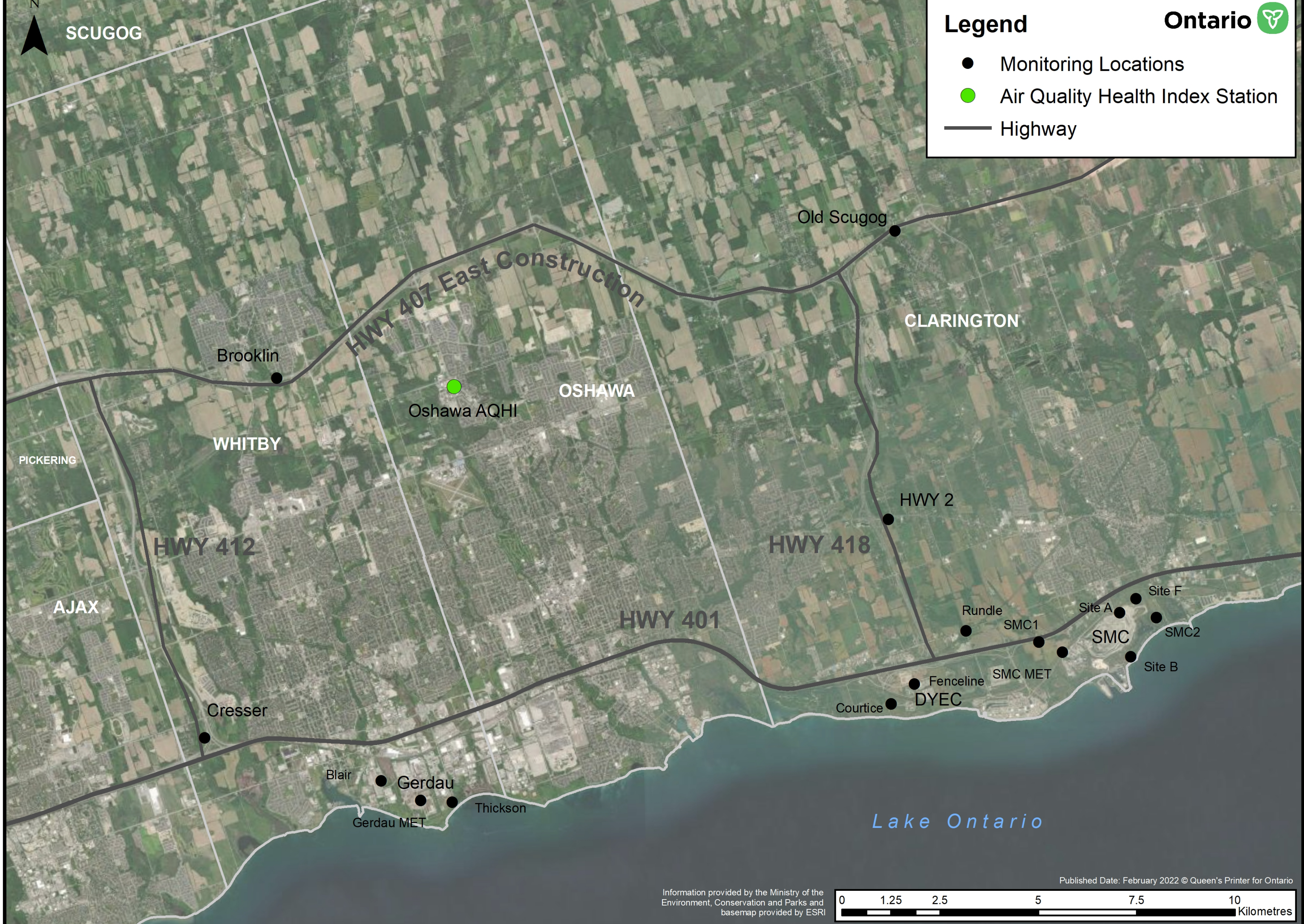


Background

- The ministry has completed an analysis of available air quality data to assess possible trends, sources, or patterns, and to provide an overview of the general ambient air quality throughout the Municipality of Clarington.
- The analysis included data from the years 2013 to 2020 collected from various air monitoring stations operating throughout Durham Region and the Province and included government operated stations as well as stakeholder operated stations near Durham York Energy Centre (DYEC), St. Marys Cement (SMC), Gerdau Ameristeel, and the Highway 407 East Construction.



Pollutants Measured

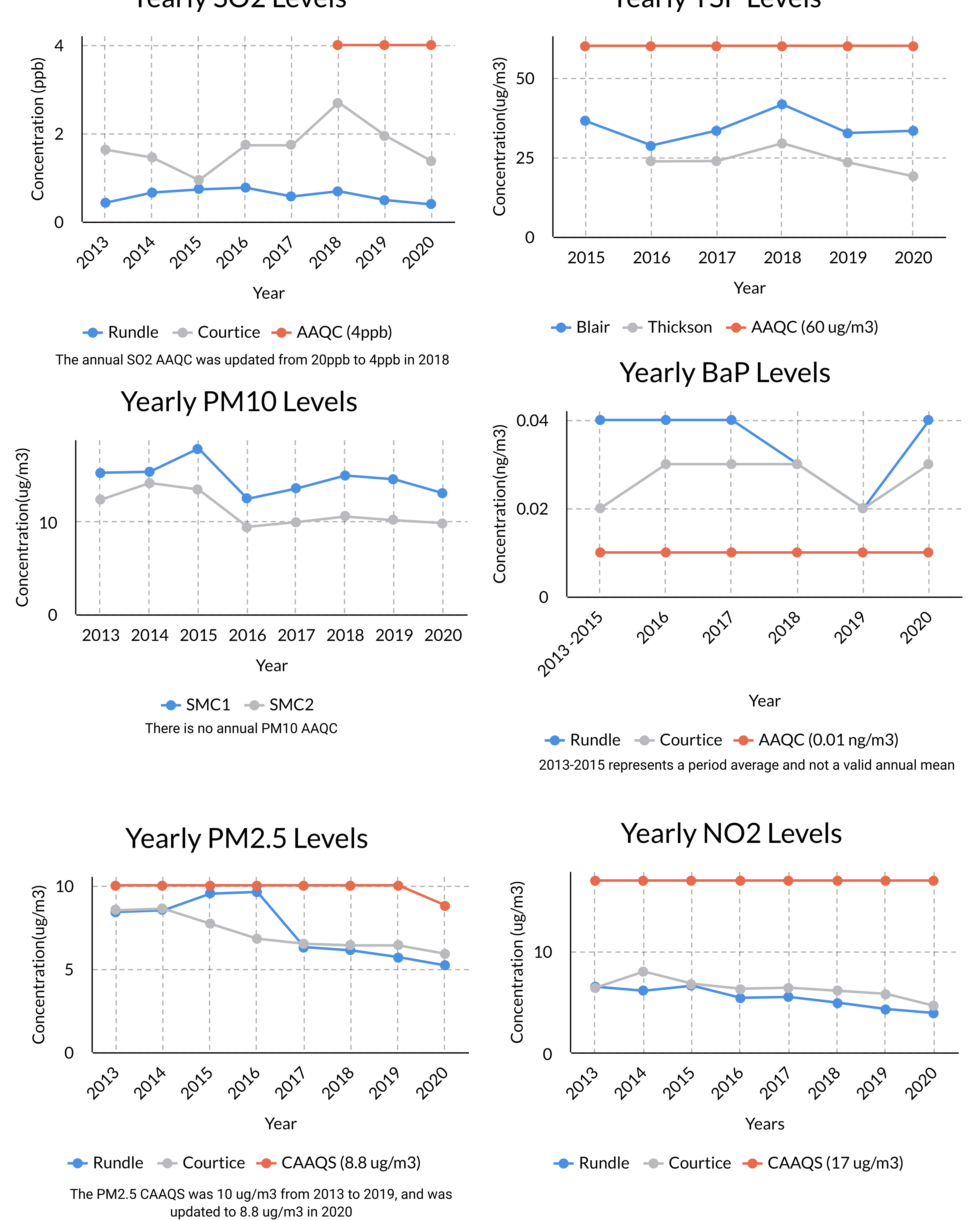
- Sulphur dioxide (SO2)
- Nitrogen dioxide (NO2)
- Particulate matter less than 2.5 µm and 10 µm in diameter (PM2.5 and PM10)
- Total suspended particulate (TSP)
- Ten Metals
- Benzo(a)pyrene as a representative of total Polycyclic Aromatic Hydrocarbons (PAHs)
- Dioxins and Furans (D/F)

Pollutants were compared to Ontario's Ambient Air Quality Criteria (AAQC) or Canadian Ambient Air Quality Standards (CAAQS) where applicable. AAQC and CAAQS are air quality levels for pollutant concentrations that aim to be protective of health and the environment.

Key Results

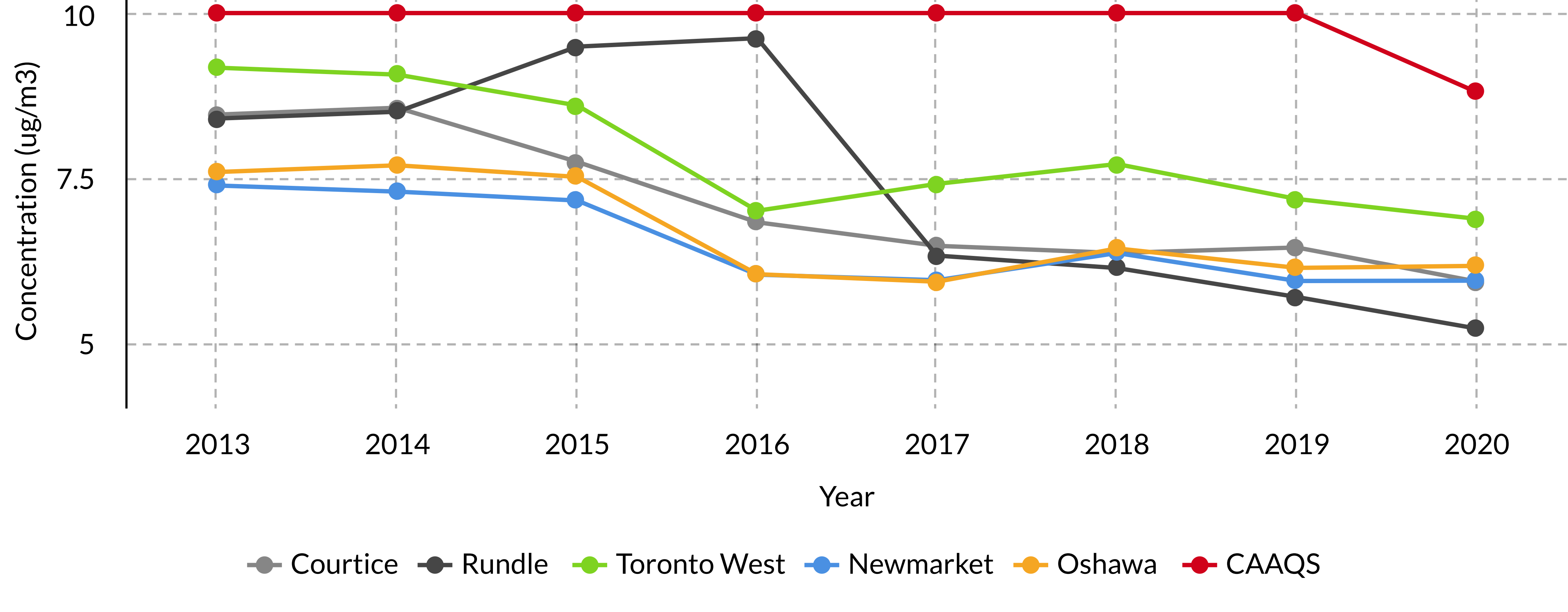
- The analysis shows that air quality in Durham Region, with its range of urban and rural communities, was comparable to similar communities across southern Ontario.
- Findings show that the pollutants monitored were all below their respective annual AAQCs or similar benchmark values, except for benzo(a)pyrene (BaP).
- Similar to other communities in Ontario, BaP annual means were typically above Ontario's AAQC. Residential wood burning, traffic and diesel engine combustion are common sources of BaP.
- The findings showed SO2 levels were below the annual AAQC, and levels have been decreasing since 2018.
- Decreases in annual NO2 and fine particulate matter (PM2.5, PM10) levels were observed in the analysis; this is similar to air quality trends previously reported in the 2018 Air Quality Report in Ontario.
- A broad range of activities contribute to local air quality in Durham Region including industrial, construction, residential, commercial, agricultural, transportation, and transboundary sources. Monitoring stations can be influenced by all sources in the area, and can vary from year to year. No single dominant source was identified.

Changes in Pollutant Levels Monitored from 2013 to 2020



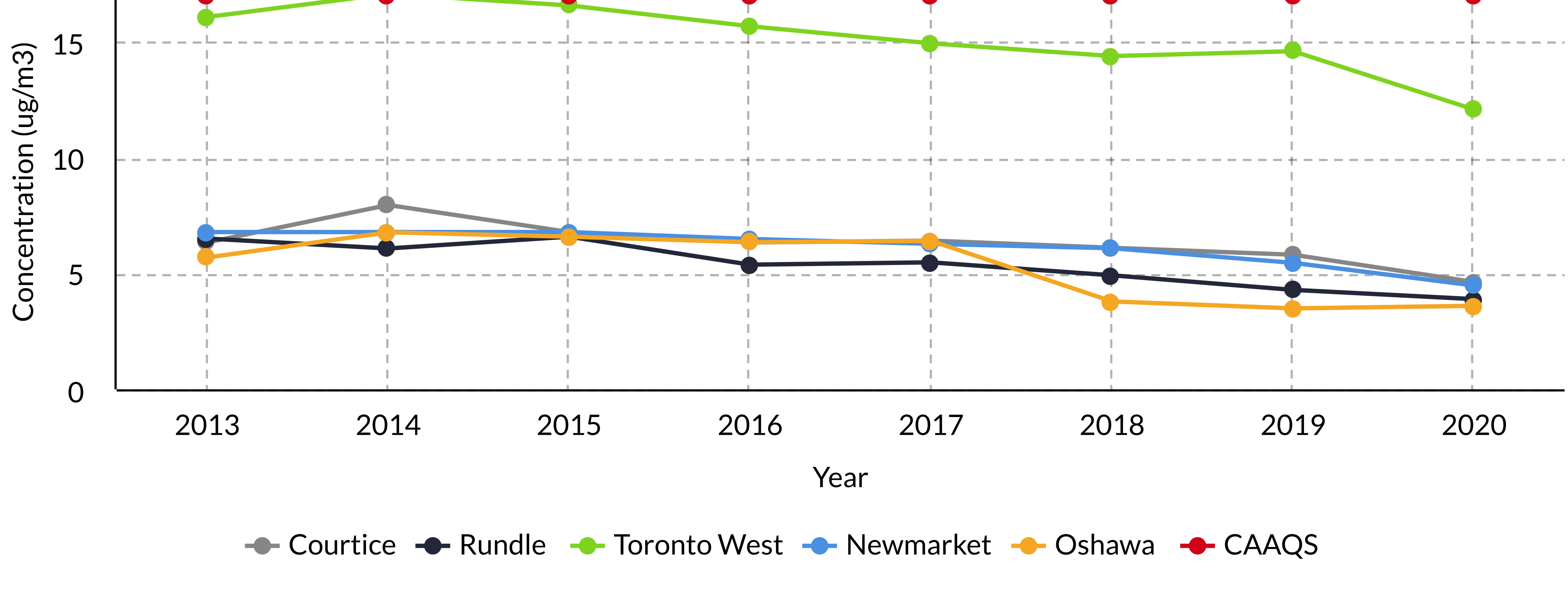
Fine Particulate Matter

Yearly PM2.5 Levels at Multiple Stations



Nitrogen Dioxide

Yearly NO2 Levels at Multiple Stations



- Annual NO2 and PM2.5 levels are below their respective CAAQS indicators from 2013 to 2020.
- Depending upon the station, NO2 levels have generally decreased since 2013.
- Depending upon the station, PM2.5 levels have generally decreased since 2013.