

Ambient Air Monitoring Network

- ◆ MPCA maintains statewide network of air quality monitors
- ◆ Used to show compliance with air standards
- ◆ Four monitors around the refinery – the most for any facility in the state



Annual Air Monitoring Network Plan for
Minnesota

2014



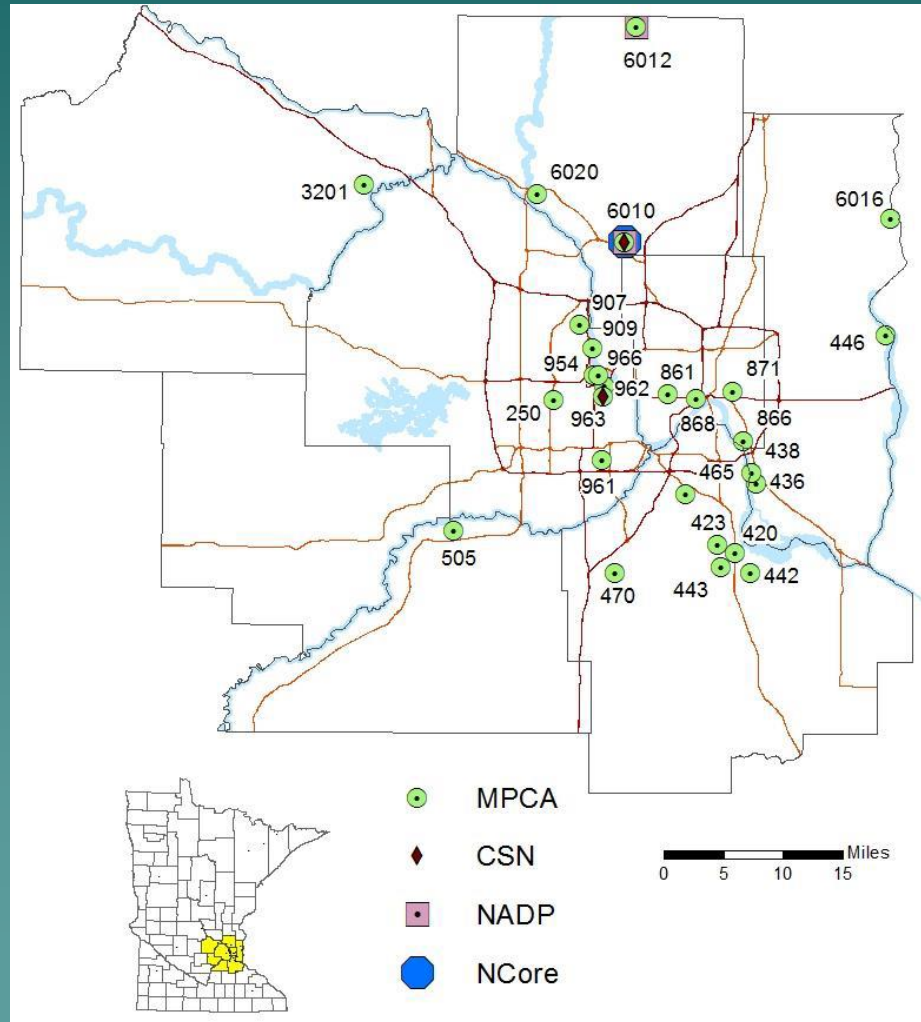
Minnesota Pollution
Control Agency

Air Pollutants

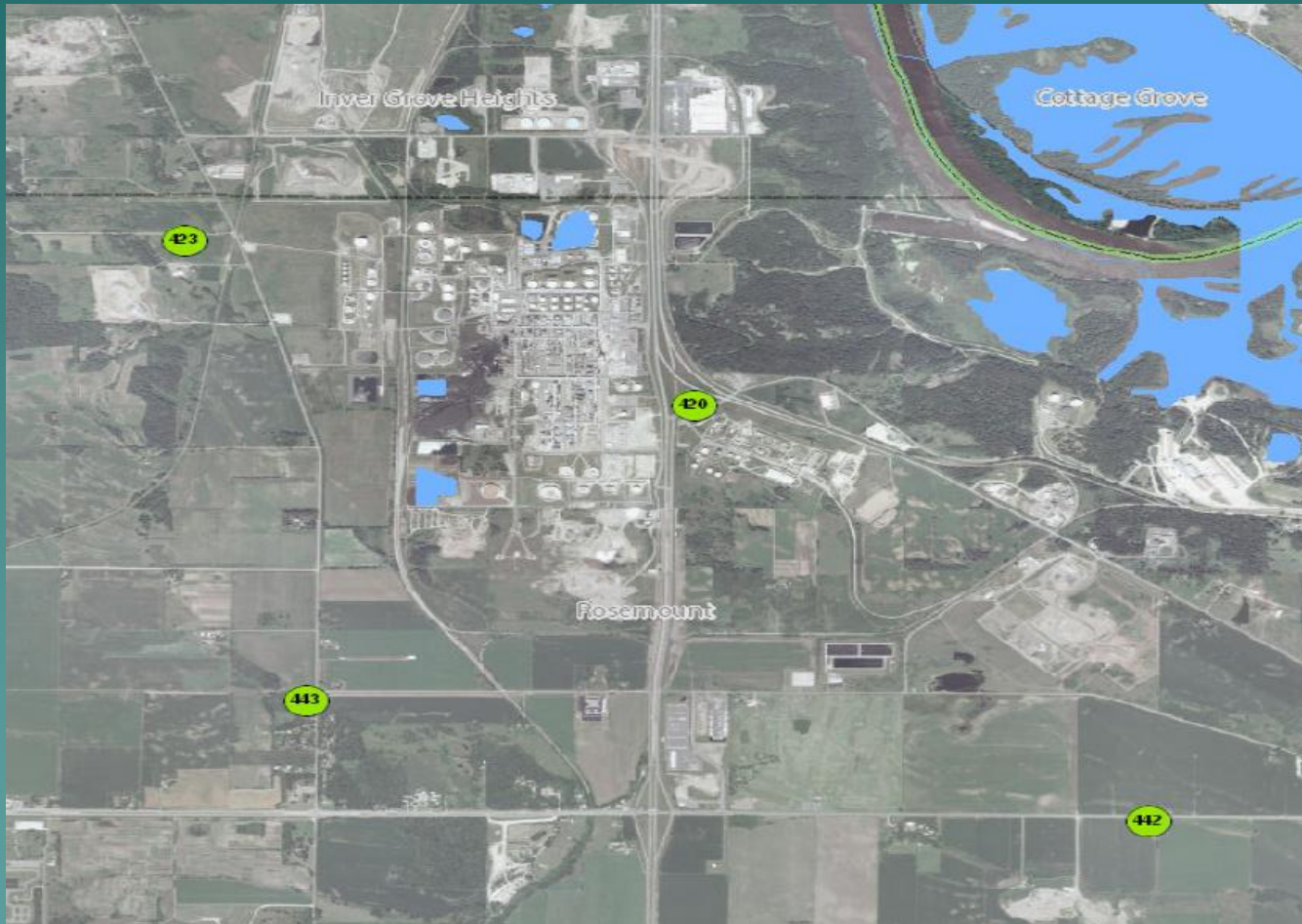
◆ Types of Emissions

- Traditional Criteria Pollutants (non-greenhouse gas)
 - ◆ VOC (volatile organic compounds)
 - ◆ CO (carbon monoxide)
 - ◆ NOX (nitrogen oxides)
 - ◆ SO₂ (sulfur dioxide)
 - ◆ Particulates - PM/PM₁₀/PM_{2.5}
- Greenhouse Gas or GHG (CO₂, methane)
- Air Toxics e.g. benzene, chromium

Twin Cities Metro Area Monitor Locations



Site 420, 423, 442, and 443, and the Flint Hills Refinery (FHR)

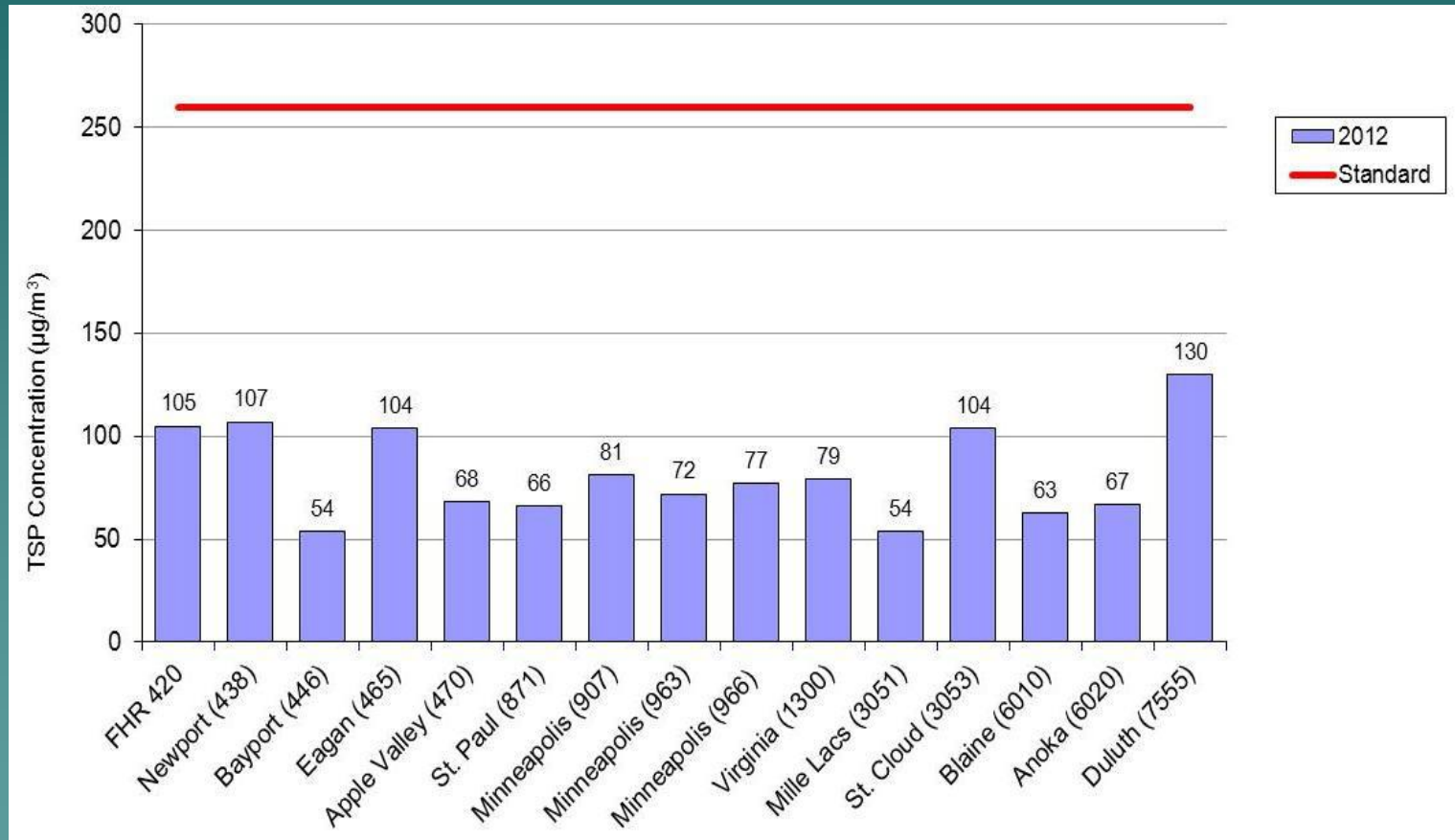


Air Quality Standards – ‘NAAQS’

- ◆ Stds set for NO_x, SO₂, CO, Fine Particles, Ozone
- ◆ Set by EPA to protect the air we all breathe.

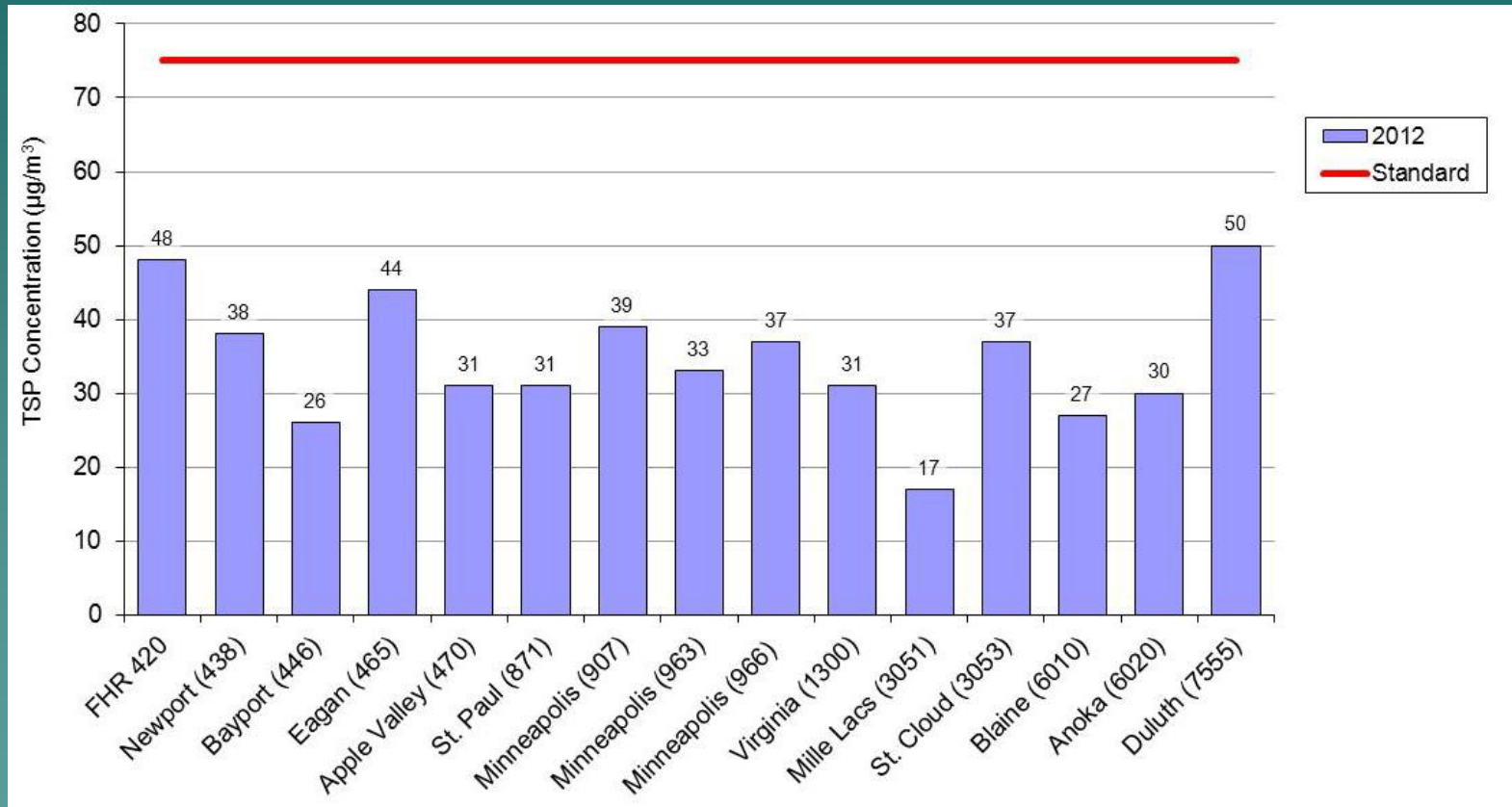
MPCA Air Quality Report

24-hour Average TSP Concentration



MPCA Air Quality Report

Annual Average TSP Concentration



Source – 2014 Annual Air Monitoring Networking Plan for Minnesota

Total Refinery Emissions Trend

