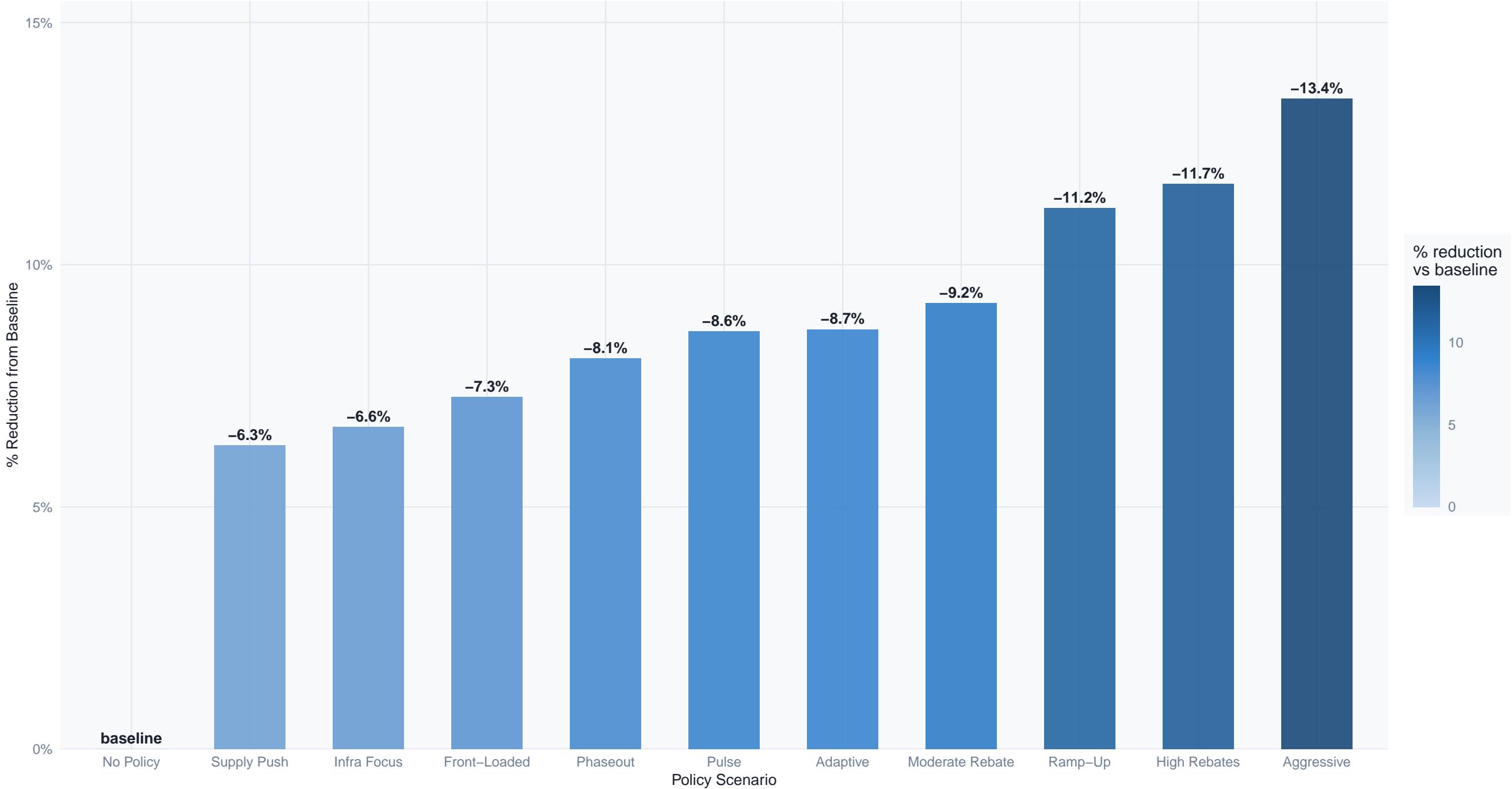


PM2.5 AV Scenarios – Year 30

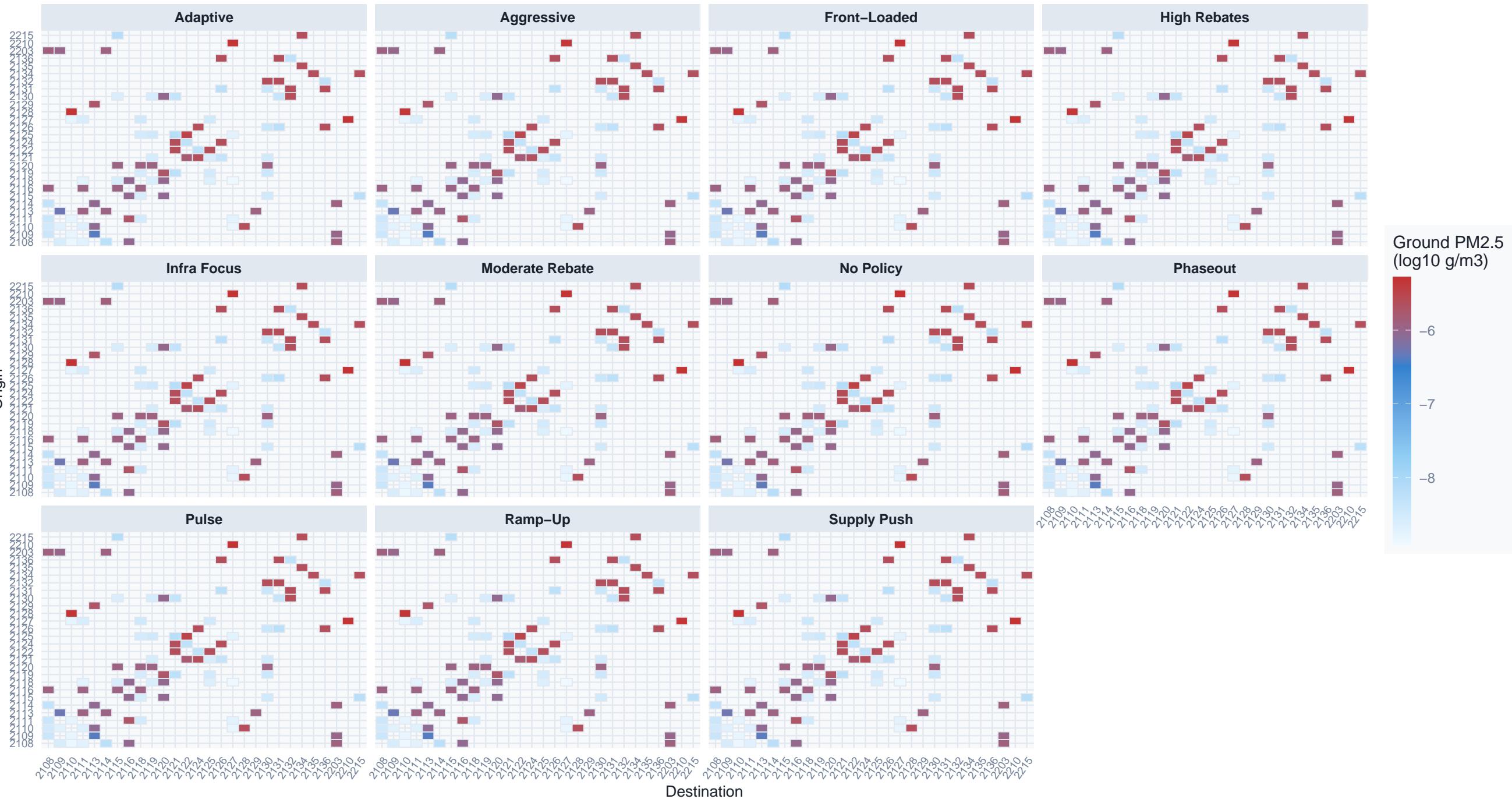
Total Network Emission Rate by Policy Scenario

Sum of E_eff across all active flow corridors; % reduction vs baseline scenario



Ground-Level Peak PM2.5 by Flow Pair

Each cell = one origin–destination corridor, color = peak ground concentration

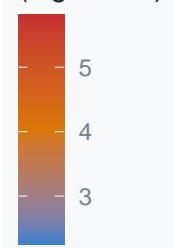


PM2.5 Reduction by Corridor vs Baseline

Each point = one flow pair; x = distance, y = % reduction in ground-level PM2.5



Volume
(log10 veh)



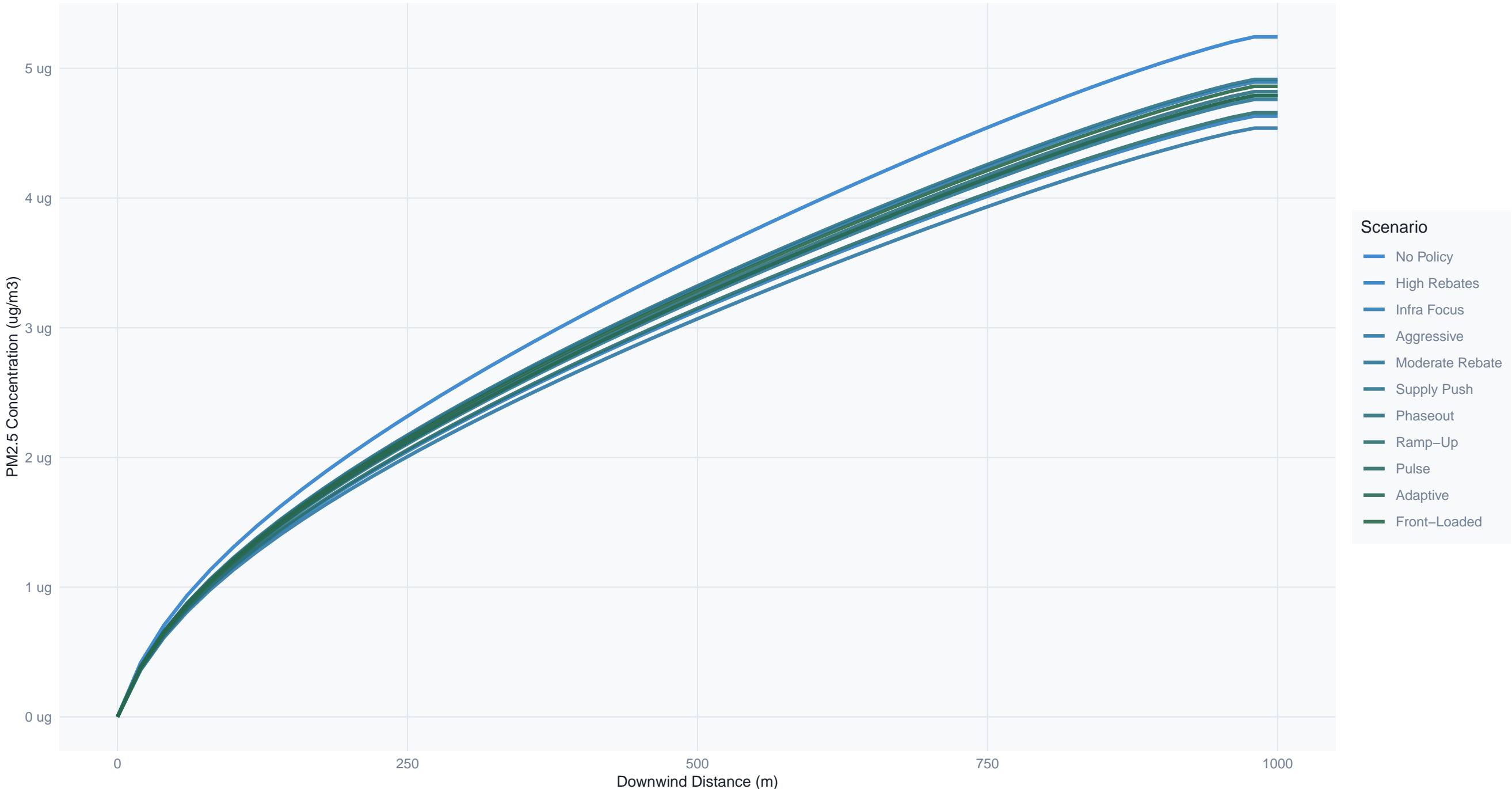
PM2.5 Plume – Busiest Corridor (2127 – 2210)

659,690 vehicles/month, 1.4 km



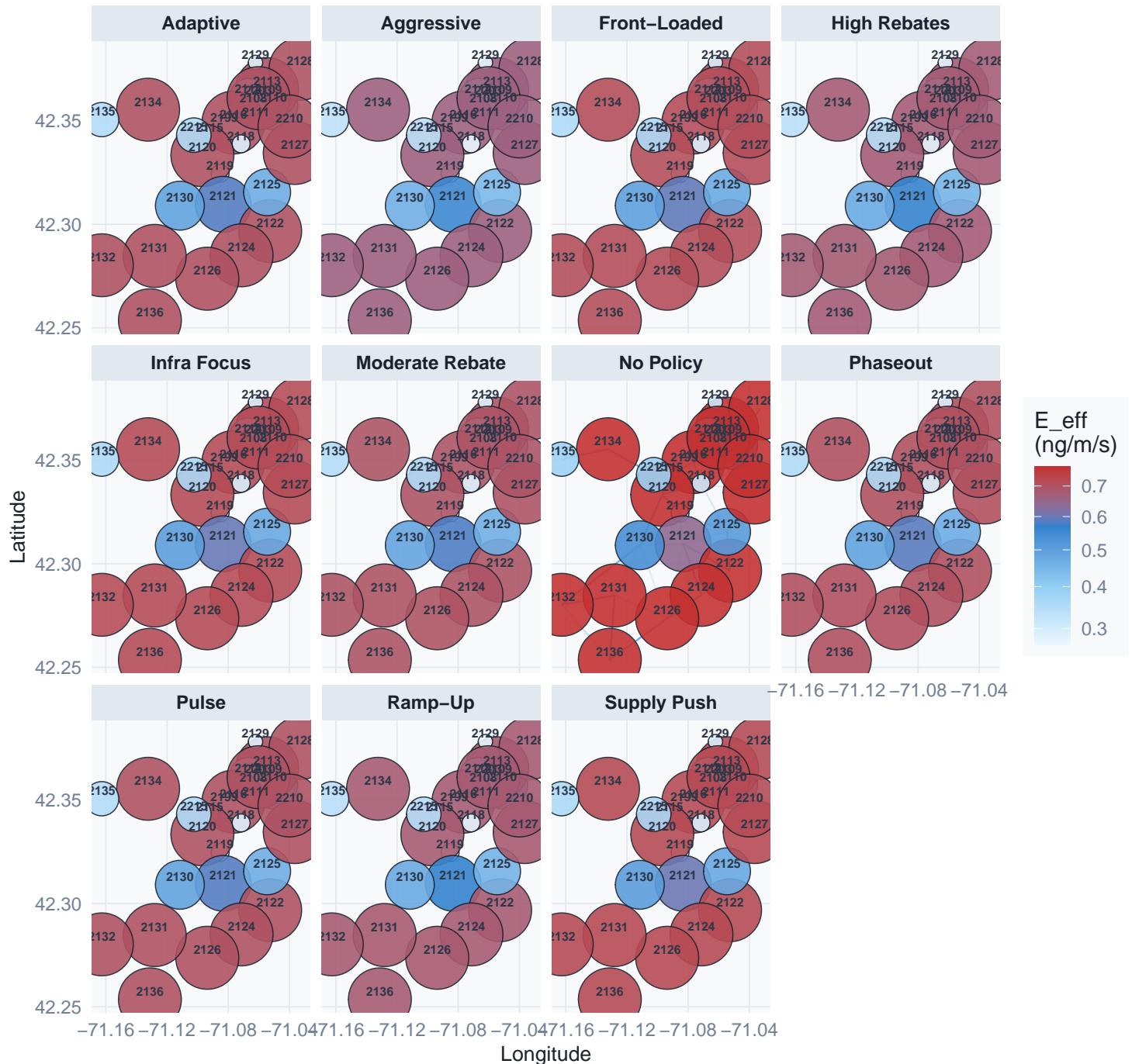
Ground-Level PM2.5 Profile – 2127 – 2210

Concentration along downwind axis at $z = 0$ (street level), converted to $\mu\text{g}/\text{m}^3$



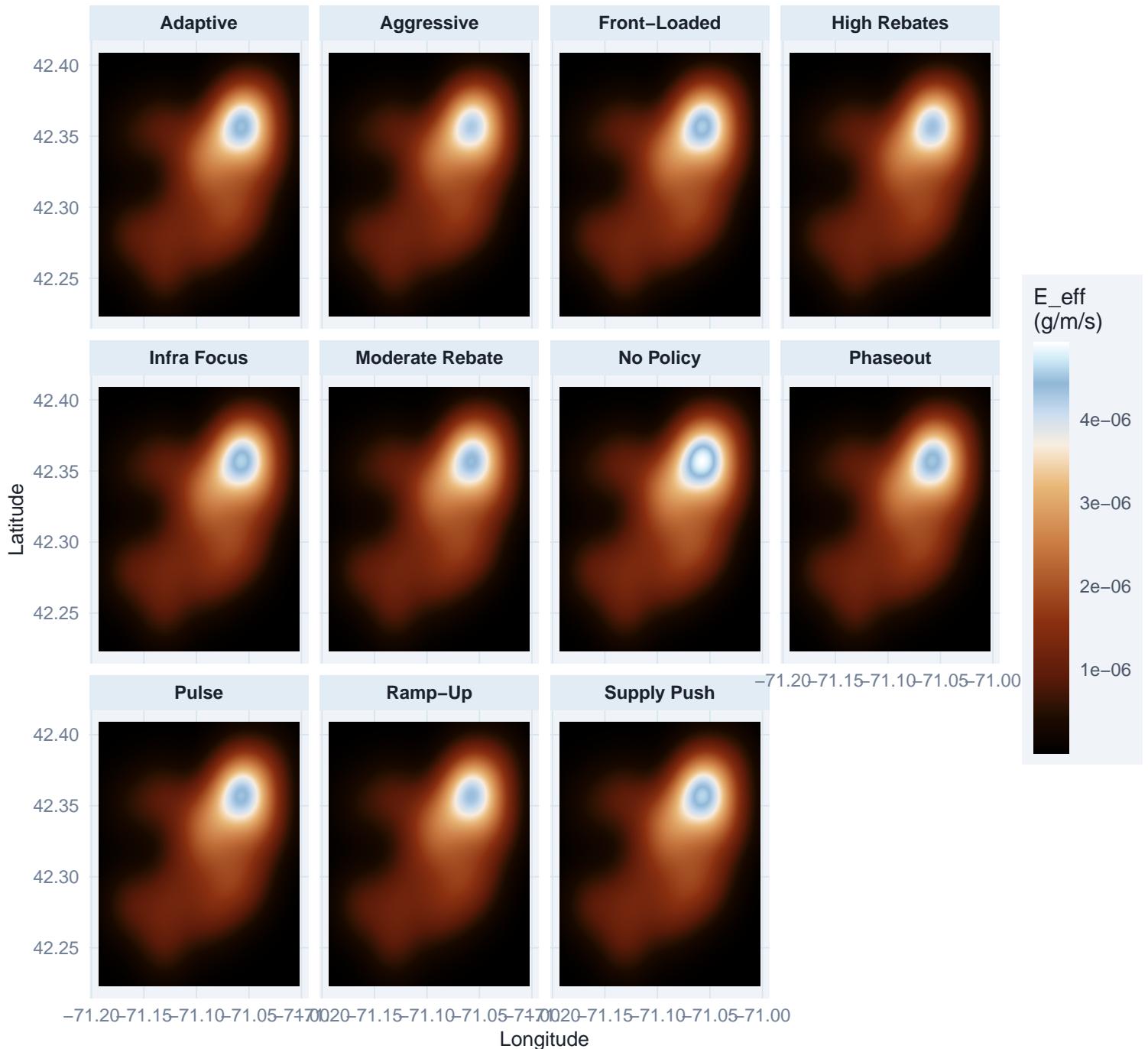
Spatial Distribution of PM2.5 Emission Burden

Node size = outbound vehicle volume, color = total emission rate



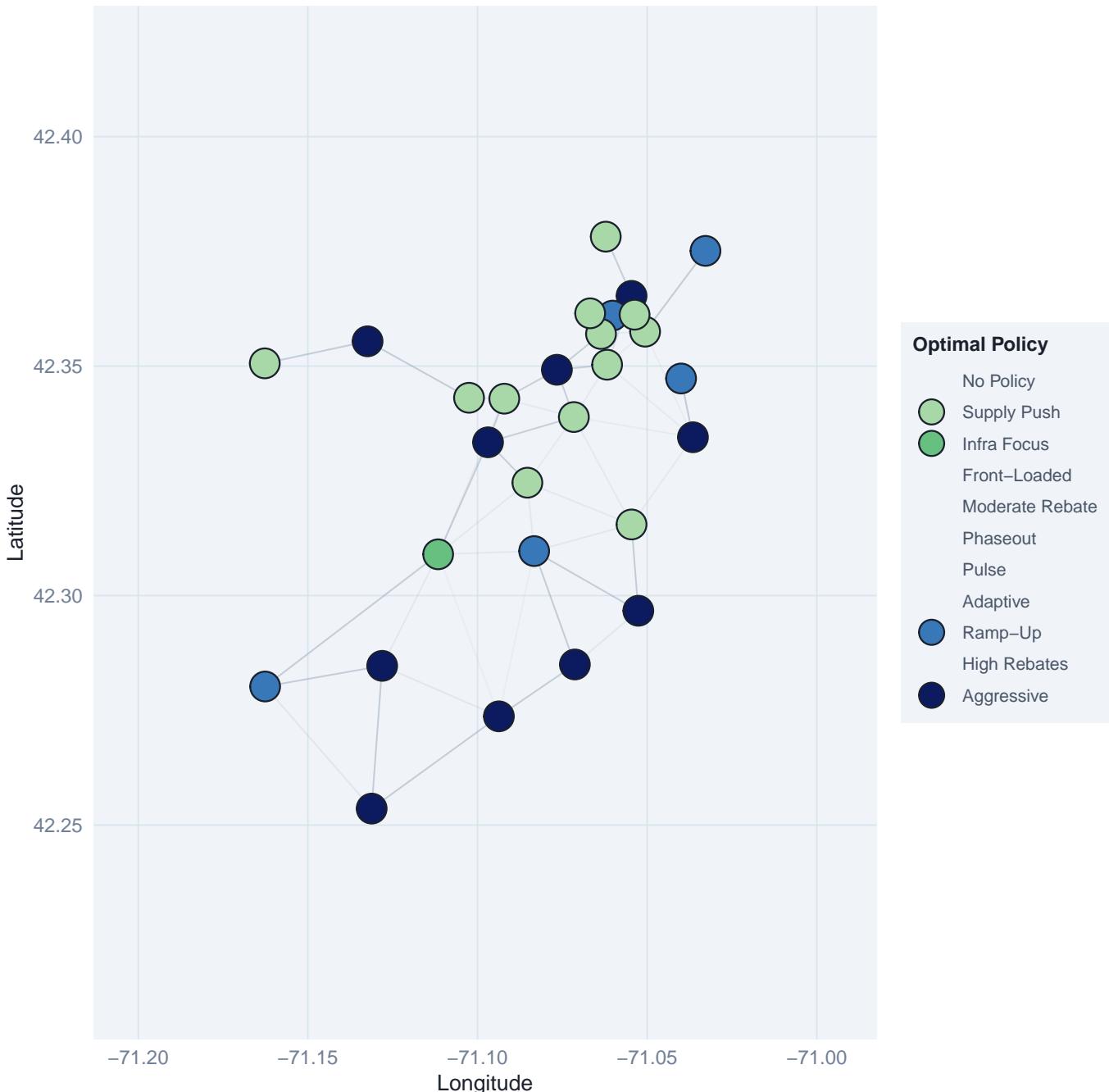
Spatial Distribution of PM2.5 Emission Burden (Absolute)

Gaussian emission surface per zone, warmer color = more pollution



Budget–Optimal Policy per Node (\$5.0B cap)

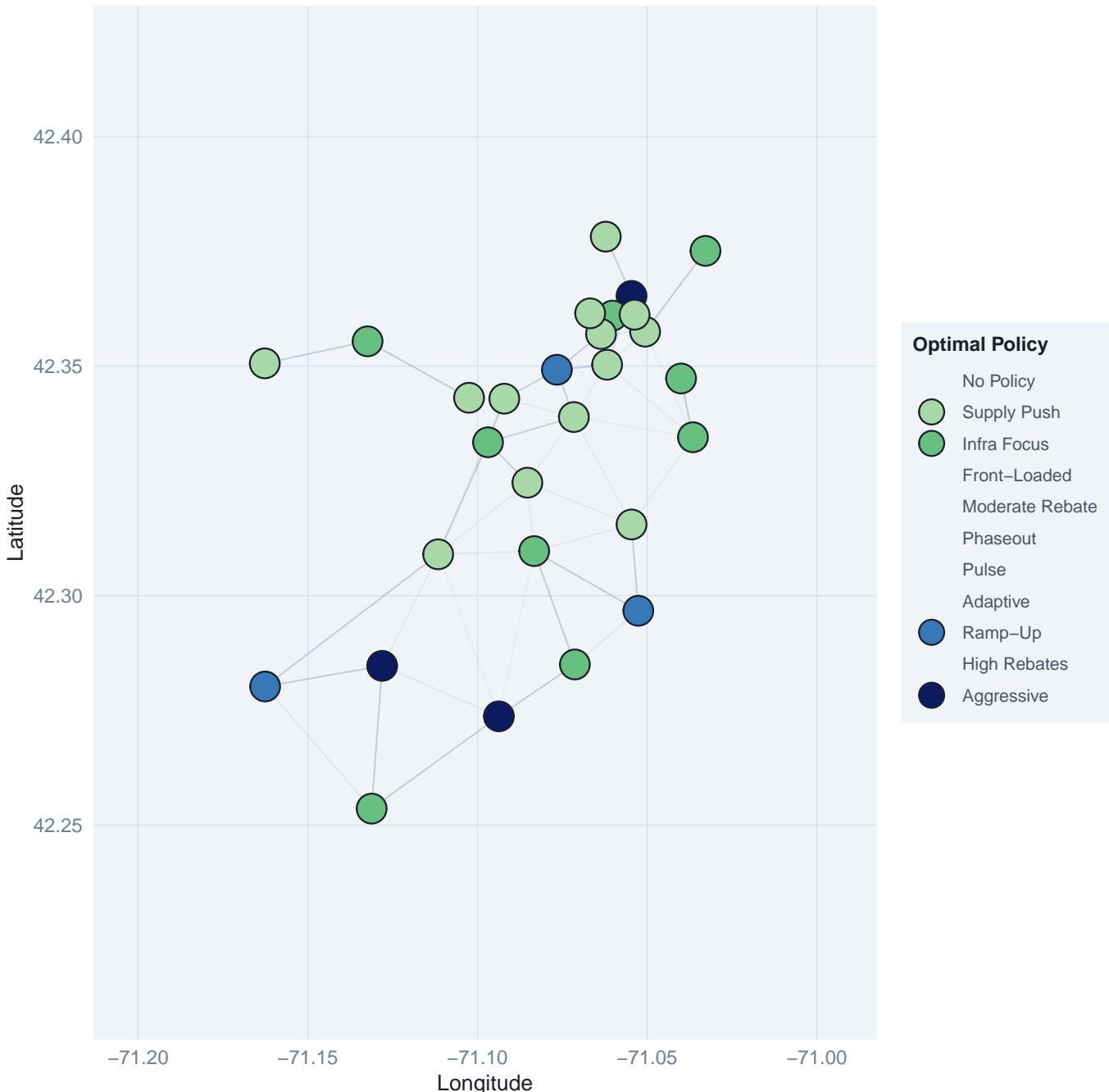
Budget: \$5.0B | Spent: \$4.97B (99.4%) | Remaining: \$0.03B | Policy intensity matched to node PM2.5 burden



Green = low-cost · Blue = moderate · Navy = high-investment · Grey = no policy (budget exhausted)

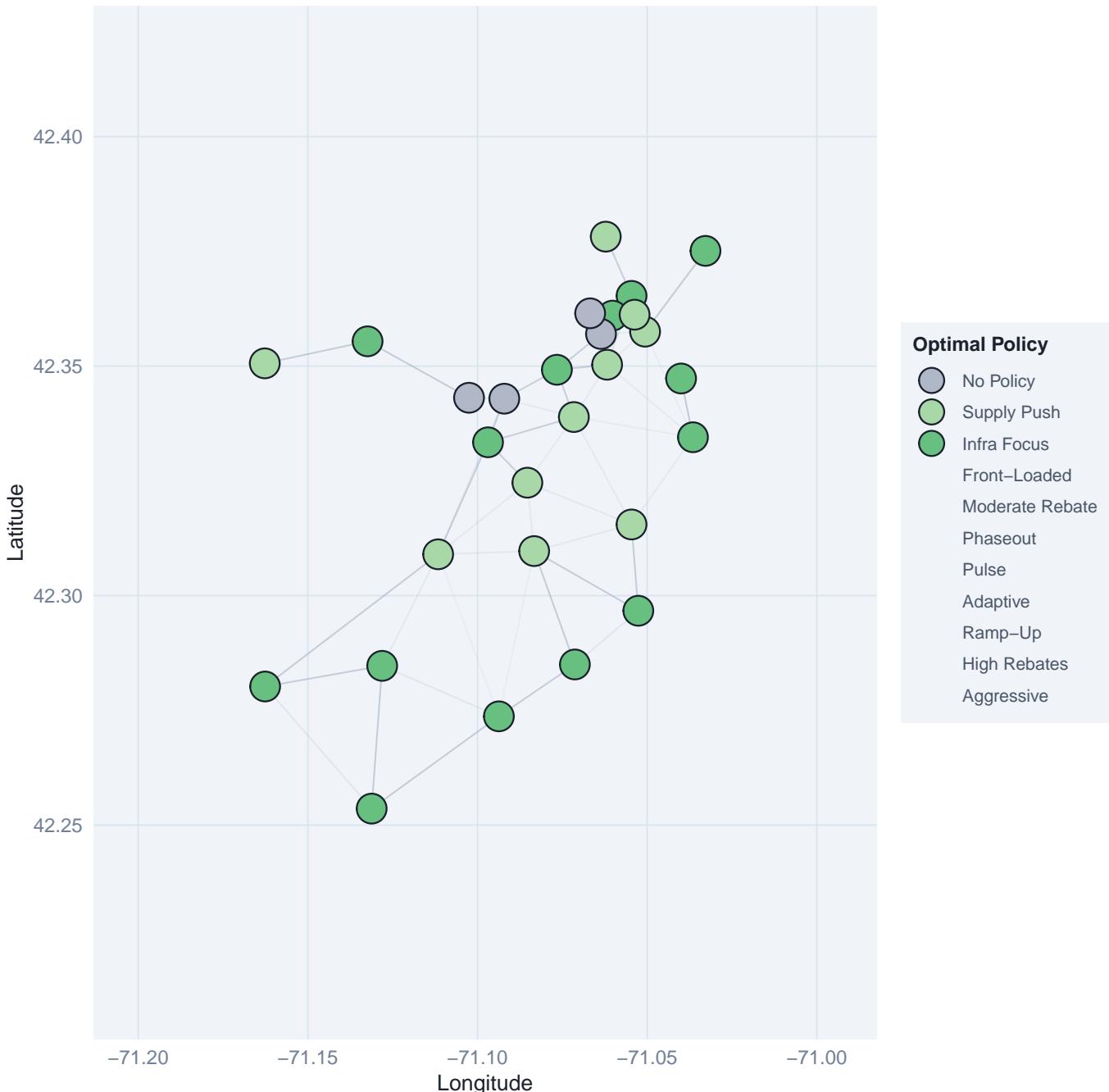
Budget–Optimal Policy per Node (\$2.5B cap)

Budget: \$2.5B | Spent: \$2.48B (99.0%) | Remaining: \$0.02B | Policy intensity matched to node PM2.5 burden



Budget–Optimal Policy per Node (\$1.0B cap)

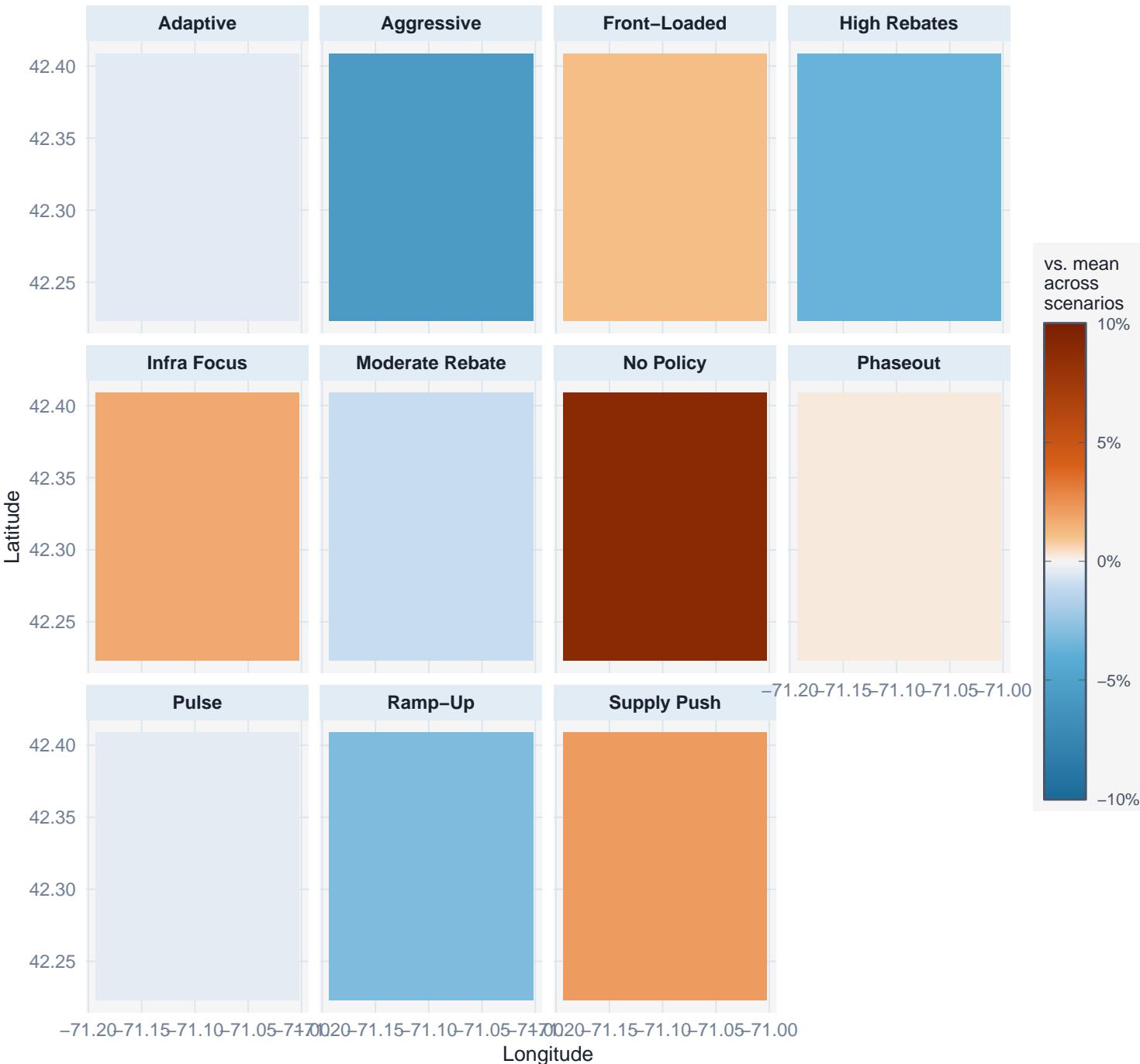
Budget: \$1.0B | Spent: \$0.97B (97.1%) | Remaining: \$0.03B | Policy intensity matched to node PM2.5 burden



Green = low-cost · Blue = moderate · Navy = high-investment · Grey = no policy (budget exhausted)

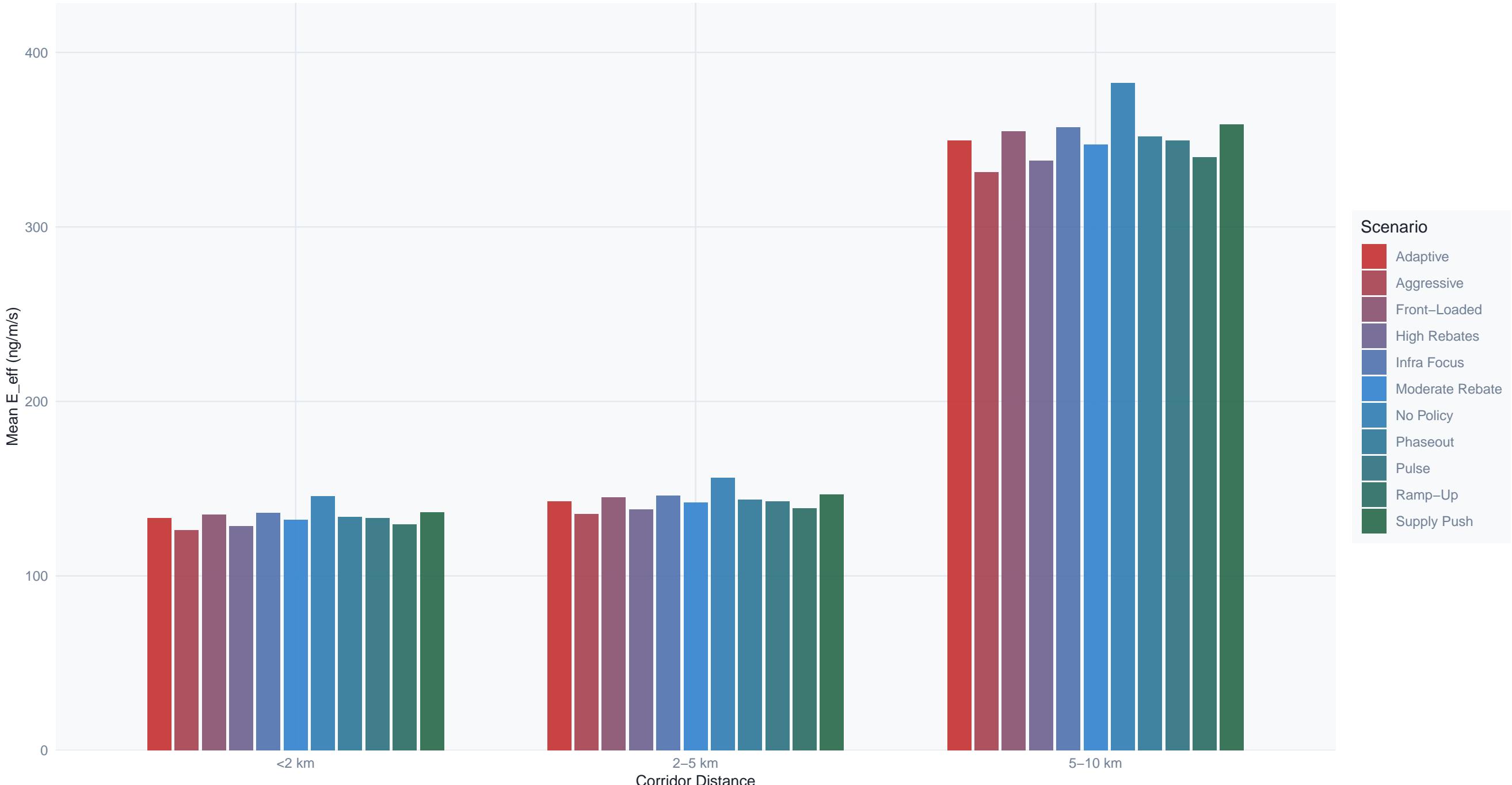
Spatial PM2.5 Emission Burden: Deviation from Cross-Scenario Mean

Orange/red = above average; blue = below average at each map cell



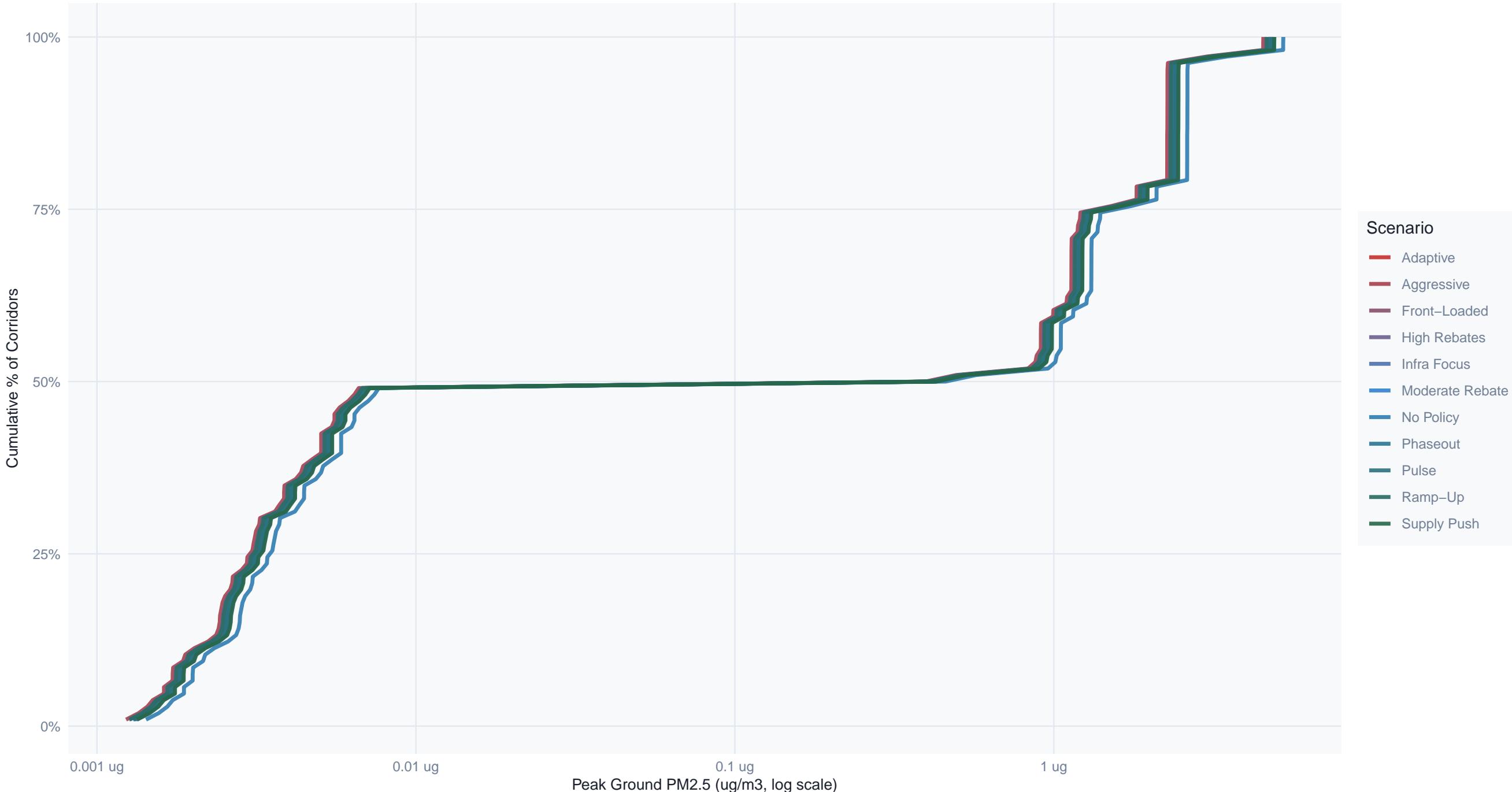
Mean Emission Rate by Corridor Distance Band

Average E_eff per corridor length category



Cumulative Distribution of Peak Ground-Level PM2.5

Each point = one corridor, rightward shift = worse air quality



PM2.5 Burden by Origin Zone

Sum of peak ground concentrations across all outbound corridors per zone



Vehicle Volume vs. Peak Ground PM2.5 by Corridor

Both axes log scale, color = corridor distance

