Supporting Information
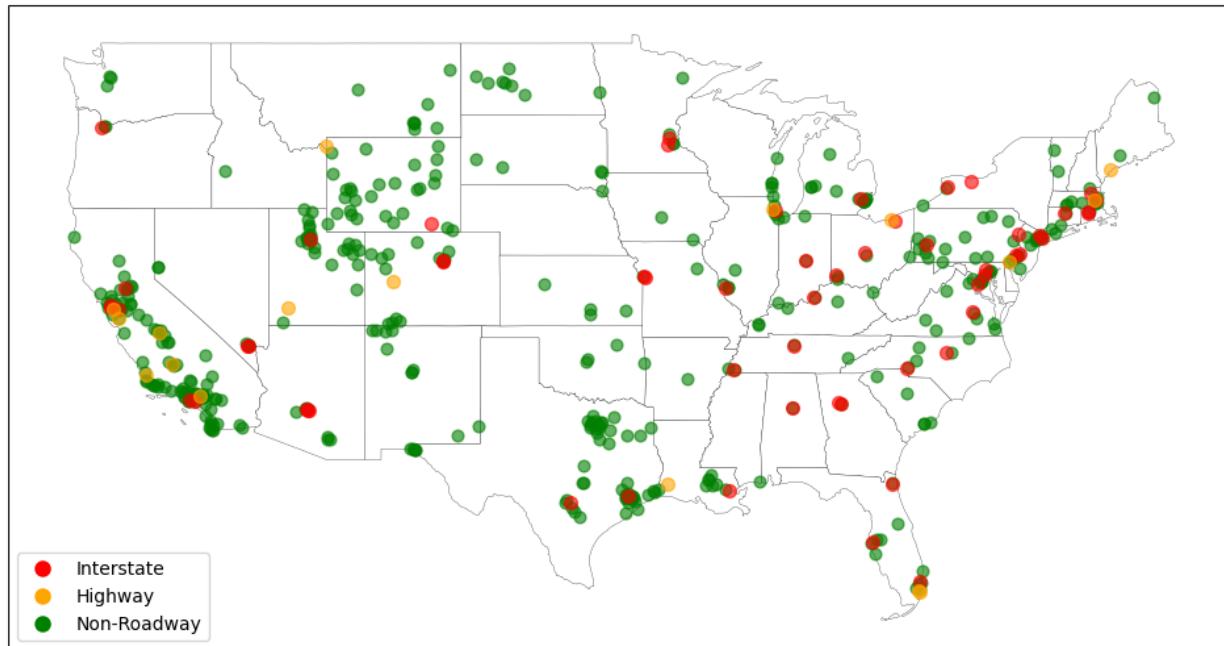
Figure S1. All U.S. EPA AQS NO₂ ground-based monitors classified as non-roadway (green), interstate (red), and highway (orange).
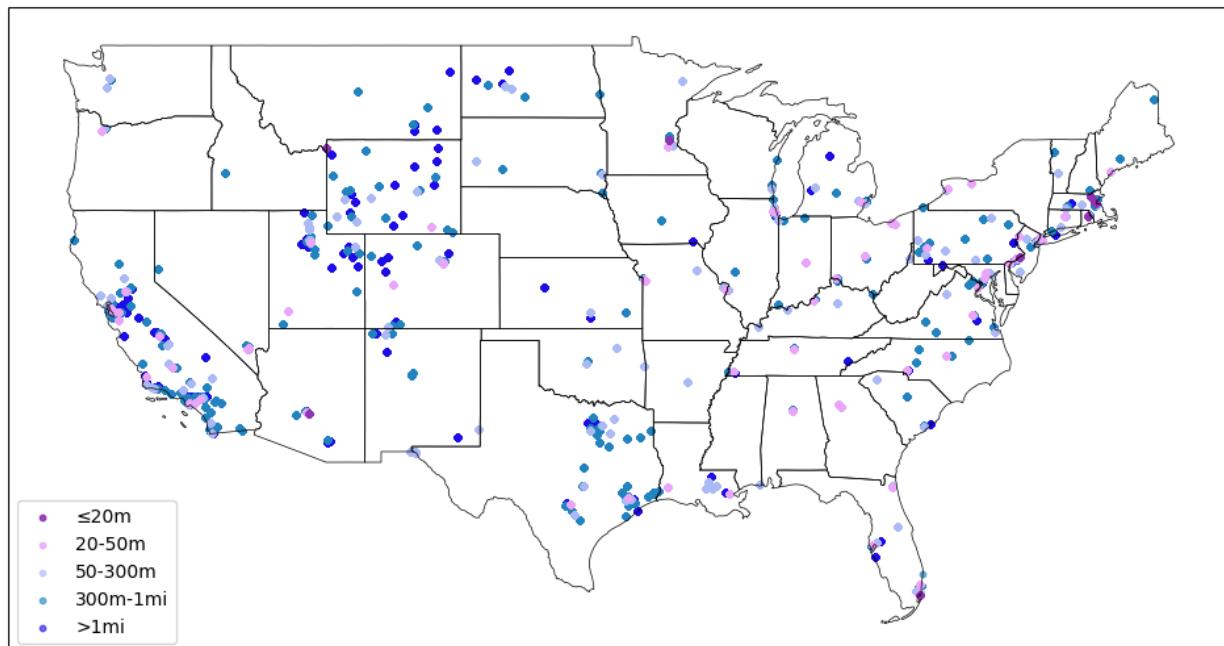
Figure S2. All U.S. EPA AQS NO₂ ground-based monitors classified by their distance from a major roadway: monitors less than or equal to 20m from a road (purple), between 20 and 50m

from a road (lilac), between 50 and 300m (periwinkle), between 300m and one mile (blue), and greater than one mile from a road (dark blue).
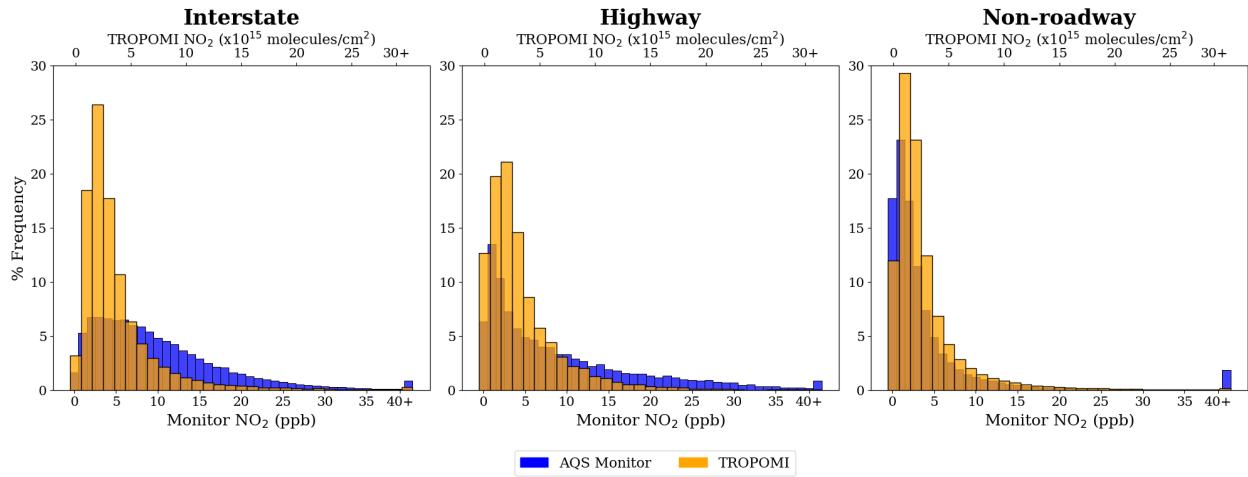
Figure S3. Distribution of 2019-2023 NO$_2$ measured by AQS ground-based monitors (blue) and TROPOMI (orange) across three monitor classifications, where roadway monitors are classified as being within 50 meters of a roadway: Interstate, Highway, and Non-roadway. The primary, lower x-axis shows the monitor NO$_2$ concentrations in parts per billion (ppb) and a secondary, upper x-axis shows satellite NO$_2$ VCD in 10^{15} molecules per cm^2. The y-axis represents the percent frequency of NO$_2$ observations within each NO$_2$ bin.
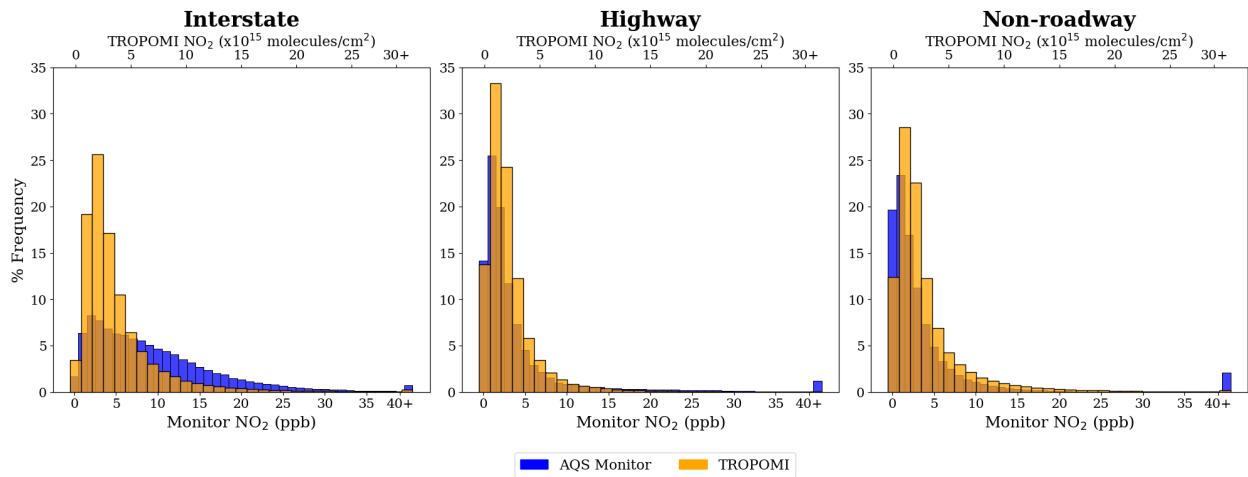
Figure S4. Distribution of 2019-2023 NO$_2$ measured by AQS ground-based monitors (blue) and TROPOMI (orange) across three monitor classifications, where roadway monitors are classified as being within 300 meters of a roadway: Interstate, Highway, and Non-roadway. The primary, lower x-axis shows the monitor NO$_2$ concentrations in parts per billion (ppb) and a secondary,

upper x-axis shows satellite NO_2 VCD in 10^{15} molecules per cm^2. The y-axis represents the percent frequency of NO_2 observations within each NO_2 bin.