Understanding Environmental Justice Issues Related to Living Near the Transportation Network Using High-Resolution Population Data from EPA's EnviroAtlas*

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Environmental justice (EJ) is a priority for the U.S. Environmental Protection Agency (EPA) and there are known inequities related to air pollution exposure. Concentrations of several transportation-related air pollutants are typically elevated near transportation sources (e.g., roads, marine ports, airports, rail facilities). The research presented will provide information regarding the potential for EJ concerns near the transportation network in the U.S.

Using demographic information from the U.S. Census to determine who lives in proximity to transportation sources is challenging given that people are not distributed evenly across Census geographies and those geographies vary in shape and size. EPA’s EnviroAtlas includes a set of population estimates for the conterminous United States (CONUS) for 30 X 30 meters grid cells, allowing population estimates for near-transportation populations at a scale that captures the proximal area where primary air pollutant concentrations from transportation are higher. The EPA’s Office of Transportation and Air Quality and the Office of Research and Development’s EnviroAtlas Team have been developing local and CONUS estimates of population in near-road locations, as well as populations near marine ports, airports, and rail facilities. These high-resolution population data allow more detailed analyses of EJ when combined with demographic and socioeconomic data from the U.S. Census Bureau. This poster will describe the new data for near-road locations and discuss some of the methodological issues faced when conducting these types of analyses.

(Note: The views expressed are those of the authors and do not necessarily represent the views or policies of the U.S. Environmental Protection Agency.)

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