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BUILDING RESILIENCE FOR CRITICAL INFRASTRUCTURE

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WHAT IS RESILIENCE PLANNING?

"There is a need to incorporate climate trends into planning efforts so that critical infrastructure systems are designed to not only absorb shocks and stresses, but utilize these trends to develop into more sustainable and efficient configurations; a concept known as resilience planning. "

https://www.novaregion.org/DocumentCenter/View/11933/Resilient-Roadmap-Final-PDF

ISC CLIMATE LEADERSHIP ACADEMY

COG and NVRC formed a team to attend the Institute for Sustainable Communities Climate Leadership Academy training in Pittsburgh, PA mid-April.

The training theme was equity and community engagement.

Gathering of cross-sector teams from 12 U.S. communities, cities, and metropolitan regions to explore innovative approaches to building resilient communities and turn ideas into action

The National Capitol Region Team

- Corey Miles – Northern VA Regional Commission
- Rich Dooley – Energy Manager, Arlington County
- Evelyn Kasongo – Equity Planner, DC Office of Planning
- Erica Bannerman - Energy Manager, Prince George's County
- Annette Osso – Director, Resilient VA

WHY SHOULD WE CARE ABOUT AIR QUALITY?

Weather patterns influence the levels and location of outdoor air pollutants such as ground-level ozone and small particulate matter. This pollution has been linked to cancer, asthma, allergies, impaired lung development in children, and other health impacts.

https://toolkit.climate.gov/topics/human-health/increased-levels-air-pollutants

BREATHING IN THE FUTURE

- higher pollen counts and longer pollen seasons due to more ragweed;
- Increased ground level ozone and particulate matter;
- Increased smoke from wildfires; equals
- Net increase in bad air days

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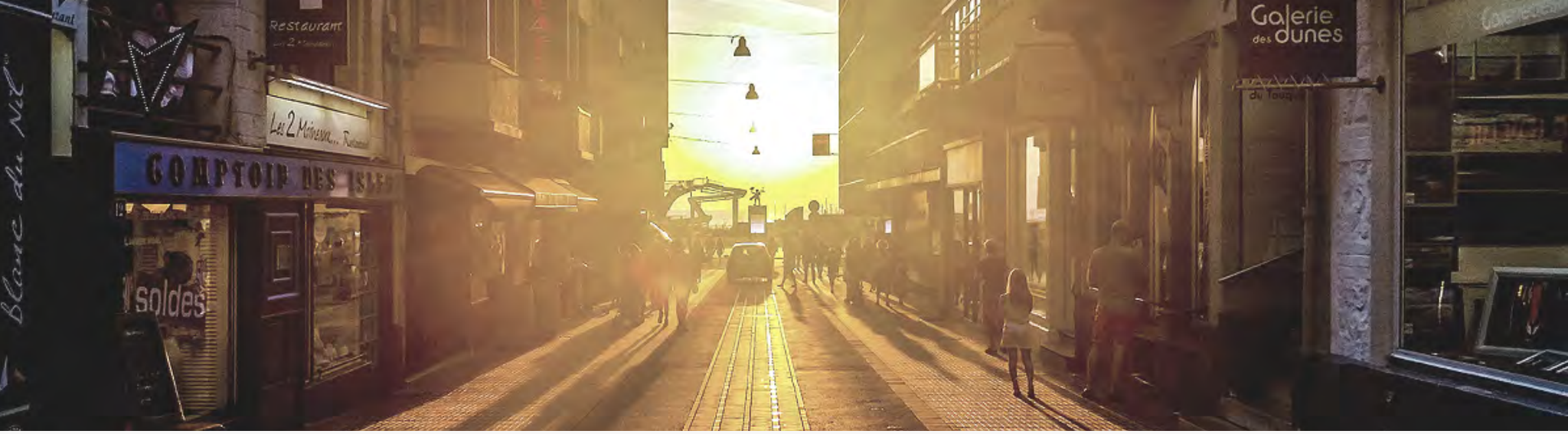
=Net increase in bad air days



WHY IT MATTERS?

Healthy neighborhoods are free of pollution and toxins that undermine the safety, health, and well-being of their residents. Neighborhoods with high concentrations of low-income families and people of color are more likely to be exposed to environmental hazards, putting them at higher risk for chronic diseases and premature death.

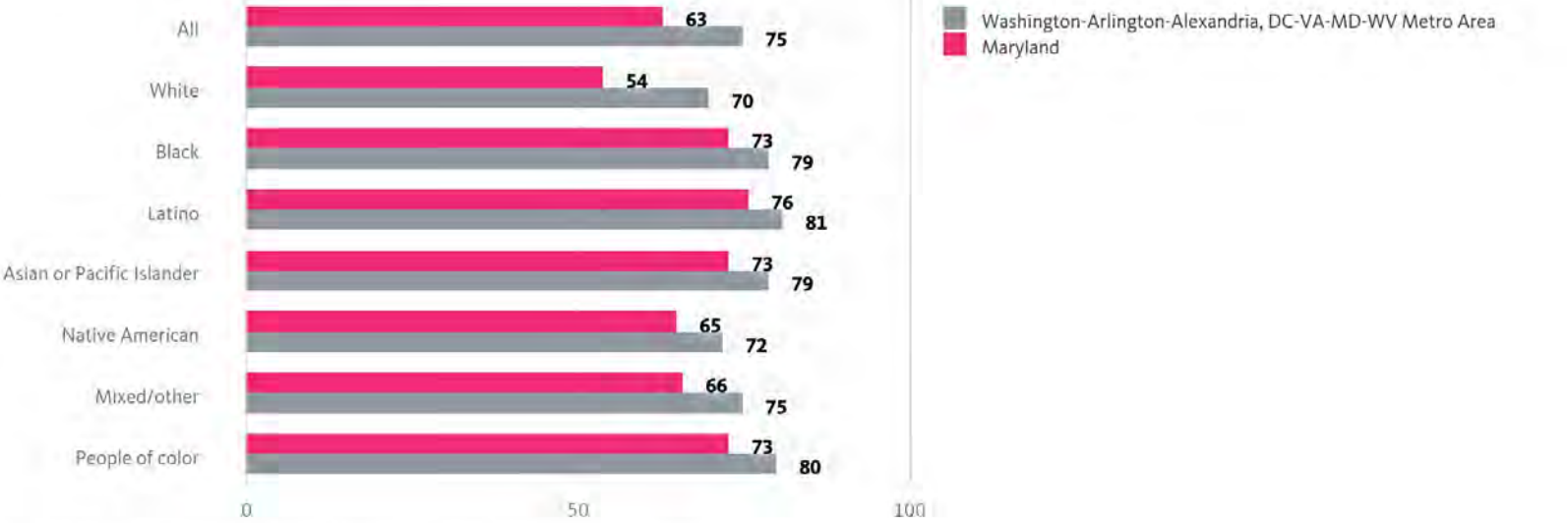
http://nationalequityatlas.org/indicators/Air_pollution%3A_Unequal_burden

CAN ALL METROPOLITAN WASHINGTON RESIDENTS HAVE ACCESS TO CLEAN AIR?

Air pollution exposure index, by race/ethnicity: Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area, Cancer and non-cancer, 2015

U.S. Environmental Protection Agency (National Air Toxics Assessment); U.S. Census Bureau
PolicyLink/PERE National Equity Atlas, www.nationalequityatlas.org

Air pollution exposure index, by race/ethnicity: Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area vs. MD, Cancer and non-cancer, 2015



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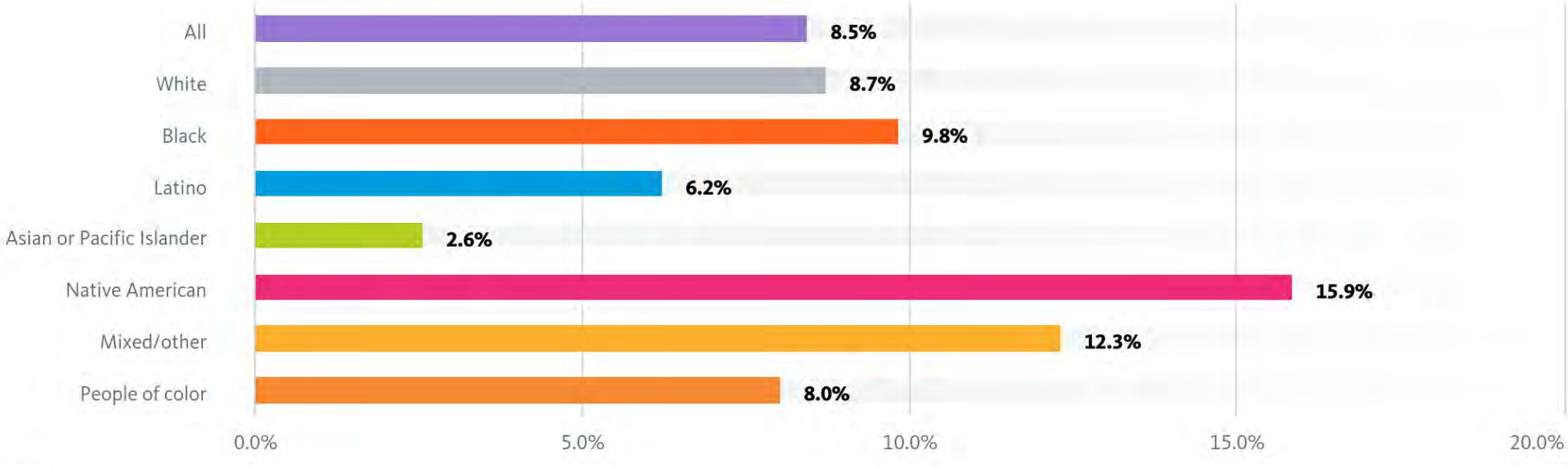

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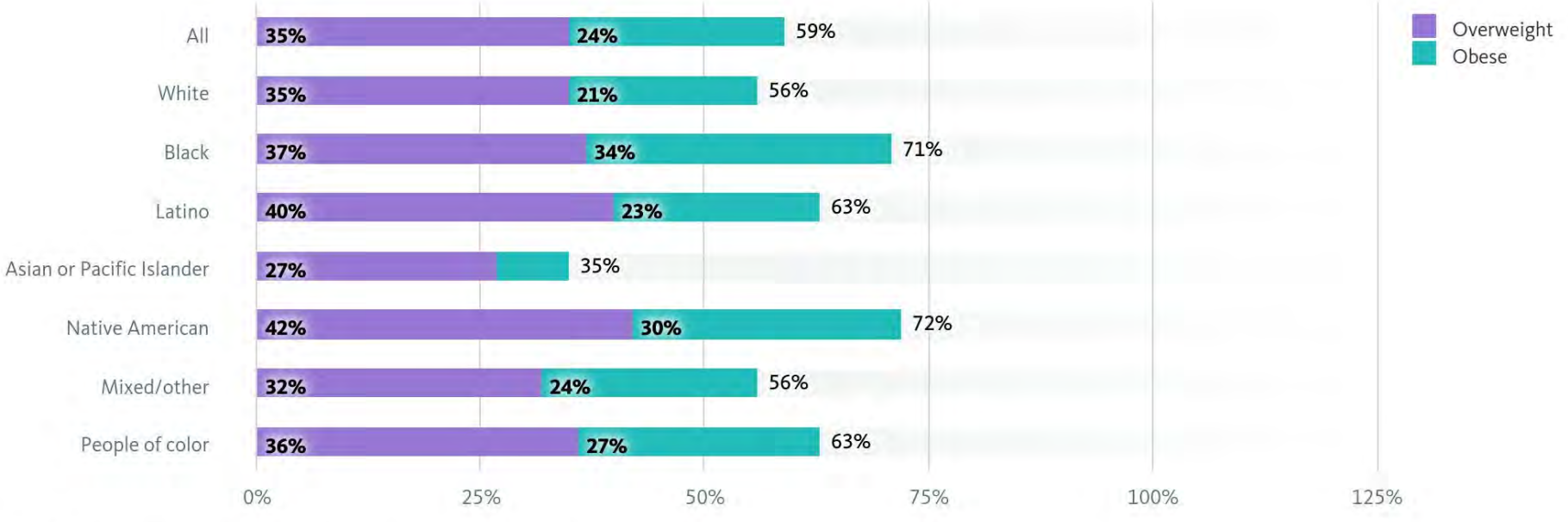
PolicyLink/PERE National Equity Atlas, www.nationalequityatlas.org

CAN ALL METROPOLITAN WASHINGTON RESIDENTS HAVE ACCESS TO CLEAN AIR?

Percent of adults that are overweight and obese: Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area, 2012



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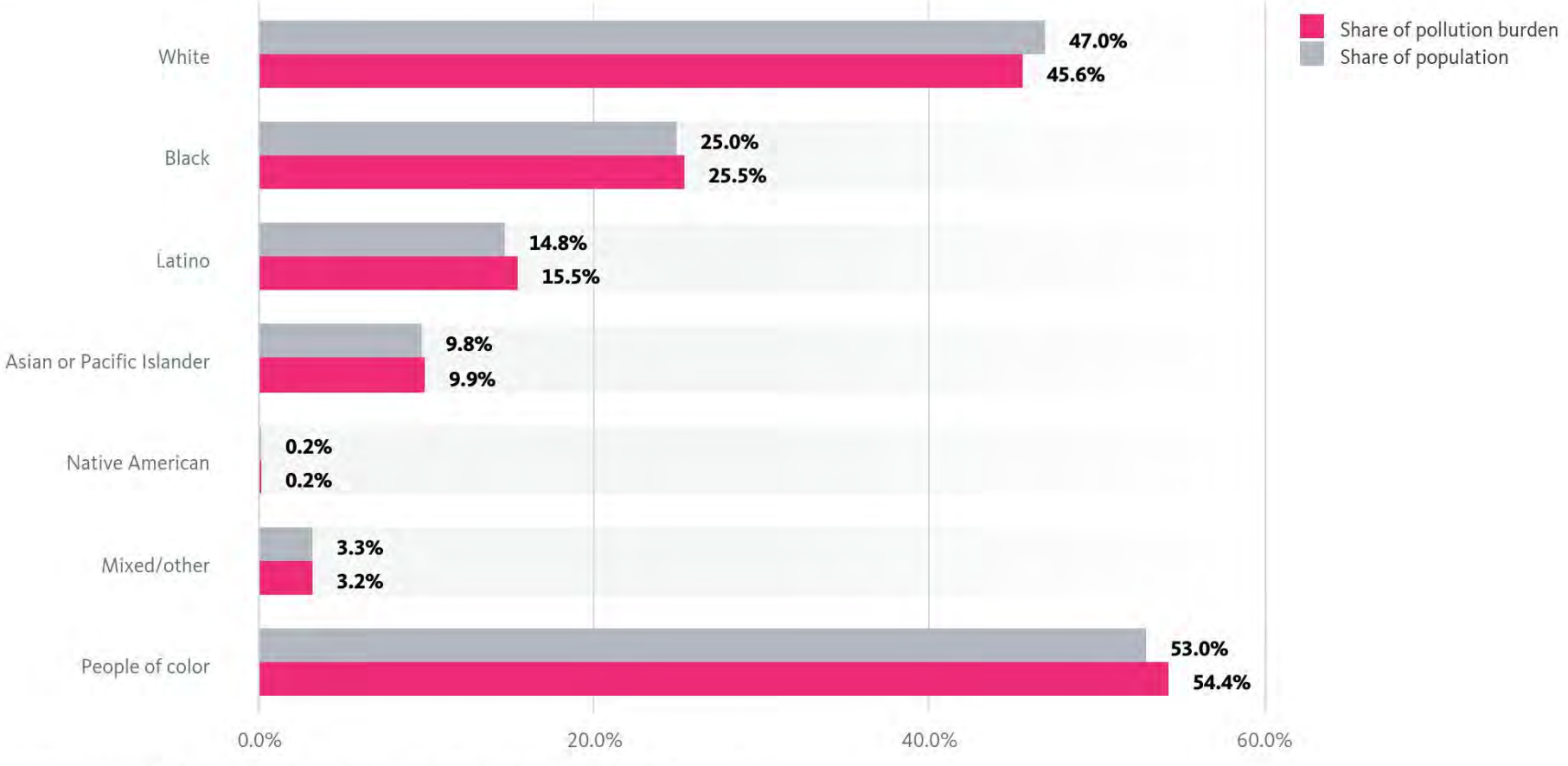
PolicyLink/PERE National Equity Atlas, www.nationalequityatlas.org

CAN ALL METROPOLITAN WASHINGTON RESIDENTS HAVE ACCESS TO CLEAN AIR?

Share of population and pollution burden, by race/ethnicity: Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area, Cancer only, All sources, 2015



U.S. Environmental Protection Agency (National Air Toxics Assessment); U.S. Census Bureau

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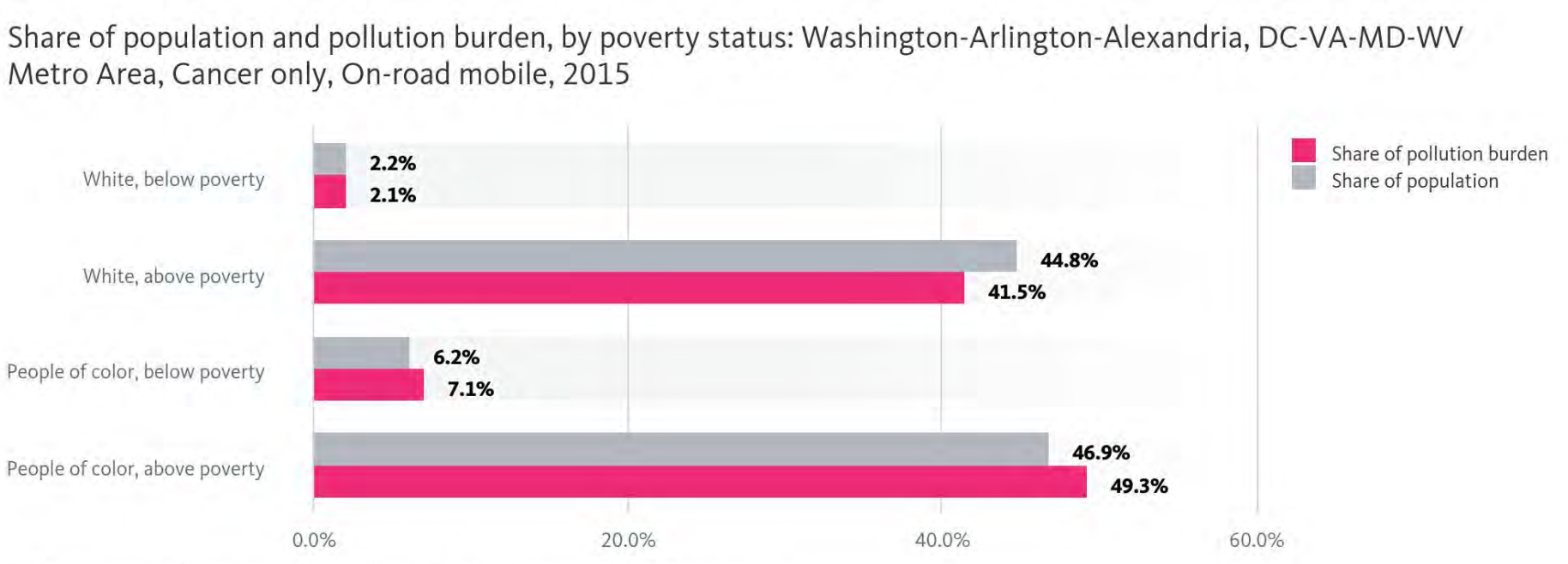

In 2015, people of color below poverty were 6.2 percent of the total population, but their share of cancer causing on-road mobile air pollution burden was 7.1 percent.

POLICIES TO PROMOTE EQUITABLE ACCESS TO CLEAN AIR

- Green Streets
- Green Infrastructure near transit
- new development should strengthen local culture
- Cooling centers
- Affordable housing with air conditioning
- Ceiling fans
- Operable windows/building design that promotes natural ventilation
- Urban tree canopy enhancement/expansion
- Land use that minimizes pollutants near residents

NEXT STEPS TOWARDS DEVELOPMENT OF A REGIONAL RESILIENCE FRAMEWORK

- Sustain and coordinate a working group of technical and policy experts from across the region
- Develop a template to characterize the risk to infrastructure from climate stressors;
- Use a “resiliency index” to quantify effective resiliency strategies;
- Develop a monitoring plan for living shorelines in Northern Virginia; and
- Pilot use of the Risk Characterization Template.
- Explore new technologies for community engagement