

Environmental Health Briefing Document
Presented to the Governor's Interagency Council on Health Disparities
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Environmental health refers to the ways that the environment can affect our health, including chemicals and microorganisms in the food and water we consume and particles in the air we breathe. Environmental health measures can include the levels of hazards in the environment, the effectiveness of prevention programs in controlling environmental hazards, the levels of chemicals and other agents in our bodies, and the incidence or prevalence of diseases associated with environmental factors. The relationships between levels of pollutants in the environment, exposures to individuals, and subsequent illnesses are extremely complex. Because of this complexity, health outcome data for environmentally-related diseases are rarely available and information on disparities by race/ethnicity and sex are also scarce. This document contains data and information on outdoor air quality and pesticide-related illness, two areas where some information on disparities exists.

CRITERION #1: MAGNITUDE

- In 2002, the majority of outdoor air pollution sources in Washington (an estimated 59%) came from highway vehicles, followed by non-road vehicles and equipment (20%), woodstoves and fireplaces (13%), large industry (4%), and open burning (2%).
- In Washington State, an estimated 4.2 million people live near major urban roadways and are, therefore, exposed to higher levels of diesel exhaust and other air pollutants caused by highway vehicles.
- In Washington State, from 2000-2005, there were 359 reported cases of occupational pesticide-related illnesses that occurred in the agricultural industry, for an average of 59 reported cases per year.

CRITERION #2: ASSOCIATION TO HEALTH OUTCOMES

- Outdoor air pollution can worsen asthma, heart disease, stroke, and lung diseases and can decrease immunity.
- Diesel exhaust can cause cardiovascular disease, respiratory disease, changes in the immune system, and cancers of the lung and bladder.
- Pesticides exposures can sometimes lead to pesticide poisoning, which is characterized by symptoms of eye irritation, visual disturbances, headache, dizziness, nausea, vomiting, numbness, skin irritation, and rash.
- Depending on the route, magnitude, and/or duration of exposure as well as the toxicity of the pesticide, health problems can vary from flu-like symptoms to serious systemic effects, including death.

CRITERION #3: DISPARITY

- Populations living in urban areas are more likely to be exposed to diesel exhaust and other outdoor air pollutants caused by highway vehicles compared to people living in rural areas. As higher proportions of some minority populations, including Asians and blacks, are more likely to live in urban areas, they may be disproportionately exposed to outdoor air pollution.
- Hispanics comprise a large majority of the farm worker population in Washington State, and are therefore, at a higher risk for occupational pesticide-related illness.
- Native Americans and those from Asian Pacific Islander communities are more likely to be exposed to toxicants such as mercury, PCBs and arsenic because of their traditional diets which include relatively frequent consumption of fish.