

**West Oakland Community Action Plan Steering Committee  
Pollutant Matrix**

<b>Sources</b>	<b>Pollutant</b>	<b>Health Effect</b>	<b>Other Effects</b>
Burning diesel fuel in combustion engines, such as on- and off-road vehicles, marine engines, locomotives, and stationary engines such as back-up generators (BUGs).	diesel PM	Irritates eyes, nose, throat and lungs. Acute symptoms: cough, headache, lightheadedness and nausea. May cause bronchitis, cardiovascular disease, bladder cancer, and contributes to risk of dementia. Designated carcinogen.	
Fossil fuel combustion, refining crude oil, residential wood burning and cooking, and wildfires.	coarse, fine and ultrafine particulate matter (PM)	Asthma, chronic bronchitis, impaired lung development in children. Increased risk of heart attack, stroke, and premature death.	
Motor vehicles, wood burning, fireplaces	carbon monoxide (CO)	At ambient concentrations, exacerbation of asthma and heart disease. Other severe health effects at very high concentrations.	
Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents	ground-level ozone (O3)	Aggravates asthma and other respiratory diseases. Symptoms: lung and throat irritation, wheezing and shortness of breath, eye irritation	Reduced visibility, damage vegetation
Sewage treatment plants and oil refineries	hydrogen sulfide (H2S)	Acute symptoms: nausea, headaches, delirium, disturbed equilibrium, and skin and eye irritation. Other severe health effects at very high concentrations.	Strong odor of rotten eggs
Power plants, boilers, stationary turbines, stationary engines, motor vehicle	nitrogen oxides (NOx) including nitric oxide and nitrogen dioxide	Aggravates respiratory problems. Chronic exposure may cause permanent lung disease. Increased risk of respiratory infections in children.	Brown haze, damage crops (beans & tomatoes), contributes to acid rain
Burned fuels, aerosol sprays, evaporation of paints, inks, solvents, and gasoline (activities such as petroleum production and refining, coating operations, and semiconductor manufacturing)	toxic air contaminants (includes benzene, formaldehyde, acrolein)	Increased cancer risk, chronic diseases of the lungs, liver, and kidneys. Symptoms include acute eye and respiratory irritation.	Reacts with oxides of nitrogen in the presence of sunlight to form ozone (smog)
Heating and burning fossil fuels	sulfur oxides (SOx)	Eye, mucous membrane and respiratory tract irritation. Symptoms include sore throat wheezing, shortness of breath. Chronic exposure associated with susceptibility to respiratory infections, chronic bronchitis and decline in lung function	Damages vegetation