

Air Quality



Why You Should Care About This Issue

Polluted air doesn't just look bad, it's also unhealthy. The GVRD Air Quality Index (AQI) is based on air pollution levels that can harm most people. Like many things that impact our health, air pollution affects different people in different ways. Some people are more sensitive and will begin to feel health impacts at levels well below the air quality standards.

The majority of air pollution is caused by internal combustion engines, mostly found in cars but also boats, lawnmowers and other gasoline powered tools. Fortunately, new cars use less fuel and produce much less pollution than older cars. Unfortunately, using a typical older gas lawnmower for one hour makes as much pollution as driving for 550 km.

Wood smoke is also a large contributor to air pollution.

Trees can help to clean the air by removing carbon dioxide and creating oxygen. It takes about 300 trees to counterbalance the amount of air pollution that one person produces in a lifetime. Natural atmospheric processes can help to disperse the daily pollution that we produce. When we don't have enough wind to disperse this pollution, it may accumulate and cause poor air quality. Since we can't always count on the wind to remove pollution, we have to try to reduce the amount that we produce everyday.

Reducing car dependence will play a key role in improving air quality and minimizing global climate change. Non-transportation factors affecting both air pollution and climate change include: energy use, industrial emissions, and heating and cooling systems. Richmond air quality is also affected by outdoor burning and soil displacement. By using less energy and recycling and composting, less power generation and industrial manufacturing processes will be required. Since some power generation and industrial manufacturing processes burn fossil fuels they contribute to air pollution.

What’s Been Happening in Richmond

The GVRD Air Quality Index (AQI) measures air quality based on ten harmful substances and their concentration in the air. The air quality is given a rating of Poor, Fair or Good.

The AQI has consistently measured the air quality average for the year as “good” in Richmond. Although the air quality in Richmond is good at the moment, it could be threatened by an increase in auto and industrial emissions.

Benefits and Challenges

The projects in this section overlap with projects from transportation, energy conservation, waste generation, and green space.

Projects from any of these sections will also have a direct impact on air quality. Clean air is essential to maintaining the quality of life in any city. Air pollution is bad for the health of people, animals and plants. It is also a cause of acid rain which can be harmful to fish and can erode buildings and sculptures.

The biggest challenge to air quality is to create practical or operational solutions that are not too costly.

Project Description

1. Air Quality Education Program

What You Can Do

Arrange for a guest speaker from the GVRD to give a public presentation on air quality in your area. Your group can promote the event and take care of hall arrangements and seating.

Some possible topics could be wood burning reduction, greenhouse gas reduction, avoiding toxic chemicals.

This could also be part of any of the education programs in the transportation section and energy conservation section. For presentations, a minimum attendance of 20 people is recommended.

Projects that Make a Difference

1. Air Quality Education Program
2. Polluting Equipment Exchange

Level of Difficulty

- Medium

Resources Required

- Low

Liability Issues

- No

Where to get Help

- GVRD Air Quality Department
- See Appendix A for contact information

2. Polluting Equipment Exchange

What You Can Do

Support a company that repairs cars.

Encourage the company to provide a “clean air” discount on newer environmentally friendly products when old polluting equipment is traded in. The old equipment can be recycled and the money raised from the scrap metal can compensate the company for some of the profits lost on discounts. The company will also benefit from the positive publicity it will receive from such an environmentally friendly project.

Used Lawn Mowers

- Most people do not associate air pollution with mowing the lawn. Yet emissions from lawn mowers, snow blowers, chain saws, leaf vacuums and similar outdoor power equipment are a significant source of pollution. Emission controls for small gasoline engines have not been an important manufacturers consideration until now. Consequently, older small engines may emit high levels of carbon monoxide. They also may emit volatile organic compounds (VOCs) and nitrogen oxides (NOx), pollutants that contribute to the formation of ground-level ozone. Ground-level ozone impairs lung function, and inhibits plant growth.
- In a Pollution Equipment Exchange, a company can provide discounts on new electric garden equipment, push-type lawn mowers or hand gardening equipment when customers trade in their old mowers, leaf blowers, chain saws and other gasoline powered garden tools.

Used Wood Stoves

- Burning wood sends harmful particulate matter into the air.
- Some alternatives to fireplaces and wood stoves are propane or natural gas fireplaces or pellet stoves. If you have to burn wood, make sure that it is dry or use compressed sawdust logs.
- In a Pollution Equipment Exchange, a company can provide discounts on new natural gas, propane or a more efficient EPA-certified pellet or wood stoves when customers trade in their old polluting pre-1988 uncertified wood stoves.

Level of Difficulty

- Medium

Resources Required

- Low

Liability Issues

- No

Where to get Help

- GVRD Air Quality
- Richmond Steel Recycling
- Regional Recycling
- *See Appendix A for contact information*



Used Barbecues

- Old style charcoal barbecues give off carbon monoxide and sulfur oxides which contribute to smog and can cause respiratory problems.
- Volatile fumes from charcoal lighter fluid also contribute to smog.
- In a Pollution Equipment Exchange, a company can provide discounts on new natural gas or propane barbecues when customers trade in their old polluting charcoal barbecues.