



# Safe and Clean - Introduction

*Assisting fleet managers in maintenance, retrofits, and purchasing decisions, plus providing assistance in obtaining grant funding for these activities.*

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## Vehicle Maintenance and Operations

Diesel vehicles are very durable, which means that some school buses remain in service for over 20 years. Consequently, many school buses on the road today were manufactured under older, less stringent emission standards. In fact, pre-1990 buses can pollute as much as six times more than new buses. To reduce the emission impacts from diesel vehicles, fleet managers can retrofit or purchase replacement buses. In addition, proper maintenance can improve fuel economy and reduce emissions.

Particulate and black carbon levels vary within individual buses over time. The most important influences on variability include bus idling behavior, queuing practices, bus ventilation via windows, and outdoor concentrations on bus routes. Engine model, age of engine, number of miles since last overhaul, maintenance cycles, location of bus engine (front, next to driver, or rear), elevation change, passenger load, and climate all may influence the levels of interior pollutants and children's exposure.

Bus parking and maintenance facilities have the potential to create localized particulate air pollution that far exceeds recommended outdoor levels. Pollution may routinely migrate to adjacent properties when buses are left idling or during periods of peak use—early mornings and afternoons. If vehicles are parked near schools, the air quality both outdoors and indoors may be diminished.

## Funding Opportunities

With federal funding allocated for the Clean School Bus USA program, Idaho schools now have the opportunity to participate in this nationwide program. DEQ is committed to assisting Idaho schools in finding and applying for funds to:

- ✓ Repair and maintain existing buses to run safely and cleanly
- ✓ Help convert buses to alternative fuels
- ✓ Retrofit buses with new emission technologies
- ✓ Replace old buses with new cleaner buses

## What Your School Can Do

- Ensure your fleet has and follows a prescribed maintenance plan that includes measuring tire pressure, replacing fuel filters and conditioning engines.
- Consider retrofitting older buses with new cleaner technologies.
- Educate bus drivers and fleet managers about the No-Idling Policy on or near school property
- Review bus routes yearly to minimize excess mileage as school demographics change

## Included in this Toolkit/CD-ROM

- Maintenance tips and resources for fleet managers
- Summary chart of clean fuel/technology options for school buses
- Fact sheets for bus drivers