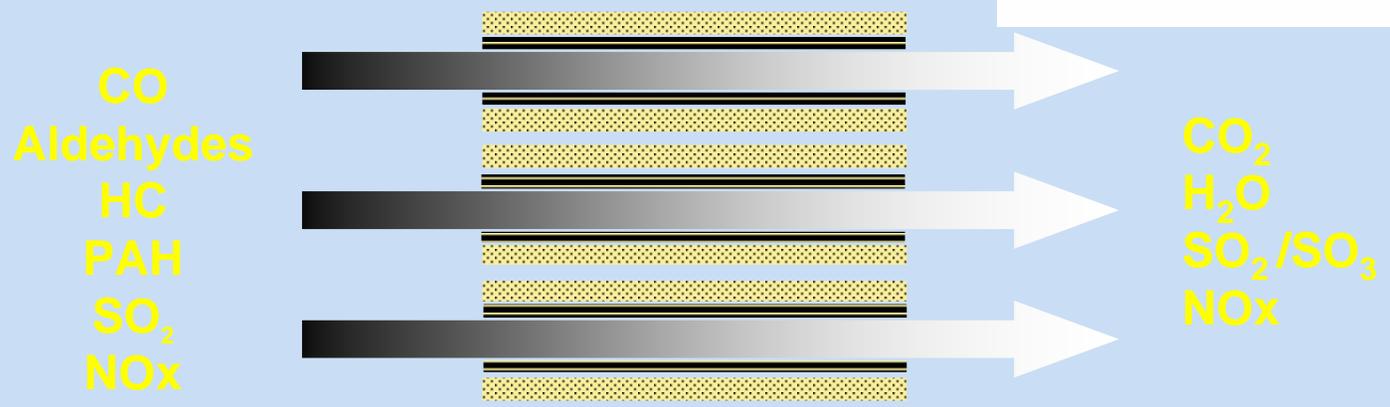


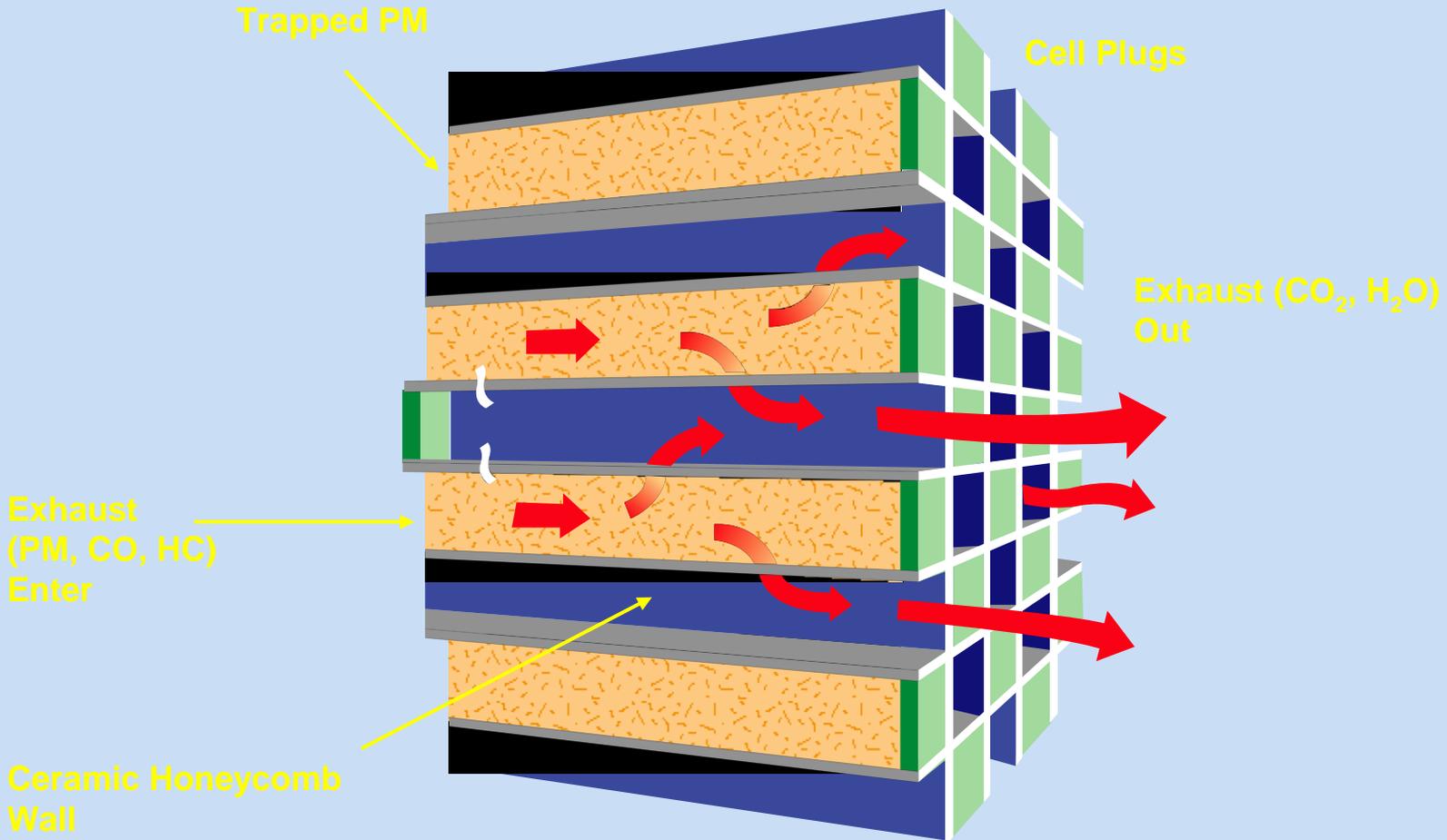
How the DOC Functions

- The catalyst interacts with the exhaust as it passes through the converter
- The Catalyst causes the particulate to burn at normal exhaust temperatures.
- The DOC burns the gaseous HC and CO emissions, and the lube oil, unburned fuel and carbon soot of the TPM



C_2H_{2n+2}	PAH	Flow through monolith with catalytic coating	SO_2+H_2O
		$CO + 1/2 O_2$	CO_2
Soot		$HC + O_2$	$CO_2 + H_2O$
Metals		$PAH + O_2$	$CO_2 + H_2O$
	SO_2+H_2O	$Aldehydes + O_2$	$CO_2 + H_2O$
			Soot
			Metals

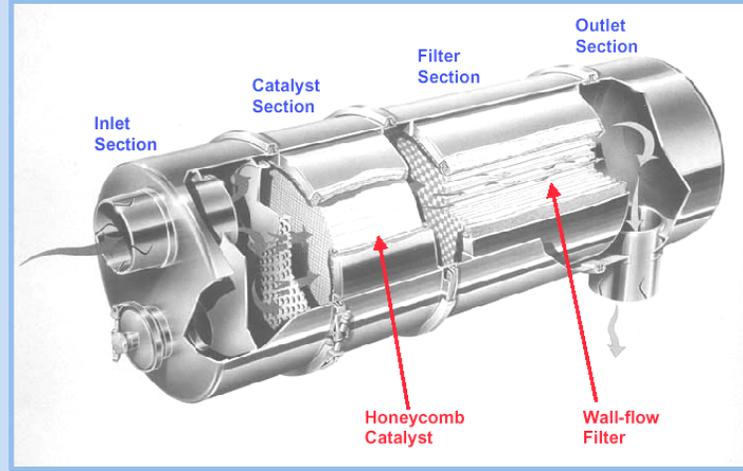
Particulate-laden diesel exhaust enters the filter, but because the cell of the filter is capped at the opposite end, the exhaust cannot exit out the cell. Instead the exhaust gases pass through the porous walls of the cell. The particulate is trapped on the cell wall. The exhaust gases exit the filter through the adjacent cell.



- **COST** - \$1,500 to \$8,000

- **DESIGN** - Not quite “off the shelf”, not quite “custom”

- **INSTALLATION** – not quite custom, not that difficult



- **Pre-88 Buses:** should not be retrofitted unless the bus will still be on the road in the state for a minimum of three years
- **88-93 Buses:** best suited for oxidation catalysts
- **94-98 Buses:** can be retrofitted with either catalysts or filters, depending on the vehicle's duty cycle and availability of ultra low sulfur diesel (ULSD) fuel
- **99 & newer Buses:** should be able to be successfully retrofitted with particulate filters

Washington State School Bus Retrofit Program

Reference Manual

September, 2003



Washington State Educational Service Districts



Publication number 03-02-016

If you require this publication in an alternate format, please contact Tami Dahlgren at 360-407-6800 or TTY (for the speech or hearing impaired) 711 or 1-800-833-6388.

**WASHINGTON STATE SCHOOL BUS RETROFIT PROGRAM
REFERENCE MANUAL
TABLE OF CONTENTS**

Introduction and Purpose	1
Program Overview	
Figure 1: Determining Local Retrofit Strategy	2
Goals, Objectives, and Performance Measures.....	3
Retrofit Grants.....	5
Key Factors for Determining Bus Retrofit Strategies.....	6
School District Application	
Figure 2: School District Application Process.....	9
Application	10
School District Selection	
Figure 3: School District Selection Process.....	12
Selection Process and Criteria for Years 1 & 2	13
Project Implementation	
Project Implementation	15
Figure 4: Process for Retrofitting School Buses using State Equipment Purchase – Local Installer Approach	16
Figure 5: Combined Provider/Installer Process State Contract	17
Figure 6: Combined Provider/Installer Process Local RFP/Contract.....	18
Appendix: Background Information	
A: Sources of Information about Air Pollution in WA State.....	A-1
B: Map of Educational Service Districts.....	B-1
Regional Transportation Coordinators.....	B-2
C: Exhaust Aftertreatment Technology (reference: California Air Resources Board)	C-1 – C-5
D: Q & A on Filters (reference: EPA)	D-1 – D-4
E: Q & A on DOCs (reference: EPA)	E-1 – E-3
F: Emission Reductions from Retrofit Technology (reference: EPA).....	F-1
G: Sample RFP for Combined Installer/Provider (reference: Puget Sound Clean Air Agency)	G-1 – G-7
H: ESSB 6072	H-1 – H-8

I: Interlocal Agreement.....I-1 – I-3

INTRODUCTION AND PURPOSE

The Washington School Bus Retrofit Program is a state-funded program that seeks to reduce children's exposure to diesel exhaust and reduce the amount of air pollution created by diesel school buses. The program provides funds for school districts to reduce emissions through engine retrofits, clean fuels, and new infrastructure.

EPA is working aggressively to reduce pollution from new, heavy-duty diesel trucks and buses by requiring them to meet tougher emission standards that will make the new 2007 model year heavy-duty vehicles up to 95% cleaner than today's vehicles. However, since diesel engines are durable and long-lasting, it will take a long time for new vehicles to replace trucks and buses currently on the road. The program is designed to jump-start the federal process of upgrading the nation's public school buses so this generation of children can reap the benefits of technology that is available now.

The program is voluntary and is administered by Ecology, the local air agencies, and the State Office of the Superintendent of Public Instruction. These agencies created a steering committee to help air agencies and school districts successfully implement the program and ensure adequate future funding from the Legislature to retrofit the entire state fleet.

The steering committee developed this manual to assist air agencies and school districts in retrofitting school buses. It is divided into sections by topic with each section containing a figure illustrating the likely steps to complete the activity described in the section. An appendix containing additional information and contacts is also provided. This reference is intended for use between now and the end of 2004, with revisions likely after that.

Each agency may modify the materials in this manual to meet their needs and the needs of local school districts, but should generally follow the process described here to ensure statewide consistency. Our objectives for the process are:

- Effectively implement the first year of the retrofit program, with measurable emission reductions.
- Ensure consistency, credibility, and accountability in the selection of fleets for retrofit projects.
- Minimize transaction time and effort for fleet selection and prioritization.

The process assumes:

- Funds from ESSB 6072 are distributed across the state and allocated to each local air agency on a per capita/vehicle registration basis as outlined in the legislation.
- School districts and air agencies do not have time and staff to fill out complex applications.
- Air agencies and school districts do not have resources to devote to involved development, screening, or priority-setting of retrofit projects.
- Selection of school districts will involve more than a simple application. Incorrect information will not invalidate an application or a school district's project, but could affect the priority it receives.

Additionally, the retrofit program, and the selection criteria in particular, should be reviewed in mid-2004 to determine how effective they have been since they are designed to achieve success for the initial phase of the program which ends when the legislative session starts in 2004. A review will also allow accommodation for any adjustments necessitated by legislative action in the 2004 session.

DETERMINING LOCAL RETROFIT STRATEGY

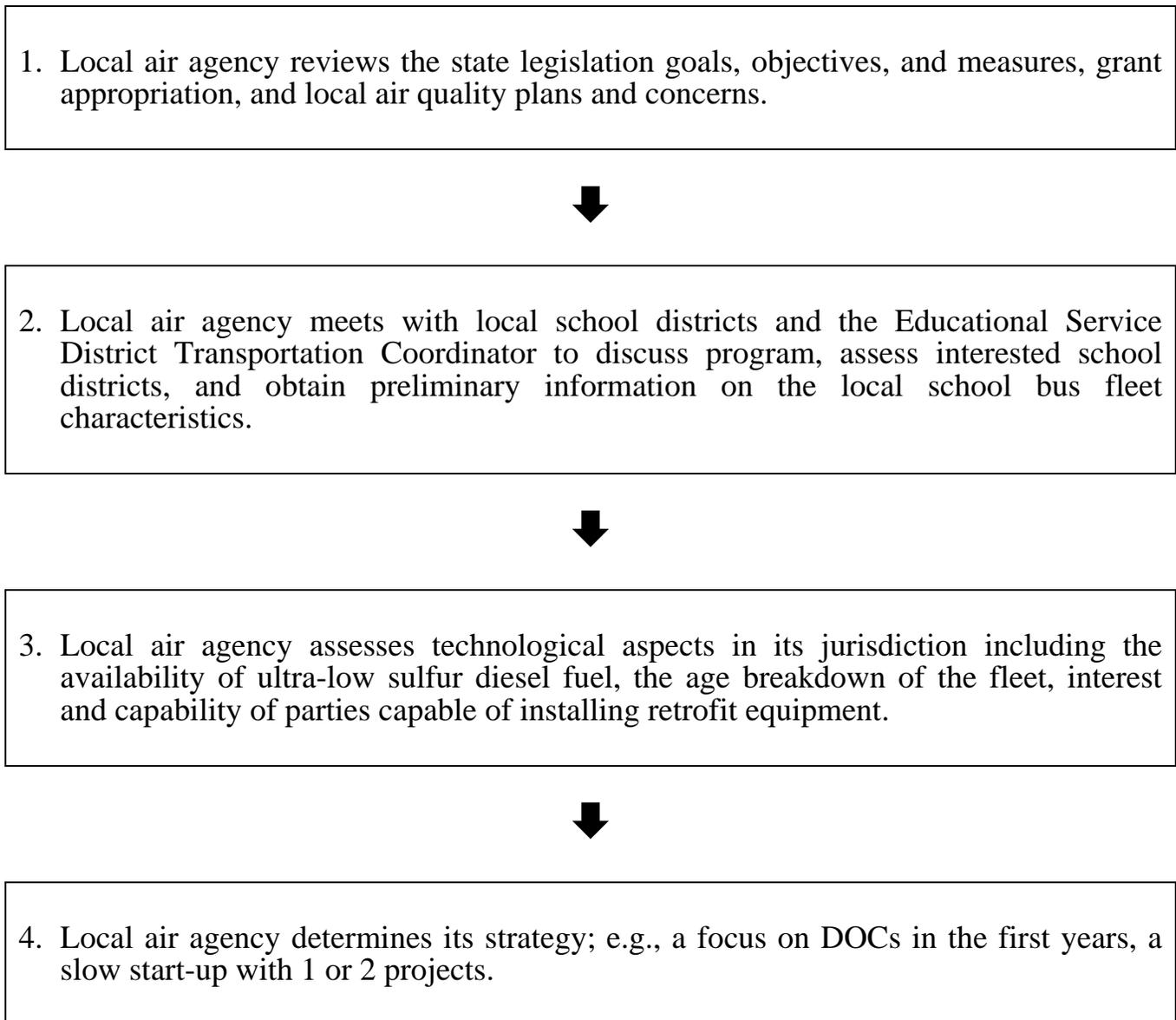


Figure 1

GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Goals

- Significantly reduce air pollution and public health risk from emissions by school buses throughout the state
- Maximize cost-effectiveness and efficiency in use of appropriated dollars
- Sustain or increase private sector employment
- Fully track use and effects of dollars spent
- Ensure appropriate geographic use of dollars and benefits from dollars spent

Objectives/Tasks/Targets

6 Months: December 2003

- Identify willing public school districts statewide with approximately 2,000 buses with potential for retrofit technology
- Complete survey of willing school bus fleets
- Complete retrofit technology installation on at least 200 buses
- Have contracts in place for retrofits for at least an additional 200 buses
- Establish 1-year plan and schedule for completing retrofits on 800 buses
- Create 5-year plan for completing retrofits on 5,000 buses
- Establish centralized state contract/vendors for fleet surveys, hardware purchase, installation, and maintenance
- Establish centralized information collection, tracking, and financial management systems
- Establish performance measures including a feedback mechanism to identify and correct problems
- Establish clear roles and responsibilities for involved agencies
- Prepare legislative fix for ESSB 6072

1 Year: June 2004

- Complete retrofits on at least 800 school buses
- Complete first report to Legislature on costs, benefits, problems, successes, and future needs
- Survey remaining public school district fleets for appropriate retrofit technology use
- Complete at least 1 cleaner fuel infrastructure project
- Ensure all future new school bus purchases have best available emission controls

5 Year: June 2008

- Complete retrofits on 5,000 public school buses
- Complete at least 10 cleaner fuel and cleaner fuel infrastructure projects
- Encourage Legislature to provide for longer-term and broader application of clean air funding

Performance Measures

- Number of retrofits completed by type of technology and location
- Emissions prevented or reduced through retrofits
- Estimated public health benefits of reduced emissions
- Dollars spent by location and activity (hardware, installation, administrative costs, etc.)
- Dollars passed into private sector and number of people employed
- Cost per performance unit: per catalyst, per installation, per ton of emissions, etc.
- Administrative costs and savings achieved through centralized contracting

RETROFIT GRANTS General Information

Appropriation (FY04)		\$5,000,000
Dept. of Ecology	15.0%	\$750,000
Locals	85.0%	\$4,250,000

<u>Local Air</u>	<u>%*</u>	<u>FY04</u>	<u>Quarterly Amounts</u>	<u>Comments</u>
BCAA	4.9	\$ 208,250	\$ 52,063	Ecology will administer – no transfer
NWAPA	6.6	280,500	70,125	transfer
ORCAA	10.3	437,750	109,438	transfer
PSCAA	40.3	1,712,750	428,188	transfer
SCAPCA	10.3	437,750	109,438	transfer
SWCAA	14.1	599,250	149,813	transfer
YRCAA	5.2	221,000	55,250	transfer
E/CRO	8.3	352,750	88,185	Ecology will administer – no transfer
	100.0%	\$4,250,000	\$1,062,500	

*% based on FY02 collections

Dates of Transfer
by Treasurer

September 30, 2003
December 31, 2003
March 31, 2004
May 31, 2004

Check or Electronic Funds Transfer
to Local Air Agency (approximate)

October 1, 2003
January 2, 2004
April 1, 2004
June 1, 2004

Grants will be sent to local air agencies for signature in early September 2003. They will be for one year and are based on amounts shown above. Actual grant amounts are dependent on revenue. Grants will allow for amendments for FY05. Please contact Paige Boulé (360) 407-6646; pbou461@ecy.wa.gov with questions.

KEY FACTORS FOR DETERMINING BUS RETROFIT STRATEGIES

Bus/Engine Characteristics

- **Pre-1988:** Buses with engines built before 1988 should not be retrofitted unless the bus will still be on the road in the state for a minimum of 3 years.
- **1988-1993:** Buses with engines built from 1988 through 1993 are best suited for oxidation catalysts and may not run hot enough for a particulate filter to operate properly.
- **1994-1998:** Buses with engines built from 1994 through 1998 can be retrofitted with either catalysts or filters, depending on the vehicle's duty cycle and availability of ultra-low sulfur diesel (ULSD) fuel, which is required when filters are used. It is essential to data log the exhaust temperatures of these buses to determine if they run hot enough for a particulate filter to operate properly. If they do not run hot enough for a particulate filter, then an oxidation catalyst should be installed. It is essential to inspect later year models for existing oxidation catalysts that were installed as original equipment.
- **1999 and newer:** Buses with engines built in 1999 or newer should be able to be successfully retrofitted with particulate filters; however, exhaust temperature measurements of representative vehicles is an essential element of a filter retrofit program. In some instances, e.g., under a light load, the buses may run colder than expected. It is essential to physically inspect the buses for existing oxidation catalysts that were installed as original equipment.

Emission Reduction Equipment

- The diesel oxidation catalysts (DOC) and diesel particulate filters (DPF) selected by school districts must be currently verified either by the EPA Voluntary Diesel Retrofit Program or the California Air Resources Board (CARB) verification process.
- Both EPA and CARB have information on diesel retrofits that is useful. CARB verification information is more detailed and provides more insight into operational concerns than EPA's information.
 - EPA website – <http://www.epa.gov/otaq/retrofit/retrofittech.htm>.
 - CARB website – <http://www.arb.ca.gov/diesel/dieselrrp.htm>.

Two industry associations also provide valuable information:

MECA – <http://www.meca.org/jahia/Jahia/pid/>

Diesel Technology Forum – <http://www.dieselforum.org/retrofit/retrofit.html>.

- **Oxidation Catalysts**
 - The approximate cost per vehicle is \$2,000, installed.
 - DOCs produce up to a 50% reduction in emissions when used with ULSD. However, the percentage reduction is from a higher base emission rate – an older, higher emitting bus – therefore the net mass emission reduction is likely to be greater than for a newer bus with a filter.
 - DOCs are a long established technology with predictable performance. They are similar to the catalytic converters used in gasoline automobile and truck exhaust systems.

- **Particulate Filters**
 - The approximate cost per vehicle is \$7,500, installed.
 - Filters require an uninterrupted supply of ULSD to operate properly and can become plugged and cause engine problems if operated on regular highway diesel for a short period of time, e.g., 2 or 3 tankfuls.
 - Filters produce a 90%+ reduction in emissions when used with ULSD. However, the percentage reduction is from a lower base mass emission rate than an older bus.
 - Filters are a newer, developing technology requiring them to be custom designed for a specific application.
 - Manufacturing lead times for filters, particularly for smaller orders, are significantly longer than those for DOC.

- Actual emission reductions from catalysts and filters depend upon a number of variables, however the following table provides an indication of the rates of reduction:

**Approximate Potential Emission Reductions
(Heavy-Duty Engine with ULSD)**

Engine Year	PM Emissions Standard (g/bhp-hr)	PM Emission Reductions (g/bhp-hr)	
		Oxidation Catalyst (50%)	Particulate Filter (90%)
Pre-1991	0.60	0.30	-
1991-1993	0.25	0.12	-
1994-1998	0.10	0.05	0.09
1999+	0.10	-	0.09

- Both oxidation catalysts and particulate filters require installation hardware, such as mounting brackets. Particulate filters are usually installed with back-pressure monitors and warning devices to indicate filter malfunction, such as plugging, that could result in engine damage.

Fuel

Highway Diesel

- Contains approximately 350 ppm of sulfur

Ultra-Low Sulfur Diesel (ULSD)

- Local availability
 - Central Puget Sound region and some other sections of western Washington now.
 - Remainder of western Washington: likely before 2006.
 - Eastern Washington uncertain until approximately 2006-2008.
- Storage and delivery requirements
 - ULSD requires separate storage unless it is 100% of fuel supply to avoid contamination with higher sulfur content highway diesel.
 - ULSD will require separate distribution until 2006 when ULSD will be the required fuel.
 - Separate storage and delivery is essential if any particulate filters are being used, but not necessary if only oxidation catalysts are being used.
- Cost
 - Currently, it costs approximately 5¢ more per gallon than highway diesel at the refineries in Tacoma and Ferndale. There may be added transportation costs. This cost is expected to decline further as more ULSD is purchased and 2006 approaches.

Bio-diesel

- Local availability
- Storage requirements
 - There are no special storage requirements.
 - There are no separate distribution requirements, but it is usually delivered separately since the manufacturers are different.
 - It may be blended with highway or ultra-low sulfur diesel. B20 – 20% bio-diesel/80% petroleum diesel is the most common blend.
 - It may dislodge sediment from the bottom of the storage tank initially, therefore the fuel system filters should be checked.
- Cost
 - Currently it costs 15¢ to 30¢ more per gallon than regular highway diesel.

For additional information contact:

Mike Boyer (360) 407-6863, mboy461@ecy.wa.gov, or

Paul Carr (206) 689-4085, paulc@psc Clean Air.org

SCHOOL DISTRICT APPLICATION PROCESS

1. Local air agency/Ecology talks with prospective school district, provides information on state program, background materials, and application: phone call, visit, workshop, at a meeting with the Regional Transportation Coordinator, or other means.



2. School district reviews its school bus fleet for number and type of buses, size and age of engines, and passenger capacity.



3. School district and local air agency or Ecology prepare application jointly or individually.



4. School district submits an application to the appropriate air agency and notifies the appropriate Regional Transportation Coordinator.

Figure 2

APPLICATION
STATE OF WASHINGTON SCHOOL BUS RETROFIT PROGRAM

SCHOOL DISTRICT _____
Street Address _____
City _____ County _____ State WA Zip Code _____

EDUCATIONAL SERVICE DISTRICT _____

LOCAL AIR AGENCY (or Ecology Regional Office) _____
Street Address _____
City _____ County _____ State WA Zip Code _____

PROJECT DESCRIPTION

Describe the total number of buses to be retrofitted, the type(s) of retrofits to be used, and the method of determining the costs of the retrofits for this project:

Fuel Please identify the diesel fuel(s) you will use after the retrofits are installed:

Regular highway Ultra-low sulfur Bio-diesel

Project Start Date _____ (mo/yr) **Completion Date** _____ (mo/yr)

PROJECT COST

Amount of Funds Requested \$ _____ **Local Match \$** _____

CONTACTS

School District

Name/Title _____
Phone No. _____ Fax No. _____
E-mail _____

Education Service District

Name/Title _____ /Regional Transportation Coordinator
Phone No. _____ Fax No. _____
ESD No. _____ E-mail _____

Local Air Agency (or Ecology Regional Office contact, if applicable)

Agency _____
Contact Person _____
Phone No. _____
E-mail _____

SCHOOL DISTRICT SELECTION PROCESS

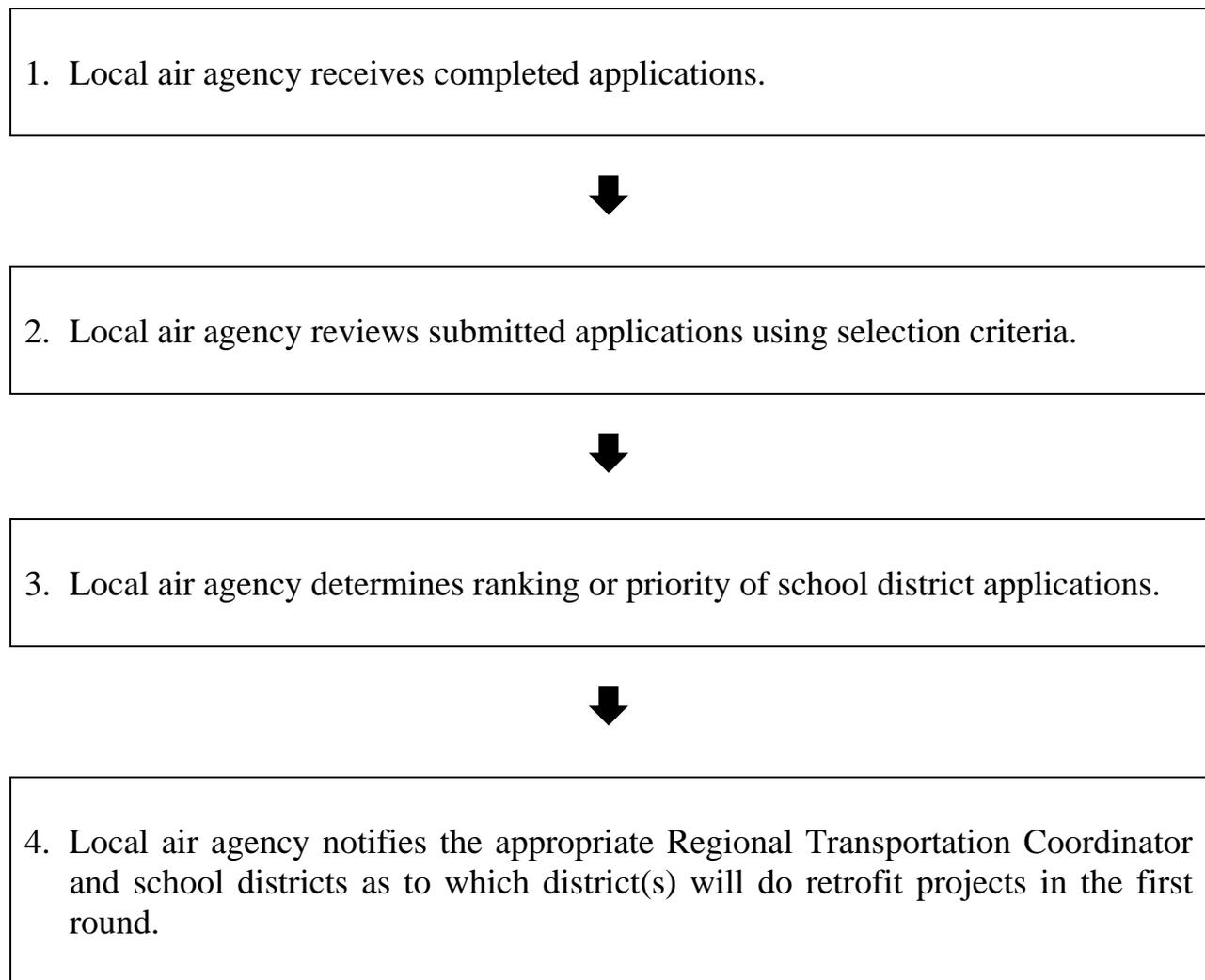


Figure 3

SELECTION PROCESS AND CRITERIA FOR YEARS 1 & 2

SELECTION PROCESS

- A 2-step process is proposed: The first step is sorting of applications/school districts by geographic characteristics, i.e., urban and rural. The second step is evaluating each application/school district within a geographic category, e.g., urban, using the selection criteria.
- The school districts are ranked “high, medium, low” for each selection criteria.

SORTING CRITERIA

Equity

School districts will be categorized to ensure a representative cross section of school districts within the state are selected and then evaluated within their category. The sorting criteria include the following:

- Local air agency jurisdiction or Ecology jurisdiction
- Urban or rural
- Large or small

SELECTION CRITERIA

Implementation: Interest, Capability, and Planning

- High School district has retrofitted some buses, clearly describes its fleet and its retrofit plan, including type of buses to be retrofitted. District has secured and is storing ULSD (if applicable) and has developed a schedule of implementation with milestones.
- Medium School district fully describes its fleet, its retrofit plan, and its implementation schedule.
- Low School district submits an application with missing or incomplete data describing its fleet and retrofit plans.

Air Quality Benefit

- High School district is located in an urban center or area that has localized air pollution problems.
- Medium School district is located in a nonattainment/maintenance area.
- Low School district is not located in those areas.

Fleet Characteristics

- High Publicly owned fleet containing a high percentage of routinely used older buses.
- Medium Publicly or privately owned fleet providing transport for public school district and containing an even mix of older and newer buses.
- Low Publicly or privately owned fleet containing mostly new buses, or fleet owned by private school district.

Financial Participation

- High School district commits to purchase ULSD or bio-diesel, (assuming it's available) with district funds and provides local "match" for retrofits.
- Medium School district provides some level of "in kind" or direct financial match for retrofits.
- Low School district provides no local financial contribution.

The local funds or match can come from federal or other sources.

ADDITIONAL CRITERIA (IF NEEDED)

Environmental Justice

- High School district has above average asthma rates in the student population.
- Medium School district has above average percentages of low-income and/or minority populations.
- Low School district has average rates and percentages of asthma, low-income and minority populations (based on statewide average data).

Ridership

- High School district is retrofitting the buses that carry the most students.
- Medium School district is retrofitting the buses that travel the most annual miles.
- Low School district is not retrofitting large buses or buses that travel additional distances.

PROJECT IMPLEMENTATION

Following the selection of the school districts that will participate in the first round of the retrofit program, the local air agency should meet with each of the districts to determine how best to implement the retrofit project. There are 2 basic approaches for the installation of diesel oxidation catalysts (DOC):

- (1) purchase of the DOCs from the state contract and hiring a contractor for the installation, and
- (2) hiring a contractor to purchase and install the DOCs

Figures 4 and 5 identify the key steps for each approach. In both approaches it is critical to have the installer visually inspect the candidate buses before the DOCs are purchased. The visual inspection will help identify the specific size of DOC needed and any installation requirements, e.g., special brackets, that may not be included in any of the general data on the buses.

Appendix G is a sample Request For Proposal (RFP) for the combined purchase and installation approach. The sample RFP may be used by an air agency or a school district, but should be reviewed by the appropriate legal counsel and adapted per their recommendations. The sample RFP also needs to be supplemented with each agency's or district's standard contract requirements.

Under both approaches a key step in the installation process is to identify where and when the buses are to be retrofitted. What is most effective for each school district may vary depending upon a number of factors including if they have spare buses, who does their routine maintenance, when the buses can be worked on, and the capabilities and facilities of the installer. Another key action is frequent, e.g., bi-weekly, reporting by the installer. It is valuable in identifying any problems, tracking progress, and keeping the project on schedule. Upon project completion, all parties, the air agency, the educational service district, Ecology, and the school district should receive a project report for their records.

PROCESS FOR RETROFITTING SCHOOL BUSES USING STATE EQUIPMENT PURCHASE – LOCAL INSTALLER APPROACH

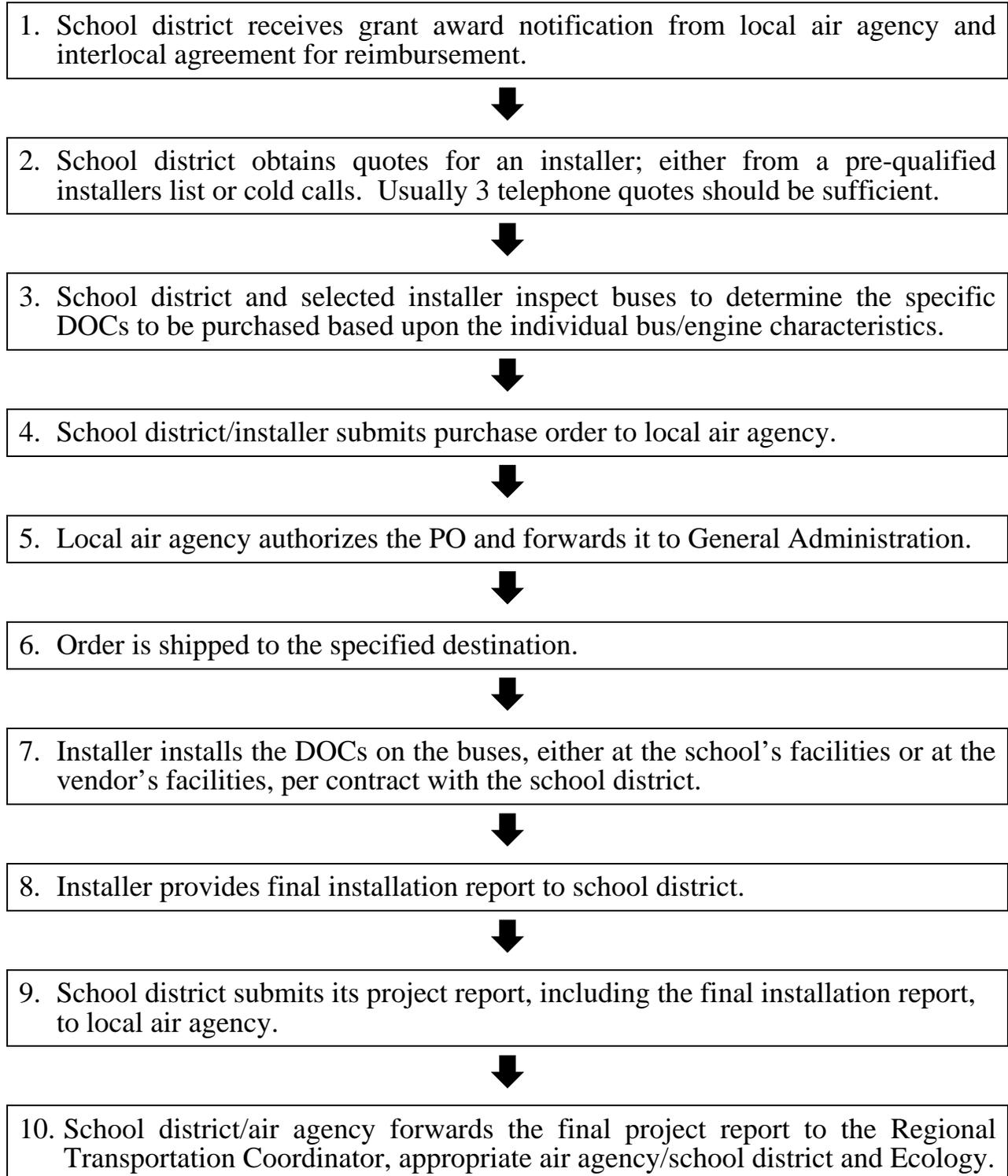


Figure 4

COMBINED PROVIDER/INSTALLER PROCESS STATE CONTRACT

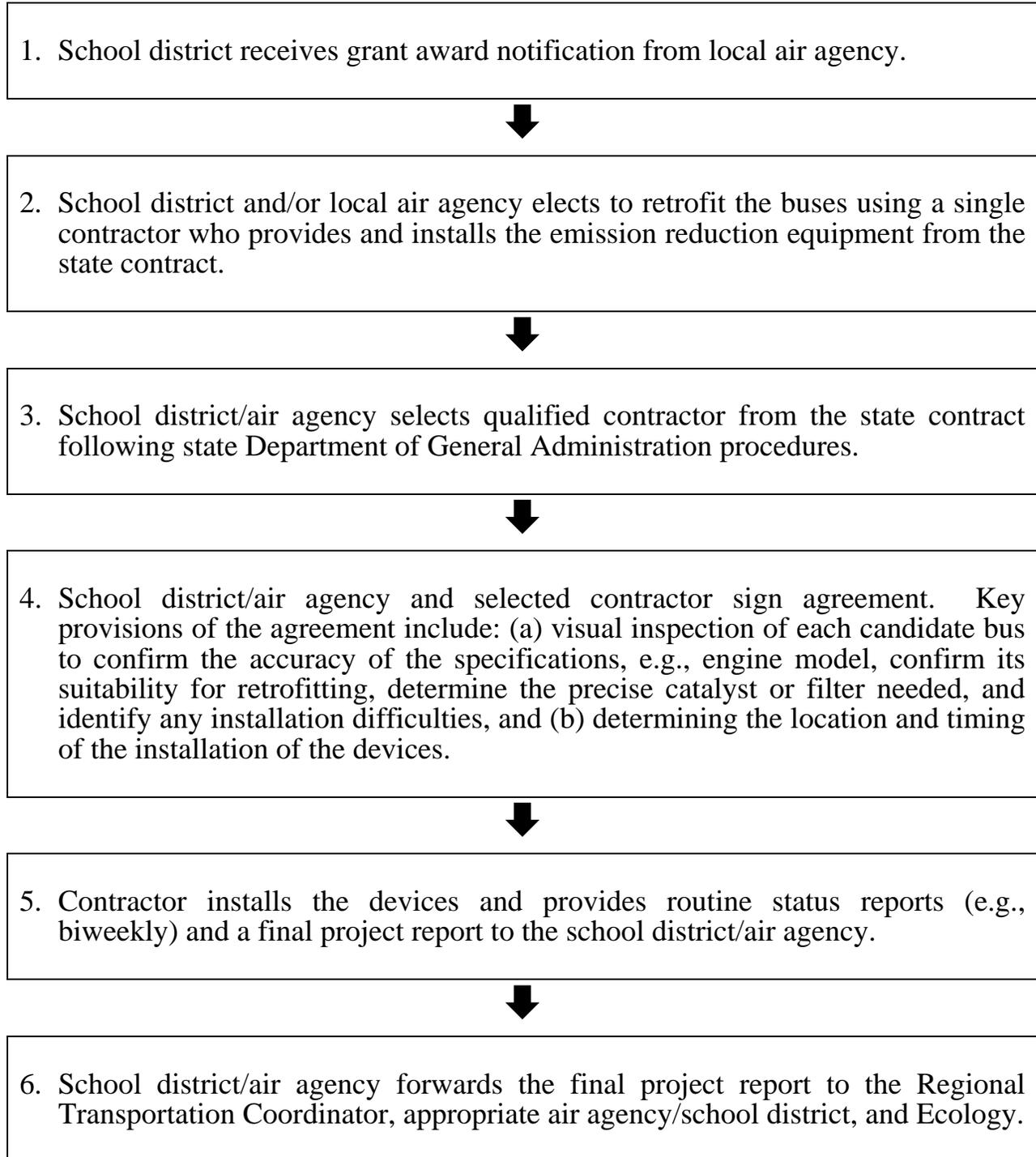


Figure 5

COMBINED PROVIDER/INSTALLER PROCESS LOCAL RFP/CONTRACT

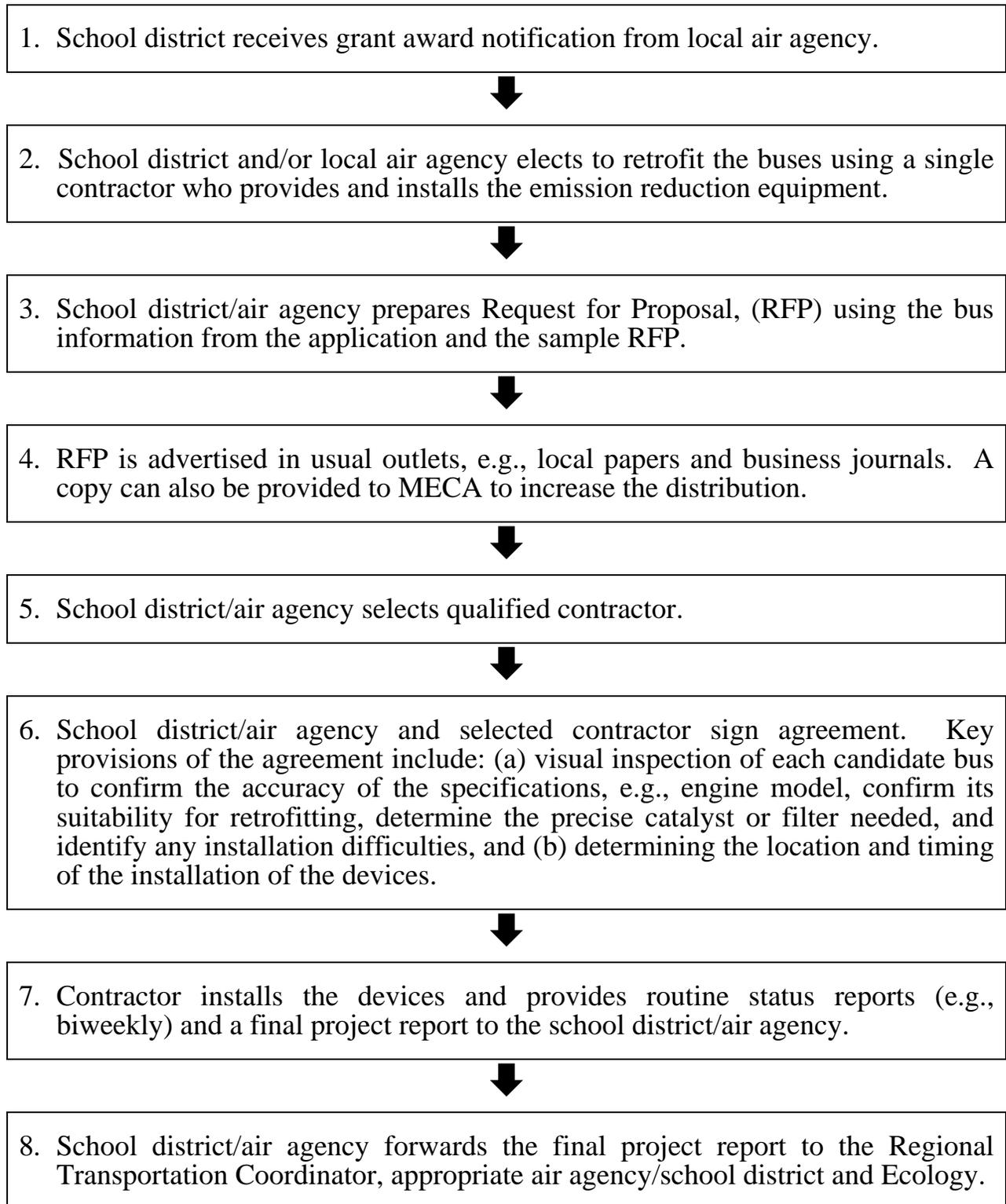


Figure 6

APPENDIX:
BACKGROUND INFORMATION

Sources of Information about Air Pollution in Washington State	
1. Olympic Region Clean Air Agency (<i>Clallam, Grays Harbor, Jefferson, Mason, Pacific, Thurston Counties</i>) 2940 B Limited Lane NW Olympia WA 98502 Richard Stedman, Executive Director Telephone: (360) 586-1044 or 1-800-422-5623 Fax: (360) 491-6308; E-mail: info@orcaa.org Internet: http://www.orcaa.org	2. Department of Ecology – Northwest Regional Office (<i>San Juan County</i>) 3190-160 th Avenue SE Bellevue WA 98008-5452 Telephone: (425) 649-7000 Fax: (425) 649-7098, TTY: 1-800-833-6388
3. Northwest Air Pollution Authority (<i>Island, Skagit, Whatcom Counties</i>) 1600 South Second Street Mount Vernon, WA 98273-5202 James Randles, Air Pollution Control Officer Telephone: (360) 428-1617 Telephone: 1-800-622-4627 (Island & Whatcom) Fax: (360) 428-1620; E-mail: info@nwair.org Internet: http://www.nwair.org	4. Puget Sound Clean Air Agency (<i>King, Kitsap, Pierce, Snohomish Counties</i>) 110 Union Street, Suite 500 Seattle, WA 98101-2038 Dennis J. McLerran, Air Pollution Control Officer Telephone: (206) 343-8800 or 1-800-552-3565 1-800-595-4341 (Burn Ban Recording) Fax: (206) 343-7522; E-mail: pscleanair.org Internet: http://www.pscleanair.org
5. Southwest Clean Air Agency (<i>Clark, Cowlitz, Lewis, Skamania, Wahkiakum Counties</i>) 11815 NE 99th St. Suite 1294 Vancouver, WA 98682-2394 Robert D. Elliott, Executive Director Telephone: (360) 574-3058 or 1-800-633-0709 Fax: (360) 576-0925; E-mail: webmaster@swcleanair.org Internet: http://www.swcleanair.org	6. Department of Ecology – Central Regional Office (<i>Chelan, Douglas, Kittitas, Klickitat, Okanogan Counties</i>) 15 West Yakima Avenue, Suite #200 Yakima, WA 98902-3401 Telephone: (509) 575-2490 Fax: (509) 575-2809, TTY: 1-800-833-6388
7. Yakima Regional Clean Air Authority 6 South 2 nd Street, Room 1016 Yakima, WA 98901 Les Ornelas, Director Telephone: (509) 574-1410 or 1-800-540-6950 Fax: (509) 574-1411; E-mail: info@yrcaa.org Internet: http://www.co.yakima.wa.us/cleanair	8. Department of Ecology – Eastern Regional Office (<i>Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, Whitman Counties</i>) 4601 N. Monroe Street, Spokane, WA 99205-1295 Telephone: (509) 329-3400 Fax: (509) 329-3529, TTY: 1-800-833-6388
9. Spokane County Air Pollution Control Authority 1101 West College Ave, Suite 403 Spokane, WA 99201 Eric Skelton, Director Telephone: (509) 477-4727 Fax: (509) 477-6828; E-mail: publicinfo@scapca.org Internet: http://www.scapca.org	10. Benton Clean Air Authority 114 Columbia Point Dr., Suite C Richland, WA 99352-4387 Dave Lauer, Director Telephone: (509) 943-3396 Fax: (509) 943-0505 or 943-2232; E-mail: email@bcaa.net Telephone: (509) 945-4489 (Burn Ban Recording) Internet: http://www.bcaa.net
<p>Department of Ecology – Air Quality Program PO Box 47600, Olympia, WA 98504-7600 Telephone: (360) 407-6800 Fax: (360) 407-7534, TTY: 1-800-833-6388 Internet: http://www.ecy.wa.gov/programs/air/airhome.html</p> <p>Department of Ecology Southwest Regional Office, PO Box 47775, Olympia, WA 98504-7775 Telephone: (360) 407-6300 – Fax: (360) 407-6305, TTY: 1-800-833-6388</p>	

If you need this document in another format, please contact Ecology's Air Quality Program at (360) 407-6800 (Voice) or 1-800-833-6388 (TTY). Ecology is an Equal Opportunity Employer

February 2003

REGIONAL TRANSPORTATION COORDINATORS

Region #1 Skip Enes
Educational Service District #112
2500 NE 65 Ave.
Vancouver, WA 98661-6812
360.750.7500 ext. 221
Fax 360.750.9836
skip.enes@esd112.k12.wa.us

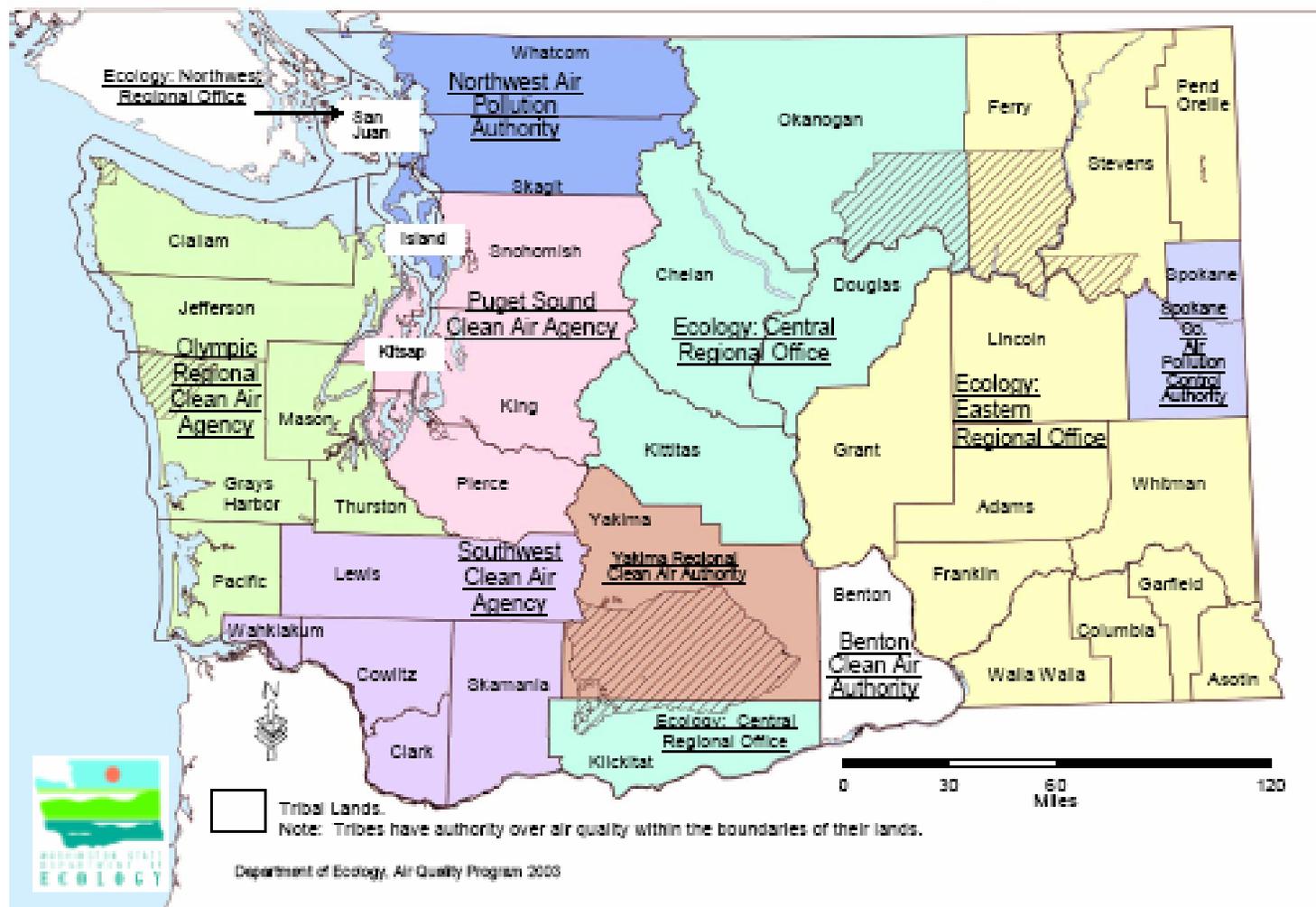
Region #2 Randy Millhollen
Puget Sound Educational Service District #121
5802 20th Street East
Fife, WA 98424-2000
253.926.6815
Fax 253.896.0621
rmillhollen@psesd.wednet.edu

Region #3 Anna Esquibel
Northwest Educational Service District #189
205 Stewart Road
Mount Vernon, WA 98273-5462
360.424.9573
Fax 360.424.9180
aesquibe@esd189.wednet.edu

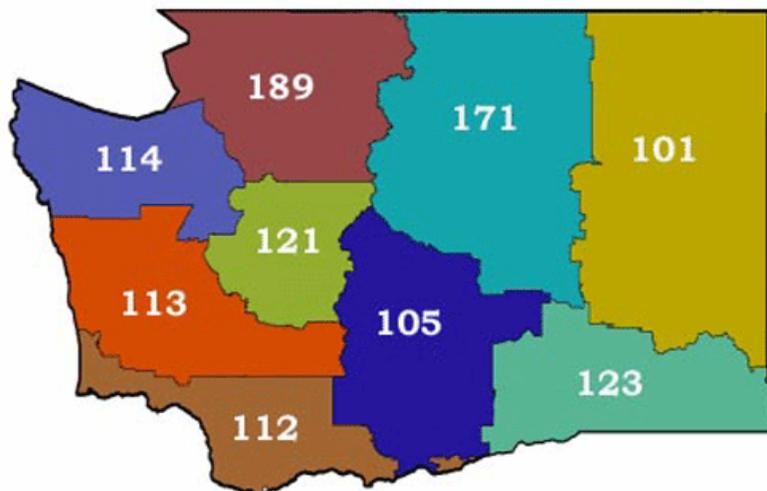
Region #4 Jan Clarence
Educational Service District #105
33 S. Second Ave.
Yakima, WA 98902
509.454.3105
Fax 509.576.3794
janetc@destiny.esd105.wednet.edu

Region #5 Mike Kenney
Educational Service District #101
1025 W. Indiana Ave.
Spokane, WA 9205-4561
509.456.6313
Fax 509.625.5240
mkenney@esd101.net

Clean Air Agencies of Washington

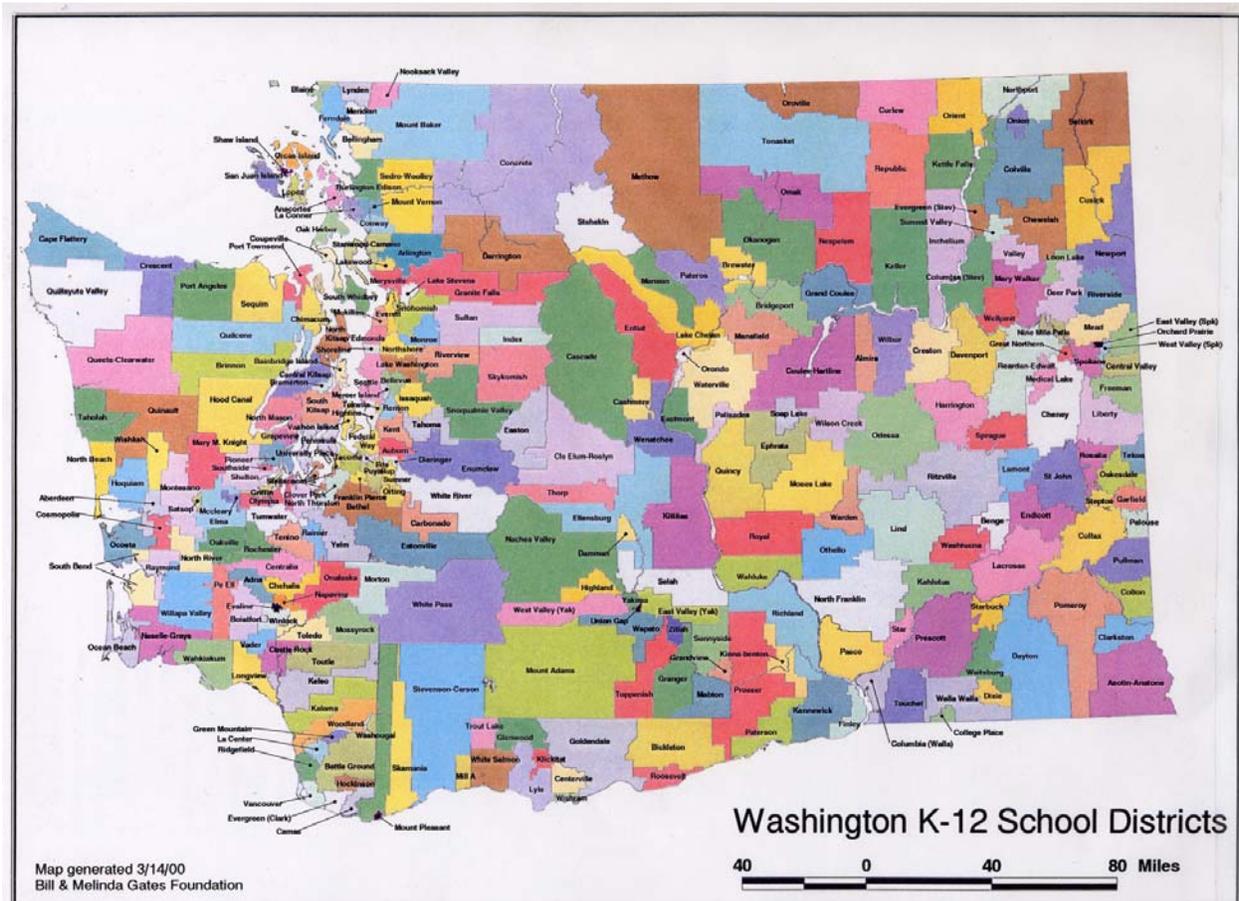


Washington State Educational Service Districts



- **ESD 101** - 4202 S. Regal, Spokane 99223-7764, (509) 789-3800, <http://www.esd101.net>
- **ESD 105** - 33 S. 2nd Ave., Yakima 98902-3486, (509) 575-2885, <http://www.esd.105.wednet.edu>
- **ESD 112** - 2500 N.E. 65th Ave., Vancouver 98661-6812, (360) 750-7500, <http://www.esd112.k12.wa.us>
- **ESD 113** - 601 McPhee Rd. S.W., Olympia 98502-5080, (360) 586-2933, <http://www.esd113.k12.wa.us>
- **ESD 114** - 105 National Ave. N., Bremerton 98312, (360) 479-0993, <http://www.oesd.wednet.edu>
- **ESD 123** - 3918 W. Court St., Pasco, 99301, (509) 547-8441, <http://www.esd123.org>
- **ESD 171** - 640 S. Mission St., P.O. Box 1847, Wenatchee 98807-1847, (509) 665-2610, <http://www.ncesd.org>
- **ESD 189** - 205 Stewart Rd., Mount Vernon 98273-5462, (360) 424-9573, <http://www.esd189.org>
- **Puget Sound ESD** - 400 S.W. 152nd, Burien 98166-2209, (206) 439-3636, <http://www.psesd.org>

Washington State K-12 School Districts



ESD Transportation Coordinators

- Region #1 Skip Enes
ESD 112/113: SW WA
2500 NE 65 Ave.
Vancouver, WA 98661-6812
360-750-7500 ext 221
Fax 360-750-9836
skip.enes@esd112.org
- Region #2 Randy Millhollen
ESD114/121: Puget Sound
5802 20th Street East
Fife, WA 98424-2000
253-926-6815 ext 5011
Fax 253-926-0621
rmillhollen@psed.wednet.edu
- Region #3 Anna Esquibel
ESD 189: NW WA.
1601 R. Ave.
Anacortes, WA 98221
360-299-4007
Fax 360-299-4070
aesquibe@esd189.org
- Region #4 Jan Clarence
ESD 105/123/171: Central WA.
33 S. Second Ave.
Yakima, WA 98902
509-454-3105
Fax 509-576-3794
janetc@esd105.wednet.edu
- Region #5: Mike Kenney
ESD 101 Eastern WA.
1025 W. Indiana Ave.
Spokane, WA 9205-4561
509-789-3558
Fax 509-789-5240
mkenney@esd101.net

APPENDIX C

EXHAUST AFTERTREATMENT TECHNOLOGY

Issued by the California Air Resources Board
April 2001

EXHAUST AFTERTREATMENT TECHNOLOGY

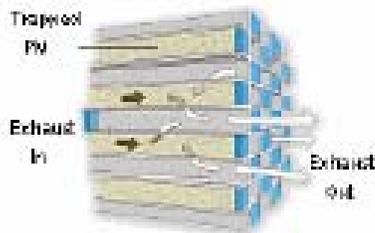
In 1988, following an exhaustive 10-year scientific assessment process, the Air Resources Board (ARB) identified particulate matter (PM) from diesel-fueled engines as a toxic air contaminant (TAC). Diesel particulates are small, generally less than 2.5 microns in diameter. These particles are complex substances typically consisting of a carbon core with adsorbed hydrocarbons, sulfates, water and inorganic materials. Diesel PM emissions are estimated to be responsible for about 70 percent of the total ambient air toxics risk. In addition to these general risks, diesel PM can also present elevated localized or near-source exposures. A significant near-source exposure group is school children. The Lower-Emission School Bus Program proposes to reduce this potential risk by replacing high-polluting school buses with new buses, and by installing special exhaust filters on remaining older buses.

Special exhaust filters, as aftertreatment or retrofit devices are available to reduce emissions from the diesel-powered school buses. These devices have been available for many years and have a proven track record of durability and effectiveness in heavy duty vehicles. The Lower Emission School Bus Program proposes to fund ARB certified aftertreatment devices that reduce diesel particulate matter (PM) emissions by at least 85%. Most of these devices are similar to current automobile catalytic converters and can be easily installed on existing buses. However, to perform effectively these devices require the use of low sulfur fuel. Use of diesel aftertreatment devices has been limited because high levels of sulfur are detrimental to their operation. The increased availability of low sulfur diesel fuel now makes widespread use of these devices practical.

The most commonly available aftertreatment device is a diesel particulate filter (DPF). Installation involves placing the DPF in the vehicles' exhaust system. In many cases the DPF replaces the existing engine muffler. The following section discusses filters suitable for this program.

A. Diesel Particulate Filters

Today, there are over 7,500 diesel particulate filters (DPF) units in use worldwide. Some of these systems have exceeded 375,000 miles of in-field use. The product is currently being used in eight heavy-duty vehicle fleets in southern California and at the New York Metropolitan Transportation Authority. The product is commercially available and being demonstrated in California school buses. In total, the technology has accumulated hundreds of millions of miles. DPF technology can achieve up to, and in some cases exceed, 85 percent reduction in PM. The filters may also reduce emissions of carbon monoxide, hydrocarbons, and in some cases oxides of nitrogen. The graphic below illustrates one type of DPF.



A typical system consists of a filter positioned in the exhaust stream designed to collect particulate emissions while allowing the exhaust gases to pass through the system. Over time, particulate matter generated by a diesel engine is sufficient to fill up and plug a filter. Therefore, a means of disposing of the trapped particulate must be provided. The most promising means of disposal is to oxidize (or burn) the trapped particulate during regular vehicle operations, thus regenerating the filter.

Two basic types of particulate filters are used: passive and active. Most passive diesel particulate filters (DPF) remove PM by collecting particles and oxidizing them during vehicle use. The oxidation process is referred to as regeneration. Passive DPFs typically rely on a precious metal catalyst contained in the filter to allow regeneration at common engine exhaust temperatures. In active filters the regeneration temperature is achieved by means of an external heat source. This typically involves an electric or other heat source to increase oxidation in the filter. There are many techniques used to facilitate regeneration. However, most DPF filters are passive self-regenerating filter systems using precious metals, like automobile catalytic converters. Usually, these DPF devices collect particulate matter and oxidize it when the exhaust temperatures are above 530°F. DPF systems do not appear to cause any additional engine wear or effect normal vehicle maintenance. However, DPF devices may require periodic maintenance to remove ash caused by motor oil combustion residues.

Several mature DPF technologies have emerged. A side by side school bus demonstration of Johnson Matthey's CRT™ diesel particulate filter and Engelhard's DPX™ catalytic soot filter is currently underway. A system manufactured by Ceryx is also being tested in school buses. All systems require the use of low-sulfur diesel fuel, i.e., fuel with sulfur less than 15 parts per million (ppm).

Johnson Matthey's CRT™ device combines a platinum catalyst and a filter element. The catalyst oxidizes NO to NO₂ and uses the produced NO₂ as an oxidant to remove the PM trapped in the filter. This method removes PM and a small percentage of exhaust NO_x. Engelhard's DPX™ device uses a different catalyst system that does not significantly affect exhaust NO_x. Ceryx Incorporated's QuadCAT™ device is designed to replace the conventional muffler/silencer on a diesel engine. The QuadCAT™ is designed to reduce PM and oxides of nitrogen (NO_x).

Independent research programs are underway to study the effects of different levels of sulfur in diesel fuel. In one such program in southern California, Detroit Diesel Corporation, Johnson Matthey, and Engelhard will demonstrate use of British Petroleum's new diesel fuel containing virtually no sulfur. This fuel may enable catalysts and particulate filters to operate more efficiently with increased durability. Johnson Matthey's CRT™ has demonstrated PM reductions greater than 90 percent by using ultra-low sulfur fuel.

A number of filter materials have been developed. Currently, ceramic monoliths, fiber wound cartridges, silica carbide and paper filters have been used commercially. The collection efficiencies of these filters range from 50 to over 90 percent.¹ All of these materials achieve high efficiencies; however, development work continues with the materials to (1) optimize the filter collection efficiency while reducing back pressure, (2) improve the regeneration process, and (3) improve the mechanical strength of the filter designs.

The exhaust temperature of a diesel school bus engine is not always high enough to initiate regeneration. A number of techniques are used to lower the regeneration temperatures found in bus exhaust. For example, in the CRT™ and DPX™ devices the filter element is coated with a catalyst. The application of a catalyst reduces the required regeneration temperature. Other techniques include the use of fuel-borne catalysts, electrical heating elements, or combustion of atomized fuel in the exhaust system to increase the temperature of the exhaust gas to start regeneration.

Diesel particulate filters are typically optimized for the particular vehicle application. This ensures the maximum control efficiency possible, while minimizing or eliminating adverse effects of the system on the engine or vehicle performance. Use of catalyzed DPFs also greatly reduces odors typically exhibited in diesel exhaust. A slight fuel economy penalty may be experienced with DPFs. This is usually attributed to the backpressure caused by a plugged DPF. Some forms of DPF regeneration involve the use of fuel burners, and if these methods are used, a 5 to 10% fuel economy penalty could be experienced. For example, Ceryx Incorporated's QuadCAT™ device uses fuel to assist in regeneration.

Filter systems do not appear to cause any additional engine wear or affect vehicle maintenance. Maintenance of the system itself should be minimal, because manufacturers are designing systems to minimize maintenance requirements during the useful life of the system.

Demonstration programs using first generation DPFs were conducted during the 1980's and into the early 1990's. Some of these systems were complex and reliability was an issue. Subsequently, manufacturers began development and

¹ Emission Control Retrofit of Diesel-Fueled Vehicles, MECA, March 2000

commercialization of second-generation systems. These simpler and more reliable systems can easily achieve PM reductions greater than 85 percent. In Europe diesel vehicles retrofitted with DPFs are offered commercially. Sweden's Clean Cities program has resulted in the commercialization of DPFs in urban transit buses. Passive filters have been installed in over 10,000 trucks and buses. Some of these vehicles have accumulated over 300,000 miles since being retrofitted. Sweden's very low sulfur diesel has enabled the use of the DPFs. Heavy-duty trucks in Germany, Finland, and France are also being retrofitted with filters. Other demonstration programs are being carried out in Taiwan and Hong Kong.

Diesel particulate filters have been used commercially in off-road equipment since 1988. The types of equipment retrofitted include mining equipment, material handling equipment, forklifts, street sweepers and utility vehicles. Germany and Austria have mandatory retrofit requirements for underground mining equipment. In the United States filters are being used in the Big Dig project in Boston. Construction equipment such as earthmovers and front loaders were retrofitted with particulate filters.

Currently, the South Coast AQMD and the ARB are conducting a demonstration program in which about 60 school buses have been retrofitted with particulate filters (the ARB is providing testing support).

B. Need for Low Sulfur Fuel

California established specifications for diesel fuel in 1990 (CARB diesel). These specifications included a 500-ppm limit on sulfur content. The typical sulfur level in CARB diesel fuel is 120 ppm. Certification of DPF devices requires the use of CARB diesel that contains 15 ppm or less sulfur. Each DPF technology has somewhat different response to sulfur levels in diesel fuel. All manufacturers agree that the sulfur levels below 15 ppm ensure optimum emission control and DPF durability.

Staff expects the low sulfur diesel fuel to cost 3 to 5 cents more per gallon than current CARB diesel. During the ARB the Transit Bus Fleet Rule development, several California refiners stated their intent to provide low sulfur diesel fuel to transit bus fleets. These refineries have the capability to produce sufficient quantities of low sulfur fuel for statewide requirements.

School districts in urban areas should be able to obtain low sulfur fuel at reasonable cost. It is unclear whether rural areas would be able to obtain low sulfur fuel at the expected cost of 3 to 5 cents per gallon above current CARB diesel. Depending on the volumes involved it may not be cost effective to deliver low sulfur diesel fuel to remote areas. Availability of low-sulfur fuel should not be a concern given the expected demand from transit and the school bus fleets expected to participate in the retrofit program.



Technical Highlights

Questions and Answers on Using a Diesel Oxidation Catalyst in Heavy-duty Trucks and Buses

The pollution emitted by diesel engines contributes greatly to our nation's air quality problems. Even with more stringent heavy-duty highway engine standards set to take effect in 2004 and 2007, existing trucks and buses will continue to emit large amounts of nitrogen oxides (NOx) and particulate matter (PM), both of which contribute to serious public health problems in the United States. Fortunately, there are several techniques and technologies designed to reduce diesel pollution from existing trucks and buses. Using pollution control devices such as a diesel oxidation catalyst (DOC) is one way existing engines can be upgraded (or "retrofitted") to pollute less. This fact sheet discusses diesel oxidation catalysts.

What are the health and environmental effects of diesel exhaust?

Heavy-duty trucks and buses account for about one-third of NOx emissions and one-quarter of PM emissions from mobile sources. In some urban areas, the contribution is even greater. The fine particles in diesel exhaust (known as particulate matter) can penetrate deep into the lungs and pose serious health risks including aggravated asthma, lung damage, and other serious health problems. In addition, diesel exhaust is a likely human carcinogen. Children are more susceptible to air pollution than healthy adults because their respiratory systems are still developing and they have a faster breathing rate.

Diesel exhaust also has environmental impacts. PM from diesel engines contribute to haze, which restricts visibility. In addition, diesel exhaust contributes to ozone formation (a component of smog), acid rain, and global climate change.

What is a Diesel Oxidation Catalyst?

A DOC is a device that uses a chemical process to break down pollutants in the exhaust stream into less harmful components. More specifically, it is a physical device with a porous ceramic honeycomb-like structure that is coated with a material that catalyzes a chemical reaction to reduce pollution.

What are the benefits of a DOC retrofit?

DOCs reduce emissions of particulate matter by at least 20 percent. DOCs also reduce emissions of hydrocarbons by 50 percent and carbon monoxide by 40 percent.

Does the EPA verify these emission reductions?

Yes, EPA evaluates the emission reduction performance of retrofit technologies such as DOCs, including their durability, and identifies engine operating criteria and conditions that must exist for these technologies to achieve those reductions. For a list of DOCs and other technologies that EPA has verified, visit: www.epa.gov/otaq/retrofit/retroverifiedlist.htm. For more information about EPA's verification process, visit: www.epa.gov/otaq/retrofit/retrofittech.htm.

How much does a DOC cost?

DOCs for school buses cost about \$1,000 - \$2,000. Field experience suggests DOCs take about 1-3 hours to install.

What type of fuel does a DOC require?

DOCs can be used with regular diesel fuel, but the effectiveness of a DOC may be increased with the use of ultra low sulfur diesel (ULSD – 15 parts per million sulfur). Currently, ULSD costs between 8 and 25 cents per gallon more than regular diesel. ULSD is available in many parts of the country now and will be available nationwide beginning in June 2006.

Can a DOC be used on any engine?

Yes. DOCs have been used for years on a variety of diesel vehicles including trucks, buses and construction equipment.

Are there special maintenance requirements for a DOC?

No. Much like a catalytic converter on a car, once a DOC is installed, it rarely requires maintenance.

How long does a DOC last?

Most DOCs come with a 100,000 to 150,000 mile warranty, and can last 7 to 15 years.

Where can I get a DOC?

For more information about manufacturers of DOCs or other retrofit equipment visit our Web site at: www.epa.gov/otaq/retrofit/cost_retrofits.htm.

Where can I find more information?

For more information on these topics, please visit these EPA Web sites:

- Voluntary Diesel Retrofit Program: www.epa.gov/otaq/retrofit
- Clean School Bus USA – Basic Information on Retrofit Options: www.epa.gov/otaq/schoolbus/retrofit.htm
- Clean Diesel Independent Review Panel: www.epa.gov/air/caaac/clean_diesel.html
- Health Assessment Document for Diesel Engine Exhaust: <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?dsid=29060>

You can also contact the Office of Transportation and Air Quality library for document information at:

U.S. Environmental Protection Agency
OTAQ Library
2000 Traverwood Drive
Ann Arbor, MI 48105
Phone: 734-214-4311
Email: GroupAALibrary@epa.gov



Technical Highlights

Questions and Answers on Using a Diesel Particulate Matter Filter in Heavy-Duty Trucks and Buses

The pollution emitted by diesel engines contributes greatly to our nation's air quality problems. Even with more stringent heavy-duty highway engine standards set to take effect in 2004 and 2007, existing trucks and buses will continue to emit large amounts of nitrogen oxides (NOx) and particulate matter (PM), both of which contribute to serious public health problems in the United States. Fortunately, there are several techniques and technologies designed to reduce diesel pollution from existing trucks and buses. Using pollution control devices such as a diesel particulate matter filter (DPF) is one way existing engines can be upgraded (or "retrofitted") to pollute less. This fact sheet discusses diesel particulate matter filters.

What are the health and environmental effects of diesel exhaust?

Heavy-duty trucks and buses account for about one-third of NO_x emissions and one-quarter of PM emissions from mobile sources. In some urban areas, the contribution is even greater. The fine particles in diesel exhaust (known as particulate matter) can penetrate deep into the lungs and pose serious health risks including aggravated asthma, lung damage, and other serious health problems. In addition, diesel exhaust is a likely human carcinogen. Children are more susceptible to air pollution than healthy adults because their respiratory systems are still developing and they have a faster breathing rate.

Diesel exhaust also has environmental impacts. PM from diesel engines contribute to haze, which restricts visibility. In addition, diesel exhaust contributes to ozone formation (a component of smog), acid rain, and global climate change.

What is a Diesel Particulate Matter Filter?

A diesel particulate matter filter (DPF) is a ceramic device that collects the particulate matter in the exhaust stream. The high temperature of the exhaust heats the ceramic structure and allows the particles inside to break down (or oxidize) into less harmful components.

What are the benefits of a DPF retrofit?

DPFs reduce emissions of particulate matter by 60 to 90 percent. DPFs also reduce emissions of hydrocarbons and carbon monoxide by 60 to 90 percent.

Does the EPA verify these emission reductions?

Yes, EPA verifies individual DPFs based on information supplied to the EPA by the DPF manufacturer. Since EPA generally receives results of testing conducted on a limited number of diesel engine models, a conservative approach is taken to establish the verified levels of reduction. In most cases the actual reductions are higher than the verified values. For a list of DPFs and other technologies that EPA has verified, visit: www.epa.gov/otaq/retrofit/retroverifiedlist.htm. For more information about EPA's verification process, visit: www.epa.gov/otaq/retrofit/retrofittech.htm.

How much does a DPF cost?

DPFs for school buses currently cost between \$5,000 and \$10,000. The cost depends on the specific bus engine and operating characteristics, such as exhaust temperatures. Field experience suggest DPFs take about 6-8 hours to install.

What type of fuel does a DPF require?

DPFs must be used with ultra-low sulfur diesel fuel (ULSD – 15 parts per million sulfur). Use of regular diesel fuel in a DPF equipped bus could eventually clog the filter. This could lead to exhaust back-pressure increases and engine damage.

Currently, ULSD costs between 8 and 25 cents per gallon more than regular diesel. ULSD is available in many parts of the country now and will be available nationwide beginning in 2006.

Can a DPF be used on any engine?

No. DPFs work best on engines built after 1995. Therefore, knowing the age and type of each engine in the fleet as well as the exhaust temperature is an important part of any retrofit project. These factors determine whether or not vehicles are candidates for filters.

Are there special maintenance requirements for a DPF?

Manufacturers of DPFs recommend that the device be cleaned about every 100,000 miles. Some of the PM collected does not completely oxidize and inert ash remains in the filter. After about 100,000 miles this ash should be removed by blowing or vacuuming it out. Generally this process takes no more than 3 hours.

How long does a DPF last?

Most DPFs come with 100,000 to 150,000 mile warranty, and can last 7 to 15 years.

Where can I get a DPF?

For more information about manufacturers of DPFs or other retrofit equipment visit our Web site at: www.epa.gov/otaq/retrofit/cost_retromfr.htm.

Where can I find more information?

For more information on these topics, please visit these EPA Web sites:

- Voluntary Diesel Retrofit Program: www.epa.gov/otaq/retrofit
- Clean School Bus USA – Basic Information on Retrofit Options: www.epa.gov/otaq/schoolbus/retrofit.htm

Appendix F

EMISSION REDUCTIONS FROM RETROFIT TECHNOLOGY

Clean Fuel/ Clean Technology Options	Type of Engine	% Reduction in Emissions of Particulate Matter	% Reduction in Emissions of Nitrogen Oxides	Approximate Cost of Technology
<u>Ultra-Low Sulfur Diesel</u> (ULSD)	New or Used Diesel Engine	Approximately 5% to 9% Enables the PM filter technology to work.	N/A	Approx. 5¢ per gallon more than regular diesel now.* In June 2006 (when ULSD will be required nationwide) cost dif-ferential will be much less.
<u>Particulate Matter Filter</u>	New or Used Diesel Engine (1995 or newer)	60% to 90%	N/A	\$5,000 to \$10,000 Must use ULSD fuel.
<u>Oxidation Catalyst</u>	New or Used Diesel Engine	20% to 30%	N/A	\$1,000 to \$2,000, and can be used with regular diesel.
<u>Compressed Natural Gas</u> (with an oxidation catalyst)	New CNG Engine	70% to 90% if using catalyst technology to reduce ultra fine PM, formaldehyde, and methane; other-wise, methane and aldehydes will be much higher than diesel engines.	Approximately 60% reduction; however, highly variable, (in- creases occur at times).	\$30,000 more than a diesel bus (cost of CNG fuel similar to regular diesel fuel). Very expensive; special refueling infrastructure and maintenance facilities are required.
<u>Bio-diesel</u> B20: 20% bio-diesel, 80% regular diesel B100: 100% bio-diesel	New or Used Diesel Engine	B20: 10% B100: 40%	Bio-diesel increases emissions of NOx slightly. B20: blend + 2% B100: fuel + 10%	B20: 15¢ to 30¢ per gallon more than regular diesel. B100: 75¢ to \$1.50 per gallon more than regular diesel. (B100 may not be an option for cold climates.)
<u>Emulsified Diesel Fuel</u>	New or Used Diesel	Approximately 50%	Approximately 10%	20¢ per gallon more than regular

	Engine			diesel.
--	--------	--	--	---------

*This number was changed from the original EPA amount to reflect local costs.

(Source of information: <http://www.epa.gov/cleanschoolbus/>)

F-1

SAMPLE
Request for Proposal
North Kitsap School District Diesel Retrofit Project

Section I. INTRODUCTION

The Puget Sound Clean Air Agency requests proposals for the following purpose according to the terms and conditions attached. In this RFP, the terms "bidder", "contractor", and "consultant" are used interchangeably.

PURPOSE: To solicit proposals to provide and install diesel exhaust emission reduction retrofit equipment on school buses for the North Kitsap School District in Kitsap County, WA.

TABLE OF CONTENTS: The RFP is organized into the following sections:

Section I	Introduction
Section II	Background and Scope of Services
Section III	Contract Term
Section IV	Contents of Proposal
Section V	Submission of Proposal
Section VI	Proposal Evaluation Criteria
Section VII	Selection of Successful Bidder
Section VIII	Contract Preparation
Appendix 1	Instructions to Bidders – Minority- and Women-Owned Businesses
Appendix 2	Standard Portion of Puget Sound Clean Air Agency Contract
Appendix 3	Certifications and Assurances

SCHEDULE: The following is a tentative schedule of events:

<u>DATE</u>	<u>EVENT</u>
June 19, 2003	Release of RFP
June 23, 2003	Pre-proposal meeting (attendance optional) meeting time: 10:00 – 12:00 noon location: 9916 NE West Kingston Rd., Kingston, WA
July 8, 2003	Proposals due by 12:00 noon
July 10, 2003	Agency selects winning proposal
July 11, 2003	Contract preparation
July 21, 2003	Contract begins
Sept. 30, 2003	Contract terminates

FOR FURTHER INFORMATION: Questions on the requirements of this RFP or how to apply should be directed by telephone or in writing to:

Project Manager:	Amy Fowler
Phone Number:	(206) 689-4017
Address:	110 Union Street #500, Seattle, WA 98101
E-mail:	amyf@pscleanair.org

AGENCY NOT OBLIGATED BY THIS RFP. Release of this RFP does not obligate the Agency in any way to contract for the services specified herein or approve or expend any funds for the services described herein. Such funds shall only be approved or expended by the Agency subsequent to execution of a contract between the Agency and the successful bidder.

The Agency will not be liable for any costs incurred by any bidder in preparation of a proposal submitted in response to this RFP, in conduct of a presentation, or any other activities related to responding to this RFP.

Bidders should be prepared to accept this RFP for incorporation into a contract resulting from this RFP. Contract negotiations may incorporate some or all of a bidder's proposal. It is understood that submitted proposals will become part of the Agency's records on this matter without obligation to the Agency.

Section II. BACKGROUND AND SCOPE OF SERVICES

The Agency is a municipal corporation responsible for protecting and enhancing the air quality in King, Kitsap, Pierce, and Snohomish counties in Washington State. The Agency, along with a consortium of partners, has developed a program called Diesel Solutions to make diesel vehicles and equipment in this region dramatically cleaner (more information is available at <http://www.pscleanair.org/dieselsolutions/index.shtml>). This voluntary initiative supports the installation of retrofit technologies and the use of reduced-sulfur fuels to help reduce emissions of diesel particulate matter from trucks, buses, vessels, and miscellaneous equipment that are currently in use. In connection with its Diesel Solutions program, the Agency has received grants totaling \$87,890.00 from the Environmental Protection Agency (EPA) to conduct a diesel retrofit project for the North Kitsap School District in Kitsap County, Washington. The EPA grant numbers are X980942-01-0 and G0300045.

In collaboration with EPA and the North Kitsap School District, the Agency seeks to contract for the installation of up to 47 diesel oxidation catalysts (DOC) on selected school buses serving the North Kitsap School District. The cost of the completed project will not exceed \$87,890.00. It is expected that the DOC installations will be completed by August 28, 2003.

The North Kitsap School District is located in Kitsap County, Washington. The school bus fleet is used to transport Native American children from the S'Klallam and Suquamish Tribes and non-Native American children to and from a school. The buses are serviced and maintained by North Kitsap School District staff.

The following buses have been identified as candidates for retrofitting with DOCs:

#	DIST. #	YEAR	VIN #	BODY MAKE	PASS	ENGINE MANUF	ENGINE CYLIN	LITERS	EST DATE RETIRE
1	90-46	1990	1BABMCXA8LF037595	Blue Bird	86	Cat	8	10.4	2010
2	90-47	1990	1BABMCXAXLF037596	Blue Bird	86	Cat	8	10.4	2010
3	90-48	1990	1BABMCXA1LF037597	Blue Bird	86	Cat	8	10.4	2010
4	90-49	1990	1BABMCXA3LF037598	Blue Bird	86	Cat	8	10.4	2010
5	90-50	1990	1BABMCXA5LF037599	Blue Bird	86	Cat	8	10.4	2010
6	92-60	1992	1BABMCBAXNF048091	Blue Bird	86	Cat	6	6.6	2012
7	92-57	1992	1BABMCBAXNF048088	Blue Bird	84	Cat	6	6.6	2012
8	92-59	1992	1BABMCBA8NF048090	Blue Bird	84	Cat	6	6.6	2014
9	94-54	1994	1BAADCSA3RF062058	Blue Bird	54	Cumm	6	5.9	2014
10	94-53	1994	1BAADCSA5RF062059	Blue Bird	54	Cumm	6	5.9	2014
11	94-67	1994	1BAANB7A5RF062014	Blue Bird	78	Cumm	6	8.3	2014
12	94-68	1994	1BAANB7A3RF062013	Blue Bird	78	Cumm	6	8.3	2014
13	94-65	1994	1BAANB7A0RF062017	Blue Bird	78	Cumm	6	8.3	2014
14	91-55	1991	1BAADCSAOMF042178	Blue Bird	20	Cumm	6	5.9	2011
15	91-56	1991	1BAADCSA2MF042179	Blue Bird	20	Cumm	6	5.9	2011
16	92-61	1992	1BABMCBA1NF048092	Blue Bird	86	Cat	6	6.6	2012
17	94-64	1994	1BAANB7A1RF062012	Blue Bird	78	Cumm	6	8.3	2014
18	94-66	1994	1BAANB7A7RF062015	Blue Bird	78	Cumm	6	8.3	2014
19	95-75	1995	4S7YT9J09TC018978	CARP	84	Cumm	6	8.3	2015
20	95-74	1995	4S7YT9J00TC019002	CARP	84	Cumm	6	8.3	2015
21	95-76	1995	4S7YT9J02TC019003	CARP	84	Cumm	6	8.3	2015
22	95-78	1995	4S7YT9J06TC019005	CARP	84	Cumm	6	8.3	2015
23	95-79	1995	4S7YT9J08TC019006	CARP	84	Cumm	6	8.3	2015
24	96-77	1996	4S7YT9J04TC019004	CARP	84	Cumm	6	8.3	2016
25	96-10	1996	4VZHR0497VC023748	CARP	84	Cumm	6	8.3	2016
26	96-51	1996	4VZHR0499VC023749	CARP	84	Cumm	6	8.3	2016
27	96-80	1996	4VZHR0495VC023750	CARP	84	Cumm	6	8.3	2016
28	96-81	1996	4VZHR0497VC023751	CARP	84	Cumm	6	8.3	2016
29	96-83	1996	4VZHR0490VC023753	CARP	84	Cumm	6	8.3	2016
30	96-84	1996	4VZHR0492VC023754	CARP	84	Cumm	6	8.3	2016
31	96-89	1996	4VZHR0491VC023759	CARP	84	Cumm	6	8.3	2016
32	96-82	1996	4VZHR0499VC023752	CARP	84	Cumm	6	8.3	2016
33	97-85	1997	4VZHR0494VC023755	CARP	84	Cumm	6	8.3	2017
34	96-88	1997	4VZHR049XVC023758	CARP	84	Cumm	6	8.3	2016
35	96-86	1996	4VZHR0496VC023756	CARP	84	Cumm	6	8.3	2016
36	96-87	1996	4VAHR0498VC023757	CARP	84	Cumm	6	8.3	2016
37	99-2	1999	1HVBGAAN3XA087864	AMTRAN	84	Cumm	6	8.3	2019
38	99-4	1999	1HVBGAAN5XA087865	AMTRAN	84	Cumm	6	8.3	2019
39	99-7	1999	1HVBGAAN7XAO87866	AMTRAN	84	Cumm	6	8.3	2019
40	99-8	1999	1HVBGAAN9XA087867	AMTRAN	84	Cumm	6	8.3	2019
41	99-9	1999	1HVBGAAN0XA087868	AMTRAN	84	Cumm	6	8.3	2019
42	99-11	1999	1HVBGAAN2XA087869	AMTRAN	84	Cumm	6	8.3	2019
43	99-3	2000	1T88U4B24Y1088293	THOMAS	78	Cumm	6	8.3	2019
44	99-15	2000	1T88U4B26Y1088294	THOMAS	78	Cumm	6	8.3	2019
45	00-21	2000	1T88U4B2X11098834	THOMAS	80	Cumm	6	8.3	2020
46	00-20	2000	1T88U4B2111098835	THOMAS	80	Cumm	6	8.3	2020

47	00-18	2000	1T88U4B2311098836	THOMAS	80	Cumm	6	8.3	2020
----	-------	------	-------------------	--------	----	------	---	-----	------

Buses #1 through 13 have the highest retrofit priority because they serve both the S’Klallam and Suquamish Tribes and conform with EPA grant X980942-01-0 prerequisites.

Specific tasks to be performed by a consultant include:

Task I: The consultant will work with the North Kitsap School District Director of Transportation and the Agency Project Manager to visually inspect the North Kitsap school bus fleet, identify proper retrofit equipment and develop an installation schedule. The DOCs selected shall be currently verified either by the EPA Voluntary Diesel Retrofit Program or the California Air Resources Board (CARB) verification process. The consultant’s proposal shall include documentation showing that each DOC selected has been verified by EPA or CARB. If the consultant cannot install DOCs on all 47 of the buses listed above within the contractual budget of \$87,890.00, the consultant shall specify which buses will be retrofitted. This list must include buses numbered 1 through 13. For the remainder of the list, the consultant shall select those buses with the greatest potential for emission reductions based upon the applicable federal motor vehicle emission standard in effect on the date of manufacture of the bus. The consultant shall ensure that the installation of the DOCs will not void any existing warranty on any retrofitted vehicle.

Task II: The consultant shall provide all necessary mounting hardware required to install the oxidation catalysts, including the oxidation catalysts themselves. The DOCs shall be installed by the consultant at the North Kitsap School District maintenance facility, located in Kingston, WA. Bus lifts will be made available to the consultant as per the schedule agreed upon by the Kitsap School District’s Director of Transportation.

Task III: The consultant shall provide the Agency Project Manager and North Kitsap School District Director of Transportation with the following documentation and reports in writing:

- A bi-weekly progress report, due on alternate Wednesdays for the previous 2 weeks of work (Monday through the following Friday), listing the bus number, vehicle district number, engine make and model number, and date each oxidation catalyst was installed for that reporting period.
- An end-of-project spreadsheet listing the bus number, vehicle district number, engine make and model number, and date when each oxidation catalyst was installed, due by September 26, 2003.
- A list of the DOC manufacturer’s maintenance procedures and recommended maintenance period for each vehicle, due by September 26, 2003.

- A written labor and materials warranty for services provided of no less than 12 months or 20,000 miles, whichever comes first. This written warranty shall be provided by September 26, 2003.

Section III. CONTRACT TERM

The contract is anticipated to start July 21, 2003 and continue through September 30, 2003.

Section IV. CONTENTS OF PROPOSAL

Submitted proposal must follow the format outlined below and all requested information must be supplied. Failure to submit proposal in the required format will result in elimination from proposal evaluation.

Proposal must be submitted on white recycled paper; stapled (not bound); printed double-sided. No 3-ring, spiral-bound, or plastic-bound proposal will be accepted. No proposal containing card stock or colored paper will be accepted. The maximum length of proposal accepted will be twenty (20) 8½ X 11 double-sided sheets of paper. Proposal must include the following:

Cover Letter – Include the name, address, and telephone number of the bidder and be signed by the bidder.

Table of Contents – Clearly identify material contained in the proposal by section and page number.

Statement of Understanding – Provide an overview of bidder's understanding of the contract, the contract purpose, and the importance of the contract to the interests of the Agency.

Objectives (Section I) – Identify the objectives of the proposal and describe the scope of work of the proposed contract from the contractor's perspective.

Background (Section II) – Provide a description of the bidder's organization, agency, or firm. Describe all experience relevant to this contract and provide at least 3 appropriate references that include contact name, address, and current telephone number.

Work Statement (Section III) – Describe the work to be performed. Include all relevant information regarding how the contract objectives will be met. Bidders must address each of the tasks outlined above in Section II - BACKGROUND AND SCOPE OF SERVICES and describe how they will accomplish the tasks within the proposed project budget.

Schedule of Deliverables (Section IV) – Provide a list of all work products and a schedule of work to be done that shows timelines for specific tasks, if needed.

Budget and Cost Breakdown (Section V) – Identify personnel who will be involved and their experience. The bidder shall describe how money would be allocated between the tasks. The estimated number of vehicles to be retrofitted must be provided. The cost to equip each vehicle with the appropriate emission control system shall be detailed by the significant components including emission control device, installation hardware.

Section V. SUBMISSION OF PROPOSAL

Proposal must be submitted according to specifications as set forth in Section IV – CONTENTS OF PROPOSAL and this section. **Failure to adhere to these specifications will be cause for rejection of the proposal.**

Signature - All proposals shall be signed by the bidder.

Due Date - The bidder shall submit 2 complete copies of the proposal in a sealed envelope, plainly marked in the upper, left-hand corner with the name and address of the bidder. The Agency address should contain the name of the project and the project manager, and the term "**CONFIDENTIAL**". Bids for this proposal are due no later than 12:00 noon on July 8, 2003, and should be delivered to:

Receptionist
ATTN: North Kitsap School District Diesel Retrofit Project
Puget Sound Clean Air Agency
110 Union Street, Suite 500
Seattle, WA 98101

If the proposal is mailed, it must arrive by 12:00 noon on the due date. Bidders mailing proposals should allow normal delivery time to ensure timely receipt of their proposal by the Agency. Bidders assume the risk for the method of delivery chosen. The Agency assumes no responsibility for delays caused by any delivery service.

Submitted bids are considered final. Late proposals will not be accepted. Any correction or resubmission by the bidder will not extend the submittal due date.

Bid opening will occur at 1:00 p.m. on July 8, 2003, in the Agency offices.

Instruction to Bidders - The attachments to the Request for Proposal, identified as *Appendices 1, 2, 3*, are an integral part of the Request for Proposal and set forth policy and compliance requirements.

Disposition of Proposals – The Agency reserves the right to reject any and all proposals received without penalty and to not issue a contract as a result of this RFP. The Agency will reject a proposal if:

- It is received any time after the above date and time set for receipt of proposals.
- It is not prepared in the format prescribed.
- It is not signed by the bidder.
- It does not contain Appendix 3.

All proposals become the property of the Agency. Proprietary materials submitted by the bidder to augment the proposal will be returned to the bidder at their request and expense. One copy of the proposal will be retained by the Agency. Additional copies will be returned only if requested and at the bidder's expense.

Section VI. PROPOSAL EVALUATION CRITERIA

The Agency will evaluate all proposals and award points (100 points maximum) based on the following criteria:

	<u>Total Possible Points</u>
1. Level of qualification: experience, knowledge, and availability of qualified personnel.	40
2. Total Budget Proposal: total cost of proposal and number of oxidation catalysts installed.	40
3. Project organization: completeness of the response to each task and the timeliness of implementing each task (particularly completing DOC installations by August 28, 2003) as outlined in the work statement.	20

Section VII. SELECTION OF SUCCESSFUL BIDDER

The successful bidder will be selected based on the above criteria. Selection is expected to be made no later than July 10, 2003.

Section VIII. CONTRACT PREPARATION

The selected contractor will enter into a contract with the Agency as a condition of receiving funds. Contract preparation will begin promptly upon selection of contractor. Before beginning contract discussions with the project manager, the successful bidder should become familiar with the Agency's standard contract language, included as Appendix 2 in the RFP.

This material is available in alternate formats for individuals with disabilities. Please call Carol Pogers at (206) 689-4080 (1-800-552-3565, ext. 4080).

[NOTE: The remainder of the RFP should include the standard contract requirements of the contracting school district or air agency.]

CERTIFICATION OF ENROLLMENT
ENGROSSED SUBSTITUTE SENATE BILL 6072

Chapter 264, Laws of 2003
(partial veto)

58th Legislature
2003 Regular Session

POLLUTION RESPONSE

EFFECTIVE DATE: 7/27/03

Passed by the Senate April 26, 2003
YEAS 42 NAYS 6

BRAD OWEN

President of the Senate

Passed by the House April 27, 2003
YEAS 63 NAYS 35

FRANK CHOPP

Speaker of the House of Representatives

Approved May 14, 2003, with the
exception of section 6, which is vetoed.

GARY F. LOCKE

Governor of the State of Washington

CERTIFICATE

I, Milton H. Doumit, Jr.,
Secretary of the Senate of the
State of Washington, do hereby
certify that the attached is
ENGROSSED SUBSTITUTE SENATE BILL
6072 as passed by the Senate and
the House of Representatives on
the dates hereon set forth.

MILTON H. DOUMIT JR.

Secretary

FILED

May 14, 2003 - 10:20 a.m.

Secretary of State
State of Washington

ENGROSSED SUBSTITUTE SENATE BILL 6072

Passed Legislature - 2003 Regular Session

State of Washington 58th Legislature 2003 Regular Session

By Senate Committee on Highways & Transportation (originally sponsored by Senators Horn and Haugen)

READ FIRST TIME 04/11/03.

1 AN ACT Relating to funding pollution abatement and response;
2 amending RCW 46.12.040, 46.12.101, and 46.68.020; adding a new section
3 to chapter 70.94 RCW; adding a new section to chapter 90.56 RCW;
4 creating a new section; making appropriations; and providing an
5 expiration date.

6 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

7 NEW SECTION. Sec. 1. A new section is added to chapter 70.94 RCW
8 to read as follows:

9 (1) Money deposited in the segregated subaccount of the air
10 pollution control account under RCW 46.68.020(2) shall be distributed
11 as follows:

12 (a) Eighty-five percent shall be distributed to air pollution
13 control authorities created under this chapter. The money must be
14 distributed in direct proportion with the amount of fees imposed under
15 RCW 46.12.080, 46.12.170, and 46.12.181 that are collected within the
16 boundaries of each authority. However, an amount in direct proportion
17 with those fees collected in counties for which no air pollution
18 control authority exists must be distributed to the department.

1 (b) The remaining fifteen percent shall be distributed to the
2 department.

3 (2) Money distributed to air pollution control authorities and the
4 department under subsection (1) of this section must be used as
5 follows:

6 (a) Eighty-five percent of the money received by an air pollution
7 control authority or the department must be used to retrofit school
8 buses with exhaust emission control devices or to provide funding for
9 fueling infrastructure necessary to allow school bus fleets to use
10 alternative, cleaner fuels.

11 (b) The remaining fifteen percent may be used by the air pollution
12 control authority or department to reduce vehicle air contaminant
13 emissions and clean up air pollution, or reduce and monitor toxic air
14 contaminants.

15 (3) Money in the air pollution control account may be spent by the
16 department only after appropriation.

17 (4) The department shall provide a report to the legislative
18 transportation committees on the progress of the implementation of this
19 section by December 31, 2004.

20 NEW SECTION. Sec. 2. The sum of ten million dollars is
21 appropriated for the biennium ending June 30, 2005, from the segregated
22 subaccount of the air pollution control account to the department of
23 ecology for the purposes of section 1 of this act.

24 NEW SECTION. Sec. 3. A new section is added to chapter 90.56 RCW
25 to read as follows:

26 The vessel response account is created in the state treasury.
27 Grants, gifts, and federal funds may be deposited into the account.
28 Oil spill penalties assessed against ships under RCW 90.56.330 and
29 90.48.144 shall also be deposited into the account as well as the money
30 distributed under RCW 46.68.020(2). Moneys in the account may be spent
31 only after appropriation. The department of ecology is authorized to
32 utilize the vessel response account to preposition a dedicated rescue
33 tug at the entrance to the Strait of Juan de Fuca to reduce the risk of
34 major maritime accidents and oil spills on the outer coast and western
35 strait. Prior to authorizing the rescue tug to respond to a distressed
36 vessel, the department shall work with the United States Coast Guard

1 and industry to determine if another capable, unencumbered commercial
2 tug is available in the area that can respond. If such a tug can
3 respond without increasing the risk of a casualty, it should be
4 deployed as the tug of choice and the state-contracted rescue tug
5 should not be taken off standby duty. The department is also
6 authorized to spot charter tugs as needed during major storms and other
7 high risk periods to protect maritime commerce and the environment
8 anywhere in state waters.

9 The department shall not proceed with rule making related to
10 emergency towing pursuant to chapter 88.46 RCW, so long as the deposit
11 of the fee into the vessel response account under RCW 46.68.020(2) is
12 continued and is appropriated for the purpose of the dedicated rescue
13 tug.

14 NEW SECTION. Sec. 4. The department of ecology shall complete an
15 evaluation of tug escort requirements for laden tankers to determine if
16 the current escort system requirements under RCW 88.16.190 should be
17 modified to recognize safety enhancements of the new double hull
18 tankers deployed with redundant systems. The department shall provide
19 a report with recommendations to the governor and the appropriate
20 committees of the legislature by January 1, 2005.

21 NEW SECTION. Sec. 5. (1) The sum of two million eight hundred
22 seventy-six thousand dollars is appropriated for the biennium ending
23 June 30, 2005, from the vessel response account to the department of
24 ecology for the purposes of section 3 of this act.

25 (2) The sum of two hundred thousand dollars is appropriated for the
26 biennium ending June 30, 2005, from the oil spill prevention account to
27 the department of ecology for the purposes of section 4 of this act.

28 *Sec. 6. RCW 46.12.040 and 2002 c 352 s 3 are each amended to read
29 as follows:

30 (1) The application accompanied by a draft, money order, certified
31 bank check, or cash for five dollars, together with the last preceding
32 certificate or other satisfactory evidence of ownership, shall be
33 forwarded to the director.

34 (2) The fee shall be in addition to any other fee for the license

1 registration of the vehicle. The certificate of ownership shall not be
2 required to be renewed annually, or at any other time, except as by law
3 provided.

4 (3) In addition to the application fee and any other fee for the
5 license registration of a vehicle, the department shall collect from
6 the applicant a fee of fifteen dollars for vehicles previously
7 registered in any other state or country. ~~((The proceeds from the fee
8 shall be deposited in the motor vehicle fund. For vehicles requiring
9 a physical examination, the inspection fee shall be fifty dollars and
10 shall be deposited in the motor vehicle fund.))~~

~~*Sec. 2 was retained. See message at end of chapter.~~

11 Sec. 7. RCW 46.12.101 and 2002 c 279 s 1 are each amended to read
12 as follows:

13 A transfer of ownership in a motor vehicle is perfected by
14 compliance with the requirements of this section.

15 (1) If an owner transfers his or her interest in a vehicle, other
16 than by the creation, deletion, or change of a security interest, the
17 owner shall, at the time of the delivery of the vehicle, execute an
18 assignment to the transferee and provide an odometer disclosure
19 statement under RCW 46.12.124 on the certificate of ownership or as the
20 department otherwise prescribes, and cause the certificate and
21 assignment to be transmitted to the transferee. The owner shall notify
22 the department or its agents or subagents, in writing, on the
23 appropriate form, of the date of the sale or transfer, the name and
24 address of the owner and of the transferee, the transferee's driver's
25 license number if available, and such description of the vehicle,
26 including the vehicle identification number, the license plate number,
27 or both, as may be required in the appropriate form provided or
28 approved for that purpose by the department. The report of sale will
29 be deemed properly filed if all information required in this section is
30 provided on the form and includes a department-authorized notation that
31 the document was received by the department, its agents, or subagents
32 on or before the fifth day after the sale of the vehicle, excluding
33 Saturdays, Sundays, and state and federal holidays. Agents and
34 subagents shall immediately electronically transmit the seller's report
35 of sale to the department. Reports of sale processed and recorded by
36 the department's agents or subagents may be subject to fees as
37 specified in RCW 46.01.140 (4)(a) or (5)(b). By January 1, 2003, the

1 department shall create a system enabling the seller of a vehicle to
2 transmit the report of sale electronically. The system created by the
3 department must immediately indicate on the department's vehicle record
4 that a seller's report of sale has been filed.

5 (2) The requirements of subsection (1) of this section to provide
6 an odometer disclosure statement apply to the transfer of vehicles held
7 for lease when transferred to a lessee and then to the lessor at the
8 end of the leasehold and to vehicles held in a fleet when transferred
9 to a purchaser.

10 (3) Except as provided in RCW 46.70.122 the transferee shall within
11 fifteen days after delivery to the transferee of the vehicle, execute
12 the application for a new certificate of ownership in the same space
13 provided therefor on the certificate or as the department prescribes,
14 and cause the certificates and application to be transmitted to the
15 department.

16 (4) Upon request of the owner or transferee, a secured party in
17 possession of the certificate of ownership shall, unless the transfer
18 was a breach of its security agreement, either deliver the certificate
19 to the transferee for transmission to the department or, when the
20 secured party receives the owner's assignment from the transferee, it
21 shall transmit the transferee's application for a new certificate, the
22 existing certificate, and the required fee to the department.
23 Compliance with this section does not affect the rights of the secured
24 party.

25 (5) If a security interest is reserved or created at the time of
26 the transfer, the certificate of ownership shall be retained by or
27 delivered to the person who becomes the secured party, and the parties
28 shall comply with the provisions of RCW 46.12.170.

29 (6) If the purchaser or transferee fails or neglects to make
30 application to transfer the certificate of ownership and license
31 registration within fifteen days after the date of delivery of the
32 vehicle, he or she shall on making application for transfer be assessed
33 a twenty-five dollar penalty on the sixteenth day and two dollars
34 additional for each day thereafter, but not to exceed one hundred
35 dollars. The director may by rule establish conditions under which the
36 penalty will not be assessed when an application for transfer is
37 delayed for reasons beyond the control of the purchaser. Conditions

1 for not assessing the penalty may be established for but not limited to
2 delays caused by:

- 3 (a) The department requesting additional supporting documents;
- 4 (b) Extended hospitalization or illness of the purchaser;
- 5 (c) Failure of a legal owner to release his or her interest;
- 6 (d) Failure, negligence, or nonperformance of the department,
7 auditor, or subagent.

8 Failure or neglect to make application to transfer the certificate
9 of ownership and license registration within forty-five days after the
10 date of delivery of the vehicle is a misdemeanor.

11 (7) Upon receipt of an application for reissue or replacement of a
12 certificate of ownership and transfer of license registration,
13 accompanied by the endorsed certificate of ownership or other
14 documentary evidence as is deemed necessary, the department shall, if
15 the application is in order and if all provisions relating to the
16 certificate of ownership and license registration have been complied
17 with, issue new certificates of title and license registration as in
18 the case of an original issue and shall transmit the fees together with
19 an itemized detailed report to the state treasurer(~~(, to be deposited~~
20 ~~in the motor vehicle fund)~~).

21 (8) Once each quarter the department shall report to the department
22 of revenue a list of those vehicles for which a seller's report has
23 been received but no transfer of title has taken place.

24 **Sec. 8.** RCW 46.68.020 and 2002 c 352 s 21 are each amended to read
25 as follows:

26 The director shall forward all fees for certificates of ownership
27 or other moneys accruing under the provisions of chapter 46.12 RCW to
28 the state treasurer, together with a proper identifying detailed
29 report. The state treasurer shall credit such moneys [~~to the~~
30 ~~multimedial transportation account in RCW 47.66.070, and all expenses~~
31 ~~incurred in carrying out the provisions of that chapter shall be paid~~
32 ~~from such account as authorized by legislative appropriation)] as
33 follows:~~

34 (1) The fees collected under RCW 46.12.040(1) shall be credited to
35 the multimodal transportation account in RCW 47.66.070.

36 (2)(a) Beginning with the effective date of this section, and until

1 July 1, 2008, the fees collected under RCW 46.12.080, 46.12.170, and
2 46.12.181 shall be credited as follows:

3 (i) 58.12 percent shall be credited to a segregated subaccount of
4 the air pollution control account in RCW 70.94.015;

5 (ii) 15.71 percent shall be credited to the vessel response account
6 created in section 3 of this act; and

7 (iii) The remainder shall be credited into the transportation 2003
8 account (nickel account).

9 (b) Beginning July 1, 2008, and thereafter, the fees collected
10 under RCW 46.12.080, 46.12.170, and 46.12.181 shall be credited to the
11 transportation 2003 account (nickel account).

12 (3) All other fees under chapter 46.12 RCW shall be credited to the
13 motor vehicle account, unless specified otherwise.

14 NEW SECTION. Sec. 9. Sections 1 and 3 of this act expire July 1,
15 2008.

Passed by the Senate April 26, 2003.

Passed by the House April 27, 2003.

Approved by the Governor May 14, 2003, with the exception of
certain items that were vetoed.

Filed in Office of Secretary of State May 14, 2003.

Note: Governor's explanation of partial veto is as follows:

"I am returning herewith, without my approval as to section 6,
Engrossed Substitute Senate Bill No. 6072 entitled:

"AN ACT Relating to funding pollution abatement and response;"

This bill establishes funding for a tugboat to reduce the risk of
major maritime accidents, to enhance emission control for school
buses, and to reduce and monitor vehicle air emissions.

I support these important environmental responsibilities, and
appreciate the work of the legislature to provide for these
activities within existing funds. However, section 6 of this bill
would inadvertently eliminate the fifty-dollar physical inspection
fee required for some out-of-state vehicles prior to registration in
Washington State. I am, therefore, vetoing section 6 of this bill in
order to maintain the inspection fee, which provides \$2.5 million
annual revenue for this important public safety program.

For these reasons, I have vetoed section 6 of Engrossed Substitute
Senate Bill No. 6072.

With the exception of section 6, of Engrossed Substitute Senate Bill
No. 6072 is approved."

INTERLOCAL AGREEMENT PURSUANT TO CHAPTER 39.34 RCW

Background

Engrossed Substitute Senate Bill (ESSB) 6072 was passed by the 58th Washington State Legislature during its 2003 Regular Session, signed into law by Governor Gary Locke, and became effective on July 27, 2003. Among its other provisions, ESSB 6072 effects a transfer of funds, generated from a fee attached to the transfer of an owner's interest in a motor vehicle (pursuant to the provisions of Chapter 46.12 RCW), into a subaccount of the¹ air pollution control account. The Department of Ecology (Ecology) retains 15% of these funds and distributes the remaining 85% to the air pollution control authorities (Authorities) in direct proportion to the amount of the transfer fee collected within each authority. For counties in which there is no Authority, Ecology retains the 85% and is responsible for seeing to it that the funds are expended in each of those counties in accordance with the purposes of ESSB 6072.

In every case, the 85% portion of the funds is to be further divided and expended for the following purposes:

1. 85% must be used to retrofit school buses with exhaust emission control devices or to provide funding for fueling infrastructure necessary to allow school bus fleets to use alternative, cleaner fuels.
2. The remaining 15% is to be used to reduce vehicle air contaminant emissions and clean up air pollution, or reduce and monitor toxic air contaminants.

Since the effect of retrofitting school buses with exhaust emission control devices and establishing clean-fuel infrastructure is to reduce vehicle air contaminant emissions, 100% of the 85% portion of the funds, could be used entirely for the first purpose identified above and thereby meet the intent of ESSB 6072. However, the law does not require all of the funds to be used in exactly the same way.

Purpose

In the state of Washington, air pollution control programs are administered separately by 7 local Authorities and, in the case of counties without an Authority, by Ecology. In effect, ESSB 6072 establishes a funding mechanism for 8 separate school bus retrofit programs. Any Authority that chooses to do so may administer its own retrofit program without involving the other authorities or Ecology. However, there are distinct advantages to a consolidated program, which places Ecology in the role of lead agency and fiscal agent. Among the advantages are:

1. Consolidated purchasing of services and equipment through Ecology's contractual arrangements with the Department of General Administration.
2. Consolidated administrative costs and functions within a single agency.

¹ For an explanation of the air pollution control account, see RCW 70.94.015.

The purpose of this interlocal agreement (Agreement) between [name of the local air pollution control authority] (Authority) and Ecology, consistent with the purposes of ESSB 6072, is to consolidate the program for purchasing and administration within Ecology, as necessary to achieve the retrofitting of school buses with exhaust emission control devices and to provide fueling infrastructure to allow school bus fleets to use alternative, cleaner fuels.

Roles and Responsibilities of Ecology

Pursuant to this Agreement, Ecology will:

1. Establish a formula for determining the proportion of funds due to the Authority, pursuant to the provisions of ESSB 6072, and provide this formula to the Authority.
2. In each fiscal year, determine the exact amount of funds due to the Authority and transmit this amount to the Authority through a grant agreement, which is substantively the same as existing agreements used to transmit other state grant funds to the Authority.
3. Receive back from the Authority and account for that portion of the funds, which the Authority determines is to be expended under the consolidated program, as outlined in the **Purpose** section above.
4. As an alternative to 3 and 4 above, and if determined to be consistent with general accounting principles, retain up front, that portion of the funds which the Authority determines is to be expended under the consolidated program and transmit the remainder to the Authority.
5. Fund the administrative costs for the consolidated program out of the 15% of the total funding appropriated under ESSB 6072. The administrative costs shall not exceed xx% of that portion of funds, which the Authority determines is to be expended under the consolidated program.
6. Establish through the Department of General Administration, centralized contracts for school bus fleet surveys, contracts for emission control equipment purchase, installation, and maintenance, and contracts for purchase of cleaner fuels.
7. Design and implement a fund tracking and distribution process, designed to ensure that the funds intended for expenditure within the boundaries of the Authority are expended accordingly. Provide quarterly reports to the Authority on the expenditure of funds.
8. Work with the Office of the Superintendent of Public Instruction to identify school districts that will participate in the program.

Roles and Responsibilities of the Authority

Pursuant to this Agreement, the Authority will:

1. Determine that portion of funds to be expended under the consolidated program and transmit or otherwise designate that portion to Ecology for this purpose.
2. Establish and retain a record of the funds expended within the Authority's boundaries.
3. Review and authorize as appropriate, the proposal of each participating school district within the Authority's boundaries for the procurement, installation, and/or

maintenance of exhaust emission control devices and/or for provision of fueling alternative fueling infrastructure. Such authorization shall include a determination, based on the bus model year, bus engine type, and other relevant criteria, as to the appropriate retrofit technology and/or alternate fuel to be used for each candidate school bus. **[Note: The authorization can be achieved through use of one of the relatively simple model contracts that are already in use for this purpose.]**

4. Assist the school districts as necessary and upon request, to identify local services for the installation and/or maintenance of the exhaust emission control devices.
5. Verify that the retrofit equipment has been installed and/or the alternate fuel infrastructure has been established and notify Ecology and/or the Department of General Administration prior to reimbursement of the entity that incurred the cost of installation/establishment. **[Question: How rigorous should this verification process be? Should the Authorities simply take the word of the school district or installer or should they somehow independently verify that the service has been rendered?]**
6. Provide quarterly reports to Ecology on the number of retrofit units installed and the fueling infrastructure established.

Indemnification

[Insert standard indemnification language here]

Termination

[Insert termination clause here.]

Executed this __ day of __ 2003

Director, Authority

Air Quality Program Manager