



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS
MOBILE SOURCE COMMITTEE

COMMITTEE MEMBERS

TIM SMITH - CHAIR
ROBERTA COOPER
JERRY HILL
JOHN SILVA

JAKE MCGOLDRICK – VICE CHAIR
SCOTT HAGGERTY
MICHAEL SHIMANSKY
PAMELA TORLIATT

MONDAY
MARCH 13, 2006
9:30 A.M.

FOURTH FLOOR CONFERENCE ROOM
DISTRICT OFFICES

AGENDA

1. **CALL TO ORDER - ROLL CALL**
2. **PUBLIC COMMENT PERIOD** (*Public Comment on Non-Agenda Items Pursuant to Government Code § 54954.3*) *Members of the public are afforded the opportunity to speak on any agenda item. All agendas for regular meetings are posted at District headquarters, 939 Ellis Street, San Francisco, CA, at least 72 hours in advance of a regular meeting. At the beginning of the regular meeting agenda, an opportunity is also provided for the public to speak on any subject within the Committee's subject matter jurisdiction. Speakers will be limited to three (3) minutes each.*
3. **APPROVAL OF MINUTES OF JANUARY 12, 2006**
4. **CARL MOYER PROGRAM GRANT ALLOCATIONS**

H. Hilken/4642
hhilken@baaqmd.gov

The Committee will consider recommending Board of Directors' approval of awarding grants to applicants for the Carl Moyer Program Year 7 funding cycle.
5. **STATUS REPORT ON CARL MOYER PROGRAM FUNDING ALLOCATION**

J. Broadbent/5052
jbroadbent@baaqmd.gov

Staff will provide a report on the methodology for allocating Carl Moyer Program funds to the Bay Area and other regions.
6. **AMENDMENT TO TRANSPORTATION FUND FOR CLEAN AIR (TFCA) MARIN COUNTY PROGRAM MANAGER EXPENDITURE PROGRAM**

H. Hilken/4642
hhilken@baaqmd.gov

The Committee will consider recommending Board of Directors' approval of an amendment to the TFCA Marin County Program Manager Expenditure Program for FY 2005/06.

7. BIO DIESEL FEASIBILITY STUDY AND PILOT PROJECTS

H. Hilken/4642

hhilken@baaqmd.gov

Staff will provide a report on bio diesel fuel.

8. COMMITTEE MEMBER COMMENTS/OTHER BUSINESS

Any member of the Committee, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2).

9. TIME AND PLACE OF NEXT MEETING: 9:30 a.m., MONDAY, APRIL 10, 2006, 939 ELLIS STREET, SAN FRANCISCO, CA

10. ADJOURNMENT

**CONTACT CLERK OF THE BOARDS - 939 ELLIS STREET
SAN FRANCISCO, CA 94109**

**(415) 749-4965
FAX: (415) 928-8560
BAAQMD homepage:
www.baaqmd.gov**

- To submit written comments on an agenda item in advance of the meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- To request special accommodations for those persons with disabilities notification to the Clerk's Office should be given at least three working days prior to the date of the meeting so that arrangements can be made accordingly.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 2, 2006

Re: Mobile Source Committee Draft Minutes

RECOMMENDED ACTION:

Approve attached draft minutes of the Mobile Source Committee meeting of January 12, 2006.

DISCUSSION

Attached for your review and approval are the draft minutes of the January 12, 2006, Mobile Source Committee meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

**Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109
(415) 771-6000**

DRAFT MINUTES

Summary of Board of Directors
Mobile Source Committee Meeting
9:30 a.m., Thursday, January 12, 2006

1. **Call to Order – Roll Call:** Chair Tim Smith called the meeting to order at 9:34 a.m.

Present: Tim Smith, Chair; Jerry Hill, Jake McGoldrick, Julia Miller, John Silva, Pamela Torliatt (9:50 a.m.), Marland Townsend.

Absent: Roberta Cooper, Michael Shimansky, Shelia Young.

Also Present: Scott Haggerty (9:37 a.m.), Gayle B. Uilkema (9:38 a.m.).

2. **Public Comment Period:** There were none.

3. **Approval of Minutes of October 24, 2005:** Director Miller moved approval of the minutes; seconded by Director Hill; carried unanimously without objection.

4. **California Air Resources Board Memorandum of Understanding (MOU) with Union Pacific and BNSF Railroads:** *Dean Simeroth of the California Air Resources Board was to provide an overview of the MOU between ARB and the UP and BNSF Railroads.*

Mr. Simeroth was unable to attend the meeting, therefore, the item was deferred. Jean Roggenkamp, Deputy APCO, stated that the MOU will reduce emissions from railroads and rail yards. Ms. Roggenkamp noted that ARB will conduct another hearing on the MOU at the end of January and community meetings are scheduled for February 7th in Richmond and February 8th in Oakland.

Director Scott Haggerty arrived at 9:37 a.m. and Board Chair Gayle B. Uilkema arrived at 9:38 a.m.

Committee Action: None required.

5. **Audit of the Transportation Fund for Clean Air (TFCA) Regional Fund:** *Staff provided a report on the audit of projects funded by the Transportation Fund for Clean Air Regional Fund.*

Andrea Gordon, Sr. Environmental Planner, presented the report and stated that the auditor reviewed projects completed as of the two-year period that ended June 30, 2004. Ms. Gordon reviewed the findings and recommendations from the auditor. Most of the auditor's recommendations are currently in place. Ms. Gordon stated that the Air District staff will develop a method to address the

recommendation for interim audits for projects not completed within three years of approval in the next revision of the TFCA policies.

There was discussion on the use the Air District logo and how it is monitored by District staff.

Committee Action: Director Townsend moved to accept the report; seconded by Director Hill; carried unanimously without objection.

6. Reallocation of Diesel Back-Up Generator Mitigation Funds to Fund Hybrid Electric Trucks: *The Committee considered recommending Board of Director approval of reallocating \$100,000 in diesel back-up generator mitigation funds to fund four (4) hybrid electric trucks.*

Director Pamela Torliatt arrived at 9:50 a.m.

Joseph Steinberger, Principal Environmental Planner, presented the report and provided background information on the FedEx experimental hybrid-electric delivery trucks. Mr. Steinberger stated that in 2002, the California Air Resources Board (CARB) provided the Air District with approximately \$2.5 million in Back-Up Generator (BUG) Mitigation funds. A portion of these BUG funds are available for the hybrid-electric delivery trucks.

Mr. Steinberger stated that staff recommends that the Committee recommend Board of Director approval of the following:

1. The allocation of \$100,000 in Diesel Back-Up Generator (BUG) Mitigation funds for four (4) diesel hybrid-electric trucks to be operated in the Bay Area.
2. Authorization for the Executive Officer/APCO to enter into a contract with FedEx Express for the hybrid-electric truck project.
3. Allocation of any remaining BUG Mitigation funds to one of the BUG Mitigation projects approved by the Board of Directors.

There was discussion on the cost of the vehicles, this is a pilot project for FedEx, and comparisons to a standard vehicle.

Speaker: Sam Altshuler
Pacific Gas & Electric Co.

Committee Action: Director Townsend moved that the Committee recommend Board of Director Approval of the staff recommendations; seconded by Director Torliatt; carried unanimously without objection.

7. Presentation Comparing the Cost of Diesel Versus Natural Gas Fuel: *The Committee received a presentation from staff and Sam Altshuler of PG&E on the price differential between the cost of diesel and natural gas fuel.*

Alison Kirk, Environmental Planner, stated that the Air District administers grants and incentive programs to reduce emissions. The programs focus on the reduction of mobile source emissions and are fuel neutral. Ms. Kirk provided a comparison of West Coast diesel and CNG prices from May 2000 through September 2005. Projected transportation energy consumption and CNG consumption in the United States was also discussed.

Sam Altshuler of Pacific Gas and Electric Company, gave a presentation on the cost per mile using a TIAX Economic model to compare natural gas versus diesel. Mr. Altshuler noted that economic modeling suggests that natural gas is competitive with diesel as they both meet the 2007 and 2010 emission standards.

8. Committee Member Comments/Other Business: There were none.

9. Time and Place of Next Meeting: 9:30 a.m., Thursday, February 9, 2006, 939 Ellis Street, San Francisco, CA 94109. Chair Smith noted he would not be available for the February 9th meeting.

10. Adjournment: The meeting adjourned at 10:37 a.m.

Mary Romaidis
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 2, 2006

Re: Carl Moyer Program Grant Allocations

RECOMMENDED ACTIONS

1. Recommend Board of Directors (Board) approval of allocation of \$2,667,676 in Carl Moyer Program (CMP) funds for eligible projects listed in Attachment 1-A.
2. Recommend Board approval of allocation of up to \$13.2 million in Mobile Source Incentive Fund (MSIF) revenues for eligible projects listed in Attachment 1-A.
3. Recommend Board authorization for the Executive Officer to enter into funding agreements with recipients of grants for the projects listed in Attachment 1-A.

BACKGROUND

The purpose of the Carl Moyer Program is to provide funds for the implementation of projects that reduce emissions from heavy-duty diesel engines. Heavy-duty diesel engines are major sources of oxides of nitrogen (NO_x), ozone precursors, and particulate matter (PM). Diesel PM has been identified by the California Air Resources Board (CARB) as a toxic air contaminant.

CARB administers the CMP in partnership with local air districts. CARB develops CMP guidelines and criteria, and allocates funds to the local air districts on an annual basis. Local air districts are responsible for soliciting applications, selecting projects consistent with CARB guidelines and criteria, and administering the awarded grants. The most common types of projects funded via the CMP are: 1) the repowering of existing diesel vehicles or equipment by installing newer, cleaner engines; and 2) the installation of CARB-verified retrofit systems or devices to reduce emissions from existing diesel engines. The types of vehicles and equipment eligible for CMP funding include on-road heavy-duty vehicles, off-road equipment, marine vessels, locomotives, stationary agricultural irrigation pumps, forklifts, and airport ground support equipment. CMP funds can only be awarded to implement projects that will result in *surplus* emission reductions, i.e., emission reductions that are not required by adopted regulations or standards.

DISCUSSION

Guidelines and Procedures

On September 30, 2003, CARB issued the guidelines and criteria for local air districts to follow to implement the fiscal year (FY) 2004/2005 CMP, which corresponds to the Year 7 CMP funding cycle. In February 2005, the District Mobile Source Committee (Committee) and the Board approved staff-recommended procedures for the allocation of funds for the Year 7 CMP funding cycle. Additionally, under the terms of Health & Safety Code Section 43023.5 (AB 1390, Lowenthal), the District is required to allocate at least 50 percent of its CMP funds to projects that will reduce emissions in communities with the most significant exposure to air pollution, including, but not limited to communities of minority or low-income populations. On October 24, 2005, staff presented to the Committee a revised methodology for the purpose of selecting projects to comply with the AB 1390 requirement (AB 1390 methodology).

Solicitation and Outreach

District staff issued a call for Year 7 CMP grant applications on November 4, 2005. Staff performed extensive outreach to encourage the submittal of CMP grant applications, including four public workshops in San Francisco, Oakland, Vallejo, and San Jose. A total of 85 interested parties attended the four workshops, as listed below.

Workshop Site	Date	Number of Attendees
San Francisco – District Boardroom	November 15, 2005	20
West Oakland – Jubilee West	November 16, 2005	21
Vallejo – Dan Foley Community Center	November 17, 2005	26
San Jose – Santa Clara VTA Auditorium	November 22, 2005	18

The deadline for submittal of CMP grant applications was December 22, 2005. The District received 145 applications¹ requesting a total of \$24 million in incentive funds to reduce emissions from 533 diesel engines.

Grant Applications Evaluation

District staff reviewed and evaluated the Year 7 CMP grant applications based upon:

- The CMP guidelines issued by CARB on September 30, 2003;
- The Year 7 CMP procedures approved by the Committee and the Board in February, 2005; and
- The AB 1390 methodology presented to the Committee and the Board in October, 2005.

The key steps in staff's review of the CMP grant applications are summarized below.

¹ Project sponsors submitted 145 grant applications. Many grant applications included multiple vehicles and/or engines. In some cases, staff divided these multi-unit grant applications into separate grant applications in order to more accurately analyze the emission reductions and cost-effectiveness for each vehicle or engine. Therefore, the total number of grant applications evaluated increased from 145 to 177.

Step 1: Staff reviewed the CMP grant applications for consistency with CARB and Board-adopted procedures for the Year 7 CMP funding cycle.

Step 2: Staff calculated the cost-effectiveness for all eligible grant applications, utilizing CARB guidelines and data provided by the project sponsors. Cost-effectiveness was determined by dividing the amount of CMP funding requested by the estimated lifetime emission reductions for each project. For the Year 7 CMP funding cycle, PM emission reductions were included for the first time in the calculation of cost-effectiveness. The PM emissions were weighted by a factor of ten, per CARB guidelines, to account for the public health impacts related to exposure to diesel PM emissions, as shown in the formula below:

$$\text{Emission Reductions} = [\text{NO}_x \text{ reduced} + (\text{PM reduced} \times 10)] \times \text{years of project life}$$

Step 3: For each grant application that met the CMP cost-effectiveness threshold established by CARB of \$13,600 (CMP funds) per ton of emissions reduced, staff analyzed its potential to reduce emissions in impacted communities, based upon the District's AB 1390 methodology. The scores for applications that fulfilled the District's AB 1390 criteria are summarized in the shaded portion of Attachment 1-A and described in greater detail in Attachment 2. The District's AB 1390 methodology is shown in Attachment 3.

Step 4: All eligible grant applications were ranked, as shown in Attachment 1-A, based upon 1) AB 1390 scores and 2) cost-effectiveness. The projects that qualify for the purpose of AB 1390 are shaded in gray.

Fourteen (14) grant applications, requesting a total of \$1,786,752, were withdrawn by their respective project sponsors. In addition, nine (9) applications, requesting a total of \$1,437,536, were deemed ineligible by staff because they did not comply with the applicable guidelines and criteria. In most cases, applications were deemed ineligible because the project would not provide *surplus* emission reductions. A list of the withdrawn and ineligible applications, and the reason each application was deemed ineligible, is provided in Attachment 4.

CARB guidelines require that each project achieve a cost-effectiveness of \$13,600 or less per ton of emissions reduced to be eligible for CMP funding. The District received a total of 110 applications, requesting an aggregate \$15,849,235 in incentive funds, which achieved the CMP cost-effectiveness threshold. 67 applications which did not achieve the requisite cost-effectiveness threshold and are not recommended for funding are listed in Attachment 1-B.

Available Carl Moyer Program Funds

CARB allocated a total of \$2,478,161 to the District for the implementation of the Year 7 CMP funding cycle. Of this amount, at least 50% (\$1,239,081) must be awarded to projects that will reduce emissions in impacted communities, as required by AB 1390. In addition, the District has \$189,515 in remaining available funds from the Year 6 CMP funding cycle due to the cancellation of previously awarded grants. At least \$114,946 of these remaining Year 6 CMP funds must be awarded to projects that will reduce emissions in impacted communities, in order to fulfill the AB 1390 requirement for the Year 6 CMP funding cycle.

As shown in the table below, a total of \$2,667,676 in Year 6 and Year 7 CMP funds are available for allocation at this time, of which at least \$1,354,027 must be awarded to projects that will reduce emissions in impacted communities, as required by AB 1390.

CMP Funding Cycle	Total Funds Available for Allocation	Funds to Allocate to AB 1390 Projects
Year 6	\$189,515	\$114,946
Year 7	\$2,478,161	\$1,239,081
Total	\$2,667,676	\$1,354,027

Supplement CMP Funds with Mobile Source Incentive Fund Revenues

As noted above, a total of 110 applications, requesting an aggregate \$15,849,235 in incentive funds, achieved the CMP cost-effectiveness threshold of \$13,600 or less per ton of emissions reduced. However, only \$2,667,676 in CMP funding is available for allocation at this time. Because these cost-effective applications represent an excellent opportunity to achieve a significant reduction in heavy-duty diesel emissions in the near-term, staff recommends that the District fund all of these projects. This can be accomplished by supplementing the CMP funds with revenues from the Mobile Source Incentive Fund (MSIF), as described below.

AB 923 (Firebaugh), enacted in 2004 (codified as Health and Safety Code Section 44225), authorized local air districts to increase their motor vehicle registration surcharge up to an additional \$2 per vehicle. AB 923 stipulates that air districts may use the revenues generated by the additional \$2 surcharge for any of the four programs listed below:

- Projects eligible for grants under the CMP;
- New purchase of clean school buses;
- Accelerated vehicle retirement or repair program; and
- Projects to reduce emissions from previously unregulated agricultural sources.

On December 21, 2004, the Board adopted Resolution 2004-16 to increase the surcharge on vehicles registered within the District boundaries from \$4 to \$6 per vehicle. The Department of Motor Vehicles began to collect the increased surcharge in May 2005. The revenues from the additional \$2 surcharge are deposited in the District’s MSIF.

Approximately \$8.7 million in MSIF funds were available to the District as of February 28, 2006. Additional revenues of approximately \$890,000 per month will continue to accrue to the MSIF account on an on-going basis. Staff recommends the allocation of \$13.2 million in MSIF revenues to supplement the available Year 7 CMP funds. This will allow the District to fund all of the cost-effective projects listed in Attachment 1-A. The District will issue these funds to grant recipients on a reimbursement basis after projects have been completed. Given the time required for grantees to execute a contract with the District, acquire and install equipment, and submit invoices to request payment, there will be ample time for the necessary MSIF revenues to accrue before the District actually expends these funds.

Recommended Grant Awards

Attachment 1-A lists 110 projects that staff recommends be awarded grants for an aggregate of \$15,849,235, using a combination of CMP and MSIF funds, as discussed above. If all projects are fully implemented, they will result in annual emission reductions of 579 tons of NO_x and 35 tons of PM, as shown in the following table.

Recommended Grant Awards by Project Category

Project Category	Number of Projects	Total Grant Awards	NO _x Emissions Reduction (tons/yr)	PM Emissions Reduction (tons/yr)
On-Road	20	\$2,096,828	36	1
Off-Road	60	\$8,906,933	237	10
Marine	27	\$3,882,474	296	24
Locomotive	2	\$948,000	9	0.3
Irrigation Pump	1	\$15,000	1	
Total	110	\$15,849,235	579	35.3

BUDGET CONSIDERATION / FINANCIAL IMPACT

None. The CMP distributes “pass-through” funds from CARB to public agencies and private entities on a reimbursement basis. Therefore, the grant funds awarded do not directly impact the District’s budget. Staff costs for the administration of the CMP are included under *Program 607 – Mobile Source Grants* in the FY 2005/2006 budget. For the Year 7 CMP funding cycle, CARB allocated \$57,364 to the District to help offset outreach and administration costs related to CMP implementation.

By law, the District is required to provide a specified percentage of local funds to match its CMP funds. For the Year 7 CMP funding cycle, the District’s required match amount is \$1,128,488. The District will fulfill this match obligation through the allocation of MSIF and TFCA funds to low-emission heavy-duty diesel engine projects that comply with CMP guidelines and criteria.

Respectfully submitted,

Jack P. Broadbent
Executive Director/APCO

Prepared by: David Burch
Reviewed by: Henry Hilken

Attachments

Projects Recommended for Grants (1)

Project Number	Project Sponsor	Project Description	Proposed Grant Award	# of Engines Funded	NOx Emission Reductions (tons/year)	PM Emissions Reductions (tons/year)	CMP C-E* (\$/ton) NOx + 10 x PM
04MOY121	Peoples Fuel Cooperative	Repower one delivery truck	\$15,040	1	0.36	0.02	\$1,768
04MOY03	Amtrak	Replace one switcher locomotive w/ "Green Goat" diesel-hybrid locomotive	\$800,000	1	7.54	0.25	\$6,700
04MOY150	Bode Concrete, LLC	Repower two concrete transport mixers	\$88,144	2	1.70	0.08	\$7,625
04MOY129	Allied Concrete Mix Service	Repower two concrete delivery mixers	\$88,144	2	1.54	0.06	\$9,064
04MOY151	Bode Concrete, LLC	Repower four concrete transport mixers	\$176,288	4	2.76	0.09	\$10,558
04MOY04	Richmond Pacific Railroad	Install retrofit kit to reduce emissions from one switcher locomotive	\$148,000	1	1.67	0.04	\$13,554
04MOY132	San Francisco Muni	Repower 12 articulated buses with reconditioned engines	\$199,992	12	2.64	0.00	\$12,196
04MOY135	NorCal Waste (Golden Gate)	Install Level 3 PM/NOx emission control systems on 15 refuse collection trucks	\$140,367	15	2.25	0.00	\$13,600
04MOY136	NorCal Waste (Sunset Scavenger)	Install Level 3 PM/NOx emission control systems on 61 refuse collection trucks	\$570,826	61	9.15	0.00	\$13,600
04MOY181	Blueline Transfer, Inc.	Install Level 3 PM/NOx emission control system on one refuse transfer truck	\$19,000	1	0.23	0.01	\$11,506
04MOY131	Waste Management, Inc	Install Level 3 PM/NOx emission control systems on 33 refuse collection trucks	\$346,500	33	5.94	0.00	\$12,717
04MOY17	Golden Gate Ferry	Repower two auxiliary engines in ferry Marin	\$20,000	2	7.20	0.42	\$282
04MOY18	Vortex Marine Construction	Repower primary crane drive on derrick barge Vengeance	\$128,198	1	15.03	0.78	\$471
04MOY21	Vortex Marine Construction	Repower primary hydraulic system drive on derrick barge Vantage	\$66,514	1	7.45	0.39	\$493
04MOY19	Vortex Marine Construction	Repower deck winch drive on derrick barge Vengeance	\$52,955	1	5.61	0.31	\$512
04MOY20	Vortex Marine Construction	Repower primary crane drive on derrick barge Vantage	\$111,223	1	11.82	0.62	\$519
04MOY26	Brusco Tug & Barge	Install retrofit kit on two main engines in tugboat Western Comet	\$327,500	2	96.72	2.15	\$587
04MOY31	Westar Marine Services	Repower two main engines in crew boat Ranger	\$130,000	2	13.92	1.18	\$592
04MOY32	Westar Marine Services	Repower two main engines in crew boat Hawk	\$130,000	2	13.92	1.18	\$592
04MOY25	Brusco Tug & Barge	Repower two main engines in tugboat Amy Brusco	\$346,000	2	37.40	2.41	\$658
04MOY28	Westar Marine Services	Repower two main engines in crew boat Zenith	\$120,000	2	9.30	0.79	\$818
04MOY29	Westar Marine Services	Repower two main engines in crew boat Reliance	\$120,000	2	9.30	0.79	\$818
04MOY30	Westar Marine Services	Repower two main engines in crew boat Scout	\$120,000	2	9.30	0.79	\$818
04MOY27	Westar Marine Services	Repower two main engines in tugboat Apollo	\$750,000	2	24.62	7.10	\$918
04MOY23-A	Hornblower Cruises	Repower two main engines in MV Spirit of Plattsburg	\$216,058	2	10.36	1.39	\$1,043
04MOY22-B	Hornblower Cruises	Repower two auxiliary engines in MV Monte Carlo	\$70,815	2	4.08	0.25	\$1,252
04MOY22-A	Hornblower Cruises	Repower two main engines in MV Monte Carlo	\$216,058	2	4.70	1.20	\$1,517
04MOY86	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57011	\$171,605	1	8.62	0.42	\$1,564
04MOY124	Harold Smith and Son, Inc.	Repower one dump truck: Unit #258	\$21,113	1	0.86	0.07	\$1,573
04MOY85	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57010	\$171,605	1	8.10	0.40	\$1,663
04MOY82	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57007	\$171,605	1	7.80	0.38	\$1,728
04MOY77	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57002	\$171,605	1	7.54	0.37	\$1,788
04MOY76	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57001	\$171,605	1	7.35	0.36	\$1,834
04MOY80	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57005	\$171,605	1	7.33	0.36	\$1,840
04MOY87	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57012	\$171,605	1	7.22	0.35	\$1,866
04MOY81	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57006	\$171,605	1	7.10	0.35	\$1,898

(1) Shaded projects fulfill the District's AB1390 criteria and are ranked by 1) AB1390 score, and 2) cost-effectiveness. See Attachment 2 for detailed AB 1390 scores.

*Cost-effectiveness = funding requested ÷ estimated emission reductions. PM emissions are weighted by a factor of 10. Emission Reductions = [NOx reduced + (PM reduced x 10)] x years of project life.

Projects Recommended for Grants

Project Number	Project Sponsor	Project Description	Proposed Grant Award	# of Engines Funded	NOx Emission Reductions (tons/year)	PM Emissions Reductions (tons/year)	CMP C-E* (\$/ton) NOx + 10 x PM
04MOY64	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51015	\$112,352	1	4.60	0.23	\$1,919
04MOY79	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57004	\$171,605	1	6.64	0.33	\$2,030
04MOY125	Harold Smith and Son, Inc.	Repower one dump truck: Unit #258	\$21,226	1	0.80	0.04	\$2,070
04MOY70	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51021	\$112,352	1	4.24	0.21	\$2,083
04MOY75	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51026	\$112,352	1	4.18	0.20	\$2,113
04MOY61	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51011	\$112,352	1	4.10	0.20	\$2,158
04MOY72	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51023	\$112,352	1	4.04	0.20	\$2,184
04MOY83	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57008	\$171,605	1	6.08	0.30	\$2,216
04MOY58	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51008	\$112,352	1	3.91	0.19	\$2,259
04MOY23-B	Hornblower Cruises	Repower two auxiliary engines in MV Spirit of Plattsburg	\$59,380	2	1.96	0.11	\$2,300
04MOY34	Red & White Fleet	Repower two main engines in ferry Royal Prince	\$275,000	2	6.00	1.22	\$2,383
04MOY123	Harold Smith and Son, Inc.	Repower one water truck: Unit #227	\$24,913	1	0.65	0.05	\$2,440
04MOY78	Independent Construction	Tier 2 Engine Repower: 657B Scraper: Unit #57003	\$171,605	1	5.48	0.27	\$2,461
04MOY06	Blue & Gold Fleet	Repower one auxiliary engine in ferry Golden Bear	\$28,203	1	0.73	0.06	\$2,519
04MOY46	Independent Construction	Tier 2 Engine Repower: 641B Scraper: Unit #41002	\$112,352	1	3.49	0.17	\$2,528
04MOY35	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #20010	\$193,094	1	6.19	0.24	\$2,630
04MOY56	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51005	\$112,352	1	3.33	0.16	\$2,650
04MOY59	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51009	\$112,352	1	3.31	0.16	\$2,666
04MOY33	Seaworthy Projects, LLC	Repower two main engines in towing vessel Hero	\$150,000	2	3.92	0.25	\$2,717
04MOY44	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37017	\$193,094	1	5.84	0.23	\$2,789
04MOY99	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57033	\$146,023	1	5.21	0.09	\$2,796
04MOY103	Independent Construction	Tier 3 Engine Repower: 657E Scraper: Unit #57032	\$287,000	1	8.54	0.30	\$2,900
04MOY112	DeSilva Gates Construction	Tier 2 Engine Repower: 637D Scraper: Unit #117303	\$177,594	1	4.92	0.19	\$3,042
04MOY65	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51016	\$112,352	1	2.86	0.14	\$3,086
04MOY113	DeSilva Gates Construction	Tier 2 Engine Repower: 637D Scraper: Unit #117304	\$177,594	1	4.81	0.19	\$3,111
04MOY114	DeSilva Gates Construction	Tier 2 Engine Repower: 637D Scraper: Unit #117305	\$177,594	1	4.68	0.18	\$3,202
04MOY45	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37020	\$193,094	1	5.06	0.20	\$3,218
04MOY100	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57034	\$146,023	1	4.50	0.08	\$3,236
04MOY62	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51012	\$112,352	1	2.56	0.13	\$3,441
04MOY71	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51022	\$112,352	1	2.55	0.13	\$3,459
04MOY57	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51006	\$112,352	1	2.50	0.12	\$3,534
04MOY50	Independent Construction	Tier 2 Engine Repower: 641B Scraper: Unit #41012	\$112,352	1	2.49	0.12	\$3,543
04MOY42	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37014	\$193,094	1	4.44	0.17	\$3,668
04MOY60	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51010	\$112,352	1	2.40	0.12	\$3,682
04MOY36	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #20011	\$193,094	1	4.37	0.17	\$3,728
04MOY109	DeSilva Gates Construction	Tier 2 Engine Repower: 633D Scraper: Unit #108513	\$103,849	1	2.31	0.09	\$3,809
04MOY111	DeSilva Gates Construction	Tier 2 Engine Repower: 633D Scraper: Unit #108515	\$103,849	1	2.23	0.09	\$3,932
04MOY41	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37008	\$193,094	1	4.10	0.16	\$3,970

*Cost-effectiveness = funding requested ÷ estimated emission reductions. PM emissions are weighted by a factor of 10. Emission Reductions = [NOx reduced + (PM reduced x 10)] x years of project life.

Projects Recommended for Grants

Project Number	Project Sponsor	Project Description	Proposed Grant Award	# of Engines Funded	NOx Emission Reductions (tons/year)	PM Emissions Reductions (tons/year)	CMP C-E* (\$/ton) NOx + 10 x PM
04MOY63	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51014	\$112,352	1	2.20	0.11	\$4,020
04MOY106	DeSilva Gates Construction	Tier 2 Engine Repower: 633D Scraper: Unit #108507	\$103,849	1	2.09	0.08	\$4,204
04MOY110	DeSilva Gates Construction	Tier 2 Engine Repower: 633D Scraper: Unit #108514	\$103,849	1	2.02	0.08	\$4,355
04MOY108	DeSilva Gates Construction	Tier 2 Engine Repower: 633D Scraper: Unit #108512	\$103,849	1	1.98	0.08	\$4,451
04MOY07	Sentinel Cremations	Repower two main engines in vessel Naiad	\$77,335	2	0.30	0.11	\$4,575
04MOY74	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51025	\$112,352	1	1.90	0.09	\$4,645
04MOY126	Coppock Trucking	Repower one heavy-duty truck	\$51,895	1	0.90	0.04	\$4,671
04MOY05	Morning Star Sportfishing	Repower main engine in fishing boat Morning Star	\$45,000	1	0.92	0.04	\$4,733
04MOY120	Bay Leasing (Solano Garbage)	Replace one refuse collection roll-off truck with an LNG truck	\$6,679	1	0.16	0.00	\$4,884
04MOY38	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37005	\$193,094	1	3.21	0.13	\$5,065
04MOY122	Harold Smith and Son, Inc.	Repower one concrete delivery mixer: Unit #117	\$44,072	1	0.77	0.02	\$5,209
04MOY01	Stanley Ranch	Repower one irrigation pump with Tier 2 engine	\$15,000	1	0.41	0.02	\$5,274
04MOY47	Independent Construction	Tier 2 Engine Repower: 641B Scraper: Unit #41003	\$112,352	1	1.65	0.08	\$5,344
04MOY40	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37007	\$193,094	1	2.79	0.11	\$5,838
04MOY24	FV Hali	Repower two main engines in fishing boat Hali	\$90,000	2	0.60	0.12	\$5,916
04MOY16	Sea Turtle Sportfishing	Repower two main engines in fishing boat Sea Turtle	\$48,000	2	0.54	0.07	\$6,038
04MOY140	Waste Management, Inc	Install Level 3 PM/NOx emission control systems on 10 refuse transfer trucks	\$190,000	10	4.20	0.22	\$6,472
04MOY37	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37002	\$193,094	1	2.31	0.09	\$7,060
04MOY92	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57019	\$146,023	1	2.40	0.00	\$7,119
04MOY97	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57025	\$146,023	1	2.33	0.00	\$7,332
04MOY12	Angel Island-Tiburon Ferry	Repower two main propulsion engines in ferry Tamalpais	\$137,000	2	0.82	0.22	\$7,402
04MOY139	Schwan's Home Service, Inc.	Replace four delivery trucks with propane trucks	\$18,900	4	0.28	0.02	\$7,923
04MOY101	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57036	\$146,023	1	2.13	0.00	\$8,021
04MOY93	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57020	\$146,023	1	2.11	0.00	\$8,097
04MOY39	Independent Construction	Tier 2 Engine Repower: 637D Scraper: Unit #37006	\$193,094	1	1.92	0.08	\$8,461
04MOY88	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57015	\$146,023	1	2.01	0.00	\$8,500
04MOY09	Bennie Anselmo	Repower main engine in fishing boat Jennifer Louise	\$34,735	1	0.19	0.03	\$8,835
04MOY96	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57024	\$146,023	1	1.89	0.00	\$9,040
04MOY104	Independent Construction	Tier 2 Engine Repower: 825C Compactor: Unit #44024	\$150,208	1	1.36	0.05	\$9,299
04MOY11	Barneich Commerical Fishing	Repower main propulsion engine in fishing boat Gar	\$12,500	1	0.05	0.01	\$9,750
04MOY49	Independent Construction	Tier 2 Engine Repower: 641B Scraper: Unit #41010	\$112,352	1	0.82	0.04	\$10,775
04MOY105	Independent Construction	Tier 2 Engine Repower: 825C Compactor: Unit #44025	\$150,208	1	1.13	0.04	\$11,266
04MOY128	Chisholm Trail Transportation	Repower one heavy-duty truck	\$23,229	1	0.33	0.00	\$11,333
04MOY161	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.29	0.02	\$11,616
04MOY194	Pleasanton Garbage Service	Install Level 3 PM/NOx emission control system on three Group 3 refuse collection trucks	\$31,500	3	0.36	0.06	\$11,990
04MOY91	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57018	\$146,023	1	1.28	0.00	\$13,347
		Total	\$15,849,235	265	579	35	

*Cost-effectiveness = funding requested ÷ estimated emission reductions. PM emissions are weighted by a factor of 10. Emission Reductions = [NOx reduced + (PM reduced x 10)] x years of project life.

Projects Not Recommended for Funding

Project Number	Project Sponsor	Project Description	Requested Grant Award	# of Engines Funded	NOx Emission Reductions (tons/year)	PM Emissions Reductions (tons/year)	CMP C-E* (\$/ton) NOx + 10 x PM
04MOY193	Pleasanton Garbage Service	Install Level 3 PM/NOx emission control system on six refuse collection trucks	\$63,000	6	0.9	0	\$15,260
04MOY189	Sysco Foods	Install Level 3 PM emission control system on three delivery trucks	\$57,000	3	0.51	0.024	\$16,568
04MOY185	City of Mountain View	Install Level 1 PM emission control system on one truck	\$2,897	1	0	0.006	\$17,092
04MOY186	City of Mountain View	Install Level 1 PM emission control system on one truck	\$2,897	1	0	0.006	\$17,092
04MOY137	Kotobuki-ya	Purchase three CNG shuttle buses	\$60,300	3	0.39	0.036	\$17,527
04MOY192	Pleasanton Garbage Service	Install Level 3 PM/NOx emission control system on three refuse	\$31,500	3	0.39	0	\$17,608
04MOY158	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.15	0.008	\$18,009
04MOY175	Sysco Foods	Install Level 3 PM/NOx emission control systems on three delivery trucks	\$57,000	3	0.36	0.033	\$18,009
04MOY51	Independent Construction	Tier 2 Engine Repower: 641B Scraper: Unit #41014	\$112,352	1	0.48	0.024	\$18,257
04MOY176	Sysco Foods	Install Level 3 PM/NOx emission control systems on 12 delivery trucks	\$228,000	12	1.68	0.096	\$18,827
04MOY182	Blueline Transfer, Inc.	Install Level 3 PM/NOx emission control system on two refuse transfer trucks	\$38,000	2	0.28	0.016	\$18,827
04MOY14	Sachiko Fish	Repower main propulsion engine in fishing boat Sachiko	\$62,000	1	0.12	0.025	\$19,605
04MOY168	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.17	0.009	\$19,658
04MOY172	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.16	0.009	\$20,444
04MOY90	Independent Construction	Tier 1 Engine Repower: 657E Scraper: Unit #57017	\$146,023	1	0.79	0	\$21,626
04MOY15	City of San Rafael	Repower two main engines in patrol boat Mission City	\$90,438	2	0.12	0.028	\$22,610
04MOY155	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.11	0.006	\$24,365
04MOY166	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.11	0.006	\$24,365
04MOY170	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.13	0.007	\$25,555
04MOY173	Sysco Foods	Install Level 3 PM/NOx emission control systems on 35 delivery trucks	\$665,000	35	3.5	0.175	\$27,613
04MOY183	Blueline Transfer, Inc.	Install Level 3 PM/NOx emission control system on one refuse transfer truck	\$19,000	1	0.1	0.005	\$27,613
04MOY190	Sysco Foods	Install Level 3 PM emission control system on 20 delivery trucks	\$380,000	20	2	0.1	\$27,613
04MOY191	Sysco Foods	Install Level 3 PM emission control system on six delivery trucks	\$114,000	6	0.6	0.03	\$27,613
04MOY156	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.09	0.005	\$29,586
04MOY160	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.09	0.005	\$29,586
04MOY169	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.11	0.006	\$30,065
04MOY174	Sysco Foods	Install Level 3 PM/NOx emission control systems on 10 delivery trucks	\$190,000	10	0.5	0.08	\$31,862
04MOY184	Blueline Transfer, Inc.	Install Level 3 PM/NOx emission control system on three refuse transfer trucks	\$57,000	3	0.15	0.024	\$31,862
04MOY10	FV Codzilla	Repower main engine in fishing boat Codzilla	\$25,954	1	0.08	0.005	\$32,143
04MOY154	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.1	0.005	\$34,073
04MOY162	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.1	0.005	\$34,073
04MOY165	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.1	0.005	\$34,073
04MOY163	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.09	0.005	\$36,507

*Cost-effectiveness = funding requested ÷ estimated emission reductions. PM emissions are weighted by a factor of 10. Emission Reductions = [NOx reduced + (PM reduced x 10)] x years of project life.

Projects Not Recommended for Funding

Project Number	Project Sponsor	Project Description	Requested Grant Award	# of Engines Funded	NOx Emission Reductions (tons/year)	PM Emissions Reductions (tons/year)	CMP C-E* (\$/ton) NOx + 10 x PM
04MOY157	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.07	0.004	\$37,655
04MOY167	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.07	0.004	\$37,655
04MOY69	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51020	\$112,352	1	0.22	0.011	\$39,834
04MOY127	South San Francisco Scavenger	Purchase one new CNG refuse collection vehicle	\$29,123	1	0.13	0.012	\$41,238
04MOY164	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.08	0.004	\$42,592
04MOY171	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.08	0.004	\$42,592
04MOY159	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.06	0.003	\$46,022
04MOY138	AC Transit	Purchase five gasoline-electric hybrid buses	\$600,000	5	1.276	0	\$47,022
04MOY205	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.003	\$47,943
04MOY210	Napa County Public Works	Install Level 1 PM emission control system on one truck	\$1,555	1	0	0.001	\$55,047
04MOY153	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.06	0.003	\$56,789
04MOY152	FedEx Freight	Install Level 3 PM/NOx emission control system on one delivery truck	\$19,000	1	0.05	0.003	\$63,888
04MOY195	San Francisco Dept. of Environment	Install Level 3 PM emission control system on two street sweepers	\$20,000	2	0	0.01	\$70,800
04MOY198	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.002	\$71,915
04MOY196	San Francisco Dept. of Environment	Install Level 3 PM emission control system on 10 street sweepers	\$130,000	10	0	0.05	\$92,040
04MOY68	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51019	\$112,352	1	0.08	0.004	\$109,543
04MOY177	County of Santa Clara	Install Level 1 PM emission control systems on one truck	\$3,360	1	0	0.001	\$118,944
04MOY179	County of Santa Clara	Install Level 1 PM emission control system on one truck	\$3,360	1	0	0.001	\$118,944
04MOY180	County of Santa Clara	Install Level 1 PM emission control system on one truck	\$16,800	5	0	0.005	\$118,944
04MOY199	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY200	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY201	Napa County Public Works	Install Level 3 PM emission control system on two trucks	\$8,126	2	0	0.002	\$143,830
04MOY203	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY204	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY206	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY207	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY208	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,063	1	0	0.001	\$143,830
04MOY73	Independent Construction	Tier 2 Engine Repower: 651B Scraper: Unit #51024	\$112,352	1	0.06	0.003	\$146,058
04MOY178	County of Santa Clara	Install Level 1 PM emission control system on one truck	\$3,360	1	0	0.00045	\$264,320
04MOY187	City of Oakland	Install Level 3 PM emission control system on 17 trucks	\$136,000	17	0	0.017	\$283,200
04MOY188	City of Oakland	Install Level 3 PM emission control system on 18 trucks	\$144,000	18	0	0.018	\$283,200
04MOY209	Napa County Public Works	Install Level 3 PM emission control system on two trucks	\$17,640	2	0	0.002	\$312,228
04MOY48	Independent Construction	Tier 2 Engine Repower: 641B Scraper: Unit #41004	\$112,352	1	0.02	0.002	\$328,630
04MOY202	Napa County Public Works	Install Level 3 PM emission control system on one truck	\$4,757	1	0	0.0004	\$431,789

*Cost-effectiveness = funding requested ÷ estimated emission reductions. PM emissions are weighted by a factor of 10. Emission Reductions = [NOx reduced + (PM reduced x 10)] x years of project life.

AB1390 Scores - Projects in Impacted Communities*

Application Number	Project Sponsor	Project Description	Impacted Community	PM Exposure Points	Low Income Points	Project Impact Factor	Impacted Community Points	C-E (\$/ton)	Funds Requested	Cumulative Funds
04MOY121	Peoples Fuel Cooperative	Repower one delivery truck	Oakland, Berkeley, San Francisco	20	5	2	50	\$1,768	\$15,040	\$15,040
04MOY03	Amtrak	Replace one switcher locomotive w/ "Green Goat" diesel-hybrid locomotive	West Oakland	20	5	2	50	\$6,700	\$800,000	\$815,040
04MOY150	Bode Concrete, LLC	Repower two concrete transport mixers	San Francisco	20	5	2	50	\$7,625	\$88,144	\$903,184
04MOY129	Allied Concrete Mix Service	Repower two concrete delivery mixers	San Francisco	20	5	2	50	\$9,064	\$88,144	\$991,328
04MOY151	Bode Concrete, LLC	Repower four concrete transport mixers	San Francisco	20	5	2	50	\$10,558	\$176,288	\$1,167,616
04MOY04	Richmond Pacific Railroad	Install retrofit kit to reduce emissions from one switcher locomotive	Richmond	20	5	2	50	\$13,554	\$148,000	\$1,315,616
04MOY132	San Francisco Muni	Repower 12 articulated buses with reconditioned engines	San Francisco	20	0	2	40	\$12,196	\$199,992	\$1,515,608
04MOY135	NorCal Waste (Golden Gate)	Install Level 3 PM/NOx emission control systems on 15 refuse collection trucks	San Francisco	20	0	2	40	\$13,600	\$140,367	\$1,655,975
04MOY136	NorCal Waste (Sunset Scavenger)	Install Level 3 PM/NOx emission control systems on 61 refuse collection trucks	San Francisco	20	0	2	40	\$13,600	\$570,826	\$2,226,801
04MOY181	Blueline Transfer, Inc.	Install Level 3 PM/NOx emission control system on one refuse transfer truck	Richmond, Berkeley, Emeryville, Oakland, San Francisco	20	5	1	25	\$11,506	\$19,000	\$2,245,801
04MOY131	Waste Management, Inc	Install Level 3 PM/NOx emission control systems on 33 refuse collection trucks	Oakland	10	5	1	15	\$12,717	\$346,500	\$2,592,301

* This list includes only those CMP grant applications that documented that the vehicle(s) or equipment covered by the grant will operate at least 30% of operating time or miles in an impacted com

Attachment 3

AB 1390 Methodology for Year 7 Carl Moyer Program

Health and Safety Code Section 43023.5 (AB 1390 - Lowenthal) requires that air districts with more than one million residents ensure that not less than 50 percent of State funds appropriated to reduce emissions from motor vehicles and diesel engines used in trucks, buses, marine vessels and other mobile sources “*are expended in a manner that directly reduces air contaminants or reduces the public health risks associated with air contaminants, ..., including, but not limited to airborne toxics and particulate matter, in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to communities or minority populations or low-income populations.*”

This document describes the methodology that the District used to select and prioritize projects for the purpose of complying with the AB 1390 mandate for the Year 7 Carl Moyer Program funding cycle. The methodology takes into account the following factors:

- PM2.5 exposure among sensitive populations; i.e., children and elderly residents.
- Low-income area
- Project impact: The degree to which a project would directly reduce emissions in an impacted community
- Project cost-effectiveness

District staff evaluated each Moyer Program application to determine: 1) its cost-effectiveness in reducing emissions; and 2) whether the project qualified for the purposes of AB 1390, based upon the criteria described below. Applications that met the AB 1390 criteria were included on the list of AB 1390-qualified projects shown in Attachment 2. If two projects had an equal AB 1390 point score, the project with the best cost-effectiveness (i.e., lower \$\$/ton of emissions reduced) received priority.

AB 1390 Criteria:

- **Impacted Community:** For purposes of AB 1390, the BAAQMD defines an Impacted Community as any area (grid square) which falls within the top 60% of total aggregate PM2.5 exposure for the Bay Area. PM exposure is calculated based upon annual person-tons exposure for children and elderly within each grid square. The attached map shows the areas which meet this definition. Areas with the highest PM2.5 exposure will receive more points, as shown in Table 1, Column A.
- **Low-Income Area:** An Impacted Community (based upon PM2.5 exposure, as defined above) in which 40% or more of households have incomes of 185% of federal poverty level or less (based on Year 2000 Census data) will qualify for 5 or 10 bonus points, as shown in Table 1, Columns B and C. This definition of “Low-Income” area is based upon the method used by the Northern California Council for the Community in its analysis entitled *The Bay Area’s Concentrated Poverty Neighborhoods*, using Year 2000 Census data. This analysis lists neighborhoods in which at least 40% of households have incomes below 185% of the Federal Poverty Level (FPL); i.e., \$30,895 or less for a family of four. *Note:*

no area can qualify as AB 1390-eligible on the basis of income data only.

- **Project Impact factor:** To qualify for consideration as an AB 1390-eligible project, the applicant must demonstrate that the project would reduce emissions in an Impacted Community. Specifically, the applicant must demonstrate that the equipment (vehicle or engine) covered by the application will operate at least 30% of its total annual operating time or miles in an Impacted Community. Applications in which the equipment will operate in an Impacted Community for a higher percentage of operating time or miles will receive greater weight, as follows:
 - 30%-50% of miles or hours in Impacted Community: multiply Impacted Community points by factor of 1
 - 51%-80% of miles or hours in Impacted Community: multiply Impacted Community points by factor of 1.5
 - 81% or more of miles or hours in Impacted Community: multiply Impacted Community points by factor of 2

The total AB 1390 score was calculated by multiplying a project’s Impacted Community and Low-Income points by the Project Impact Factor, as shown in the formula:

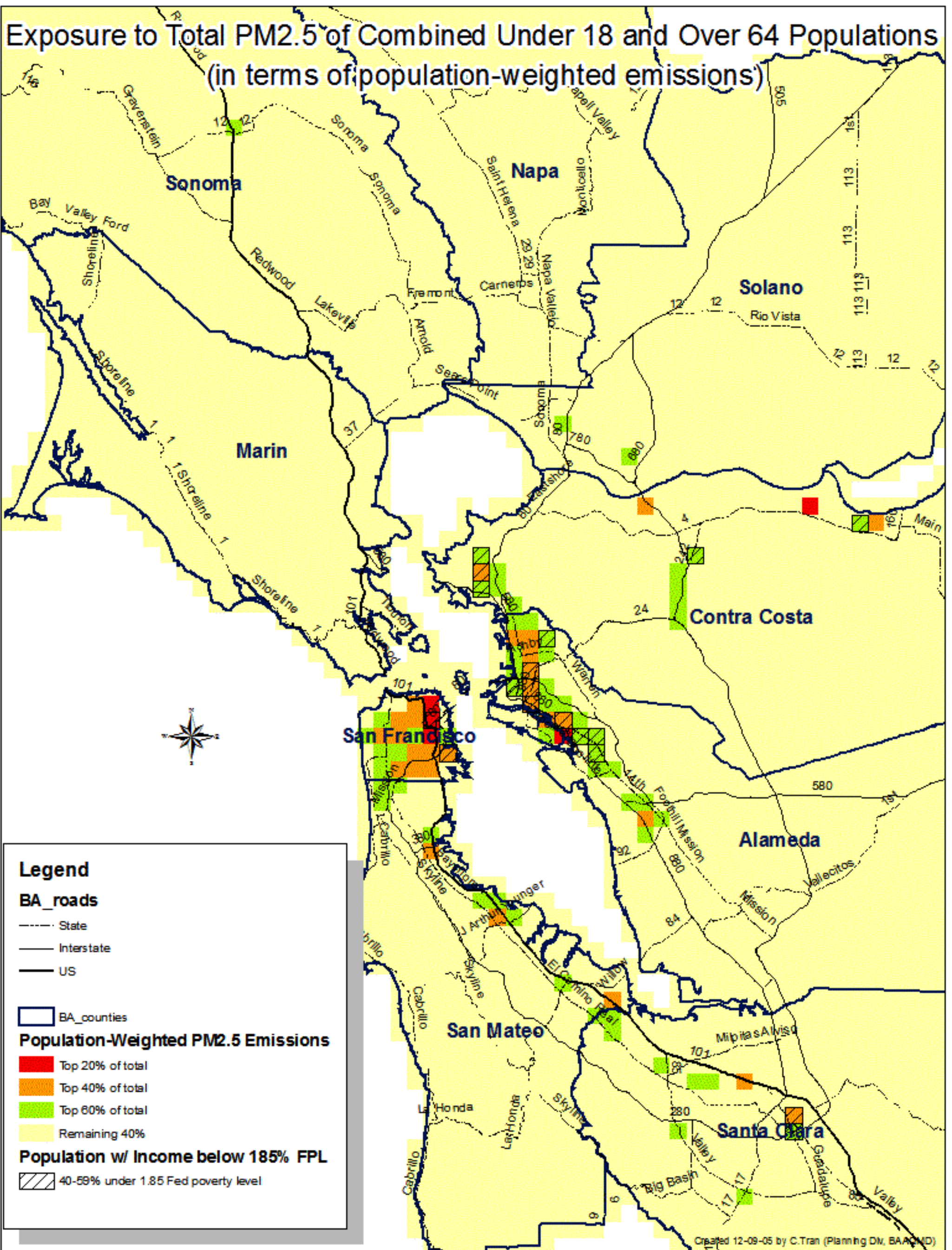
$$AB\ 1390\ score = (Impacted\ Community\ Points + Low-Income\ Points) \times Project\ Impact\ Factor$$

Table 1 – Impacted Community Points

Column A		Column B		Column C	
Exposure to PM2.5 *	# Points	Household Income	# Points	Household Income	# Points
Within highest 20% (1% - 20%)	30	40-59% of households below 185% of FPL	5	60% + of households below 185% of FPL	10
Within highest 40% (21% - 40%)	20	40-59% of households below 185% of FPL	5	60% + of households below 185% of FPL	10
Within highest 60% (41% - 60%)	10	40-59% of households below 185% of FPL	5	60% + of households below 185% of FPL	10
Not within highest 60% PM	0	NA		NA	

* PM2.5 exposure is expressed in terms of person-tons per year for elderly and children. Percentages in Table 1, Column A are based upon grid squares that account for top 20% / 40% / 60% of total regional PM2.5 exposure for elderly and children.

Exposure to Total PM2.5 of Combined Under 18 and Over 64 Populations (in terms of population-weighted emissions)



Withdrawn or Ineligible Grant Applications

Withdrawn Applications				
Project Sponsor	Project Description	Funds Requested	Reason	
1	LB Railco	Retrofit two ALCO locomotives	\$60,000	Withdrawn by sponsor; retrofit kit is not yet CARB-verified.
2	Independent Construction	Tier 2 Repower: 637D Scraper: Unit #37016	\$193,094	Project sponsor sold unit
3	Independent Construction	Tier 2 Repower: 651B Scraper: Unit #51001	\$112,352	Project sponsor sold unit
4	Independent Construction	Tier 2 Repower: 651B Scraper: Unit #51002	\$112,352	Project sponsor sold unit
5	Independent Construction	Tier 2 Repower: 651B Scraper: Unit #51003	\$112,352	Project sponsor sold unit
6	Independent Construction	Tier 2 Repower: 651B Scraper: Unit #51004	\$112,352	Project sponsor sold unit
7	Independent Construction	Tier 2 Repower: 651B Scraper: Unit #51017	\$112,352	Project sponsor sold unit
8	Independent Construction	Tier 2 Repower: 651B Scraper: Unit #51018	\$112,352	Project sponsor sold unit
9	Independent Construction	Tier 2 Repower: 657B Scraper: Unit #57009	\$171,605	Already funded via CMP grant #02MOY61
10	Independent Construction	Tier 1 Repower: 657E Scraper: Unit #57016	\$146,023	Already funded via CMP grant #02MOY60
11	Independent Construction	Tier 1 Repower: 657E Scraper: Unit #57021	\$146,023	Already funded via CMP grant #02MOY60
12	Independent Construction	Tier 1 Repower: 657E Scraper: Unit #57022	\$146,023	Already repowered
13	Independent Construction	Tier 1 Repower: 657E Scraper: Unit #57037	\$146,023	Already repowered
14	DeSilva Gates Construction	Tier 2 Repower: 633D Scraper: Unit #108509	\$103,849	Already funded via CMP grant #04MMD02

Ineligible Applications				
Project Sponsor	Project Description	Funds Requested	Reason	
1	Bass-Tub	Repower one auxiliary engine in fishing boat <i>Bass Tub</i>	\$6,207	Not eligible because engine is less than 50 horsepower. CMP requires that engines be at least 50 hp.
2	Chucky's Pride	Repower one auxiliary engine on fishing boat <i>Chucky's Pride</i>	\$6,200	Not eligible because engine is less than 50 horsepower. CMP requires that engines be at least 50 hp.
3	Schnitzer Steel Products	Tier 2 Repower: 769C Haul Truck: Unit #60	\$157,393	Not eligible because these engines are subject to new CARB cargo-handling rule.
4	Schnitzer Steel Products	Tier 2 Repower: 769C Haul Truck: Unit #61	\$157,393	Not eligible because these engines are subject to new CARB cargo-handling rule.
5	Schnitzer Steel Products	Tier 2 Repower: 769C Haul Truck: Unit #65	\$157,393	Not eligible because these engines are subject to new CARB cargo-handling rule.
6	Pacheco Brothers	Purchase new Case 570M XT loader	\$59,950	Project will meet only baseline standard for existing engine. No "surplus" emissions reduced.
7	R. Rossi Company	Repower one tractor	\$13,000	The repower engine would not comply with CMP Program guidelines.
8	Norcal Waste Systems (Golden Gate Disposal)	Purchase 6 new liquified natural gas (LNG) refuse trucks	\$480,000	These would be Family Emission Limit (FEL) engines; CARB indicated there would be no surplus emissions reductions.
9	Norcal Waste Systems (Sunset Scavenger)	Purchase 5 liquified natural gas (LNG) refuse trucks	\$400,000	These would be Family Emission Limit (FEL) engines; CARB indicated there would be no surplus emissions reductions.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/ APCO

Date: March 2, 2006

Re: Status Report on the Carl Moyer Program Funding Allocation

RECOMMENDED ACTION

Information item only.

BACKGROUND

The Carl Moyer Memorial Air Quality Standards Program (Carl Moyer Program) was established by the Governor and Legislature of California in 1999. The Carl Moyer Program is administered by the California Air Resources Board (CARB) and local air pollution control and air quality management districts (air districts) to provide grants to implement heavy-duty diesel projects that result in surplus emission reductions. CARB sets the Carl Moyer Program guidelines and the participating air districts administer the program locally according to their regional needs.

During the first six years of the Carl Moyer Program, \$154 million was provided to air districts statewide to reduce emissions from approximately 7,000 engines. Recent legislative changes increased the Carl Moyer Program funding up to a maximum of approximately \$86 million per year statewide through 2015. The current methodology used by CARB to allocate the Carl Moyer Program funds to air districts annually was established in AB 923. The methodology takes into consideration a number of factors, including population of the air districts' jurisdictions, severity of the air quality problems experienced by the population, and the historical allocation of Carl Moyer Program funds. Air District staff believes that this methodology negatively impacts the amount of Carl Moyer Program funds allocated to the Bay Area.

DISCUSSION

Staff will update the Committee on discussion with the California Air Pollution Control Officers Association (CAPCOA) regarding changes to the allocation formula for the Carl Moyer Program funds to correct past problems.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer /APCO

Prepared by: J. Ortellado
Reviewed by: H. Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: March 2, 2006

Re: Amendment to Transportation Fund for Clean Air (TFCA) Marin County
Program Manager Expenditure Program

RECOMMENDED ACTION

Recommend Air District Board of Directors (Board) approval of an amendment to the Marin County Program Manager TFCA fiscal year (FY) 2005/2006 expenditure program, to award \$159,037 to the Town of Fairfax Department of Public Works for the Safe Routes to Schools Pedestrian/Bicycle Bridge and Sidewalk Project.

BACKGROUND

In July 2005, the Board approved the FY 2005/2006 TFCA Program Manager expenditure program for the Transportation Authority of Marin (TAM), totaling \$844,151. This left an unallocated balance of \$249,505 in the TFCA Marin County Program Manager funds. The TAM has requested Board approval of the allocation of \$159,037 from this balance to the Manor Circle Safe Routes to School Pedestrian/Bicycle Bridge and Sidewalk Project, to be implemented by the Town of Fairfax Department of Public Works.

DISCUSSION

The Manor Circle Safe Routes to School Pedestrian/Bicycle Bridge and Sidewalk Project will be constructed in the Town of Fairfax on the northwest side of Marin Road, adjacent to the Manor Circle Bridge, and along the southwest side of Sir Francis Drake Boulevard, from Marin Road south to Olema Road, respectively. The project is intended to achieve emission reductions by reducing vehicle trips to and from schools by providing access to biking and walking facilities for students attending Manor, Saint Rita, Cascade Canyon and Brookside schools. The estimated lifetime emission reductions for this project totals 1.89 tons, which results in a cost-effectiveness of \$74,415 (TFCA funds) per ton of reduced emissions. This project meets the Board-approved cost effectiveness threshold of \$90,000/ton of emission reductions and is eligible to receive TFCA funding. The project also meets all other applicable TFCA eligibility criteria.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Currently the TFCA Marin County Program Manager unallocated funds balance is \$249,505, and the requested \$159,037 of additional funding will be allocated from this balance.

Respectfully submitted,

Jack P. Broadbent
Executive Officer /APCO

Prepared by: Andrea Gordon
Reviewed by: Henry Hilken

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Smith and
Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/ APCO

Date: March 2, 2006

Re: Biodiesel Feasibility Study and Pilot Project

RECOMMENDED ACTION

Receive and file report on Biodiesel Feasibility Study and Pilot Project.

BACKGROUND

At the April 11, 2002 Mobile Source Committee (Committee) meeting, the Committee directed staff to research a potential pilot project using or promoting the use of biodiesel fuel. On December 18, 2002, the Board approved a staff recommendation to use up to \$75,000 of Diesel Back-Up Generator Mitigation Funds, provided by the California Air Resources Board (CARB), to study the use of biodiesel and to develop a biodiesel pilot project. On January 17, 2003, the District released a Request for Proposals (RFP) to conduct a biodiesel feasibility study and implement a pilot project. The focus of the feasibility study was to research the quantity of recoverable biodiesel feedstock from Bay Area sources, to assess the environmental benefits from using biodiesel instead of petroleum diesel, and to identify obstacles and corresponding solutions to increasing biodiesel use in the Bay Area. The objective of the pilot project was to evaluate the conversion of local biodiesel feedstocks to biodiesel fuel for use in local fleets. On April 16, 2003, the Board approved the selection of two proposals, a biodiesel feasibility study by CytoCulture International, and a biodiesel pilot project by Biodiesel Industries. Following are the findings of the feasibility study and pilot project.

DISCUSSION

Biodiesel is a liquid fuel that can be used as an alternative to petroleum diesel. It is a renewable energy resource that is derived by reacting vegetable oils and animal fats with alcohols. Pure biodiesel, or B100, can be used directly, or as a blend with petroleum diesel, in diesel engines with little or no modifications. Biodiesel may currently be used in California if it meets CARB and Division of Measurement Standards diesel specifications. The cost of biodiesel in California is approximately one dollar more per gallon than the cost of conventional diesel.

Biodiesel Feasibility Study

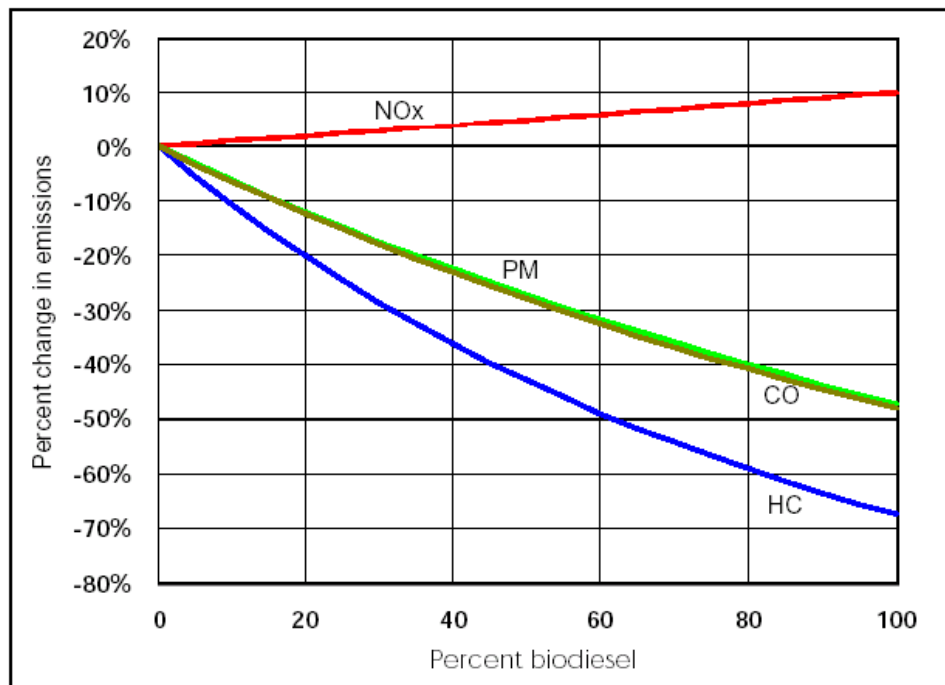
The feasibility study examines the environmental and economic benefits of increased biodiesel use in the Bay Area. The local production of biodiesel from local feedstocks for use in local fleets optimizes the environmental and economic benefits of this renewable fuel. However, local sources

of feedstocks to produce biodiesel (e.g. agricultural oils, “yellow grease” from restaurants and waste water treatment facilities, and fats from rendering plants) could only supplant approximately 5% of the Bay Area’s diesel fuel consumption. Currently, biodiesel provides roughly one-half percent of diesel fuel consumption in California. Approximately 3 million gallons of biodiesel were used in the Bay Area in 2004. The Bay Area is host to three biodiesel retail outlets, but most of the biodiesel consumed in the region is produced elsewhere.

Air Pollutant Emission Impacts

Preliminary estimates by US EPA of the air pollutant emission impacts of biodiesel compared to petroleum diesel are summarized in Figure 1, which shows the percent change in emissions for different blends of biodiesel compared to petroleum diesel.

Figure 1 – Average Emission Impacts of Biodiesel for Heavy-Duty Highway Engines



Source: USEPA, A Comprehensive Analysis of Biodiesel Impacts on Exhaust Emissions, 10/02.

Note: Percent change in emissions of PM and CO values are almost identical.

Figure 1 indicates that increasing the use of biodiesel in the Bay Area could help reduce emission of hydrocarbons (HC), particulate matter (PM) and carbon monoxide (CO). However, there could be a slight increase in emissions of oxides of nitrogen (NOx). Although NOx emissions from biodiesel are typically higher than the emission levels for conventional diesel, existing technologies (e.g., additives, fuel filters, different feedstocks and aftertreatment devices) may reduce NOx emissions. Other potential benefits of using biodiesel are substantially reduced emissions of toxic air contaminants and greenhouse gases. CARB is currently working with the National Biodiesel Board to establish a protocol for evaluating the emission reduction benefits of biodiesel.

Biodiesel Pilot Project

Biodiesel Industries conducted a pilot project that produced biodiesel from local feedstocks, such as “yellow grease” from restaurants, a wastewater treatment facility, and rendering companies. Fats from dairies were found not to be suitable as feedstock for biodiesel production. Biodiesel

Industries supplied B20 (20% biodiesel content) to four Bay Area fleets (Benziger Winery in Glen Ellen, Ecology Center in Berkeley, Peninsula Sanitation Service in Palo Alto, and Rental Car Shuttle in Oakland) that were previously using conventional petroleum diesel. Surveys completed by the fleet operators indicated a reduction in exhaust smoke with little or no change in mileage, engine noise, power, smoothness, starting, performance or maintenance.

Conclusion

The pace at which biodiesel is being accepted into the marketplace is accelerating dramatically with increased interest in fuel diversity, renewable fuels, PM reductions and greenhouse gas reductions. The air quality benefits of implementing local biodiesel production for use in local fleets are encouraging, although the overall replacement of petroleum diesel with biodiesel will likely be relatively small on a volume basis. The price of biodiesel is becoming more competitive with that of petroleum diesel as a result of increased petroleum prices and new federal subsidies for biodiesel. Given these conditions, the production and use of biodiesel is expected to continue to increase in the Bay Area in the coming years.

Following are unresolved issues regarding the use of biodiesel that staff believes need to be resolved prior to the Air District supporting the use of this fuel to reduce air pollutant emissions:

- CARB certification of biodiesel as an emission reduction strategy needs to be completed.
- Issues surrounding quality control, fuel handling, and conversion of fleets to biodiesel have created problems in some fleets and need to be properly addressed prior to promoting the use of this fuel.
- Concerns regarding the potential increase of NOx emissions with the use of biodiesel are being addressed with new NOx emission control strategies and should be incorporated into new programs promoting biodiesel for air emission reductions.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer /APCO

Prepared by: J. Steinberger
Reviewed by: H. Hilken